



# A12 Suffolk's Energy Gateway Outline Business Case

Suffolk County Council

Summary of the SEGway Outline Business Case

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### Document history and status

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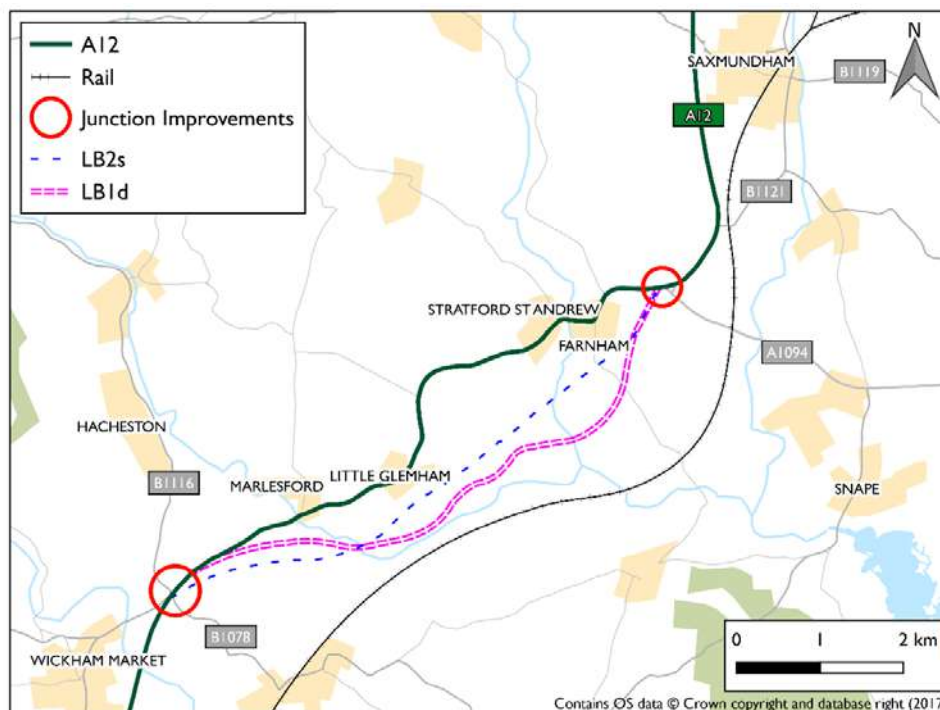
## 1. Introduction to the Outline Business Case

This document provides brief details of the A12 Suffolk's Energy Gateway (SEGway) scheme, with a summary of each of the five business case chapters, and the reasons for the preferred option selection. The reader is encouraged to read the individual business case reports for further detail.

## 2. The A12 and the Scheme

The A12 is the main corridor for movement within, to and from "Suffolk's Energy Coast". It links two of the county's main settlements, Ipswich and Lowestoft, and the array of communities, businesses, energy assets and visitor attractions in their hinterland with the Strategic Road Network (A12, A14, A47), international gateways (ports at Felixstowe, Ipswich and Lowestoft) and each other.

SEGway comprises an improvement to the 4.5 mile (7 km) section between the B1078 at Wickham Market and the A1094 at Saxmundham. The **preferred option (LB1d – dual carriageway)** is shown below alongside the single carriageway alternative (LB2s) also appraised as part of the Outline Business Case.



Principal features of the dual carriageway option include:

- Joining two sections of existing dual carriageway through a new 70mph dual carriageway segregated from local roads.
- Bypassing of the 'Four Villages' of Marlesford, Little Glemham, Stratford St. Andrew and Farnham currently subject to all the adverse impacts of traffic. It does this to the south and east of these communities.
- Upgrades to sub-standard junction layouts at both the B1078 and A1094 intersections.
- Viaduct structures over the River Ore and Alde floodplains.
- Provision for existing roads and public rights of way to cross the A12 via overbridge or underbridge structures either in their current location or through short diversions.
- Appropriate environmental mitigation measures.

It would be subject to preliminary design and further consultation in 2018 with a view to submitting a planning application for determination in early 2019. Based on the scheme's programme it would be built between April 2021 and April 2023, opening to the public in April 2023.

It represents the first phase of improvements to the A12 corridor between Ipswich and Lowestoft considered necessary by amongst others, the hosting authorities of Suffolk County Council, Suffolk Coastal District Council and Waveney District Council.

### 3. Overview of the Strategic Case and Economic Case

The Strategic Case sets out the need for improvement to the A12 and how funding can benefit the New Anglia Local Enterprise Partnership (LEP) region and in particular Suffolk in terms of quality of life, homes, jobs and a more resilient and productive economy. It highlights the strong support the case for investment has amongst local stakeholders. Norfolk and Suffolk contribute £35 billion to UK plc and when there is investment in this region it delivers further growth to the UK. The Strategic Case is closely intertwined with the Economic Case in appraising the performance of scheme options to improve the A12 and achieve the core aim and objectives set.

The core aim of the project is **“to enable, support and deliver economic growth in East Suffolk and enhance the quality of life for residents”**.

#### 3.1 Economic Context

East Suffolk’s current and future prosperity within the New Anglia LEP’s economy is founded on numerous assets and growth sectors, namely:

- **Energy** – this adds £1 billion GVA to Norfolk’s and Suffolk’s economy each year. Its major features include:
  - EDF Energy’s Sizewell B nuclear power station, planned investment in Sizewell C nuclear power station and the 25,000 different job roles associated with it. Sizewell was identified in 2011 by the Government’s *National Policy Statement for Nuclear Power Generation* as a potentially suitable site for a new nuclear power station.
  - The East Anglia Array, Greater Gabbard and Galloper off-shore wind turbine fields serviced from the Port of Lowestoft; the town’s Centre for Offshore Renewable Engineering, and clusters of manufacturing firms centred within Lowestoft’s successful Enterprise Zone. Scottish Power is planning to invest in a further 3,000 job roles associated with East Anglia ONE offshore wind.
  - This recent and future investment in the nuclear and renewable energy industry is vital to the achievement of the UK Government’s Clean Growth Strategy (October 2017).
- **Information and Communications Technology (ICT), Tech and Digital Creative** - Adastral Business Park at Martlesham Heath, home to BT’s Global Research and Development Headquarters, and Innovation Martlesham – an established (and growing) cluster of around 100 high-tech ICT firms.
- **Advanced Agriculture, Food and Drink** - The region supplies significant amount of food and drink to the country’s supermarkets and the region’s artisan products, restaurants, shops and markets are a major draw for visitors. Furthermore, the Centre for Environment, Fisheries and Aquaculture works across multiple sectors as a world leader in innovation and research in marine science. This presence has been strengthened with a recent £16 million Government investment in new and refurbished facilities at its Lowestoft Headquarters, with these due to open in 2019.
- **Visitor Economy, Tourism, Heritage and Culture** - In 2013 there were over 10 million visits made to East Suffolk. The total value of tourism to East Suffolk’s economy and well-being is important, contributing £590 million and over 12,500 jobs. Suffolk’s Energy Coast is supported by a strong cultural offer through festivals such as Aldeburgh and Latitude, alongside popular resorts such as Southwold, and things to do and visit including The Broads National Park, historic buildings and castles, wildlife parks, restaurants and shops all accessed by the A12.
- **Transport, Freight and Logistics** – is worth £1.3 billion to New Anglia and employs over 23,500 people. Ipswich is the country’s largest port for grain export; Great Yarmouth and Lowestoft serve the North Sea energy sector; and Felixstowe is the country’s busiest container port.
- This is all underpinned by **new homes**. Suffolk Coastal District Council and Waveney District Councils are both taking their Local Plans through a review with further work in 2018/19. These Local Plan reviews provide options for the location and scale of housing growth along the A12 and elsewhere in the districts up to 2036, both to cater for housing need and realise further potential employment growth. The ability to realise the full potential is likely to be at least partly linked to the delivery of new infrastructure, such as SEGway.

Despite this potential only the south of Suffolk’s Energy Coast performs on a par with the rest of England. More needs to be done to close that productivity gap and exploit the potential that the region can offer to rebalance the UK economy and achieve wider Government aims associated with trade, industry, decarbonisation of the power grid and tourism. The Economic Strategy for Norfolk and Suffolk has identified the Norfolk and Suffolk Energy Coast with its assets on and offshore as one of its priority places for continued growth.

### 3.2 Opportunities and Problems

New Anglia LEP, Suffolk County Council, Suffolk Coastal District Council and Waveney District Council have set out a balanced yet ambitious approach to delivering growth. This matches investment in skills and infrastructure with support for business to ensure that the region is a well-connected place, with an economy that is inclusive, high performing, productive and international facing, including the centre for the UK's clean energy sector with this all staffed by a highly skilled workforce.

**Their view is that the A12 - and specifically the section between Wickham Market (B1078) and Saxmundham (A1094) - represents the most pressing need for initial investment to help realise these ambitions in East Suffolk, with future spending on other sections of the A12 and East Suffolk Rail Line to follow.**

Key problems to be resolved include:

- Long, unreliable journeys caused by the standard of road, congestion pinch-points such as the Farnham Bend and the unpredictable impacts of seasonal agricultural and tourism traffic. This pushes up the cost of doing business, reducing productivity and making it less attractive for investment and a barrier to employing skilled staff or those seeking work.
- High traffic flows on summer Fridays and weekends, demonstrating the vital role that the A12 plays in bringing people to the region.
- Poor resilience of the corridor – there is little alternative to the A12.
- Road safety including sub-standard junctions.
- Community severance limiting local residents' access to services and social networks, and an air quality management area in Stratford St. Andrew village.
- Perception of the area from inward investors and leisure visitors as a result of all of these factors.
- Expected increase in traffic flows on the A12 corridor as a result of growth in housing, employment, Sizewell C construction and the tourist industry. This would exacerbate all of the above problems for businesses, visitors and residents alike.

Solving these problems through the SEGway scheme will help make this main artery in East Suffolk fit for purpose and help deliver regeneration benefits to towns within Waveney district through their improved connectivity.

Transport and environmental studies have been undertaken by Suffolk County Council since the 2000s into how to solve the problems associated with traffic in the Four Villages and the impacts of Sizewell C growth on the road and communities. This culminated in the development of a Strategic Outline Business Case in 2016 investigating two long bypass and two short bypass options, with DfT development funding awarded to take forward this work to the next stage. The scheme option assessment and appraisal has been developed further in the Outline Business Case, with a summary of all option appraisal included in the Option Assessment Report.

### 3.3 Policy Fit

The scheme is closely aligned with the outcomes sought by pertinent national, regional and local policy documents. Specific emphasis should be given to the following documents to which SEGway aligns:

- The Government's Industrial Strategy and Clean Growth Strategy – in the links between SEGway and helping to realise continued investment in offshore wind and new nuclear power generation.
- The Transport Investment Strategy including the Government's emerging concept of a Major Road Network for England, to which the A12 would be a regionally important component.
- The National Policy Statement for Nuclear Power Generation which first set out the potential for Sizewell C.
- The Economic Strategy for Norfolk and Suffolk – which sets out Norfolk's and Suffolk's Energy Coast and the transport corridors within it as a priority place for continued growth and investment.
- Suffolk's Local Transport Plan – which has long stated the need for the scheme.
- Adopted Local Plans for Waveney District Council and Suffolk Coastal District Council which support SEGway.
- Local Plan reviews - the First Draft Waveney Local Plan and Suffolk Coastal District's Issues and Options.
- East Suffolk Tourism Strategy – which sets out the vital role of the sector to growth, employment and well-being in East Suffolk and the dependency of it on a fit for purpose transport network.
- Access to International Gateways – namely the ports of Lowestoft (for servicing the offshore wind industry), Ipswich (UK's largest grain handling port) and Felixstowe (the UK's busiest container port).

### 3.4 Value for Money Assessment

The Outline Business Case has appraised the economic, environmental, social, distributional and fiscal impacts of the proposed scheme using qualitative, quantitative and monetised information. A summary of the overall monetised costs and benefits as prepared for the Central Case is provided below. Both options help achieve the objectives with the strongest benefits noted for the dual carriageway option. The greatest differentiation between the two options is found in terms of the present value of benefits associated with journey time savings, accidents and local air quality.

Benefit	LB1d (Dual Carriageway)	LB2s (Single Carriageway)
Present Value of Benefits (PVB) including	<b>£230.5m</b>	<b>£143.4m</b>
Economic efficiency benefits	£194.3m	£128.2m
Reduced accidents	£27.1m	£9.1m
Local Air Quality	£9.7m	£3.6m
Noise	£3.8m	£4.5m
Greenhouse gases	-£2.9m	£1.7m
Indirect taxation revenue	-£1.3m	-£3.3m
Present Value of Costs (PVC)	<b>£120.9m</b>	<b>£75.6m</b>
Net Present Value	<b>£109.6m</b>	<b>£67.8m</b>
Benefit Cost Ratio (PVB ÷ PVC)	<b>1.906</b>	<b>1.898</b>
Adjusted BCR	<b>1.961</b>	<b>1.956</b>
Wider Impacts	<b>£86 million - £183.1 million</b>	
Economy - Reliability	Slight beneficial	Slight beneficial
Environmental - Landscape	Large adverse	Large adverse
Environmental - Historic Environment	Moderate adverse	Moderate adverse
Environmental - Biodiversity	Large adverse	Large adverse
Environmental - Water Environment	Slight adverse	Slight adverse
Social - Physical activity	Neutral	Neutral
Social - Journey quality	Strong beneficial	Strong beneficial
Social - Security	Neutral	Neutral
Social - Severance	Slight beneficial	Slight beneficial

The Value for Money Statement makes a strong case for the scheme to be considered **High Value for Money**, with the scheme needing to capture just over £11m of benefits or reduce its costs by £5.6m to be categorised as High value for money (BCR of 2.0), with the lower range of wider impacts associated with Sizewell C and local employment and growth in the tourism economy more than enough to close that gap.

With potential Sizewell C developer contributions included in the scheme's BCR, this is also enough to categorise the scheme as High Value for Money with a BCR of 2.0+.

### 4. Overview of the Financial Case

The preferred option is estimated to cost £133.4 million, based on 2017 prices, including risk adjustments and excluding sunk costs. The project's funding package is currently planned as comprising a minimum 5% local contribution with the remainder from Central Government. This reflects the importance of the project in terms of helping the UK to meet its clean energy and growth targets – in helping to facilitate Sizewell C, and the affordability of a local contribution for Suffolk County Council and its local partners.



However, there is the opportunity for a significantly larger local contribution once it is confirmed that the Sizewell C project goes ahead. EDF Energy supports in principle the aims and objectives of the scheme and is prepared to make a proportionate financial contribution towards the SEGway scheme, in lieu of providing an alternative highway scheme along the A12 (identified as options within EDF Energy's Sizewell C Stage consultation), which would be required to enable its delivery of the Sizewell C project. It has been accepted by Suffolk County Council that the Sizewell C project would not justify the delivery of a four village bypass as mitigation in its own right. Therefore, any contribution by EDF Energy towards the SEGway scheme would be proportionate to the level of contribution necessary to mitigate the impacts of the Sizewell C project, and is contingent on the SEGway scheme being in place to support the construction of Sizewell C. Suffolk County Council is still in discussion with EDF Energy what a proportionate mitigation for Sizewell C would be, but believes that a two village bypass would be the minimum mitigation.

As Suffolk County Council considers that the development cannot be properly mitigated with less than a bypass scheme, Suffolk County Council estimates this would result in a contribution from EDF Energy of between £12 million and £26 million towards the scheme, which would then constitute a 9-19% private sector local contribution towards LB1d or a 13.5% to 29% private sector local contribution towards LB2s, reducing the level of Central Government funding.

The local contribution of 5% currently proposed does not rely on EDF Energy's contribution at this stage. This would place unnecessary uncertainty on SEGway's timescales and the ability to deliver the scheme in time for the construction period of Sizewell C, given that EDF Energy is yet to submit its Development Consent Order. If and when Sizewell C receives its Development Consent Order and a positive Final Investment Decision, EDF Energy would then be in a firm position to commit funding. This would allow the local contribution to be substantially increased by being funded through the in-lieu payment of its mitigation requirements. However, EDF Energy would be looking to progress construction of the new nuclear power station as quickly and efficiently as possible. Crucially this would be more rapidly than the time it would then take for Suffolk County Council to be given the 'green light' to design, plan and procure the construction of SEGway to successfully mitigate all the impacts of Sizewell C's construction on this part of the A12. Thus, it will be essential to progress the scheme before the outcome of a Development Consent Order and Final Investment Decision is known.

Meanwhile, Suffolk County Council continues to work closely with EDF Energy, with the aim to secure funding from them to help reduce the national and local contribution to the scheme. As demonstrated in the Strategic Case, EDF Energy is supportive of the scheme and willing to provide funding in lieu of its own mitigation. Also as demonstrated in the Economic Case, should this funding be secured then this has a beneficial impact on the scheme's value for money and importantly, the level of public funding.

## 5. Overview of the Management Case

The Management Case shows that there is a significantly mature governance arrangement and organisation to discharge the responsibilities associated with the planning, construction, operation and monitoring of the SEGway scheme. Suffolk County Council is well versed in delivering major pieces of transport infrastructure and has provided a clear delivery programme and risk register to guide the scheme's development.

Suffolk County Council has also taken the decision to proceed with environmental surveys and scoping of other surveys and activities in early 2018 in advance of DfT making a firm decision on which schemes will be awarded Programme Entry status through the Large Local Major Funding route in May 2018. This approach helps to fast track the delivery of the scheme and allow the necessary steps to be taken to submit a planning application for determination in spring 2019.

Assuming that the scheme still demonstrates value for money it is anticipated that DfT approval of the Full Business Case would be achieved in early 2021 allowing construction contract award and mobilisation with a view to commence the scheme's construction in April 2021, with opening to the public in April 2023.

## 6. Overview of the Commercial Case

It is currently proposed that the scheme will use an OJEU 'Negotiated Procedure' procurement tendering process, which has been utilised by the Council previously and currently on large-scale transport infrastructure schemes, including the Lake Lothing Third Crossing in Lowestoft.

The Council will keep open the option of traditional 2 stage procurement or a design and build contract, with further work on the procurement strategy in 2018. The Council will also draw upon expertise from the DfT's Procurement centre of Excellence as required to determine the most appropriate route.

## 7. Summary of the Preferred Option

Based on the analysis undertaken across the five constituent parts of the Outline Business Case, the view of the Project Delivery Team is that LB1d (Dual Carriageway) is best able to meet the aim of the project, offers the best value for money and has the greatest support of public, business and political stakeholders. Advantages of the dual carriageway option and the resulting benefits include

- Value for money:
  - ✓ Reduced travel costs for businesses, commuters and visitors through improved connectivity to other major centres and the Strategic Road Network.
  - ✓ Increased road safety benefits by providing safer opportunities for overtaking slow moving vehicles.
  - ✓ Achievement of local noise and air quality benefits.
- Strategic fit with scheme objectives, central government, LEP and local government policy aims:
  - ✓ It is strongly aligned to the UK Government's Clean Growth Strategy and Industrial Strategy through its support to the delivery of £50 billion of investment in the highly productive energy sector in the next two decades, including 25,000 different job roles associated with Sizewell C and up to 3,000 jobs for Scottish Power's East Anglia ONE offshore wind investment. We forecast that SEGway could contribute £30 million to £115 million of Gross Value Add to the economy over the 60-year appraisal period through its role in facilitating Sizewell C (other infrastructure is of course also important).
  - ✓ It supports sustained growth in the region's tourism offer, responsible for 10,000+ jobs and 10 million annual visits, with SEGway forecast to result in £42.6 million of Gross Value Add benefits to the economy over the 60-year appraisal period through an increase in tourism visits and spending.
  - ✓ Provides essential infrastructure to support potential new homes, with the scale and location of growth to be confirmed in the reviews of each district's Local Plan, with Waveney district's subject to consultation and Examination in Public in 2018, and Suffolk Coastal district's subject to consultation in 2018 and Examination in Public in 2019.
- Future proofs the function of the A12 as part of Suffolk County Council's emerging Major Route Network. It helps provides all road users with a largely consistent and high quality level of service (dual carriageway) for journeys between Ipswich, the A14 (and thereby London, Essex, the Southeast and Midlands) and the A1094 where travel demand splits between the A12 (Saxmundham, Southwold, Lowestoft and Great Yarmouth) and A1094 (Aldeburgh, Leiston and Sizewell). This helps portray the A12 in a positive image as a marketable gateway to a region that is quicker and easier to do business in, live in and visit thereby:
  - ✓ retaining companies and workers,
  - ✓ encouraging repeat visits, and
  - ✓ attracting new businesses, skilled workers, families, and visitors.
- It helps to provide the headroom for East Suffolk's energy and tourism industries and settlements to grow at the pace they want, rather than be dictated by transport network constraints.
- It provides East Suffolk's only major north-south road and its economy with the resilience to cater for significant seasonal variation in travel demand caused by visitors to East Suffolk's wide range of tourist destinations and slow moving agricultural traffic. It will help improve the reliability of travel for East Suffolk's businesses and hauliers to and from the ports of Felixstowe, Ipswich and Lowestoft and the Strategic Road Network. It also caters for the increase in traffic demand caused by ten years of Sizewell C construction and subsequent periodic maintenance outages of both Sizewell B and C power stations.
- Strength of support from the public, business, MPs, district, town and parish councils.

Suffolk County Council are also promoting major investment in transport improvements in Ipswich (Upper Orwell Crossing) and Lowestoft (Lake Lothing Third Crossing), as fast track schemes through the Large Local Major Schemes process. These schemes in addition to SEGway would promote better connectivity within and between Suffolk's two major settlements, and two of its three key ports.

The two remaining sections of A12 single carriageway south of the scheme (close to Woodbridge) are in Suffolk County Council's view more easily solved through lower cost, largely online improvements utilising a wide range of current and future public and private funding options.



This represents a once in a lifetime opportunity to forward fund the further development of SEGway through the design, consultation, planning, scheme orders and procurement phases. This approach helps provide the best opportunity to capture developer funding to deliver SEGway in advance of Sizewell C's peak construction.

## 8. List of Annexes

In addition to the five case reports and their appendices, the following Annexes should be read.

### Business Case Annexes

1. *Economic Appraisal Report*
2. *Environmental Report*
3. *Forecasting Report*
4. *Option Assessment Report*
5. *SEGway Consultation Report*
6. *Strategic Outline Business Case and its appendices*
7. *2006 Four Villages Study (The Landscape Partnership / Faber Maunsell)*
8. *2013 Four Villages Study (AECOM)*
9. *2014/2015 Four Villages Study (AECOM)*
10. *SCTM Local Model Validation Report (WSP)*
11. *SEGway Local Model Validation Report (WSP)*
12. *SCTM Traffic Data Collection Report (WSP)*
13. *Demand Model Report (WSP)*
14. *SEGway Model Specification Report (WSP).*