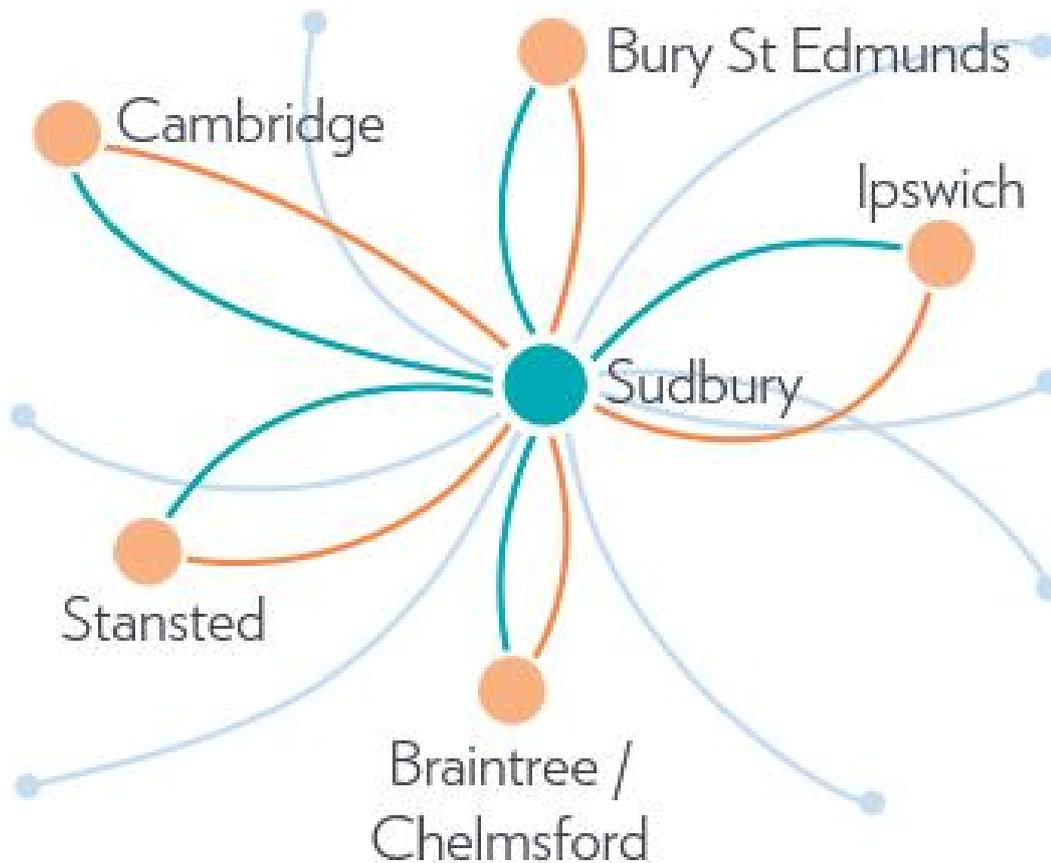


REPORT N° V1.2

# SUDBURY BYPASS BUSINESS CASE

STRATEGIC AND  
ECONOMIC ANALYSIS

APRIL 2016



# SUDBURY BYPASS BUSINESS CASE

## STRATEGIC AND ECONOMIC ANALYSIS

**Suffolk County Council**

### **Draft Version**

Project no: 62105213

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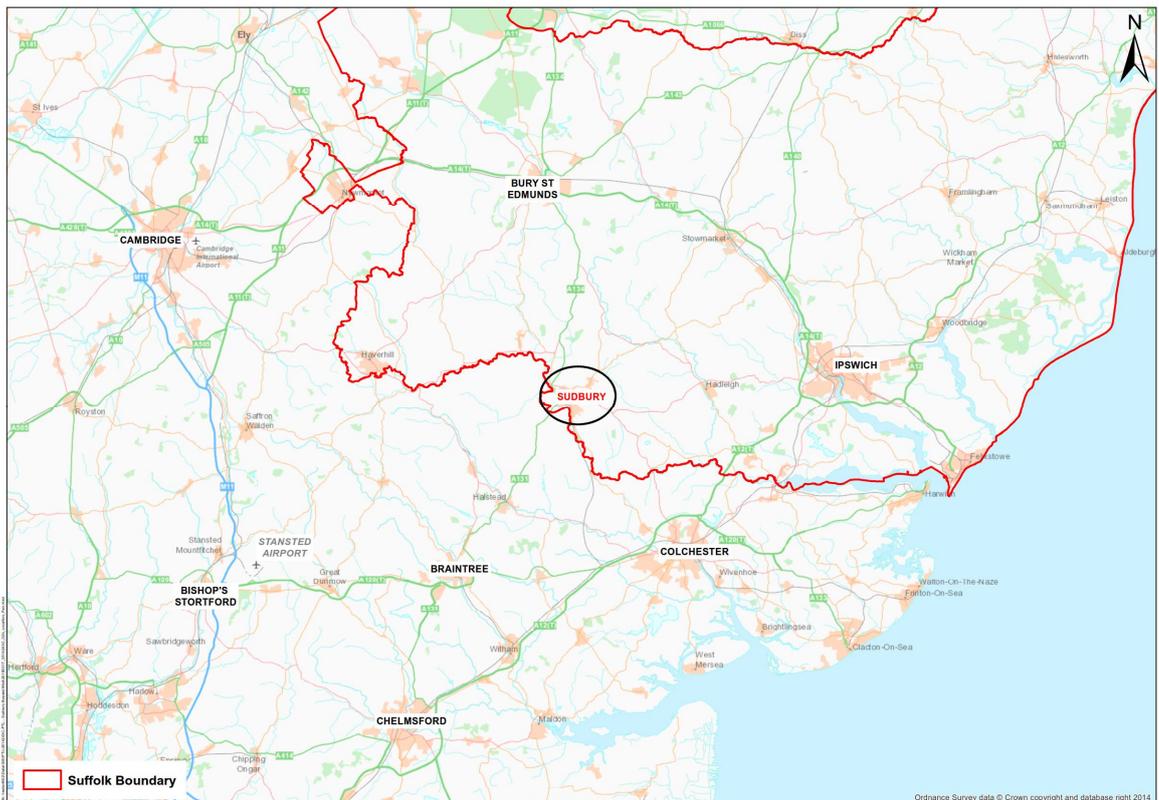
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APPENDIX A-2 APPRAISAL SUMMARY TABLE

# 1 INTRODUCTION

## 1.1 SUDBURY – A KEY REGIONAL TOWN

- 1.1.1 Situated in the southwestern part of Suffolk, Sudbury is a historic market town with a vibrant town centre. This centre, with its Georgian and Victorian architecture, mixed with Grade 1 listed churches, creates an attractive streetscape, drawing in residents and tourists alike.



Map 1-1 Map of Suffolk

- 1.1.2 Over the course of the twentieth century Sudbury, together with Great Cornard, experienced substantial growth. New employment and retail areas were built in the town centre and at out-of-town (centre) locations to the south and east. Housing grew in the northern parts of the town and in Great Cornard. Today, the internationally recognised traditional silk weaving industry is still represented, but new industries and office uses have developed as well.
- 1.1.3 Sudbury has a substantial history, famous Gainsborough landscapes, strong economy and is ideally located among key towns such as Cambridge, Ipswich, Colchester and Bury St Edmunds. It has always played an important region function; serving the shopping, leisure, social and cultural needs of the residents. Its history, beauty and culture have successfully attracted tourists to the town and region for decades.
- 1.1.4 However, the ability of the town to perform this key regional role has been stifled by congestion. The town's historic core is comprised of a medieval network of streets that are narrow and offer few alternative routes for motor vehicles. Although the town has seen substantial growth since the

Second World War, due to the restrictions of its historic highway network, this growth has not achieved its potential and the beauty of the town centre remains hidden behind a queue of large vehicles.



**Map 1-2 Map of Sudbury**

- 1.1.5** The town is constrained to the west and south by the River Stour. The A131 corridor is the only access into and through Sudbury from the southwest and as such accommodates the strategic lorry network for the area. High volumes of traffic are funnelled through the town centre. This results in a town centre that is congested with cars throughout most of the day.
- 1.1.6** This has inevitably resulted in noise and air quality problems. There is currently an Air Quality Management Area (AQMA) encompassing part of Cross Street. The pollution identified, Nitrogen Dioxide, exceeds the allowed annual mean. The images in Figure 1-1, taken on a weekday in October (2015), show the congestion in the town centre.



**Figure 1-1 Sudbury Town Centre Congestion**

- 1.1.7 Sudbury has the potential to play an even larger role in supporting the economic growth of the region but it is hindered by severely lacking road infrastructure. These traffic levels have constrained the economic growth that is needed in the region.
- 1.1.8 Sudbury is a key town in the western part of Suffolk that could offer quick and easy connections to destinations in and around London. It is also due to play a large role in meeting the targets for jobs and housing growth. The challenge will be to how to address congestion issues and enable growth, while also protecting Sudbury's historic heritage.

## 1.2 BABERGH DISTRICT COUNCIL LOCAL PLAN

- 1.2.1 Babergh District Council published in 2014 a *Core Strategies & Policies* document. This, alongside the *emerging Local Plan 2011-2031*, sets out the potential for business and housing growth, job creation and development. As the largest town in the District, Sudbury plays a significant role in helping to achieve these targets. However developers and house builders are finding it difficult to achieve those targets.
- 1.2.2 The Local Plan is jobs led and sets out the level of growth to meet the districts aspiration. The 9,720 new jobs in a 30-year plan (to 2031) will require 485 new jobs per year. To meet this economic growth, 5,975 new dwellings are to be built across the District over the plan period. Delivery of the dwellings is phased: 220 dwellings per annum in the first five years (2011-2016), rising to 325 dwellings per annum in the later years of the plan.
- 1.2.3 Babergh Council plans to distribute the growth across the district with growth in both the urban centres and rural areas. The plan shows 60% of the housing growth will be provided in urban areas (Sudbury/Great Cornard, Hadleigh, and the Babergh Ipswich Fringe) and 40% across the rural areas.
- 1.2.4 When the Local Plan was first developed the Sudbury/Great Cornard area was to receive about a quarter of housing allocated to urban areas.
- 1.2.5 The Babergh Local Plan Alternation No.2 (2006) Saved Policies allocated 19 hectares of land for residential development and 20.2 hectares for general employment and low impact employment at Chilton. However limited progress has been made bringing this plan forward.
- 1.2.6 Babergh and Mid Suffolk District Councils are working together to develop a new Joint Local Plan. This includes discussions about new growth figures for Babergh and Mid Suffolk. As the Councils identify its Objectively Assessed Need (OAN), additional growth in Sudbury may be desirable.

These numbers are not yet finalised and will need to be agreed upon between the District and the County.

1.2.7 The cumulative delivery of housing from the Core Strategy start period of 2011 to 2015 is 7% above target. This is due to some large developments which have come forward early on in the plan. However recent build out rates for Babergh as a whole are poor and have begun to underperform. If growth remains at its current levels, the District will not deliver the level of new housing needed. The councils are reviewing possible factors that are limiting housing delivery. This review includes discussions with local developers.

1.2.8 Several factors are likely contributing to the slowing of housing growth for Babergh and West Suffolk. The narrow congested road network is the key reason that Sudbury and the surrounding area are not achieving its growth.

### 1.3 WIDER ECONOMIC IMPACTS

1.3.1 The congestion caused by sending traffic through the historic Sudbury town centre has other wide reaching effects on the local and regional economy, beyond constraining jobs and housing growth. The impacts of congestion can be seen at a local level in the town centre, across the wider Sudbury area (including rural areas) and at a higher regional transport level.

1.3.2 The congestion through Sudbury town centre is off putting to drivers. The result is:

- It is difficult to drive through the town and so alternative routes may be chosen; resulting in **fewer people passing through the town**
- It is difficult to enter the town and so alternative destinations are chosen; resulting in **fewer people coming to the town.**
- It is difficult to leave the town and so alternative places to live are chosen; resulting in **fewer people wanting to live in the town.**

1.3.3 With fewer people choosing to, or unable to, make trips into Sudbury town centre or to live in the town centre there are further knock on impacts:

- The town is unable to grow
- Businesses in the town centre are unable to grow and attract skilled workers
- Rural areas surrounding Sudbury suffer from restricted access to key services and facilities

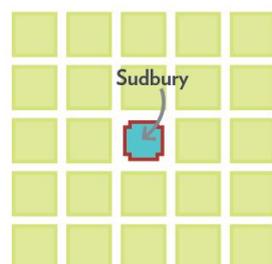
1.3.4 The congestion in the town centre, and nearby roads, also increases journey times on the A131 which has wider impacts on the regional transport network. Suffolk relies on its highway network to support the economy and deliver growth in key areas. If an important north-south connector route is congested, then the whole county suffers.

## 1.4 SUDBURY BYPASS – TRANSPORT & ECONOMIC SOLUTION

- 1.4.1 A Bypass west of Sudbury would alleviate congestion in the town. A less congested road network and town centre would support housing and business growth as well as the generation of new jobs. The Bypass would allow Sudbury to become a connected town, drawing residents from the rural area surrounding it to local businesses.

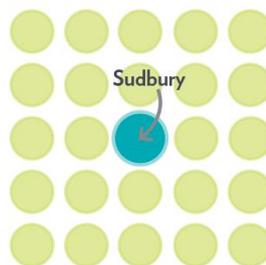
### SUDBURY – UNLOCKING POTENTIAL

#### 01 CUT OFF BY CONGESTION



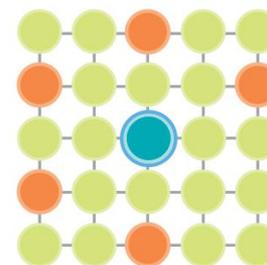
Sudbury is **blocked** from nearby communities and centres

#### 02 NEW BYPASS REMOVES BARRIERS



A new bypass will **remove the barriers** restricting connectivity with surrounding areas

#### 03 UNLOCK POTENTIAL



Sudbury will become a **connected town**, creating opportunities for new **businesses, jobs and housing**

- Connections include: Braintree, Bury St Edmunds, Cambridge, Chelmsford, Ipswich & Stansted

**Figure 1-2 Western Bypass – Unlocking the Potential in Sudbury**

- 1.4.2 Removing the traffic in the town would enable much needed improvements to the town centre. Showing off the historic and beautiful town and making better use of the market square. It would also help to address the AQMA in Sudbury town centre.
- 1.4.3 Reduced traffic through the town would also allow sustainable transport measures to be provided. This would work to ensure future developments not only promote walking and cycling, but also reduce car usage.
- 1.4.4 By improving access to the town centre, and providing excellent links to the growth areas, Babergh District Council can ensure sustainable growth is promoted and the historic Sudbury town centre thrives.

# 2 THE TRANSPORT CASE

## 2.1 WESTERN BYPASS – ORIGINAL SCHEME

- 2.1.1 As congestion has been an issue for Sudbury for many years, the idea for a Western Bypass is not a new one. In 2001 Suffolk County Council and Babergh District Council published a *Local Transport Action Plan* (LTAP) to address a wide range of transport problems in the area. The main focus was the traffic that passed through Sudbury on the A131, and the resulting congestion, accidents and negative impact on the town centre.
- 2.1.2 The LTAP included a do-minimum scheme that could be implemented in the short term. This would improve the quality of service and accessibility to the public transport network and provide a series of sustainable transport measures.
- 2.1.3 The long term solution was the construction of the A131 Western Bypass.
- 2.1.4 Work progressed on a potential alignment for the bypass and in 2003 Suffolk County Council produced *A131 Sudbury Bypass and Related Measures*.
- 2.1.5 The document included full horizontal and vertical alignment for the road, a summary of the costs, benefits and impacts of final scheme.
- 2.1.6 The Transport Case for the Sudbury Bypass was successfully made. The scheme had initial Benefit Cost Ratio (BCR) of 2.8, representing a **high value for money** (VfM) scheme. This could be further increased if consider potential wider economic impacts through unlocking growth.



Figure 2-1 Sudbury Landscape

2.1.7 At that time there were a number of issues which needed to be addressed during the design process. The main concern was the environmental impacts: the alignment passed across a former landfill site and the River Stour flood plain. The initial designs had not taken into account the type of earthworks needed or ways to design the bypass to mitigate the impact to the landscape.

## 2.2 A NEW ANALYSIS

2.2.1 Alternative alignments for the Western Bypass were examined in the summer of 2015. Experienced environmental consultants reviewed constraints to highlight alternative routes with a reduced environmental impact.

2.2.2 The Technical Note, *Sudbury Bypass Review of Environmental Issues*, showed that there are viable alternatives for the Western bypass route, some of which would likely have a lower environmental impact. For example:

- The original proposal took a path through an area of woodland to the South of the scheme. Changes to the southern “tie-in” section of the bypass could remove the need to take the bypass through this woodland.
- The northern section of the bypass re-joins the road network at the A134/ A131 roundabout junction. No alternatives to this arrangement could be found; therefore, the new bypass has to traverse through an area of floodland (which is a local walking area and is an environment which has a great deal of natural beauty). Changes to the alignment of the road are possible which would reduce the amount of floodland area affected by the bypass.

# 3 STRATEGIC BUSINESS CASE

## 3.1 PURPOSE

3.1.1 The Strategic business case determines whether or not an investment is needed, either now or in the future. It should demonstrate the case for change, what effect the project would have and why it is needed now. This chapter will answer those questions and highlight why the bypass is a much needed infrastructure investment for the region.

## 3.2 THE PROBLEM

3.2.1 Sudbury town centre is ideally located to form a connection between key towns/cities and services in the region. Regional and strategic traffic should be using the A131, the A134 and the A1071 to travel around West Suffolk. However, the historic highway network through Sudbury Town Centre is causing severe congestion.

3.2.2 Traffic volume is constrained by the road network stifling growth and cutting off Sudbury from key destinations in the surrounding area. Traffic speed through the town is very low and results in alternative routes being used. Because of this:



- fewer people pass through Sudbury
- fewer people come to Sudbury
- fewer people wanting to live in Sudbury

3.2.3 These factors negatively influence businesses and jobs in Sudbury.

3.2.4 Traffic levels on the main roads through the town centre are well above acceptable levels as set out by the Design Manual for Roads and Bridges (DMRB). A two-way single carriageway with a 6.75m carriageway width has a theoretical maximum capacity of approximately 1,110 vehicles per hour. The A134 north of Sudbury town centre regularly has 1,220 vehicles each hour (data used from 2014). This road has seen traffic flows that exceed capacity every year that counts are available (back to 2000).

3.2.5 The problem becomes even worse due to the way one street system in the town centre required by the historic highway network. The route from Braintree to Bury St. Edmunds and Newmarket joins with local traffic on a narrow one way gyratory. The width of the road reduces along this section. The number of junctions and the amount of parking increases. The ability of this section of road to carry traffic therefore reduces significantly.

3.2.6 If nothing is done the problem will not only persist but get worse. Babergh Council has plans to add more jobs and housing across the district and Sudbury would struggle to meet these demands.

3.2.7 However, conversely, a Sudbury bypass would reverse this situation, enabling Sudbury to become a 'Connected Town' and have an 'Enhanced Local Centre'.

3.2.8 Sudbury as a Connected Town would see it having a far greater regional influence. Offering an increased range of services to areas further afield. More people would travel on the roads around Sudbury and would begin to make Sudbury a place to come and visit on these travels. No longer put off by congestion and delays.

- 3.2.9 The bypass will also alleviate congestion and reduce journey times to key destinations, like Cambridge, Stansted, Chelmsford, Braintree, Ipswich and Bury St Edmunds.
- 3.2.10 The reduced traffic through the town would allow Sudbury to reimagine the town centre as a place for people to visit. Providing an Enhanced Local Centre would position Sudbury to grow sustainably as required

3.2.11 Improvements to the town centre could include

- provide town centre parking which interacts better with the streetscape
- designing the town centre for pedestrians to freely use all areas of the town
- making better use the historic market area
- increase the amount of space used to provide outdoor seating (both café style seating and public areas)
- improved safe and sustainable access into the town, which will support economic growth

#### Enhanced local centre



3.2.12 The bypass would result in the removal of the strategic lorry route through Sudbury town centre. This, along with the relocation of the pass through traffic, would result in a significant reduction of traffic through the town. A reduction in traffic, along with these improvements to the town centre, would lead to reduced noise for residents and better air quality.

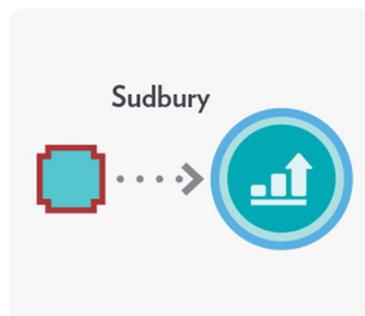
### 3.3 GROWTH

3.3.1 The objectives for Sudbury are to become a Connected Town and to enable an Enhanced Local Centre. This supports opportunities for new businesses, jobs and housing.

3.3.2 Growth in Sudbury has slowed over recent years. A new bypass will enable Sudbury to remove the key blockers to growth and meet current expectations for allocated growth and allow for independent growth. The bypass will allow Sudbury to build on its regional influence and take housing and jobs allocated to its partner authority, Mid Suffolk District Council.

## SADBURY – HOUSING AND JOBS

### 01 INDEPENDENT GROWTH



With the new bypass Sudbury has potential for **independent growth** – which is currently being constrained.

### 02 ALLOCATED HOUSING AND JOBS



The bypass provides the opportunity to better take forward the local plan and more likely **deliver growth allocated in the local plan**.

### 03 POTENTIAL FOR ADDITIONAL GROWTH



**Rural and local productivity** in Sudbury will be improved. There will also be the potential for **significant additional growth**.

**Figure 3-1 Sudbury Housing and Jobs**

- 3.3.3 The bypass will inevitably unlock development land which currently cannot be accessed. This unlocked land could be used to take unallocated housing and jobs from other authorities in Suffolk and from neighbouring councils, such as Essex County Council.

## 3.4 MEASURES FOR SUCCESS

- 3.4.1 The success of the Western Bypass will be measured by three factors:

- making Sudbury a Connected Town
- allowing Sudbury to have an Enhanced Local Centre
- providing the infrastructure and development land to stimulate housing and job growth.

## 3.5 SCOPE

- 3.5.1 This project will deliver a new bypass, which will in turn support the planned growth for not only Sudbury, but for Babergh District Council as a whole. The net result of this will be new housing developments to support the creation of new jobs.
- 3.5.2 With these new homes and better connections to the surrounding areas, Sudbury can begin to attract high quality jobs and a better skilled workforce.
- 3.5.3 The employees in these markets will bring in more industries that support innovation. This will lead to productivity increases which in turn have wider benefits to the central treasury.

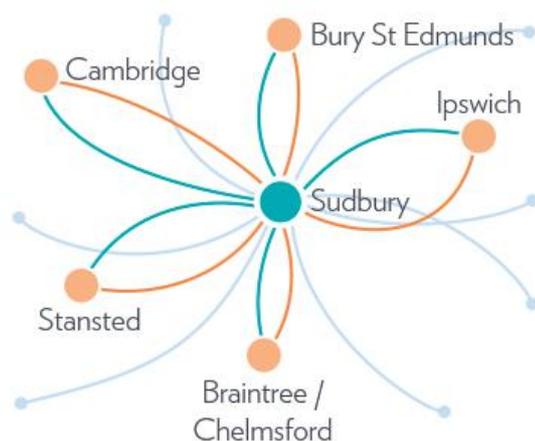
## 3.6 GOVERNANCE AND CONSTRAINTS

- 3.6.1 Suffolk County Council and Babergh District Council have experience delivering similar schemes, and would be able to oversee and manage the construction programme.

- 3.6.2 The main constraint will be the time process for selecting the appropriate alignment for the bypass. The western route passes through areas where there are flood plains and protected woodlands. Any route must be sensitive to these environmental constraints and be designed to use the least impactful method of construction.
- 3.6.3 This type of work takes time, as various environmental and stakeholder groups will need to be consulted. The congestion and growth issues for Sudbury are an immediate issue. To capitalise on growth in the surrounding areas the bypass should be built as soon as possible. A balance between a speedy programme and an environmentally sensitive bypass route will need to be struck.
- 3.6.4 Time should be spent upfront, to understand the environmental constraints and design the best possible alignment. This is to ensure issues do not come up during the construction process, when mitigation becomes much more costly.

### 3.7 INTER-DEPENDENCIES

- 3.7.1 The neighbouring counties surrounding Sudbury are also investing in their road networks. To the south, in Essex they are working on dualling the A120.



**Figure 3-2: Inter-dependencies**

- 3.7.2 A Western Bypass would help to create a wider improved network in this region. Reducing journey times south to Braintree would link Sudbury and the rest of Suffolk to the growing Essex economy.

# 4 ECONOMIC BUSINESS CASE

## 4.1 PURPOSE

- 4.1.1 The main purpose of the economic case is to demonstrate that the proposal represents the best VfM scheme to the UK as a whole.
- 4.1.2 The key with this work is the identification of the right range of options. These options are then assessed to take forward the optimal or preferred option.
- 4.1.3 A review of this preferred option is undertaken, which shows the costs and benefits of the scheme.
- 4.1.4 The scheme's BCR was calculated in order to assess the VfM.
- 4.1.5 An initial benefit cost ratio (BCR) reviews just the transport benefits of the scheme. The 'Adjusted BCR' takes into account wider economic impacts, while the 'Enhanced BCR' qualitatively assesses the case for benefits that result from this scheme to the UK.

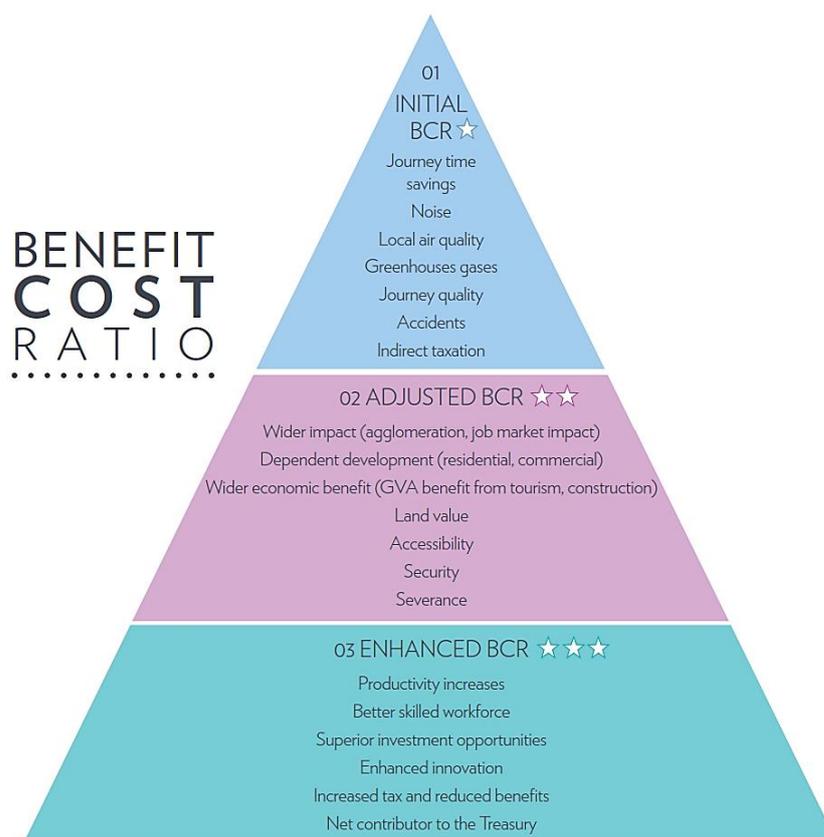


Figure 4-1: BCR explained

## 4.2 OVERVIEW OF THE APPROACH

- 4.2.1 The list of options assessed was taken from the 2003 study and the recent work looking at alternative alignments for the western bypass with lower environmental impact. The options

assessed in this review are a base case do nothing scenario, the original bypass alignment, and the new alignment alternative.

4.2.2 In order to perform an economic assessment the results from the 2003 study of the original layout of the bypass was reviewed. Included in this were journey time savings, cost estimates for the bypass (and related works) and an environmental impact assessment. Using this information a business case assessment for the new bypass has been carried with the costs and benefits re-estimated.

4.2.3 It is important to qualify that this review is high level, desk-based and qualitative. It is not a revision to the appraisal undertaken in 2003. Further desk-based analysis, including qualitative reviews of environmental constraints in accordance with WebTAG appraisal guidance will be required in order to confirm a preferred route option for the proposed bypass.

4.2.4 It is likely that further analysis would show greater transport improvements as traffic reroutes onto the bypass.

## 4.3 METHODOLOGY

4.3.1 The new bypass option is appraised using the methodologies recommended by the Department for Transport (DfT) *WebTAG* (Transport Analysis Guidance) and the *Green Book*, using the most up to date parameters in November 2014.

4.3.2 The key benefits for the schemes are journey time savings as the bypass would provide a quicker and more direct route for through traffic, which is expected to significantly reduce current congestion in the town. The key benefits and dis-benefits also include the environmental impact from both the construction of the new bypass and traffic movement. These following were assessed:

- Journey time saving benefit
- Noise
- Air Quality
- Greenhouse gas
- Landscape
- Heritage/Townscape
- Biodiversity
- Water Environment
- Geology and Soils

## 4.4 COSTS AND BENEFITS

4.4.1 In order to assess the costs and benefits of a western bypass the base case “Do Nothing” scenario must first be established. For this assessment “Do Nothing” is the road network as it exists today, without the bypass.

4.4.2 Once the base case has been established the costs and benefits of building a western bypass can be assessed. These include journey time savings, environmental impact and the cost benefit analysis of building the bypass.

## JOURNEY TIME SAVINGS

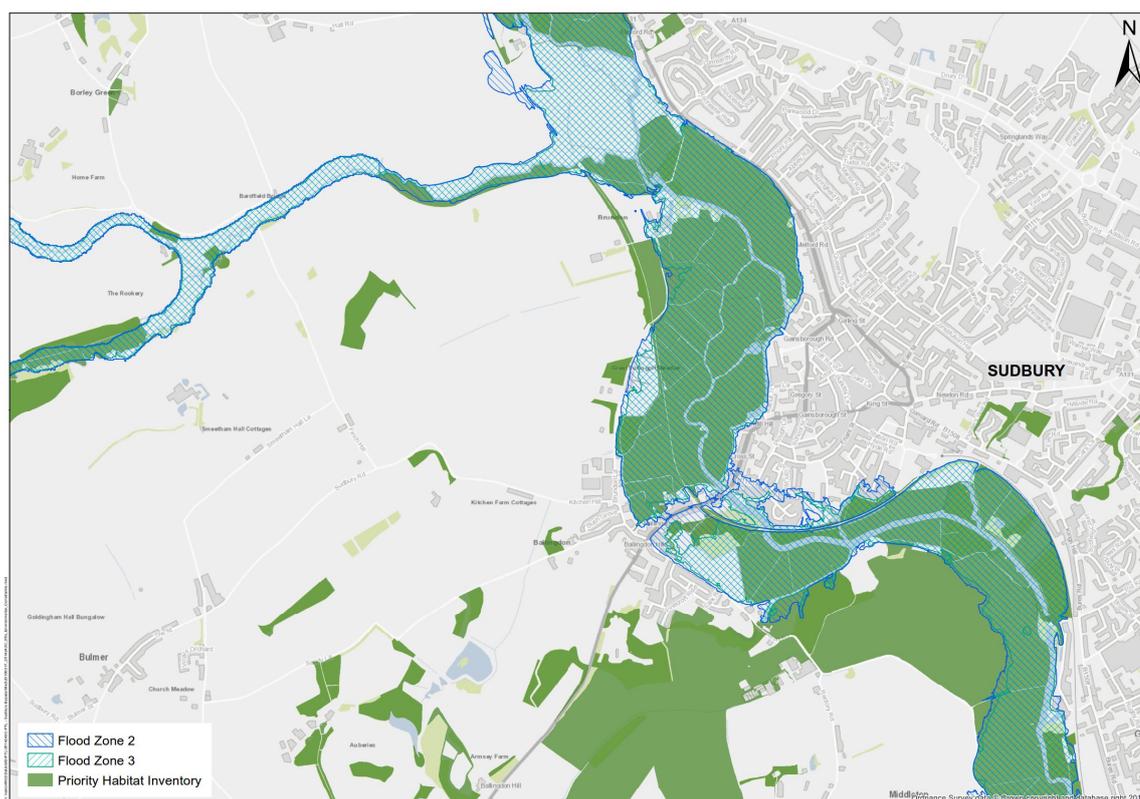
- 4.4.3 In the 2003 assessment the journey time savings from building the western bypass were calculated; these were based on traffic model done by Mouchel. Information about existing traffic flow and speeds was used to calculate the reduction in journey times.
- 4.4.4 The alternative alignment is very slightly shorter than the original alignment. The journey time saving are therefore expected to be similar, with slightly more benefit for the alternative alignment.

**Table 4-1 Journey Time Savings**

PERIOD	REDUCTION IN JOURNEY TIME	
AM peak	2 min 42 sec	4.4.9
PM peak	1 min 29 sec	4.4.10
Off-peak	1 min 25 sec	4.4.11
		4.4.12

## ENVIRONMENTAL IMPACT

- 4.4.13 The environmental impact from the new alignment is expected to be similar to the original layout except for in a few locations.



**Figure 4-2 Environmental Constraints**

- 4.4.14 *Air Quality* – The impacts on air quality have not altered substantially since 2003.
- 4.4.15 *Noise* - The likely noise impact at dwellings on Kitchen Hill and Bush Grove would be minimised. The potential for eligibility under Noise Insulation Regulations (NIR) 1975 would be also minimised.

- 4.4.16 *Landscape* - Off-site planting and management as well as reinforcement of off-site hedgerows would enhance the adjoining landscape and vegetation pattern.
- 4.4.17 *Cultural Heritage* - The Gainsborough landscapes are identified as key resources, the new bypass alignment would minimise the level of harm to the significance of the heritage assets.
- 4.4.18 *Biodiversity* - For biodiversity, the impact on various features of high nature conservation value, including floodplain fen meadow, grazing marsh and other aquatic ecosystems is reduced.
- 4.4.19 *Water Environment* - An alternative route suggests that the new road alignment should avoid crossing over minor watercourses where possible, and if feasible to reduce its total footprint on the existing floodplain to reduce the environmental impacts to the watercourses.
- 4.4.20 *Geology and Soils* - As it avoids cutting through the historic landfill, the new layout of the bypass reduces the potential risk to human health, as the remobilisation of waste could risk polluting the sensitive bedrock aquifer and SPZ.
- 4.4.21 *Effects on all Travellers* - There is an overall positive effect on all travellers when compare to the original bypass layout, since the amount of disruption to the area is reduced and the impact to the environment is minimised. The new layout has a better recreational value of the area.
- 4.4.22 *Community and Private Assists* - The route alignment cuts through agricultural land of Grade 3 value and this land will be subject to land take from the construction and operation of the scheme. Grade 3 is of good to moderate agricultural value therefore if the loss of Best and Most Versatile agricultural land is greater than 20ha consultation with the Depart for Environment, Food and Rural Affairs will be necessary.
- 4.4.23 *Cumulative Effects* - No cumulative impacts are anticipated to arise as a result of the scheme.
- 4.4.24 A qualitative assessment has been carried for the environmental impact according to the WebTAG Unit A3, details and quantitative assessment has been considered where it is possible. The key appraisal assumptions are listed in the table below.

**Table 4-2 Qualitative Environmental Assessment**

Criteria	Assumption	Source
<b>Discount Rate</b>	3.5%	WebTAG
<b>Opening Year</b>	2017	General assumption
<b>Base Year</b>	2010	DfT Base Year
<b>Appraisal years</b>	30 years*	Based on asset life
<b>Forecast Year</b>	2047	30 years from the opening
<b>Value of time</b>	Work: £27.06 per hour Non-work: £6.43 per hour	WebTAG Nov 2014 update
<b>Capital cost</b>	£44.17m	Project cost estimation; Expected total outturn capital investment, with 44% optimism bias included
<b>Capital expenditure</b>	100% in 2016	General assumption

*\*\*The appraisal and forecast years were done in 30 years, not 60 years like current WebTAG guidance, because the original business case done in the 2003 assessment used 30 years. In order to do a comparison against those figures we had to use the same assumptions.*

- 4.4.25 Operating costs can be fuel and travel distance related costs to road users, and can be highway operating and maintenance related costs. Both are assessed based on the 2003 study and the most up to date WebTAG parameters (Nov 2014 updates).

4.4.26 A spreadsheet model has been built in line with the WebTAG requirement, to compare the potential benefits for the new layout of the bypass against the costs. The findings and results are discussed in the following section.

## 4.5 APPRAISAL RESULTS

4.5.1 For the final appraisal of the BCR the option appraised is the new bypass alignment. This was compared to the Base Case “do nothing” scenario where no bypass is built. The appraisal has assessed the costs of the new bypass against the benefits.

4.5.2 The monetised costs and benefits are shown in the Economic Efficiency of the Transport System (TEE) table in Appendix A-1. Numbers reported in the table are in pounds millions, in 2010 price and values.

4.5.3 The non-monetised benefits including the qualitative assessment of the environmental impact have been reported in the Appraisal Summary Table (AST) in Appendix A-2.

4.5.4 According to WebTAG guidance, and based on some high level assumptions, the scheme has an **initial BCR of 2.8**, representing a high value for money business case. Please note that the BCR is not directly comparable to the BCR from 2003 study, since the assessment method is not the same and the growth factors, assessment parameters have been changed since then.

4.5.5 These results do not take into account the wider economic growth and benefits that would occur as a result of the bypass. That is because the development sites in the greater Sudbury area have not yet been selected by Babergh District Council and Suffolk County Council. Once these sites have been agreed, and the alignment selected, then the wider enhancements achieved by the bypass, like increased productivity and job growth, can be included as a benefit.

# 5 CONCLUSIONS

## 5.1 CONCLUSION

- 5.1.1 Overall, it is concluded that, with a BCR of 2.8 and a high VfM, the western bypass has a strong business case. This transport investment will alleviate the congestion Sudbury has experienced for decades. This historic market town, which has been cut off from the wider region and not achieved the level of economic growth it could, would become a Connected Town that could support and create new opportunities for businesses, jobs and housing.
- 5.1.2 Her Majesty's (HM) Treasury identified skills as one of the five key drivers of productivity, which in turn impacts on the economic performance of a region. It is expected growth in businesses and job opportunities the bypass will deliver, the region will begin to attract more skilled workers. This is crucial to driving up the productivity of not only Babergh but also Suffolk as a whole.
- 5.1.3 The wider economic benefits, alongside the long term benefits to the wider area, like creating a region with innovative industries, supporting rural productivity and generating highly skilled jobs, will turn Sudbury into the centre of a strong, inter-connected Eastern England.

## 5.2 RECOMMENDATIONS AND NEXT STEPS

- 5.2.1 The work done to date on the bypass alignment options, and the business case appraisal, are all high level assessments. Further work must be done to fully assess the economic and wider impacts of the alignment options.
- 5.2.2 This includes a full environmental impact of the western bypass alignment as well as further design work to mitigate potential adverse impacts construction will have on the landscape and environment. With further studies and design work it is possible that the scheme could be designed to have a less adverse impact on the receiving environment than the alignment option assessed in 2003.
- 5.2.3 It is recommended that further studies and surveys are undertaken. Especially those related to the topics which were determined to be the key constraints namely: landscape, heritage, biodiversity, the River Stour and associated floodplain habitats as well as the footpaths of the Valley Line walk.
- 5.2.4 To progress the scheme forward it is advisable that a full WebTAG study be undertaken. This would consider a number of alternative routes and thus will help with defining and selecting a preferred scheme to go forward.
- 5.2.5 In addition, the WebTAG process offers a robust method for undertaking a full 5 case business case assessment and helps define why the preferred scheme is the best scheme alignment.

With updated information in regards to journey times, costs and environmental mitigation the schemes could be progressed to detailed design and built in time to play an active role in helping to achieve the growth set out in the Babergh Local Plan.

# Appendix A

**BUSINESS CASE APPRAISAL TABLES**

APPENDIX A-1

**MONETISED COSTS AND BENEFITS**

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Economic Efficiency of the Transport System (TEE)

	ALL MODES	ROAD	BUS and COACH	RAIL	OTHER
<b>Non-business: Commuting</b>		Private Cars and LGVs	Passengers	Passengers	
<u>User benefits</u>	TOTAL				
Travel time	32.3	27.6	4.7		
Vehicle operating costs	-0.9	0.9			
User charges					
During Construction & Maintenance					
<b>NET NON-BUSINESS BENEFITS: COMMUTING</b>	31.4 (1a)				
<b>Non-business: Other</b>		Private Cars and LGVs	Passengers	Passengers	
<u>User benefits</u>	TOTAL				
Travel time	32.3	27.6	4.7		
Vehicle operating costs	-0.9	0.9			
User charges					
During Construction & Maintenance					
<b>NET NON-BUSINESS BENEFITS: OTHER</b>	31.4 (1b)				
<b>Business</b>		Goods Vehicles & LGVs	Business Cars Passengers	Freight	Passengers
<u>User benefits</u>					
Travel time	53.1	17.6	33.9	1.6	
Vehicle operating costs	-1.4	-1.18	-0.20		
User charges					
During Construction & Maintenance					
Subtotal	51.7 (2)				
<i>Private sector provider impacts</i>				Freight	Passengers
Revenue					
Operating costs					
Investment costs					
Grant/subsidy					
Subtotal	(3)				
<i>Other business impacts</i>					
Developer contributions	(4)				
<b>NET BUSINESS IMPACT</b>	51.7 (5) = (2) + (3) + (4)				
<b>TOTAL</b>					
Present Value of Transport Economic Efficiency Benefits	114.5 (6) = (1a) + (1b) + (5)				

Notes: Benefits appear as positive numbers, while costs appear as negative numbers.  
All entries are discounted present values, in 2010 prices and values

Public Accounts (PA) Table

	ALL MODES	ROAD	BUS and COACH	RAIL	OTHER
<b>Local Government Funding</b>		INFRASTRUCTURE			
Revenue					
Operating Costs					
Investment Costs					
Developer and Other Contributions					
Grant/Subsidy Payments					
<b>NET IMPACT</b>	(7)				
<b>Central Government Funding: Transport</b>					
Revenue					
Operating costs	0.2				
Investment Costs	44.2				
Developer and Other Contributions					
Grant/Subsidy Payments					
<b>NET IMPACT</b>	44.3 (8)				
<b>Central Government Funding: Non-Transport</b>					
Indirect Tax Revenues	0.07 (9)				
<b>TOTALS</b>					
<b>Broad Transport Budget</b>	44.3 (10) = (7) + (8)				
<b>Wider Public Finances</b>	0.1 (11) = (9)				

Notes: Costs appear as positive numbers, while revenues and 'Developer and Other Contributions' appear as negative numbers.  
All entries are discounted present values in 2010 prices and values.

## Analysis of Monetised Costs and Benefits

Noise		(12)
Local Air Quality		(13)
Greenhouse Gases		(14)
Journey Quality		(15)
Physical Activity		(16)
Accidents	£4.5	(17)
Economic Efficiency: Consumer Users (Commuting)	£32.3	(1a)
Economic Efficiency: Consumer Users (Other)	£32.3	(1b)
Economic Efficiency: Business Users and Providers	£53.1	(5)
Wider Public Finances (Indirect Taxation Revenues)	£0.0	- (11) - sign changed from PA table, as PA table represents costs, not benefits
Present Value of Benefits (see notes) (PVB)	£122.2	$(PVB) = (12) + (13) + (14) + (15) + (16) + (17) + (1a) + (1b) + (5) - (11)$
Broad Transport Budget	£44.3	(10)
Present Value of Costs (see notes) (PVC)	£44.3	$(PVC) = (10)$
<b>OVERALL IMPACTS</b>		
Net Present Value (NPV)	£77.8	$NPV = PVB - PVC$
Benefit to Cost Ratio (BCR)	2.8	$BCR = PVB / PVC$

Note : This table includes costs and benefits which are regularly or occasionally presented in monetised form in transport appraisals, together with some where monetisation is in prospect. There may also be other significant costs and benefits, some of which cannot be presented in monetised form. Where this is the case, the analysis presented above does NOT provide a good measure of value for money and should not be used as the sole basis for decisions.

APPENDIX A-2

**APPRAISAL SUMMARY TABLE**

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