

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.

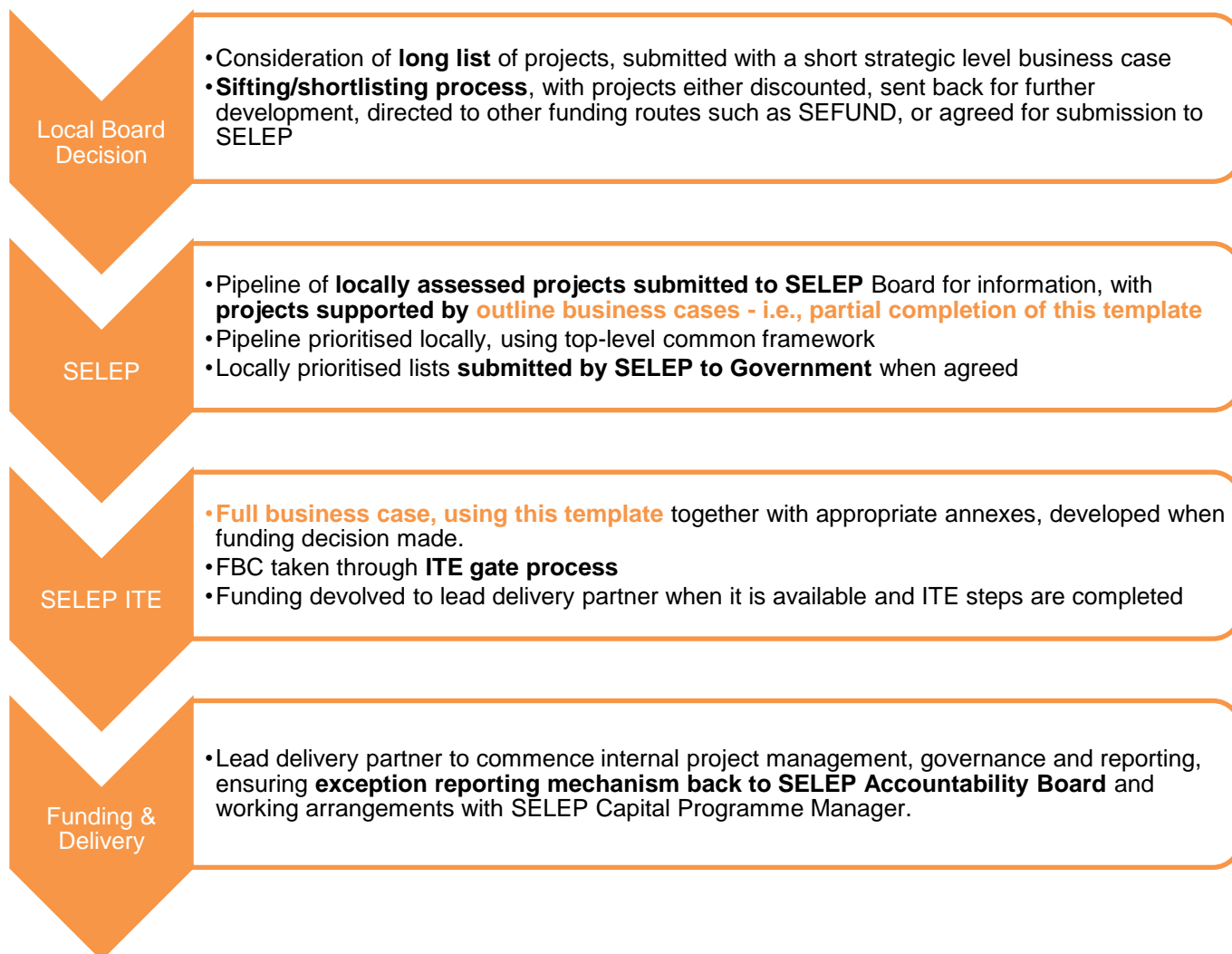
Please note that this template should be completed in accordance with the guidelines laid down in the HM Treasury's Green Book. <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>.

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 through 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.

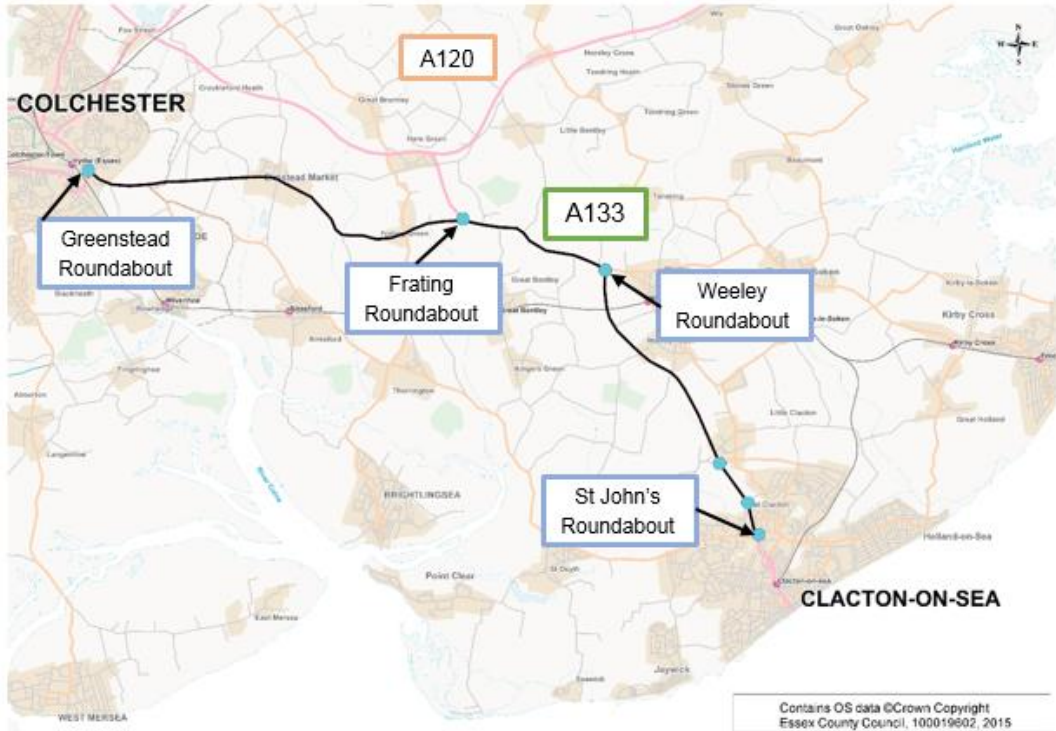



In the form that follows:

- **Applicants for funding for non-transport projects should complete the blue sections only**
- **Applicants for funding for transport projects should complete both the blue and the orange sections**

Version control	
Document ID	Chelmsford to Braintree Route Based Strategy Business Case
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1. PROJECT SUMMARY

1.1. Project name	Colchester to Clacton Route Based Strategy Business Case
1.2. Project type	Corridor Improvements – Highways Capacity, Safety and Cycling
1.3. Location (incl. postal address and postcode)	<p>Colchester to Clacton Corridor</p>  <p>Figure 1: Colchester to Clacton Corridor</p>
1.4. Local authority area	<p>Essex County Council / Colchester Borough Council / Tendring District Council – Council covering Clacton-on-Sea</p> 
1.5. Description (max 300 words)	<p>The A133 is the key route providing access from Colchester to the seaside resort of Clacton-on-Sea and allowing access from the district of Tendring into Colchester.</p> <p>The purpose of this bid is to deliver a package of schemes to provide highways capacity, cycling and safety improvements for the Colchester to Clacton corridor.</p> <p>National Planning Guidance states that plans should maximize opportunities to accommodate the efficient delivery of goods and supplies, give priority to pedestrian and cycle movements wherever possible and minimise conflicts between traffic and cyclists or pedestrians. This route based strategy aims to do just that.</p> <p>The DfT national RBS objectives are shown in 2.1 and the scheme aims to address each of the five objectives, with the possible exception of public transport which is referred to in Section 2.3.</p> <p>The following improvements were identified from a Route Based Strategy (RBS) study undertaken last year, which included site visits, workshops, consultations and the publication of recommendations / reports:-</p>

	<ul style="list-style-type: none"> • Bromley Road Improvements – Widen to two lane approach from Colchester, introduce new Puffin crossing and modify junction layout • Safety Improvements – Implement variety of safety improvements between Frating roundabout and Progress Way, Little Clacton including actions to reduce potential collisions • Frating Roundabout – Introduce left-turn slip from A133 (A120 Spur) to A133 E and modify roundabout and approached to accommodate this slip • Frating Roundabout – Introduce left-turn slip from A133 E to A133 W • Weeley Roundabout – Junction and signage improvements • Signage – Various improvements along the route • Cycling – Improve cycle paths along the A133 (Salary Brook). In particular, the section from Greenstead Roundabout, up Clingoe Hill that provides links and access to the University of Essex and the B1441 which runs alongside the A133 from Weeley to Progress Way, Little Clacton. <p><i>Drawings of the proposed improvements can be found at Appendix A.</i></p> <p><i>Copies of the full Route Based Strategy Reports are available on request.</i></p>								
1.6. Lead applicant	Essex County Council (ECC)								
1.7. Total project value	£5.48m								
1.8. SELEP funding request, including type (e.g. LGF, GPF etc.)	£2.74m SELEP funding is requested from the LGF to match the £2.74m funding to be provided by ECC.								
1.9. Rationale for SELEP request	<p>The SELEP SEP included a list of thirteen Route Based Strategies in Essex that were identified for improvement work. The first route based strategy, A414 Chelmsford to Maldon, was approved by SELEP and work was completed by December 2016. The second route based strategy, Chelmsford to Braintree was approved in November 2016 and work is due to start in Autumn 2017.</p> <p>This request follows on from these first two RBSs and is felt, alongside Chelmsford to Harlow, to be the next route that provides the greatest opportunity for network improvements.</p>								
1.10. Other funding sources	ECC funding has been approved and is guaranteed.								
1.11. Delivery partners	<table border="1"> <thead> <tr> <th>Partner</th><th>Nature and / or value of involvement (financial, operational etc)</th></tr> </thead> <tbody> <tr> <td>Colchester Borough Council</td><td>Support for scheme</td></tr> <tr> <td>Tendring District Council</td><td>Support for scheme</td></tr> <tr> <td>Clacton Town Council</td><td>Support for scheme</td></tr> </tbody> </table>	Partner	Nature and / or value of involvement (financial, operational etc)	Colchester Borough Council	Support for scheme	Tendring District Council	Support for scheme	Clacton Town Council	Support for scheme
Partner	Nature and / or value of involvement (financial, operational etc)								
Colchester Borough Council	Support for scheme								
Tendring District Council	Support for scheme								
Clacton Town Council	Support for scheme								
1.12. Key risks & mitigations									

	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
	<p>As the section between Frating and Weeley is the primary route for traffic travelling between Colchester and Clacton, it will be essential to ensure that appropriate traffic management is to put in place to minimize disruption to the network between these points.</p> <p><i>Further detailed risks are shown as part of the QRAs which can be seen at Appendix E.</i></p>					
1.13. Start date	<p>Phased package of improvements, with construction commencing formally in October 2018, although initial design work and costs have already been undertaken.</p> <ul style="list-style-type: none"> • Safety Improvements – April 2019 • Bromley Road Signals – April 2019 • Frating Roundabout – April 2019 • Weeley Roundabout – October 2018 • Signage – July 2019 • Cycling Improvements – October 2019 					
1.14. Practical completion date	<ul style="list-style-type: none"> • Safety Improvements – February 2021 • Bromley Road Signals – September 2019 • Frating Roundabout – September 2019 • Weeley Roundabout – March 2019 • Signage – September 2019 • Cycling Improvements – March 2020 					
1.15. Project development stage	<p>All – Draft designs, costs and programmes have been produced. Detailed designs are being developed and will be available to support this bid.</p>					
1.16. Proposed completion of outputs	<p>Individual components will be completed and opened as they are finished on a planned phased basis:-</p> <ul style="list-style-type: none"> • Safety Improvements – February 2021 • Bromley Road Signals – September 2019 • Frating Roundabout – September 2019 • Weeley Roundabout – March 2019 • Signage – September 2019 • Cycling Improvements – March 2020 					
1.17. Links to other SELEP projects, if applicable	<ul style="list-style-type: none"> • Chelmsford to Braintree RBS – approved November 2016 • Chelmsford to Harlow RBS – to be submitted concurrent with this bid • Chelmsford to Maldon RBS – work completed December 2016 • Colchester ITP – approved 2015, mainly complete • Colchester LSTF – approved 2015, completed 2016 • Colchester Park & Ride – approved 2015, opened 2015 • Colchester Town Centre – approved 2015, completed 2016. 					

2. STRATEGIC CASE

2.1. Challenge or opportunity to be addressed

Route Based Strategy

A Route Based Strategy identifies areas for targeted investment in the short and longer term. A package of schemes are identified to improve safety and reliability, solve the operational issues on the route and assist in releasing land for growth.

The A133, Colchester to Clacton, route based strategy is one of the key RBSs identified in the SELEP Strategic Economic Plan.

Each RBS aims to provide:

- improved journey times and reliability for all users with traffic management, capacity enhancements and congestion relief measures;
- passenger transport improvements along the routes;
- walking and cycling improvements along the routes where appropriate;
- targeted safety improvements; and
- highway asset renewal.

The proposed package of scheme improves access, from the east, to Colchester– a key employment zone in Essex, by providing improved access to employment, markets and suppliers. The traffic enhancements, provided along the A133, will also provide safety and cycling improvements.

Traffic

In and around Colchester, traffic did not significantly increase from 2001 to 2011, despite the level of housing and business growth delivered during that period, reflecting changes in lifestyles and working patterns, such as more people working from home. Despite this, in peak hours, the road network suffers from serious congestion. This congestion restricts the economic performance of Colchester and the surrounding area; impacts health through poor air quality and the high traffic volumes do not encourage the use of alternative forms of transport. The cumulative impact from development adds to this congestion.

Colchester is a key destination for employment, education, health, leisure and retail. The main inward movement into the Borough for employment is from the east, with 38% of people coming into the Borough from Tendring, for work, along two main corridors – the A120 and the A133. Of these trips, 82% are made by car. The key destinations for those commuting out of the Borough are London (25%), Braintree (15%) and Tendring (15%).

The combination of travel patterns results in peak congestion on the road network. Traffic congestion delays all road users, and businesses take this, and the perceived economic cost, into account when deciding whether to locate within the area.

Congestion

Congestion levels in Colchester are negatively affecting the local economy, especially at key pinch points. These pinch points restrict traffic flows throughout the Borough and lead to unreliable journey times, late deliveries and gridlock on the network. In addition to this, air quality is a significant problem in Colchester and the town centre has a declared Air Quality Management Area. The Essex Business Survey (2010) found that 35% of businesses are concerned about local traffic congestion, with the road / transport network being identified as a priority for investment.

Congestion in Colchester is already unacceptable. Doing nothing would lead to a situation where none of the growth options could be undertaken without gridlock. This is not an option and the Local Plan is predicated on the introduction of a range of measures, such as route based strategy improvements, to allow growth to take place.

The route between Colchester and Clacton, and Tendring in general, becomes heavily congested in the summer season and at peak times. With further developments planned for Clacton (see Section 2.3, Strategic Fit below), this situation is only going to get worse and requires action to be taken.

New Homes

Based on national projections, covering the period 2013 to 2037, some 4,900 more people will be living in the North Essex area each year. This translates to an additional 2,700 new homes required each year.

Colchester is one of the fastest growing towns in the country. Over the period 2001-2023, Colchester has allocated land for 19,000 new houses, and is on schedule to deliver this target. The adopted plan for Colchester also allows for the creation of 14,000 new jobs over the same period. The key challenge facing Colchester is accommodating housing and economic growth in the most sustainable way and to provide appropriate transport connections.

Employment

The town centre is the major employment area for Colchester, providing approximately 20,000 jobs. Maintaining reliable access into and across Colchester is essential for employment and other opportunities, such as further education, retail and leisure.

Colchester town centre is already a major regional shopping centre, but will also see substantial growth, with 2,000 new homes and planned increases in office and retail floorspace of 40,000m² and 67,000m² respectively.

Traffic Congestion

The following diagrams show the congestion flows based on recent Trafficmaster data. It can be seen that the significant issues in the AM Peak are approaching Greenstead roundabout and the Weeley to Frating section. In the PM peak, it can be clearly seen that the approaches to Frating roundabout are heavily congested.

Regarding public transport, both rail and bus connections are provided between the two destinations on a regular hourly basis. To provide a better service for its customers, who live in the villages to the east of the A133, the bus deviates from the corridor at Weeley and does not reappear on the route until it reaches Clacton itself (outside of the scope of this RBS). As a consequence, there is very little that can be done to improve public transport connections, although there have been conversations with the rail operator with regards to increasing the frequency of the train service.

Safety is covered in 1.5 and describes the safety actions proposed. Most of these improvements are between Frating and Little Clacton - banning right turns (where there have been clusters of collisions), providing an alternative cycle route avoiding the A133 (two cyclists were killed on this section within the last three years) and by introducing a speed limit between Weeley and Little Clacton (with a view to reducing the overall number of collisions).

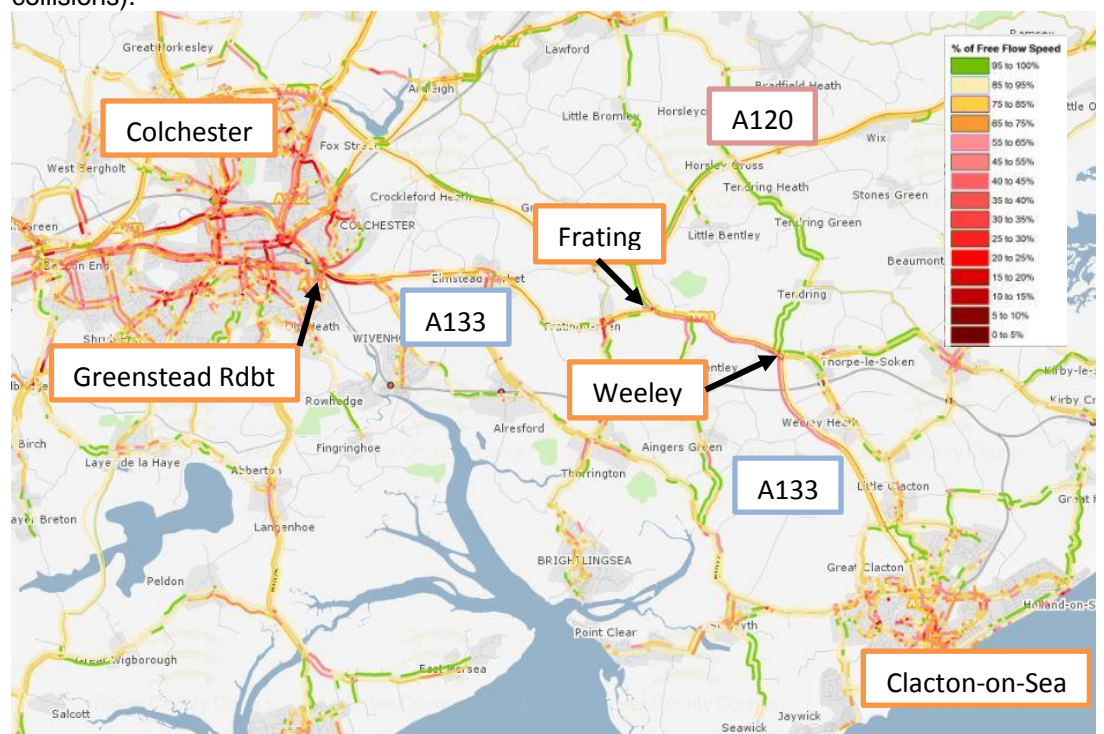


Figure 2: AM Peak Hour Congestion Indicator

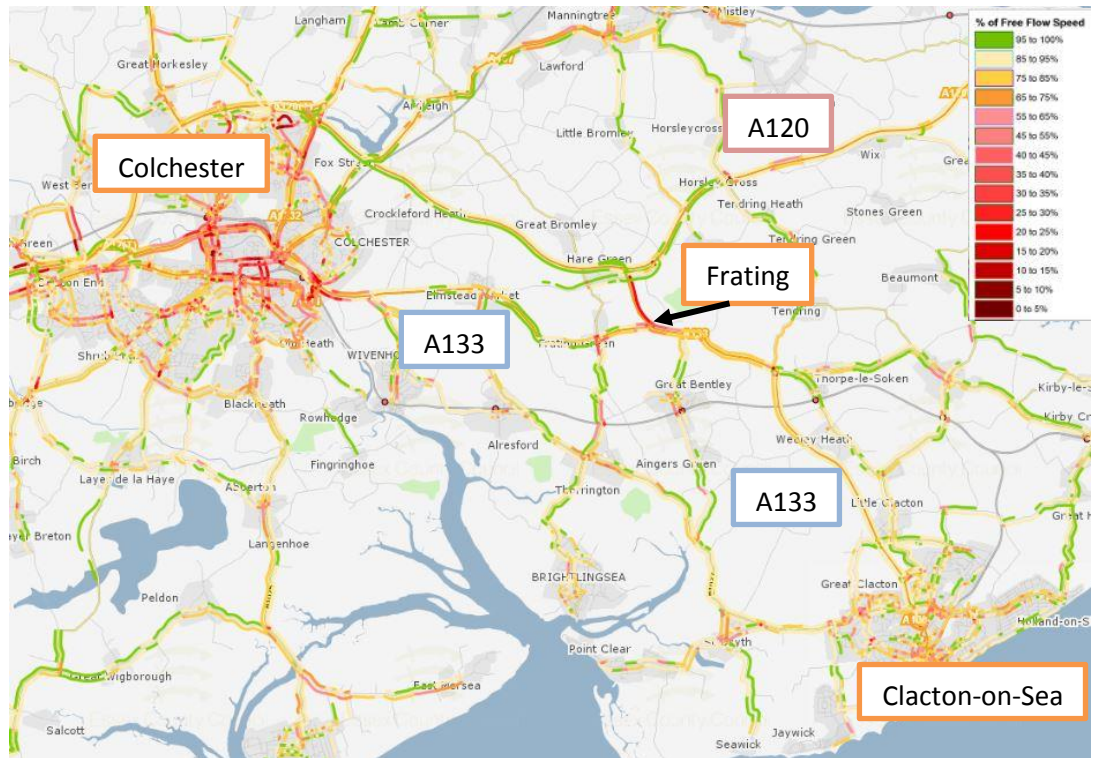


Figure 3: PM Peak Hour Congestion Indicator

2.2. Description of project aims and SMART objectives

Outcomes will primarily be:-

- To improve safety along the corridor (reduced collisions)
- To improve cycling options along the corridor (number of cyclists)
- To improve journey times and reliability for all vehicles along the A13 corridor (JT flows etc)
- Completion of at least 3,000 new homes in North Essex
- To support economic growth and businesses along the corridor.

The following **objectives** are proposed for this route:

- Deliver transport improvements to support and accommodate future housing and employment growth
- Tackle congestion
- Improve journey-time reliability
- Improve safety on the route and reduce the number of people killed or seriously injured
- Provide for, and promote, sustainable forms of travel
- Reduce congestion and facilitate improved reliability of journeys
- Improve accessibility and connectivity into and within Colchester
- Maintain and improve the public transport network
- Facilitate and improve pedestrian and cycling routes into and around the city
- Encourage and assist economic growth
- Develop long-term solutions to resolve gaps within the strategic network
- Improve air quality and environment by providing and promoting the use of more sustainable forms of travel
- Maintain assets ensuring that the highways network (including roads, footways and cycleways) is resilient, safe to use, and fit for purpose.

2.3. Strategic fit

SELEP Strategy

The Colchester to Clacton Route Based Strategy supports the SELEP Vision; to 'Create the most enterprising economy in England' and the single SELEP goal; to promote steady, sustained economic growth over the next two decades.

The scheme improves access, from the east, to Colchester– a key employment zone in Essex, by providing improved access to employment, markets and suppliers. The traffic enhancements, provided along the A133, will also provide safety and cycling improvements.

Essex Strategy

Investment in improvements along the A133 between Colchester and Clacton is wholly compliant with the aspirations of the Economic Plan for Essex (EPfE) that updates and incorporates the Greater Essex Integrated County Strategy (ICS) and the ECC Economic Growth Strategy (EGS). The package of improvements proposed also supports the delivery of the Essex Local Transport Plan (LTP), and has the support of partner authorities.

Essex County Council has the stated ambition to make Essex the location of choice for business and to be a county where innovation brings prosperity:

- To grow, the Essex economy depends on the efficient movement of people, goods and information, via effective and reliable transport and communications networks to provide access to markets and suppliers. It is therefore essential that we develop and maintain the infrastructure that enables our residents to travel and our businesses to grow
- Support for employment and entrepreneurship across our economy is focused on ensuring a ready supply of development land, new housing and the coordinated provision of appropriate infrastructure.

This investment along the strategic corridor from Colchester to Clacton is essential for the delivery of these ambitions.

The Essex County Council Corporate Outcomes Framework 2014-2018 sets out the seven high level outcomes that ECC want to achieve to ensure prosperity and wellbeing for Essex residents. Securing these outcomes will make Essex a more prosperous county; one where people can flourish, live well and achieve their ambitions.

The seven outcomes are listed below:

- Children in Essex get the best start in life
- People in Essex enjoy good health and wellbeing
- People have aspirations and achieve their ambitions through education, training and life-long learning
- People in Essex live in safe communities and are protected from harm
- Sustainable economic growth for Essex communities and businesses
- People in Essex experience a high quality and sustainable environment
- People in Essex can live independently and exercise control over their lives.

Essex Local Transport Plan

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

North Essex

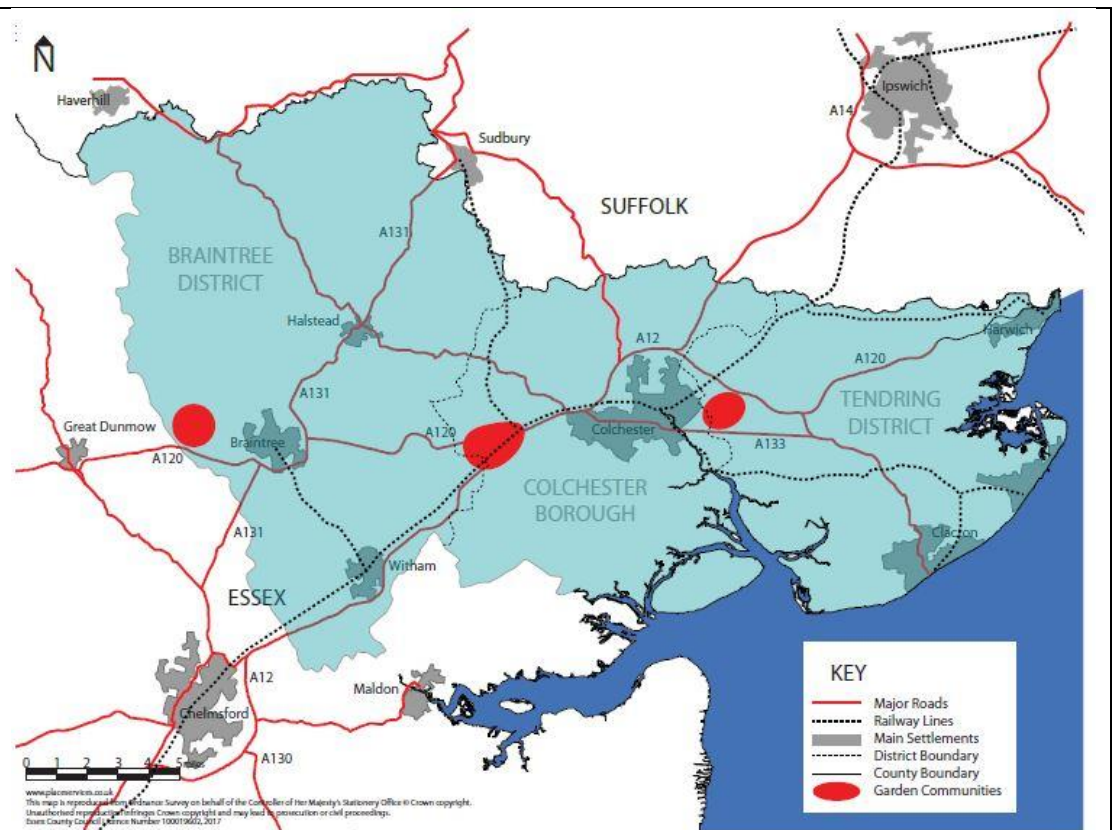


Figure 4: North Essex

Braintree, Colchester and Tendring districts are located to the north of Essex between the East coast ports and London Stansted airport. The principal towns are Braintree, **Colchester** and **Clacton-on-Sea**, together with the port of Harwich and a number of secondary settlements: Brightlingsea, Frinton, Halstead, Tiptree, Walton, Witham and Wivenhoe.

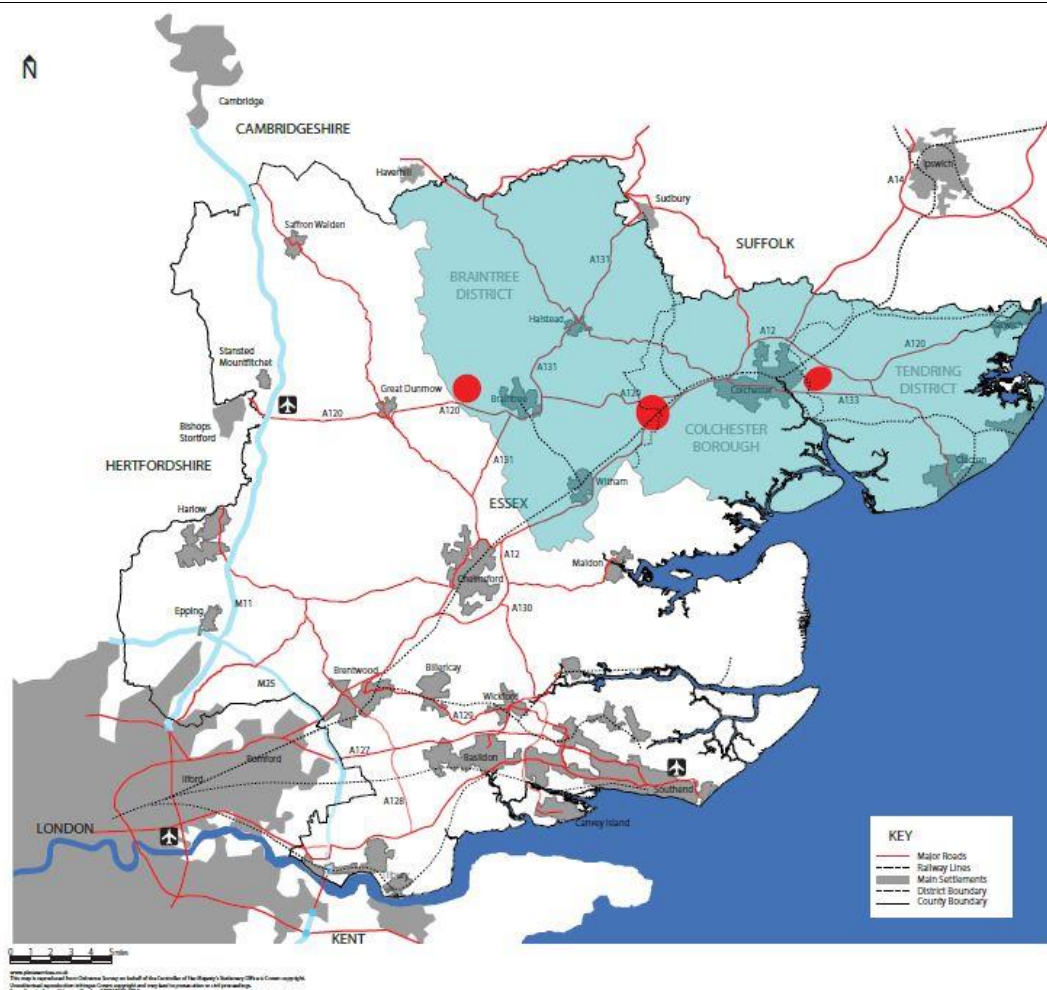
This area comprises a large part of the Haven Gateway, an established partnership area which is identified in a range of existing strategy and investment documents. The Haven Gateway includes the administrative areas of Braintree, **Colchester** and **Tendring** Councils and extends northwards into Suffolk.

North Essex – Connectivity

The area's strategic road and rail network is heavily used, particularly given the proximity to, and connectivity with, London. The principal roads are the A12 and A120, while the A130, **A133** and A14 also form important parts of the strategic road network.

The Great Eastern Main Line provides rail services between London Liverpool Street and the East of England, including Chelmsford, **Colchester** and **Clacton-on-Sea**. It also carries freight traffic to and from Harwich International Port, which handles container ships and freight transport to the rest of the UK. Harwich is also one of the major UK ports for ferry and cruise departures.

Colchester is one of the major centres of employment within the strategic area. While there are high levels of commuting to London, many residents work and live within the area, with significant commuting across district boundaries.



North Essex – Road Network

Nationally, the growth of car traffic has slowed, and in urban areas, traffic levels have remained fairly static over the last 20 years, even though the population and economy has grown. However, across all types of roads in Essex, traffic has continued to grow.

In particular, on the inter-urban road network in Essex, traffic levels have increased, with parts of the A12 around **Colchester** carrying in excess of 100,000 vehicles per day, which is extremely high for an A-Class trunk road. Most of the inter-urban road network, particularly the capacity of the A12, is constrained by operation of the junctions. In particular, the A12 between Junction 25 at Marks Tey and Junction 29 at the A120 / Crown Interchange is at capacity. Any additional traffic results in a reduced level of service with increased queuing, congestion and decreased journey reliability.

The A120 is the key route linking Stansted airport in the west to the port of Harwich in the east. Many sections of the road are of low standard with heavy congestion, high accident risk and, above all, poor journey time reliability. To support economic and housing growth, significant improvements to the A120 between Marks Tey and **Colchester** are currently being investigated.

North Essex – Road Infrastructure

For any new development in the west, external road movements will be heavily reliant on improvements to the A12 and the A120.

For any development in the east, it is likely that development would impact on the section of the A120 east of **Colchester** which carries 38,000 vehicles per day. It is also likely to impact on the A12 Junction 29 Crown Interchange, which provides the main access point for vehicles into north east Colchester and to the North Colchester Business Park. Development will also impact on the local road network in Colchester, especially on the **A133** Clingoe Hill (carrying 35,000 vehicles per day), the **A133** / A134 Greenstead Roundabout, along Colne Causeway and St Andrews Avenue.

North Essex – Rail

The rail network is heavily used by passenger trains and through freight from the Haven Ports. Whilst there are few capacity issues in the **Colchester** area on the rail network, improvements are required along the line to accommodate growth and provide a faster, more competitive service across the region.

On the east, the rail line from **Clacton-on-Sea** / Walton-on-the-Naze to Colchester has capacity to accommodate growth. In the long term, larger scale sustainable development in the east would provide a good opportunity to create a new public transport system linking the development area, the University and the existing urban area of **Colchester**. The system could combine a high frequency quality rapid transit system, linking into new and / or improved rail stations, an improved transport interchange, and an eastern park and ride site.

North Essex – Strategic Objectives

The following strategic objectives are designed to support the vision for the area:-

- **Providing Sufficient New Homes** – to provide for a level and quality of new homes to meet the needs of a growing and ageing population in North Essex; to achieve this by ensuring the availability of developable land in appropriate locations and that the market delivers a suitable mix of housing types.
- **Fostering Economic Development** – to strengthen and diversify local economies to provide more jobs; and to achieve a better balance between the location of jobs and housing, which will reduce the need to travel and promote sustainable growth.
- **Providing New and Improved Infrastructure** – to make efficient use of existing transport infrastructure and to ensure sustainable transport opportunities are promoted in all new development. Where additional capacity is required in the form of new or upgraded transport infrastructure to support new development, to ensure this is provided alongside the development.
- **Addressing Education and Healthcare Needs** – to provide good quality educational opportunities as part of a sustainable growth strategy, including practical vocational training and apprenticeships linked to local job opportunities. To work with partners in the NHS and local health partnerships to ensure adequate provision of healthcare facilities to support new and growing communities.
- **Ensuring High Quality Outcomes** – to promote greater ambition in planning and delivering high quality sustainable new communities, including new garden communities and strategic growth areas. Overall, new development must secure high standards of urban and built design which creates attractive places where people want to spend time.

To support the expected jobs growth would require 3,100 net new homes per year. This represents an uplift of 400 additional homes, or 15%, over the demographically projected need. It also makes an allowance for additional London related migration.

North Essex – Public transport, walking and cycling

Alternative forms of transport for travel to work other than the private car (walking, cycling and public transport) are important in managing congestion and accommodating sustainable growth.

Within the urban areas of North Essex, a good bus network is available, although it is currently underutilised. By promoting travel by sustainable modes, there are wider benefits to local people such as personal health, less pollution and using less resources, and they are usually very cost effective.

The levels of growth in the Local Plan will require that the consequent need to travel is managed. Travel planning and smarter choices initiatives are being promoted to ensure that all residents have good access to local jobs, services and facilities, preferably by either walking or cycling. For longer trips, and in rural areas where there are fewer local services and employment opportunities, public transport will be promoted.

North Essex is well placed in connections by road, rail, air and sea to the wider region and beyond, and these connections will need to be strengthened as part of developing sustainable transport networks. The Great Eastern Main Line (GEML) and branch lines, link the major towns and cities via a high capacity, high frequency rail line radiating from

London. The strategically important London Stansted Airport lies 40 miles to the west of key urban centres in North Essex. Access via sea is provided by the port at Harwich.

The challenge is to provide North Essex with a sustainable transport system that provides good access to jobs and services, to support economic growth. Growth, promoted through the Local Plans, provides an opportunity to prioritise, facilitate and deliver larger scale transport infrastructure projects that can significantly improve connectivity across and within the area, and positively alter travel patterns and behaviour to reduce reliance on the private car.

Measures designed to encourage people to make other sustainable travel choices such as better public transport provision, car clubs, electric vehicle charging points and provision of cycle links and walk ways will also be required to achieve such a change. It will also help to enhance air quality and improve health and well-being.

Braintree, **Colchester** and **Tendring** will continue to work closely with government departments, Highways England, Essex County Council, Network Rail, rail operators and other partners to better integrate all forms of transport and improve roads and public transport and to promote cycling and walking. Key projects during the plan period will see improvements to the A12, A120, Great Eastern Main Line rail services, and provision of rapid transit connections in and around urban areas and the Garden Communities. An integrated and sustainable transport system will be delivered that supports economic growth and helps deliver the best quality of life.

North Essex – Jobs

The average annual jobs forecast (East of England Forecasting Model (EEFM) and Experian 2016) is:

- Braintree (EEFM) 490
- Colchester (EEFM) 930
- Tendring (Experian) 490.

Colchester

Colchester is located at the intersection of the A120 Haven Gateway and the A12 Great Eastern Mainline Growth Corridors and the SEP states that 'Colchester will accommodate significant future growth, with development planned for the town centre and the Northern Gateway creating a new leisure / sporting hub'. A digital incubation centre for the creative industries in the heart of Colchester will support this priority sector. The development of a STEM training centre will help raise local skills to support priority sectors along the corridor.

This package of improvements for the A133 corridor is complementary to other Colchester schemes eg Colchester Park and Ride, Colchester LSTF, Colchester Town Centre Access and Colchester ITP. Jointly, they respond to the objectives detailed above. There is 'a golden thread' running through the Colchester LDF core strategy, the Essex Economic Growth Strategy and the Economic Plan for Essex, which pulls these all together, and ensures the future delivery of growth in and around Colchester in a sustainable manner.

As part of the Colchester LDF Core Strategy process, additional highway infrastructure has been considered in the form of junction and link improvements. However, the scale of the improvements required cannot keep pace with the level of traffic demand likely to arise from growth in the town and are often not feasible in the area of land available, nor is it independent of other initiatives. Congestion in Colchester is already unacceptable. Doing nothing would lead to a situation where none of the growth options in the town could be undertaken without gridlock.

Over the last four decades, Colchester has been expanding. Growth has been influenced by the wider UK economy and housing cycles, but over the period 1974/75 – 2012/13, housing growth has averaged 830 dwellings per year.

Initial work from the Strategic Housing Market Assessment (SHMA) suggests an estimated requirement of 1,065 new homes per annum needed in the Borough over a 20-year period.

Planning for sustainable development involves building a strong local economy that is well connected to global markets. This includes trying to provide local jobs for residents moving into new housing to minimise their need to travel. Colchester's location in the south east,

near London, means that a small but significant proportion of its residents commute to Greater London (7%), but the large majority of residents (65%) both live and work in the Borough. Recognising both these trends, Local Plan allocations will include further land to support the delivery of jobs in Colchester, as well as acknowledging the continual role of London as a 'world city' drawing longer distance commuters. Major local employers include the Army and educational institutions, including the University of Essex. The University is currently developing a research park which will provide new employment opportunities linked to University areas of technical expertise.

The main urban centre of Colchester is surrounded by a large rural hinterland comprising the smaller towns of Tiptree, West Mersea and Wivenhoe and a number of smaller villages and hamlets. Approximately 30% (51,000) of the Borough's population live in the Borough's rural areas.

New development impacts on travel demand. Weekday trips, by all types of travel, are expected to grow 20% by 2032 (including trips that will be generated by development expected to take place over the Plan period). The geographical relationship of different uses, for example where people live, work, study and shop, affects how many journeys are made, how long they are and what means of transport is used. This travel demand impacts on the economy, environment and the local community. The challenge is to provide a sustainable transport system into and around Colchester, while providing good access to jobs and services.

Colchester – Travel Patterns

Travel to work makes up around a third of journeys each week day. Colchester has a high level of people living and working locally, with approximately 65% of employed residents working within the Borough. This reflects the Borough's ability to offer local employment. However, the high level of self-containment results in a large number of short trips to work, many of which are still undertaken by the car. The car dominates the mode of transport to work, representing 55% of all journeys in the Borough. In rural areas, 62% of journeys to work are made by car and, in urban areas, 53%.

The average total time for all trips travelled per person has remained constant over the past 30 years, close to one hour per day, but the length of the journey has increased and there has been a reduction in the number of walking trips. National forecasting suggests that car travel will continue to dominate movement patterns.

Colchester is also a key destination for employment, education, health, leisure and retail. The main inward movement into the Borough for employment is from the east, with 38% of people coming into the Borough from Tendring, for work. Of these trips, 82% are made by car. The key destinations for those commuting out of the Borough are London (25%), Braintree (15%) and Tendring (15%). Within the Borough, there is a diverse range of destinations for commuting, resulting in complex short journeys. However, the town centre remains the main destination for work and education.

The town centre of Colchester serves as a centre, not only for the Borough, but for a much wider area of North Essex, with residents of Braintree, Maldon and Tendring districts travelling into the town to work, shop and use its community facilities.

The urban area of Colchester will continue to be a focus for growth due to its pre-eminent role as a centre for jobs, services and transport. The urban area of Colchester, however, has a limited and diminishing supply of available brownfield sites, so new communities will need to be included to provide a sustainable option for further growth of homes and jobs.

Colchester – Road Network

Modelling of traffic growth in the Colchester urban area, including the housing and employment growth up to 2023, suggests an 18% growth in trips in the peak hours between 2007 and 2023 (an average growth of 1.1% per annum).

It will be particularly important to improve and maintain Colchester's transportation infrastructure, provide travel options and change how people travel, so that the Borough can continue to attract businesses, retailers, tourists and home buyers, therefore boosting the local economy and contributing to the delivery of sustainable growth.

Colchester – Public transport, walking and cycling

Approximately 30% of people use alternative forms of transport (walking, cycling and public transport) to travel to work (or work at home). This is important in managing congestion and there is capacity in most of the alternative forms of transport to accommodate sustainable growth in the Borough. However, these local routes are not always continuous, particularly for cyclists, and they are often of variable standards. The bus network is comprehensive in urban Colchester and most places in the urban area have good access to bus services. However, the bus network is currently underutilised and the County Council plans to address this through a new passenger transport strategy. By promoting travel by sustainable modes, there are wider benefits to local people such as personal health, less pollution and using less resources, and they are usually cost effective.

Colchester Borough Council Strategic Plan 2015-18 This plan sets out the direction and future potential for the borough, with the aim of making the Borough a vibrant, thriving, prosperous and welcoming place.

Colchester Economic Strategy 2015-21 This plan provides an overarching vision and framework for economic interventions in Colchester, including guidance on partnership work and prioritising resources.

Colchester – Employment

Colchester has maintained good levels of employment growth over the last two decades, with declining industrial employment being offset by a growth in office jobs. Colchester registered 92,300 workforce jobs in 2014, representing an increase of 20% over 1991 levels. This increase was higher than the average for the UK (14.6%) and similar to the East of England (19.6%), but was lower than employment growth recorded across Essex as a whole (27.9%) over the same period. The challenge for Colchester will be to retain existing office employers and to increase the supply of better quality modern space catering to small and start-up businesses.

Colchester – History

As the oldest recorded Roman town in Britain, Colchester is claimed to be the oldest town in Britain. The town's present character reflects its rich and diverse history dating back to the Iron Age, including its period as the Roman capital of Britain, its importance as a wool and cloth centre in medieval and Tudor times, and its focus as a hub for Victorian and 20th century industry. In addition to its wealth of historic buildings and environments, the Town Centre is also valued for its shops; employment opportunities; institutions of learning and culture; and services catering to a wide variety of users.

Colchester – New homes

Colchester delivered 12,644 new homes between 2001/02 and 2014/15 at an average rate of 903 dwellings per year. Given the continuing pressures on the South East housing market, Colchester will need to maintain its rate of delivery over the next local plan period to meet the Objectively Assessed Need figure of 920 houses a year, while also ensuring that increasing quantity is matched with high design quality and sustainable construction.

Colchester – 2033 Vision

The following sets out the vision for Colchester in 2033:-

"Colchester will be an active and welcoming town with its rich and prestigious heritage treasured and showcased for all to enjoy. Colchester will be acclaimed for the creative, innovative and sustainable ways in which it addresses the wide range of challenges facing the Borough, including climate change; population growth and changing composition; new lifestyle and technological innovations; creating and maintaining strong safe communities; and shifting market forces."

Colchester – Population

Colchester is an historic market town and the largest settlement within the borough of Colchester. At the time of the census in 2011, it had a population of 121,859, marking a considerable rise from the previous census and, with considerable development since 2001 and ongoing building plans, it has been named as one of Britain's fastest growing towns. The Borough's population has grown by 15.6% between 2001 and 2014 and was estimated at 180,420 people in mid-2014.

Colchester – Location

Colchester is some 50 miles northeast of London and is connected to the capital by either the A12, or its railway station, which is on the Great Eastern Main Line. It is a popular town for commuters, and is 32 miles from Stansted Airport and 20 miles from the passenger ferry port of Harwich. Colchester benefits from its location with good access to London, Stansted Airport and Harwich.

Colchester – Transport

Colchester has a bus system (run mostly by First Essex and Arriva Colchester, but with specific services provided by Hedingham Omnibuses, Beeston's, Ipswich Buses, Panther Travel (Essex), Chambers and Regal Busways) which mostly uses the bus station in Osborne Street on the southern edge of the town centre.

Colchester railway station is located on the Great Eastern Main Line operated by Greater Anglia. The town is also served by Colchester Town railway station and Hythe station, both located on the Sunshine Coast Line.

Clacton-on-Sea is the largest town in the Tendring peninsula. The town's economy continues to rely significantly on entertainment and day-trip facilities and it is strong in the service sector, with a large retired population. The north-west part of the town has two business / industrial parks. In the wider district, agriculture and occupations connected to the Port of Harwich provide further employment.

Clacton-on-Sea is located at the end of the A133 road which runs between Clacton and Colchester.

The town is served by Clacton-on-Sea railway station (90 minutes to London Liverpool Street) via the Sunshine Coast Line whose two branches (the other runs from Walton-on-the-Naze) converge before Thorpe-le-Soken. Clacton-on-Sea is the terminus for services from London Liverpool Street via Wivenhoe, Colchester and Chelmsford.

The town is served by bus routes operated by First Essex, Hedingham Omnibuses. Termini include Colchester, Manningtree, Harwich and Walton-on-the-Naze. National Express operates coach services to / from London and Liverpool.

Clacton – Population

Clacton's population increased substantially during the 20th century from 7,456 at the 1901 census to 25,000 in the 1960s, 45,065 in 1991 and reaching 57,000 today.

Clacton – History

The first visitors to arrive at the newly established seaside resort and urban district of Clacton-on-Sea in 1871 came by boat, but eleven years later, the station opened and the first trains arrived on what is now known as the Sunshine Coast Line. It is a seaside resort that saw a peak of tourists in the summer months between the 1950s and 1970s. The focal point of the town has always been the seafront, the beach, and Clacton Pier. The Pier was built in 1871 to meet the steamships travelling to and from the resort and the pier remains an attraction to this day, with amusements, restaurants and a sea-aquarium.

North Essex Garden Communities

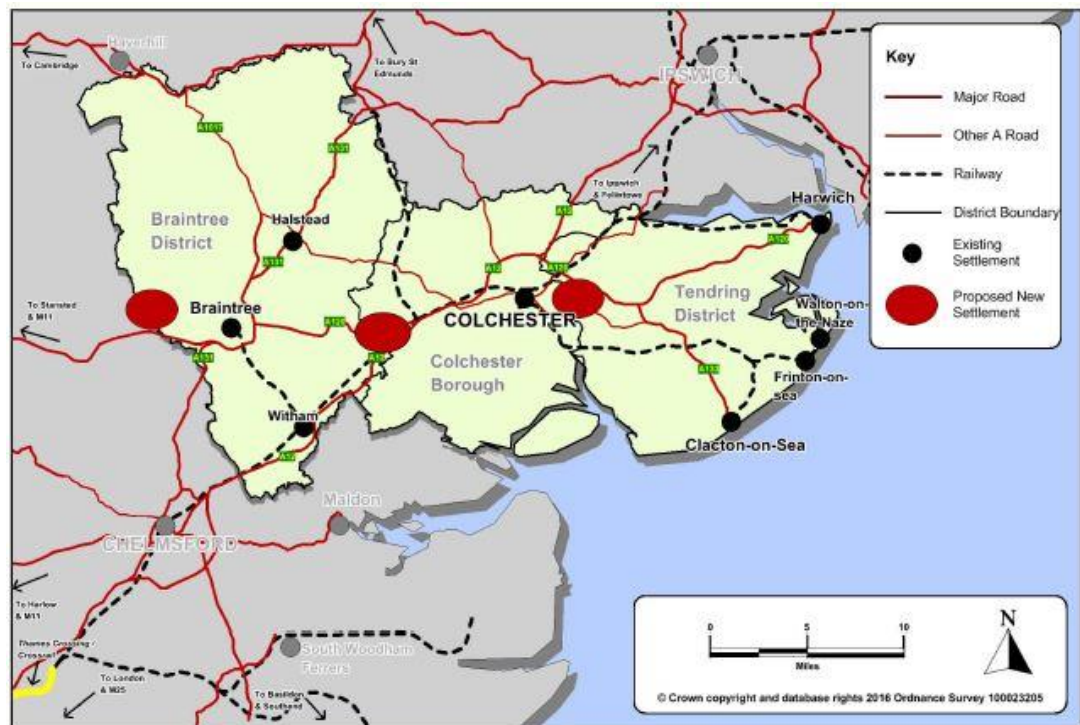


Figure 6: North Essex Garden Communities

A key element of the spatial strategy for North Essex is the development of three new large scale garden communities. Garden communities were amongst a range of options which were considered by the local authorities to meet their needs, but due to the scale of development being proposed across North Essex, and the infrastructure constraints which exist in many of the existing main settlements, this was considered the most deliverable and sustainable option, providing a major long term supply of new homes.

The following three new garden communities are proposed in North Essex:

- East of Colchester, on the border of Colchester BC and Tendring DC, the new garden community will deliver up to 2,500 homes (as part of an overall total of between 7,000-9,000 homes)
- West of Colchester, on the border of Colchester BC and Braintree DC, the new garden community will deliver up to 2,500 (as part of an overall total of between 15,000-20,000 homes)
- West of Braintree in Braintree DC and on the border with Uttlesford DC, the new garden community will deliver up to 2,500 homes (as part of an overall total of between 10,000-13,000 homes).

Tendring

Tendring District is located in the north-eastern corner of the county of Essex, bordering Suffolk and approximately 70 miles from London. Tendring is a coastal District containing a number of individual seaside and riverside towns and a large rural heartland. Tendring District is a peninsula bordered by the Stour Estuary to the north, the North Sea to the south and east and the Colne estuary to the south-west. The western edge of the District borders Colchester.

The largest urban area within the District is Clacton-on-Sea. Tendring District is also home to the International Port of Harwich, the coastal towns of Frinton-on-Sea and Walton-on-the-Naze, the historic port town of Brightlingsea and Manningtree, a town which borders Suffolk, the Stour Estuary and the Dedham Vale Area of Outstanding Natural Beauty.

Tendring District Local Plan

North Essex has experienced significant population, housing and employment growth in recent years and this is forecast to continue. Braintree District Council, Colchester Borough Council and Tendring District Council have agreed to work together to address strategic

planning matters across their areas. Collectively they are known as the North Essex authorities.

Consequently, Braintree, Colchester and Tendring have come together because of their shared desire to promote a sustainable growth strategy for the longer term; and the particular need to articulate the strategic priorities within the wider area and how these will be addressed. Central to this is the effective delivery of planned strategic growth, particularly housing and employment development, with the necessary supporting infrastructure.

Due to its strong economic base, proximity to London and attractiveness as a place to live and work, North Essex has seen significant growth over recent years. The area is well-placed and connected to key growth points in the wider region including London, Cambridge and Stansted Airport and, as a result, will continue to be a successful location for growth. In particular, Braintree and Colchester have regularly exceeded planned house building targets and this is expected to continue. Planning for, and managing future population growth, requires an appropriate response from the local authorities to ensure that sufficient homes, employment premises and land, and supporting social and other infrastructure are provided in a sustainable way.

Tendring District promotes growth in settlements that are the most accessible to the strategic road network, public transport and offer a range of services. Clacton and Harwich with Dovercourt are classified as strategic urban settlements and will accommodate around 5,000 new homes. The smaller urban settlements of Frinton, Walton, Kirby Cross, Manningtree, Lawford, Mistley, Brightlingsea and Weeley will accommodate between 1,500 and 2,500 new homes.

Tendring – New homes

Based on 2014 national demographic projections covering the period 2013 to 2037, the objectively assessed need across the Housing Market Area is 3,000 new homes a year over the period 2013 – 2037. The total requirement across north Essex is 2,200 new homes per year, which includes a figure of 550 new homes per year for Tendring, leading to a total housing supply in the 2013-2033 period of 11,000.

Tendring – Population / Demographics

Within Tendring, the 2011 Census puts the population at approximately 138,100, with an average density of 4.1 people per hectare. The district is projected to grow by 14.4% (from 2011 Census numbers) to approximately 158,000 by the end of the plan period. Recent decades have seen a trend towards an ageing population in the District and this is projected to continue in the future. The percentage of over 65s in Tendring District is higher than both the East of England and Essex percentages. The number of people over 65 years is projected to increase by more than a third within the plan period. In contrast, the proportion of the population aged under 5 years is projected to remain the same in that period.

Tendring – Transport

Tendring District is connected to a network of major roads via the A120, A133 and A137, which provide routes to Chelmsford, London, the M25, London Stansted Airport and the Port of Felixstowe.

Transportation provision in the District includes 14 railway stations with connections to Colchester, Ipswich and further afield. The average journey time between Clacton-on-Sea and London Liverpool Street is 1 hour 26 minutes.

There are numerous bus routes throughout the District, including frequent inter-urban routes linking villages to the larger urban areas of the district and Colchester. The dispersed geography of the District means that there is a reliance on the use of private cars.

The District includes Harwich International Port which has developed into a highly efficient, multi-purpose freight and passenger port handling bulk and container ships as well as roll-on, roll-off ferries and cruise ships. The port also supports the off-shore renewables industry (wind farms) providing support facilities for the installations at London Array (630MW), Gunfleet Sands (172MW), Greater Gabbard (500MW) and Galloper (336MW), off the Essex and Suffolk coasts.



Figure 7: Greater Gabbard Wind Farm

Significant Developments along the Corridor

There are some significant projects planned, underway, or established, along the corridor which will drive change over the next few years. These include:

- Improved access to Frinton and Walton-on-the-Naze
- Brook Park West, Clacton – £75 million retail park, leisure and housing complex
- Brook Retail Park expansion
- Brook Country Park – 50ha, 900 homes
- West Tendring Garden Community - between A133 and A120 near Greenstead – 7,500 homes, 400 acre site
- Hartley Meadows, Clacton – 105ha, 1,500 homes
- Highfield Grange – 19ha, 330 homes
- Sladbury's Lane – 132 homes
- Crabtree Farm, Great Bentley – 115ha, 2000 homes
- Tendring Park Services & Weeley Bridge – 53ha, 1000 homes
- Gainsford Gardens, Clacton – 65 bungalows
- Oakwood Park, Thorpe Road – 250 homes.

Clacton will deliver the largest proportion of Tendring's growth between 2011 and 2031 including some 4,100 new homes and up to 3,500 new jobs.

Future Significant Transport Plans in Essex

- Widening of the A12 (Highways England RIS)
- Major improvements to the Great Eastern Main Line (GEML) between London and Norwich (Network Rail).

Tendring Local Plan, 2017-2032

Tendring District Council (TDC) is currently in the process of devising a new Local Plan to deliver 10,000 new homes and around 200,000m² of employment land over the plan period. 9,200 of these homes have been allocated in the Colchester fringe, Harwich, Clacton, Manningtree and Frinton / Walton. Three scenarios are focussing on Weeley, Hartley Meadows (NW of Clacton) and Tendring Central (Frating). The Hartley Meadows option would include the construction of a new link road between Progress Way Roundabout on the A133 and the roundabout junction of St John's Road and Jaywick Lane.

Colchester Emerging Local Plan, 2017-2032

Colchester Borough Council (CBC) is currently in the process of devising a new Local Plan to deliver 15,000 new homes over the plan period. After the dwellings identified and allocated for growth through the existing Core Strategy and Site Allocations Development Plan Document, CBC is considering three main options to deliver 10,000 of these homes:

- Option 1 – Development to the East and West
- Option 2 – Development to the West
- Option 3 – Development to the East and North.

Other Relevant Schemes:**Rouses Farm, Jaywick Lane**

This development includes up to 900 dwellings and was allocated as part of the Tendring District Draft Local Plan, published in November 2012. Persimmon Homes has since engaged with TDC and ECC in pre-application discussions about the proposals for this site.

Sainsbury's Supermarket, Lightship Way, Colchester

A planning application is under consideration for the redevelopment of the existing B&Q store into 11,105m² foodstore with 548 car parking spaces. This development is likely to increase demand on Greenstead roundabout to the north of Lightship Way.

Clacton Factory Outlet redevelopment, Stephenson Rd

Clacton Factory Outlet, 2km east of Progress Way roundabout, is set to undergo a major redevelopment including a six screen multiplex cinema and a net floor space increase of 1729m². Planning permission was granted by Tendring District Council in August 2015.

Link Road between A120 and A133

Tendring District Council (TDC), in partnership with Essex County Council, Colchester Borough Council, Essex University and Highways England, is committed to explore the possibility of creating a north/south link between the A120 and the A133.

Tendring LHP Safety Schemes

There are two Local Highway Panel (LHP) safety schemes that relate to this route. These both involve relatively minor changes to signage at the following junctions:

- A133 Colchester Rd (Frating Roundabout)
- A133 Colchester Rd junction with Heckfords Road.

Development funded improvements

As part of development planning applications, it is proposed to introduce safety improvements at the Colchester Road / Heckford's Road junction as part of an application for up to 50 dwellings in Great Bentley. This would include the provision of central refuges with illuminated bollards on both sides of the Heckford's Road junction and the partial widening of Heckford's Road.

Rail

Rail provides services between Colchester and Clacton. The Sunshine Coast Line operates between Colchester and Clacton-on-Sea and Walton-on-the-Naze. The typical off-peak service on the line is as follows:

- 1 train per hour (tph) between Clacton-on-Sea and London Liverpool Street, calling at Thorpe-le-Soken, Wivenhoe, Colchester, Witham, Chelmsford, Shenfield, Stratford and London Liverpool Street
- 1tph between Walton-on-the-Naze and Colchester, calling at Frinton-on-Sea, Kirby Cross, Thorpe-le-Soken, Weeley, Great Bentley, Alresford, Wivenhoe, Hythe, Colchester Town and Colchester
- 1tph between Colchester and Colchester Town.

The line is double-track, with the exception for the branch between Thorpe-le-Soken and Walton-on-the-Naze, and is electrified. The journey between Clacton-on-Sea and Colchester takes 25-30 minutes and between Clacton-on-Sea and Colchester Town it takes 35-40 minutes with a change at Thorpe-le-Soken or Colchester.

2.4. Summary outputs (3.2 will contain more detail)

Specific to this bid:-

	17/18	18/19	19/20	20/21	Totals
Jobs	0	0	350	350	700
Homes	0	0	1225	1225	2,450

Figures as stated above – specific to Tendring Local Plan and east of Colchester Garden Community.

2.5. Planning policy context, consents and permissions

A Programme Timing Plan can be found at Appendix F.

As all schemes are contained within current highways land, no exterior planning consents are required.

	For all components, plans are being finalised and rail discussions are ongoing.
2.6. Delivery constraints	<p>Stats work may be more extensive than originally provisioned for.</p> <p>There are various sets of Stats work scheduled at different locations along the route, but the biggest and most expensive is the tele-communications Stats work at Frating roundabout – approximately £415k for this site alone. Because the roundabout is a major junction and provides access to Colchester and the A120, the Stats work is more acute and the concern is that once work commences, further unmarked stats may be discovered.</p>
2.7. Scheme dependencies	<p>Because the improvements have been identified through a route based strategy approach, to deliver the required level of improvement on this corridor, these schemes all need to go ahead, because, if only part of this improvement package is delivered, it will not have the required effect.</p> <p>2.3 details the known proposed developments along the corridor. The junctions were modelled on today's flows (outputs were provided) which show that the network is already saturated and, so, running the models with predicted growth at 2034 just produced unrealistic results. This is all addressed in the Economics Note at Appendix C.</p>
2.8. Scope of scheme and scalability	<p>The scope of this bid is to deliver a package of schemes to provide highways capacity, passenger transport and safety improvements for the Colchester to Clacton corridor.</p> <p>Because the package involves six distinct elements, it would be possible to defer or cancel individual items. However, this would have a detrimental effect on the overall benefit of the package. The impact of not providing an overall route based strategy would be reduced and the general taxpaying public and users may judge this to be a missed opportunity.</p>
2.9. Options if funding is not secured	<p>If funding for this package is not secured, it would not be possible for ECC to fund the complete works without support. As described above, individual elements could be considered, but, on their own, they would not have the same level of impact.</p> <p>Doing nothing is not an option, because of the problems already being experienced in and around Colchester. In particular, if all the development planned for Clacton goes ahead, the only viable route out of the town is the A133. This would put even more and unacceptable pressure on the area between Weeley and Frating.</p>

3. ECONOMIC CASE

3.1. Impact Assessment

For Scheme Appraisal Summary Table please see Appendix D.

Positive impacts (inc. jobs & homes)	Negative impacts
Journey time improvements	None identified so far
Improved access to new homes	
Improved access to jobs	
Improved opportunities for cycling	
Improved safety – reduced collisions	

Modelling approach:-

- **Bromley Road** – LinSig
- **Frating Roundabout** – Junctions 9
- **Weeley Roundabout** – Junctions 9

The route based strategy conducted last year identified 13 options to be considered for prioritisation. Some, such as the dualling of the carriageway between Frating and Weeley were deemed desirable, but too expensive to implement at this time.

Additionally, in discussions with Essex Highways, options were considered for improving Greenstead roundabout, but, because of the size and cost of this scheme, this was again deferred to a later opportunity.

Additional improvements were under consideration for specific junctions on the stretch of the A133 from St John's roundabout to the seafront, but some of this work was dependent on the outcome of plans for Clacton which were still under negotiation and so it was felt that work on this section should be deferred until plans were finalised.

3.2. Outputs

Specific to this bid (see Section 2.4 above), numbers are derived from Tendring Local Plan and North Essex Garden Communities papers :-

- Jobs – up to 700 new jobs
- Homes – up to 2,450 new homes.

3.3. Wider benefits

Overall access to Clacton and the Essex coast will be improved, which will also help improve access to Frinton and Walton. This, in turn, will undoubtedly have a positive effect on the tourist trade, which is a significant employer and driver of the local economy.

3.4. Standards

All works will conform to regular building and highways standards.

3.5. Value for money assessment

See below – Sections 3.12 and 3.13.

3.6. Options assessed

Private funding is not an option, so that the only other opportunities for funding are through SELEP and ECC.

- **Safety Improvements** – The 'Do Nothing' alternative would be viable, but, unfortunately, over the last few years, this road has suffered from a number of collisions which leads to the requirement to implement safety improvements. It might be possible to consider prioritising some improvements over others, but public opinion would judge that once work started on this corridor then it should be completed.
- **Bromley Road Signals** – The 'Do Nothing' alternative would be viable, but, the signals at this junction are in urgent need of replacing and upgrading. It might be possible to consider deferring elements of this package, but public opinion would judge that once work started at this junction then it should be completed. Additionally, as this junction is on a National Cycle Way, it make it even more of a priority to improve the signals and crossings at this point.
- **Frating Roundabout** – The 'Do Nothing' alternative would be viable, but this pinch point junction is the one with the most serious problems and in urgent need of improvement. It

might be possible to consider deferring the east to west slip portion of this work as a 'Do Minimum' alternative, but public opinion would judge that once work started on this junction then both nominated actions should proceed.

- **Weeley Roundabout** – The 'Do Nothing' alternative would be viable, but would be regarded as a real missed opportunity as this is the point at which the A133 splits from the B1033 (the principal access route for both Frinton and Walton) and is therefore a key junction along this corridor. It may be possible to deliver a 'Do Minimum' or 'Do Something' alternative by only undertaking the re-alignment, or only refreshing the signs and lines etc, but again this would be viewed as a missed opportunity as, once work has been started on the roundabout it, should be completed. The 'Do Optimum' option would be the complete set of improvements for the roundabout.
- **Signage** – The 'Do Nothing' alternative would be viable, but a safety audit has identified the need for action on this corridor. Traffic continues to grow and to minimize the potential for collisions, it is important to upgrade the signs and lines along this route. A 'Do Minimum' or 'Do Something' alternative could be to prioritise some improvements over others, but public opinion would judge that once work started on this corridor then it should be completed. The 'Do Optimum' would be the complete scheme, as previously described.
- **Cycling Improvements** – The 'Do Nothing' alternative would be viable, but as the University of Essex continues to expand and with an increasing push to support sustainable travel, it would definitely be regarded as a real missed opportunity. Similarly, the improvements to cycling along the old A120 (now the B1441) could be deferred or delayed, but as there has been a number of collisions involving cyclists on this section, this would be regarded as real missed opportunity. A 'Do Minimum' or 'Do Something' alternative could be to reduce the length of cycle track improvements, but it would be essential to ensure that the improvements reach a suitable junction rather than stop in the middle of nowhere, just because the funding ran out. The 'Do Optimum' would be the complete scheme, as previously described.

A SWOT Analysis is shown below:-

<p>Strengths:</p> <ul style="list-style-type: none"> • Colchester is the largest town in north-east Essex with fastest growing population • Clacton is nominated for significant development - both housing and jobs • Well-established partnership working with CBC and Tendring District Council • Strong and unique connectivity to the markets of London and the south-east, with onward connections to Europe and other international markets • High employment rate • Significant environmental and historical assets • Cultural and significant tourism appeal • Served by major railway line with good connectivity to London 	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Major road congestion at peak times, especially at, and between, Frating and Weeley • Restricted land availability for development in some areas • Lack of connected cycleways alongside corridor
<p>Opportunities:</p> <ul style="list-style-type: none"> • Tie-in with good progress undertaken as part of other SELEP schemes in Colchester • Fully utilise land, labour and capital assets to achieve Colchester and Tendring's economic and growth potential • Large pockets of land available for housing development 	<p>Threats:</p> <ul style="list-style-type: none"> • Potential decline of London as a world financial services centre • Significant change in the build up to, and following Brexit, may bring significant changes in policies and investor confidence • Prevailing economic conditions discourage private sector investment, including bringing forward key development sites

	<ul style="list-style-type: none">• Important location for housing development• Making transport links more resilient to incidents and congestion• Fully realise the potential of economic links with London, including capacity to accommodate growth to the East of London• Potential to improve rail links and utilisation	<ul style="list-style-type: none">• Employment in Clacton and surrounding area largely dependent on tourist trade and care facilities• Lack of value employment stunting economic growth and increasing the level of under-employment• Public concern that growth will lead to increased congestion as a result of failure to invest in adequate infrastructure improvement	
3.7. Scheme assessment			
	Category of impacts	Quantified / Qualitative impact	Large Beneficial to Large Adverse
	Economy	Business Users and Transport Providers	Large Beneficial
		Reliability Impact on Business Users	Large Beneficial
		Regeneration	Large Beneficial
		Wider Impacts	Large Beneficial
	Environment	Noise	Slight Beneficial
		Air Quality	Slight Beneficial
		Greenhouse Gases	Slight Beneficial
		Landscape	Moderate Beneficial
Townscape		Neutral	
Heritage		Neutral	
Biodiversity		Neutral	
Water Environment		Neutral	
Social	Commuting & Other Users	Large Beneficial	
	Reliability Impact on Commuting and Other Users	Large Beneficial	
	Physical Activity	Slight Beneficial	
	Journey Quality	Moderate Beneficial	
	Accidents	Moderate Beneficial	
	Security	Neutral	
	Access to Services	Moderate Beneficial	
	Affordability	Slight Beneficial	
	Severance	Moderate Beneficial	
Option Values	Slight Beneficial		
Public Accounts	Cost to Broad Transport Budget	Slight Beneficial	
	Indirect tax	Slight Adverse	
	<ul style="list-style-type: none">• For the modelling and appraisal methodology, see below.• For a summary of the economic case, see below.		

3.8. Transport KPIs

As a fundamental part of the contract between Essex County Council and Ringway Jacobs there are 60 measurable KPIs for the total contract. Of these, the following four are relevant to this scheme:-

KPI Ref No	KPI	Target	YTD
JTR3	95% of journeys on specified routes are undertaken within target time range	95.00%	94.4%
SC4	Percentage increase in average daily cycling trips	+ 2.5%	+ 2.7%
SE3	Number of people killed and seriously injured	593	621
SE4	Number of people slightly injured	3531	3732

3.9. Assumptions

For Frating junction, Base and Forecast demands were obtained from junction counts from May 2015 and adjusted for base year and forecast years based on a Local Plan VISUM model prepared for Tendring District Council, with growth factors estimated using Trip End Model Presentation Program (TEMPro) with National Transport Model (NTM) version 7.0 growth factors and other committed development provided by Colchester Borough Council and Tendring District Council for 2019 and 2034.

To avoid exaggerated modelled delays and providing unrealistic benefits, the junction was assessed using Junctions9 software for Do-Minimum and Do-Something, Base (2019) and a shortened forecast (2023), where DM results are within reasonable range.

TUBA was used to assess value for money as a small network. Annualisation was over 253 weekdays.

For Weeley Roundabout, the same approach and methodology as for the Frating Junction, described above, was applied. Again the forecast was shortened to provide more realistic results.

Changes to the Bromley Road Junction are primarily addressed to facilitate cyclists and pedestrians. Modelling of traffic in LINSIG and applying the same methodology of economic appraisal as outlined above was applied.

As input to the economic appraisal, all estimates had or were supplemented by:

- Base year of assessment
- Allowance for Risk
- 60-year DM and DS maintenance profiles
- Preparation in terms of design and diversion of statutory undertakers' equipment taking place in 2017 and 2018, construction starting in 2018, with phased opening dates through 2018 and 2019
- GDP deflation values for 2017 prices from WebTAG Databook July 2017.
- Costs separated by Construction, Development, Supervision as per cost estimate breakdown provided in Appendix E1.
- With costs in 2016 and 2017 values, and deflated to 2010, as a simplification, costs were not inflated to a future year and deflated from there.
- 44% optimism bias was added for all elements, except maintenance cost.
- No sunk or past costs were included in the appraisal.

An assessment was taken over the five years of collision data that showed 65 slight injury collisions, 17 serious injury collisions and 6 fatalities (4 collisions). Assessment of the proposed safety measures compared to the nature of collisions is considered to address 37 of the injury collisions that occurred in a three year period. Using estimated collision savings taken from the RoSPA Manual, it is considered that an average of 13.6 of these collisions could be addressed, averaging 4.5 collisions per year.

Benefits for cycling were assessed using the DfT Active mode appraisal toolkit over a 20 year period. Potential user numbers were estimated for each of the proposed schemes from

	<p>existing counts and incorporating the estimated effect of local developments.</p> <p>Costs for Cycling and Safety Improvements were presented as a combined estimate and were discounted and deflated to 2010 values and prices from the 2017 base and adjusted for Resource Cost to Market Prices.</p> <p>Some of the wider impact benefits for business users have been captured in the assessment.</p> <p>More details are provided in the Note on Economic Evaluation at Appendix C.</p>
3.10. Sensitivity tests	Sensitivity tests have not been undertaken at this stage, but will be as the scheme develops.

3.11. Appraisal summary

Category of impact	Impacts typically monetised	Impacts that can be monetised	Impacts currently normally monetised
Economy	PVB: Business users and providers: £14.735m	<i>Reliability regeneration</i> <i>Wider impacts</i> See Appendix C	<i>Townscape heritage</i> <i>Biodiversity Water</i>
Environment	Not assessed at this stage	<i>Landscape</i> Not assessed at this stage	<i>Security Access to</i> <i>Services Affordability</i>
Social	PVB: Commuting Users: £5.184m Other users: £12.289m Highway capacity enhancement scheme with positive benefit to safety, cyclists and journey times. Lower net journey times will add to journey quality.	<i>Reliability option and non-use values</i> Not assessed at this stage	<i>Severance</i> Not assessed at this stage
Public accounts	Broad Transport Business Cost: £3.131m		

3.12. Transport value for money statement

	Present values in 2010 prices and values
PVB	£ 33.600m
PVC	£ 5.667m
NPV = PVB – PVC	£ 27.93m
Initial BCR = PVB/PVC	5.93

3.13. Value for money summary - worked example

	Assessment	Detail
Initial BCR	5.93	Conservative and standard TAG assessment undertaken
Adjusted BCR	6.19	Using wider economic adjustments
Qualitative Assessment	Largely Beneficial	Based on journey time improvements, cycling and safety improvements
Key risks, sensitivities	Forecast growth of traffic	High growth scenarios were assessed but showed that it yielded too high DM delays to make for reasonable appraisal. The assessment is sensitive to growth at the Frating Roundabout. An unlikely no growth scenario for this junction would see the BCR for this junction drop to 1.79 and the overall to 1.34. Taking the safety benefits over 1 year only would only reduce the overall BCR to 5.77
VfM category	BCR = Very High	

4. COMMERCIAL CASE

4.1. Procurement	Essex County Council (ECC) are committed to providing best value in the delivery of
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	<p>major highways schemes across the county. ECC has undertaken numerous procurement processes for major schemes.</p> <p><u>Procurement Strategy</u></p> <p>The eastern Highways Alliance and SMARTe and the Highways Agency Framework have all been used extensively in prior major projects eg Sadlers Farm, Army & Navy Improvements, Chelmsford and Roscommon Way, Canvey.</p> <p>Construction will be delivered through the Essex Highways Service Direct Delivery Framework using supply chain partners.</p> <p>The benefits of procuring the scheme through this route are:-</p> <ul style="list-style-type: none"> • 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.
4.2. Commercial dependencies	<ul style="list-style-type: none"> • Essex Highways will be the delivery partner for 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.
4.3. Commercial sustainability	<p>The project will include an ongoing maintenance programme over the next 60 years, as is normal for all new road schemes.</p> <p>Apart from scheduled maintenance, there will be no requirement for cash flow injections post-completion.</p>
4.4. Compatibility with State Aid rules	<p>Funding for this scheme does not constitute state aid.</p>
4.5. Commercial viability	<p>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.</p> <p>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.</p> <p>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.</p> <p>Any cost overrun will be met by ECC.</p> <p>The declaration from the S151 officer will be submitted by ECC as part of the final submission, once ECC governance processes have been completed.</p>

5. FINANCIAL CASE

5.1. Total project cost and basis for estimates	£5.48m
5.2. Total SELEP funding request	£2.74m Capital funding is requested in the form of a grant.
5.3. Other sources of funding	£2.74m ECC

5.4. Summary financial profile

Funding (£m)	17/18	18/19	19/20	20/21	Total
SELEP request		1.370	1.370		2.740
ECC contribution	0.048	0.525	2.047	0.120	2.740
Third party & other contributions					
Total	£0.048	£1.895	£3.417	£0.120	£5.480

Costs (£m)	17/18	18/19	19/20	20/21	Total
Design		0.200	0.149		0.349
Site Surveys etc		0.158	0.003		0.161
Preliminaries		0.147	0.368		0.515
Site Preparation		0.004	0.097		0.101
Land		0.025			0.025
Scheme Preparation	0.048				0.048
Barriers, Fencing			0.019		0.019
Drainage		0.011	0.019		0.030
Earthworks		0.171	0.236		0.407
Footways, Kerbs		0.127	0.866		0.993
Signs & Lines		0.003	0.334		0.337
Lighting & Electrical		0.176	0.116		0.292
Structural			0.021		0.021
Landscaping & Ecology			0.005		0.005
Risk		0.334	0.622	0.120	1.076
Inflation		0.029	0.194		0.223
Stats		0.438	0.185		0.623
Management		0.072	0.183		0.255
Total	£0.048	£1.895	£3.417	£0.120	£5.480

5.5. Viability: How secure are the external sources of funding?

Type	Source	How secure?	When will the money be available?
Public	SELEP LGF	Dependant on Accountability Board approving this business case.	2018
	ECC	Secure	2017/18
Private			

5.6. Cost overruns

ECC will bear any cost overrun risk for the project.

5.7. Delivery timescales

The main risks associated with the delivery timescales of the project are as described above.

Should the complete package go ahead, then the timing of the various elements would have to be phased so as not to cause undue adverse effects on the traffic network by

	working on adjacent parts of the network simultaneously.
5.8. Financial risk management	ECC will bear all risk for the project as part of its role as the Highways Authority.
5.9. Alternative funding mechanisms	<p>No loan funding is requested.</p> <p>None of the investment will be repaid.</p>

6. DELIVERY/MANAGEMENT CASE

6.1. Project management

Project Organisation

The organisation to deliver the scheme is indicated in Figure 8 below. The roles and responsibilities of the parties indicated in the figure are described in the following paragraphs.

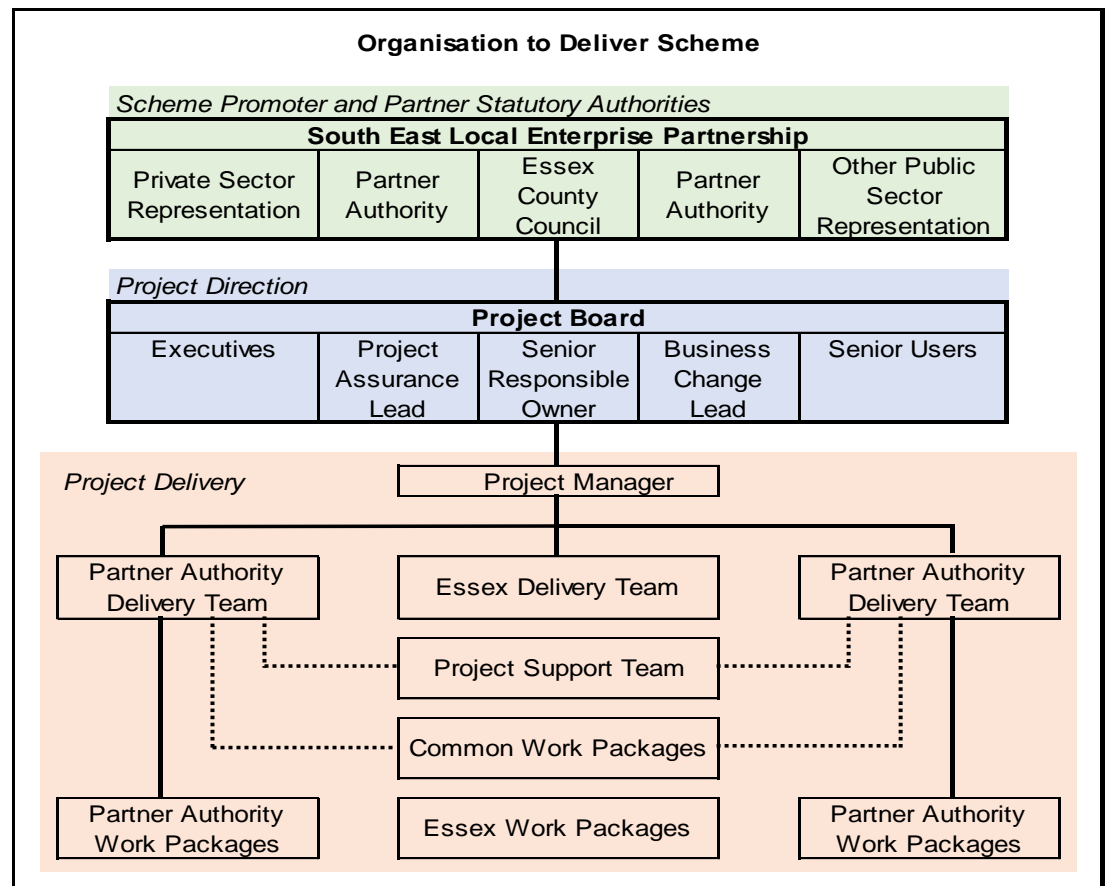


Figure 8: Arrangements for Scheme Delivery

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 from Highways England and ECC and is responsible for managing the scheme and handling of any issues. HE 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 (including David Forkin, Senior Manager, Head of Maintenance; Sean Perry, Head of Transportation, Planning and Development, ECC and Braintree District Council) – 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. Outputs

See Section 2.4 above.

Output	17/18	18/19	19/20	20/21	Total
Direct jobs	175	175	175	175	700
Indirect jobs	TBE	TBE	TBE	TBE	TBE
Housing completions	550	550	675	675	2,450

6.3. How will

A Benefits Realisation Plan has been produced (see *Appendix J*) and monitoring /

<p>outputs be monitored?</p>	<p>evaluation 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.</p> <p>Essex Highways will conduct traffic / cycle counts and analyse Trafficmaster for journey time changes.</p>																																																																								
<p>6.4. Milestones</p>	<p>Safety Improvements</p> <table border="1"> <thead> <tr> <th>Project milestone</th><th>Indicative date</th></tr> </thead> <tbody> <tr> <td>Preliminary design</td><td>Now</td></tr> <tr> <td>Detailed design</td><td>December 2018</td></tr> <tr> <td>Tender</td><td>January 2019</td></tr> <tr> <td>Start construction</td><td>April 2019</td></tr> <tr> <td>End construction</td><td>February 2021</td></tr> </tbody> </table> <p>Bromley Road Signals</p> <table border="1"> <thead> <tr> <th>Project milestone</th><th>Indicative date</th></tr> </thead> <tbody> <tr> <td>Preliminary design</td><td>Now</td></tr> <tr> <td>Detailed design</td><td>December 2018</td></tr> <tr> <td>Tender</td><td>February 2019</td></tr> <tr> <td>Start construction</td><td>April 2019</td></tr> <tr> <td>End construction</td><td>September 2019</td></tr> </tbody> </table> <p>Frating Roundabout</p> <table border="1"> <thead> <tr> <th>Project milestone</th><th>Indicative date</th></tr> </thead> <tbody> <tr> <td>Preliminary design</td><td>Now</td></tr> <tr> <td>Detailed design</td><td>December 2018</td></tr> <tr> <td>Tender</td><td>January 2019</td></tr> <tr> <td>Start construction</td><td>April 2019</td></tr> <tr> <td>End construction</td><td>September 2019</td></tr> </tbody> </table> <p>Weeley Roundabout</p> <table border="1"> <thead> <tr> <th>Project milestone</th><th>Indicative date</th></tr> </thead> <tbody> <tr> <td>Preliminary design</td><td>Now</td></tr> <tr> <td>Detailed design</td><td>June 2018</td></tr> <tr> <td>Tender</td><td>July 2018</td></tr> <tr> <td>Start construction</td><td>October 2018</td></tr> <tr> <td>End construction</td><td>March 2019</td></tr> </tbody> </table> <p>Signage</p> <table border="1"> <thead> <tr> <th>Project milestone</th><th>Indicative date</th></tr> </thead> <tbody> <tr> <td>Preliminary design</td><td>Now</td></tr> <tr> <td>Detailed design</td><td>April 2019</td></tr> <tr> <td>Tender</td><td>May 2019</td></tr> <tr> <td>Start construction</td><td>July 2019</td></tr> <tr> <td>End construction</td><td>September 2019</td></tr> </tbody> </table> <p>Cycling Improvements</p> <table border="1"> <thead> <tr> <th>Project milestone</th><th>Indicative date</th></tr> </thead> <tbody> <tr> <td>Preliminary design</td><td>Now</td></tr> <tr> <td>Detailed design</td><td>June 2019</td></tr> <tr> <td>Tender</td><td>July 2019</td></tr> <tr> <td>Start construction</td><td>October 2019</td></tr> <tr> <td>End construction</td><td>March 2020</td></tr> </tbody> </table>	Project milestone	Indicative date	Preliminary design	Now	Detailed design	December 2018	Tender	January 2019	Start construction	April 2019	End construction	February 2021	Project milestone	Indicative date	Preliminary design	Now	Detailed design	December 2018	Tender	February 2019	Start construction	April 2019	End construction	September 2019	Project milestone	Indicative date	Preliminary design	Now	Detailed design	December 2018	Tender	January 2019	Start construction	April 2019	End construction	September 2019	Project milestone	Indicative date	Preliminary design	Now	Detailed design	June 2018	Tender	July 2018	Start construction	October 2018	End construction	March 2019	Project milestone	Indicative date	Preliminary design	Now	Detailed design	April 2019	Tender	May 2019	Start construction	July 2019	End construction	September 2019	Project milestone	Indicative date	Preliminary design	Now	Detailed design	June 2019	Tender	July 2019	Start construction	October 2019	End construction	March 2020
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<p>6.5. Stakeholder management & governance</p>	<p>Stakeholders</p> <ul style="list-style-type: none"> Liaison with key stakeholders (such as developers, land owners, Colchester Borough Council, Tendring District Council) will be essential to ensure engagement and buy-in, 																																																																								

	<p>and also to ensure work programmes are suitably aligned. Both Colchester Borough Council and Tendring District Council are aware of this project and supportive of it. They have attended two stakeholder workshops already and we will continue to engage them.</p> <p>The overall aim is to involve key stakeholders as much as possible. Key stakeholders will be actively involved in delivery and decision making through an effective stakeholder engagement process.</p> <p>The objectives for the Stakeholder Engagement Plan are that it:</p> <ul style="list-style-type: none"> • Communicates and reinforces the branding of the overall plan; • Improves awareness and understanding of the proposals; • Allows the Project Board to obtain timely feedback on proposals; • Helps gauge the level and nature of any opposition that may arise to the proposals and address these appropriately; and • Enables the Project Team to explore the opportunities to establish a consensus, as the basis for successful implementation of the proposals. <p><i>Letters of support to follow.</i></p>
6.6. Organisation track record	<p>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.</p> <p>Essex County Council has, or is, in the process of delivering £50m of transport improvement schemes through Pinch Point, SELEP LGF and LSTF funding. The majority of the following schemes are operational and were delivered on programme and to budget:</p> <ul style="list-style-type: none"> • Mill Yard, Chelmsford - £2.9m • A414 Maldon to Chelmsford - £4.0m • A414 Harlow Pinch Point Package - £15.1m • Colchester Integrated Transport Package (ITP) - £12.7m • A127 Resilience Package - £5.1m • Colchester LSTF - £2.0m • Colchester Town Centre - £5.0m • South-East LSTF £5.0m • Colchester Park and Ride £7.19m • Basildon ITP (phase 1) - £2.05m
6.7. Assurance	<p>S151 Officer confirms that adequate assurance systems are in place and evidence can be provided of financial performance over the last three years.</p>
6.8. Equalities Impact Assessment	<p><i>See Appendix H.</i></p>
6.9. Monitoring and evaluation	<p>A Benefits Realisation Plan has been developed and 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.</p> <p>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.</p> <p>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.</p> <p>ECC is mindful of the need to review and monitor highway 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.</p>

	<p>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. Traffic volumes, speeds and journey times will be monitored at key locations within the area affected by the scheme.</p> <p>Road safety impacts will be monitored as part of routine county-wide annual monitoring programmes to verify future accident incidences, numbers and locations.</p> <p>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.</p> <p>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.</p> <p>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.</p>
<p>6.10. Post completion</p>	<p>The scheme will remain in the control of ECC.</p>

7. RISK ANALYSIS

Likelihood and impact scores:

5: Very high; 4: High; 3: Medium; 2: Low; 1: Very low

Risk Management

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.

A summary of the major risks is shown below.

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

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

8. 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>If the answer is "yes" to any of these questions please give details on a separate sheet of paper of the person(s) and business(es) and details of the circumstances. This does not necessarily affect your chances of being awarded SELEP funding.</i>	
<p>I am content for information supplied here to be stored electronically and shared in confidence with other public sector bodies, who may be involved in considering the business case.</p> <p>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. I also declare that, except as otherwise stated on this form, I have not started the project which forms the basis of this application and no expenditure has been committed or defrayed on it. I understand that any offer may be publicised by means of a press release giving brief details of the project and the grant amount.</p>	
8.4. Signature of Applicant	
8.5. Print Full Name	
8.6. Designation	
8.7. Date	