

Capital Project Business Case

Basildon Integrated Transport Package - Tranche 3

Flagship Cycle Route

The template

This document provides the business case template for projects seeking funding which is made available through the **South East Local Enterprise Partnership**. It is therefore designed to satisfy all SELEP governance processes, approvals by the Strategic Board, the Accountability Board and also the early requirements of the Independent Technical Evaluation process where applied.

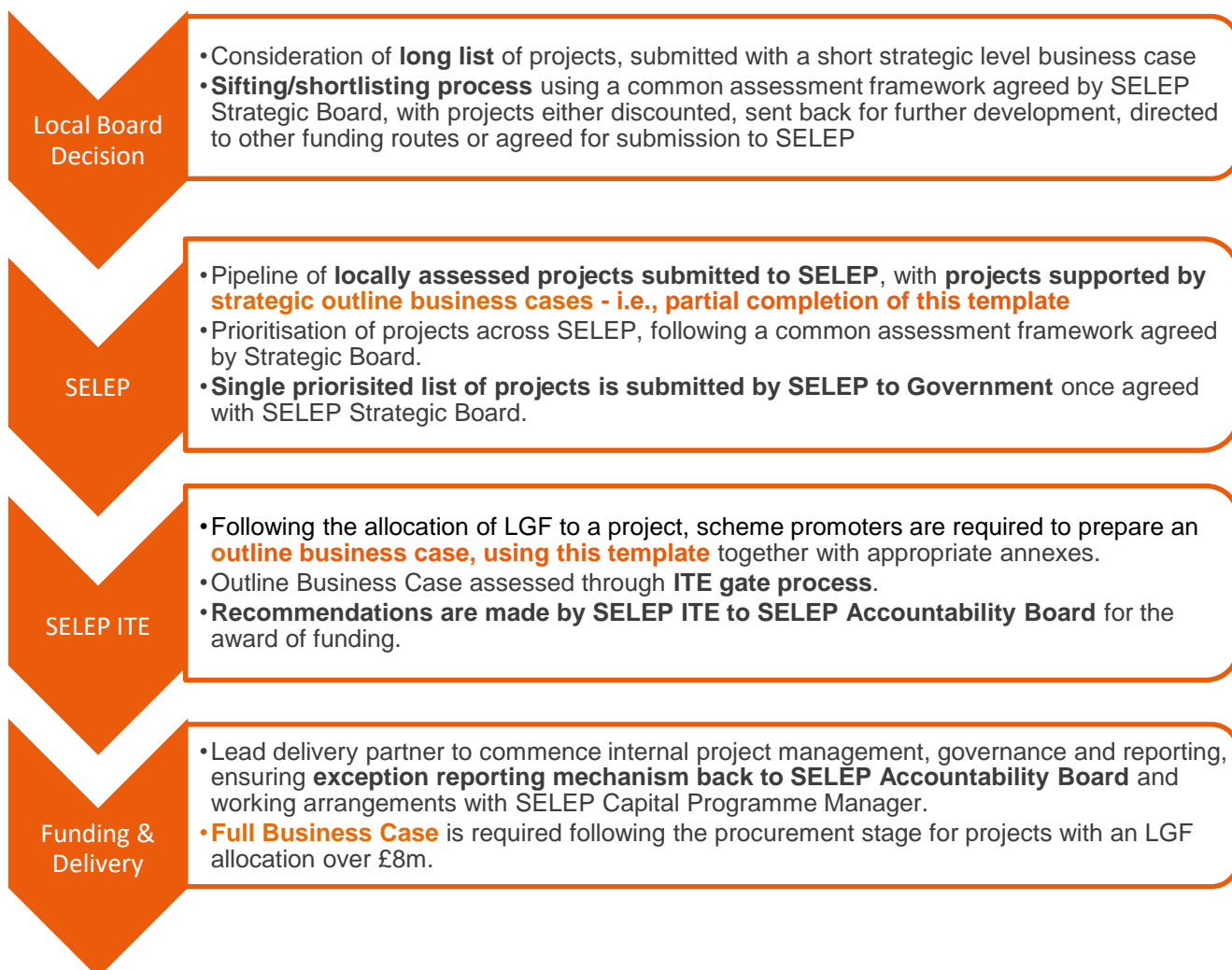
It is also designed to be applicable across all funding streams made available by Government through SELEP. It should be filled in by the scheme promoter – defined as the final beneficiary of funding. In most cases, this is the local authority; but in some cases the local authority acts as Accountable Body for a private sector final beneficiary. In those circumstances, the private sector beneficiary would complete this application and the SELEP team would be on hand, with local partners in the federated boards, to support the promoter.

Please note that this template should be completed in accordance with the guidelines laid down in the HM Treasury's Green Book. <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>

As described below, there are likely to be two phases of completion of this template. The first, an 'outline business case' stage, should see the promoter include as much information as would be appropriate for submission though SELEP to Government calls for projects where the amount awarded to the project is not yet known. If successful, the second stage of filling this template in would be informed by clarity around funding and would therefore require a fully completed business case, inclusive of the economic appraisal which is sought below. At this juncture, the business case would therefore dovetail with SELEP's Independent Technical Evaluation process and be taken forward to funding and delivery.

The process

This document forms the initial SELEP part of a normal project development process. The four steps in the process are defined below in simplified terms as they relate specifically to the LGF process. Note – this does not illustrate background work undertaken locally, such as evidence base development, baselining and local management of the project pool and reflects the working reality of submitting funding bids to Government. In the form that follows:



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1. PROJECT OVERVIEW

1.1. Project name:

Basildon Flagship Cycle Route

1.2. Project type:

The Basildon Cycling Action Plan published by Essex Highways in November 2017, recommended a number of Flagship Cycle routes that should be introduced for Basildon. Funding has already been won from Defra for the first Cycle Route. This proposal is for the second identified route from Basildon station to the Industrial area and Retail Park at Pipp's Hill to the north of the town, with an additional spur to Laindon – a total distance of 2.4 miles.

1.3. Federated Board Area:

Opportunity South Essex

1.4. Lead County Council / Unitary Authority:

Essex County Council

1.5. Development location:

A cycle route from Basildon Rail Station heading in a northerly direction to the Pipp's Hill Industrial Area and Retail Park (Pipp's Hill Industrial Estate, Basildon, SS14 3BD) – mainly paralleling the route of the A176. It is also planned to add a link heading to Laindon from Pipp's Hill.

1.6. Project Summary:

Basildon is a large town of 107,000 residents. It is a heavily motorised conurbation with a high-capacity road network and a large number of parking spaces. The town's topography is relatively flat and cycle friendly. The Borough has good rail connections, with the three main stations of Basildon, Pitsea and Laindon providing excellent access to London.

Although Essex County Council (ECC) and Basildon Borough Council (BBC) have been promoting and facilitating cycling for a number of years, the lack of joined up routes with appropriate signage is considered to discourage some residents from cycling more.

Using the new Department for Transport (DfT) Local Walking and Cycling Infrastructure Plans (LCWIP) process, tools and methodology and the findings from the recently published Basildon Cycling Action Plan (CAP), ECC have been able to prioritise investment decisions based upon a robust methodology which considers future demand and the propensity to cycle. Initially five scheme options were identified and, through a stakeholder workshop, a preferred option was identified. This has since progressed through Design Stage 2 and is currently undergoing Design Stage 3 - the detailed design of the preferred option.

The Flagship Routes that have been identified in Basildon offer the best opportunities to increase cycling use on the key corridors. In most cases, the scheme will require the linking-up of existing short sections of route which were built when Basildon was originally constructed in the 1950s, with the addition of improved crossings, signage and surfacing to modernise the facilities to a level of quality expected by potential users.

As part of the A127 Air Quality Improvement Programme, contribution funding has already been won from Defra for the first Flagship Route to the Basildon Enterprise Corridor, alongside the A127, and this proposal is for the second identified route from Basildon station to the Industrial area and Retail Park at Pipp's Hill to the north of the town with an additional spur to Laindon – a total distance of 2.4 miles.

Drawings of the proposed improvements can be found at Appendix F1 and F2. Appendix F3 shows the location of the proposed route in context with the Defra funded route.

1.7. Delivery partners:

Partner	Nature and / or value of involvement (financial, operational etc.)
Essex County Council	Financial, operational, programme management and project direction
Basildon Borough Council	Support for scheme
Essex Highways	Responsible for design, management and coordinating delivery of schemes
Ringway Jacobs and partners	Responsible for constructing schemes

1.8. Promoting Body:

Essex County Council

1.9. Senior Responsible Owner (SRO):

Andrew Cook, Director, Highways & Transportation, ECC

1.10. Total project value and funding sources:

Funding source	Amount (£m)	Constraints, dependencies or risks and mitigation
SELEP	£0.453	Dependent on this bid
ECC Capital Funding	£0.497	Included in the 2018/19 and 2019/20 ECC Cycling Programme capital allocation. The 2019/20 programme will be subject to formal approval in February 2019.
ECC Revenue Funding	£0.003	Revenue budget will be formally approved in February 2019 for 2019/20 Financial Year
Total project value	£0.953	

1.11. SELEP funding request, including type (LGF, GPF etc.):

£0.453m capital LGF funding will be requested from SELEP in the form of a financial contribution.

The funding will not constitute State Aid.

1.12. Exemptions:

This scheme, as defined, is not subject to any Value for Money exemptions.

1.13. Key dates:

Cycle Route

Project milestone	Indicative date
Preliminary design	Completed
Detailed design	Completed

Tender	September to November 2018
Start construction	December 2018
End construction	June 2019

1.14. Project development stage:

Project development stages completed to date			
Task	Description	Outputs achieved	Timescale
Basildon Cycling Action Plan	Detailed action plan	Completed – paper issued	November 2017
Design	Detailed design	Completed – issued	August 2018
Eol	Expression of Interest	Completed – paper issued	August 2018
Project development stages to be completed			
Task	Description	Timescale	
Business Case	Full Business Case	November 2018	

1.15. Proposed completion of outputs:

The high-level outputs of the scheme are the creation of 4.22km of new cycle ways and instillation of 1km of associated electrical cabling.

Physical Activity

This scheme will have a major impact on cycling as a consequence of the improved and co-joined links, the improved signage and the improved surfacing.

Journey Quality

Journey quality will be improved as identified below:-

- External Views – Clear views and good sight-lines along cycle paths with good visibility. Pleasant surroundings down which to cycle.
- Cleanliness - Clear and clean signage and resurfaced cycleways will provide a clean appearance.
- Facilities - Clear and clean signage and resurfaced cycleways will provide an appearance of good, modern facilities.
- Information - Clear and clean signage and resurfaced cycleways with appropriate markings will provide good information.
- Traveller Stress - Clear and logical layouts / geometry with the ability to make good progress will reduce traveller's frustration.
- Fear of potential accidents - Removing cyclists from the road network will inevitably reduce cycling accidents.
- Route uncertainty - Clear and clean signage and resurfaced cycleways with appropriate markings will reduce route uncertainty.
- Landscaping - Well landscaped cycleways will encourage more people to cycle.
- Lighting - Well-lit cycleways will encourage more people to cycle.

2. STRATEGIC CASE

2.1. Scope / Scheme Description:

Flagship Cycle Routes

Over time, ECC and Basildon Borough Council aim to introduce a number of Flagship cycle routes across Basildon which will provide a series of upgraded cycle routes to introduce a comprehensive well-equipped cycling (and walking) network in the town.

ECC have identified the routes which are most likely to make the most significant socio-economic impact in Basildon and help reduce motorised traffic through the town. Providing sustainable travel route choices to residents, businesses and visitors will not only provide a level of service which will attract new users, but will also act as a catalyst for further investment and support the development of new homes and businesses. Moreover, enhanced walking and cycling networks are complementary to a mix of land uses and can help to link consumers with markets, and businesses with new opportunities.

Cycling Action Plans



Figure 1: Essex Cycling Strategy and Basildon Cycling Action Plans

As part of the county-wide Essex Cycling Strategy, Cycling Action Plans (CAPs) have been developed for the individual Boroughs, Districts and Cities of Essex, including one for the Borough of Basildon (See Appendix G).

The CAP identifies opportunities to develop and promote cycling in Basildon by providing improvements to the infrastructure. Together with the wider promotion of cycling by Active Essex, Essex County Council (ECC) and Basildon Borough Council (BBC), it is proposed to establish cycling in the public's mind as a 'normal' mode of travel, especially for short A-to-B trips, and as a major participation activity and sport for all ages.

Two key commitments of the Essex Cycling Strategy are to:

- establish a coherent, comprehensive and advantageous cycle network in every major urban area in Essex, utilising a combination of on-carriageway and off-carriageway cycle facilities; and
- ensure each Borough / District / City in Essex has an up-to-date Cycling Action Plan (which will be renewed every five years).

The CAPs identify any high quality and well planned infrastructure which will be vital in encouraging cycling and improving safety. It is ECC's policy to ensure that every urban area has a well-planned cycle network that:

- connects key destinations;
- supports a network of recreational routes; and
- caters for all users and abilities.

Coherent cycle networks will ensure that:

- physical barriers to cycling in Essex's urban areas are progressively broken down; and
- cycling becomes a prioritised mode of transport in the mind of Essex residents.

In addition, the priority aims for Active Essex (County Sports Partnership) and how cycling can help achieve these aims are shown in Table 1.

Table 1: Active Essex priority aims

Active Essex priority aims	How cycling helps achieve these aims
Increase participation in sport and physical activity	Cycling is one of the most popular sports in Essex and can be enjoyed by people of all ages
Encourage healthy and active lifestyles	Cycling provides a means of active transport that can help to reduce the number of short car journeys
Develop sporting pathways	Alex Dowsett, cycling world record breaker, is from Essex and benefited from Active Essex Sporting Ambassador funding and support when he was a talented young cyclist
Encourage lifelong learning and skills development	Bikeability courses help children and adults to acquire physical skills and road safety awareness



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Figure 2: Basildon Borough Map

Although Essex County Council (ECC) and Basildon Borough Council (BBC) have been promoting and facilitating cycling for many years, the lack of a planned and justifiable list of interventions,

aimed at widening the appeal of cycling within the Borough, means that it has not always been prioritised.

The aims of the Cycling Action Plan are to:

- Identify how cycling levels can be increased in the Borough;
- Prioritise funding for new cycling schemes in Basildon;
- Create a usable, high-quality cycle network that connects residential areas with key employment locations, rail stations and town centres; and
- Create opportunities to increase recreational cycling in Basildon.

Cycling improvements will help enable and support planned growth, along with the housing identified in the south Essex Strategic Housing Market Assessment (SHMA). The SHMA identifies the 'objectively assessed need' for Basildon, Castle Point, Rochford and Southend as being 2,350 to 2,770 dwellings per annum, resulting in around 12,800 new homes being required by 2021. The local authorities each have significant plans for growth in housing and jobs, estimated to be around 26,000 houses and 25,000 jobs up to 2031.

History – Basildon

Basildon was one of eight 'New Towns' created in the south east of England after the New Towns Act was passed in 1946. It was created to accommodate the London population overspill, and was based on the conglomeration of four small villages, namely Pitsea, Laindon, Basildon (the most central of the four) and Vange.

Population and Demography

The Borough's population has dramatically increased since the 1950's, following the phased construction of Basildon New Town, and the gradual expansion of the older settlements of Billericay and Wickford. The 2011 Census identified a population of 174,500 in the Borough of Basildon. Of this, Basildon itself has a population of around 107,000, whilst Billericay and Wickford have populations of approximately 38,500 and 29,400 respectively.

Traffic in Basildon

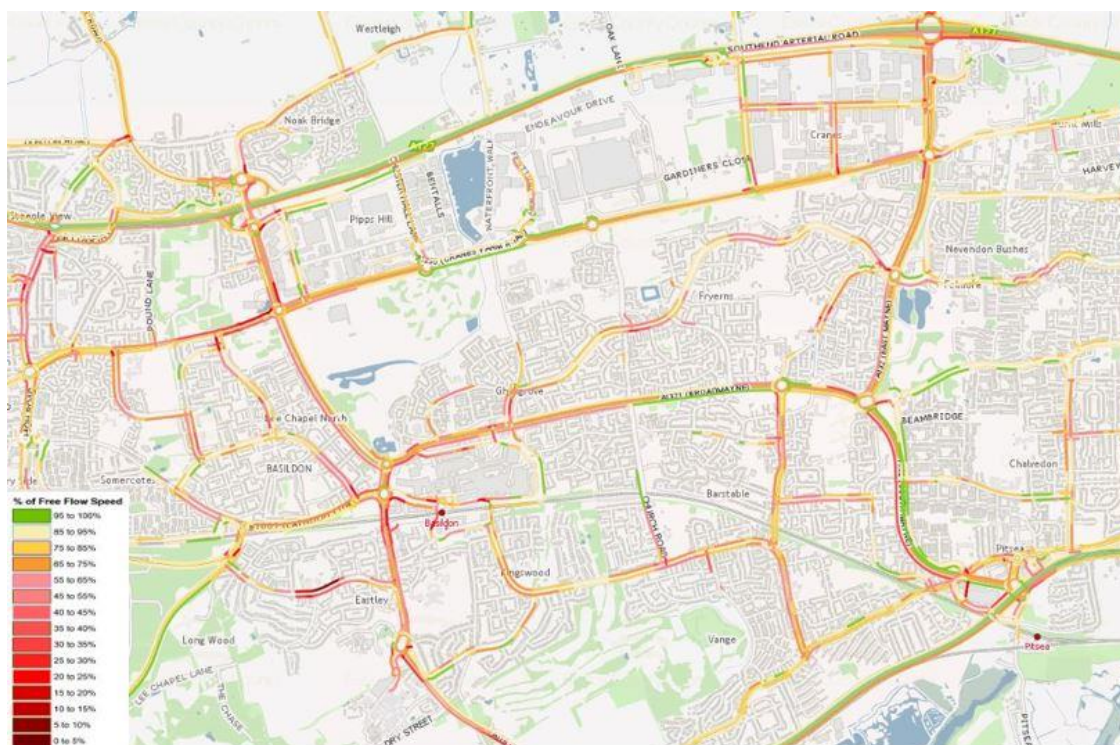


Figure 3: 2017 Trafficmaster AM peak (07:00-08:00) plot

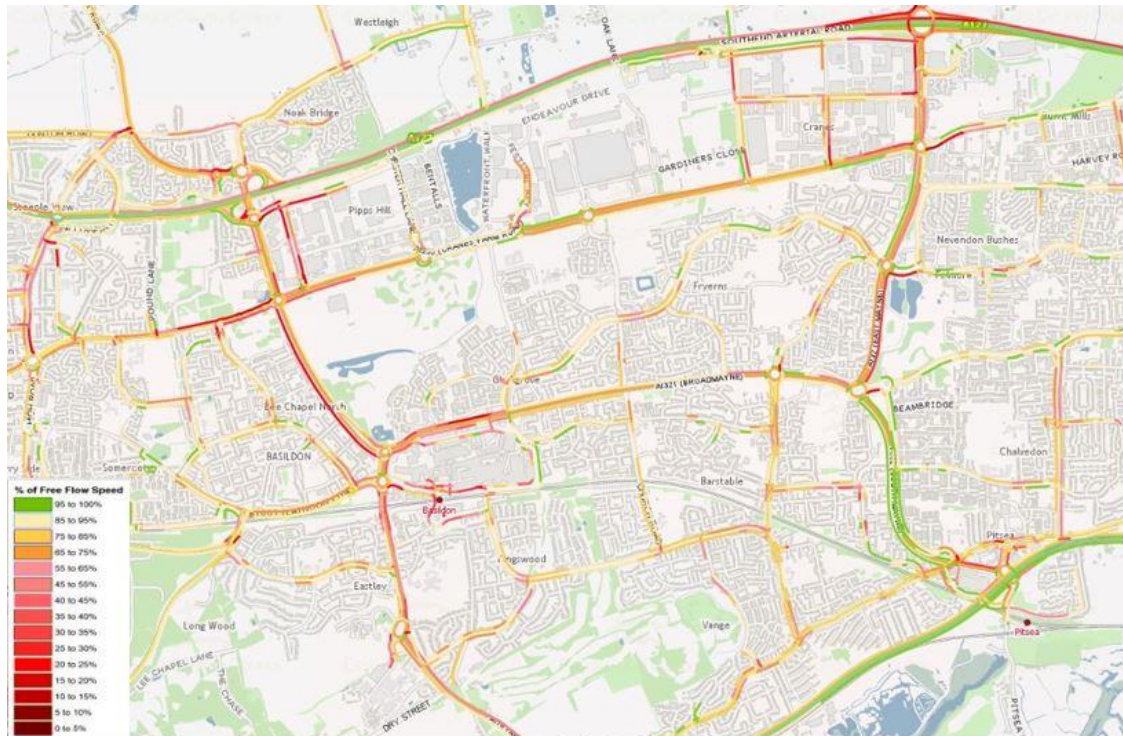


Figure 4: 2017 Trafficmaster PM peak (17:00-18:00) plot

The Teletrac (Trafficmaster) plots show that, during the AM peak hour:

- The junction of Cranes Farm Road with Upper Mayne is congested.
- The local roads around the station are all congested.

The delay during the PM peak hour is found to be more significant than in the AM peak hour, particularly on the following:

- Upper Mayne approaching Cranes Farm Road.
- Roads around the Pippis Hill Industrial Estate.

The data shows that, a number of the roads heading to the station already experience delay in both the AM and PM peaks. Therefore, any opportunity to reduce these traffic flows will help congestion and will help improve the efficiency of existing businesses in the surrounding area and the commute to the station.

2.2. Location description:

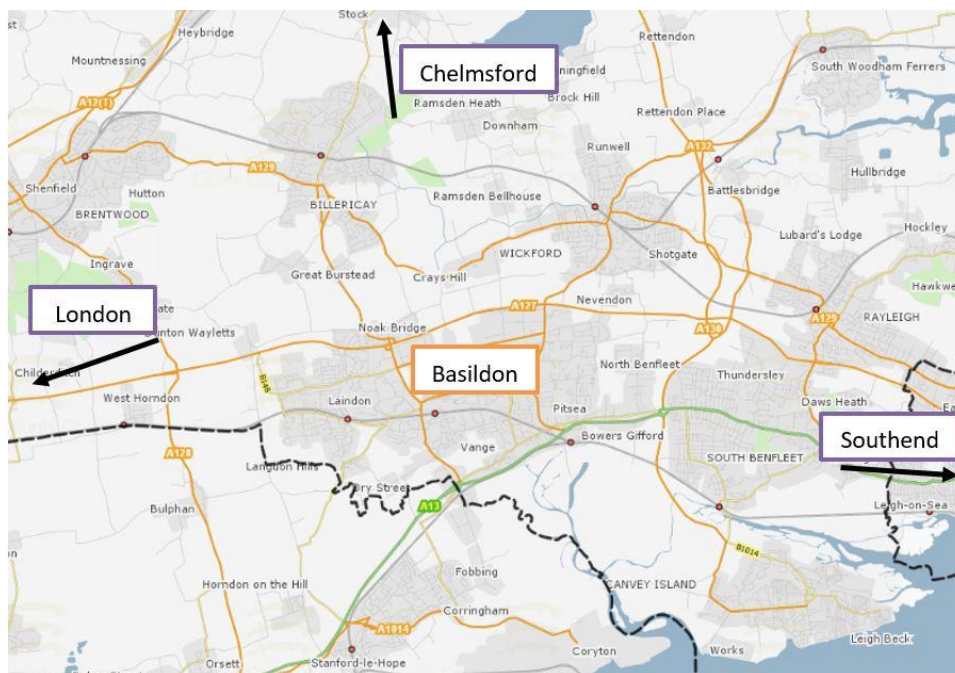


Figure 5: Basildon and South Essex

Location – Basildon

Basildon is the largest town in the borough of Basildon. It lies 32 miles east of Central London, 11 miles south of the city of Chelmsford and 10 miles west of Southend-on-Sea. Nearby smaller towns include Billericay to the north, Wickford in the northeast and South Benfleet to the east.

Many of Basildon's residents work in Central London, due to the town being well connected to the City of London and the Docklands financial and corporate headquarters districts, with a 35–60 minute journey from the three Basildon stations to London Fenchurch Street. Basildon also has access to the City via road, on both the A127 and A13.

Employment and Economy

The town of Basildon is the largest employment centre in the Thames Gateway South Essex (TGSE) area and is home to the Basildon Enterprise Corridor, the largest concentration of employment in Essex with 35,000 employees.



Figure 6: Pipp's Hill Retail Park

The Basildon Enterprise Corridor plays host to major international businesses such as Ford, SELEX Galileo and New Holland Agriculture, along with a growing concentration of advanced engineering small and medium employers (SMEs). It is well located to provide a base for global companies seeking to build links with the established concentration of advanced manufacturing and engineering businesses.



Figure 7: Basildon Enterprise Corridor

A127

Basildon is situated halfway along the key strategic A127, which links East London to Southend.

The A127, previously known as the Southend Arterial Road, is a dual carriageway east-west link between Southend, Basildon, the M25 and Romford, where it merges with the A12 into East London. Approximately 15 miles of the A127 road falls within Essex County Council's boundary, from the M25 Cranham Interchange to the outskirts of Southend.

The A127 corridor is a vitally important primary route for the South Essex area which connects the M25, Basildon and Southend (including London Southend Airport). It also provides access to the wider areas of the adjacent boroughs of Basildon, Brentwood and Rochford and the district of Castle Point. These include the key towns of Basildon, Billericay, Brentwood, Canvey Island, Rayleigh, Rochford and Wickford.

The A127, which has strategic links to the A13, A128, A129 and A130, experiences volumes of traffic up to 80,000 average annual daily flows which means it exceeds the volume of many motorways in the UK.

2.3. Policy context:

National, Regional and Local Policies

The relevant National, Regional and Local Policy documents are: the UK Government's Cycling and Walking Investment Strategy (CWIS, 2017), the Essex Transport Strategy (2011) and the Basildon Draft Local Plan (2016).

These documents indicate that there is a great deal of support for cycling at all levels. At a national level, there is a long term vision for cycling to become the normal mode of choice for short journeys, or as part of a longer journey. At a regional level, there is a particular emphasis on providing sustainable access and travel choice for Essex residents. Cycling is being promoted as a way to reduce congestion within urban areas, to encourage healthier lifestyles, and as a valuable leisure and tourism opportunity that is important to the local economy. Basildon is specifically identified in

Policy 14 (Cycling) of the Essex Transport Strategy as a 'main urban area where cycling facilities will continue to be improved'.

At a local level, to support the planned growth in Basildon Borough and to enable more existing journeys to be made by bicycle, extending and upgrading the cycle networks is a key objective, along with promoting their use. Evidence shows that future traffic growth in the Borough will lead to significant parts of the highway network operating at, or above, capacity, thereby causing delay. Whilst the topography of much of the Borough is reasonably flat, and Basildon town centre has a well-developed cycle network, the proportion of people travelling to work by bicycle is currently well below the national average.

Cycling and Walking Investment Strategy (CWIS)

Under the Infrastructure Act 2015, the UK Government is required to set a Cycling and Walking Investment Strategy (CWIS) for England. A CWIS strategy was published in 2017, which sets out the UK Government's ambition for creating a walking and cycling nation; the targets and objectives they are working towards; the financial resources available to meet their objectives; the strategy for delivering the objectives; and the governance arrangements that will review this delivery.

The strategy states that the Government "wants to make cycling and walking the natural choices for shorter journeys, or as part of a longer journey". The aim is for more people to have access to safe, attractive routes for cycling and walking by 2040. So, by 2040, the ambition is to deliver:

- **Better safety (a safe and reliable way to travel short journeys), through:**
 - Providing streets where cyclists and walkers feel they belong, and are safe;
 - Providing better connected communities;
 - Ensuring safer traffic speeds, with lower speed limits appropriate to the local area; and
 - Providing cycle training opportunities for all children.
- **Better mobility (more people cycling and walking – easy, normal and enjoyable), by providing:**
 - More high quality cycling facilities;
 - More urban areas that are considered walkable;
 - Rural roads which provide improved safety for walking and cycling;
 - More networks of routes around public transport hubs and town centres;
 - Safe paths along busy roads;
 - Better links to schools and workplaces;
 - Technological innovations that can promote more of, and safer, walking and cycling;
 - Behavioural change opportunities to support increased walking and cycling; and
 - Better integrated routes for those with disabilities, or health conditions.
- **Better streets (places that have cycling and walking at their heart), by providing:**
 - Places designed for people of all abilities and ages so that they can choose to walk or cycle with ease;
 - Improved public realm;
 - Better planning for walking and cycling;
 - More community-based activities, such as 'led' rides and play streets where local places want them; and
 - A wider green network of paths, routes and open spaces.

Great progress has been made on cycling in the past six years. Cycling rates have increased in areas where dedicated funding has been made available and spend on cycling has risen from around £2 per person in 2010 to £6 per person in England in 2016-17. The Government want to build on these successes and, to help achieve this, have made over £1 billion of Government funding available to local bodies that will be invested in walking and cycling over the next five years.

The £1.2 billion is allocated as follows:

- £50 million to provide cycling proficiency training for a further 1.3 million children;

- £101 million to improve cycling infrastructure and expand cycle routes between the city centres, local communities, and key employment and retail sites;
- £85 million to make improvements to 200 sections of roads for cyclists;
- £80 million for safety and awareness training for cyclists, extra secure cycle storage, bike repair, maintenance courses and road safety measures;
- £389.5 million for councils to invest in walking and cycling schemes; and
- £476.4 million from local growth funding to support walking and cycling.

In addition, the government is investing an extra:

- £5 million on improving cycle facilities at railway stations;
- £1 million on Living Streets' outreach programmes to encourage children to walk to school; and
- £1 million on Cycling UK's 'Big Bike Revival' scheme which provides free bike maintenance and cycling classes.

By 2020, the objectives of the CWIS are to:

- Increase cycling activity, where cycling activity is measured as the estimated total number of cycle stages made;
- Increase walking activity, where walking activity is measured as the total number of walking stages per person;
- Reduce the rate of cyclists killed or seriously injured on England's roads, measured as the number of fatalities and serious injuries per billion miles cycled; and
- Increase the percentage of children aged 5 to 10 that usually walk to school.

Cycling and Walking Infrastructure Plan (CWIP)

A national CWIP is being developed to inform the CWIS. It will include the identification of nationally significant locations / infrastructure. Six outputs are currently being developed (three national and three local outputs):

- The national outputs focus on identifying criteria for national significance and developing a pipeline of potential schemes; and
- The local outputs are focused on developing a 'Level of Service' tool, and guidance to Local Authorities on developing their own local CWIP.

Local Cycling and Walking Infrastructure Plans (LCWIPs)

The Local Cycling and Walking Infrastructure Plans (LCWIPs), which are set out in the Government's Cycling and Walking Investment Strategy, are a new, strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing local cycling and walking networks, ideally over a 10 year period, and form a vital part of the Government's strategy to increase the number of trips made on foot, or by cycle.

ECC's suite of Cycling Action Plans are contributing to the future development of a Basildon LCWIP by providing:

- a network plan for cycling which identifies preferred routes and core zones for further development;
- a prioritised programme of infrastructure improvements for future investment; and
- a report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network.

Regional Policy Context

Essex Transport Policy

The Essex Transport Strategy (2011) seeks to achieve the following five broad outcomes:

- Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration;
- Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation and technology;
- Improve safety on the transport network and enhance and promote a safe travelling environment;

- Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use; and
- Provide sustainable access and travel choice for Essex residents to help create sustainable communities.

Policy 14 (Cycling) states that Essex County Council will encourage cycling by:

- Promoting the benefits of cycling;
- Continuing to improve the cycling facilities within the main urban areas of Basildon, Chelmsford, Colchester and Harlow;
- Developing existing cycling networks in other towns where cycling offers an appropriate local solution;
- Working with schools and employers to improve facilities for cyclists;
- Improving access to local services by integrating the Public Rights of Way, walking and cycling networks to form continuous routes; and
- Providing training opportunities to school children and adults.

Cycling will be promoted as a way to reduce congestion within urban areas, to encourage healthier lifestyles, and as a valuable leisure and tourism opportunity that is important to the local economy.

Improving the safety of the cycling network is also a key concern within the Essex Transport Strategy. Policy 14 of the plan sets out Essex County Council's approach to encouraging cycling, which includes developing cycle networks within towns across Essex and improving access to local services and schools for cyclists. In terms of locational priorities in relation to cycling, the plan identifies Basildon (including Laindon and Pitsea) as a priority area, seeking improvements to the town's cycle networks, including links with surrounding areas such as Billericay and Wickford.

The Essex Transport Strategy seeks to promote sustainable travel, by providing the infrastructure for sustainable travel and promoting the use of travel plans. With regard to cycling, the Essex Transport Strategy considers actions to improve access for cyclists and pedestrians, in particular, and identifies the following improvements as essential:

- Addressing gaps in existing networks;
- Better linkages for walking and cycling routes within the Public Rights of Way network;
- Improving signing;
- Improving crossing facilities; and
- Ensuring that pedestrian routes are accessible for everyone.

The DfT's Cycling Delivery Plan (2014) refers to a new national cycling target, to double the number of cycling stages (trips) nationally over a 10 year period. This new target has been adopted by Essex County Council as part of the Essex Cycle Strategy (2015).

Additionally, the Government has introduced a £6bn Local Growth Fund for cycling and walking. It has also set a target of achieving an annual cycling spend of £10 to £20 per head of the population. In the Borough, this could see between £1.8m and £3.6m per year being spent on improving cycling provision.

Opportunity South Essex

In Lord Heseltine's words, the Thames Gateway is "crucial to UK competitiveness". Stretching 40 miles along the River Thames from Canary Wharf in East London to Southend in Essex and Sittingbourne in Kent, the Thames Gateway is one of the most exciting and potentially rewarding investment locations in the United Kingdom. The Gateway hosts significant pieces of UK infrastructure and is a major gateway between the UK, Europe and the rest of the world.

South Essex is one of three development areas which make up the Thames Gateway, the others being East London and Thames Gateway North Kent. South Essex presents a significant opportunity for transformational growth. While much has been achieved in recent years, for example the opening of the port of DP World London Gateway, the development of London

Southend Airport and the expansion of the Port of Tilbury, South Essex has the potential to deliver a further 66,600 jobs and 46,850 homes in the years to 2031.

Responding to this challenge, the private sector led Opportunity South Essex (OSE) has produced an Economic Growth Strategy which identifies the roles that the partnership and individual partners will play.

Five priorities for intervention have been identified and for each of these priorities there is a strong pipeline of investment propositions:-

Priority 1: Driving Growth – Securing resources for priority projects and supporting business growth with a strong integrated offer

Priority 2: Outstanding connectivity – Improving connectivity locally, nationally and internationally

Priority 3: Quality of Place – Creating places and spaces that improve lives and secure investment

Priority 4: Skills for Growth – Developing, attracting and retaining talent

Priority 5: Housing – Stimulating and reshaping the housing market.

Essex Cycle Strategy (2016)

In response to the legal requirement, and also the requirements of the Essex Transport Strategy, the Essex Cycle Strategy has been prepared with the aim of setting out a strategy for providing coherent cycle networks. The purpose of the strategy is to set out the key elements of a long term plan that will lead to a significant and sustained increase in cycling in Essex, establishing it in the public's mind as a 'normal' mode of travel, especially for short A-to-B trips, and as a major participation activity and sport for all ages. The strategy has been produced in conjunction with Essex County Council, the 12 Essex Boroughs / Districts / Cities, the two Unitary Authorities (Southend-on-Sea and Thurrock) and other key stakeholders. It has taken account of current UK policy, data on cycling levels within Essex and best practice from around the world. Specifically, it commits to:

- i. Establish a coherent, comprehensive and advantageous cycle network in every major urban area, by utilising a combination of on-carriageway and off-carriageway cycle facilities;
- ii. Ensure each Borough, District or City has an up-to-date cycling action plan (to be renewed every 5 years);
- iii. Provide well placed and high quality cycle parking at key public destinations such as town centres, leisure facilities and railway stations;
- iv. Ensure that all new housing includes secure and easily accessible cycle storage and that new secure cycle storage is facilitated in existing housing developments;
- v. Ensure that cycling is prioritised over motorised transport in all new developments – making it easier to carry out short trips by bicycle rather than by car. Cycle routes within commercial and residential developments will be more direct and convenient than car routes and will connect into existing cycling infrastructure on leaving the site;
- vi. Prioritise more frequent and good maintenance of our cycle network;
- vii. Provide a clear and consistent standard of good quality, well placed cycle signage – to an appropriate density, with provision of journey times as well as distances (to cater for all audiences);
- viii. Continue to improve cycle safety at sites with actual and perceived safety problems; and
- ix. Develop an improved mechanism for the reporting of safety issues.

Local Policy Context

Basildon Draft Local Plan (January 2016)

Essex is a diverse county with different sub-areas that have different needs and issues with regards to continued and future transport provision. The Thames Gateway South Essex sub-area, within which Basildon Borough is located, can become heavily congested, particularly at peak periods. The Essex Transport Strategy identifies, therefore, a specific suite of priorities for South Essex that aims to promote more sustainable modes of transport that support economic growth ambitions. The priorities which are specifically related to cycling are:

- Providing for and promoting access by sustainable modes of travel to new development areas;
- Improving the availability of sustainable travel choices and raising public awareness of these through travel planning; and

- Addressing maintenance, signing and broken links in the cycle network to improve conditions for cyclists and create a safer environment for cycling.

Basildon Borough Council is progressing its Local Plan which aims to bring forward 18,180 homes and provide a total of 72ha of employment land by 2034. Basildon Borough Council's Corporate Plan has two promises which this project connects to:

- Strong, safe and healthy communities with access to quality homes.
Within this, the scheme, in particular, supports the outcome of ensuring "people are healthier, happier, independent and active"
- Enhanced local environment and increased pride in the borough.
This scheme will support one of Basildon Borough's aims to deliver "a borough that will plan properly to improve air quality".

Specific funding has been secured from SELEP to fund various improvements along the A127 Corridor, including improvements to the A127 / A130 Fairglens Interchange. A further £13m has also been secured for the Basildon Integrated Transport Package which will help deliver public transport improvements, highway changes and new cycle routes, required by the Basildon Town Centre Masterplan, along with improved access to Basildon Hospital.

A Highway Impact Assessment was prepared for Basildon Borough Council, in partnership with ECC, to understand the implications that growth within the Borough, and also growth arising from outside the Borough, could have on the existing highway network in the Borough, in the future. The results of the Highway Impact Assessment showed that significant parts of the road network in the Borough would operate at, or above, capacity as a consequence of growth. Both improvements to the highway network, and a modal shift towards more sustainable travel modes is required, therefore, to enable further growth without exacerbating congestion levels.

In terms of sustainable transport modes, Basildon Borough Council has been working closely with Essex County Council to develop a local Cycling Strategy. A strategic approach to cycling is essential to address the levels of participation in this mode. Although Basildon town has a well-developed cycle network, the proportion of people travelling to work by bicycle is well below the national average. It is necessary, therefore, to deliver improvements to the existing network, and also to secure new route provision within new development proposals.

2011 Census data shows that only 1% of journey to work trips in the Borough are made by bicycle, with only 4% on foot. However, 31% of journeys to work are less than 5km, and 12% are less than 2km. Whilst there are some steep gradients and hills around the Borough, such as Noak Hill, Crown Hill, and Crays Hill, which would make some journeys by bicycle, or foot, challenging, there is great potential within the Borough for cycling rates to be increased to meet the national cycling target. Significant parts of the Borough have relatively flat terrain, particularly within Basildon. There are also opportunities to improve cycling access to the rail network.

With regard to walking and cycling, the NPPF expects Local Plans to support patterns of development which facilitate the use of sustainable modes of transport. In particular, plans should be located and designed to give priority to pedestrian and cycle movements, and create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians.

The Essex Transport Strategy seeks to promote sustainable travel, by providing the infrastructure for sustainable travel and promoting the use of travel plans. In supporting this aim, Policy TS3 (Improvements to Footpaths and Cycle Infrastructure) of the Draft Local Plan states that:

- In order to increase the proportion of residents accessing work, railway services, education facilities, other services and recreational opportunities by foot, or by bicycle, the schemes and projects set out in the Basildon Cycling Action Plan to improve footpaths, footways and cycling infrastructure will be delivered during the plan period.
- The Council will work with partners, including Essex County Council, to secure the funding necessary to deliver the infrastructure improvements set out in the Basildon Cycling Action Plan. It will also expect development proposals to support the implementation of the Essex Cycle Strategy and the Basildon Cycling Action Plan by:

- Retaining, and improving, any existing footpaths, footways, cycle routes, bridleways and other Public Rights of Way passing through, or adjacent to their site
- Providing additional footpaths, cycle routes and bridleways which link-up with the existing network
- Providing access to nearby residential, commercial, retail, education and leisure opportunities
- Providing access to the countryside
- Addressing any gaps in the network
- Providing facilities for pedestrian and cycle access, including the provision of cycle parking, in both residential development and non-residential development; and
- Contributing to facilities for pedestrian and cycle access at nearby public transport hubs.

SELEP Strategy

SELEP's Strategic Economic Plan aims to:

- enable the creation of 200,000 sustainable private sector jobs over the decade to 2021, an increase of 11.4% from 2011,
- complete 100,000 new homes by 2021, which will entail increasing the annual rate of completions by over 50% in comparison with recent years; and,
- lever investment totalling £10 billion, to accelerate growth, jobs and homebuilding.

Future of Essex Strategy

Investment in cycle routes and networks is wholly compliant with the recently published 'Future of Essex' strategy. This states that an effective transport system is integral to peoples' daily lives; it underpins business and commerce; provides access to work, education and training, essential services and leisure activities; and enables people to make the most of opportunities, as they arise.

The strategy, developed collaboratively with partners throughout Essex, identifies the importance of connecting us to each other, and the world, if we are to develop our county sustainably and share prosperity with everyone.

The provision of the Basildon Flagship Cycle Route Scheme is strongly aligned with the 'Future of Essex' priority of tackling congestion on our roads and railways.

Investment in the transport network is aimed at ensuring the efficient and effective movement of people and goods to boost economic growth, create great places to live, work and visit, enable people to live independently, and improve the lives of people using the transport network throughout Essex.

Specifically the Basildon Flagship Cycle Route Scheme helps enable inclusive economic growth within South Essex, identified as a major economic engine within the Essex Organisational Strategy and supports the following strategic priorities:

- Enables Essex to attract and grow large firms in high growth industries. The scheme supports trade, by better connecting key economic centres, especially along major transport corridors, and helping people to travel by public transport, bike and on foot
- Helps secure sustainable development and protect the environment. The scheme ensures that growth can be sustainable and accommodated in a way that enhances Essex.
- Facilitates growing communities and new homes by enhancing transport access to employment, education and training, and essential services including healthcare, retail and leisure facilities to enable participation in everyday life.

The proposal supports the delivery of the Essex Local Transport Plan vision for a transport system that supports sustainable economic growth and helps deliver the best quality of life for the residents of Essex by providing connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration.

Greater Essex Growth and Infrastructure Framework (2016-2036)

This report presents an overview of growth patterns and the infrastructure projects needed to support growth in Essex.

Growth in Greater Essex over recent decades has created a deficit in existing infrastructure. In particular, the growth in journeys by road and rail has not been matched by sufficient government investment to enhance the network. The framework has identified that the listed major transport projects need to secure at least £26.5 billion (regional) and £5.5 billion (cross-boundary) funding.

Capacity within Greater Essex will also be affected by housing and economic growth in neighbouring areas. In particular, the influence and reach of the London City Region, and the overheating Cambridge economy will impact in different ways on localities within Essex. The emergence of the new London Plan is expected to displace housing and employment from London along strategic growth corridors into Essex.

Essex Local Transport Plan

The *Essex Local Transport Plan (2001,)* which included the *Essex Transport Strategy (2011)*, set out the original 15 year vision to improve travel in the county and underlined the importance of the transport network in achieving sustainable, long term economic growth and enriching the life of residents. It has been supplemented by delivery strategies for public transport, highways, cycling and public rights of way.

There are common themes across the policy documents, including the need to facilitate economic growth through new housing and jobs, and improve travel conditions to support businesses to expand and operate efficiently. The scheme aligns strongly with the economic growth objectives of SELEP, and the emerging local plans for new homes and job creation.

South Essex 2050

The intention has been to formulate a joint “place-based” vision, together with the growth and strategies necessary to support this, the infrastructure required in the area, and how local authorities might work together to deliver these aspirations.

Consequently, following extensive discussion and by joint working, the Leaders and Chief Executives have agreed on eight industrial and infrastructure strategic priorities for the area:

- Place leadership, proposition and brand
- Opening up spaces for development (green infrastructure, housing and commercial)
- Transforming transport connectivity
- Supporting the seven sectors of industrial opportunity: Advanced manufacturing; Construction; Environmental technologies and energy; Digital and creative services; Finance and business services; Life sciences and healthcare; and Transport and logistics
- Shaping local labour and skills markets
- Creating a fully digitally-enabled place
- Securing a sustainable energy supply
- Enhancing health and social care through co-ordinated planning.

Thames Gateway South Essex (TGSE) stretches along the north bank of the Thames, running to the eastern fringes of London. As part of the Thames Gateway, it is an established national priority area for growth and, in Lord Heseltine’s words, “crucial to UK competitiveness”. The TGSE area has the capability to add at least £2.4b to the UK economy each year.

Stretching from Purfleet and Thurrock, in the west, to Rochford and Southend in the east, the TGSE is home to more than 650,000 people, 54,000 businesses and a workforce of over 200,000.

Thanks to its location, the area is crucial to the UK for both national and international trade. The TGSE area has excellent road and rail links to the capital and the rest of the south east and other UK markets. Port and airport connections to Europe and beyond are strategically key – and constantly improving. The London Gateway port and logistics park and the massive redevelopment of London Southend Airport are just the most recent and high-profile developments.

Thousands of new jobs are being created in the area, along with high-quality new homes and leisure facilities for the local communities.

South Essex

Over the period from 2014 to 2037, the following table shows the projected change in population and households across South Essex, based on the latest 2014-based projections. Household growth is converted to dwellings using 2011 Census vacancy rates, for consistency with the Strategic Housing Market Assessment (SHMA).

Table 2: 2014-based Population and Household Projections 2014 – 2037

	Change 2014 – 2037				Average per year	
	Population	%	Households	%	Net migration	Dwellings
Basildon	34,197	18.9%	17,396	23.0%	588	770
Castle Point	9,723	10.9%	5,561	15.0%	669	250
Rochford	10,464	12.3%	5,740	16.7%	475	256
Southend-on-Sea	33,359	18.7%	19,151	24.9%	980	876
Thurrock	41,062	25.1%	19,502	30.2%	574	869
South Essex	128,805	18.5%	67,350	23.4%	3,286	3,021

Source: DCLG; ONS; Edge Analytics

The 2014-based projections suggest that the population of South Essex will increase by circa 19% over the period from 2014 to 2037, with around 128,800 additional residents projected to live in the area. This projected growth exceeds the national rate (17%) projected for England over the same period.

Based on the latest 2014-based household formation rates ('headship rates') applied within this dataset, a need for 3,021 additional dwellings will be generated annually under this 'starting point' projection, when allowing for vacancy and second home ownership. The projected 23% increase in the number of households in South Essex again slightly exceeds the 22% growth projected nationally over the period.

Table 3: Implied Annual Housing Need 2014 – 2037 (Source: Edge Analytics)

	Basildon	Castle Point	Rochford	Southend-on-Sea	Thurrock	South Essex
SNPP London	721	296	284	895	874	3,070
2014 SNPP	770	250	256	876	869	3,021

Key:

Strategic housing market assessment (SHMA)

Sub-national population projections (SNPP)

Sub-national household projections (SNHP)

The following table summarises the current and projected future population under these scenarios.

Table 4: Projected Change in Population 2014 – 2037 (Source: ONS; Edge Analytics)

	2014	Adjusted Demographic Projection		Supporting Likely Job Growth	
		2037	Change	2037	Change
Basildon	180,521	214,718	34,197	220,286	39,765
Castle Point	88,907	98,630	9,723	96,964	8,057
Rochford	84,776	95,240	10,464	98,532	13,756
Southend-on-Sea	177,931	211,290	33,359	212,614	34,683
Thurrock	163,270	204,332	41,062	228,217	64,947
South Essex	695,405	824,210	128,805	856,613	161,208

2.4. Need for intervention:

There are significant growth pressures in Basildon, which are predicted to intensify with predicted future development. A key component to managing this growth is through the promotion and provision of cycle infrastructure. Encouraging a modal shift towards sustainable modes, such as cycling, will help to ensure that the road network operates efficiently.

Data Analysis

When planning for cycling infrastructure, it is important to first understand the current levels and conditions for cycling. This section includes analysis of:

- 2011 Census data;
- The Active People Survey (by Sport England);
- The Essex Cycle Monitor database;
- Department for Transport count data;
- Collision data;
- Cycle crime statistics; and
- Topography.

Census Data

As part of the 10 year national census, respondents are asked to state their main mode of travel to work by distance. The 2011 Census results for Essex are shown in Figure 8 below.

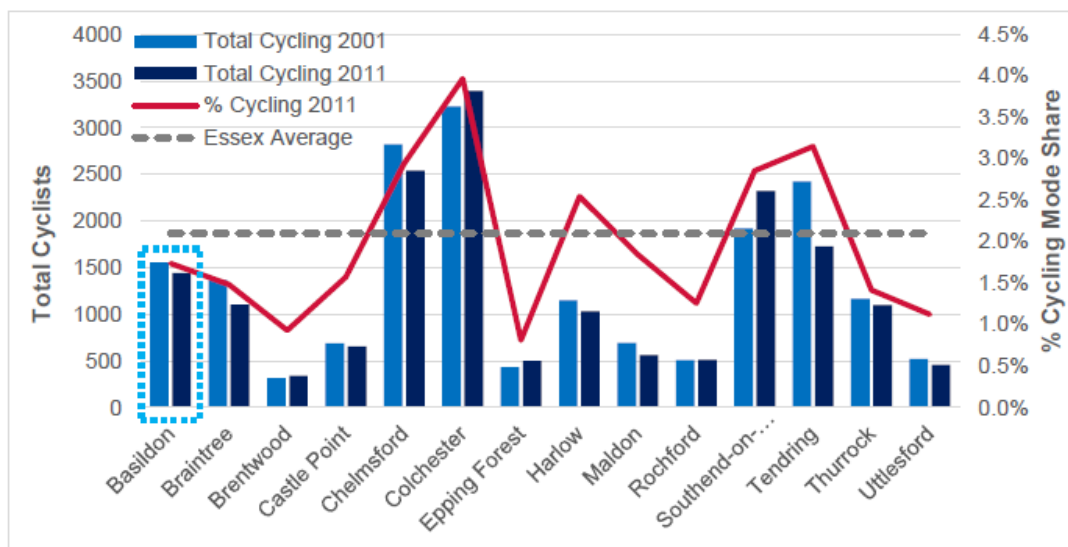


Figure 8: Census Cycling to Work by Borough / District / City

As shown above, based on the 2011 Census data, Basildon has slightly below average levels of cycling numbers when compared with other Essex Boroughs / Districts, with 1,441 people cycling to work every day (1.7% of all journeys to work) in 2011. In other words, 1.7% of the journeys to work in Basildon are made by bicycle, which is slightly lower than the Essex average of 2.1%.

Within Basildon town itself, 4% of internal journeys to work are made by bike, equating to 858 cyclists per day, putting it in the top 10 urban areas for cycling in Essex. However, there is a huge potential to increase the numbers cycling and thus help increase the efficiency of the cycle network.

Figure 9 shows the percentage cycling to work by origin in Basildon.

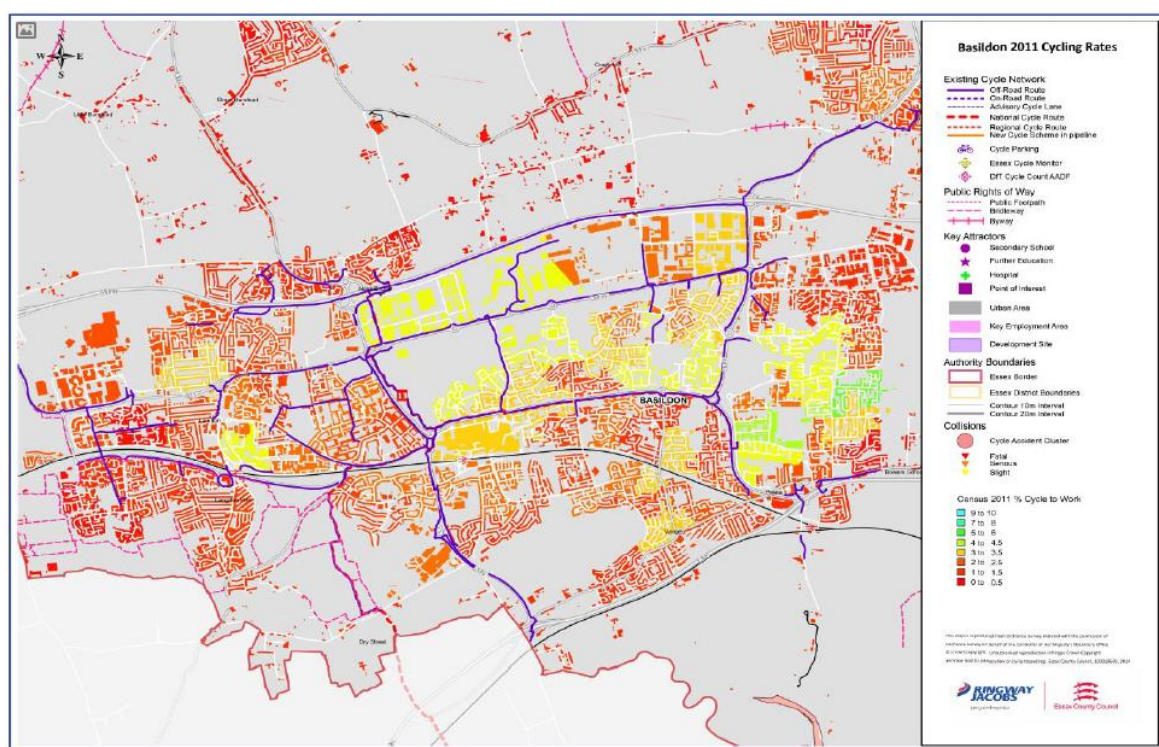


Figure 9: Percentage cycling to work by origin in Basildon

Sport England Active People Survey

Sport England carry out an Active People Survey annually, which involves interviewing 500 people from every District in England about their propensity to do physical activity. It is the largest survey of sport and active recreation in Europe.

Figure 7 shows the average propensity to cycle at least once per month, for any purpose, based on the Sport England data over the period 2010-2013. The results show that across Essex, Basildon has relatively low levels of residents cycling at least once a month in the county. Relative to other districts and boroughs, Basildon fares worse in this data-set than for journey to work. This might be because, as an urban and heavily motorised Borough, recreational cycling is relatively less appealing than in most other parts of the county.

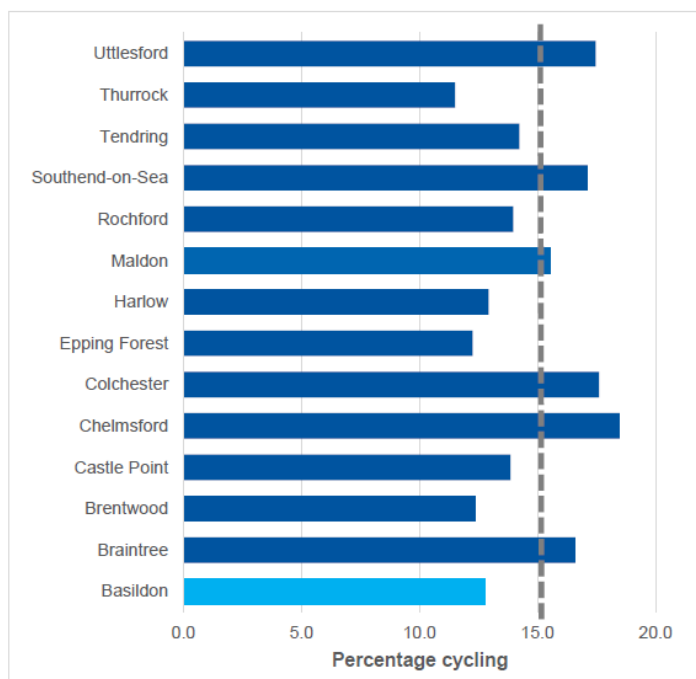


Figure 10: Sport England Propensity to cycle at least once per month 2010-2013

Essex Cycle Monitor

Essex County Council has an established network of over 50 cycle monitor counters located across the five urban areas of Basildon, Braintree, Chelmsford, Colchester and Harlow. The count sites continuously record hourly total cycle flow data and have a baseline of 2007. Figure 11 below shows May to October total 7-day flows by urban area.

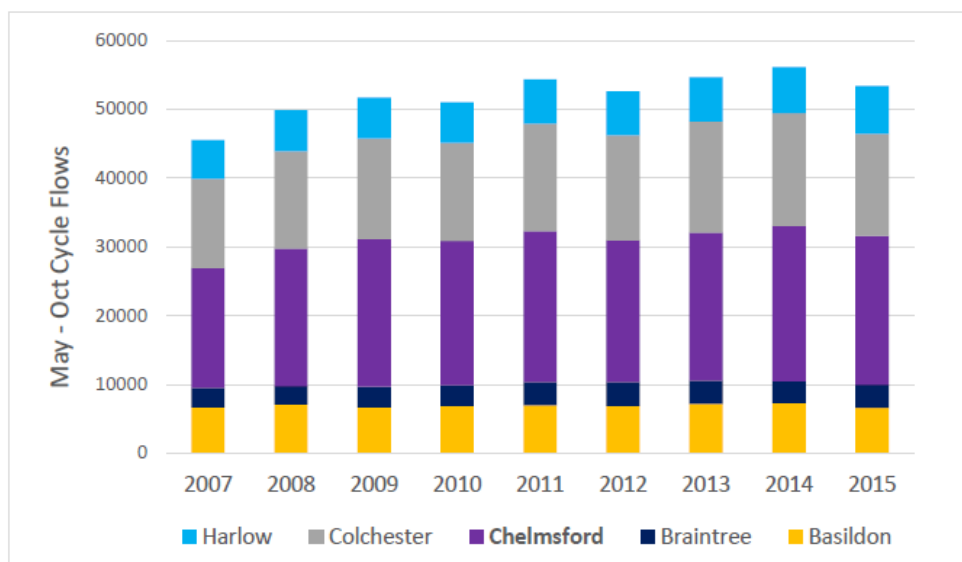


Figure 11: Essex Cycle Monitor 2007-2015

The cycle monitor sites have observed a 17% increase between 2007 and 2015, although levels in Basildon have remained fairly steady with 7 day average flows of approximately 7,000 cycles per week, peaking in 2014 with average weekly flows of 7,380 cycles. Since 2014, levels have declined to 6,573 cycles per week in 2016.

There are nine cycle monitor sites in Basildon, located at:

- B148 St Nicholas
- Broadmayne
- Westgate
- Roundacre
- Basildon Hospital
- Staneway
- Mandeville Way
- A1235 near the Tractor Factory
- Laindon cycleway.

In 2016, four of these sites recorded 7 day average cycle flows of more than 100 cycles, reaching more than 200 cycles for a 7 day average in the summer months (Figure 12).

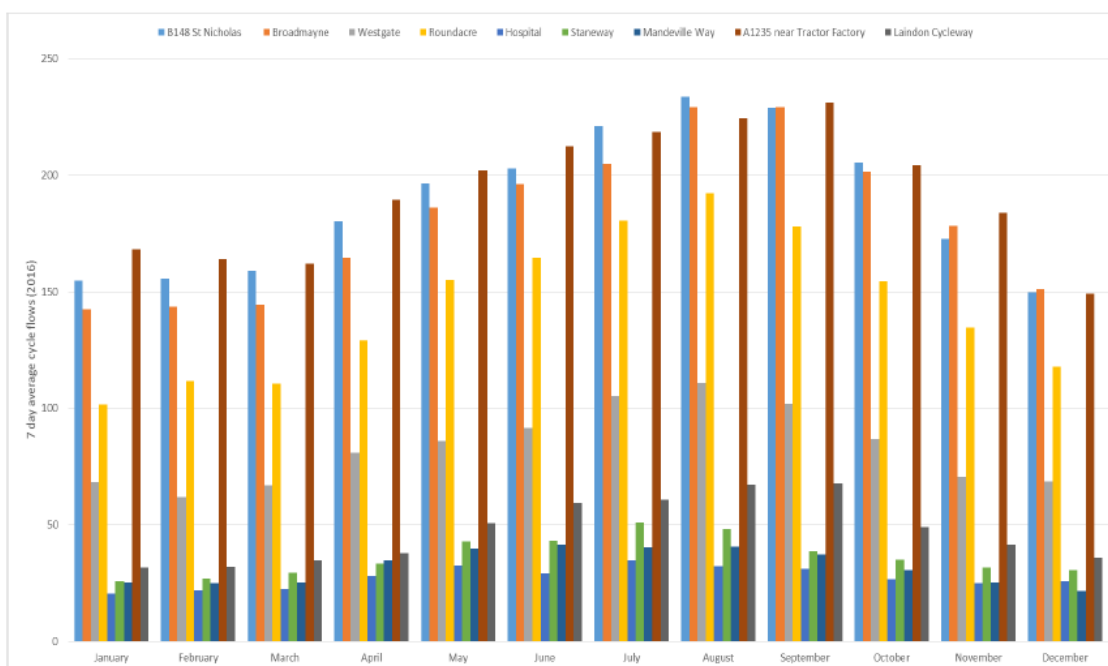


Figure 12: 7 day average cycle flows at Essex Cycle Monitor Sites in Basildon (2016)

DfT Count Data

The Department for Transport collects vehicular flow data at various locations on the road network around the country. These counts record all vehicles using the carriageway, including pedal cycles. Of the 20 count sites located in Basildon, 7 sites recorded more than 100 cyclists per day, and most of these are on the off-road cycle network, indicating that, despite its poor quality in places, it is still attracting a fair amount of use.

Collision Data

Fear of personal injury is often cited as the biggest barrier to cycling, but, while this is an important issue, it is useful to use statistics rather than just perceptions to direct improvements to highway infrastructure to improve the cycling environment. The location of cycling personal injury collisions also serves to identify where cyclists are travelling in higher numbers which can be useful when deciding where to prioritise new infrastructure.

Table 5 shows the number of recorded personal injury collisions (PICs) involving cyclists, by District, for the five year period between August 2012 and July 2017.

Table 5: Personal Injury Collisions involving Cyclists, August 2012 - July 2017

Cycle Accidents	Fatal	Serious	Slight	Grand Total	% of Total	Number cycling to work ²	% of Total
BASILDON	0	37	135	172	8%	1412	8%
BRAINTREE	2	37	90	129	6%	1070	6%
BRENTWOOD	0	16	41	57	3%	320	2%
CASTLE POINT	0	24	69	93	5%	631	4%
CHELMSFORD	2	56	194	252	12%	2486	14%
COLCHESTER	0	72	227	299	15%	3310	19%
EPHING FOREST	1	36	105	142	7%	482	3%
HARLOW	2	13	60	75	4%	1018	6%
MALDON	1	15	42	58	3%	548	3%
ROCHFORD	1	25	63	89	4%	498	3%
SOUTHEND	1	63	266	330	16%	2260	13%
TENDRING	3	28	117	148	7%	1683	10%
THURROCK	0	35	101	136	7%	1078	6%
UTTLESFORD	0	18	41	59	3%	433	3%
ESSEX	12	412	1285	1709		13891	

Basildon has the fourth highest number of cyclist collisions in the County, but the fifth highest amount of cycle commuting and ninth highest amount of monthly cycling (from the Sports England survey). This suggests that cyclists are at greater risk in Basildon than they are on average across the county. The large majority of the 103 collisions took place in Basildon town with about 20 in the other two towns (Billericay and Wickford) combined. There is a relatively even distribution within Basildon.

Topography

There are a number of factors which determine the popularity of cycling in any given area. Of the geographical factors, by far the most significant is topography, as identified in many research studies and policy statements. These include research carried out by leading UK cycling academic Professor John Parkin who concluded; 'hilliness was found to be, by far, the most significant determiner of the proportion that cycled to work in a District'.

Basildon is one of the hillier districts / boroughs in the county. In Basildon town, the central and eastern side is quite flat, but, to the south and west, the land rises considerably from 30m up to 100m (in Westley Heights) which would remove virtually all demand for utility cycling, apart from those who have no transport choice.

Cycling Provision

Basildon town has a relatively dense network of cycling provision which is typical of the 'new towns' built in the 1950s. Much of the network is substandard, with facilities too narrow to support large levels of use, particularly where there are shared paths which are well used by pedestrians e.g. Cranes Farm Road.

Some obvious desire lines are not catered for by the existing provision, and cyclists have limited priority and protection at junctions and crossings. The main shopping centre (Westgate) is pedestrianised, with some well-used cycle parking dotted around, and bikes frequently locked to railings and other street furniture. Cycling is not formally permitted, although there is plenty of space, and other towns have found that cycling can work well in pedestrianised areas.

Key Barriers

A cycling Technical Note was prepared earlier this year which identified, section by section, the condition of each of the cycling routes in Basildon and their barriers and problems to more extensive use (see Appendix H).

There are a number of major barriers to cycling movements in the Borough. Some of these (e.g. major junctions) could still be cycled through, but many people would find them too intimidating. The most difficult junctions and other obstacles in the Borough are currently:

- Travelling to and from the north side of the Basildon railway station into the shopping centre and along Roundacre and Southernhay. These are wide, heavily trafficked roads without any cycling provision (on or off carriageway), and also include some turning restrictions and sections of one-way streets. The whole area acts as a barrier to cycle movement in a key part of the town centre.
- Broadmayne is a major east-west arterial road just to the north of Basildon town centre with very limited crossing points (for pedestrians as well as cyclists)

Basildon's Cycling Potential

Commuter Flow Analysis

The 2011 Census records how residents choose to travel to work, as well as the location of their workplace. The aim of analysing this information is to establish where the predominant local commuter movements exist that could feasibly be undertaken by bicycle. This data can then be used to assess the commuter cycle potential for an area.

The predominant commuter flows for Basildon Borough have been calculated based on travel between Medium Super-Output Areas (MSOAs). As journeys to work take place to and from all MSOAs within the Borough, only the top 10 most popular commuter journeys per mode have been analysed.

It has been assumed that commuters would choose the same route and mode of travel to work (in the AM) as they do to return from work (in the PM).

Cycle trips

Figure 12 below shows the predominant commuter flows for journeys to work by bicycle within Basildon. The majority of the cycle trips picked up in the MSOA analysis seem to be heading to and from the Pipp's Hill Industrial Estate (Basildon zone 015) from most other parts of Basildon, with daily trip numbers of between 27 and 41. The only other attractor (of the ten most popular trips) is the Burnt Mills Industrial Estate (Basildon zone 011) with movements of 23 and 24 people from nearby MSOAs (on the eastern side of Basildon).

Car trips

The car trips mirrored the cycle trips fairly closely (nearly everyone heading to Pipp's Hill) but with much bigger numbers involved (between 184 and 435).

Rail

In many cases, cycling can form a key part of commuter rail journeys. The 2011 Census only records main mode by distance and, therefore, assumptions must be made when analysing journeys that would be multi-modal. Therefore, where commuters have stated that their main mode of travel to work is by rail, it has been assumed that passengers would predominantly choose the closest station to them, unless a main line station is located within a similar proximity. In such cases, it is assumed the preference would be for the main line station.

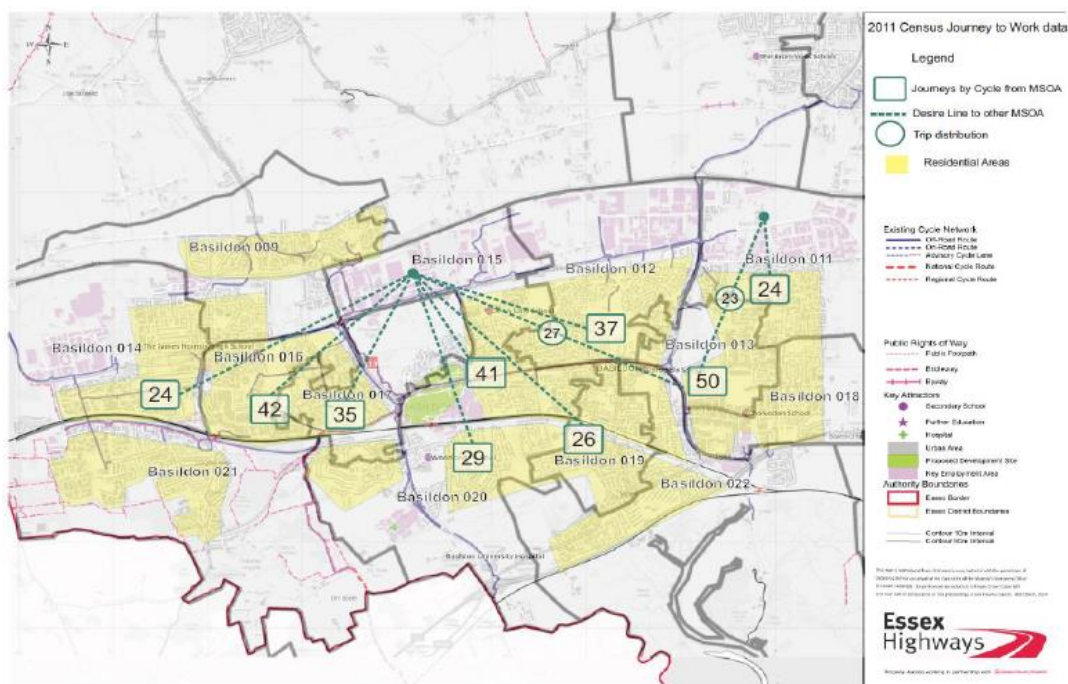


Figure 13: Predominant commuter flows for journey to work by bicycle in Basildon

Propensity to Cycle

Market segmentation is concerned with grouping together a diverse range of people to understand their current behaviour and the likelihood and triggers for maintaining or changing how they act in the future. Propensity to cycle tools were used to identify the best areas to increase modal share and assist in increasing trips.

One of the most significant areas identified, resulting from this analysis, was trips to and from Pipp's Hill Industrial Estate and Retail Park, with the potential to replace lots of short, car commuter trips.

Where traffic volume and speed data is available, the potential schemes have been subjected to Sustrans design principles, which recommend the type of scheme that should be considered under those conditions (Figure 14). Traffic, volume and speed may influence the decision on the need to segregate cyclists from other traffic. For example, where low speeds and traffic volumes are evident, there is no need to segregate cycles and other traffic and a shared carriageway is acceptable. As traffic speeds and volumes increase, cycle lanes are found to be more desirable, until the threshold is reached whereby physical segregation is required. Beyond this point, where 85 percentile traffic speeds exceed 40mph, and / or volumes exceed 9,500 vehicles per day (or 950 vehicles / hour), conditions become unsuitable for cycling on the carriageway and physical segregation with a verge is necessary. Where traffic volume and speed data are not currently available, it will be necessary to undertake a traffic survey to determine the provision that is required.

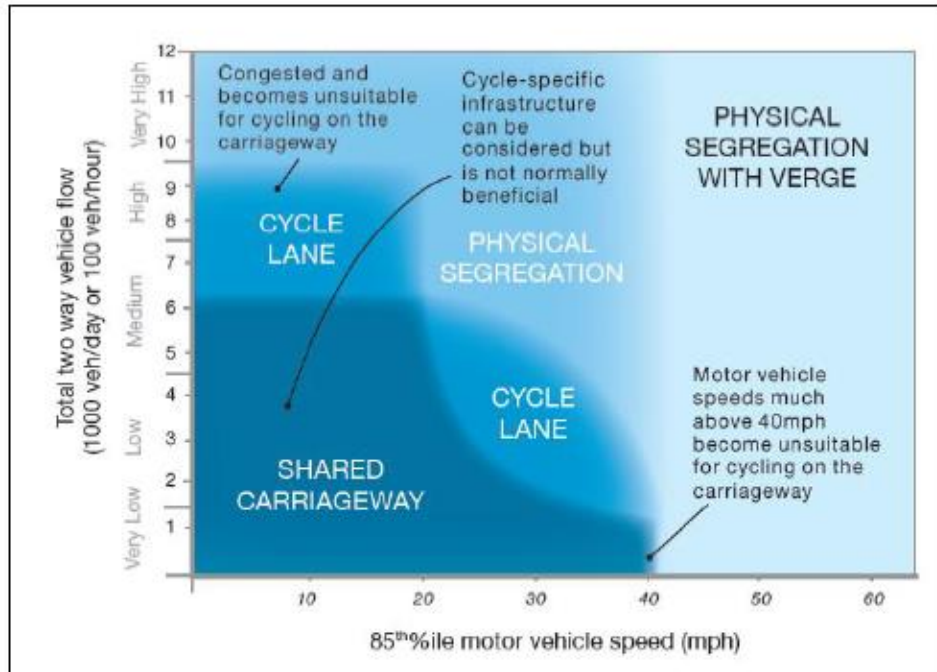


Figure 14: Sustrans Segregation and traffic flow

Recommended Schemes

A full list of recommended schemes can be found in Figure 15 below.

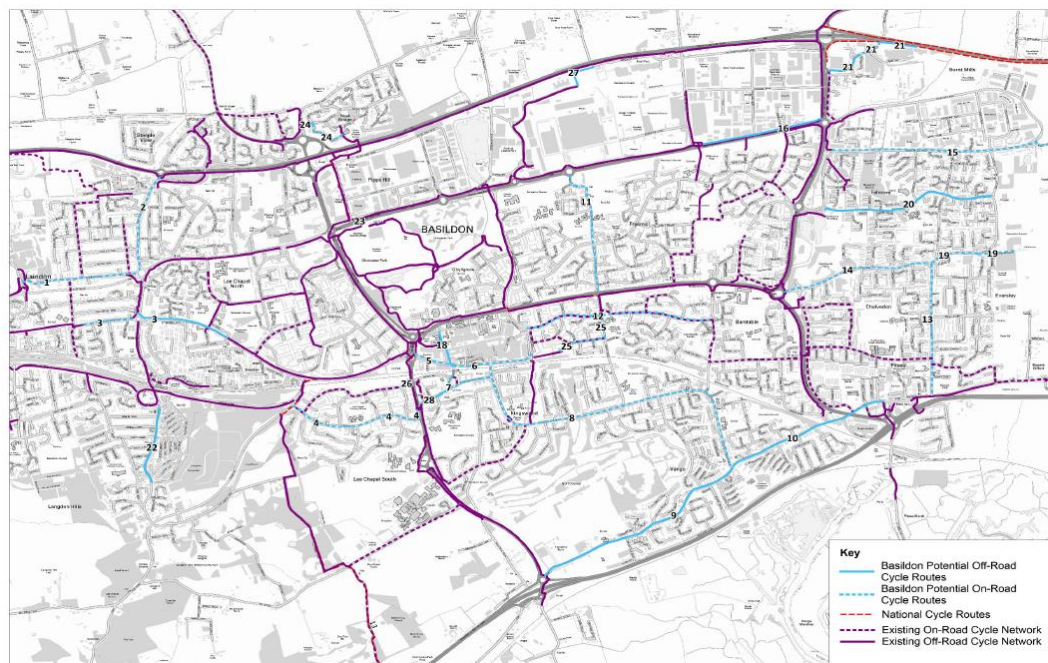


Figure 15: Existing and potential cycle routes in Basildon

Smarter Travel Measures

Introduction

In order to maximise the benefit of good quality cycle facilities, there needs to be a significant increase in the promotion of these facilities and an encouragement of cycling in general. Therefore,

to ensure the potential for cycling is fully realised, new infrastructure must be accompanied by targeted promotion and events.

In combination with the Defra funded flagship cycle route, there is further potential to promote cycling in Basildon to convince residents that cycling is a normal and accessible activity for all, as well as highlighting the health benefits of cycling.

In addition, cycling has the potential to alleviate congestion by persuading people to replace a local car journey by cycling. This could include workplace travel planning in the town centres within the Borough.

Marketing and promotion

The Essex Cycling Strategy sets out a number of overarching themes for marketing and promoting cycling which are as follows:

Cycle Essex

ECC are committed to running high profile campaigns under the “Cycle Essex” umbrella which aim to change the image of cycling in Essex, break down perceptual barriers, communicate a safety message and tie-in with existing organisations such as Active Essex.

High profile events

Essex has been successful in attracting high profile cycling events to the County that have been well attended by the public, such as the Tour of Britain, The Tour Series and hosting Stage 3 of the 2014 Tour de France. Additionally, the 2012 Olympic mountain biking course was located at Hadleigh, just 6 miles to the east of Basildon, and which has now been converted into a public mountain biking facility. ECC will continue to support these events, but will also encourage more cycling through further mass events, car-free days in town centres and bike festivals.

Support for local initiatives

ECC recognise that local initiatives are particularly effective at engaging with people on a personal level. Therefore, they aim to empower Boroughs / Districts to promote cycling locally, support community providers / charities, support cycling clubs and ensure that secondary schools, large employers, large council offices and major hospitals have up-to-date travel plans.

Cycling Maps

Cycling maps (digital and on paper) aid with navigation and are an effective marketing tool for raising the profile of cycling. If the maps are legible, well designed and effectively disseminated, they can be the nudge that is needed to motivate the market to start making some trips by bike.

In addition, in order to maximise the benefits of cycling maps, future cycling maps for Basildon will be designed with the following principles in mind:

- The maps should be prepared under the same design guidelines as the promotion of ‘Cycle Essex’. This will help to raise their profile and visibility;
- Information included in the maps should correspond with the signage by the roadside;
- Include more information about local points of interest. This should encourage leisure cycling, local tourism and increase patronage to local attractions; and
- Widely distribute the maps (if more than one) in a bundle and on as many online and physical outlets as possible.

Furthermore, official and unofficial routes are also available through mobile phone apps, social media and specialised websites such as mapmyride.com and strava.com, which allows people to track their routes whilst cycling and share them on various platforms.

For example, there is some interest in cycling at a community level in Basildon, as demonstrated by the website mapmyride.com displaying over 1,200 routes recommended in the local area by its users.

Potential Local Considerations

Local considerations, improvements and factors that may have an effect on encouraging cycling in Basildon Borough include:

- South Essex Active Travel is facilitating a step-change in the area's approach to sustainable transport; using targeted travel engagement with jobseekers, young people, newly recruited employees, students, lower socio-economic communities and volunteers so they can use active travel to get to work, training and educational opportunities and fully contribute to the local economy.
- ECC are committed to creating a Cycle Essex brand which will run high profile campaigns and act as an umbrella for all cycling activities in Basildon.
- Local initiatives are particularly effective at engaging with people on a personal level. Support for local initiatives will ensure that people are encouraged to cycle by other local cyclists, and provided with the practical advice and support that they need to be confident to use their bicycles on a regular basis. This will help to 'embed' cycling as a normal, everyday activity, rather than just a one-off experience.
- Updating the existing cycle map of Basildon town to include isochrones and mode-switch motivational information
- Cycle access – promoting access to bicycles through the cycle-to-work scheme, cycle hire, bike share, provision of subsidised bikes
- National Bike Week events to include a commuter challenge where people using different modes make the same journey in the morning peak – would normally show the advantages of cycle travel in the peak time) and a cycle commuter's breakfast where free refreshments are laid on at a central location for all those who arrive by bike
- Essex Roads Cycle Club, based in Billericay is very active and organises a number of sportives throughout the year (www.essexroadscyclingclub.com/index.htm).
- The demographics of the Basildon town population largely aspire to drive results in relatively low cycle mode share. Any promotional work needs to be customised to address this.
- Although Basildon Enterprise Corridor is a very large employment area, there is a large amount of free car parking and good highway network capacity which suppresses cycling demand.

Age profile of residents

Annual mid-year population estimates for mid-2014 were published by the Office for National Statistics (ONS) in June 2015. The population estimates in the local authorities surrounding Basildon are shown in Table 6. This shows that the percentage of people at working age (16 to 64 years old) is equal to or less than the UK average.

Table 6: Age distribution in the local authorities around Basildon

	Age 0-15 years (%)	Working age 16 to 64 (%)	Age 65+ (%)
Basildon	20%	63%	17%
Castle Point	17%	59%	24%
Rochford	17%	60%	22%
Southend-on-Sea	19%	62%	19%
Thurrock	22%	64%	14%
Essex	19%	61%	20%
UK	19%	64%	18%

Car ownership of residents

Car ownership data (2011 Census) has been analysed. This shows that between 14% and 28% of households in Basildon, Castle Point, Rochford, Southend-on-Sea, and Thurrock have no car or van. Therefore, over 70% of households do have access to at least one car or van, which suggests that car usage is likely to be high in this area.

A127 Enterprise Parks Corridor – Within Basildon Borough, there are over 8,000 businesses including multi-national companies such as Ford Motor Company, Selex Galileo, First Data, MK Electric, Case New Holland and IFDS located within the A127 Enterprise Corridor. Together, these businesses provide over 35,000 jobs. The *Basildon Economic Growth Strategy* envisages that, in the future, the role of this corridor not only will be retained, but will grow by attracting new investors to the corridor.

Basildon Town Centre – A masterplan has been prepared for the regeneration of Basildon town centre to enhance its role as a regional centre. The masterplan envisages 65,300m² of commercial leisure and comparison floorspace, and a new 2,000 student college campus, a new town market and additional residential development. This will be supported by enhanced public transport connections and integration. Elements of the masterplan have already been delivered, with the remaining delivery expected to occur within the next few years.

Developments in Basildon, Benfleet, Rayleigh, Wickford

The following large developments situated in the area surrounding Basildon are:-

- 12ha to 16ha of land to the west of Gardiners Lane South
- 3.5ha of land at Terminus Drive, Pitsea
- 5.5ha of land to the south west of A127 Dunton Interchange
- 5.5ha of land to the east of Burnt Mills
- The delivery of 440 homes at Dunton Fields – under development.

Also,

- Basildon are seeking to deliver up to 14,600 sq.m net additional comparison goods floorspace and up to 4,300 sq.m net additional convenience good floorspace by 2021, and a further 57,600 sq.m and 1,600 sq.m net floorspace respectively by the end of the plan period (2034).
- In addition to new retail provision, the Council will seek to deliver up to 5,500 sq.m gross additional food and drink (A3, A4 and A5) floorspace by 2021, and a further 11,100 sq.m gross floorspace by the end of the plan period.

Significant Projects in South Essex

There are a number of significant projects elsewhere in South Essex that will influence traffic flows. Some of these projects will create new jobs, and will therefore create new commuting patterns, opportunities in new spin-off industries and new skill requirements. Others will create new shopping and leisure opportunities for residents that will need to be addressed, in order that town centres, such as Basildon, continue to grow and thrive to serve local people.

2.5. Sources of funding:

Essex with support from SELEP have already contributed to a number of cycling schemes in the region and Basildon, in particular. However, the available evidence indicates that further opportunities exist to improve and enhance cycling further. ECC have already made provision for £500k worth of funding for this scheme, but, unfortunately, because of other programmes, ECC's money is already committed and the availability of other sources of funding have been exhausted.

Given that ECC have secured £788k funding from Defra for one of the Flagship routes that has been identified, this would provide a golden opportunity to combine the two routes and double the positive effect.

2.6. Impact of non-intervention (do nothing):

It would not be possible for ECC to fund all of the costs without support. By delivering the two Flagship Routes simultaneously, it would more than double the level of impact to cycling in Basildon.

2.7. Objectives of intervention:

	Problems / Opportunities versus Objectives						
	Congestion	Connectivity	Employment	Environment	Sustainability	Safety	Resilience
Objective 1	✓✓	✓✓	✓✓✓				✓✓
Objective 2	✓✓	✓✓✓	✓✓				✓✓
Objective 3	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓	
Objective 4				✓✓	✓✓✓	✓✓	
Objective 5	✓✓	✓✓✓	✓✓	✓✓	✓✓	✓✓	
Objective 6	✓✓	✓✓				✓✓✓	
Objective 7	✓✓✓					✓✓	✓✓✓
Objective 8	✓✓	✓✓		✓✓		✓✓	✓✓✓

Objectives

The following are the scheme objectives:

- Connectivity
 - Objective 1 - Accommodate / manage future travel demands to facilitate proposed growth in Basildon
 - Objective 2 - Ensure good connectivity within Basildon
- Environment
 - Objective 3 - Encourage residents and employees in Basildon to access alternative modes such as cycling
 - Objective 4 - By encouraging modal switch provide a positive effect on the environment by improving air quality and reducing emissions
- Sustainability
 - Objective 5 - Improve connectivity for residents and employees in Basildon
- Safety
 - Objective 6 - Improve safety by removing motorised traffic from the network
- Resilience
 - Objective 7 - Assist in the reduction of congestion at peak times and enhance the provision of reliable journey times in Basildon
 - Objective 8 - Provide enhanced cycling infrastructure with improved maintenance provision

2.8. Constraints (see also Appendix J for Powers & Consents):

Virtually, all land identified for this scheme is either Highways land, or is on land belonging to Basildon Borough Council.

A number of Stats facilities have already been identified which will require both the support and cooperation from the bodies concerned.

2.9. Scheme dependencies (see Appendix B3):

See Appendix B3.

2.10. Expected benefits:

See Developments in Basildon listed above in Section 2.4.

2.11. Key risks:

For the Risk Management Strategy, see Appendix B1, for Key Risks Appendix B2 and for QRA Appendix N2.

Type	Description	Responsibility	Mitigation / Proposed Resolution	Probability	Impact
Design	Design and construction scope changes	Essex Highways / ECC	Clear communication and early confirmation of scope	Low	Medium
Utilities	Discovery of undetected utilities during construction	Essex Highways	Undertake early surveys with trial holes	Medium	Medium
Ground Conditions	Unforeseen soft spots and voids requiring redesign	Essex Highways	Undertake early surveys with trial holes	Low	Medium
Traffic Management	Potentially complex and costly with approvals required	Essex Highways	Consult early and work closely with Network Management	Low	Medium
Tender Prices	Tender prices at variance with estimates and client budget	Essex Highways	Obtain early estimates, compare with other recent information and work with suppliers	Low	Medium
Costs	Construction costs escalation	Essex Highways	Monitor regularly and develop alternative actions as necessary	Low	Medium
Stats Costs	C3 Prices at variance with estimates	Essex Highways	Timely requests, utility mapping and trial holes	Low	Medium
Approvals	Time consuming processes with legal and cost implications	Essex Highways	Commence approval process early	Low	Low
Weather	Adverse conditions could jeopardize programme timing	Essex Highways	Plan programme taking account of likely weather conditions and provide programme float	Low	Low
Project	Lack of capacity to deliver the programme in full	ECC	Ensure resources are allocated and identify potential contingency support	Medium	Medium

3. ECONOMIC CASE

3.1. Options assessment:

Prioritising Schemes

The potential schemes, identified in Section 2.4 above, have been prioritised according to four criteria of their design:

- Deliverability;
- Directness;
- Extension of existing network; and
- Key attractors.

A score of high, medium or low has been given for each potential scheme against each of the prioritisation elements. It was then possible to determine the overall prioritisation score for each scheme (again, scoring each potential scheme as high, medium or low).

Deliverability

The deliverability of a scheme has been assessed according to land ownership issues, which will determine how easy the scheme will be to deliver:

- H: High - a scheme that lies wholly within the highway boundary, straightforward to deliver, with no land ownership issues.
- M: Medium - any route that requires conversion of Public Rights of Way (PROW); and
- L: Low - any scheme which is likely to encounter private land ownership issues, or requires a singular large expense, such as a bridge.

Directness

The directness of the route is considered in terms of where it is proposed to provide access to, for instance, a town centre or a railway station:

- H: High - a scheme that provides direct access, using as short a distance as reasonably possible, or could provide a real improvement on the corresponding car journey time;
- M: Medium - a link route, providing access to the main radial cycle route(s);
- L: Low - indirect routes, which are routed along relatively longer distances.

Extension of existing network

The extent to which a potential route extends the existing network is considered against this criteria:

- H: High - a route which extends, or fills a gap, in the existing network;
- L: Low - a route which is isolated and / or unlinked to the existing network.

Key attractors

Under this criteria, the number of key attractors that a route connects is considered. Key attractors include town centres, other urban areas, railway stations, secondary schools / education facilities, employment (including hospitals), and leisure destinations (parks, sports centres, etc.). The scoring is undertaken as follows:

- H: High - a route which connects to three attractors;
- M: Medium - a route which connects to two of these attractors; and
- L: Low - a route which connects to none (or just a leisure destination) of these attractors.

Within this criteria, town centres and railway stations are considered to be the most important attractors, so, if a route connects to both, it is likely to score high rather than medium. Conversely, leisure destinations are considered to be less important, so may attract a lower score.

Overall prioritisation

After a score had been obtained for each of the four criteria (Deliverability, Directness, Extension of Existing Network and Key Attractors), its overall prioritisation was determined, giving an overall score of low (L), medium (M) or high (H). Where there was an equal number of different scores, there was an element of subjective judgement used to decide the overall result.

Estimated costs of potential schemes

As with the prioritisation, the costs of the potential schemes were rated on a low (L), medium (M), high (H) and exceptionally High (H+) scale. The 2017 cost estimates related to the following broad ranges:

- L: Low - less than £100,000;
- M: Medium - within the range £100,000 to £500,000;
- H: High - within the range £500,000 to £1,000,000; and
- H+: Exceptionally High - more than £1,000,000.

The outline costs were indicative of a feasibility proposal stage costing, prior to detailed surveys being undertaken for design and construction. Costs exclude the following:

- VAT (costs are exclusive of VAT);
- Land costs, legal fees, Highways consultation;
- Construction on contaminated land;
- Diversion of services;
- Landscaping; and
- Access roads for construction.

Realistic unit costs were derived for each of the elements that were identified in the potential schemes and they were applied to a length of route where appropriate, and as a series of elements, to enable the overall cost of each scheme to be built up.

Flagship Routes

Introduction

A Flagship Cycle Route is a key corridor providing safer, faster and more direct access to one or more key attractors (town centres, employment sites, education establishments, transport hubs, visitor attractions and existing / proposed developments). The routes are on high demand corridors, are able to meet demand (both existing and potential), encourage a focus on innovation / design best practice and will include continental facilities as standard.

It is hoped that a county-wide suite of Flagship Routes will be a focus for future funding, high quality infrastructure, design best practice and innovation.

Potential Flagship Routes in Basildon Borough

It is proposed that two Flagship routes for Basildon are created: an East / West Flagship Route and a North / South Flagship Route. Both routes conclude at Basildon town centre, with the East / West route passing the northern side of the town centre and the North / South route passing along the western and southern sides of the town centre.

North / South Flagship Route (FR1) – this scheme proposal

According to the MSOA analysis data, the car trips in the Pipp's Hill Industrial Estate location mirrored the cycle trips fairly closely, but with much bigger numbers involved. Therefore, a significant opportunity for modal shift is possible with the right provision.

By linking existing cycling provision at Cranes Farm roundabout (e.g. routes heading north / south along Miles Gray Road, West along St Nicolas' Lane and East along Cranes Farm Road) to Basildon rail station and Clay Hill Road a North / South Flagship route can be created.

The majority of the cycle trips picked up in the MSOA analysis (see 5.1 Commuter Flow Analysis above) seem to be heading to and from the Pipp's Hill Industrial Estate and, therefore, the creation of a high quality route to this location will improve current provision and encourage growth. Provision of a new toucan crossing of Cranes Farm Road in the vicinity of the Pipp's Hill Industrial Estate is being investigated.

Particular focus will be required at the station interchange, the links with other Basildon ITP cycling schemes and where the route cuts through the town centre. This flagship route would benefit from existing high quality provision and proposed improvements around Basildon train station.

This key spine route could be supplemented by improved connections to residential and employment opportunities in the north and south of the town, the station and the town centre and to the west towards Laindon station.

East / West Flagship Route (FR2) – scheme funded by Defra

An East / West Flagship route will be delivered by upgrading the existing cycling network that runs alongside Broadmayne (A1321) from Westgate and connects to the north-east of the town and the Enterprise zone. Broadmayne currently represents a significant barrier to North – South pedestrian and cycle movements, so, in future schemes, pedestrian and cycle-friendly crossings will be provided at key locations, giving useful and easy access to the destinations.

Prioritisation of Flagship Routes

Both Flagship Routes have been considered against the four prioritisation criteria, as per the other potential schemes:

- Deliverability;
- Directness;
- Extension of existing network; and
- Key attractors.

The North / South Flagship Route (FR1) connects a number of key destinations (Pipps Hill Industrial Estate, Gloucester Park, Basildon Town Centre, Basildon rail station and the residents of the Lee Chapel estate), is direct, relatively straightforward to deliver and connects to the existing network in a number of locations, so achieves a high priority.

For the East / West Flagship Route (FR2), the assessment found that the route would be relatively easy to achieve, is relatively direct, connects to the existing network in a number of locations and links the key attractors of Basildon town centre and the Enterprise Zone (with short onward links to Basildon Rail Station). As such, this route (FR2) also achieves a high overall prioritisation.

The inference from the prioritisation exercise is that it supports the basis for identifying the Flagship Routes in the first instance, in that they are key corridors, providing important benefits for cycling in Basildon and are therefore considered a high priority going forward.

Options assessment:

See above.

Short list of options:

See above.

3.2. Preferred option:

See above. The two Flagship Routes achieve high prioritisation and should be introduced asap.

3.3. Assessment approach:

The Department for Transport (DfT) active mode appraisal toolkit, released in May 2018, has been used to understand the potential benefits of the Basildon Flagship cycle route. As the scheme involves upgrading of an existing route, along with the provision of a new route, cycle counts were undertaken to obtain the existing number of users. This has then been factored by Essex County Council (ECC) cycle monitor data in Basildon to estimate inter-peak and weekend trips to provide an average daily number of users over 365 days. The forecast number of cyclists was estimated using Approach 3, outlined in WebTAG Unit 5.1 Active Mode Appraisal. Where pedestrian counts had been undertaken, these were included, however, no growth in pedestrians was assumed.

Appraisal was over 20 years, with maintenance assumed to be required twice during the appraisal period, each time estimated to be 10% of the scheme cost.

Costs were input as factor costs, inflated to the preparation and construction year (2019) and deflated to 2010 values (May 2018 WebTAG Databook values). Costs included provision for Risk, Design and Supervision Costs, Statutory Undertaker Diversion costs and Inflation.

15% Optimism Bias was added to all costs for the purposes of the economic appraisal only.

The analysis indicated a BCR of 3.85 (High) and a Net Present Value of £2.711m.

A sensitivity test was undertaken which assumed only 50% of the new users forecast using WebTag approach 3 would be realised. This resulted in a BCR of 2.48 (High) along with a Net Present Value of £1.402m.

3.4. Economic appraisal inputs:

As above and see Table below.

3.5. Economic appraisal assumptions and results

Appraisal Assumptions	Details
WebTAG version	Cycling Schemes: TAG Databook July 2017
Opening Year, Final Modelled Year and Appraisal Duration	Opening Year – 2019 Final Modelled Year – Opening Year plus 5 years Appraisal Duration – 20 years For cycle scheme growth and mode switch, Sustrans' Infrastructure tool was used. Sensitivity tests used 50% growth in cycling.
Price Base / GDP Deflator	Cost estimates are in 2018 prices and inflated by BCIS Indices to year of expenditure with the DfT Active Mode Appraisal Toolkit.
Real Growth (i.e. above CPI or below)	Inflation was applied to 2017 Cost Estimates for the Financial Case. For the Economic Case, prices, including inflation, were deflated and discounted to 2010 values.
Discounting	Per WebTAG and Standard TUBA Economics File, discounting at a rate of 3.5% per year for 30 years and 3.0% thereafter.

Summary Analysis of Monetised Costs and Benefits (in £'000s) table:

Congestion benefit	10.57
Infrastructure	0.10
Accident	3.03
Local Air Quality	0.02
Noise	0.20
Greenhouse Gases	0.56
Reduced risk of premature death	2391.93
Absenteeism	118.05
Journey Ambience	1138.53

Indirect Taxation	-2.28
Government costs	983.05
Private contribution	0.00

PVB	3660.61
PVC	949.71

BCR	3.85
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3.6. Sensitivity tests:

	£m PV (2010)
Sensitivity Test 1	Sensitivity tests used 50% growth in cycling
Present Value of Costs (PVC)	949.71
Present Value of Benefits (PVB)	2352.12
Net Present Value (NPV)	1402.42
Benefit Cost Ratio (BCR)	2.48

3.7. Environmental impacts:

Environmental Impact	Assessment
Noise	Slight Beneficial
Air Quality	Slight Beneficial
Greenhouse Gases	Slight Beneficial
Landscape	Slight Beneficial
Townscape	Slight Beneficial
Heritage	Neutral
Biodiversity	Neutral
Water Environment	Neutral

3.8. Social impacts:

Social Impact	Assessment
Accidents	Slight Beneficial
Physical Activity	Moderate Beneficial
Security	Slight Beneficial
Severance	Slight Beneficial
Journey Quality	Moderate Beneficial
Option values and non-use values	Slight Beneficial
Accessibility	Slight Beneficial
Personal Affordability	Slight Beneficial

For a summary of the Social Impacts, see Appendix K1.

3.9. Distributional impacts:

For a summary of the Distributional Impacts, see Appendix K2.

3.10. Wider impacts:

Wider economic impacts, not captured by transport user benefits, are not expected to be significant and have not been assessed in detail.

3.11. Value for money:

Details can be found above, while the Appraisal Summary Table can be found at Appendix M.

4. COMMERCIAL CASE

4.1. Procurement options:

Essex County Council (ECC) are committed to providing best value in the delivery of major highways schemes across the county. ECC has undertaken numerous procurement processes for major schemes.

- Essex Highways will be the delivery partner for the design of the scheme
- The construction will be subject to tender process through the Eastern Highway Alliance (EHA)
- ECC have a good track record of scheme delivery through this process
- Use of the EHA ensures a ready supply chain / contractors.

4.2. Preferred procurement and contracting strategy:

The Eastern Highways Alliance and SMARTe and the Highways Agency Framework have all been used extensively in prior major projects e.g. Sadlers Farm, Army & Navy Improvements, Chelmsford and Roscommon Way, Canvey.

Construction will be delivered through the Essex Highways Service Direct Delivery Framework using supply chain partners.

The benefits of procuring the scheme through this route are:-

- early involvement with the contractor
- use of supply chain partners who are familiar with the delivery of smaller complex projects under tight deadlines
- flexibility and opportunity to accelerate the delivery of smaller elements through the 'Walk, Talk and Build' process, thus increasing confidence in project delivery timeframe
- the utilisation of the Framework is endorsed by the ECC procurement team and the ESH Construction Management Group.

Because work is already targetted to commence on the Defra funded scheme in December 2018, it would make financial and economic sense to ensure that the procurement and contract delivery for both schemes are tied closely together. It is probable that the tender for the Defra work will include reference to the possibility of this scheme being added and that suitable provisions should be made.

4.3. Procurement experience:

Essex Highways / Ringway Jacobs have been responsible for delivering all non-HE highway schemes in Essex since April 2012. All schemes are run to tight budgets and timing constraints and this programme would be managed in the same way.

Since 2014, Essex County Council has delivered, or is in the process of delivering, nearly £140m of transport improvement schemes through SELEP LGF funding.

As a demonstration of prior experience at delivering programmes such as this, the following schemes are operational and were delivered on programme and to budget:

- A414 Maldon to Chelmsford RBS
- Colchester Integrated Transport Package (ITP)
- Colchester LSTF
- Colchester Town Centre
- South-East LSTF
- Colchester Park and Ride
- Basildon ITP (Phase 1)

Under construction:

- A127 Resilience Package
- Mill Yard, Chelmsford

- A414 Harlow Pinch Point Package
- Chelmsford to Braintree RBS

Construction about to commence:

- Basildon ITP (Phase 2)

Approved at the November 2017 Accountability Board:

- Chelmsford to Harlow RBS
- Colchester to Clacton RBS
- M11 J8

Approved at the February 2018 Accountability Board:

- Chelmsford City Growth
- Gilden Way Upgrading

Approved at the June 2018 Accountability Board:

- Braintree to Sudbury RBS

4.4. Competition issues:

The construction will be subject to a tender process through the Eastern Highway Alliance (EHA).

4.5. Human resources issues:

None identified.

4.6. Risks and mitigation:

Throughout the development of the scheme, risks will be identified, recorded and actively managed. Where appropriate, risk owners will be allocated and tasked with eliminating risks, where possible, or identifying mitigation measures for residual risks. The same ethos will be taken through to the delivery stages of the scheme.

The quantified risk register will be updated as part of the procurement process to collate and cost, as accurately as possibly, construction related risk. This process will inform a more competitive tendering process.

The approach to risk transfer will be such that the management of a particular risk will rest with the party best placed to manage them.

4.7. Maximising social value:

During the development of the cycling action plans, the opinions of all interested parties and stakeholders were taken into account for the proposed schemes. This ensured that the proposed actions have been considered against the economic, social and environmental well-being of the residents or persons affected.

5. FINANCIAL CASE

5.1. Total project value and funding sources:

This Flagship Cycle Route is estimated to total £0.953m. The ECC contribution of £500k is included in the 2018/19 ECC Cycling Programme capital allocation.

5.2. SELEP funding request, including type (LGF, GPF, etc.):

This bid requests £0.453m of capital LGF funding from SELEP.

5.3. Costs by type (capital and non-capital) :

Cost type (£m)	Expenditure Forecast						
	18/19	18/19	19/20	19/20	Total	Total	Total
	ECC	SELEP	ECC	SELEP	ECC	SELEP	All
Capital							
Construction, Stats etc	0.212	0.209	0.195	0.152	0.407	0.361	0.768
Risk	0.025	0.025	0.033	0.033	0.058	0.058	0.116
Inflation	0.000	0.000	0.005	0.004	0.005	0.004	0.009
Management & Supervision	0.013	0.013	0.014	0.014	0.027	0.027	0.054
Monitoring and Evaluation - pre build		0.003		0.000	0.000	0.003	0.003
Revenue							
Transportation Studies ECC Revenue Budget - Monitoring and Evaluation (post build) <u>2/</u>			0.003		0.003		0.003
Total funding requirement	0.250	0.250	0.250	0.203	0.500	0.453	0.953

Note 1/: Optimism Bias has not been applied to the costs in the Financial Case

Note 2/: ECC's revenue budget will be formally approved in February 2019 for 2019/20 Financial Year

Detailed cost sheets can be found at Appendix N.

5.4. Quantitative risk assessment (QRA):

The Quantitative Risk Assessment will be developed later at the start of the programme.

5.5. Funding profile:

Funding source (£m)	Expenditure Forecast			
	18/19	19/20	20/21	Total
SELEP	0.250	0.203		0.453
ECC	0.250	0.250		0.500
Total funding requirement	0.500	0.453569		0.953

Please note that there is scope for a little flexibility within the funding profile.

5.6. Funding commitment:

Provisional ECC funding has already been approved by Cabinet. ECC's revenue budget and Capital Programme for 2019/20 will be formally approved in February 2019.

Section 151 Officer sign-off is included at Appendix A.

5.7. Risk and constraints:

Throughout the development of the scheme, risks will be identified, recorded and actively managed. See Appendix B2. Where appropriate, risk owners will be allocated and tasked with eliminating risks, where possible, or identifying mitigation measures for residual risks. The same ethos will be taken through to the delivery stages of the scheme.

The quantified risk register will be updated as part of the procurement process to collate and cost, as accurately as possible, construction related risk. This process will inform a more competitive tendering process.

The approach to risk transfer will be such that the management of a particular risk will rest with the party best placed to manage them.

Costs will be carefully monitored throughout the scheme and if any overruns start to emerge, contingency action will be developed. Options may include using alternative materials, programme timing acceleration or slight modifications to scheme design.

Risk Management (See Appendix B1)

A proactive risk management procedure is in operation, including a quantified risk assessment approach, which ensures that risks are continuously identified, owners assigned and mitigation measures put in place. Regular reviews check the status of each risk and regulate their control and mitigation. Project procedures also require that, should the likelihood or severity of risks be identified as increasing by this process, responsibility for its mitigation is escalated upwards through the project management chain to ensure that this is achieved.

All risks are currently owned by the partner authorities. As the project develops, it is expected that some of these risks will be transferred to contractors constructing the infrastructure. In addition, Essex County Council uses a proprietary online Risk Register to assess levels of risk and to track the progress of the risk management strategy for the scheme. The §151 Officer also has access to this system. Risks are categorised into five main areas, i.e.:

- Project and programme risks related to delivery;
- Consultation and stakeholder acceptance;
- Reputational risks to the project partner authorities (and ultimately the contractors and service providers);
- Statutory Processes; and
- Financial and funding risks.

Risk Allocation

ECC will bear all risk for the project as part of its role as Highways Authority.

Further detailed risks are shown as part of the QRAs which can be seen at Appendix N2.

6. MANAGEMENT CASE

6.1. Governance:

The organisation to deliver the scheme is shown in Figure 16 below. The roles and responsibilities of the parties indicated in the figure are described in the following paragraphs.

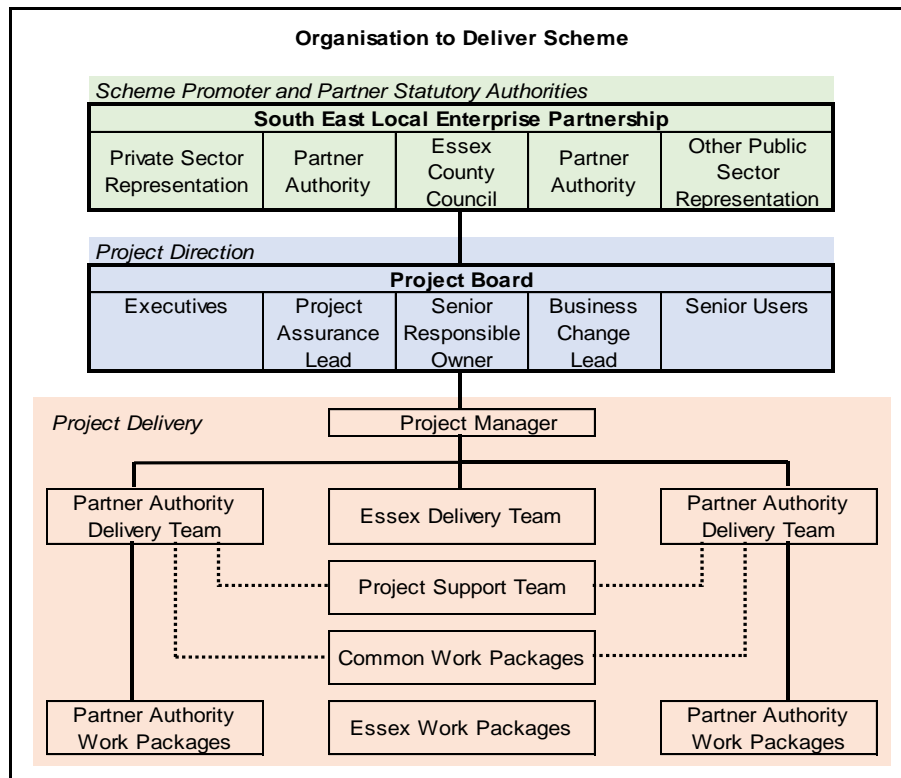


Figure 16: Arrangements for Scheme Delivery

Roles of Key Interested Parties:

South East Local Enterprise Partnership Board (SELEP) – brings together senior officers and transport portfolio holders of the partner statutory authorities promoting the scheme. Essex County Council acts as the lead authority for the scheme and provides the project's Senior Responsible Owner.

The arrangements between the statutory authorities promoting the scheme are in the process of being formalised through a joint working partnership agreement. This sets out the basis for governance of the project and for the financial contributions to be made by each party.

The Project Board – is responsible for the direction and overall management of the scheme. The Project Board is chaired by the Senior Responsible Owner and made up of the Executive and Senior User for each of the partner statutory authorities, the Project Assurance Lead and the Business Change Lead. These roles are defined below. Project Board meetings are normally held every six weeks. The Project Manager reports regularly to the Project Board, keeping members informed of progress and highlighting any issues or concerns.

The responsibilities of the Project Board include:

- Setting the strategic direction of the project;
- Defining the scope and setting the timescales for major project milestones;
- Approving the appointment of the Project Manager;

- Providing the Project Manager with the strategy and decisions required to enable the scheme to proceed to programme and resolve any challenges;
- Securing necessary approvals through the partner statutory authorities;
- Approving the project scope of work, programme and budgets, as well as any subsequent changes;
- Signing off completion of each stage of the project and authorising the start of the next stage; and
- Monitoring project risks and taking any appropriate action to mitigate risks.

Strategic Partnership Board – formed to be responsible for managing the scheme and handling of any issues. Essex Highways will also provide technical support and advice.

Delivery Teams – reporting to the Project Manager, the Delivery Teams (one for each partner statutory authority) are responsible for organising and delivering work packages on the highways under the authority's jurisdiction. The Essex Delivery Team has the additional responsibility for common work packages.

Project Support – this team is responsible for project administration, including document control, project team communications, arranging meetings, updating plans, and chasing up the completion of actions.

Individual Roles:

Senior Responsible Owner (Andrew Cook, Director, Highways & Transportation, ECC) – has ultimate responsibility and delegated authority for ensuring effective delivery of the scheme on time and on budget.

Project Manager (Elliot Smith, Infrastructure Project Manager, ECC) – is the individual responsible for organising, controlling and delivering the scheme. The Project Manager leads and manages the project team, with the authority and responsibility to run the project on a day-to-day basis. They also will be assigned the task of running and updating the risk register and organising the monitoring of the delivery of the programme objectives.

Executives – represent the group in each partner statutory authority with responsibility for obtaining funding for the scheme (Chris Stevenson, Head of Connected Essex Integrated Transport, ECC) and securing resources to deliver it (Ben Finlayson, Head of Infrastructure Delivery, ECC).

Sponsor – the role of major sponsor is coordinated through the Transportation Strategy and Engagement Group (Alan Lindsay, ECC).

Commissioning Delivery Manager (Gary MacDonnell, Project Manager, Commissioning Delivery, ECC) - The Commissioning Delivery Manager will provide coordinated management of projects associated with change management activities to achieve the aims and objectives associated with external funding requirements.

Senior Users (David Forkin, Senior Manager, Head of Maintenance; Alan Lindsay, Transportation, Planning and Development, ECC) – represent the group who will oversee the future day-to-day operation of the scheme.

Project Assurance Lead (Erwin Deppe, Client Services Director, Ringway Jacobs) – provides an independent view of how the scheme is progressing. Tasks include checking that the project remains viable, in terms of costs and benefits (business assurance), the users' requirements are being met (user assurance), and that the project is delivering a suitable solution (technical assurance).

6.2. Approvals and escalation procedures:

See above

6.3. Contract management:

A Benefits Realisation Plan has been produced (see Appendix R1) and monitoring / evaluation (see Appendix R2) will be undertaken at the appropriate points during scheme development. Monitoring activities will be aligned to those best placed to do so and to existing regular monitoring and evaluation work. Land-use development related outputs are routinely monitored by planning authorities and this information will be tracked and linked to scheme completion where appropriate.

6.4. Key stakeholders:

Key Stakeholders	Nature of involvement
Essex County Council	Support for scheme
Basildon Borough Council	Support for scheme

6.5. Equality Impact:

See Appendix P.

6.6. Risk management strategy:

A proactive risk management procedure is in operation, including a quantified risk assessment approach, which ensures that risks are continuously identified, owners assigned and mitigation measures put in place. Regular reviews check the status of each risk and regulate their control and mitigation. Project procedures also require that, should the likelihood, or severity of risks, be identified as increasing by this process, responsibility for its mitigation is escalated upwards through the project management chain to ensure that this is achieved.

All risks are currently owned by the partner authorities. As the project develops it is expected that some of these risks will be transferred to contractors constructing the infrastructure. In addition, Essex County Council uses a proprietary online Risk Register to assess levels of risk and to track the progress of the risk management strategy for the scheme. The S151 Officer also has access to this system. Risks are categorised into five main areas, i.e.:-

- Project and programme risks related to delivery;
- Consultation and stakeholder acceptance;
- Reputational risks to the project partner authorities (and ultimately the contractors and service providers);
- Statutory Processes; and
- Financial and funding risks.

6.7. Work programme:

See Appendix C.

To avoid additional costs, the programme will be timed to be built either alongside the Defra funded scheme or immediately after.

6.8. Previous project experience:

Essex Highways / Ringway Jacobs have been responsible for delivering all non-HE highway schemes in Essex since April 2012. All schemes are run to tight budgets and timing constraints and this programme would be managed in the same way.

Since 2014, Essex County Council has, or is, in the process of delivering nearly £140m of transport improvement schemes supported with SELEP LGF funding.

As a demonstration of prior experience at delivering programmes such as this, the following schemes are operational and were delivered on programme and to budget:

- A414 Maldon to Chelmsford RBS
- Colchester Integrated Transport Package (ITP)
- Colchester LSTF
- Colchester Town Centre
- South-East LSTF
- Colchester Park and Ride
- Basildon ITP (Phase 1)

Under construction:

- A127 Resilience Package
- Mill Yard, Chelmsford
- A414 Harlow Pinch Point Package
- Chelmsford to Braintree RBS

Construction about to commence:

- Basildon ITP (Phase 2)

Approved at the November Accountability Board:

- Chelmsford to Harlow RBS
- Colchester to Clacton RBS
- M11 J8

Approved at the February Accountability Board:

- Chelmsford City Growth Package
- Gilden Way Upgrading

Approved at the June 2018 Accountability Board

- Braintree to Sudbury RBS

6.9. Monitoring and evaluation:

Inputs

- Design, experience and expertise
- Construction equipment and materials
- Appropriate management and supervision.

Outputs

- New improved cycle route from Basildon Station to Pipp's Hill Industrial Estate and Retail Park
- New improved cycle route from Upper Mayne to Laindon
- New signs
- Resurfaced routes.

Outcomes (See Appendix D & Appendix R2)

- Increased cycle usage – both commuting and pleasure
- Enhanced journeys
- Less congestion
- Less collisions
- Temporary construction jobs.

Impacts (evaluation)

- Numbers of cyclists and traffic flows will be monitored on a regular basis
- Levels of new housing and businesses will be recorded on an annual basis.

Although construction work has commenced on the Basildon Town Centre Improvements, the remaining cycle routes from Basildon ITP Tranche 2 are scheduled for construction later this year.

A Benefits Realisation Plan has been developed (see Appendix R1) and monitoring and evaluation (see Appendix R2) will be undertaken at the appropriate points during the scheme. The plans will be refined further as part of the business case development to confirm the principal benefits of the scheme. Lessons learned from prior projects are automatically fed through to new projects on inception.

A requirement of the SELEP Assurance Framework is that each scheme will have an evaluation plan produced prior to final approval, independently reviewed, and monitored in accordance with this plan. This monitoring will be done according to government guidance and will, where appropriate, include 1 and 5 year reports.

A monitoring and evaluation plan for the scheme will be developed as an output of the full business case work. The plan would be informed by the quantitative and qualitative analysis undertaken for the key performance metrics and wider benefits anticipated.

ECC is mindful of the need to review and monitor highway or cycleway network performance at various stages of scheme implementation to manage and minimise any potential negative scheme impacts. A process of monitoring and evaluation will be implemented to support and inform ongoing wider monitoring activities that are in place, utilising where possible survey data which is already collected.

Surveys will need to capture volumes, patterns of movement and journey times for all modes of transport, including private vehicles, public transport, and non-motorised users. Numbers of cyclists, traffic volumes, speeds and journey times will be monitored at key locations within the area affected by the scheme.

Road safety impacts will be monitored as part of routine county-wide annual monitoring programmes to verify future accident incidences, numbers and locations.

The process evaluation will be ongoing throughout the life of the project and will be managed by the Project Executives and reported through the Project Board. Lessons learned, as part of the development of the scheme, will be reported.

Process Evaluation Monitoring reports will be produced at key milestones. Impact Evaluation Reports will be produced in line with key scheme progression and delivery milestones.

The management of risk in delivering to the monitoring and evaluation requirements will also been taken into account and mitigation measures set out in the risk register.

6.10. Benefits realisation plan:

A Benefits Realisation Plan has been developed (see Appendix R1) and monitoring and evaluation (see Appendix R2) will be undertaken at the appropriate points during scheme development. Monitoring activities will be aligned to those best placed to do so and to existing regular monitoring and evaluation work. Land use development related outputs are routinely monitored by planning authorities and this information will be tracked and linked to scheme completion, where appropriate.

7. DECLARATIONS

Has any director / partner ever been disqualified from being a company director under the Company Directors Disqualification Act (1986) or ever been the proprietor, partner or director of a business that has been subject to an investigation (completed, current or pending) undertaken under the Companies, Financial Services or Banking Acts ?	No
Has any director / partner ever been bankrupt or subject to an arrangement with creditors or ever been the proprietor, partner or director of a business subject to any formal insolvency procedure such as receivership, liquidation, or administration, or subject to an arrangement with its creditors	No
Has any director / partner ever been the proprietor, partner or director of a business that has been requested to repay a grant under any government scheme ?	No

I am content for information supplied here to be stored electronically, shared with the South East Local Enterprise Partnerships Independent Technical Evaluator, Steer, and other public sector bodies who may be involved in considering the business case.

I understand that a copy of the main Business Case document will be made available on the South East Local Enterprise Partnership website one month in advance of the funding decision by SELEP Accountability Board. The Business Case supporting appendices will not be uploaded onto the website. Redactions to the main Business Case document will only be acceptable where they fall within a category for exemption, as stated in Appendix E.

Where scheme promoters consider information to fall within the categories for exemption (stated in Appendix E), they should provide a separate version of the main Business Case document to SELEP six weeks in advance of the SELEP Accountability Board meeting at which the funding decision is being taken, which highlights the proposed Business Case redactions.

I understand that if I give information that is incorrect or incomplete, funding may be withheld or reclaimed and action taken against me. I declare that the information I have given on this form is correct and complete. Any expenditure defrayed in advance of project approval is at risk of not being reimbursed and all spend of Local Growth Fund must be compliant with the Grant Conditions.

I understand that any offer may be publicised by means of a press release giving brief details of the project and the grant amount.

Signature of applicant	
Print full name	
Designation	

8. APPENDIX A - FUNDING COMMITMENT

Dear Colleague,

In submitting this project Business Case, I confirm on behalf of Essex County Council that:

- The information presented in this Business Case is accurate and correct as at the time of writing.
- The funding has been identified to deliver the project and project benefits, as specified within the Business Case. Where sufficient funding has not been identified to deliver the project, this risk has been identified within the Business Case and brought to the attention of the SELEP Secretariat through the SELEP quarterly reporting process.
- The risk assessment included in the project Business Case identifies all substantial project risks known at the time of Business Case submission.
- The delivery body has considered the public-sector equality duty and has had regard to the requirements under s.149 of the Equality Act 2010 throughout their decision-making process. This should include the development of an Equality Impact Assessment which will remain as a live document through the projects development and delivery stages.
- The delivery body has access to the skills, expertise and resource to support the delivery of the project
- Adequate revenue budget has been or will be allocated to support the post scheme completion monitoring and benefit realisation reporting
- The project will be delivered under the conditions in the signed LGF Service Level Agreement with the SELEP Accountable Body.

I note that the Business Case will be made available on the SELEP website one month in advance of the funding decision being taken, subject to the removal of those parts of the Business Case which are commercially sensitive and confidential as agreed with the SELEP Accountable Body.

Yours Sincerely,

SRO (Director Level)

S151 Officer