

Essex Transport Strategy

# **Implementation Plan: South Essex**

# Contents

1.	Introduction .....	1
2.	Outcomes we want to achieve .....	4
3.	Our plan for South Essex.....	9
Appendix A. Scheme List .....		12
Appendix B. Addressing the challenges .....		21
Appendix C. References .....		36

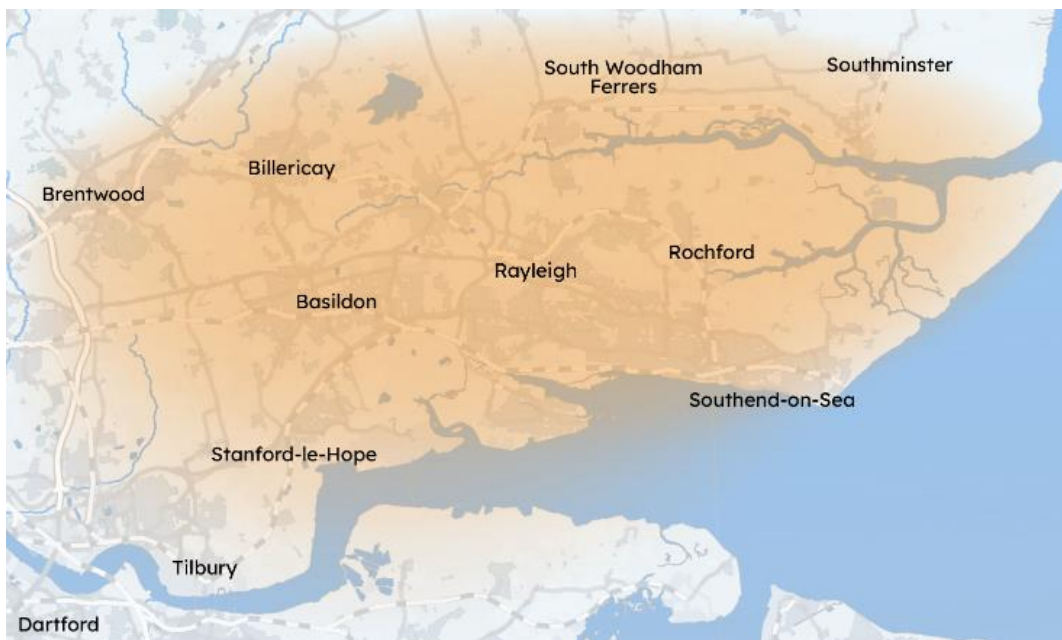
# 1. Introduction

## 1.1 South Essex

This South Essex Implementation Plan includes, Castle Point borough, Rochford district, and some areas in the south of Chelmsford and the southeast of Brentwood districts. The town of Basildon is covered by its separate Implementation Plan.

This plan also refers to Southend-on-Sea and Thurrock as while these areas lie outside of the area administered by Essex County Council, they are key origins and destinations for journeys to and from South Essex. Southend-on-Sea (with a population of 180,915 as of 2022)<sup>1</sup> is a popular leisure destination for residents in the South Essex area and a key employment destination for residents in Rochford with 26% of residents in the district who drive to work travelling to Southend. Thurrock (with a population of 176,877 as of 2022)<sup>2</sup> is also a key employment destination for South Essex residents, particularly those living in Basildon, and an important destination for goods vehicles in the South Essex area.

Key towns lying in and near to the South Essex area include: Brentwood, Basildon, Billericay, Wickford, South Woodham Ferrers, Rayleigh, Rochford, Southend-on-Sea, Benfleet, Canvey Island, Stanford-le-Hope, South Ockendon, Grays and Tilbury. Major commercial hubs include Tilbury Port and London Gateway Port, in the neighbouring area of Thurrock and London Southend Airport, on the Rochford and Southend boundary. These sites support the international movements of people and goods to and from Greater Essex and benefit the region's economy. Other employment areas within or in close to the area include Basildon's Enterprise Corridor and Westmayne industrial parks (including Ford's



Dunton Campus) in Basildon's urban area. Waterglade industrial park and Lakeside Shopping Centre and retail park in Thurrock, Horndon business park in Brentwood, Saltcoats industrial estate in South Woodham Ferrers, Stock Road and Progress Road industrial estates in Southend, Rayleigh Weir in Castle Point Major urban centres, including Basildon, Southend-on-Sea and London are also key employment destinations for people living within the South Essex area.

Direct and frequent rail services to London Fenchurch Street, Stratford and London Liverpool Street give residents good access to the city of London and additional employment opportunities. The Elizabeth Line at Shenfield and Brentwood stations also provide direct and frequent links to transport hubs in London including Paddington Station and London Heathrow Airport. There are also frequent rail services between various towns in the area and the Southend urban area.

Education is the largest employer in Castle Point and Rochford and Brentwood's is business administration and support services. Retail and professional services and administration are also common sectors of employment across the South Essex areas. Jobs within the Construction, Wholesale and Retail, Transportation and Storage sectors are also available in neighbouring Southend and Thurrock.<sup>3</sup> Levels of employment in South Essex (75% of working age population)<sup>4</sup> are in line with the Essex average. However, levels of income and employment deprivation vary across the South Essex area. The most deprived areas include Canvey Island and Rochford urban area while the least deprived include Billericay, Hockley, Rayleigh, Benfleet, Brentwood and Shenfield. The life expectancy of residents in Castle Point borough (82.6) is slightly less than the Essex average (83.3) while the life expectancy of residents in Brentwood borough (84) and Rochford district (83.7) is slightly higher<sup>5</sup>. Both

Basildon and Castle Point boroughs have higher levels of health deprivation, obesity and inactivity compared to other areas in South Essex.

The key transport ambitions for South Essex are:

- Improve connectivity across the South Essex area, particularly the north/south links and externally and connections from more rural and isolated areas, to enhance access to employment and key services.
- Adapt and protect infrastructure, especially in coastal locations to be resilient, allowing current and future users to enjoy the area's natural assets and help protect tourism.
- Improve access to international gateways and strategic connections to neighbouring authorities, including Southend and Thurrock, to support economic growth and facilitate movements of people and goods.

Address key points of delay on the road network and ensure efficient transport movements across South Essex by improving capacity, where necessary, and ensuring good alternatives to the car are in place.

## 1.2 Local travel across South Essex

Many residents work within or close to the boundary of South Essex highlighting the need for good sustainable transport links within the area and to neighbouring Southend and Thurrock. London is also a key employment destination for residents, offering a wider range of opportunities. South Essex's strong transport links to London are one of the reasons why people have decided to live here. Private vehicle ownership varies across South Essex with higher levels of ownership in rural areas and lower levels of ownership in urban centres. And in some urban areas, over 25% of households do not own a vehicle<sup>6</sup>. South of Canvey Island stands out as an area with

particularly low car ownership which could result in poor access to services.

Driving remains the most common way to commute to work in South Essex, with 67% of people who travel to work, travelling by car. Many also get the train to work (20%) or walk or cycle (8%)<sup>7</sup>. The proportion who get the train to work is higher than other areas in Essex, likely due to the area's good connections to London via key stations such as Brentwood, Shenfield, Billericay, Wickford, Benfleet and Basildon. South Essex is served by 16 railway stations, across four lines: the Essex Thameside Line, the Elizabeth Line, the Shenfield to Southend Victoria Line, and the Crouch Valley Line.

These provide access to Fenchurch Street, Stratford and Liverpool Street, with the Elizabeth Line also serving central London and Heathrow Airport. Shenfield station also offers fast, direct services to Chelmsford and Colchester on the Great Eastern Main Line. Since 2019 the opening of the Elizabeth Line has meant passenger numbers at Brentwood and Shenfield have increased 19% and 56% respectively<sup>8</sup>. Residents in the south west of Brentwood district also lie within a short journey to Upminster station which is on the District Line as well as a rail head for the rest of South Essex due to being in a cheaper TfL zone. The area generally has a good bus network. Services with a higher frequency (four to eight or more, buses per hour, on average) mostly operate within the urban areas of Basildon, Wickford, Rayleigh and Brentwood. Although buses to Basildon employment areas are less frequent.

There are also frequent bus services connecting these areas, the Rochford urban area and Great Wakering to Southend-on-Sea, however some services are in direct and slower than taking a car. Less frequent services (less than four per hour, on average) run between Brentwood and Basildon

and connect Castle Point and Basildon to Thurrock, specifically the Waterglade Industrial Park and Lakeside Shopping Centre. More generally, South Essex has good east-west public transport connections, but north-south links within the area and to other major centres such as Chelmsford are generally limited and could be improved.

The area largely lacks a comprehensive cycle network. While the Basildon urban area has good cycling infrastructure, it is not well used or integrated into neighbouring towns such as Billericay and Wickford. In Castle Point there is a good connection to Benfleet Station from Canvey and there are also a few good multi-use trails in Hadleigh Farm and Country Park which encourage residents to cycle, walk and horse ride for recreation and leisure.

Rochford generally lacks a good active travel network but there is potential to encourage walking for leisure in the area at Hockley Woods and Cherry Orchard Country Park and with the recent opening (December 2024) of the Southend-on-Sea to Wallasea Island section of the King Charles III England Coast Path<sup>9</sup>. During the Spring and Summer months a foot and cycle ferry service links Wallasea Island with Burnham-on-Crouch and further sections of the coastal path to the north of Essex. In terms of its road network, the area is served by major roads including the A12, A13, A127 and A130. The M25 also falls on the western border of the South Essex area, with busy junctions 28 (A12), 29 (A127) and 30 (A13) providing access for different parts of South Essex.

National Highways are upgrading junction 28 to increase capacity, reduce congestion and improve safety and accessibility. The planned Lower Thames Crossing would connect to the M25 and the A13 in Thurrock, providing new links to Kent



and alleviating pressure on the M25 and the Dartford Crossing. There are also a number of local A roads in the area including the A128, connecting Brentwood to Basildon; the A129, connecting Shenfield to Billericay, Wickford, Hadleigh and Rayleigh; the A176, providing access between Billericay and Basildon University Hospital; the A132, running through Basildon and Wickford to South Woodham Ferrers; the A1015 between Rayleigh and Eastwood; and the A1023, connecting Brentwood and Shenfield. The A130 and B1014 are also important local roads, providing the only two connections between Canvey Island and the mainland.



## South Essex in numbers

**349,658** residents (2022)



**75%** economically active  
(of working population, as of 2021)



Life expectancy\* is **83.2**



**17%** are aged under 16



**23%** are aged over 65



Mostly **urban**



**13%** of households do not own a car/van (2021)

**67%** of residents **drive** to work

**3%** of residents **get the bus** to work

**8%** of residents **cycle or walk** to work

**20%** of residents get the **train or underground** to work

### Top industries residents work in



Retail



Education



Health

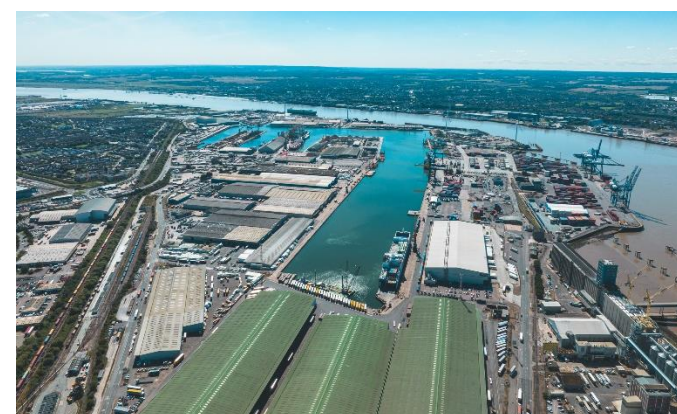


Professional and  
Administration  
services



Business  
Administration  
and Support

\*Average of Castle Point Borough, Rochford and Brentwood districts.





## 2. Outcomes we want to achieve

### 2.1 Supporting people, health, wellbeing and independence

#### 2.1.1 People have inclusive and affordable access to key services

Some areas in South Essex, such as Canvey Island, show high levels of income deprivation and low levels of vehicle ownership. For many, affordability may be a barrier to transport, limiting access to essential services and job opportunities.

While the South Essex area has strong east to west rail connections, providing good access to London in the west and Southend in the east, public transport connections to areas further north in Essex are limited. There are no direct rail links to Chelmsford and, or destinations further north, from Basildon, Castle Point, Rochford and Southend. Residents in these areas have to interchange at Shenfield or stations in London. This can increase journey times and ticket prices for residents, resulting in few using rail for these journeys.

Airlink services (X10 and X30) currently provide affordable (currently capped at a £3 fare) and limited stop services between south Essex, Chelmsford and Stansted Airport. The X30 provides a half hourly services from Rayleigh, Southend Airport and Southend, while the X10 gives an hourly service from Basildon and Wickford. There is also a more frequent but slower bus between Basildon, Billericay and Chelmsford. Elsewhere, bus services connecting to destinations further north operate with a low to limited frequency and offer slower journey times.

While most locations in the area lie within 20 minutes of a town centre by public transport, there

are areas where bus services could be improved, including north Benfleet, areas north of Wickford and Rayleigh, Rettendon, Ingrave and Herongate. As Canvey Island doesn't have rail services, it's important that bus services remain frequent and reliable, particularly to Benfleet station to help residents access interchange facilities. Direct bus connections to Thurrock from Basildon and Castle Point could also be improved to help residents access Lakeside Retail Park and services. Currently services between these areas operate with a low to limited frequency (less than 4, per hour, on average). Improvements to the number and frequency of passenger transport services between these areas and to local town centres would help to improve connectivity and access to a wider range of facilities.

With a higher proportion of residents aged over 65 in both Castle Point (25%) and Rochford (23%), compared to the Essex average (21%), there is a greater need for alternatives to the car for those who are unable to drive but still require access to key services. Improving public transport connections across South Essex and exploring initiatives to make these services more accessible to all, will help increase travel independence and reduce feelings of isolation among elderly residents.

#### 2.1.2 People enjoyed improved physical and mental health and well being

We want people to enjoy consistently improved physical and mental health and wellbeing. However, levels of activity and obesity vary across the South Essex area. Brentwood has one of the lowest rates of adult and childhood obesity in Essex and one of the highest proportions of active

adults. However, Castle Point borough has a low proportion of active adults and some of the highest rates of obesity.

It is important that cycling and walking routes are accessible and in good condition to enable residents to access key services within urban centres and enjoy the rural and coastal routes the area has to offer. A good example is the active travel network in Hadleigh County Park where cycle tracks from the 2012 Olympics are complemented by a range of routes for cyclists, walkers and horse riders<sup>10</sup>.

The area currently lacks a comprehensive cycle network in the main urban areas including Wickford, Benfleet, Rayleigh, as well as in smaller surrounding villages. Besides a national cycle route extending north from Billericay through Margaretting Tye to Chelmsford, a national cycle route connecting Basildon to Stanford-le-Hope in Thurrock and a cycleway connecting Canvey Island to Benfleet station there are also poor connections between urban areas. Providing additional routes in and between urban areas and the surrounding villages will help to improve connectivity in the area and encourage greener and healthier ways of travelling. By providing and promoting additional walking and cycling routes and the physical and mental health benefits that travel using these modes can bring, we aim to encourage healthier lifestyles.

Access to healthcare could be improved in the South Essex area. Residents are served by two nearby 24-hour hospitals, including Basildon University Hospital and Southend University Hospital. While Billericay, Brentwood and Thurrock have community hospitals, they do not provide the same range of healthcare services or have the

same opening hours. It is therefore essential that residents in these areas are well connected to the major Hospitals nearby, to enable them to access 24-hour care and Accident and Emergency services. Currently, the Airlink X10 and X30 bus services provide residents in Basildon, Wickford, Rayleigh and Rochford with affordable, although not very regular services (1 to 2 buses per hour, on average) to Basildon University Hospital and Southend University Hospital, respectively. There are regular services to Southend University Hospital, but many routes to Basildon Hospital involve a change at Basildon Bus Station.

Residents in Canvey Island, Billericay, Benfleet and the Wakering area face journey times of up to an hour to reach a 24-hour hospital by public transport. Residents in villages around Brentwood including: Mounthessing, Ingrave, Herongate and Great Warley, face journey times of over an hour by public transport. Currently, bus services in these areas operate with a low to limited frequency (less than four services, per hour, on average). Improving the quality of existing services and providing new passenger transport links between Brentwood and Basildon will help to enhance access to essential healthcare services. Improving passenger transport links between Basildon and Thurrock will also help residents in Thurrock to access better healthcare services. While there are direct bus services running between Thurrock and Basildon University Hospital, they offer a limited number of services (1-2 buses per hour, on average).

### **2.1.3 The transport network is safe and feels safe for all users**

Between 2021 and 2023, 17 people were killed and 397 were seriously injured on roads in the South Essex area<sup>11</sup>. Achieving Essex's ambition of zero road deaths and serious injuries by 2040 will

require a joined-up plan, working with the police and other partners.

Generally, across South Essex, residents living in more urban areas with higher levels of deprivation are less likely to feel safe when outside in the area<sup>12</sup>. Despite crime rates in Castle Point being lower than the Essex average, only 43% of residents said that they feel safe when outside in the area, after dark, which is lower than the Essex average potentially due to a larger elderly population. Making areas safer and more attractive could help to improve perceptions of safety and help people travel independently.

## **2.2 Creating sustainable places and communities**

### **2.2.1 All places support the transport needs of all residents**

There is a high variation in the age of the population across South Essex. For example, Basildon and Brentwood boroughs have higher proportions of residents aged under 16, compared to the Essex average, while Castle Point and Rochford have higher proportions of residents aged over 65<sup>13</sup>. Rochford also has a higher proportion of residents with a physical impairment than the Essex average<sup>14</sup>.

It's important that transport measures in South Essex are tailored to meet the needs of its different users. For example, improving cycling and walking routes may benefit the high proportion of young residents in more urban areas. However, older and less abled residents living in Castle Point and Rochford may benefit more from public transport improvements. We will look to offer residents with a greater level of choice over how they travel and consider the varying travel needs across the South Essex area.

In more rural and isolated areas such as Great and Little Wakering, driving will often be the main option and potentially the most practical mode of transport for some people to access key services. However, we want to help people make this as sustainable as we can. Some areas in South Essex, including Great Wakering and Canvey Island have higher levels of electric vehicle ownership. Increased provision of public charging infrastructure in these areas may help to encourage further use. Improving passenger transport links to and within these areas will also help to increase travel choice.

Physical severance of communities from one another is often an issue in some areas across South Essex. The A13, A127 and east to west railway lines can restrict movement areas either side and pose a physical safety risk to pedestrians and cyclists in particular. Natural barriers, such as Hadleigh Ray, East Haven Creek and Holehaven Creek also isolate Canvey Island from Benfleet, Hadleigh and London Gateway. In the northwest, the A12 and Great Eastern Main Line hinders access between areas in Brentwood and Basildon. Improving sustainable links particularly north/south links and identifying options for strategic crossing points, where possible, will enable better links across South Essex and help to reduce social isolation.

### **2.2.2 Developments are designed to be sustainable from the start**

The population will continue to grow with people living longer and moving to the area from other parts of the country, therefore we need new homes and communities.

The emerging local plan for Basildon is seeking to provide for a minimum of 27,111 homes for the plan period 2023 - 2043 based on a standard method of 1,291 homes per year. As of April 2024,

259 homes have been completed with a minimum of 26,852 homes still to build. The next stage in the process will require the plan to be based on new government targets of 1,287 per year as set out in the new National Planning Policy Framework.

For Castle Point a Local Plan Review has commenced to cover the period to 2043 based upon a Local Housing Need of 255 homes to provide around 5,100 homes. This is below the new government target of 701 homes per year set out in the new National Planning Policy Framework.

In Rochford a Local Plan Review has commenced to cover the period to 2043 based upon the new government target of 689 homes per year as set out in the new National Planning Policy Framework. As of April 2024, around 285 homes have been completed with a minimum of 13,500 homes still to build.

All of this growth needs to be supported by appropriate transport infrastructure. As residents become wealthier, we want to ensure that active and sustainable travel choices are available as a first choice over buying a car.

Not all of this development will fall within the South Essex area but will likely have an impact on its transport network. We want all developments to be designed sustainably, and we will work with the local councils of South Essex to prioritise locations for jobs and homes with good sustainable transport access to a wide range of services. This LTP is important to influence the process of Local Plan development and getting these plans right can bring in the right infrastructure. We will use the planning process, including funding from new development where possible, to improve transport options, benefiting both new and existing residents and businesses

There are also plans for an entirely new garden community nearby. Dunton Hills Garden Village near West Horndon, Brentwood, will create up to 4,000 new homes over the next two decades. It is important that new garden community developments provide accessible and integrated transport systems and opportunities for walking and cycling. We will look to work closely with Brentwood Borough Council and developers to ensure that this development and its cross-boundary impact is being sustainably managed.

### **2.2.3 Transport has a reduced impact on the environment and adverse impacts on natural habitats are avoided**

Reducing transport emissions, wherever possible, and encouraging more active and sustainable travel will help to support the delivery of this outcome. Rochford and Canvey Island are particularly vulnerable to rising sea levels which increase coastal flooding and erosion risk. Heavier rainfall and hotter summers will also impact the transport network so preparing for these challenges is essential.

It is important that we protect and invest in the area's natural assets to bring benefits to the local environment, as well as new opportunities for more sustainable growth and tourism. The South Essex Council's project, SEEPARK<sup>15</sup>, in South Essex, Thurrock and Southend, aims to create new waterfront paths and cycleways for residents and visitors to enjoy, protect areas from flooding, create a strong network of natural landscapes to improve ecological health and local air quality.

Basildon and Brentwood have some of the highest levels of air pollution in the South Essex area. This is mainly caused by road traffic emissions using major roads, including the M25, A12, A127, A128, A1023 and A129. Currently, around 90% of journeys made between Brentwood and Basildon

are made by car<sup>16</sup>. Bus services that run between these two areas currently operate with a low to limited frequency (less than four services per hour, on average). Increasing sustainable transport links between these areas, wherever possible, will help to reduce unnecessary traffic on major roads and potentially improve local air quality. 55 electric buses are coming to Basildon and the surrounding area as part of Basildon VOLT, which will help improve local air quality and remove polluting vehicles.

Cycling is a good option for making local trips and is better for the environment than the car. Improving existing provision and promoting the benefits of cycling and walking will hopefully encourage more residents to travel by these modes.

The electrification of the freight only branch to London Gateway or the provision of bi/tri-mode freight locomotives for port trains could reduce freight generated emissions in the area. This will be something that will need to be delivered by a combination of the rail industry and port.

We will work jointly with local councils to improve air quality as set out in our [Air Quality Strategy](#)<sup>17</sup>. Measures will include encouraging the use of less polluting modes of travel (see LTP Policy 10), reducing congestion in Air Quality Management Areas through better traffic management, if applicable (see LTP Policy 5) and better managing the movement of higher-polluting goods vehicles (see LTP Policy 6). We also have our Electric Vehicle Charging strategy, ensuring that we can deliver a network of EV chargers, in the right place ensuring anyone can take up owning an electric vehicle without the worry of how to charge it.

We will also focus on reducing noise pollution, managing street lighting to minimise light pollution, and enhancing urban spaces.



## 2.3 Connecting people, places and communities

### 2.3.1 The business potential of Essex is maximised

Thames Freeport, and London Southend Airport are important nearby economic sites supporting international movements of people and goods. While there are good bus and rail connections to London Southend Airport, improving passenger transport to Thames Freeport will help residents in South Essex access the jobs these ports have to offer. It is also important that key roads connecting to these areas, particularly the A12, A13, A127, A128, A1089 and A1014 can continue to support efficient freight movement through Essex, to help boost the local and regional economies.

The road network in South Essex is already under pressure and can expect an increase in traffic flows with future development and the delivery of the Lower Thames Crossing. Significant delays are currently experienced along the A12, A13, the A127 between Basildon and Southend and along the A130 between Basildon and Chelmsford. The A12 and A127 are the two roads with the highest levels of delay in South Essex. On average, there are up to 30-minute delays along the A12 in both the northbound and southbound directions, across the peak periods. Delays of up to 15-minutes are often experienced along the A127, travelling from Basildon to Southend, across both peak periods<sup>18</sup>. Canvey Island and seaside towns in neighbouring Southend are attractive destinations for both residents and tourists, particularly in the Summer, creating some local pressures on the network during this period. Canvey seafront is currently being regenerated, with work underway to develop seafront facilities and protect the island from flooding. There is an opportunity to provide better walking and cycling routes in these areas so that

residents and visitors alike, can make the most of these coastal areas.

Road access to Canvey Island is also constrained with its two roads from the mainland meeting at the same roundabout.

The transport network needs to be robust to ensure the safe and efficient movement of people and goods. Improving road capacity where it is needed and providing suitable alternatives that allow road users to choose the most appropriate mode of transport for their journey will help to relieve some pressure on the road network.

There are some places in South Essex where less than 20% of homes have access to ultra-fast broadband, which is a barrier for attracting businesses to the area as well as those looking to relocate to the area to work some of the time from home.

### 2.3.2 People have inclusive and affordable access to employment, education and training

Unemployment in Castle Point borough is among the highest in Essex<sup>19</sup>. The area also has a poor job availability with a lower number of jobs than other areas. Job availability is also poor in Rochford district, meaning that people have to travel outside of their area for work. However, nearby urban areas, including London, Basildon, Brentwood and Thurrock have better job availability. It is important that there is a variety of transport options connecting residents to these areas. Currently, bus services between Basildon, Castle Point and Thurrock operate with a low to limited frequency. Improving the quality and quantity of long distance, passenger transport connections across South Essex and to neighbouring Thurrock and Southend, could help to unlock a wider range of job opportunities for

residents and help to reduce unemployment in more isolated areas.

In North Benfleet and parts of Canvey Island, less than 40% of residents are able to work from home<sup>20</sup>, highlighting the need for more sustainable alternatives to the car. Despite an increased potential to work from home in Brentwood where, on average, 50% of residents could work from home, some areas lack good access to fast broadband, meaning that there is also a demand for good transport links. Ingatestone and Mountnessing stand out as areas where less than 20% of households have access to ultra-fast broadband<sup>21</sup>. While residents in these areas have good access to direct rail services to London and Chelmsford via Ingatestone and Shenfield, bus links to and from these villages are limited. These areas should be a focus for improved passenger transport connections to larger urban centres.

### 2.3.3 The transport network has a secure and long-term future

We may see changes to our natural environment in the future and the impacts on the coast and river estuaries such as Canvey Island and Rochford could be significant. Impacts include higher temperatures, more severe weather, coastal flooding and erosion, which will all have increasingly significant implications for the reliability of transport infrastructure for everyday journeys and its ongoing maintenance.

We may see heavier rainfall and hotter summers which will have an impact on the transport network. Preparing and adapting to these challenges will be critical and it is vital that this strategy does not make this worse.

This will have significant implications on our network and its ongoing maintenance. For example, flooding will reduce how long our

network lasts, and severe weather will reduce the time available for repairs.

This is crucial – the network provides access to jobs, education and essential services and it is often the only way people can access their everyday needs, particularly in rural areas. It is vital that the network is maintained and fit for purpose, for all modes but we also need to look at ways to solve the problem such as improving the materials we use and reduce unnecessary travel.

Improving bus services, walking and cycling routes, and working to increase rail freight will all help with this, reducing the pressure on our network and ensuring its long term future.





## 3. Our plan for South Essex

Our plan for South Essex focuses on supporting people, creating sustainable places, and connecting communities. To do this, we'll need to provide choice by considering all modes and be bold by considering new approaches and solutions.

### 3.1 South Essex Wide

Providing better public transport connections is a key priority to improve access to healthcare and essential services for all residents. We plan to deliver a rapid transit system across South Essex that will link key transport hubs and provide better connectivity in the area. Countywide initiatives including the provision of mobility hubs and expansion of Plus Bus could also help encourage journeys, via multiple modes, to destinations further afield.

The improvements needed to develop more sustainable transport options must also focus on making public transport more affordable. While the current £3 fare cap for buses provides cheaper bus travel for longer distance routes, we will continue to work with operators to seek more affordable bus and rail passes for those who find the cost a challenge to accessing work and other opportunities. We can also look to make journeys easier with contactless ticketing on trains, already available on C2C trains to and from London and Southend.

In the more rural and less connected areas of South Essex, driving will remain a main option for residents. Providing greater EV charging infrastructure to support EV use and/or promoting alternative fuels will help to reduce transport generated emissions. Sustainable Transport Packages, Basildon VOLT, and the wider roll out

of e-scooters and e-bikes will also help to achieve South Essex' aim to be carbon zero by 2040.

To encourage healthier lifestyles and address high rates of obesity and inactivity, we will promote existing cycling and walking routes in South Essex and seek opportunities to invest in new or improved infrastructure, such as the locally important cycling and walking routes. Given the variety of landscapes across South Essex including urban, rural and coastal locations, we will look for opportunities to promote and provide cycling and walking trails for both travel and leisure purposes. This plan will improve links to multifunctional green spaces, creating walking and cycling routes that connect parks and natural areas. Local policy and strategies should focus on improving access to green space and creating greener communities, especially in areas of deprivation or where there is poor or unequal access.

There is a need to reduce severance between places either side of main transport corridors in South Essex. We propose to improve the ability to seamlessly cross the A13, A127 and east to west railway lines to address this need. Better crossing points will also help to improve the safety of these busy, congested corridors.

The Thames Freeport will unlock new growth opportunities in the area and enable residents to better access jobs. Sustainable links from Canvey to Thames Freeport, the South Essex rapid transit system and a new Great Eastern Main Line rail link to London Gateway will further support this. We also propose to improve sustainable links to Southend Airport and business park to help improve access to local jobs and encourage

greater use of the local airport and its interchange facilities.

To facilitate efficient movements of people and goods to these international gateways and to support future growth associated with the Thames Freeport and Lower Thames Crossing, it's crucial that the road network works well with few delays. We will deliver appropriate capacity improvements along the A13 and A127, as well as providing alternatives that provide drivers with greater choice over how they travel.

The implementation of an effective maintenance programme will ensure that the network remains fit for purpose now and in the future. For example, by using more durable materials and planning for more extreme weather, we can keep our infrastructure open whatever the season. These improvements, typically funded by Government, will need to align with community and transport priorities, and include footway, cycleway, carriageway and drainage renewal.

It should be noted that this implementation plan will need to be reviewed to reflect changes to Local Plans or other significant proposals.

### 3.2 Surrounding Basildon and Wickford

In addition to the South Essex rapid transit, bus improvements, for example, along the A127 enterprise corridor and better bus provision between urban centres, such as Basildon to Wickford and Basildon to Brentwood, will help to improve public transport connections to key destinations. Plans to improve Wickford station will also help to make rail travel more attractive and accessible for local residents. Park and Ride options will be explored to help improve access to



Basildon University Hospital and reduce congestion on the surrounding network.

To reduce delays and accommodate future traffic growth, we plan to deliver capacity and safety improvements along the A13, the A127 and at the Fairglens Interchange, which is an existing congestion point on the network. Improving the performance of this junction is essential to the area's sustained economic growth.

### 3.3 Brentwood (Dunton Hills and West Horndon)

We will work with Brentwood Borough Council to help ensure that the Dunton Hills Garden Village development in West Horndon and its impact on neighbouring areas is managed sustainably. The development will feature new bus lanes and new interchange facilities to help encourage sustainable travel from the start. Improvements to West Horndon station will also help to accommodate future growth in the area. Travel planning<sup>22</sup> and behavioural change initiatives within the Dunton Hills Garden Village development will help to raise residents' awareness of the benefits of sustainable transport.

### 3.4 Castle Point and Rochford

To encourage both residents and visitors to spend more time in Castle Point and Rochford, we plan to improve walking and cycling routes for travel, leisure and recreation, as well as public realm improvements in Hadleigh and Canvey town centre.

We want to increase travel independence across all age groups, but particularly among the larger elderly populations in Castle Point who are at risk of isolation. To achieve this, we will look to introduce community transport services such as Dial-a-Ride Canvey to help elderly residents and those with limited mobility access essential services.

We also want future residents to be able to enjoy the best South Essex has to offer. To help mitigate against climate change, the Thames Estuary 2100 project is already underway to improve flood defences in the area. Other initiatives including the Canvey surface water flooding scheme and Thames Coastal Protection will further support this work and help to make coastal areas in Castle Point and Rochford more resilient to future challenges.

In addition to the South Essex rapid transit, we propose to deliver a bus corridor along the A129 to improve connections between Castle Point and Rochford, specifically to Rayleigh town centre, where residents can access Greater Anglia rail services. We plan to deliver sustainable transport links between Canvey and Thurrock and look into enhancing sustainable connectivity to and from Canvey Island to reduce the impacts of severance and help residents access a greater range of services and jobs not available on the island.

As part of the plans to improve access to Southend Airport and its railway station, and links to Southend Road and a second station entrance, we could consider a sustainable link connecting the airport to Great Wakering, given the growth in the area, to give local residents greater access a wider range of transport services and local job opportunities.

**Scheme Details** can be found in Appendix A.

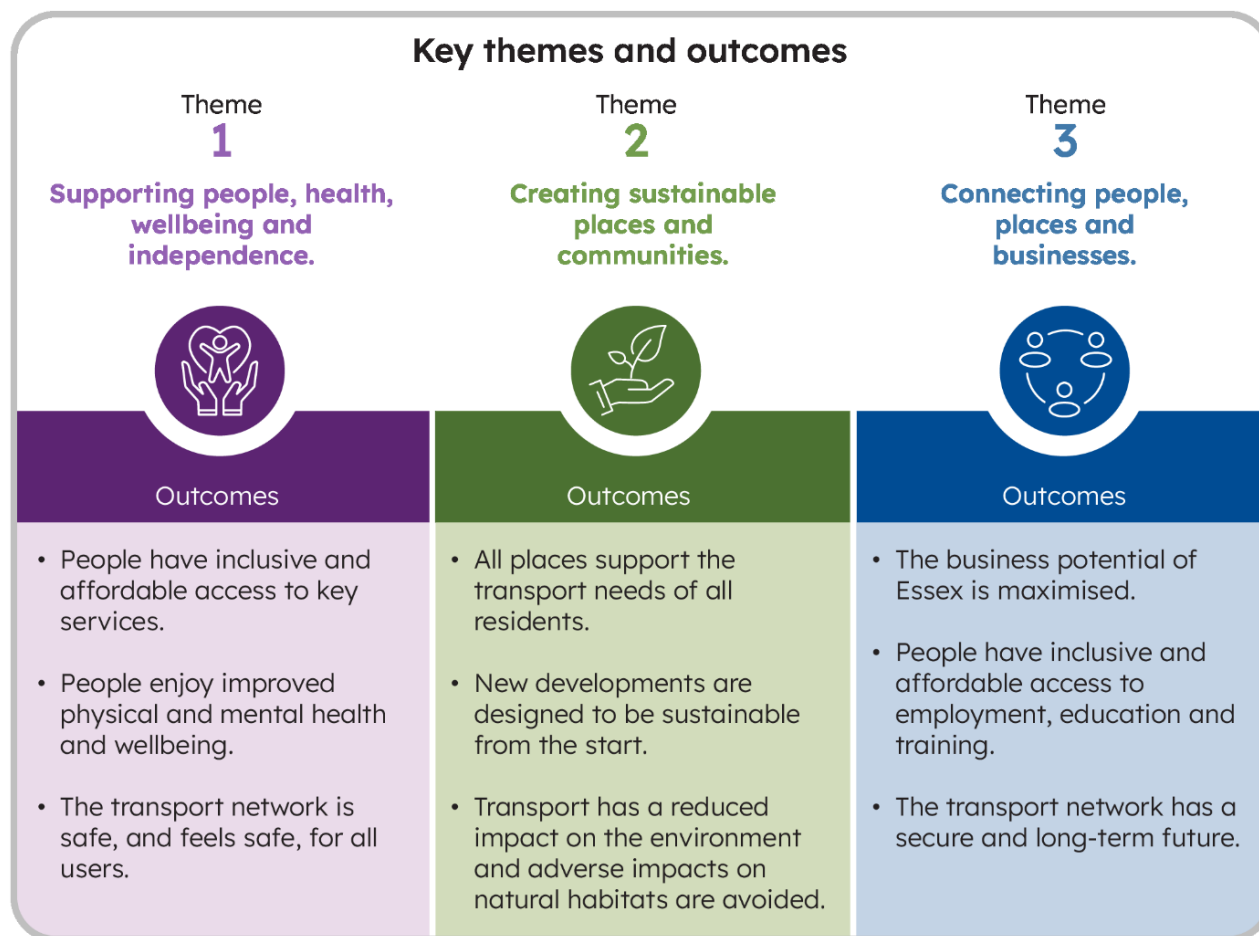






## Appendix A. Scheme List

The table below sets out some ideas of projects that could help achieve our outcomes and solve some problems identified in this Implementation Plan. These projects have emerged from a prioritisation exercise and represent ideas from a snapshot in time and are not guaranteed to be funded as part of LTP4. As funding and circumstances change so will our priorities for schemes.



*	Weak Alignment
**	Medium Alignment
***	Strong alignment



Project	Description	Impact	Supporting People			Sustainable Place			Connecting People		
			Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7	Outcome 8	Outcome 9
South Essex Wide											
South Essex bus metro	Rapid transit (bus or tram or mixture) linking key transport hubs to provide connectivity across South Essex	Improved public transport options for sustainable access to services and jobs	**	*	*	*	**	**	**	**	*
A13 Non Motorised User Crossing Improvements	New pedestrian and cycle crossings across the A13	Improved safety and placemaking encourages footfall and active and sustainable travel	*	***	**	*	*	**	**	*	*
A13 improvements (Essex)	Package of capacity and safety improvements including sustainable options and schemes to address local pinch points linked to the delivery of growth along the corridor and the Lower Thames Crossing. Possible strategic maintenance e.g. Pitsea Flyover	Keeps the network moving by improving safety and reducing congestion	*	*	***	**	*	**	***	*	
GEML Rail Link to London Gateway	Rail link connecting Essex Thameside to Southend Victoria branch	Improving sustainable freight options, removing lorries off the road network, reducing congestion and improving local air quality.	**	*	*	*	*	**	*	**	*

Project	Description	Impact	Supporting People			Sustainable Place			Connecting People		
			Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7	Outcome 8	Outcome 9
A13 sustainable corridor	In support South Essex bus metro, bus lanes between west of Sadlers Farm Roundabout to Southend border and beyond, to connect employment areas in Basildon and Southend. Encourage sustainable modes/journey time advantage, very good commercial bus journey - important for enhanced bus partnership.	Improved public transport options for sustainable access to services and jobs		*	**	**	*	**	*	*	*
Essex Thameside rail network study (passenger, freight)	Delivery of the package of improvements identified within the Essex Thameside study	Improving sustainable freight options, removing lorries off the road network, reducing congestion and improving local air quality.	*	*		*	**	**	***	*	
A129 bus corridor	Bus corridor along the A129 in Hadleigh, between Victoria House Roundabout and Rayleigh Town Centre.	Improved public transport options for sustainable access to services and jobs	**	*	*	**	*	**	*	**	*
Lower Thames Crossing	New strategic link to address capacity constraints at the Dartford Crossing	Improving journeys to Kent and boosting economic growth	*	*	*	*	*		***	*	
Electrify rail access to London Gateway	Electrification of spur to London Gateway	Improving the local environment with fewer diesel trains						***			

Project	Description	Impact	Supporting People			Sustainable Place			Connecting People		
			Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7	Outcome 8	Outcome 9
Thames Freeport Access Package	Feasibility studies into how projects can aid access to the Freeport. Train link for passengers. Bike link for Canvey. Fast bus link from South Essex. Water connectivity - and the need to provide connection to Basildon, Basildon Town Centre, Brentwood and Castle Point.	Improving access to services, health and wellbeing, and access to employment.	**	**	**	**	*	***	**	**	
<b>Castle Point and Rochford</b>											
Thames Coastal Protection	Protection to the Thames Estuary coastal path and climate change management and mitigation.	Protecting the local environment	*	**	**	*		*	*	*	*
Canvey - surface water flooding	Maintain pumps as currently there is nowhere for water on the roads to go when it rains.	Protecting the local environment		**	**	*	*		**		
Canvey Access Improvement	Enhance connectivity to and from the island by all modes of transport to improve sustainable access and ease traffic congestion	Improving access to services, health and wellbeing, and access to employment. Keeping the network moving	**	*	*	**	*		***	**	
Improved links from Canvey to Thames Freeport	Improved access between Canvey Island and Thames Freeport to connect people to jobs and address high levels of deprivation.	Improving access to services, health and wellbeing, and access to employment. Keeping the network moving	*	***	**	**	*	***	**	***	



Project	Description	Impact	Supporting People			Sustainable Place			Connecting People		
			Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7	Outcome 8	Outcome 9
Multi Modal Transport Hub at Southend airport/ A127 accessibility/Airport Surface Access Plans (ASAS)	Improvements to multi modal interchange - key transport hub (difficult to access currently). Warners bridge to Sumpters Way (Southend-on-Sea) sustainable corridor to improve bus journey times and facilitate e.g., Shoeburyness to Rochford bus services not via Southend-on-Sea. Decarbonisation, movement of people, contributors to surface access targets. Whilst they are now operating now, need to consider wider role of the airport as a multi modal transport hub and how enhanced access for the wider community may benefit operators, the airport (revenue from services) and enhance employment opportunity access for the community.	Improved public transport and walking and cycling options for sustainable access to the airport.	**	**	**	**	***	***	**	**	*
Southend Airport Connection Improvements	Multi modal transport link between airport - Great Wakering and Southend. Also linking the two rail lines together.	Improved public transport and walking and cycling options for sustainable access to the airport.	**	**	**	**	*	**	***	**	**
Rochford walking and cycling improvements	Connections from existing and new residential areas to employment areas and town centres.	Improved cycling and walking options encouraging people to be more active	**	***	**	*	**	**	**	**	*

Project	Description	Impact	Supporting People			Sustainable Place			Connecting People		
			Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7	Outcome 8	Outcome 9
Castle Point walking and cycling improvements	Delivery of walking and cycling improvements in Castle Point.	Improved cycling and walking options encouraging people to be more active	**	***	**	*	*	**	**	**	*
Dial a ride to Canvey	Ageing population on the island means a lot of the travel on the island is less than a mile, as people cannot walk or cycle. This may lead to congestion with more cars on the road. Dial a Ride is a door-to-door transport service.	Keeping the network moving with less congestion and enabling independence for longer	***	**	**	**	*	**	*	**	
Canvey Town Centre	Improvements to Canvey's town centre. Detailed design output from the Town Board's Plan.	Improves the feel of the town centre and Increases footfall for businesses	***	***	**	***	*	***	**	***	
<b>Surrounding Basildon and Wickford</b>											
A127 strategic package	Package of capacity and safety improvements including sustainable options and potential re trunking of the A127 and schemes to address local pinch points linked to the delivery of growth along the corridor.	Keeps the network moving by improving safety and reducing congestion	*	*	***	**	*	**	***	*	*

Project	Description	Impact	Supporting People			Sustainable Place			Connecting People		
			Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7	Outcome 8	Outcome 9
A127/A130 Fairglen	<ul style="list-style-type: none"> <li>A new 'Southend Link Road' linking the A130 southbound to a new signalised junction on the A1245, effectively bypassing the Fairglen roundabout itself</li> <li>Widening of the westbound A127 off-slip at the Fairglen Interchange</li> <li>Dedicated left-turn from A1245 onto Southend-bound A127</li> <li>Improvements at the Rayleigh Spur Roundabout, including new traffic lights at two arms of the junction and an additional lane on the roundabout itself</li> <li>An additional traffic lane southbound between Fairglen Roundabout and Rayleigh Spur Roundabout</li> <li>A new bridge for pedestrians and cyclists, linking to existing routes alongside the A127.</li> </ul>	Keeps the network moving by improving safety and reducing congestion			*	*			***		*
Wickford Station rebuild/re-opening	Plans for an extension of the platform.	Improving capacity of rail services at Wickford			***				*		**
Wickford to Basildon bus access improvements	Bus access improvements to help reduce journey times along this key corridor and improve air quality. Potential to support 24/7 bus routes.	Improved public transport options	**	*	*	**	*	**	**	**	*

Project	Description	Impact	Supporting People			Sustainable Place			Connecting People		
			Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7	Outcome 8	Outcome 9
Park and Ride for Basildon Hospital and College	Park and Ride scheme	Improves sustainable access to help provide congestion relief around the hospital.	*	**	*	**		*	*	*	
Wickford High Street Bus Gate	Bus gate in Wickford High Street reducing journey times for numerous buses in Wickford by around 3 minutes per trip	This intervention would improve public transport and reduce congestion / emissions caused by current enforced route deviation.		*	**	**	*	**	*		*
<b>Brentwood (Dunton and West Horndon)</b>											
Dunton Hills Garden Village-Basildon Connection	Multi modal connection to Basildon Town Centre, Freeport and the Basildon A127 enterprise corridor/employment areas.	Improved public transport and walking and cycling options for sustainable access to services and jobs.	***	***	**	***	***	***	***	***	**
A128 improvement across C2C railway at West Horndon	A128 is constricted by rail bridge for non motorised users. Feasibility into how to accommodate safe passage.	Improved access to the station from the south for active modes.	*	***	**	**	***	**	*	*	*
Dunton Hills Garden Village Bus Lanes	Bus lanes to Basildon, Brentwood and Grays.	Improved public transport options for sustainable access to services and jobs.	*	*	**	**	***	**	*	*	**
Dunton Hill - Laindon sustainable corridor	Route for future South Essex Rapid Transit (SERT) to encourage DHGV residents to travel sustainably, due to improved journey times.	Improved public transport options for sustainable access to services and jobs.	**	*	**	**	***	**	*	**	



Project	Description	Impact	Supporting People			Sustainable Place			Connecting People		
			Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7	Outcome 8	Outcome 9
West Horndon Station	Interchange improvements including a bus interchange and cycle parking, along with an improved access and better walking and cycling links (including foot/cycle bridge over the railway).	Improved public transport and walking and cycling options for sustainable access to services and jobs.	**	*	*	**	***	**	**	**	***

## Appendix B. Addressing the challenges

Appendix B outlines the challenges outlined in this implementation plan, identifies some high level activities that we could do to address these and the potential schemes we could do to address these challenges. For scheme descriptions, please see Appendix A and the core text to understand why these schemes can address the challenges.

Those schemes in bold with an asterisk are **\*Countywide Initiatives – they are not in the map above**

### B.1 People Theme

Outcome	Challenge	High Level Activity	Schemes to address these challenges
People have inclusive and affordable access to key services	Socio-economic inequalities. The most deprived areas include Canvey Island, Rettendon and Rochford urban area while the least deprived include Billericay, Hockley, Rayleigh, south of Benfleet, Ingrave and Herongate.	<ul style="list-style-type: none"> <li>Encourage digital innovation, such as new apps that enable the delivery of essential services, such as healthcare, in ways that are less dependent on travel</li> <li>Implement our Bus Service Improvement Plan</li> <li>Develop and deliver long-term plans to improve our cycling and walking networks by considering our Local Cycling and Walking Infrastructure Plans</li> <li>Design, build, operate and maintain transport infrastructure so that it is accessible, easy and safe to use for everyone</li> <li>Support the introduction of multi operator and fully integrated smart ticketing for transport services in Essex</li> <li>Provide training and promote free initiatives to increase people's confidence and participation in cycling</li> </ul>	<ul style="list-style-type: none"> <li>Thames Freeport connection</li> <li>Canvey access improvements</li> <li>Canvey Town Centre Improvements</li> <li>Dunton-Basildon connection</li> <li>Sustainable links from Canvey to Thames Freeport</li> <li>South Essex bus metro</li> <li>A13 sustainable corridor</li> <li>Essex Thameside rail network study</li> <li>Rochford walking and cycling improvements</li> <li><b>Expansion of plus bus schemes*</b></li> <li><b>Integrated ticketing across modes*</b></li> </ul>
	Low levels of vehicle ownership in some areas including Basildon Urban Area, Canvey Island and the area between Wickford and South Woodham Ferrers. Tends to correlate with deprivation.	<ul style="list-style-type: none"> <li>Raise awareness of the impacts of individual travel choices and alternatives consistent with our 'Safer, Greener, Healthier' approach</li> <li>Raise awareness of the impacts of individual travel choices and alternatives consistent with our 'Safer, Greener, Healthier' approach</li> <li>Encourage digital innovation, such as new apps that enable the delivery of essential services,</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable links from Canvey to Thames Freeport</li> <li>South Essex bus metro</li> <li>Southend Airport Connection Improvements</li> <li>Multi modal transport hub at Southend airport / A127 accessibility / airport surface access plans</li> <li>Wickford High Street bus gate</li> <li>West Horndon Station</li> <li>Dunton Hill – Laindon sustainable corridor</li> <li>A129 bus corridor</li> <li>Dial a ride Canvey</li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
		<p>such as healthcare, in ways that are less dependent on travel</p> <ul style="list-style-type: none"> <li>▪ Support the rollout of faster broadband and ongoing improvements to 5G mobile coverage in rural and deprived areas</li> <li>▪ Implement our Bus Service Improvement Plan</li> <li>▪ Provide attractive, safe, convenient, inclusive and high quality public transport routes and facilities, designed in line with latest design standards and guidance</li> <li>▪ Explore opportunities to expand our Demand Responsive Transport network in rural areas</li> <li>▪ Work with partners to promote more sustainable forms of car use, such as lift sharing and car clubs</li> <li>▪ Develop and deliver long-term plans to improve our cycling and walking networks by considering our Local Cycling and Walking Infrastructure Plans</li> <li>▪ Develop and deliver mobility hubs to facilitate convenient access to public transport services, shared mobility solutions, and active travel options. In rural locations, these could combine transport, retail and community services</li> <li>▪ Work with the bus and rail industries to secure further improvements to the accessibility of public transport and passenger assistance on buses, trains and at bus and rail stations</li> <li>▪ Support the introduction of multi operator and fully integrated smart ticketing for transport services in Essex</li> <li>▪ Use travel planning to promote active travel choices across all sizes of development and major existing generators of traffic</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Cycle quietways in residential areas*</b></li> <li>▪ <b>ATF major package*</b></li> <li>▪ <b>NCN package – urban*</b></li> <li>▪ <b>Expansion of plus bus schemes*</b></li> <li>▪ <b>Integrated ticketing across modes*</b></li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
		<ul style="list-style-type: none"> <li>Provide training and promote free initiatives to increase people's confidence and participation in cycling</li> </ul>	
	High proportion of residents aged 65+ in Castle Point who may also have limited mobility and less ability to travel independently	<ul style="list-style-type: none"> <li>Encourage digital innovation, such as new apps that enable the delivery of essential services, such as healthcare, in ways that are less dependent on travel</li> <li>Implement our Bus Service Improvement Plan</li> <li>Work with partners to promote more sustainable forms of car use, such as lift sharing and car clubs</li> <li>Work with the bus and rail industries to secure further improvements to the accessibility of public transport and passenger assistance on buses, trains and at bus and rail stations</li> </ul>	<ul style="list-style-type: none"> <li>Dial a ride Canvey</li> <li>A129 bus corridor</li> <li>South Essex bus metro</li> <li><b>Expansion of plus bus schemes*</b></li> </ul>
	Access to local towns is an issue for residents living in West Rochford, south of Rayleigh, Canvey Island and areas between Basildon and Brentwood. Journey times are over an hour from these areas to the nearest town, by public transport.	<ul style="list-style-type: none"> <li>Implement our Bus Service Improvement Plan</li> <li>Provide attractive, safe, convenient, inclusive and high quality public transport routes and facilities, designed in line with latest design standards and guidance</li> <li>Explore opportunities to expand our Demand Responsive Transport network in rural areas</li> <li>Develop and deliver mobility hubs to facilitate convenient access to public transport services, shared mobility solutions, and active travel options. In rural locations, these could combine transport, retail and community services</li> <li>Work with the bus and rail industries to secure further improvements to the accessibility of public transport and passenger assistance on buses, trains and at bus and rail stations</li> <li>Travel information will make use of new technology and be available in a range of formats for everyone to access</li> </ul>	<ul style="list-style-type: none"> <li>South Essex bus metro</li> <li>Canvey access improvement</li> <li>A13 sustainable corridor</li> <li>GEML rail link to London Gateway</li> <li>A129 bus corridor</li> <li>Dial a ride Canvey</li> <li><b>Expansion of plus bus schemes*</b></li> </ul>



Outcome	Challenge	High Level Activity	Schemes to address these challenges
	Less frequent bus services available in north Benfleet, areas north of Wickford and Rayleigh and the rural areas in the south of Chelmsford and east of Brentwood.	<ul style="list-style-type: none"> <li>Implement our Bus Service Improvement Plan</li> <li>Provide attractive, safe, convenient, inclusive and high quality public transport routes and facilities, designed in line with latest design standards and guidance</li> <li>Explore opportunities to expand our Demand Responsive Transport network in rural areas</li> <li>Develop and deliver mobility hubs to facilitate convenient access to public transport services, shared mobility solutions, and active travel options. In rural locations, these could combine transport, retail and community services</li> <li>Work with the bus and rail industries to secure further improvements to the accessibility of public transport and passenger assistance on buses, trains and at bus and rail stations</li> <li>Travel information will make use of new technology and be available in a range of formats for everyone to access</li> </ul>	<ul style="list-style-type: none"> <li>Wickford to Basildon bus access</li> <li>A129 bus corridor</li> <li>Wickford High Street Bus Gate</li> <li>West Horndon Station - bus interchange and cycle parking along with improved access and walking and cycling links</li> <li><b>Expansion of plus bus schemes*</b></li> </ul>
People enjoy improved physical and mental health and wellbeing	High proportion of physically inactive adults and high rates of childhood and adult obesity in Basildon and Castle Point.	<ul style="list-style-type: none"> <li>Develop and deliver long-term plans to improve our cycling and walking networks by considering our Local Cycling and Walking Infrastructure Plans</li> <li>Widen access to Essex Pedal Power, which provides free bikes and a support service for our most disadvantaged communities</li> <li>Implement our Green Infrastructure Strategy to deliver better quality and more accessible multipurpose green spaces and links for everyone</li> <li>Work with landowners and other partners to ensure that public rights of way are well maintained and easy to use</li> <li>Improve access to, and raise awareness of, the green spaces, facilities and activities available to the public</li> </ul>	<ul style="list-style-type: none"> <li>Castle Point walking and cycling improvements</li> <li><b>Cycle Quietways in Residential areas*</b></li> <li><b>Cycle Parking*</b></li> <li><b>Home Run Travel Planning app for Schools*</b></li> <li><b>Cycle training and bike maintenance workshops*</b></li> <li><b>ATF Package*</b></li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
	Lack of leisure / recreational walking and cycling routes in Castle Point, Southend and Rochford.	<ul style="list-style-type: none"> <li>Develop and deliver long-term plans to improve our cycling and walking networks by considering our Local Cycling and Walking Infrastructure Plans</li> <li>Implement our Green Infrastructure Strategy to deliver better quality and more accessible multipurpose green spaces and links for everyone</li> <li>Work with landowners and other partners to ensure that public rights of way are well maintained and easy to use</li> <li>Improve access to, and raise awareness of, the green spaces, facilities and activities available to the public</li> </ul>	<ul style="list-style-type: none"> <li>Rochford walking and cycling improvements</li> <li>Castle Point walking and cycling improvements</li> </ul>
	High proportion of hospital admissions and high levels of health deprivation, particularly among elderly residents.	<ul style="list-style-type: none"> <li>Support people and increase their confidence to travel by improving travel information, while making fares and ticketing easier and simpler to understand</li> <li>Promote the support we provide on mental health and wellbeing through our Essex Wellbeing Service</li> <li>Promote the work of the independent charity – Rural Community Council of Essex – in tackling hidden deprivation and social isolation in our villages and rural areas</li> </ul>	<ul style="list-style-type: none"> <li>Basildon Park and Ride for the hospital</li> <li>Dial a ride Canvey</li> <li><b>Cycle Quietways in Residential areas*</b></li> <li><b>Cycle Parking*</b></li> <li><b>ATF Package*</b></li> </ul>
	Residents in South Woodham Ferrers, Heybridge, Mountnessing, Ingrave, Herongate and Great Warley face journey times over an hour to the nearest hospital. Currently, bus services in these areas operate with a low to limited frequency.	<ul style="list-style-type: none"> <li>Support people and increase their confidence to travel by improving travel information, while making fares and ticketing easier and simpler to understand</li> <li>Promote the support we provide on mental health and wellbeing through our Essex Wellbeing Service</li> <li>Promote the work of the independent charity – Rural Community Council of Essex – in tackling hidden deprivation and social isolation in our villages and rural areas</li> </ul>	<ul style="list-style-type: none"> <li>South Essex bus metro</li> <li>Basildon Park and Ride for the hospital</li> <li>Dial a ride Canvey</li> <li><b>Expansion of plus bus schemes*</b></li> <li><b>Roll out of shared mobility initiatives*</b></li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
The transport network is safe, and feels safe	Vehicle collisions and road safety – 17 people killed and 397 seriously injured between 2021 and 2023 within the South Essex area	<ul style="list-style-type: none"> <li>Follow a safe systems approach in designing and maintaining our highway network</li> <li>Collaborate with partners, such as the police and Safer Essex Roads Partnership, to improve safety</li> <li>Design new and improved infrastructure and promote well-designed neighbourhoods so that they feel safe and secure to use</li> </ul>	<ul style="list-style-type: none"> <li>A13 non-motorised user crossing improvements</li> <li>A128 improvements across C2C railway at West Horndon</li> <li><b>Safer school streets*</b></li> </ul>
	Total crime rates are higher than the average and only 34% of residents said they feel safe when outside, after dark in Basildon. Despite lower crime rates in Castle Point only 43% of residents (lower than Essex average) said they feel safe after dark.	<ul style="list-style-type: none"> <li>Follow a safe systems approach in designing and maintaining our highway network</li> <li>Collaborate with partners, such as the police and Safer Essex Roads Partnership, to improve safety</li> <li>Promote training initiatives (e.g. Bystander training) and apps (e.g. Travel Guardian) to improve safety and confidence when travelling</li> <li>Collaborate with the police and public transport operators to reduce crime and the fear of crime when travelling on the transport network</li> </ul>	<ul style="list-style-type: none"> <li>A13 non-motorised user improvements</li> <li>Canvey town centre improvements</li> <li>A128 improvements across C2C railway at West Horndon</li> <li>A13 non-motorised user crossing improvements</li> <li><b>Safer School Streets*</b></li> <li><b>Bus stop improvements*</b></li> <li><b>Cycle training and bike workshops*</b></li> <li><b>Cycle parking*</b></li> </ul>



## B.2 Place

Outcome	Challenge	High Level Activity	Schemes to address these challenges
All places support the needs of all residents	In more rural and isolated areas, driving will always be the main option for some people. Some areas in South Essex, including East Rochford and Canvey Island have higher levels of EV ownership, highlighting the need for better charging infrastructure.	<ul style="list-style-type: none"> <li>Introduce a 'Place and Movement' approach to help embed the principles of 'Healthy Streets' and manage the transport network effectively for both existing streets and new developments</li> <li>Implement 'well designed neighbourhood principles' in the redesign of existing neighbourhoods</li> <li>Implement our Electric Vehicle Strategy to provide suitable access to a reliable, convenient, accessible and fairly priced network of electric charge points</li> <li>Promote opportunities to convert public transport, taxi and freight vehicles to cleaner fuels</li> <li>Continue to evaluate the suitability of our towns and cities for new electric forms of transport, such as e-scooters while we await new national requirements</li> </ul>	<ul style="list-style-type: none"> <li><b>Roll out of EV infrastructure*</b></li> </ul>
	The A13, A127 and East to West railway lines can cause severance between the north and south areas.	<ul style="list-style-type: none"> <li>Introduce a 'Place and Movement' approach to help embed the principles of 'Healthy Streets' and manage the transport network effectively for both existing streets and new developments</li> <li>Implement 'well designed neighbourhood principles' in the redesign of existing neighbourhoods</li> </ul>	<ul style="list-style-type: none"> <li>A13 non-motorised user crossing improvements</li> <li>A130 non-motorised user improvements</li> <li>A128 improvement across C2C railway at West Horndon</li> <li><b>ATF Package*</b></li> <li><b>NCN*</b></li> </ul>
	Hadleigh Ray and East Haven Creek forms a natural barrier between Canvey Island and areas in Benfleet and Hadleigh - can make the area feel a bit more isolated.	<ul style="list-style-type: none"> <li>Introduce a 'Place and Movement' approach to help embed the principles of 'Healthy Streets' and manage the transport network effectively for both existing streets and new developments</li> <li>Implement 'well designed neighbourhood principles' in the redesign of existing neighbourhoods</li> </ul>	<ul style="list-style-type: none"> <li>Canvey access improvement</li> <li>Sustainable links from Canvey to Thames Freeport</li> </ul>
	Areas such as Wickford, Benfleet, Billericay, Great Burstead and Rayleigh lack good cycling/walking routes.	<ul style="list-style-type: none"> <li>Introduce a 'Place and Movement' approach to help embed the principles of 'Healthy Streets' and manage the transport network effectively for both existing streets and new developments</li> </ul>	<ul style="list-style-type: none"> <li>Castle Point walking and cycling improvements</li> <li><b>Cycle Quietways in Residential areas*</b></li> <li><b>Cycle Parking*</b></li> <li><b>ATF Package*</b></li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
		<ul style="list-style-type: none"> <li>▪ Implement 'well designed neighbourhood principles' in the redesign of existing neighbourhoods</li> <li>▪ Continue to evaluate the suitability of our towns and cities for new electric forms of transport, such as e-scooters while we await new national requirements</li> </ul>	
New developments are designed to be sustainable from the start	Future development	<ul style="list-style-type: none"> <li>▪ Introduce a 'Place and Movement' approach for planning all new developments</li> <li>▪ Adopt a vision-led approach to planning for new growth and its transport needs, including through all new Local Plans and the identification of monitoring measures</li> <li>▪ Adopt an 'Avoid-Shift-Improve' approach to plan transport and development from the earliest stages of development planning</li> <li>▪ Use connectivity planning to help locate new homes, jobs and essential services in sustainable places that align with our vision for transport</li> <li>▪ Work with Local Planning Authorities (LPAs) and other partners to allocate developments in Local Plans and deliver new Garden Communities to help meet the significant housing targets set for Essex by the Government</li> <li>▪ Work with LPAs to ensure that measures proposed in large developments and Garden Communities to promote sustainable transport are deliverable and sufficient to meet the vision for active and sustainable mode share</li> <li>▪ Set up Transport Review Groups for larger developments to help the ongoing management of transport impacts</li> <li>▪ Require effective travel plans for all new homes, new and existing workplaces and schools, including Garden Communities and other large-scale developments in line with our travel plan guides for residential, workplace, school, and</li> </ul>	<ul style="list-style-type: none"> <li>▪ A127 strategic package</li> <li>▪ A13 improvements</li> <li>▪ Lower Thames crossing</li> <li>▪ South Essex bus metro</li> <li>▪ A127 / A130 Fairglens</li> <li>▪ <b>Residential travel planning*</b></li> <li>▪ <b>Business and school planning*</b></li> <li>▪ <b>Behavioural change programme*</b></li> <li>▪ <b>YouSmart planning tool*</b></li> <li>▪ <b>Roll out of shared mobility initiatives*</b></li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
		<p>large-scale developments and garden communities</p> <ul style="list-style-type: none"> <li>▪ Monitor the delivery of active and sustainable mode share targets through the Travel Plan with permission for latter phases of development linked to the achievement of modal split targets for early phases in line with our travel plan guide for large-scale developments and garden communities</li> <li>▪ Work with LPAs to embed inclusive design principles into all new developments</li> <li>▪ Promote tools, guidance and best practice documents, such as A New Street Types Model for Essex, EPOA 2024 Parking Guidance, Mobility Hubs as part of the Essex Design Guide and the Highways Technical Manual, to help plan all new developments sustainably</li> <li>▪ Implement 'well designed neighbourhood principles' in the design of new communities</li> <li>▪ Require planning applications to be supported by a Health Impact Assessment (HIA) considering the Essex Healthy Places Checklist</li> </ul>	
	Cross-boundary impact of development in Brentwood	<ul style="list-style-type: none"> <li>▪ Introduce a 'Place and Movement' approach for planning all new developments</li> <li>▪ Adopt a vision-led approach to planning for new growth and its transport needs, including through all new Local Plans and the identification of monitoring measures</li> <li>▪ Adopt an 'Avoid-Shift-Improve' approach to plan transport and development from the earliest stages of development planning</li> <li>▪ Use connectivity planning to help locate new homes, jobs and essential services in sustainable places that align with our vision for transport</li> <li>▪ Work with Local Planning Authorities (LPAs) and other partners to allocate developments in Local Plans and deliver new Garden Communities to</li> </ul>	<ul style="list-style-type: none"> <li>▪ Dunton to Basildon connection</li> <li>▪ West Horndon station interchange (to support new development)</li> <li>▪ Dunton Hills Garden Village bus lanes</li> <li>▪ Rail station to serve proposed Dunton EC</li> <li>▪ Dunton Hill to Laindon sustainable corridor</li> <li>▪ <b>Residential travel planning*</b></li> <li>▪ <b>Business and school planning*</b></li> <li>▪ <b>Behavioural change programme*</b></li> <li>▪ <b>YouSmart planning tool*</b></li> <li>▪ <b>Roll out of shared mobility initiatives*</b></li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
		<p>help meet the significant housing targets set for Essex by the Government</p> <ul style="list-style-type: none"> <li>▪ Work with LPAs to ensure that measures proposed in large developments and Garden Communities to promote sustainable transport are deliverable and sufficient to meet the vision for active and sustainable mode share</li> <li>▪ Set up Transport Review Groups for larger developments to help the ongoing management of transport impacts</li> <li>▪ Require effective travel plans for all new homes, new and existing workplaces and schools, including Garden Communities and other large-scale developments in line with our travel plan guides for residential, workplace, school, and large-scale developments and garden communities</li> <li>▪ Monitor the delivery of active and sustainable mode share targets through the Travel Plan with permission for latter phases of development linked to the achievement of modal split targets for early phases in line with our travel plan guide for large-scale developments and garden communities</li> <li>▪ Work with LPAs to embed inclusive design principles into all new developments</li> <li>▪ Promote tools, guidance and best practice documents, such as A New Street Types Model for Essex, EPOA 2024 Parking Guidance, Mobility Hubs as part of the Essex Design Guide and the Highways Technical Manual, to help plan all new developments sustainably</li> <li>▪ Implement 'well designed neighbourhood principles' in the design of new communities</li> <li>▪ Require planning applications to be supported by a Health Impact Assessment (HIA) considering the Essex Healthy Places Checklist</li> </ul>	



Outcome	Challenge	High Level Activity	Schemes to address these challenges
Transport has a reduced impact on the environment and adverse impacts on natural habitats are avoided	Basildon and Brentwood boroughs have some of the highest levels of air pollutants in the South Essex area. This is mainly caused by road traffic using major roads, including the M25, A12, A127, A128, A1023 and A129.	<ul style="list-style-type: none"> <li>▪ Adopt an 'Avoid-Shift-Improve' approach to plan transport and development from the earliest stages of development planning</li> <li>▪ Implement the Essex Air Quality Strategy to reduce exposure to poor quality air</li> <li>▪ Develop effective and deliverable Air Quality Action Plans with partners</li> <li>▪ Avoid adverse effects from new transport projects on the integrity of internationally important habitat sites.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Rochford walking and cycling improvements</li> <li>▪ A127/A130 Fairglen (to tackle congestion at Lower Thames Crossing/Thames Freeport)</li> <li>▪ South Essex bus metro</li> <li>▪ Electrify rail access to London gateway</li> <li>▪ Wickford high street bus gate</li> <li>▪ Wickford to Basildon bus access</li> <li>▪ A129 bus corridor</li> <li>▪ Dunton to Basildon connection</li> <li>▪ Park and Ride for Basildon Hospital</li> <li>▪ <b>Promotion of synthetic fuels*</b></li> <li>▪ <b>Roll out of EV infrastructure*</b></li> <li>▪ <b>Promotion of the Smarter Travel Network for Essex* Businesses*</b></li> </ul>

## B.3 Connectivity

### B.3.1 Outcome -> Issue -> Activity -> data

Outcome	Challenge	High Level Activity	Schemes to address these challenges
The business potential of Essex is maximised	Passenger transport links to the London Gateway area and Tilbury Port could be improved to improve access to employment for the local workforce.	<ul style="list-style-type: none"> <li>▪ Adopt a vision-led approach to planning for new growth and its transport needs, including through all new Local Plans</li> <li>▪ Prioritise journey time reliability for all modes of transport, including freight and passenger transport</li> <li>▪ Work with partners to make the case for investment in our strategic road and rail links, including to the airports and ports to provide enhanced capacity for freight</li> <li>▪ Work with partners and the freight industry to reduce the impact of freight and delivery vehicles on communities and the environment</li> </ul>	<ul style="list-style-type: none"> <li>▪ GEML rail link to London Gateway</li> <li>▪ Sustainable links from Canvey to Thames Freeport</li> <li>▪ Thames Freeport connection</li> <li>▪ Essex Thameside rail network study</li> <li>▪ <b>Roll out of shared mobility initiatives*</b></li> <li>▪ <b>Expansion of plus bus schemes*</b></li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
	Delays along the A12, A13, A127, between Basildon and Southend and along the A130 between Basildon and Chelmsford.	<ul style="list-style-type: none"> <li>▪ Prioritise journey time reliability for all modes of transport, including freight and passenger transport</li> <li>▪ Work with partners to make the case for investment in our strategic road and rail links, including to the airports and ports to provide enhanced capacity for freight.</li> </ul>	<ul style="list-style-type: none"> <li>▪ A13 sustainable corridor</li> <li>▪ Lower Thames Crossing</li> <li>▪ A127 strategic package</li> <li>▪ A127 / A130 Fairglens</li> <li>▪ South Essex bus metro</li> <li>▪ <b>Roll out of shared mobility initiatives*</b></li> <li>▪ <b>Expansion of plus bus schemes*</b></li> <li>▪ <b>A12 Improvements*</b></li> </ul>
	Coastal towns Canvey Island and Leigh-on-Sea could have better cycling / walking routes so residents / tourists can make the most of these seaside towns.	<ul style="list-style-type: none"> <li>▪ Introduce a 'Place and Movement' approach to help embed the principles of 'Healthy Streets' and manage the transport network effectively for both existing streets and new developments</li> </ul>	<ul style="list-style-type: none"> <li>▪ Castle Point walking and cycling improvements</li> <li>▪ Canvey town centre improvements</li> <li>▪ <b>Rural walking and cycling improvements*</b></li> <li>▪ <b>Strategic PROWs for longer distance routes*</b></li> <li>▪ <b>ATF major package*</b></li> </ul>
People have inclusive and affordable access to employment, education and training	Areas currently facing journey times over an hour, via public transport, to areas of employment include Rettendon, South Woodham Ferrers, Margaretting Tye, Mounthnessing, parts of Canvey Island and areas around Hadleigh, Wickford and Hockley.	<ul style="list-style-type: none"> <li>▪ Tackle barriers to travel, such as accessibility, complexity and security, to support greater use by everyone</li> <li>▪ Work with organisations such as bus operators and active travel organisations and funders to make the case for new investment</li> <li>▪ Work with partners to improve walking, cycling and public transport connections between residential and employment areas</li> <li>▪ Work with partners to secure better facilities at stations for onward travel via all modes of transport, including step-free access</li> <li>▪ Work in partnership to provide attractive, safe, convenient, inclusive, and high quality walking, cycling and public transport routes and facilities</li> <li>▪ Deliver high quality rapid transit networks where feasible</li> </ul>	<ul style="list-style-type: none"> <li>▪ South Essex bus metro</li> <li>▪ Thames Freeport connection</li> <li>▪ GEML rail link to London Gateway</li> <li>▪ Sustainable links from Canvey to Thames Freeport</li> <li>▪ A13 sustainable corridor</li> <li>▪ Southend Airport connection improvements</li> <li>▪ Essex Thameside rail network study</li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
	Several areas face long journey times to rail and tube stations.	<ul style="list-style-type: none"> <li>Tackle barriers to travel, such as accessibility, complexity and security, to support greater use by everyone</li> <li>Work with organisations such as bus operators and active travel organisations and funders to make the case for new investment</li> <li>Work with partners to secure better facilities at stations for onward travel via all modes of transport, including step-free access</li> <li>Work in partnership to provide attractive, safe, convenient, inclusive, and high quality walking, cycling and public transport routes and facilities</li> <li>Deliver high quality rapid transit networks where feasible</li> </ul>	<ul style="list-style-type: none"> <li>South Essex bus metro</li> <li><b>Roll out of shared mobility initiatives*</b></li> <li><b>Expansion of plus bus schemes*</b></li> <li><b>Integrated ticketing across modes*</b></li> <li><b>ATF major package*</b></li> <li><b>NCN*</b></li> </ul>
	High unemployment levels in Castle Point borough and low job density.	<ul style="list-style-type: none"> <li>Tackle barriers to travel, such as accessibility, complexity and security, to support greater use by everyone</li> <li>Deliver locally relevant training programmes to address skills gaps holding people back and stopping firms from investing</li> <li>Support the rollout of gigabit speed broadband and ongoing improvements to 5G mobile coverage in rural and deprived areas</li> </ul>	<ul style="list-style-type: none"> <li>South Essex bus metro</li> <li>IDP A127 corridor strategic improvements</li> <li>West Horndon station</li> <li>Wickford station re-build / extension</li> <li>Thames Freeport connection</li> <li>Wickford to Basildon bus corridor</li> </ul>
	Low potential to work from home with key sectors of employment in Basildon and Castle Point boroughs including retail, healthcare and education, all of which require people to travel.	<ul style="list-style-type: none"> <li>Support the rollout of gigabit speed broadband and ongoing improvements to 5G mobile coverage in rural and deprived areas</li> <li>Tackle barriers to travel, such as accessibility, complexity and security, to support greater use by everyone</li> <li>Work with partners to improve walking, cycling and public transport connections between residential and employment areas</li> </ul>	<ul style="list-style-type: none"> <li>South Essex bus metro</li> <li>IDP A127 corridor strategic improvements</li> <li>A129 bus corridor</li> <li>West Horndon station interchange improvements</li> <li>Wickford station re-build / extension</li> <li>Thames Freeport connection</li> <li>Wickford to Basildon bus corridor</li> <li><b>Roll out of shared mobility initiatives*</b></li> <li><b>Expansion of plus bus schemes*</b></li> <li><b>Integrated ticketing across modes*</b></li> </ul>

Outcome	Challenge	High Level Activity	Schemes to address these challenges
	Around 90% of journeys made between Brentwood and Basildon are made by car but potential and/or ability to work from home in both areas is low (due to type of jobs and/or poor access to broadband). Bus services that run between the two areas operate with a low to limited frequency	<ul style="list-style-type: none"> <li>▪ Support the rollout of gigabit speed broadband and ongoing improvements to 5G mobile coverage in rural and deprived areas</li> <li>▪ Tackle barriers to travel, such as accessibility, complexity and security, to support greater use by everyone</li> <li>▪ Work with partners to improve walking, cycling and public transport connections between residential and employment areas</li> </ul>	<ul style="list-style-type: none"> <li>▪ South Essex bus metro</li> <li>▪ <b>Expansion of plus bus schemes*</b></li> </ul>
The transport network has a secure and long-term future	Transport networks need to be resilient to ensure the safe, efficient movement of people and goods.	<ul style="list-style-type: none"> <li>▪ Implement our Highways Infrastructure Asset Management Plan and supporting plans and strategies to maintain our transport infrastructure to appropriate standards which offer value for money to the Essex taxpayer</li> <li>▪ Proactively monitor the condition of our road, cycle and pedestrian networks and other pieces of infrastructure</li> <li>▪ Manage, maintain and improve our network by considering our Climate Adaption Plan Framework, Decarbonisation Strategy and our Strategy for managing the Green Estate</li> <li>▪ Develop our own ability as a Council to adapt to climate-related risk</li> <li>▪ Deliver suitable actions that enable our transport network to adapt to change</li> <li>▪ Deploy approaches such as Sustainable Drainage and Natural Flood Management to promote greater flood resilience on the highway network</li> <li>▪ Play an active role in flood defence, coastal protection, and conservation to reduce the risks and impacts on our coastal communities and transport network</li> </ul>	<ul style="list-style-type: none"> <li>▪ A127 strategic package</li> <li>▪ A13 improvements</li> <li>▪ A13 sustainable corridor</li> <li>▪ A127 / A130 Fairglen</li> <li>▪ Lower Thames Crossing</li> <li>▪ <b>Smart junctions*</b></li> <li>▪ <b>Active Intelligent Traffic Management Systems*</b></li> </ul>



Outcome	Challenge	High Level Activity	Schemes to address these challenges
		<ul style="list-style-type: none"> <li>▪ Work with National Highways and neighbouring local transport authorities to provide a common approach to innovation</li> <li>▪ Accurately digitise our highway networks and traffic regulation orders to support future use of our networks by autonomous vehicle systems</li> <li>▪ Manage the introduction of appropriate alternative fuel infrastructure to encourage cleaner zero-emission travel</li> <li>▪ Support the pilot and where appropriate the adoption of new technology which enables more sustainable travel</li> </ul>	
	Areas along the Thames estuary and coastal areas including Foulness Island and Southend's seaside towns are particularly vulnerable to the impacts of sea level rise.	<ul style="list-style-type: none"> <li>▪ Play an active role in flood defence, coastal protection, and conservation to reduce the risks and impacts on our coastal communities and transport network</li> </ul>	<ul style="list-style-type: none"> <li>▪ Canvey surface water flooding</li> <li>▪ Thames coastal protection</li> </ul>

## Appendix C. References

---

- <sup>1</sup> Admin based population estimates: local authority case studies, England and Wales. ONS. 2022. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/adminbasedpopulationestimates/localauthoritycasestudiesenglandandwalesmid2023>
- <sup>2</sup> Admin based population estimates: local authority case studies, England and Wales. ONS. 2024
- <sup>3</sup> Business Register and Employment Survey. ONS. 2021. Available at: <https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/businessregisterandemploymentsurvey>
- <sup>4</sup> Economic Activity Status, Census 2021. NOMIS. 2021. Available at: <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=2083>
- <sup>5</sup> Essex Joint Strategic Needs Assessment. ECC. 2019. Available at: <https://data.essex.gov.uk/jsna-home/>
- <sup>6</sup> Car or van availability Census 2021. NOMIS. 2021. Available at: <https://www.ons.gov.uk/datasets/TS045/editions/2021/versions/4>
- <sup>7</sup> Method of travel to work Census 2011 (Census 2021 data is not representative of commuting travel because of the pandemic.) NOMIS. 2011. Available at: <https://www.nomisweb.co.uk/census/2011/qs701ew>
- <sup>8</sup> Estimates of Station Usage, Office of Rail and Road. 2024. Available at: <https://dataportal.orr.gov.uk/statistics/usage/estimates-of-station-usage>
- <sup>9</sup> King Charles III England Coast Path – East. National Trails. 2025. Available at: [https://www.nationaltrail.co.uk/en\\_GB/trails/england-coast-path-east/](https://www.nationaltrail.co.uk/en_GB/trails/england-coast-path-east/)
- <sup>10</sup> Olympic Legacy. Hadleigh Country Park. Unknown. Available at: <https://hadleighcountrypark.co.uk/olympic-games/>
- <sup>11</sup> Collision Data sourced from Essex Police, 2021-23
- <sup>12</sup> Essex' Residents Survey, 2022
- <sup>13</sup> Admin based population estimates: local authority case studies, England and Wales. ONS. 2022
- <sup>14</sup> Essex Joint Strategic Needs Assessment. ECC. 2019.
- <sup>15</sup> SEEPARK. South Essex Councils. Unknown. Available at: <https://www.southessex.org.uk/vision/environment/seepark>
- <sup>16</sup> South Essex Public Transport Model, 2019
- <sup>17</sup> Essex Air Quality Strategy, Draft document for public consultation. Essex Air. 2025. Available at: [https://consultations.essex.gov.uk/essex-highways/essex-air-quality-strategy/supporting\\_documents/essex\\_air\\_quality\\_strategy\\_web\\_version.pdf](https://consultations.essex.gov.uk/essex-highways/essex-air-quality-strategy/supporting_documents/essex_air_quality_strategy_web_version.pdf)
- <sup>18</sup> Department for Transport journey time data
- <sup>19</sup> Census, 2021
- <sup>20</sup> Census, 2021
- <sup>21</sup> OFCOM, 2022