

2. Existing Situation

2.1 Introduction

The chapter is structured under the following sub-headings:

- Population and growth (Section 2.2)
- Educational and skills attainment (Section 2.3)
- Car ownership, distance and journey to work (Section 2.4)
- Economy employment, deprivation, economic performance and productivity, structure of the economy, growth opportunities (Section 2.5)
- Transport network (Section 2.6)
- Route performance (Section 2.7)
- Users' perception of the A12 (Section 2.8)
- Environment (Section 2.9).

2.2 **Population and growth**

The 2011 Census provides a recent measure of the total resident population and population density across the study area. The total population of Suffolk Coastal, Ipswich, Waveney, the wider New Anglia Local Enterprise Partnership (LEP) area and England are included in **Table 2-1** below. These three Local Authority districts comprise the major areas of influence for the scheme, with the scheme itself located in the centre of Suffolk Coastal district and connecting the major urban areas of Ipswich to the south and Lowestoft within Waveney to the north. The New Anglia LEP covers the wider area of Suffolk and Norfolk.

Coographical Area	2001	2011	Change		
Geographical Area	2001 2011		Number	%	
Suffolk Coastal district	115,141	124,298	9,157	8.0	
Ipswich borough	117,069	133,384	16,315	13.9	
Waveney district	112,342	115,254	2,912	2.6	
New Anglia LEP area	-	1,586,051	-	-	
England	49,138,831	53,012,456	3,873,625	7.9	

Source: 2001 and 2011 Census.

Table 2-1: Historic trends in total resident population, 2001-2011.

Table 2-1 shows that Suffolk Coastal district's population increased by approximately 8% between 2001 and 2011; similar to the population growth percentage for England as a whole. Ipswich to the south grew substantially faster, with a 14% increase in population from 2001 to 2011. Growth in Waveney starting from a similar base in 2001 has not matched that of the other districts with only 2.6% growth.

The Ipswich⁶ and Waveney Housing Market Area (HMA) Strategic Assessment studies⁷ highlight the attractiveness of the area as a place to live and the impact this has had on population increase between 2001 and 2015. This is important in that the Local Planning Authorities are required through the Local Plan process to seek to meet the expected housing needs of migrants from both domestic and overseas sources, as well as the impacts of other demographic changes.

The Ipswich HMA has continued to experience persistent population growth although this has slowed down in recent years. Of all the Ipswich HMA authorities Suffolk Coastal District experienced the greatest increase in population as a result of domestic migration; 14,090 in total. This figure represents 11.3% of the 2014-15 population. How this has varied over the 2001 to 2015 time period is illustrated in **Figure 2-1**.

⁶ The Ipswich Housing Market Area is defined as Ipswich, Babergh, Mid Suffolk and Suffolk Coastal Districts.

⁷ Ipswich and Waveney Housing Market Areas, Strategic Housing Market Assessment Part 1, Peter Brett Associates, May 2017





Source: ONS MYE (2015)

Figure 2-1 : Suffolk Coastal District – Domestic and Overseas Migration (2001 – 2015), Source: Peter Brett Associates, 2017.

2.3 Educational and skills attainment

The New Anglia LEP has invested significant funding in improving education and skills infrastructure within the wider Suffolk and Norfolk region, most notably following the City Deals signed for Ipswich and Norwich and the April 2015 Growth Deal investment awarded by the UK Government⁸. Notable projects benefitting from the Growth Deal funding within the region have included £2.5 million for the establishment of the Lowestoft Enterprise Zone, £5 million invested in expanding superfast broadband across Suffolk, £13 million awarded to 265 businesses as part of the Growing Business Fund as well as numerous investments in new college facilities and transport schemes across the wider LEP area. The LEP published a Skills Manifesto in 2013 and set up a Skills Board to deliver their skills strategy across the region. A LEP Skills Investment Fund also provides £4 million worth of funding for local employers to secure Skills Deals with the LEP.

Table 2-2 shows that the proportion of the population of the Suffolk Coastal district holding higher level qualifications is marginally above the national average. The proportion of the population of Waveney district and Ipswich borough with higher level qualifications is below the national average. New investment by the New Anglia LEP is aimed at addressing this discrepancy across the region. Higher qualified people are understood to typically be more willing to travel further to access higher skilled jobs, indicating that the population of Suffolk Coastal district are currently more likely to travel further to reach the key employment centres in the surrounding districts.

Highest qualification held	Suffolk	lpswich	Waveney	New Anglia	England
	Coastal				
No qualifications	21%	26%	30%	25%	22%
Level 1 (equivalent to GCSE G-D grade)	13%	16%	14%	14%	13%
Level 2 (equivalent to GCSE A*-C grade)	17%	16%	16%	16%	15%
Apprenticeship	4%	4%	5%	4%	4%
Level 3 (equivalent to A level)	11%	11%	12%	12%	12%
Level 4 or above (equivalent to a diploma)	29%	21%	18%	23%	27%

Source: Census 2011 (DC5102EW)

Table 2-2: Highest qualification held by residents of each district in the study area, New Anglia LEP and England

⁸ <u>https://newanglia.co.uk/growth-deal/</u>, accessed 8 December 2017



2.4 Car ownership and travel to work

Table 2-3 shows that car ownership in the Suffolk Coastal district is significantly higher than in England and the surrounding districts. In Suffolk Coastal, 91% of households own one or more car or vans compared to 80% nationally.

No. of cars in household	Suffolk Coastal	Ipswich	Waveney	New Anglia	England
No car or van	9%	21%	16%	13%	20%
One car or van	36%	44%	43%	39%	39%
Two or more car or van	55%	35%	42%	48%	41%

Source: Census 2011 (DC4109EWla)

Table 2-3: Car ownership levels in the study area

These high rates of car ownership are reflected in **Table 2-4** which shows that 63% of workers in the Suffolk Coastal district drive to their place of work in a car / van, compared to 54% nationally.

Mode of travel	Suffolk Coastal	Ipswich	Waveney	New Anglia	England
Work from home	14%	7%	10%	12%	10%
Train, underground,	2%	2%	1%	2%	9%
Bus, mini bus or coach	2%	8%	3%	4%	7%
Driving a car or van	63%	54%	61%	61%	54%
Passenger in a Car or Van	4%	7%	5%	5%	5%
Bicycle	4%	5%	6%	4%	3%
On foot	8%	16%	10%	10%	10%
Other	2%	2%	3%	2%	2%

Source: Census 2011 (DC7101EWla)

Table 2-4: Mode of travel to work by residents of each district, New Anglia LEP and England

Table 2-5 shows that distances travelled to work in the Suffolk Coastal district are generally in line with the national picture. It is notable however, that a greater proportion work mainly at or from home.

Distance travelled to work	Suffolk Coastal	Ipswich	Waveney	New Anglia	England
Less than 2km	16%	25%	21%	18%	17%
2km to less than 5km	14%	28%	19%	16%	18%
5km to less than 10km	15%	10%	10%	13%	17%
10km to less than 20km	17%	10%	15%	15%	15%
20km to less than 30km	5%	4%	5%	8%	6%
30km to less than 40km	3%	2%	4%	3%	3%
40km to less than 60km	2%	2%	2%	2%	2%
60km and over	5%	4%	3%	4%	3%
Work mainly at or from home	14%	7%	10%	12%	10%
Other	8%	8%	10%	9%	8%

Source: Census 2011 (DC7102EWla)

Table 2-5 : Distance travelled to work by residents of each district in the study area, New Anglia LEP and England

Figure 2-2, **Figure 2-3** and **Figure 2-4** show the main commuting flows and workplace locations for residents of the Suffolk Coastal district, in comparison to Ipswich and Waveney.

Data for the Suffolk Coastal district indicates that the majority of the residents also work in this local authority area, with over 20,000 people commuting by car or other forms of road transport. A large number of Suffolk Coastal residents also commute to Ipswich, with up to 10,000 commuters travelling by road to the borough. As the only major north-south road within the district, it is likely that a large number of these journeys utilise the A12.





Figure 2-2: Location of workplace and mode of travel to work by road for residents of Suffolk Coastal district

By comparison, **Figure 2-3** shows the numbers of workers commuting from Ipswich borough to Suffolk Coastal district and Waveney district. Approximately 6,500 commuters travel by road to Suffolk Coastal district daily, significantly fewer than those that travel in the opposite direction. Although still an important commuting flow, this is mainly using the A12. Only a very small number of workers commute daily from Ipswich borough to Waveney district and vice versa.



Figure 2-3: Location of workplace and mode of travel to work by road for residents of Ipswich borough

The numbers of commuters travelling from Waveney district to Suffolk Coastal district and Ipswich borough are significantly lower than the commuting flows between these latter two areas. However, in excess of 1,200 commuters still travel to Suffolk Coastal district daily by road.





Figure 2-4: Location of workplace and proportion of travel to work by road for residents of Waveney district

Key Observations

- Population growth in Suffolk Coastal district has been partly driven by domestic migration, reflecting the attractiveness of the area as a place to live.
- Population growth in Waveney district has not been as high as Suffolk Coastal district and the rest of England.
- 91% of households have access to the car within Suffolk Coastal district, and so is the predominate method of travel to work for residents.
- Distances travelled to work are higher for Suffolk Coastal district compared to Waveney district and Ipswich borough which have larger urban centres to reduce journey distances.
- Qualifications for Suffolk Coastal district residents closely match those of England. Waveney district in comparison performs poorly compared to the national average.

2.5 Economy

2.5.1 Employment and Labour Market

The Business Register and Employment Survey (BRES) publish employee and employment estimates at detailed geographical and industrial levels, based on data gathered from businesses. **Table 2-6** shows historic trend BRES data for the period 2011 to 2015.

Coographical Area	2011	2015	Change 2011-2015		
Geographical Area	2011 2015		Number	%	
Suffolk Coastal district	46,007	48,807	2,800	6.1	
Ipswich borough	65,765	69,450	3,685	5.6	
Waveney district	38,880	39,525	645	1.7	
New Anglia LEP area	617,053	654,919	37,866	6.1	

Source: 2015 BRES. The BRES definition of an employee is anyone working on the BRES reference date who is aged 16 years or over that the contributor directly pays from its payroll(s), in return for carrying out a full-time or part-time job or being on a training scheme.

Table 2-6: Total employees and growth by district and New Anglia LEP area, 2011-2015



Percentage growth in employment has been highest in Suffolk Coastal district, closely followed by Ipswich borough. As with population change, Waveney district has experienced comparatively lower growth.

2.5.2 Economic performance and productivity

Gross Value Added (GVA) measures the contribution to the economy of each individual producer, industry or sector in the UK. It is used in the estimation of gross domestic product (GDP), a key indicator of the state of the overall economy. Data for GVA per filled job can be used as a measure of productivity.

Table 2-7 sets out workplace-based GVA per head for the Suffolk Coastal, Ipswich and Waveney local authorities, compared to New Anglia LEP Area and England and how that has changed between 2005 and 2015.

Coorrentiant Area	Total GVA,	£ per head	Change 2005-2015		
Geographical Area	2005	2015	Number	%	
Suffolk Coastal district	19,538	24,362	4,824	25	
Ipswich borough	20,913	24,669	3,756	18	
Waveney district	15,240	19,068	3,828	25	
New Anglia LEP	17,857	21,788	3,931	22	
England	20,738	26,159	5,421	26	

Table 2-7: Changes in GVA (£ per head), 2005-2015. Source: ONS 2015.

Suffolk Coastal district performs above average (£24,362 per head) compared to the New Anglia LEP area (£21,788 per head), but below the figure for England as a whole (£26,159 per head). Over the ten-year period Suffolk Coastal district has largely matched the growth of England and almost closed the gap in productivity with Ipswich borough. Waveney district to the north of the SEGway scheme lags significantly behind in terms of productivity, despite the 25% growth. This suggests that the productivity gap is persistent and entrenched. Interestingly the GVA performance for Waveney district is on a par with performance of the North of England region (around a 25% gap compared to England) described in significant detail within the Northern Powerhouse Independent Economic Review.⁹ The lack of connectivity with the rest of East Suffolk and hence the rest of the English economy is likely to be a key contributor to the performance of Waveney district. Further connectivity improvements associated with Suffolk's Energy Coast across road, rail and digital infrastructure will help to completely close the gap for Suffolk Coastal district and take Waveney district out of its entrenched position.

2.5.3 Deprivation

The Indices of Multiple Deprivation (IMD) were updated in 2015, and measure deprivation across seven domains: income; employment; education, skills and training; health and disability; crime; barriers to housing and services; and living environment. **Table 2-8** demonstrates that across the study area and surrounding districts, Suffolk Coastal district has the lowest levels of deprivation, with 0% of LSOAs (Census and National Statistics - Lower Super Output Areas) falling within the most deprived 10% of LSOAs nationally. By comparison, Ipswich borough and Waveney district have 14% and 12% of their LSOAs within the 10% most deprived LSOAs nationally.

Local Authority	% of LSOAs in 10% most deprived in England
Suffolk Coastal district	0%
Ipswich borough	14%
Waveney district	12%

Table 2-8: Presence of 10% most deprived LSOAs within the study area. Source: English Index of Multiple Deprivation, 2015¹⁰

⁹ SQW (2016): Northern Powerhouse Independent Economic Review <u>http://www.sqw.co.uk/insights-and-publications/northern-powerhouse-independent-economic-review/</u> accessed 31 July 2017

¹⁰ https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015

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Figure 2-5 shows the Index of Multiple Deprivation Rank for LSOAs located along the route of the proposed SEGway scheme, as well as other significant employment centres within the region, such as Ipswich, Lowestoft, Sizewell nuclear power station and Adastral Park in Martlesham. The deprivation divide across the region is notable, with areas of Ipswich and Lowestoft in particular displaying significantly higher levels of deprivation.

Figure 2-5: Map of the IMD Rank for LSOAs within the vicinity of the study area.



As a result of the high regional levels of deprivation within the large coastal towns, Lowestoft, Great Yarmouth and surrounding areas have been granted Assisted Area Status from 2014-2020 by the UK Government. Assisted Areas are defined under European state aid rules as "less economically advantaged places that would benefit from additional support for development". This status enables additional financial aid to be provided by the Government, predominantly delivered to local businesses to support new investment. This is likely to provide significant benefits for the further development of the Great Yarmouth and Lowestoft Enterprise Zone and the energy sector located within the area.

Key Observation

Suffolk Coastal district's economic performance is good, having closed its productivity gap with Ipswich and matched that of England as a whole. It has a sound basis to grow further through more investment in infrastructure. The more peripheral Waveney district experiences an entrenched and persistent productivity gap compared to the rest of England on a par with Northern regions of England. It follows that improved transport links such as SEGway that better connect the district with Suffolk Coastal, Ipswich and the rest of England will start to make a difference in closing that gap.

2.5.4 Structure of the economy

The Economic Strategy for Norfolk and Suffolk and the LEP's previous Strategic Economic Plan (SEP) seek to deliver more jobs, new businesses, new housing, and increased productivity by 2036, building on a successful Norfolk and Suffolk economy that contributes £35 billion to UK plc, and where investment is made it delivers growth. Specific 'high-impact growth' sectors across the region include the following, with many of the growth opportunities involving collaboration and partnership between firms in different sectors:

- Energy global expertise is found across all energy sectors, including oil and gas, nuclear generation and nuclear new build and the world's largest offshore windfarms in development off the East Anglian coast. This is all fed by a globally competitive renewables supply chain and support industry.
- Life Sciences and Biotechnology international expertise in the fields of food, health and pharmaceuticals. In East Suffolk, this includes the world leading centre for marine science, innovation and research Cefas, headquartered at Lowestoft.
- Information Communication Technology (ICT) / Tech and Digital Creative including the world leading centre of innovation in communications technology at Adastral Park and Innovation Martlesham adjacent to the A12 near Ipswich
- Advanced Agriculture, Food and Drink employs over 10% of the workforce generating £2.2 billion per annum GVA. The region supplies food and drink to the country's supermarkets and the region's artisan products are a draw for visitors.
- Financial Services and Insurance contributes £3.1 billion per annum GVA or 13.4% of New Anglia's total and employs almost 21,000 people (3.2% of employment). As well as regional businesses, Ipswich hosts a concentration of both national and international insurance companies.
- Visitor Economy Tourism, Heritage and Culture. This sector employs about 74,000 people. Tourism is worth £1.3 billion per annum in GVA to New Anglia, including the Broads (which extend into north eastern Suffolk) and the Suffolk coast and an underpinning by a strong cultural offer through festivals such as Aldeburgh and Latitude, both accessed via the A12.
- Transport, freight and logistics (including ports). These are worth £1.3 billion per annum to New Anglia and employ over 23,500 people. These include Ipswich, the country's largest port for grain export; Great Yarmouth and Lowestoft serving the North Sea energy sector; and Felixstowe as the UK's largest container port.
- **Construction and development** a large and diverse construction and development sector including emerging specialisation in sustainable design.
- Advanced manufacturing and engineering including national expertise in automotive, civil aviation, composites and pharmaceuticals.

The Business Register and Employment Survey (BRES) provides data on employment by industrial sector. **Figure 2-6** shows the percentage of total employees employed in broad industrial sectors in 2015 across the local authority areas of Suffolk Coastal, Ipswich and Waveney, and England as a whole.



Figure 2-6: Employees by broad industrial sector, 2015. Source: BRES, 2015.

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The BRES data indicates that Transport and communications makes up the largest employment sector within the Suffolk Coastal district, accounting for almost 25% of all employment in the region, significantly higher than the proportions in neighbouring districts and England as a whole. This likely reflects the importance of two key components of Suffolk's economy:

- High-tech business centres such as Adastral Park at Martlesham, which is BT's Global Research and Development Headquarters as well as a base for internationally significant companies such as Huawei, Alcatel-Lucent, Nokia Cisco and Intel
- The county's international Gateways (Felixstowe, Lowestoft, Ipswich) and the logistics operators that serve them and the region's businesses.

Comparatively the district of Waveney to the north of the proposed scheme, has a significantly higher proportion of its workforce within the manufacturing sector, likely reflecting the various businesses associated with the port of Lowestoft. This includes a significant proportion employed by the large offshore wind sector in the area either directly or as part of its supply chain, servicing the Greater Gabbard, Galloper and East Anglia wind farms off the Suffolk and Norfolk coasts.

Meanwhile, Ipswich to the south has a greater proportion of its workforce within professional, scientific, technical and other service sectors compared to neighbouring districts, reflecting its importance as an ever-growing business centre.

Both Suffolk Coastal and Waveney districts have higher proportions of their workforces employed in retail, accommodation and food services, indicating the relative importance of the tourism industry to the economies of these districts. In 2013 there were over 7.5 million trips made to Suffolk Coastal and Waveney districts, with a total direct visitor spend of £462million.¹¹ However, seasonality is a significant issue for employment in this sector, with the majority of tourist trips to the various destinations in the district made in the summer months, resulting in increased stress on infrastructure at these times.

Regarding annual numbers of new business starts, data are made available by the Office for National Statistics for the years 2011-2015 indicating that within Suffolk as a whole there were 3,045 new businesses across the year. Among the districts within Suffolk, the number of new businesses was also notably high in Ipswich (605) and Suffolk Coastal (560), both likely to benefit further from enhanced transport links as a result of SEGway.

Table 2-9 indicates that the number of new business starts within Suffolk and the districts within the area of impact of the SEGway scheme have risen across the five-year period from 2011-2015, indicating an increased recognition of the opportunities the region offers to entrepreneurs and new businesses.

Geographical Area	2011	2012	2013	2014	2015
Suffolk	2,495	2,400	3,095	2,495	3,045
Suffolk Coastal district	435	430	495	435	560
Ipswich borough	425	430	540	520	605
Waveney district	330	305	435	395	365

Table 2-9: Enterprise Births by year, 2011-2015 Source: ONS Business Demography 2015

2.5.5 Growth Opportunities

In addition to the proposed construction of Sizewell C (provided in brief summary herein with more detail in sections 3.2 and 11.1.3), both the East Suffolk Growth Plan¹² and the Economic Strategy for Norfolk and Suffolk identify a number of economic sectors, and specific sites based around these sectors, which are of particular importance to the regional economy. These are considered to be of critical importance in enabling future economic growth in the region through increased wealth creation and enhanced employment opportunities.

 ¹¹ Economic Impact of Tourism Reports for Suffolk Coastal and Waveney, 2015, referenced in the East Suffolk Tourism Strategy 2017 to 2022
 ¹² East Suffolk Growth Plan 2014-2025, Suffolk Coastal District Council & Waveney District Council, August 2014



A second Suffolk Enterprise Zone has recently been established in six locations, focusing on key sectors for innovation and supply chain expertise, including agri-tech, food and health, offshore energy, ICT and digital and creative sectors and the Green Economy.

Suffolk's Energy Coast

EDF Energy is proposing to construct a new nuclear power station at Sizewell, known as Sizewell C, comprising two reactors, immediately to the north of the existing single reactor Sizewell B power station. This location was identified in 2011 by the Government's National Policy Statement for Nuclear Power Generation $(2011)^{13}$ as a potentially suitable site for a new nuclear power station because of its proximity to an existing power station (Sizewell B), the North Sea and its relatively isolated location.

EDF Energy undertook its Phase Two Consultation in 2016. EDF Energy is still to undertake its Stage 3 consultation for Sizewell C, followed by a period of time to develop and submit a Development Consent Order, moving to the examination, possible approval and Final Investment Decision, before construction can commence. This timetable needs to be considered alongside the timetable for the construction of SEGway.

Sizewell C's construction workforce is expected to involve 25,000 different roles over the lifetime of the project. This includes a peak of approximately 5,600 people plus another 500 off-site staff. A permanent operational workforce of around 900 personnel would build up over the course of the construction phase to run the station post-commissioning. The construction workforce equates to 7% of the current Suffolk Coastal District's current entire workforce.



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Figure 2-7: Map of the East of England Energy Zone. Source: EEEZ

Norfolk and Suffolk and the East Suffolk coastline in particular have over 50 years' experience in the offshore energy sector, originating from the exploration of North Sea oil and gas in the 1960s (**Figure 2-7**). The energy sector is currently worth £1 billion GVA to Norfolk's and Suffolk's economy and employs 7,700 people, with £50

¹³ Department for Energy and Climate Change, National Policy Statement for Nuclear Power Generation, July 2011

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/47859/2009-nps-for-nuclear-volumel.pdf, accessed 10 December 2017



billion investment in the sector expected over the next two decades. The energy sector is currently one of the region's most productive, with a GVA per job of £126,000.14

Given the expertise in the offshore energy sector and the infrastructure present, the East of England Energy Zone (EEEZ) was established by a partnership of regional business and Local Authorities to facilitate future investment and development of the sector.

This EEEZ includes the Great Yarmouth and Lowestoft Enterprise Zone, also designated as a national Centre for Offshore Renewable Engineering (CORE), which provides further excellent conditions for the development of offshore wind projects. OrbisEnergy, situated in Power Park Lowestoft, also plays an important role in the progression of the sector as a specialist regional innovation centre for offshore renewable energy and supply chain development.

As shown in **Figure 2-7**, the majority of companies involved in the offshore wind supply chain are located along the East of England Energy coastline. Lowestoft has also been selected as the construction base for Galloper Wind Farm and as both a construction and operations and maintenance hub for the £2 billion, 102-turbine East Anglia ONE development comprising part of the East Anglia Array. Scottish Power has noted that the East Anglia ONE development has the potential to develop 3,000 new jobs.

Also related to the EEEZ is the Centre for Environment, Fisheries and Aquaculture Science (Cefas) – a world leader in marine science and technology with its headquarters in Lowestoft. It provides solutions for the aquatic environment, biodiversity and food security. It works with sectors which Lowestoft and Suffolk act as hubs for, including offshore renewable energy, oil and gas and nuclear energy. In October 2017, Cefas received planning permission to redevelop its headquarters site in Lowestoft, with £16 million of investment in new and refurbished office and laboratory facilities to create a leading centre for applied science, with completion of the works scheduled for March 2019.

The UK's Fisheries Minister – George Eustice has stated: "Cefas has always been at the forefront of marine research and innovation, and I'm pleased this new centre is one step closer to reality. Once complete it will help bolster our research and understanding of sea life – solidifying our positon as a world leader on marine science and a champion of sustainable fishing".¹⁵

Tourism

The Suffolk tourism industry is considered a highly important part of the regional economy and another key sector for the LEP. The tourism sector has grown consistently in East Suffolk for the past twenty years and has outstripped the rate of tourism growth at the national level. In 2013 there were over 7.5 million day trips and 2.5 million overnight stays in the Suffolk Coastal and Waveney districts. The total direct spend from visitors was £462 million, adding £590 million to the local economy and supporting the employment of over 12,500 individuals. ¹⁶ However, the ability of the tourism sector to grow and develop depends to a great extent on the safeguarding of the area's tourism assets and also importantly, on the ease of access to the area. The growing population in the Greater London area and Suffolk's expanding population present an increasing market for East Suffolk's attractions.

Figure 2-8 shows the location of tourist destinations within the area. Important destinations accessible from the A12 include coastal resorts such as Great Yarmouth, Lowestoft, Kessingland, Southwold and Aldeburgh with specific attractions including Adnams Brewery, the Broads National Park, the Suffolk Coast and Heaths AONB, Framlingham Castle, Leiston Abbey, Orford Castle, Sutton Hoo, Dunwich, RSPB Minsmere, Snape Maltings art complex, the annual Latitude, FolkEast Festivals and the Suffolk Coast Path. Beyond these principal locations there are a wealth of secondary tourist sites across the region accessed from the A12, including Rendlesham Forest, Africa Alive and RSPB Boyton, further bolstering Suffolk's tourist offering.

¹⁴ New Anglia LEP, Economic Evidence Report (Updated), p. 126, December 2017, <u>https://newanglia.co.uk/wp-content/uploads/2017/12/2017-12-05-FINAL-Economic-Evidence-Report-single-pages-HighRes.pdf</u>, accessed 8 December 2017

¹⁵ A new era for marine science: green light for new Cefas headquarters in Lowestoft, Cefas Press Release, 13 October 2017

¹⁶ Economic Impact of Tourism Reports for Suffolk Coastal and Waveney 2015, referenced in the East Suffolk Tourism Strategy 2017 to 2022





Figure 2-8: Location of the majority of key tourism destinations within East Suffolk

Specific features of the tourist economy, namely the Suffolk Coastline, Food and Drink, and Festivals are now described in turn.

Suffolk Coastline

The 2015 Destination Research report¹⁷ commissioned by Visit Suffolk identified the Heritage Coast of East Suffolk as one of the top tourist destinations, with the coast noted as one of the best things about Suffolk. Coastal towns such as Aldeburgh and Southwold represent 'market towns by the sea' whilst Felixstowe and Kessingland are more traditional seaside resorts. Southwold in particular is known for its iconic pier and lighthouse and the famous Adnams' Brewery which exports ales and other alcoholic beverages internationally.

The Suffolk Coastline also has a good network of walking routes, with three established long distance trails and a series of shorter trails. It is estimated that the Suffolk Coastal and Heaths AONB alone is worth £190 million per year in direct contributions to the local economy, with a further £44 million being generated through indirect spend. This supports an estimated 3,599 Full Time Equivalent (FTE) jobs.

¹⁷ Visit Suffolk Market Segmentation, Destination Research Ltd, 2015, <u>https://www.suffolk.gov.uk/assets/planning-waste-and-environment/suffolks-countryside-and-wildlife/Visit-Suffolk-Market-Segmentation-2015-FINAL-Report.pdf</u> accessed 14 December 2017



Investment in projects along the East Suffolk coastline is important to continue to attract tourists, ensuring the maintenance of current attractions and creation of new destinations for visitors. In 2016 the Lowestoft Coastal Community Team received a £997,901 grant from the UK Coastal Community Fund, to transform a currently semi-derelict green space and seafront promenade at Ness Point, Britain's most easterly point, into a visitor destination that celebrates its cultural heritage and location.

The 2015 Destination Research report also identified the A12 (which should be acting as a gateway to tourism opportunities) as one of the worst things about Suffolk (further information in Section 2.8.2). Case studies suggest that road improvements can generate tourism-related economic benefits as tourism businesses widen their catchment area owing to the enhanced accessibility, something recognised in the New Anglia SEP.

Food and drink

Suffolk has a strong offering of locally distinctive foods/produce and nationally renowned producers, with products such as Suffolk Pork and local names including Dingley Dell Farm, Stokes Sauces, Broxtead Estate/Suffolk Food Hall and Jimmy's Farm providing a strong tourist offering. The region is also known for its abundance of high quality local pubs, restaurants and artisan shops set within some of Britain's best landscapes. Suffolk Coastal and Waveney Councils' have teamed up to produce several East Suffolk Food Trails, allowing tourists to better discover this breadth of offerings available across the district.

The thriving food and drink and agriculture industries have a strong reliance on the A12. It provides the means for goods deliveries to the country's supermarkets from key local businesses, farms and artisan providers, and access to the UK's largest port for grain export - the Port of Ipswich to the south, as confirmed by the DfT Port Freight Statistics.¹⁸ Its owner, ABP has invested more than £5.4 million in 2016/17 in new facilities at Ipswich, with volumes at the Port of Ipswich growing year-on-year since 2013.

ABP short sea ports director Andrew Harston said: "Our 2016 figures are yet another positive indicator of the importance of the Port of Ipswich to the broader East Anglian economy. An 8% increase in ship calls is a testament to the efforts of our staff and customers who are striving to continually grow their businesses. We are now looking forward to improving this result again in 2017."¹⁹

Festivals

The Suffolk Coastal region has a comprehensive programme of events and festivals which run roughly from March to November, although concentrated around the summer months. The range and quality of these festivals and events is considered a key driver of additional tourist visits to the region, with those outside peak summer months particularly important in creating new business during the off season. **Table 2-10** displays some of the multitude of festival offerings currently running within the district.

Name	Description	Location	Months
Music			
Aldeburgh Festival	17 days of classical music	Snape Maltings	June
Maverick Festival	Roots and americana	Easton Farm Park	June
Latitude Festival	Music, literature, comedy, theatre, dance and poetry. Twice winner of the UK Festival Award for Best Line-Up	Henham Park	July
Snape Proms	30 nights of classical music with international performers.	Snape Maltings	August
FolkEast	Folk music, food and crafts	Little Glemham	August

¹⁸ <u>https://www.gov.uk/government/statistics/port-freight-statistics-2016-final-figures</u>, September 2017 &

http://www.abports.co.uk/Our_Locations/Short_Sea_Ports/lpswich/, accessed 8 December 2017

¹⁹ http://www.ipswichstar.co.uk/news/associated-british-ports-hails-record-year-for-the-port-of-ipswich-1-4900140, accessed 8 December 2017



Name	Description	Location	Months
Food			
Jimmy's Sausage and	Sausages and beer from the award winning	Jimmy's Farm,	July
Beer Festivals	farm and live music	Belstead	
Aldeburgh Food & Drink	A weekend of tasting, talking about and	Aldeburgh	September
Festival	discovering East Anglian produce		
Woodbridge Shuck	Shellfish festival	Woodbridge	September
Framlingham Sausagefest	Autumn sausage festival, including	Framlingham	October
	workshops, activities and entertainment		
Arts and Literary			
Aldeburgh Literary	Talks and readings by a range of top writers.	Aldeburgh	March
Festival			
Ink Festival	Brand new works of theatre, films and live	Halesworth	April
	music		
Southwold Arts Festival	A week-long showcase by artists, poets,	Southwold	June
	writers, actors and musicians		
Felixstowe Book Festival	One of the newest book festivals in Suffolk	Felixstowe	July
Hightide Festival	10-day festival of new theatre	Aldeburgh	September
Halesworth Arts Festival	Top quality artists in small, intimate	Halesworth	October
	surroundings		

Table 2-10: Major festivals and events in the Suffolk Coastal region. Source: visitsuffolk.com

Some of the most successful of these include Aldeburgh Music Festival, which attracts around 100,000 visits per year to its performances, with approximately 40% of those estimated to travel from outside the area, and Latitude Festival, which attracts 35,000 visitors annually from across the UK. The Snape Maltings creative campus is also notable for the wide variety of nationally renowned concerts and festivals it plays host to, as well as numerous art exhibitions, independent shops and its location within the Suffolk Coast & Heaths AONB.

However, the success of the region's festivals and the increase in events during the summer months since 2006, has attracted large numbers of visitors and put significant pressure on the road network. This is most notable on the A12, which handles the majority of the traffic destined for the events. The congestion causes significant impacts to local residents and businesses who rely on the A12 to travel for work and leisure purposes, and also affects deliveries and freight.

Key Observation

The New Anglia LEP identifies Suffolk's Energy Gateway new road as a key factor for driving growth in the local economy, including maximising the potential of the energy, life sciences and biotechnology, ICT, visitor economy, agriculture, food and drink and the transport, freight and logistics sectors. This is reinforced by further evidence presented by the East of England Energy Zone and Destination Research Report on Tourism, and backed by our own research and analysis.



2.6 Transport network

2.6.1 Road network

The A12 is the major north-south highway and most important transport link in East Suffolk, linking Ipswich and Lowestoft and providing connectivity to the A14 and A47, with access to London, the Midlands, Europe and beyond. The A12 along the section between the urban boundaries of Lowestoft and Ipswich has a series of secondary A and B distributor road links to towns, villages and tourist attractions.

Travelling north to south this includes amongst others; Kessingland Beach (B1437); Southwold (B1127, B1126 and A1095); Beccles and the Broads National Park (A145, B1127); Walberswick and Dunwich (B1125 and B1387); Halesworth (A144); Dennington and rural areas of central Suffolk (known as "The Tourist Route" A1120); Leiston and Sizewell (B1122); Saxmundham and Framlingham (B1119); Aldeburgh, Leiston and Snape Maltings (A1094); Orford and Wickham Market (B1078), Framlingham (B1116); Melton and Rendlesham (A1152); Woodbridge (B1079 and B1438); Martlesham (B1438); Martlesham Heath (various unclassified distributor roads); and Kesgrave, Ipswich and its eastern park and ride scheme (A1214).

Moving to the specific section between Saxmundham and Wickham Market, this section of the A12 runs through or close to the communities of Farnham, Stratford St. Andrew, Little Glemham and Marlesford. It is a 4 ½ mile stretch of single carriageway road between two dual carriageway sections of the A12 that end at the junctions with the A1094 and B1078 respectively. It is a narrow and winding road, subject to speed limits (30 mph or 40mph) through the communities. In addition, there are fifteen side roads along its length, which lead to queuing and congestion from local traffic turning in and out of these roads. This section of the A12 does not meet current design standards with regards to both its alignment and capacity for the volume of traffic it now carries.

Road users have little alternative to the A12 for north-south movements. Alternatives are either substantially longer and / or inferior quality:

- The A140 / A143 route between Ipswich and Lowestoft via Beccles is some 9 miles (15 km) longer.
- The A1120 between the A140 to the northwest of Ipswich and A12 is signed as a tourist route, and is of lower standard.
- The A1152 / B1069 route between Woodbridge and the A1094 is only of 'A' road standard as far as the former US Airforce base at Bentwaters, with the B1069 of inferior quality and lower speed limits resulting in slower journey times (typically 5 minutes slower based on Google Maps at off peak times) in comparison to the A12 route to the west see **Figure 2-9** below.
- Most motorised vehicle users at off peak times are only likely to travel along the full length of this route to visit local destinations such as Sutton Hoo, Tunstall Forest and Snape Maltings on route.



Figure 2-9: Off-peak journey options – A12 vs A1152/B1069. Source: Map Data – Google Maps, 5 October 2017.



Key Observation

The A12 is the main transport link in the area. It caters for both local and strategic traffic. It is an important feeder link to a large number of secondary A and B roads. Alternatives are slower and of lower quality.

2.6.2 Bus services

Bus and rail services in the area are shown in Figure 2-10. Their frequency is shown in Table 2-11 (next page).



Figure 2-10: Map of local bus and rail services along the scheme section of the A12.

This section of the A12 is served by First in Norfolk & Suffolk supported by Suffolk County Council. The Four Villages along the section of the A12 are all served directly by the route 64, whilst the 65 parallels this along the A1152 and B1069 to the southeast. Neighbouring communities such as Framlingham are also linked by bus to Ipswich through routes that do not use the A12. Services on both 64 and 65 operate approximately every two



hours through most of the day, with the exception of weekday peak times on route 64 when the service is hourly. Other services (routes 62 and 521) are less frequent and more circuitous.

Comilao	Operates	Oneneter	Monda	y - Friday	Coturdou	Sunday & Bank
Service	between	Operator	Peak	Off-Peak	Saturday	Holiday
64	Leiston, Woodbridge, Ipswich	First	Hourly	Every 2 Hours	Every 2 Hours	No Service
65	Aldeburgh, Woodbridge, Ipswich	First	Every 2 Hours		Every 2 Hours	Every 2 Hours
118 / 119	Framlingham, Ipswich via Earl Soham or Otley	Galloway European	Irregular, generally every 60 – 90 minutes between Framlingham an Ipswich alternating between route			No Service

Table 2-11: Principal bus services serving the immediate study area

Key Observation

The section of the A12 is served by one bus route, with a second running along a parallel route to the southeast. However, services are infrequent and the percentage of people using the bus to travel to work is significantly lower than the national average.

2.6.3 Rail

The immediate study area is served by two main railway stations, Wickham Market (in the neighbouring village of Campsea Ashe) to the southwest and Saxmundham to the northeast as shown in **Figure 2-10**. These are situated on the East Suffolk Line and are operated by Greater Anglia.

Both stations are served by an approximately hourly basis in each direction following the installation of a passing loop at Beccles, complementing other sections of double track on the line. Northbound services from Saxmundham call at Darsham, Halesworth, Brampton, Beccles, Oulton Broad South and Lowestoft. Southbound services from Wickham Market call at Melton, Woodbridge and Ipswich. The journey between Ipswich and Lowestoft currently takes on average around 1hr 30mins, demonstrating the poor connectivity that currently exists between the two settlements, which could be enhanced by the SEGway scheme.

Facilities at Wickham Market and Saxmundham Stations include:

- Cycle parking for a limited number of cycles within the car park and on the platform at Wickham Market Station and on the platform at Saxmundham Station.
- No open ticket office facilities at any time at either station although Wickham Market has a station café and shop.
- Car parking spaces for 48 vehicles at Wickham Market and 18 vehicles at Saxmundham. Car parking is free of charge.

Table 2-12 and **Table 2-13** show annual station entries and exits over the last five years, at Wickham Market and Saxmundham respectively. The tables show an overall increase in passenger numbers although more modest growth since 2013/14

Year	Total entries & exits	Percentage growth from previous year	
2011/12	32,856	-	
2012/13	38,900	18%	
2013/14	44,270	14%	
2014/15	43,804	-1%	
2015/16	44,332	1%	





Year	Total entries & exits	Percentage growth from previous year	
2011/12	122,400	-	
2012/13	132,418	8%	
2013/14	139,254	5%	
2014/15	139,246	0%	
2015/16	147,346	6%	

Table 2-13 : Railway station patronage – Saxmundham

North of Saxmundham a single track freight only line joins the East Suffolk Line, providing a connection to the transhipment yard for nuclear waste trains from Sizewell power station to the east of Leiston. The line's former passenger services to Aldeburgh, Thorpeness and Leiston were withdrawn in 1966.

2.6.4 Walking, cycling and horse riding

Traffic volumes on the A12 corridor through the Four Villages makes non-motorised forms of transport less attractive and contributes to community severance. In theory residents of Farnham and Stratford St. Andrew should be able to make use of shared facilities in both settlements given their close proximity. However, there is only a continuous footway on the south side of the road between the two villages and crossing facilities are limited to low cost traffic islands (to provide durability given the presence of wide vehicles) at various locations. Consequently, local residents have reported driving from Farnham to facilities in Stratford St Andrew due to the difficulty crossing the road and feeling unsafe on the narrow footways.

Key community facilities of note are:

- A large, modern, village hall, (the Riverside Centre) and adjoining recreational facilities, is shared by Farnham and Stratford St Andrew, but is not comfortably accessible on foot by residents of Farnham.
- A combined petrol station and convenience store, and neighbouring antiques shop is located in Stratford St Andrew close to the Riverside Centre.
- St Mary's Church, Farnham.
- A small industrial estate at Farnham, located on the outside of Farnham Bend, which is difficult to access on foot.
- A network of public rights of way (PROW) from Farnham Village to Foxburrow Wood used for dog walking and recreation.

Figure 2-11 illustrates an aerial view of Farnham, including the 'Farnham Bend', and Stratford St Andrew, through which the A12 corridor cuts.



Figure 2-11: Community facilities and severance: Stratford St. Andrew and Farnham (source: Imagery: DigitalGlobe, November 2017, Map Data: Google Maps, November 2017)



Little Glemham has separate community facilities, although with the A12 running through the village, roughly half of the village's residents have to cross the busy A12 to access them:

- Parish Rooms on Church Road provide another local community venue.
- St Andrew's Church, Little Glemham, is well to the east of the A12.
- Lion Inn at Little Glemham. It is a popular local venue but roughly half of the Little Glemham's residents have to cross the busy A12 to access it.

Marlesford village is spread out with some homes on the south side of the A12 and others including the village's church located some 500 metres to the north on the unclassified Hall Road. Community facilities of note include a village church in the northern part of the village and a farm café, shop and antiques centre alongside the A12 to the south.

The level of motorised traffic also dissuades people from cycling along the A12. May 2017 counts revealed just 6 cyclists using the A12 between 0700 and 1900, with all of these being recorded in the evening peak hour.

Figure 2-12 displays the network of national and regional cycle routes in the vicinity of the scheme. Regional Cycle Route 41 crosses the A12 to the south of Stratford St Andrew providing a signed link between National Cycle Route 1 which runs north-south further inland and the coast (Orford and Dunwich). Weekday usage of this route is also very low, with 4 cyclists recorded at its junction with the A12 in May 2017. National Cycle Route 1 also forms part of the international North Sea Cycle Route which runs traverses all of East Anglia as part of a longer route which runs from the UK through to northern mainland Europe including Belgium, Netherlands, Denmark, Sweden and Norway. This could form an additional tourism draw with improved promotion and accessibility.



Figure 2-12: National and regional cycle routes in the vicinity of the scheme area.

An assessment of existing and potential equestrian facilities has identified that no current bridleways are crossed by the proposed scheme options and the minor roads that cross do not appear to be used for horse-riding.

The assessment did identify several bridleways and byways in the local area that could be used in conjunction with the lightly trafficked local roads for circular horse-riding trips, as well as the nearby Tunstall Forest and



Rendlesham Forest located at the edge of the study area, which are also popular for horse-riding. Several stables and livery services were also recorded in the vicinity, including Glevering Hall Farm, Plunketts Equestrian Services, Tunstall Forest Livery and Valley Farm Equestrian Leisure.

Key Observation

Pedestrian access to facilities and services within the Four Villages is hindered by the busy A12. The level of traffic through the Four Villages also results in very low numbers of cyclists from using the A12 or crossing it via local junctions. This dissuades leisure cyclists from visiting the immediate study area on journeys to and from NCR 1 and the North Sea Cycle Route (Route 41/42).

No bridleways are crossed by the proposed scheme options and the lightly trafficked side roads that connect with the A12 do not appear to be well used for horse riding. With a number of equestrian facilities and forests nearby, the potential for circular trips to take in the old A12 and side roads would increase with construction of a new alignment.



2.7 Route performance

This section provides an overview of the following:

- Travel patterns for all purposes, commuting and visitors to the area
- Traffic volumes including annual average daily traffic flows, seasonal and hourly variability
- Speeds and journey times

The "Farnham Bend"

HGV flows

Accidents

2.7.1 Travel patterns

The Suffolk County Transport Model (SCTM) makes uses of observed mobile phone data to derive matrices of travel demand. WSP, acting as consultants working on behalf of Suffolk County Council, have analysed the 2016 baseline model to demonstrate the distribution of trip lengths on the A12 in the study area for both the AM and PM peak area. This profile is shown below in **Figure 2-13** which shows that the majority of trips are between 15 and 80km in length. This indicates that the road is used for a variety of types of journey, ranging from local to regional in distance.



Figure 2-13 : Distance profile of existing traffic demand on the A12 in the Four Villages Study Area, WSP – 2016 Suffolk County Transport Model Matrices

To help put these figures into perspective, the following are distances between key locations in East Suffolk: Ipswich and Woodbridge 9 miles (14.5 km); Ipswich and Saxmundham 22 miles (35.5 km); Ipswich and Aldeburgh 26 miles (42 km); Ipswich and Southwold 35 miles (56 km); Ipswich and Lowestoft 45 miles (72 km). Trips longer than this are to or from Essex, Norfolk, Cambridgeshire, Greater London, the Midlands and beyond.

2.7.2 Commuting patterns

Section 2.4 provided an overview of the Census journey to work dataset at the district level. This dataset has been further analysed to show the principal southbound commuting destinations for residents located in Suffolk Coastal District Medium Super Output Areas (MSOAs) covering Blythburgh / Walberswick, Saxmundham, Leiston and Aldeburgh and Waveney District that could involve the use of the A12. For all destinations other than the longer distance destinations such as London, the majority of these journeys are made by residents of

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the part of Suffolk Coastal District likely to be impacted by the proposed scheme. Few journeys are made from Great Yarmouth (e.g. 10 journeys to work between Great Yarmouth and Ipswich) and these could be made by alternative if similarly, slow routes, and so these are not included in the analysis.



Figure 2-14 : Destination of southbound journeys to work by car likely to use the A12 between Farnham and Marlesford, Census 2011 Dataset - WU03EW. Sample Size 2656 Journeys by car

Similarly, the Census has been analysed to understand the origins of northbound journeys to work likely to be using the A12 between Marlesford and Farnham. Interestingly, 50% of these journeys are destined for the MSOA covered by Aldeburgh, Leiston and Sizewell.



Figure 2-15 : Origin of northbound journeys to work by car likely to use the A12 between Marlesford and Farnham, Census 2011 Dataset - WU03EW. Sample Size 1288 journeys by car.



However, there is a strong imbalance in flows north and south as the summary graphic in **Figure 2-16** illustrates.

Travel north to jobs in Saxmundham, Leiston, Sizewell, Aldeburgh and Waveney District	Travel south to jobs in Woodbridge, Martlesham, Felixstowe, Ipswich and the South East
c.1300 journeys	c.2650 journeys

Figure 2-16 : Imbalance in commuting flows on the A12 – Census 2011 Dataset – WU03EW

Key Observation

The strong draw of employment in Ipswich and Martlesham versus the weaker pull of Lowestoft and the smaller towns between there and Farnham results in a strong imbalance in the direction of commuting journeys on the A12.

Half of all northbound journeys to work on the A12 are destined for locations close to the northern end of the SEGway scheme, such as Sizewell, Leiston and Aldeburgh.

Journeys beyond Lowestoft from the south to Great Yarmouth are less significant, given the distance and road conditions currently experienced.

2.7.3 Visitor journeys

Visit Suffolk aims to develop the county as a year-round holiday and short break destination for people of all ages and interests. It plans to do this by increasing the amount of trips visitors make to Suffolk, particularly by those who live within two hours of the county, and the amount they spend. To help achieve these aims it commissioned research (The 2015 Destination Report – Market Segmentation study) primarily, to determine Suffolk's tourism strengths, weaknesses, opportunities and threats and the nature of its visitor market, benchmarking the county against other well-known tourism counties.

Using an online survey completed by 2,263 respondents across a representative sample the survey established key origins for visitors to Suffolk:

- 40% East of England (Suffolk, Essex, Norfolk, Cambridgeshire, Hertfordshire, Bedfordshire)
- 20% South East England
- 9% East Midlands
- 8% London.

With perceived drive times given by respondents of:

- Within 2 hours: 45%
- Two to three hours: 29%
- Three hours or more: 26%.

The research finds two predominant clusters of visitors, with likely different travel habits in terms of day/time of travel and travel when in Suffolk:

• A primary cluster of visitors includes affluent couples (often in their fifties or older) who are likely to use independent hotels and are particularly interested in walking, nature watching, culture and heritage.



• Younger families (parents in their thirties to early fifties) are likely to visit family attractions. They show an interest in cycling, water- based sports and are likely to stay in self-catering units, holiday parks or chain hotels.

Long weekend breaks often using independent hotel accommodation were particularly popular amongst respondents living between a two-hour and four-hour drive away. These visitors mainly come for trips to the Heritage Coast and Woodbridge, of specific interest to our study area. Further north, holidays to Lowestoft and its surroundings are more likely to be a week in length with visitors (families) more likely to use holiday park accommodation available on this section of the coast.

Suffolk's key holiday season appears to be long from April to September. This extent of seasonality is reflected in the traffic flows described later in this section.

Suffolk's natural environment appeared to be the most visited attraction, with the coastal beaches (83%) and countryside (75%) appearing at the top of the list, right across the board. Visitors were asked unprompted to name a location that had proved particularly appealing, demonstrating the importance of Suffolk's coast to tourism and repeat visits, with Southwold, Aldeburgh and Woodbridge particularly prominent.



Figure 2-17 : Suffolk's long tourist season and visitor view of tourist locations (Source: Destination Research Ltd Report, 2015)

Key Observation

Suffolk's coastal season is relatively long covering all of spring and summer. The coast is the most visited attraction, with key destinations in the county being Southwold and Aldeburgh. For the Heritage Coast covered by Suffolk Coastal District and the south of Waveney District the predominant type of trip is a long weekend break using independent hotels, with implications for evening peak flows towards the end of the working week, as well as travel when in Suffolk.

Trips to the Lowestoft section of the coast are more likely to be family orientated, week long and based at a holiday park where there will be more activities on site, likely to reduce the need for travel.



2.7.4 Traffic volumes

This section provides a brief description of the annual, seasonal and hourly variation on traffic flows on the A12. Further information on traffic flows elsewhere in the study area can be found in the supplementary *Traffic Data Collection Report.*

Annual Average Daily Traffic flows

In 2017, the Annual Average Daily Traffic (AADT) flow on the A12 at Farnham was 16,600. These flows are outside the recommended opening year flow range of up to 13,000 vehicles AADT for a single carriageway road, as stipulated by the Design Manual for Roads and Bridges. Furthermore, this hides some of the seasonal variation in traffic flows that promotes added stress during the summer months, which we now discuss.

Seasonal variation in traffic flows

The seasonal variation in traffic flows between January and August on the A12 in Stratford St Andrew is presented in **Figure 2-18** below. This indicates that there is a significant increase in traffic using the road in summer on all days of the week. This increase is more pronounced from Friday to Sunday, indicating that tourism plays a significant role in exacerbating the potential for traffic problems during summer weekends.



Figure 2-18: Seasonal differences of vehicles using the A12. Source: Suffolk County Council 2016.

Figure 2-19 and **Figure 2-20** shows average flows by direction at the same location for 12 hours 0700-1900 on Saturdays and Sundays respectively by month in 2016. On Saturdays, northbound flows tend to be higher than southbound in most months, with a more marked difference during the summer months. The reverse situation is found on Sundays.

Figure 2-19 and Figure 2-20 are consistent with a trend for weekend leisure trips in Suffolk and Norfolk during the summer months.





Figure 2-19 : Monthly average flows on A12 at Farnham, Saturdays 0700-1900, 2016



Northbound Southbound

Figure 2-20 : Monthly average flows on A12 at Farnham, Sundays 0700-1900, 2016

Figure 2-21 and **Table 2-14** compare the average 12-hour flows at the same location for weekdays, Saturday, Sundays and Bank Holidays by quarterly period in 2016. The greatest average flows are observed during the summer months between July and September. The difference is most marked for weekends and bank holidays – flows on Sundays during the summer months are 44% greater than on Sundays during winter. During the second and third quarters of the year, bank holiday flows exceed the average weekday flows.





Figure 2-21 : Quarterly average 12-hour flows 0700-1900 weekdays, weekend and bank holidays 2016

Quarter 2016	Weekday (excluding Bank Holidays)	Saturday	Sunday	Bank Holidays
Jan-Mar	13,600	11,500	10,600	11,500
Apr-Jun	15,300	13,500	13,900	15,900
Jul-Sep	16,600	15,100	15,300	18,600
Oct-Dec	14,700	12,300	11,400	12,200
Increase Jul-Sep/ Jan-Mar	23%	32%	44%	61%

Table 2-14 : Quarterly average 12 -hour flows 0700-1900 weekdays, weekend and bank holidays 2016

Key Observation

Annual Average Daily Traffic Flows on the A12 at Farnham = 16,600 vehicles. This however hides a significant variation in flow over the course of the year.

Traffic flow patterns on the A12 in the study area are representative of a road that plays a significant role in the region's tourism economy:

- Greatest observed traffic flows are experienced in the summer months
- Summer average weekend traffic flows are higher than average weekday flows from October to March
- Higher northbound Saturday flows are balanced by higher southbound Sunday flows reflective of a significant influx of weekend tourism related traffic from London and the South East to the region.

Hourly variation in traffic flow by day

Figure 2-22 displays the times of peak demand on the section of the A12 under study, both on a regular weekday and across the weekend throughout the year. The data shows that Friday evening is the time of peak demand on the A12, however other notable peaks have been recorded on Saturday/Sunday mornings and Sunday afternoons/evenings. The Friday afternoon peak is likely due to the combined factors of commuters travelling home and tourists travelling to the district for the weekend, even outside of spring and summer.





Figure 2-22 : Hourly differences in demand for vehicles using the A12 across the week. Source: Suffolk County Council 2016.

From a tourism perspective, there is the potential for the existing road capacity on the A12 and associated congestion during the peak summer months to restrict access (and worsen traveller perception of their ability to do so) to regional tourist destinations and seasonal events such as festivals. This may also result in journey suppression due to a lack of traveller confidence in the network and act as a disincentive to repeat journeys. It is possible that both these factors may be affecting investment in the regional tourist economy, restricting growth opportunities.

AM and PM peak hour flows

Figure 2-23 shows the average two-way flows during the weekday AM peak hour (the maximum of the three hours between 0700 and 1000) and the PM (the maximum of the two hours between 1600 and 1800) peak hour on the A12 in Farnham for each month in 2016. The weekday PM peak hour two-way flow is consistently greater than the weekday AM peak hour flow throughout the year. There is also a seasonal trend with the highest flows observed during the summer months July to September.



Average of AM peak hour
Average of PM peak hour

Figure 2-23: Average two-way flows on A12 at Farnham, weekday AM and PM peak hours, 2016



Key Observation

Evening peak flows are higher than morning peak flows reflecting the dual role that the road plays in terms of the commuter and visitor economy. This difference is most pronounced in the summer.

2.7.5 Speed and journey time analysis

Journey time data obtained from Trafficmaster Ltd from 2016 has been analysed to gain a greater understanding of the average traffic speeds along the subject section of the A12. The Trafficmaster data

provides individual vehicle speeds obtained via GPS devices fitted to both private and commercial vehicles. Trafficmaster data is able to provide a large sample of vehicle speeds and can be analysed over any route.

Data has been analysed in terms of:

- Average speeds on the A12 between Ipswich and Lowestoft on Friday evenings, during the summer months, when the greatest demand for travel occurs (see Figure 2-24)
- Comparing average speed with the free flow speed within the specific study area to understand where congestion occurs between Wickham Market and Saxmundham. Again this has been analysed on Friday evenings during the summer months.
- Journey time analysis of the A12 at weekday peak and inter peak times between Woodbridge and Saxmundham.

Figure 2-25 shows locations where pinch points occur on Friday evenings during summer months. Average vehicle speeds reduced to 60%-70% of free-flow speed in the village of Little Glemham and 70-80% of free-flow speed in the sections between Stratford St Andrew and Farnham.



Figure 2-24 : Average speeds on A12 between Ipswich and Lowestoft (Friday evenings 1600-1900, July to September 2016)

JACOBS



Figure 2-25 : Congestion pinch points along the A12, Fridays 1600-1900, July-September 2016

Figure 2-26 shows locations where slow moving traffic occurs on weekends during summer months. Average vehicle speeds reduced to 60%-70% of free-flow speed in the village of Little Glemham and the sections between Stratford St Andrew and Farnham.



Figure 2-26: Congestion pinch points along the A12, Saturday-Sunday 1000-1400, July-September 2016



Figure 2-27 and **Figure 2-28** display the variability of speeds for journeys in the northbound direction for the AM and PM peaks. South of the Four Villages, the dual carriageway section of the A12 Wickham Market Bypass results in average speeds of around 65mph with the variability clustered around 60-80mph. Average speeds through the Four Villages fall to 25-40mph on average, with variability ranging from 10mph (5mph in the PM peak) to 35mph noted in the villages of Little Glemham, Stratford St. Andrew and Farnham.



Figure 2-27 : A12 speed variability AM northbound

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Figure 2-28 : A12 speed variability PM northbound



Figure 2-29 and Figure 2-30 display the speed variability of journeys in the southbound direction. As with the opposite direction, average speeds are lower through the Four Villages than the adjoining section. Variability is greatest in the AM peak and in this direction, with more incidences of lower speeds (<10 mph) noted than in the opposite direction reflecting volumes of traffic.



Figure 2-29 : A12 speed variability AM southbound

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Figure 2-30 : A12 speed variability PM southbound

Key Observation

These graphs display the impact the single carriageway section of the road and multiple junctions are having on the smooth operation of traffic along this section of the A12. The high variability of speeds through the Four Villages further confirm the observed congestion issues and also indicate the potential for stop-start nature of traffic which is likely to worsen with increasing traffic in future.

Heavy Goods Vehicle (HGV) flows

2017 data shows that 6% of the total vehicles on the A12 through Farnham and Stratford St Andrew were HGVs. As the main road serving East Suffolk and its economy, principal reasons for HGV flows will include:

- Agricultural traffic including deliveries of grain to the Port of Ipswich and delivery of produce to local and national retailers
- Distribution of raw materials to and outgoing goods from the region's businesses
- Materials for the offshore wind industry

2.7.6

- Periodic servicing of Sizewell B planned "outages" in addition to other deliveries and works
- Delivery of goods to/from the Strategic Road Network (e.g. A14, A47) and the ports of Lowestoft and Felixstowe.

HGV flows are anecdotally compounded by high volumes of caravans (although not captured separately in manual traffic counts), a key component of Suffolk's tourism industry. Furthermore, a caravan retailer is located in Farnham adjacent to the A12.

Specific sections of this route are particularly unsuited to HGVs and articulated vehicular traffic. At the 'Farnham bend', pictured in **Figure 2-31**, the A12 bends sharply and HGVs often struggle to pass each other, requiring advance reactive signage to warn drivers of oncoming large vehicles. This location, and the narrow carriageway section preceding the bend from the south, has a significant reputation as a pinch-point on the A12 route. In some cases, police have had to stop traffic in order to assist large vehicles to negotiate the bend, such as materials for the onshore or offshore wind industry. A selection of photographs taken when turbine components were delivered to a site in Kessingland in 2011, are shown at the following website link: http://www.dailymail.co.uk/news/article-1373915/Gently-does-Residents-look-giant-wind-turbine-hauled-round-tight-bend.html



JACOB

Figure 2-31 : Large vehicles trying to negotiate the 'Farnham bend'

2.7.7 The "Farnham Bend" - Impact of HGVs and turning movements

In order to assess the impact of HGVs meeting at the Farnham Bend and vehicles turning movements into side roads at this constrained location on journey times along the A12, a survey was carried out on the weekdays of 20 and 21 July 2017 along an approximately 185m section of the road, including this bend. Further detail can be found in the *Traffic Data Collection Report;* the key points to note being:

- The results of the survey indicate that the majority of the queues in the area occur during morning and evening peak period, when more motorists are on the road, with a smaller peak around lunchtime.
- the majority of queueing events at the Farnham bend is due to vehicles turning in or out of Langham Road stopping the flow of traffic. The absence of a right turn lane and poor visibility exacerbates the problem.
- When large vehicles do meet these cause the longest queues.

Key Observation

HGV deliveries are an essential part of the ongoing function and operation of local and regional businesses which add immense value to the region's economy. The A12 being the primary artery for travel in East Suffolk plays a key role despite the substandard nature of this section of the road.

The Farnham Bend is noted as a local pinchpoint on the A12. This is caused by both a combination of HGVs meeting at the narrowest section, and also more frequently by vehicles attempting to turn into and out of side roads with poor advance visibility.



2.7.8 Accidents

Analysis of DfT's STATS19 accident database has been undertaken for the area likely to be affected by the scheme for the period between January 2012 and January 2017. The locations of these accidents are shown in **Figure 2-32**.



Figure 2-32 : Personal injury accident locations 2012-2017

Looking at just the A12 between the A1094 and B1078 analysis shows that there were 63 personal injury accidents (PIAs) involving 99 casualties, of which one was fatal and nine were serious. The main cause of personal injury accidents on this section of the A12 is shunts by vehicles into the rear of turning vehicles, followed by head on collisions when turning, then drivers losing control of their vehicle. Shunts are a symptom of congested conditions and poor visibility associated with lower standard roads.

The A12/A1094 junction is a particular accident blackspot, rated the seventh most serious for accidents in Suffolk. Vehicles on the westbound approach to the junction are warned of the potential risk of accident by two large traffic signs (see right), and a speed camera has been installed on this approach, which has a restricted speed limit of 50 mph. There were 16 accidents recorded close to this junction over the five-year period 2012-2017.

Further details on the accident analysis can be found in the *Option Assessment Report* and *Economic Assessment Report* annexes.





Key Observation

The section of A12 passing through the villages of Farnham, Stratford St Andrew, Little Glemham and Marlesford experiences a higher frequency of personal injury accidents than expected for older single carriageway 'A' roads. The A12/ A1094 junction at Farnham in particular has been identified as an accident hotspot with road safety initiatives introduced to try to reduce the safety risk for road users.

2.8 Users' perception of the A12

This section describes the views of businesses and tourist visitors/potential visitors to Suffolk

2.8.1 Business perception

During January / February 2016 Suffolk County Council and the Suffolk Chamber of Commerce undertook an extensive engagement exercise with businesses in East Suffolk to understand local businesses perception of significant transport issues, and whether the A12 was a barrier to growth, and whether a new A12 road scheme was needed. The objectives of the exercise were to understand:

- The impacts of A12 congestion issues on existing business activities and the extent to which it constrains prospects for growth
- Respondents priorities for improving the A12 in East Suffolk, and the value added by a SEGway scheme.

The engagement exercise involved an online survey and two business consultations. Over 50 businesses responded to the online survey and 78 business people attended the two consultation events. Further details can be found in *Business Perception Survey 2016.*

Businesses stated that their key traffic issues were as follows (Figure 2-33):

- Unpredictable journey times
- A perception that the area is unattractive for investment or business expansion
- Length of business-related journey times (deliveries, visiting clients).



Figure 2-33 : Significant traffic issues for local businesses



Businesses were asked to prioritise eight potential sections of the A12 between Ipswich and Lowestoft for improvement (**Figure 2-34**). The two sites that received greatest support were:

- Marlesford to Farnham (34 of 78 respondents)
- Yoxford (28 of 78 respondents).



Figure 2-34 : Businesses' priority locations for improvement between the A12/A14 Seven Hills and Wrentham in the north

As part of the development of the Outline Business Case we have sought to enhance our understanding of the importance that businesses place on the A12 for their operation.

Key Observation

East Suffolk's businesses have ranked an improvement to the A12 between Marlesford and Farnham as the most pressing for investment to help solve problems of journey time reliability, the perception of the area's suitability for inward investment and journey times to customers and for staff.

2.8.2 Visitors' perception

The 2015 Destination Research Report previously referenced asked visitors a series of open ended unprompted questions to understand their perceptions about the best and worst things about Suffolk, with the following word clouds demonstrating the importance given by respondents.

The **best thing about Suffolk is**... "Suffolk appears to be valued, both for its coast and rural appeal. The towns, villages, scenery and friendly people are also strong assets."





The worst thing about Suffolk

is... The main weaknesses appear to be the poor road network into Suffolk, and the roads and traffic found within Suffolk, as well as the weather and people's perception that the county is far away.



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When respondents were asked how Suffolk could be made a more appealing place to visit, improving transport (to and within) the county was the primary suggestion, particularly better transport links. The New Anglia LEP's SEP (2014) similarly (previously) and the subsequent Economic Strategy for Norfolk and Suffolk (2017) acknowledged the linkage between improved accessibility and the prospects for tourism.

Key Observation

Visitors and potential visitors to East Suffolk mention the coast as the standout highlight of a trip to Suffolk. Unfortunately, key road links including the A12 are seen as the worst thing about Suffolk, reinforcing the need for intervention.

2.8.3 Public Consultation Responses

The SEGway proposals were subject to non-statutory public consultation between 12 September and 25 October 2017, in order to gather stakeholder feedback. The consultation offered two possible route options for a proposed bypass to the Four Villages along the A12; options, the single carriageway LB2s and dual carriageway LB1d, as well as background on the scheme and objectives.

The public consultation allowed respondents to highlight issues associated with the existing A12 road, with congestion, safety and ability to cater to future growth noted as the most important factors for local stakeholders as shown in **Figure 2-35**.



Figure 2-35 : Negative impacts of travel on the A12



2.9 Environment

A detailed *Environmental Report* has been produced as part of the scheme's Outline Business Case as enclosed as supporting Annex 2. A broad overview of specific points of interest for each of the environmental features are provided below. This should be read alongside the *Environmental Constraints Maps* at the end of this section.

2.9.1 Air quality

In accordance with Part IV of the Environment Act (1995) local authorities in the UK must carry out reviews and assessments of air quality in their area. The Air Quality Strategy (Department for Environment, Food and Rural Affairs 2000) outlines a framework for improvements and where an authority identifies an area which is likely to exceed these targets it must be declared an Air Quality Management Area (AQMA).

There is one Air Quality Management Area (AQMA) within 200m of the affected network of both of the options. The AQMA (No.3) is designated for an area which incorporates four properties comprising 1 - 5 Long Row, Main Road, in Stratford St Andrew. The most recent annual mean concentrations measured in 2015 within the AQMA remain above the annual mean NO₂ objective of 40 µg/m³, with 43 µg/m³ measured at monitoring site STA1 and 44 µg/m³ at monitoring site STA8. An air quality action plan (AQAP) was produced in Feb 2017. A village by-pass is one of the measures given in the AQAP.

The Defra background concentration mapping shows that the background concentrations of NO₂ and PM₁₀ in the area for the current year and opening year are below the air quality objectives for both pollutants.

2.9.2 Noise and vibration

No noise surveys have been undertaken for this assessment as they are not required by the WebTAG methodology. However, given the rural location it is likely that traffic on the existing A12 is the dominant noise source in the area, particularly within those villages proposed to be bypassed.

Landscape

Cultural

The Suffolk Coastal District Special Landscape Area (SLA) covers much of the area, including the valleys and tributaries of the Rivers Alde, Deben and Ore and the following Parks and Gardens of Historic or Landscape Interest:

- Glevering Hall Park;
- Marlesford Hall Park;
- Glemham Hall Park (Historic England Registered Parks and Gardens);
- Benhall Lodge Park;
- Campsea Ashe Park (Historic England Registered Parks and Gardens).

Several Ancient Woodlands and Tree Preservation Orders (TPOs) also occur.

Topography and Hydrology

The topography comprises a gently rolling plateau at the south western section of the proposed routes, with sloping valley sides towards the middle of the study area levelling off at the north eastern end of the scheme. Where the scheme options LB1d and LB2s cross the rivers Ore and Alde the land is relatively flat, reflecting the river floodplains.

The study area includes three significant watercourses, the rivers Alde, Deben and Ore, and their tributaries. These form wide flat riparian zones across land dominated by arable fields, pasture, woodland and hedgerows.



Landscape, Land Use and Settlement Pattern

The field pattern in the north is ancient and organic in appearance with many enclosed former greens and commons. To the south and southwest the field pattern of former heathland is more regular. Several historic parkland sites are a characteristic and influential feature. Meadows and vegetation occupy the flat valley bottoms that surround the rivers Alde and Ore, however, some meadow grassland has been drained and cultivated as arable fields. Outdoor pig rearing and sugar beet production are common in the west and southwest.

Small clustered villages and numerous dispersed hamlets reflect historic settlement patterns within parishes although, in places, this pattern has been affected by modern infill and ribbon development. Timber-framed structures are interspersed with brick constructions and roofs of flat or curved peg-tiles and 19th century estate cottages are common. There has been an increase in the spread and influence of horse paddocks, barn conversions with associated garden curtilages and post and rail fencing. Industrial agricultural buildings are visible where there is an absence of screening from existing landform or tall vegetation.

The landscape is well wooded, with frequent blocks of ancient semi-natural woodland, plantations, coverts and hedgerow trees. Some lines of pines mark field boundaries and form a significant feature in the eastern part of the study area. Some alder carr is associated with the rivers Alde and Ore and their tributaries.

The A12 highway is a dominant and heavily trafficked feature within the landscape, although generally well screened by hedgerows and woodland, including highway planting. The numerous country lanes reflect historic routes and are generally well screened by tall roadside hedgerows and other vegetation.

2.9.3 Historic environment

No Scheduled Monuments, World Heritage Sites or Registered Battlefields have been identified in proximity to the scheme. However, within 1km there are approximately 130 cultural heritage assets, around 80 are designated or registered comprising numerous Listed Buildings, a Grade II Registered Park and Garden (Glemham Park), and two Conservation Areas (Marlesford and Wickham Market).

2.9.4 Biodiversity

There are no nationally or internationally designated Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar²⁰ sites, Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), within 1 km of the route options. However, a number of international and national designations occur within 5km of either or both options. These include:

- Alde Ore and Butley Estuaries SAC / SPA / Ramsar / SSSI;
- Sandlings Forest SPA;
- Blackhall Heath SSSI;
- Snape Warren SSSI;
- Iken Wood SSSI;
- Tunstall Common SSSI;
- Gromford Meadow SSSI.

There are also numerous designated non-statutory sites within 2km of the route options, including ancient woodland, Community Wildlife Sites (CWS) and Nature Reserves.

Given the rural nature of the area the presence of protected species along the proposed route corridors cannot be discounted. The presence of the following protected species is likely:

• Mammals: badger, otter, water vole, dormouse and various species of bat.

²⁰ The Ramsar Convention (1971) in Wetlands of International Importance is an international treaty for the conservation and sustainable use of wetlands.



- Amphibians and reptiles: great crested newt, grass snake, slow worm, adder and common lizard.
- Notable fish: European eel and brown trout.
- Various Birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 Ancient/ species rich hedgerow network BAP Priority Habitat.

2.9.5 Hydrology and water quality

Within 1km, the River Ore, runs northwest to southeast through the southerly part of the alignment, and is crossed by the existing A12 at Marlesford. The River Alde flows north to south through the northern part of the area and is crossed by the A12 at Stratford St Andrew. The lower reach of the River Ore, south of the existing A12, is known as the River Alde-Ore and has an extensive estuary, fed by the Rivers Alde and Butley. A drain, discharging to the River Ore flows from northwest to southeast through Little Glemham. The floodplains of the main rivers are generally broad, typical for the lower reaches of watercourses, but narrow at the point that they would be crossed by the route options.

The River Alde has been assessed as 'At Risk' under the Water Framework Directive. The sources of risk are diffuse source pollution, and, potentially, water abstraction and flow regulation. The River Ore is also assessed as being 'At Risk', the sources of risk identified as diffuse source pollution and physical or 'morphological' alteration.

Groundwater Protection Zones (GPZ) are found to the northwest of Little Glemham and Farnham. The area to the southeast of the road does not lie within a GPZ.

2.9.6 Summary

Key Observation

The number of environmental constraints to the north of the existing A12 severely restrict available route options for construction of a full length bypass to the north of the Four Villages.

A further few environmental constraints exist to the south of the A12. Studies undertaken by the County Council over the last decade have shown that some mitigation is possible, despite the Economic Case reporting adverse impacts.

Any bypass road constructed to the north would have to be significantly longer to avoid impacting protected areas, reducing the benefits of the scheme in terms of journey time savings and affecting its projected value for money.

Key environmental constraints restricting construction of a new road to the north of the existing A12 include a large conservation area to the west of the village of Marlesford, based around numerous Grade 1 and 2 listed buildings in this area, likely blocking the initial section of any northern route option; several large areas of ancient woodland (also designated as wildlife sites) situated to the north of Marlesford and to the west of Farnham and Stratford St Andrew which would require significant re-routing of the proposed road, destruction of habitat (likely unacceptable); and various other grade 2 and 2* listed buildings in the path of probable route alignments to the north of the existing A12.