Essex County Council

wsp

Essex LCWIP

Technical Report

August 2025

Essex County Council

wsp

Quality Control

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Introduction & Objectives

Overview

WSP has been commissioned to support Essex County Council (ECC) in developing their Countywide Local Cycling and Walking Infrastructure Plan (LCWIP), as part of the government's Cycling and Walking Investment Strategy. The LCWIP aims to enhance cycling and walking infrastructure across Essex, focusing on strategic and rural connections to enable longer journeys by active and sustainable modes. Given the rural nature of the area, the plan prioritises cross-boundary connections between towns and cities, utilising off-road routes like Public Rights of Way (PROWs) and bridleways, and innovative on-road cycling solutions in constrained networks. Essex County Council members and wider stakeholders, including county-wide walking/cycling groups and council officers, will be involved throughout the project's lifecycle. This report outlines the vision, goals, and strategies for enhancing cycling and walking infrastructure within the study area, focusing on both strategic and rural connections to support longer journeys by active modes. The proposed LCWIP geographical scope is shown in **Figure 1.**

Objectives

The Essex Countywide LCWIP must reflect best practices and recent developments to ensure it is fit for purpose over the next three to four years. A bespoke methodology for the Essex LCWIP Countywide programme has been created to build upon the existing town and city LCWIPs, while providing links between key urban areas and rural communities. The Avoid, Shift & Improve method is outlined on the next page and will be followed to deliver the outputs listed below:

- Cycle Network for Essex (PDF maps and shapefiles
- Walking Network for Essex (PDF maps and shapefiles)
- High-Level Concept Plans for Initial Agreed Active Travel Areas and Corridors
- An LCWIP Consultation Report

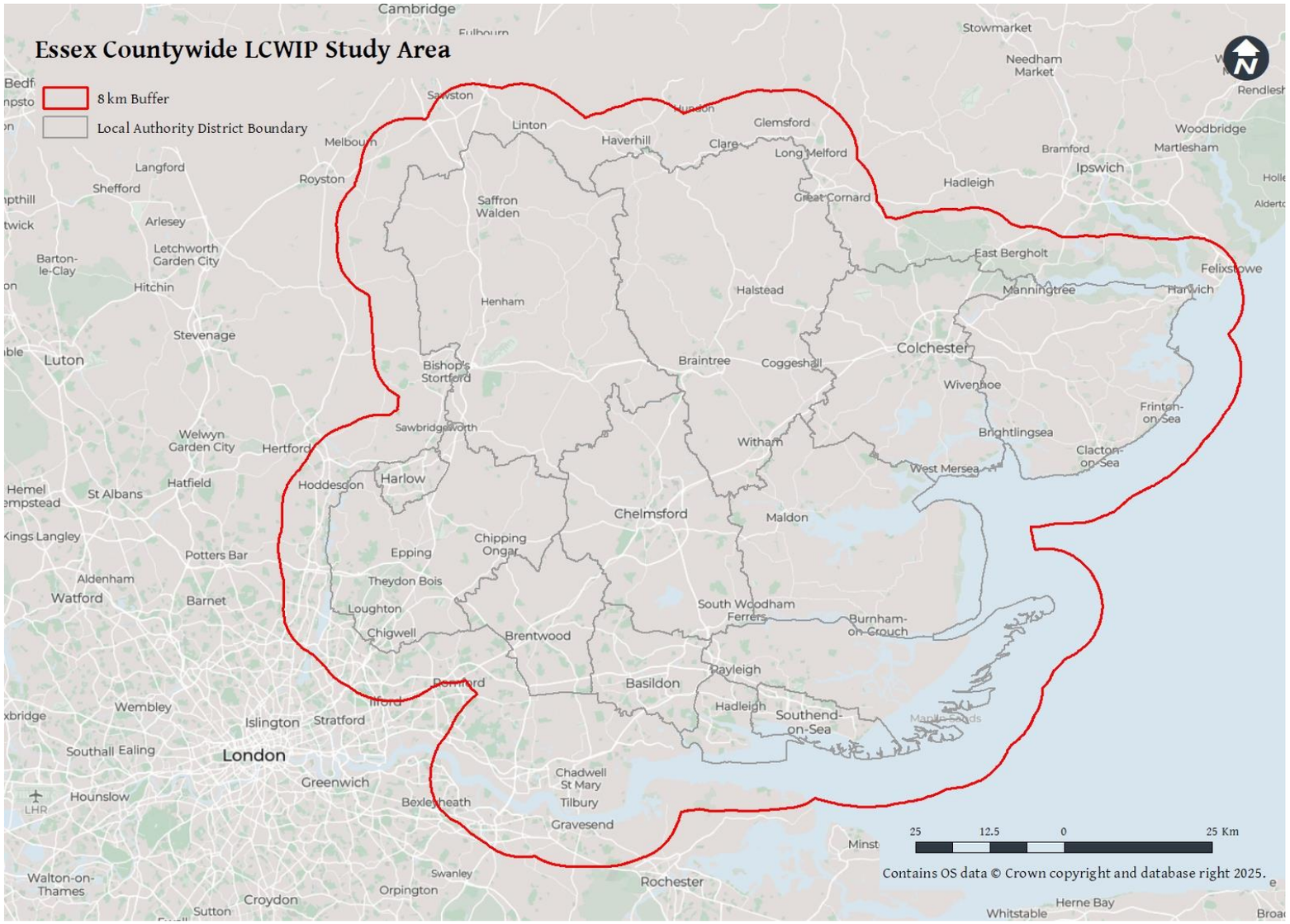


Figure 1 – Study Area

Active Travel Context & Policy Alignment

Active Travel Context

Essex recognises that active travel plays an essential role in contributing to transport decarbonisation, traffic decongestion, improved accessibility, health, and wellbeing. The LCWIP provides an opportunity for active travel to become the natural choice for shorter journeys, with the county-wide LCWIP offering more opportunities for active transport to become a feasible option for longer regional trips. When considering longer journeys, it is important to highlight the role of e-bikes, which can make these trips more accessible. Additionally, the plan aims to address first mile/last mile trips, such as those to rail stations, to ensure a seamless and integrated transport network.

The development of the county-wide LCWIP will help Essex meet its ambitious plans to be Net Zero by 2050. The rural connections developed during this LCWIP process will complement existing plans for urban areas to provide an active travel network across the county. Expanding and upgrading the existing National Cycle Network will form a key part of this.

To encourage residents to avoid using private transport and shift attitudes towards active and sustainable transport modes, the LCWIP network looks to enhance the connectivity between railway stations and transport hubs, allowing residents to incorporate active travel for first and last mile journeys. Providing safe, LTN 1/20 compliant cycle infrastructure in rural areas can boost the economy through increased leisure use and more people passing through smaller settlements.

Policy Alignment

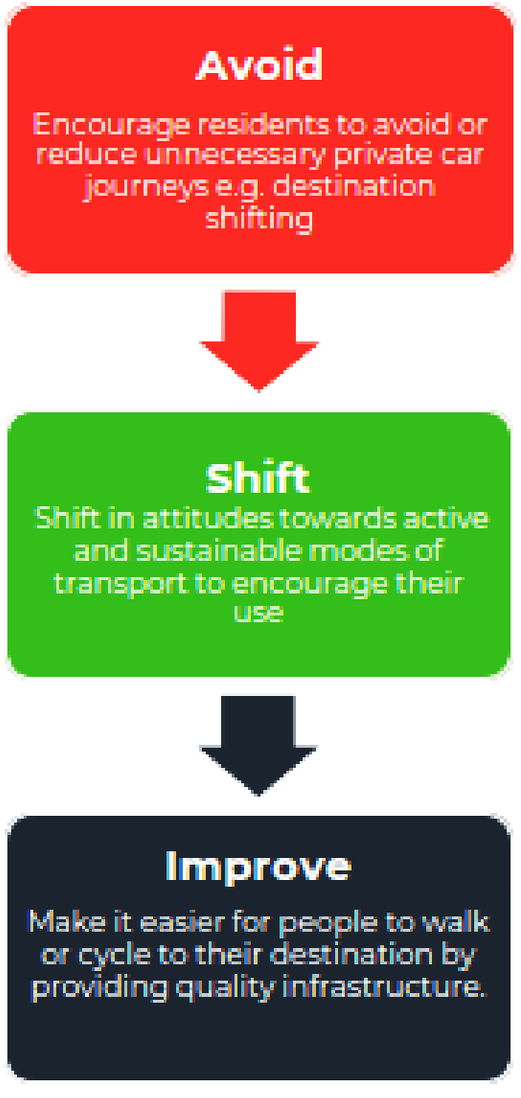
Essex's commitment to achieving Net Zero by 2050 is a comprehensive approach involving the principles of avoid, shift, and improve, as outlined in **Figure 2**. These principles are integral to making Essex carbon neutral and are reflected in the LCWIP's strategies:

Avoid: This principle focuses on reducing the need for travel by private vehicles. By promoting active travel options such as walking and cycling, Essex aims to decrease the reliance on cars, thereby reducing carbon emissions. The LCWIP encourages the development of local amenities and services within walking or cycling distance, making it easier for residents to choose active travel over driving.

Shift: Shifting from private car use to more sustainable modes of transport is crucial. The LCWIP aims to make active travel the preferred choice for short trips and to integrate it with public transport for longer journeys. Enhancing the connectivity between railway stations and transport hubs ensures that residents can easily combine cycling or walking with train travel, making sustainable transport more convenient and attractive.

Improve: Improving the infrastructure for active travel is essential to support the shift away from car dependency. The LCWIP includes plans to upgrade the National Cycle Network and ensure that all new cycle infrastructure meets the LTN 1/20 standards. This not only makes cycling safer and more accessible but also encourages more people to take up cycling as a regular mode of transport.

Focusing on these principles will allow Essex to create a comprehensive active travel network that supports its Net Zero goals. The integration of rural and urban areas through improved walking and cycling infrastructure will ensure that all residents have access to sustainable transport options, contributing to a healthier, more connected, and environmentally friendly county.



Source: Net Zero: Making Essex Carbon Neutral

Figure 2 – Full LCWIP Methodology

Policy & Guidance

National Policy

National Policy

Cycling and Walking Investment Strategy 2 (DfT 2022)

Sets the ambition that 50% of all journeys in towns and cities should be walked or cycled by 2030. The strategy sets out how the government intends to target investment in active travel through to 2025. The strategy supports locally targeted investment identified via LCWIPs to connect people with places – creating vibrant, healthier and productive places and communities.

A Moment Of Change: Increasing Cycling Uptake (DfT & Sustrans 2021)

The DfT commissioned this study to identify policy priorities that can deliver increased cycle uptake during recovery from the COVID-19 pandemic. A range of behaviour change measures were identified that could be delivered at a national and local scale to factor in sustainable travel behaviour.

Decarbonising Transport (DfT 2021)

Sets out the Government's commitments to reduce carbon emissions through investing in walking and cycling networks with the aim of half of all journeys in towns or cities to be walked or cycled by 2030. This will support their overall vision to achieve a NetZero transportation sector by 2050.

Gear Change: A bold vision for cycling and walking (DfT 2020)

Sets out Government's vision for delivery of far higher quality cycling infrastructure, focusing on segregated cycle routes with local authorities being expected to deliver a step change in the Level of Service for cycling and walking. It establishes "Active Travel England" that will assess local authorities' performance on active travel, with findings influencing the funding authorities receive across all transport modes. The accompanying Local Transport Note 1/20 Cycle Infrastructure Design sets out new ambitious cycle design standards.

Local Transport Note 1/20: Cycle Infrastructure Design (DfT, 2020)

LTN 1/20 builds on the ambition set out within Gear Change, by developing technical guidance on the design of cycle infrastructure. The guidance sets out core principles that those designing for cycle traffic should follow, whilst also outlining technical and geometric requirements. Future rounds of cycle infrastructure funding are expected to be contingent on designs following the guidance. Infrastructure proposals within this LCWIP have been designed to be LTN 1/20 compliant.

Inclusive Mobility (DfT 2021)

This document outlines best practice on inclusive design of pedestrian and transport infrastructure. Inclusive design requires that the needs of all people are considered from the outset of any transport and pedestrian infrastructure. LCWIPs identify improvements to build active travel networks and key routes fit for all users.

Clean Air Strategy (DEFRA 2019)

Outlines how achieving modal shift is key to delivering emissions reduction. LCWIPs have a part to play in tackling the climate emergency and reducing emissions by delivering walking and cycling alternatives.

Outdoor Accessibility Guidance: Supporting inclusive outdoor access in the UK (Paths for All, 2023)

This document provides updated guidance from 'Countryside for All' (1997) on best practice design techniques for active travel infrastructure in rural contexts. The guidance covers multiple types of publicly accessible land, from lightly managed to remote countryside and more intensively managed parks, community spaces, paths and trail.

Future of Mobility: Urban Strategy (DfT 2019)

Nine principles to address the challenge of transforming towns and cities to meet current and future transport demands. This includes the principle: 'walking, cycling and active travel must remain the best option for short urban journeys.'

DfT (2020): LTN1/20 Cycle Infrastructure Design Guidance

DfT (2020): Gear Change

DfT (2021): Inclusive Mobility

Figure 3 – National Policy & Guidance

Policy & Guidance

Regional & Local Policy

Regional and Local Policy

Essex Cycling Strategy (2016)

Sets out the key elements of a long- term plan that will lead to a significant and sustained increase in cycling in Essex, with the aim of establishing cycling in the public's mind as a 'normal' mode of travel, especially for short a-to-b trips.

Transport East Transport Strategy (2022)

Identifies four strategic priorities including decarbonising transport to reach net zero target by 2040. As part of the key goal of "Shift Mode" considered in decarbonisation of transport, prioritisation of the active travel to achieve better connections in the towns and cities have been proposed.

South East Local Enterprise Partnership (SELEP) - Economic Recovery and Renewal Strategy (2021)

The SELEP's plan to recover from the COVID -19 pandemic and drive sustainable economic renewal and growth in the area. The strategic priority of communities for the future aims at supporting the development of low carbon technologies and behaviours along with improving walking and cycling routes with Sustrans in coastal and rural economies.

Active Travel Strategy (2021)

The strategy envisions to deliver a comprehensive, high-quality walking and cycling network across the region, fit for purpose for all users. Vision 2030 and Vision 2040 of the strategy aims at achieving half of all journeys from urban centre to 3 miles and 6 miles respectively through active travel within the region. In addition, the Vision 2050 of the document aims at converting half of all trips in the region to walking and cycling trips.

Organisational Strategy 2017-2021

Sets a number of aims and outcomes, it recognises that the role of the council is changing, that its key role is as an enabler of communities and individuals which will provide residents with information and choices.

Essex Cycling Action Plan (CAP)

Key elements of a long-term plan leading to a significant and sustained increase in cycling in Essex. The CAPs are targeted towards the specific needs of local residents, which will assist ECC in tackling wider problems associated with poor health, pollution, traffic congestion and inequalities of opportunities for the County's youth population and people on low incomes.

Everyone's Essex: our plan for levelling up the county 2021 to 2025

Four key areas have been considered with aim to level up the economy and bring prosperity within the community. Commitment has been made under the environment component to reduce the carbon footprint by delivering sustainable travel across the county through growth of passenger transport and active travel.

The Essex County Council - Bus Service Improvement Plan (2021 – 2026)

Proposes key vision of shifting towards sustainable travel by encouraging Essex residents to rethink their journeys. Provision of bike storage, rental e-scooters and e-bikes at proposed Transport Hubs along with safe, dedicated walking and cycle routes to complete the last part of the journey into urban centres. School zones are proposed to be prioritised with cycling, walking and bus in addition to suggestion of a car free zone at drop off and pick up time.

Net Zero: Making Essex Carbon Neutral, Essex Climate Action Commission (2019)

Mission statement for Essex to achieve their target of net-zero carbon emissions by 2050. The document highlights key target areas for reducing carbon emissions and transport is positioned as a key area. Promoting active transport through introducing dedicated cycling and walking routes across both urban and rural locations and providing active travel connections to stations is a key strategy, along with upgrading and expanding the National Cycle Network and integrating this with local cycle routes.

Transport East Transport Strategy (2022)

Bus Service Improvement Plan (2021 - 2026)

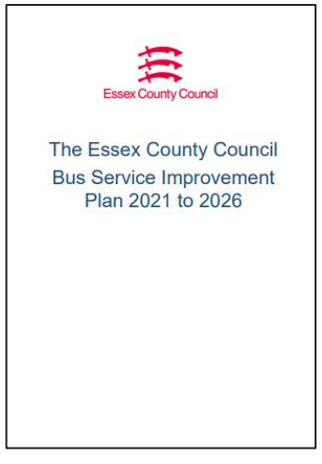


Figure 4 – Regional & Local Policy & Guidance

Alignment with the Essex Local Transport Plan 4

The forthcoming Local Transport Plan (LTP4) for Essex County will be evidence-led, emphasising the delivery of broader outcomes.

It recognises the crucial role of transportation in facilitating the movement of people and goods, while also acknowledging its impact on the local environment. LTP4 will focus on understanding the travel needs of both residents and businesses in Essex, promoting awareness of available travel options and encouraging sustainable choices.

Essex County Council, in collaboration with partners, will develop LTP4 throughout 2025, engaging in extensive consultations before its formal adoption later this year.

The Countywide Local Walking and Cycling Infrastructure Plan (LCWIP) aims to enhance connectivity within the city through improved walking and cycling infrastructure.

By prioritising active modes of transportation, the plan aligns with Essex's forthcoming Local Transport Plan, promoting sustainable travel options and enhancing accessibility for residents and visitors alike.

Figure 5 highlights the strategy relationships between the LTP4 and other supporting policy, strategies and guidance.

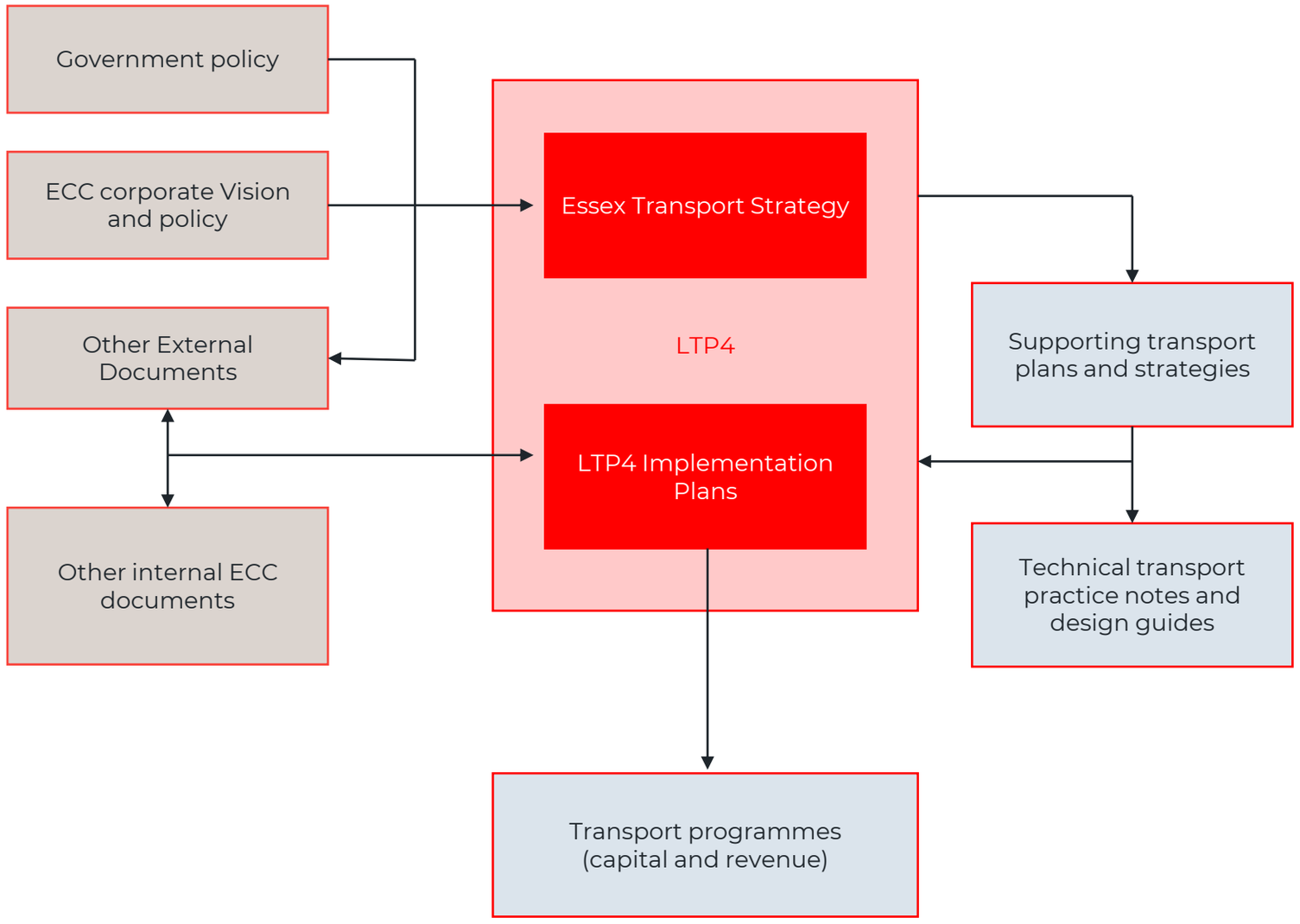


Figure 5 – LTP Strategy Relationships

Interaction with Urban LCWIPs

Interaction with Town LCWIP's

In addition to providing connections into surrounding towns and villages from neighbouring local authority districts, the county-wide Essex LCWIP also aims to connect with the proposed routes for the existing LCWIPs in Essex.

The county-wide LCWIP has been designed to provide intra-regional active travel connections between towns with existing LCWIP's , while giving residents in neighbouring settlements the opportunity to access the LCWIP network.

Figure 6 shows the towns which have existing LCWIPs or are in the process of developing their LCWIP networks.

As shown, these are predominantly larger settlements in urban areas where there is a higher propensity to cycle. Integrating these LCWIPs with rural cycle and walking routes will increase the potential for modal shift across the region as it will enable people to use active transport for longer journeys between towns and significantly improve the accessibility of Essex's countryside for less confident cyclists or people with mobility issues.

The LCWIP also considers cross boundary connections to surrounding networks in Hertfordshire and Cambridgeshire. This integrated approach aims to create a comprehensive active travel network, encouraging more cycling trips into Essex and generating health and economic benefits.

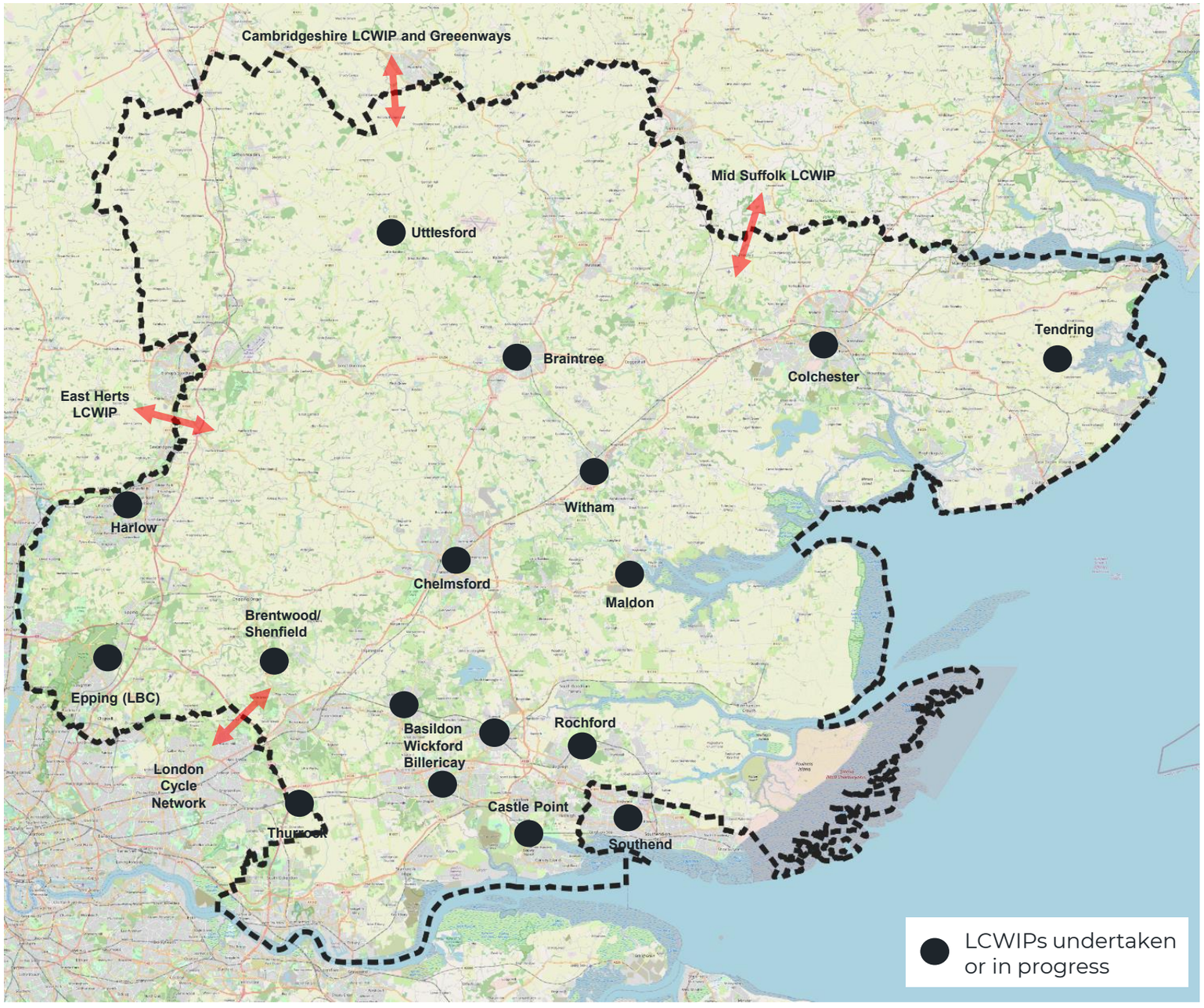


Figure 6 – Essex LCWIPs currently being undertaken or in progress

Essex Unitary Authorities

Southend-on-Sea City Council & Thurrock Council

Consistent and ongoing collaboration between Essex County Council (ECC), WSP, and both Southend-on-Sea City Council, and Thurrock Council has ensured that the proposed cycling and walking routes between these unitary authorities are effectively integrated within the countywide network. The goal throughout the process has been to create a seamless and cohesive infrastructure plan that serves both the local communities within Thurrock and Southend and also aligns with the overall ambitions for sustainable transport across Essex. This has resulted in key routes and connection points being identified, which has ensured that the routes link with their boundary edges and match the ambitions of Essex as a whole.

Figure 7 and **Figure 8** below are active travel network maps from Southend-on-Sea and Thurrock used to understand the existing connectivity while informing our analysis and optioneering process to further develop a connected network.

The Local Cycling and Walking Infrastructure Plans (LCWIPs) for Southend-on-Sea Council have been omitted from the current countywide report while they are being finalised, with the opportunity to add these in future. The LCWIPs developed for Thurrock have been included in the countywide report. These plans, produced by another consultant, offer an important contribution to the countywide map, particularly in relation to cross-boundary routes, and there has been positive engagement with the team throughout the various stages of the plan's development. In undertaking this collaborative approach, we aim to provide a comprehensive and interconnected network that supports active travel, reduces congestion, and promotes healthier lifestyles.

Figure 7 – Forward Motion: Southend Cycling Routes Map

Figure 8 - Cycling and Walking Map of Thurrock

Cross Boundary Connections

Overview

The routes and infrastructure plans contained within this LCWIP do not extend beyond the Essex District Boundary. However, onward connections to surrounding networks and settlements were an essential consideration during the route and infrastructure plan development. Early-stage engagement was carried out to establish cross-boundary connections, and neighbouring Local Authorities were invited to attend workshops and contribute to the emerging networks. These considerations have contributed to the creation if a network of active travel infrastructure which will have a wider reach than Essex and generate more cycling trips into Essex from neighbouring districts, creating wider health and economic benefits.

Interaction with Hertfordshire

Hertfordshire County Council (HCC) are developing a number of LCWIP's across the region with view to create a comprehensive county-wide LCWIP network. WSP has been involved in developing LCWIP's for Dacorum, St Albans, Hertsmere and East Herts.

The LCWIP for East Herts is expected to be published in late 2025, and cross boundary connections into the East Herts network have been considered throughout the Essex county-wide LWIP network planning process.

Cambridgeshire Greenways

The proposed Cambridgeshire Greenways scheme, as shown in **Figure 9**, aims to create a network of pedestrian and cycling routes from towns and villages outside of Cambridge into the city centre. This network of active travel routes will provide both locals and visitors with a safe and enjoyable pathway through the countryside, linking towns and villages and providing direct active travel connections into the city of Cambridge. These routes will be used for commuting to work and school and leisure routes, encouraging outdoor recreation, exercise and eco-friendly transportation. It is hoped that the Greenways will encourage a mode shift and reduce the number of commuters entering Cambridge by car.

Additionally, the greenways may serve as a means to promote tourism, enhance community connectivity and contribute to the overall wellbeing of residents by providing access to green spaces and recreational opportunities.

The Linton Greenway provides the opportunity for cross boundary connections between Essex and Cambridgeshire. Routes connecting into the Linton Greenway will provide users with wider access to the Cambridgeshire Greenways network.

Additional Cross Boundary Connections

One key cross-boundary route extends from Tendring District in Essex to Cattawade and East Bergholt in Suffolk, providing a continuous and safe active travel corridor that supports commuting, leisure activities, and regional ties. Another significant route links Epping Forest District in Essex to Woodford in the London Borough of Redbridge, integrating Essex's network with London's infrastructure, facilitating sustainable commuting, and reducing car reliance.

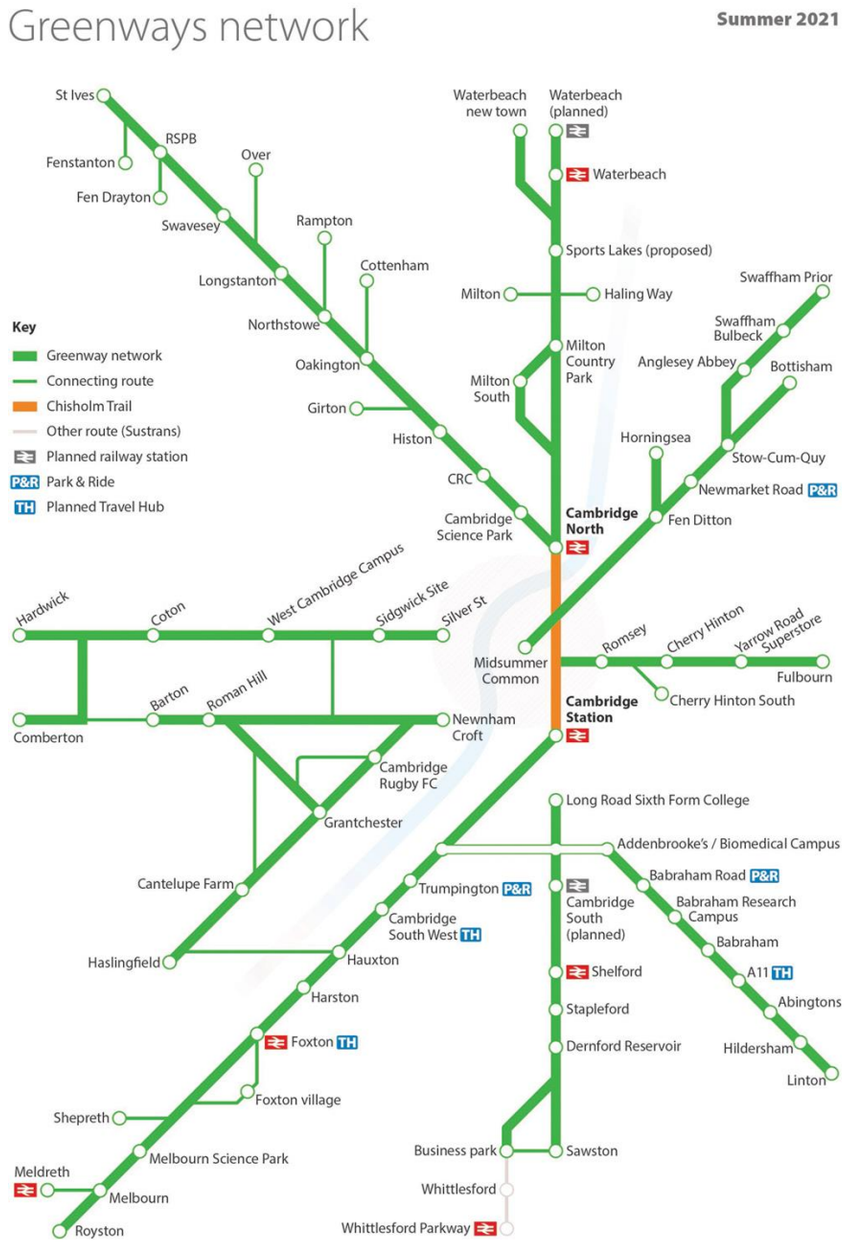


Figure 9 – Cambridge Greenways

Gathering Data

Current Travel Patterns

Evidence Base

Figure 10 illustrates the evidence base for the network, which includes:

- Planned future developments, e.g. housing development sites (Census 2021)
- Key employment areas.
- Key origins and destinations (rail stations and schools)

Table 1 and **Table 2** below highlights the low active travel mode share across Essex. The Countywide LCWIP aims to increase the percentage of people travelling to work via active travel.

Table 1 – Comparative Mode Share of Travel to Work (Census 2021)

Method of travel to work	Active Travel	Car
Mode share	12%	76%

Car Accessibility

11% residents do not have access to a car	89% residents have access to a car
43% use active travel for commuting to work	10% use active travel for commuting to work

Table 2 – Commuting Breakdown for Distances Less than 10km (Census 2021)

Distance travelled to work	Cycle	Walk
Less than 10km	2%	10%

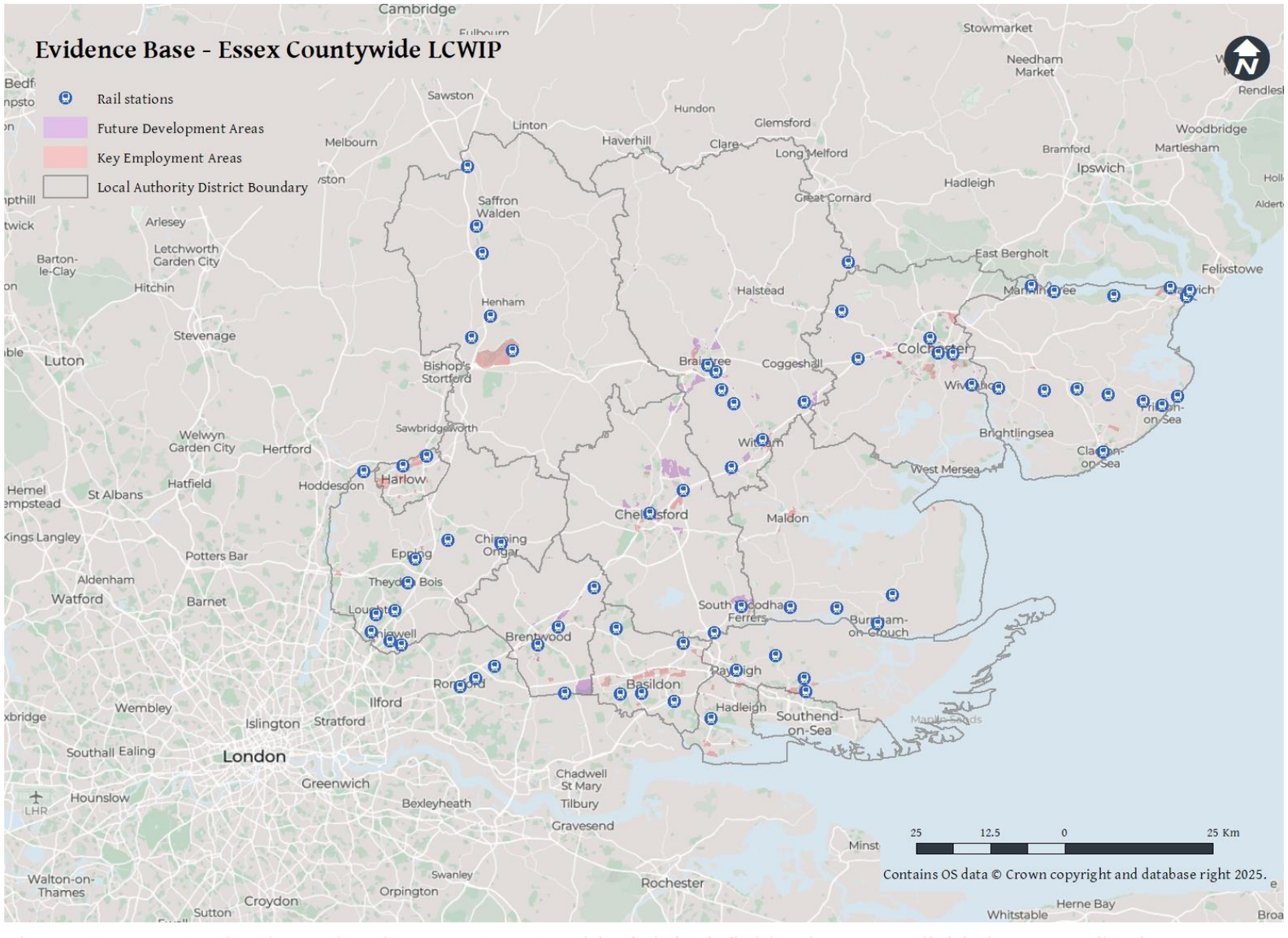


Figure 10 – Key Destination Points in Essex Countrywide *(High-definition image available in Appendix A)*

Gathering Data

Collision Analysis

Pedestrian Collision Data

It is important to visualise and gain an understanding of the areas and patterns of high risk for pedestrians.

Figure 11 maps the collisions involving pedestrians in Essex Countrywide in the 6 years between 2018 and 2023. The map shows three levels of severity indicators showing collisions marked with color-coded dots, with red being the most fatal incidents, orange showing serious incidents, and green showing slight incidents.

Over this period, there were 44 fatal pedestrian collisions across the Essex County.

Pedestrian collisions were observed along Motorways, A roads, and B roads, as well as near roundabouts and junctions with minor roads. Notable clusters of collisions were identified in the southwest of Epping Forest, the centre of Chelmsford, Colchester, Brentwood, and Braintree.

A total of 20 of the fatal collisions occurred on 30mph speed limit roads, with another 9 collisions occurring on 70mph roads. Additionally, 31 of the total 44 fatal collisions occurred more than 20m from junctions.

LCWIP Context

This analysis serves as an important tool for identifying potential new/existing collision hotspot locations with a high incidence of collisions. Reflecting on the insights from the previous LCWIP, this information has been taken into consideration while updating the primary and secondary walking routes to develop safer options for pedestrian accessibility throughout Essex Countrywide.

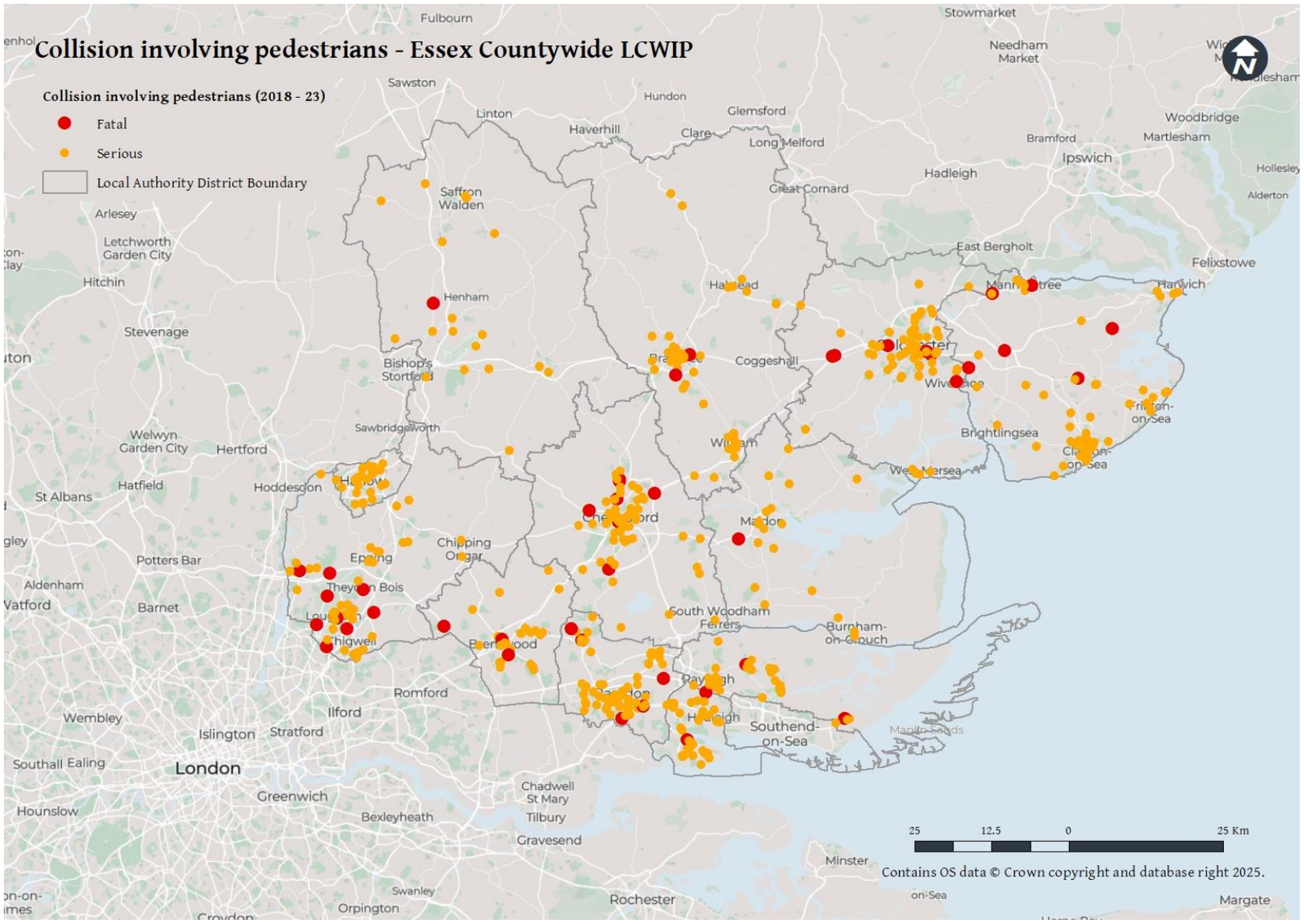


Figure 11 – Fatal collisions involving pedestrians in Essex Countrywide (*High-definition image available in Appendix A)*
Source: Essex Highways

Gathering Data

Collision Analysis

People Who Cycle Collision Data

Safety and the perception of safety is one of the key reasons along with ability why people do not cycle, thus necessitating the importance of understanding where there is a high safety risk. **Figure 12** maps the collisions involving cyclists in Brentwood in the 6 years between 2018 and 2023.

The map shows three levels of severity indicators showing collisions marked with color-coded dots, with red being the most fatal incidents, orange showing serious incidents, and green showing slight incidents.

Over this period, there were 18 fatal cyclist collisions across the Essex County.

Cyclist fatal collisions were generally scattered across the County, with a higher concentration observed on A roads and B roads. Notably, a greater number of collisions were recorded in the south of Braintree, the north of Clacton-on-Sea, and Epping Forest.

A total of 8 of the fatal collisions occurred on 30mph speed limit roads, with another 4 collisions occurring on 40mph roads and 4 collisions occurring on 60mph roads. Additionally, 13 of the total 18 fatal collisions occurred more than 20m from junctions.

LCWIP Context

This analysis serves as an important tool for identifying potential new/existing collision hotspot locations with a high incidence of collisions. Reflecting on the insights from the previous LCWIP, this information has been taken into consideration while updating the primary and secondary cycling routes to develop safer options for people who cycles Essex Countrywide.

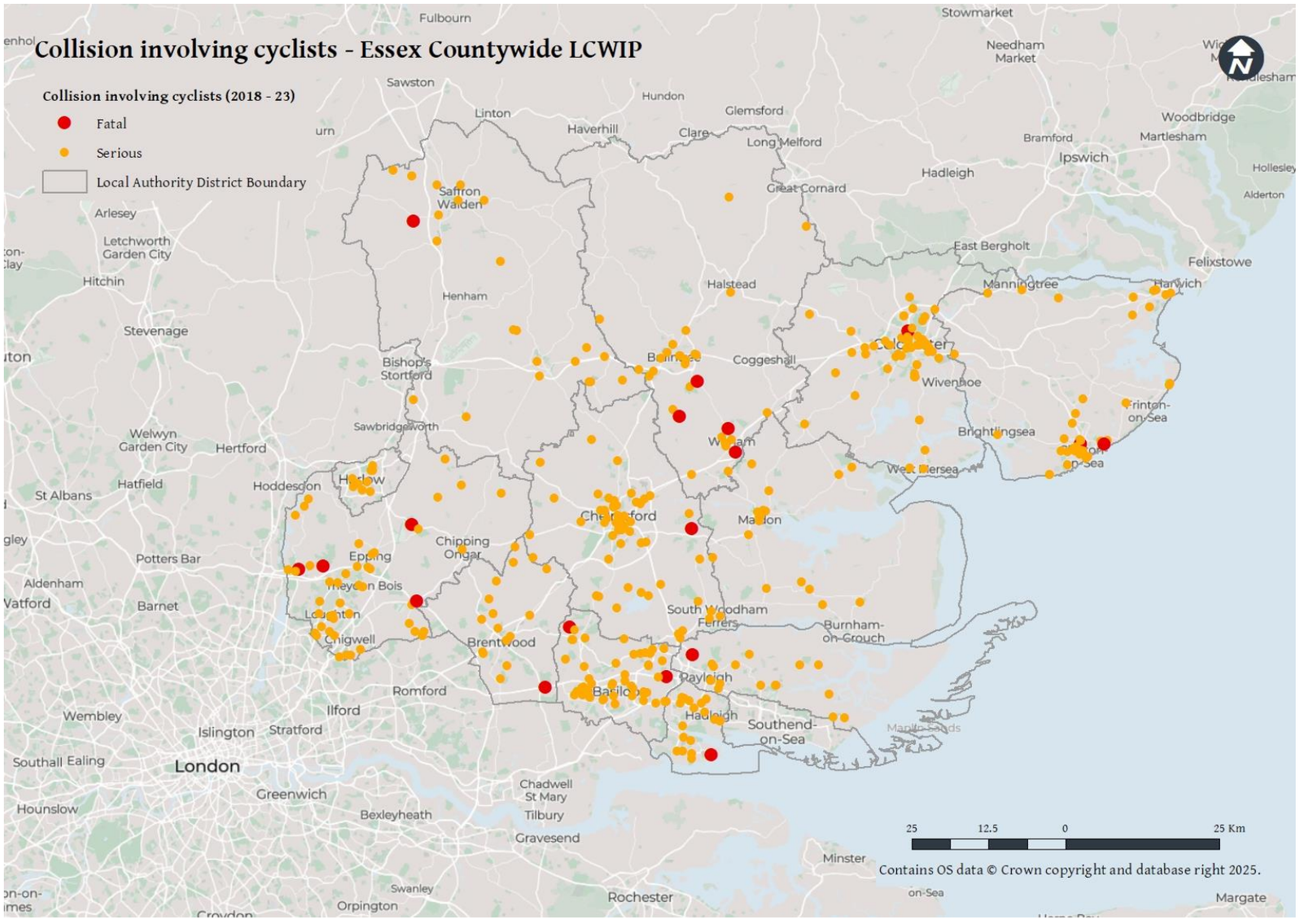


Figure 12 - Fatal collisions involving people who cycles in Essex Countrywide (*High-definition image available in Appendix A)*

Gathering Data

Indices of Multiple Deprivation

Socio-Demographics

To identify the regions requiring a higher level of analysis and active travel provision, it is important to firstly understand the socio-economic context of the study area.

Figure 13 shows levels of deprivation across Essex Countrywide. The map uses a color-coded scale to indicate deprivation levels, with 1 being the most deprived and 10 being the least deprived.

The majority of Essex County falls within levels 7 to 10. The most deprived areas are primarily concentrated in central Basildon, Colchester, and the entire Tendring district, including Clacton-on-Sea, Dovercourt, and Harwich. Also, some most deprived neighbourhoods are scattered farther out, including Harlow, Epping Forest, Rettendon in Chelmsford, Braintree, Witham, and Canvey Island.

LCWIP Context

The Indices of Multiple Deprivation is important for planning active travel as it helps to identify areas classed as having higher levels of deprivation. Since the previous LCWIP was submitted, those areas may have changed rank. Therefore, it is important to reassess Essex Countrywide, so those more deprived areas benefit from active travel improvements, which provides better access to employment, education, as well as improving physical and mental health.

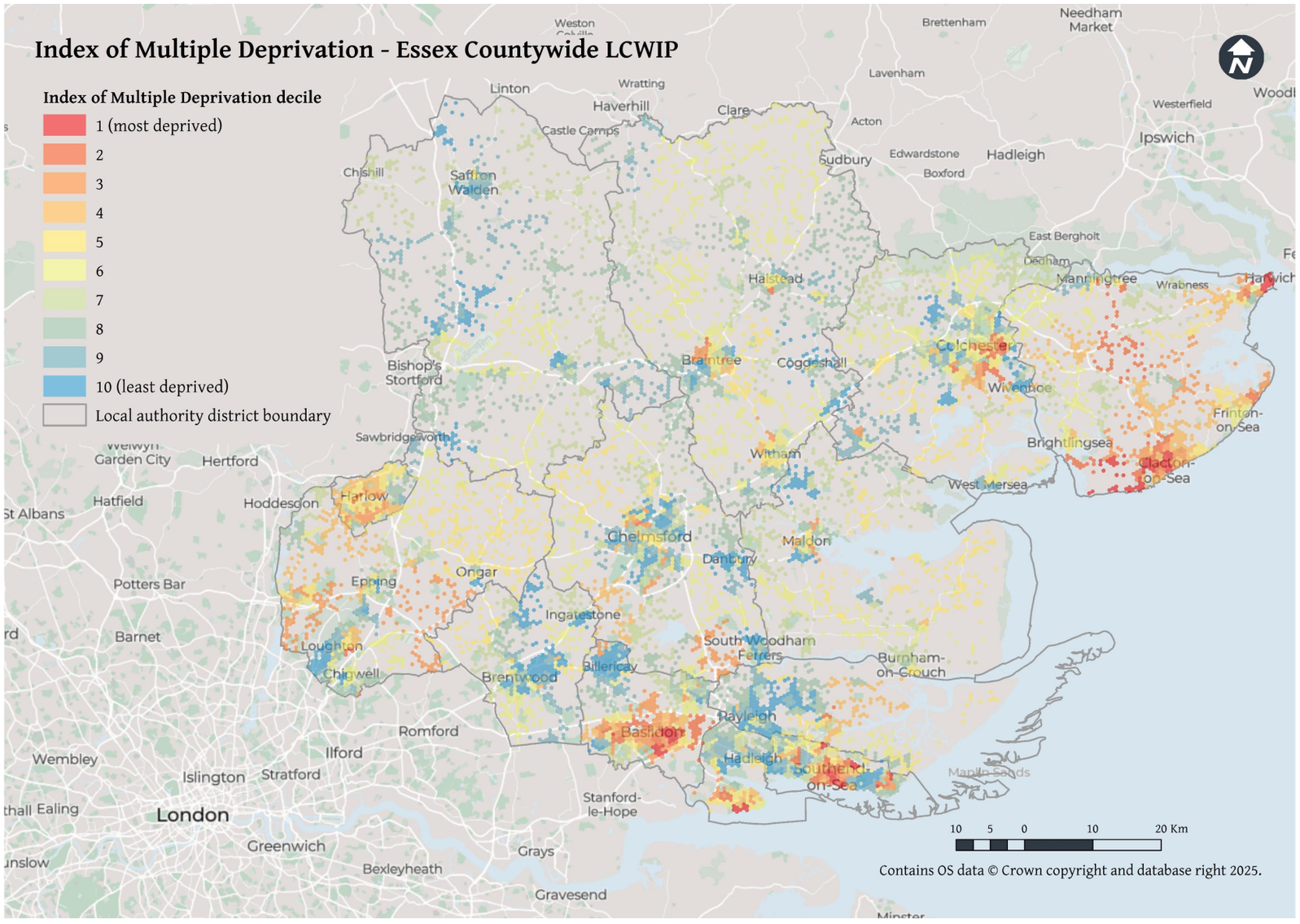


Figure 13 - Index of Multiple Deprivation (*High-definition image available in Appendix A)*

Route Planning & Navigation Apps

Strava & Komoot

To gain insights into the current cycling routes in Essex, we utilised data from Strava and Komoot (**Figure 14**). An example of the data used is shown in **Figure 15** with an extract from Strava's global heatmap.

These platforms provided valuable information on how cyclists rated various routes based on several key factors:

- **Surface Quality:** Cyclists' feedback on the condition and type of surfaces helped us identify areas needing improvement
- **Distance Travelled:** Data on the distances covered by cyclists, helping us understand the popularity and usage of different routes
- **Cyclist Volume:** The quantity of people using specific routes, indicating high-traffic areas and potential hotspots for cycling activity
- **Elevation Gain:** Insights into the elevation profiles of routes, which are crucial for planning routes suitable for different fitness levels
- **Route Popularity:** Heatmaps showing the most frequently used routes, helping us identify popular paths and potential areas for infrastructure development
- **Amenities:** Information on the availability of amenities such as rest stops, water stations, and bike repair shops along the routes
- **Community Feedback:** Reviews and ratings from the cycling community, providing qualitative data on user experiences and preferences

Figure 14 – Strava & Komoot

Analysing this data enabled us to inform the development of countywide routes and green links, ensuring they effectively connect rural areas and meet the needs of the cycling community in Essex.

This approach allowed us to create more comprehensive and user-friendly cycling infrastructure plans.

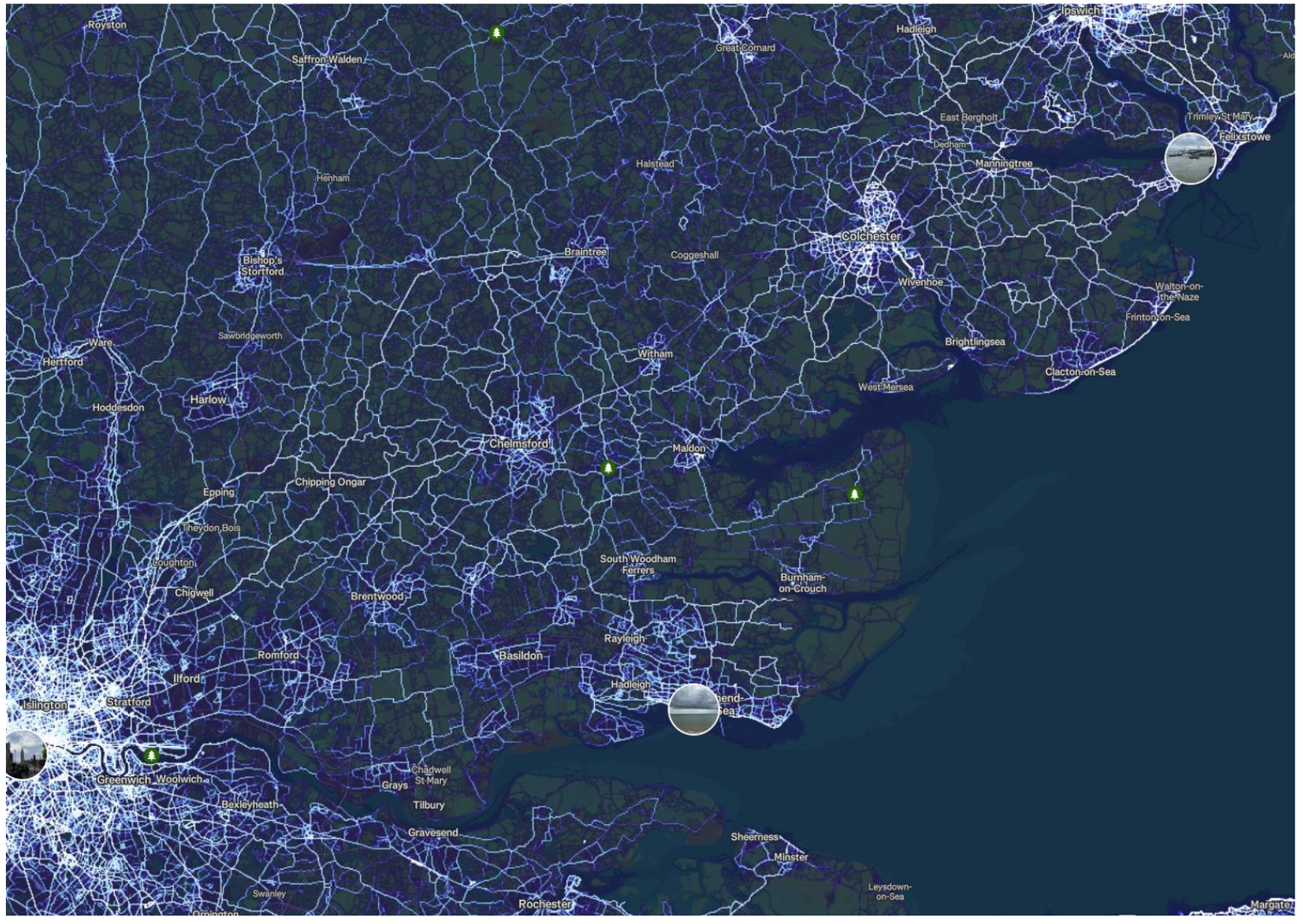


Figure 15 – Extract from Strava Global Heatmap

Origin-Destination Analysis

Current and Future Origins and Destinations

Chapter 3 & 4 of the LCWIP Technical Guidance notes that identifying demand for a planned cycle network should start by mapping the main origin and destination points in an area.

A bespoke GIS model for Essex was run to identify routes with the highest potential for active travel trips. The model compensates for the limitations in the Propensity to Cycle Tool by allowing the latest origin and destination data to be input and applied to a custom network, giving us an indication of potential demand for cycle and walk trips beyond the commute and the school run for both present and future scenarios. The model is set to a 2km buffer for walking, and an 8km buffer for cycling to reflect typical maximum desirable walking and cycling distances as set out in the UK Government's 2020 Active Travel vision document, Gear Change. This buffer also stretched outside the boundary to locations including Stansted, Bishop Stortford and Harlow, catering for cross boundary connectivity.

Figure 16 illustrates how individual origins and destinations are grouped into clusters, connected by desire line corridors, with designated access points facilitating movement between them. Postcode level population data was chosen to represent journey origins from existing residential areas.

Additional origins and destinations were identified as:

- Existing draft LCWIP network (walking and cycling)
- Future housing and employment sites adopted in the Local Plan
- Core tourism areas and attractions.
- Town, District, and Neighbourhood Centres as identified in the Local Plan
- Current and proposed rail stations
- Primary and secondary schools

LCWIP Context

The GIS model outputs represents a strategic enhancement of our LCWIP methodology. It ensures our network planning is responsive to the current and future needs of the community. By incorporating the most up-to-date data, including changes in commuting patterns and retail dynamics, this has allowed us to provide robust model outputs.

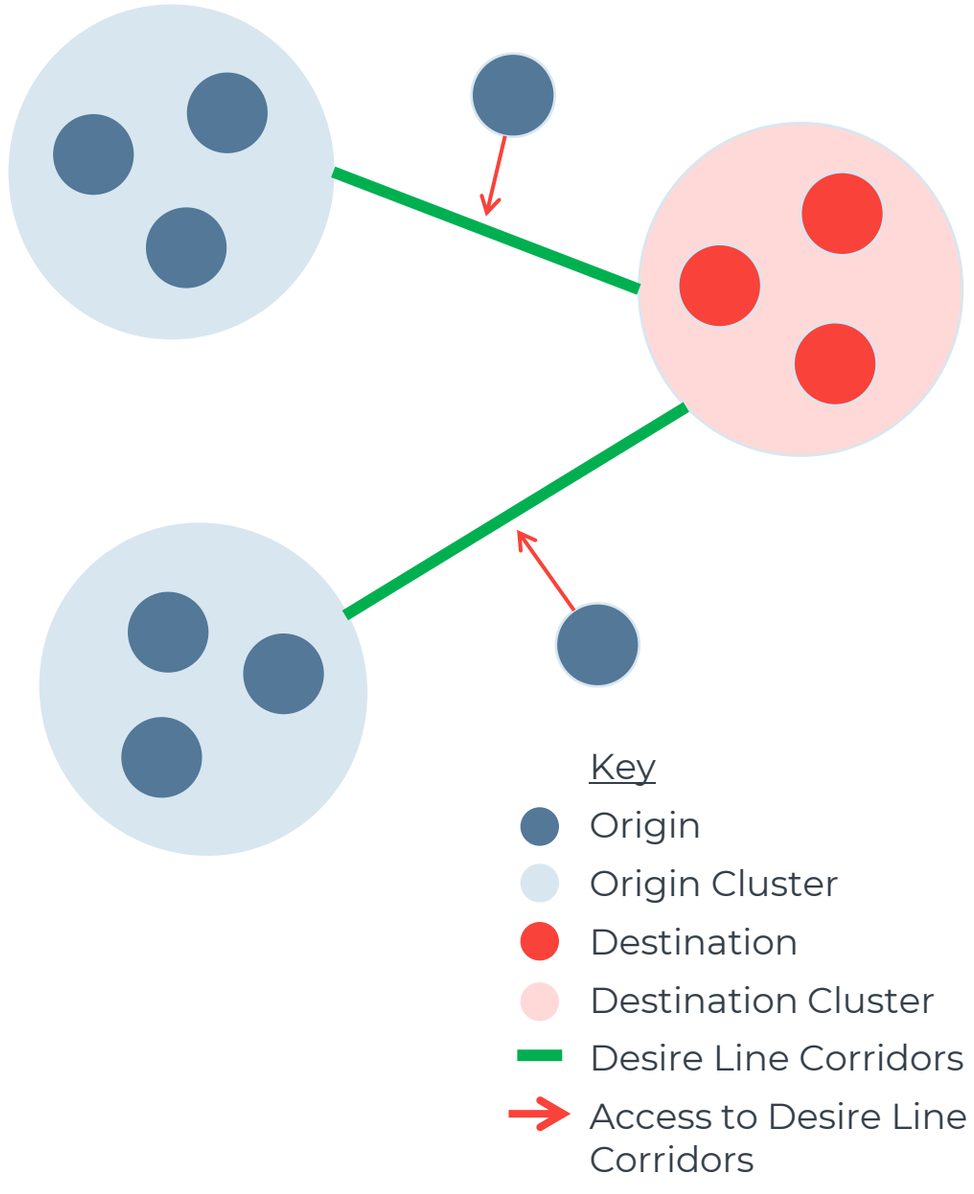


Figure 16 – Clustering of Origin and Destination Points Corridor
Source: LCWIP Technical Guidance

Potential Cycling Network

GIS Model : Cycling Outputs

Following the methodology outlined in the previous slide, the GIS model was used to identify potential key cycling route locations.

As shown in **Figure 17**, the potential routes have been colour coded to indicate the number of estimated trips with dark red colour indicating the highest potential for cycling trips and yellow indicating lowest potential. Based on this, it was observed that:

- The core area of each local authority in the County has high cycling potential
- The estimated number of journeys across the County ranges from about 2,864 to 18,100. These numbers indicate potential trips that could be made by active travel, specifically cycling, for distances under 8 kilometres. It's important to note that this model represents potential trips rather than actual trips made by real people
- The A12 and A120 are key potential cycle routes from West to East across the County, connecting Bishop's Stortford to Braintree, Colchester, and Tendring
- Additionally, cycling trips from the north, east, south, and West could potentially use the main corridors of A12, A120, A130, and A131 to travel to the centre of County

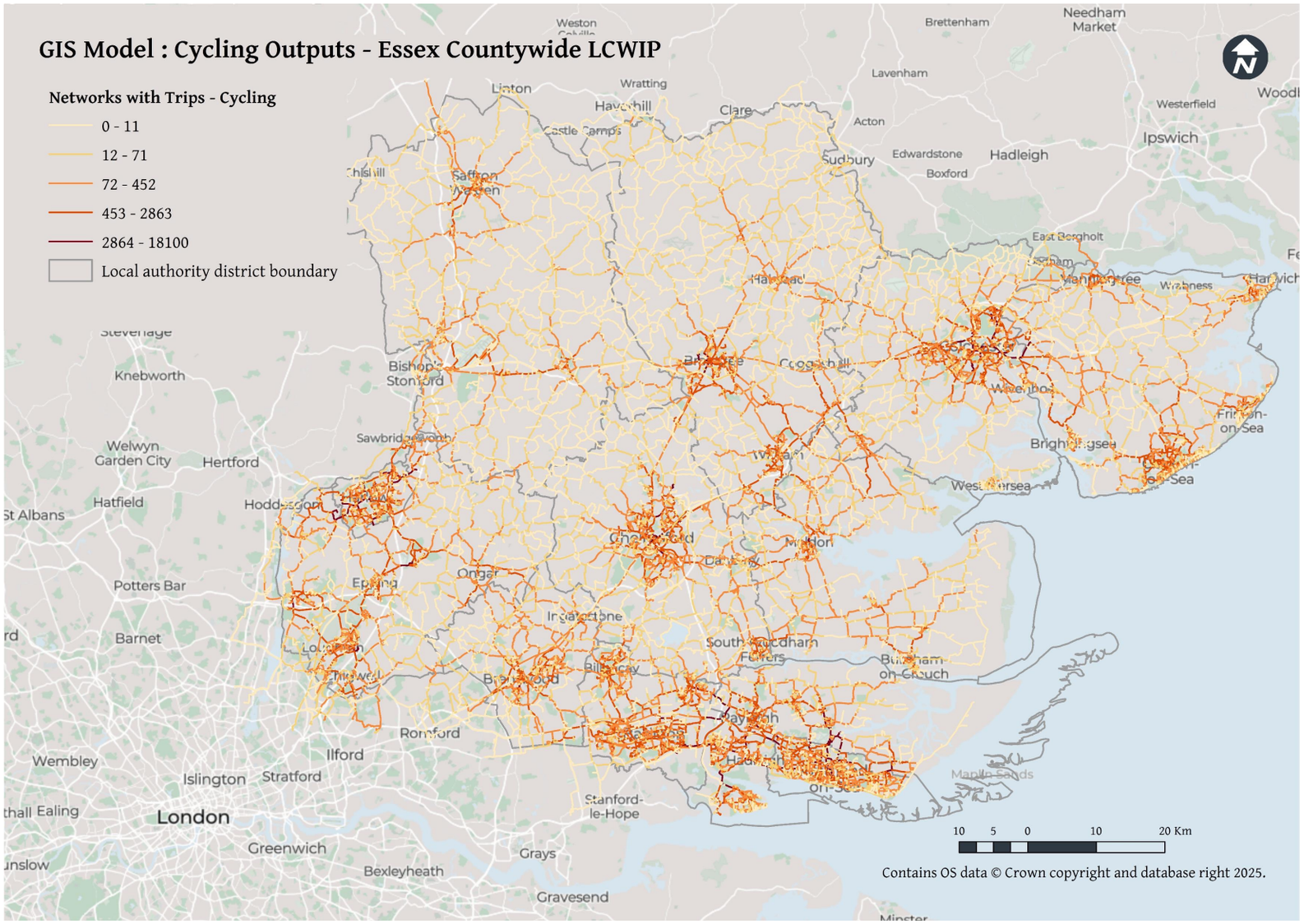


Figure 17 – Cycling Outputs (*High-definition image available in Appendix A)*

Potential Walking Network

GIS Model : Walking Outputs

In addition to cycling outputs, walking outputs were also identified. It is worth noting that not every road or path on the identified network is walkable (for example along motorways and some dual carriageways). These unviable connections have not been omitted from these outputs. This has been done to reflect the model's purpose of identifying potential demand, which may include suppressed demand along unviable routes.

The output walking map shown in **Figure 18** highlights potential demand between future origin points and destinations which have been inputted along an OS roads and paths network layer. These origin and destination points were developed alongside Essex County Council. The outputs have not been restricted to any time of day, or day of week, and the model considers a range of possible active travel trips, e.g. weekday commutes as well as weekend leisure trips. The outputs therefore do not provide an estimated number of trips generated and instead focuses on the potential for trips according to the assumptions made regarding origins and destinations.

Unlike the demand model for cycling, walking trips are observed to mostly contained within the settlement areas.

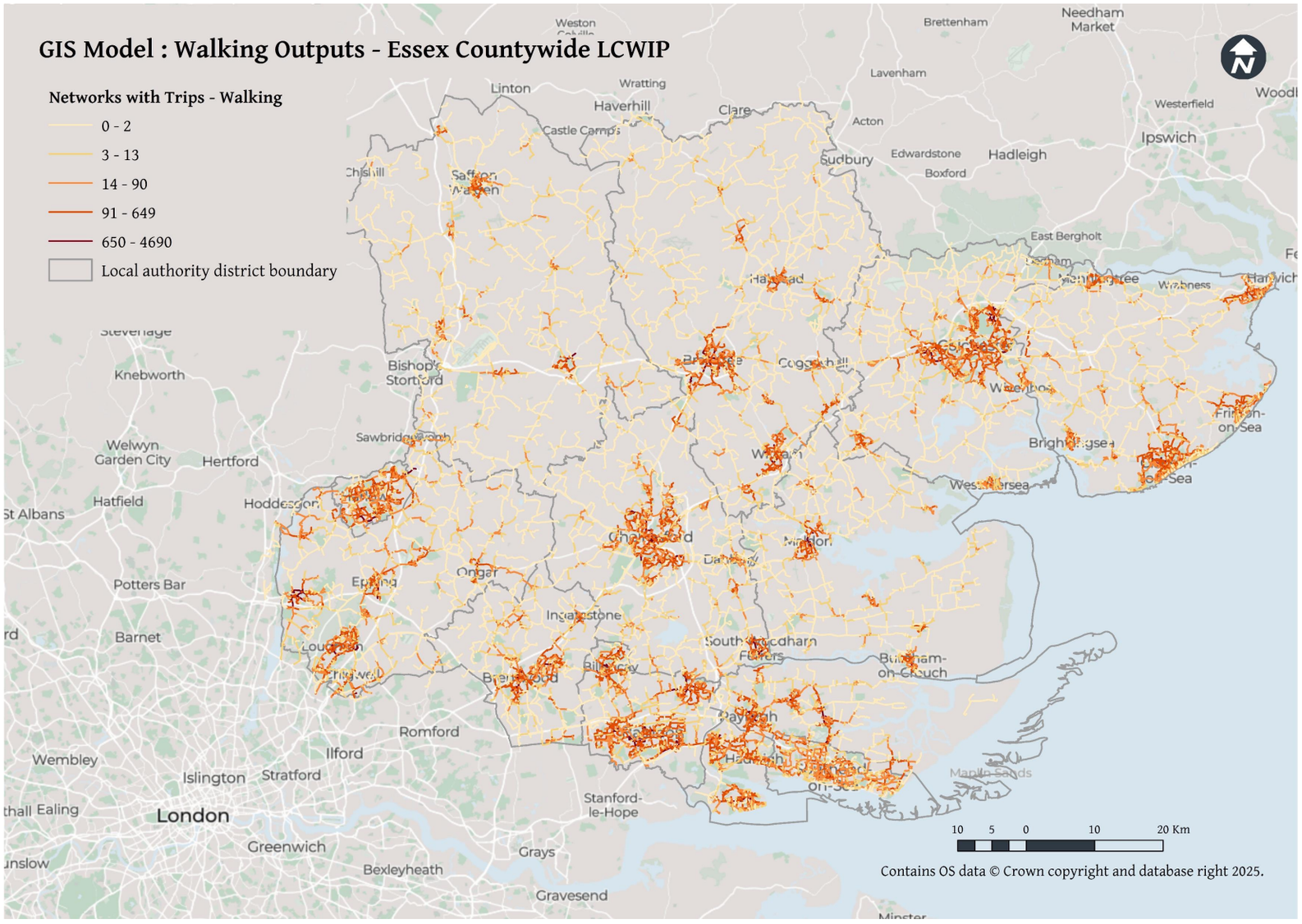


Figure 18 – Walking Outputs (*High-definition image available in Appendix A)*

Mode Shift Potential

Sustainable Travel Potential Tool

The Sustainable Travel Potential Tool (**Figure 19**) was used to plan the county-wide LCWIP network by identifying which car trips could feasibly be made by sustainable travel methods and how likely people are to use them.

The tool estimates the opportunity for trips to be made by sustainable modes, based on distance and journey time criteria from modelled car trips. This data is then paired with propensity data, which calculates the likelihood for users to walk, cycle or use public transport based on their socio-demographic characteristics and preferences.

It combines the opportunity and propensity outputs to estimate the mode shift potential for the area.

Key findings for Essex were:

- Opportunity: Up to 35% (665,000) of daily car trips in Essex could potentially be made by sustainable modes
- Propensity: Walking, cycling and public transport propensity in Essex was below UK average, whilst driving propensity was above average. This indicates that there are barriers and challenges that prevent or discourage residents form choosing sustainable modes
- The potential for mode shift from car to sustainable modes in Essex is much lower than the opportunity, as only up to 13% of daily car trips are likely to be made by sustainable modes
- Cycling had the most potential for mode shift, with 6-11% of daily car trips in Essex being cyclable
- This is closely followed by walking potential, with up to 4% of daily car trips in Essex being walkable

The analysis identified specific areas and corridors with the highest opportunity and potential for mode shift, along with the dominant socio-demographic groups in each area. These findings were used to inform the county-wide LCWIP network designs to ensure interventions were targeted in the areas with the highest potential for mode shift.

	Sustainable travel opportunity	Sustainable travel propensity	Sustainable travel potential
Sustainable travel (walk, cycle or public transport)	**Up to 35%** of daily car trips can be made by sustainable modes	Existing Essex residents have **below average** propensities **for walking, cycling, bus, rail** and combined **public transport,** but **above average** propensity to **drive.**	**Up to 13%** of daily car trips in Essex have the potential to be made by sustainable modes
Walking	**Up to 8%** of daily car trips in Essex can be walked	Propensity to walk **(86)** is **lower than the England average** across Essex.	**Up to 4%** of daily car trips in Essex are likely to be walked
Cycle	**Up to 25%** of daily car trips in Essex can be cycled	Propensity to cycle **(85)** is **lower than the England average** across Essex.	**Up to 11%** of daily car trips in Essex are likely to be cycled
Public transport	**Up to 14%** of daily car trips in Essex can be made by public transport	Public transport propensity **(85)** is **lower than the England average** across Essex. Propensity to travel by **bus** is **82** and propensity to travel by **rail** is **84.**	**Up to 4%** of daily car trips in Essex are likely to be made by public transport

Summary of sustainable travel opportunity, propensity and potential

Figure 19 – Summary of sustainable travel opportunity, propensity and potential

Full analysis of the mode shift potential can be viewed online here - https://storymaps.arcgis.com/stories/d930384ac64043b486c70bfc07fb2f8e

Developing the Draft Networks

Overview

To develop the countywide LCWIP, we identified strategic routes for direct connections between towns and villages, green links for quieter rural leisure travel, and active travel areas. These active travel areas are the next largest settlements without an LCWIP and are not large enough to justify a network, but they would benefit from Area Based Scheme interventions.

Strategic Routes

The strategic county-wide routes, which are shown in blue in **Figure 20** with an example in **Figure 21** were identified by modelling key desire lines to connect local schools, railway stations and villages. These routes run in parallel to the strategic road network, to provide direct connections between key settlements. The LCWIP will provide segregated and shared use infrastructure where possible, but cyclists will also mix with traffic where it has been assessed to be inline with LTN 1/20 mixed traffic criteria.

Green Links

The rural routes, which are referred to as green links and shown in green in **Figure 22**, were defined using a local route planning and navigational apps such as Strava and Komoot. These routes provide users with an alternative connection between towns and villages in a more rural location with less vehicle traffic. Currently, these routes are primarily used for leisure activities. However, they have the potential to be incorporated into the wider network and used for utility trips as well. The LCWIP can facilitate their integration into the broader network, promoting their use for practical trips between settlements. The Green Links will enhance the overall accessibility of the LCWIP network.

Active Travel Areas - Area Wide Improvements

The settlements connected by the LCWIP routes have been designated as active travel areas (ATA). These key settlements, typically with populations under 15,000, show high potential for increased cycling and walking if area-wide infrastructure improvements are made. Although too small for an LCWIP at this stage, the concept of an ATA focuses on movement within these settlements and their connections to the wider networks.

As shown in the blue polygons in **Figure 20**, Halstead, Bocking Churchstreet, Coggeshall, and the settlement cluster of Colne Engaine, Earls Colne and White Colne were identified as active travel areas. These area-based measures focus on how strategic routes and green links integrate with the areas, along with the improvements needed, as discussed below.

Active travel infrastructure, as shown in **Figure 23**, which will support the pedestrianisation of these town centres will include cycle parking and maintenance facilities, enhanced public realm including seating, landscaping and pedestrian friendly features, and consistent wayfinding and signage.

Figure 20 – Example of Strategic Routes, Green Links & Active Travel Areas

Figure 21 – Strategic Route example

Figure 22 – Green Link example

Figure 23 – Active Travel Area example

Stakeholder Engagement

Engagement Importance

Engagement is crucial for a Local Cycling and Walking Infrastructure Plan (LCWIP), as effective engagement ensures that the needs and preferences of the community are accurately understood and addressed, fostering a sense of ownership and support for the project. By involving local residents, businesses, and stakeholders from the outset, the Essex LCWIP team were able to gather valuable insights and feedback, which helped identify potential challenges and opportunities.

This collaborative approach not only enhanced the quality and relevance of the LCWIP but also builds trust and transparency, increasing the likelihood of successful implementation and long-term sustainability. Early engagement can also help to identify and mitigate any concerns or resistance, paving the way for smoother project progression and stronger community buy-in. A timeline of stakeholder involvement throughout the Countywide LCWIP process is outlined below in **Figure 24**.

Figure 25 – Stakeholder Collaboration

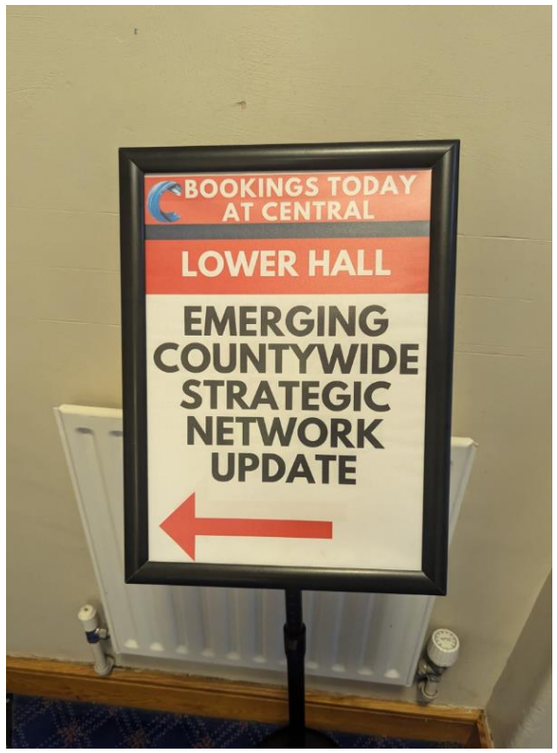


Figure 26 – Consultation Poster

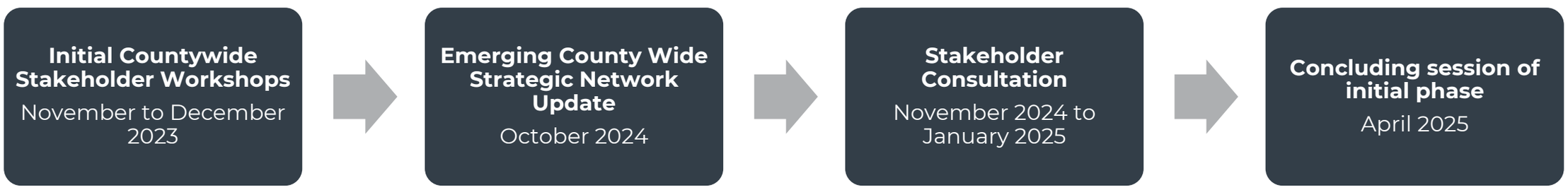


Figure 24 – Stakeholder Involvement Timeline

Stakeholder Engagement

Issues and Opportunities Workshop

Initial Countywide Stakeholder Workshops

The following workshops took place to discuss the Countywide LCWIP in 3 parts:

- Mid Essex held in Chelmsford – **23rd November 2023**
- South Essex Workshop held in South Benfleet– **24th November 2023**
- West Essex Workshop held in Harlow – **4th December 2023**

The initial workshops were used to present WSP's emerging network based on the data gathering exercise described earlier, which included the demand model and an analysis of existing Local Cycling and Walking Infrastructure Plans (LCWIPs). The workshops were invaluable in collecting information relating to existing well used routes, routes with identified potential, opportunities to integrate with the wider network, as well as planned development areas.
Additionally, the concept of active travel areas and the importance of green links for connectivity were explored in depth. These discussions aimed to enhance planning and integration efforts for the next iteration of the LCWIP.

Stakeholder Engagement

Miro boards, which are a forum for knowledge sharing in an easily accessible location, were introduced for each of the workshop groups. Stakeholders were encouraged to reflect on the contents of the workshops and provide feedback at a later date. Doing so ensured that stakeholders could include a greater level of detail, as well as include input from other colleagues. Comments were then categorised and pinpointed, providing specific locations for improvements.

The engagement attracted 116 comments from various stakeholders throughout Essex., such as local councils, cycle & walking campaign groups, local authorities, and Sustrans. **Figure 27** categorises the feedback received on the Countywide Network. The majority (26%) of comments were comments related to the Town LCWIP's.

Comments received on the Countywide Network were used to inform the next round of changes. Local knowledge is invaluable to the development of a network that is attuned to the local community's needs and movement patterns.

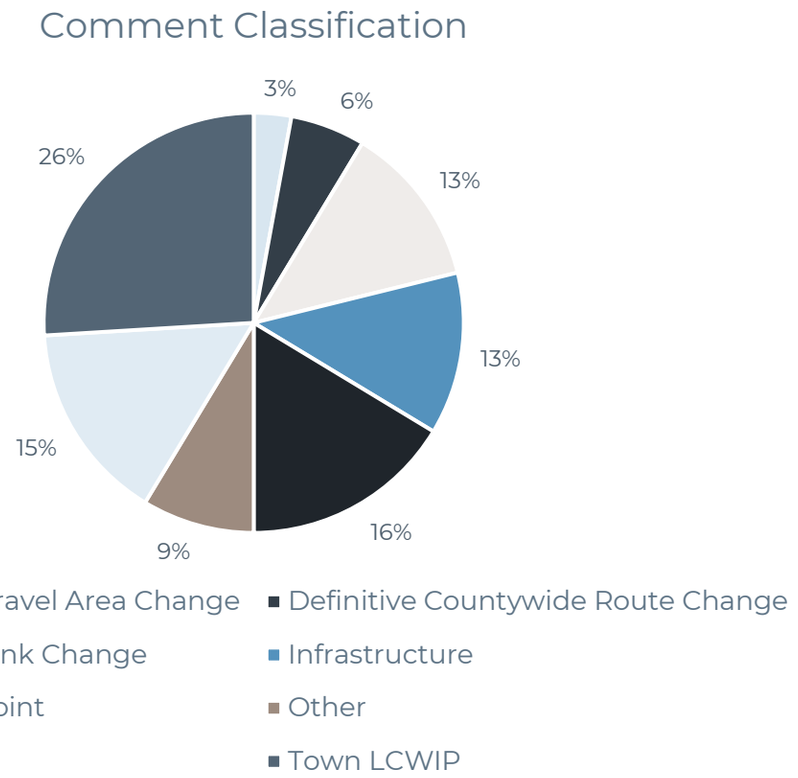


Figure 27 – Stakeholder Engagement Comment Classification

LCWIP Context

The engagement stage provided an opportunity to assess the needs and priorities of the local community. To date, this had been a data-driven process. Engaging with stakeholders offered added value through their local knowledge, providing an understanding of current travel behaviours and the quality of infrastructure across the county. This iterative process within the LCWIP ensured that our plan remained responsive, relevant, and effective in prompting walking and wheeling and cycling in the community.

Outcome of Stakeholder Workshops & Key Themes

Issues and Opportunities Workshop

Countywide Map Alterations

Feedback from the stakeholder workshops and Miro boards were reflected in several iterations made to the Countywide map. Constructive conversations were had with neighbouring Local Authorities, where insights were offered about the network wide plans of each authority. The changes made following the engagement improved the connectivity, accessibility of the routes, as well as the network overall safety of the network.

Countywide Routes

The Countywide Routes were extended to enhance connectivity between key areas. Notable additions include a new route from Cheshunt to south Epping via Waltham Abbey, which aims to provide a direct and efficient link for cyclists and pedestrians. Extensions were also made from Tolleshunt D'Arcy to Tollesbury, facilitating better access to coastal areas, and from Marks Tey to Kelvedon, improving connections between these important localities. Additionally, a new route was established to connect Bradwell B Nuclear Power Station, ensuring safe and accessible travel options for workers and visitors.

Green Link Routes

To further improve accessibility and safety, several Green Link Routes were added and modified. New Green Links were established between Halstead and Sudbury, providing a scenic and safe pathway for cyclists and walkers. Another significant addition is the Green Link along Southend Road from Great Baddow to Wickford, which enhances connectivity in this busy corridor. The route from Saffron Walden to Great Yeldham was also added, offering a picturesque and practical link between these towns. Furthermore, a Green Link was created between Langenhoe and West Mersea, facilitating better access to coastal areas.

The Green Link connecting Chipping Ongar to the existing Sustrans route near Fyfield was extended, providing a good quality connection for cyclists. The route between South Woodham Ferrers and Southminster was amended to avoid the accident hotspot at Lower Burnham Road, enhancing safety for all users. Additional Green Links were added in Maldon between Wickham and Langford, and between Ingatestone and North Billericay, further expanding the network and improving accessibility.

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Active Travel Areas

Epping was designated as an Active Travel Area, highlighting its importance in promoting cycling and walking. This designation aims to encourage more residents and visitors to choose active travel options, contributing to healthier lifestyles and reduced congestion. Additionally, the Active Travel Area in West Mersea was extended to the east, ensuring comprehensive coverage and support for active travel in this region.

These alterations reflect a commitment to creating a connected, safe, and accessible network for cyclists and pedestrians across Essex. The collaborative efforts of stakeholders have resulted in a robust plan that aligns with the county's ambitions for sustainable transport and active travel.

Figure 28 – Stakeholder Workshop

Stakeholder Engagement

Emerging County Wide Strategic Network Update Session – 2nd October 2024

Emerging County Wide Strategic Network Update Session

On the **2nd of October 2024**, a workshop was held with the primary purpose of gathering feedback on Countywide, Greenspace, and Active Travel Areas.

The goal was to create a comprehensive stakeholder priority list that would guide future planning and development efforts. Participants were encouraged to leverage their local knowledge and user experience to enhance the working plans, ensuring that the outcomes would be both practical and beneficial to the community.

During the workshop, a prioritisation exercise was conducted to evaluate various aspects of the areas in question. The ranking criteria were clearly defined to ensure a consistent and objective assessment. Areas were rated as Poor (1), Average (2), or Good (3) based on several factors. A Poor rating indicated high safety risks, difficult access, inconvenience, high environmental impact, and poor infrastructure. An Average rating suggested moderate safety, general accessibility, basic convenience, moderate environmental impact, and adequate infrastructure. A Good rating was reserved for areas that were the safest, easily accessible, convenient, had minimal environmental impact, and boasted good infrastructure.

Following the workshop, participants were given the opportunity to continue their ranking and scoring exercise through a Microsoft Forms survey. This allowed for a more comprehensive collection of feedback and ensured that all voices were heard. The comments and scores submitted through the survey were thoroughly reviewed and will be considered in the next steps post-consultation. This iterative process aims to refine the plans further, incorporating stakeholder insights to create well-rounded and effective strategies for Countywide, Greenspace, and Active Travel Areas.

Figure 29 – Stakeholder Engagement Workshop Exercise

Prioritisation Meeting and Workshop

Collaborative Workshop Prioritisation Session

Overview

The Countywide workshop encouraged attendees to score the Countywide Routes, Green Link Routes and Active Travel Area and provide reasoning's behind their decisions.

As this was a lengthy exercise, a Microsoft Form was circulated after the meeting to be completed by the participants. It began by collecting respondent information, including their name and organisation. Participants were then asked to specify whether they were commenting on a corridor or an active travel area, and to identify the specific corridor or active travel area they wished to comment on.

The survey included questions on various impact criteria, as shown in **Table 3**. Participants were also invited to share any final thoughts they had regarding the proposed routes or areas.

Comments were reviewed and will be considered for the next steps post-consultation.

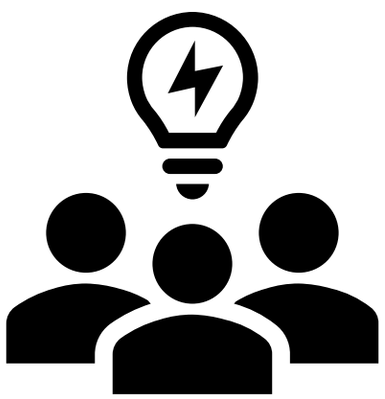

Table 3 – Impact Criteria

Impact Criteria	Questions
Economic Factors	**Cost of Implementation**: Budget required for developing and maintaining the route/area. **Potential for Economic Benefit**: Impact on local businesses and tourism.
Development and Infrastructure	**Existing Infrastructure Condition**: Current state of roads and paths. **Alignment with Existing Network**: Integration with current cycling and transport networks. **Development Sites**: Areas of planned or ongoing development. **Major Employment Sites**: Proximity to large workplaces. **Catchment Population**: Number of people living within a certain distance of the route/area. **Route in Progress**: Status of ongoing or planned route projects.
Health and Wellbeing	**Physical Activity**: Encouragement of regular exercise. **Schools**: Proximity to educational institutions, promoting safe routes for students.
Safety	**Lighting**: Availability and quality of lighting along the route/area. **Visibility**: Clear sightlines and visibility for both cyclists and motorists. **Road Conditions**: Quality and maintenance of the road surface.
Accessibility	**Connectivity**: Links to other cycle routes, public transport, and key destinations. **Ease of Access**: Availability of entry and exit points. **Rail Connections**: Proximity to train stations and integration with rail services. **Reduces Rural Severance**: Helps connect rural areas to urban centres.
Convenience	**Route Directness**: How direct the route/area is between key points. **Travel Time**: Estimated time to travel the route. **Availability of Amenities**: Proximity to rest stops, cafes/pubs, and repair stations
User Experience	**Current Cycle Usage**: Current cyclist traffic levels. **Stakeholder Support**: Backing from local communities and organizations.
Environmental Impact	**Green Spaces**: Proximity to parks and natural areas. **Pollution Levels**: Air quality along the route/area. **Noise Levels**: Ambient noise from traffic and other sources.

Countywide Stakeholder Consultation

Consultation Summary

As part of our ongoing efforts to enhance the countywide map and promote active travel, we conducted a comprehensive stakeholder consultation across 21st November 2024 to 10th January 2025. This consultation aimed to gather valuable insights and feedback from a diverse range of stakeholders, including district and county officers, local councils, and community members. Through a combination of emails, social media engagement, and interactive tools, we sought to ensure broad participation and inclusivity in the decision-making process.

Figures 30 & 31 illustrate how stakeholders can express their opinions on the proposed routes and active travel areas using the online consultation platform Engagement HQ. Using a color-coded system, stakeholders can indicate their level of agreement or disagreement with the proposals:

Additionally, stakeholders can use the grey marker with a speech bubble icon to leave comments and suggest improvements. This system ensures that all feedback is clearly categorised and easy to interpret, helping to refine and enhance the proposed network based on community input.

Table 4 below provides a breakdown of how the comments were received.

Table 4 – Comments and Participation Summary

Emails	• Sent to 1353 addresses across 12 districts, including district officers, county officers, stakeholders, parish/town councils, city councillors, and county councillors
Social Media	• Facebook: Post received 29 comments, 128 shares, and 30k views • LinkedIn: Post received 1 comment, 5 reposts, and 358 views
Map Contributions	• 71 people contributed 282 pins • 797 visits to the map
Survey Participation	• 462 people participated in the survey • 3.6k visits to the general page

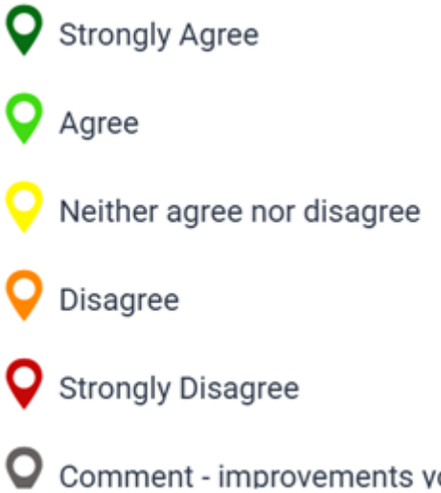

Figure 30 – Consultation colour-coded system & comment log

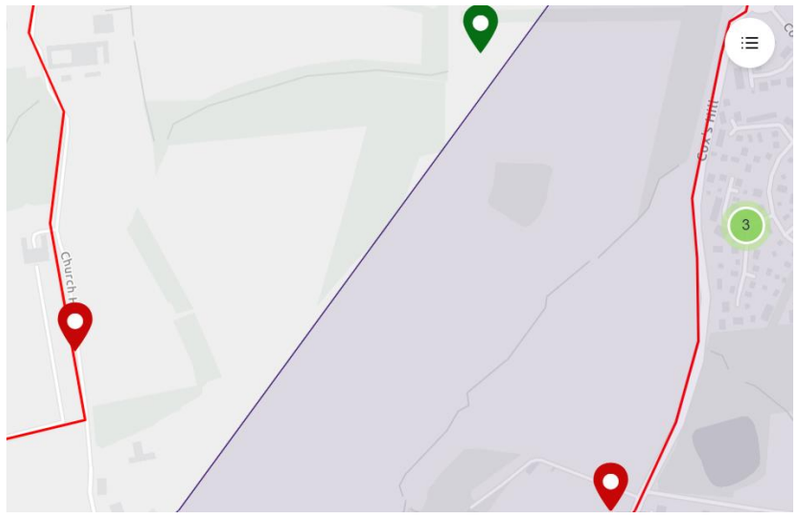

Figure 31 – Engagement HQ Platform

Countywide Stakeholder Consultation

Consultation Outputs

The countywide consultation received a total of 562 responses.

The data revealed that the majority of respondents felt the proposed network is somewhat connected, and their suggested comments have been reviewed for potential changes to the network.

Many respondents indicated that safer cycleways and footpaths would encourage them to cycle and walk more. On average, people are willing to cycle for 16-30 minutes and walk for 21-30 minutes for short daily trips, including parts of their journey such as walking or cycling to the station. Just under half of the respondents currently cycle at least once a week for their shorter daily trips, and many stated they would likely increase this frequency if their journeys were made easier and safer. Similarly, nearly the majority of respondents currently walk at least once a week for their shorter daily trips, and they also indicated a high likelihood of increasing this activity if conditions improved.

Three themes were identified when summarising the consultation comments. These are summarised below, and a percentage breakdown is shown in **Figure 32**

New route suggestions emphasise the need to align with existing plans and developments, such as the Epping Forest District Council Local Plan and Tendring Garden Community. They also focussed on promoting leisure, sport, and reducing traffic congestion by connecting housing developments with services and retail. Enhancing connections between areas, like linking Epping and Harlow or Burnham-on-Crouch and Southminster.

Infrastructure improvements highlighted the importance of aligning with Local Plans and linking with the Essex Town LCWIPs. These improvements aim to support local communities and reduce congestion through enhanced infrastructure. Improving connections between areas, such as Epping and Harlow, is also a key focus.

Safety concerns emphasise the need to ensure safety measures align with existing plans. Enhancing safety while promoting leisure and reducing congestion is a significant aspect. Creating safe connections between areas, especially where routes travelled along high vehicular traffic roads.

The stakeholder consultation comments are summarised in **Appendix C** and changes to routes described in **Appendix D**.

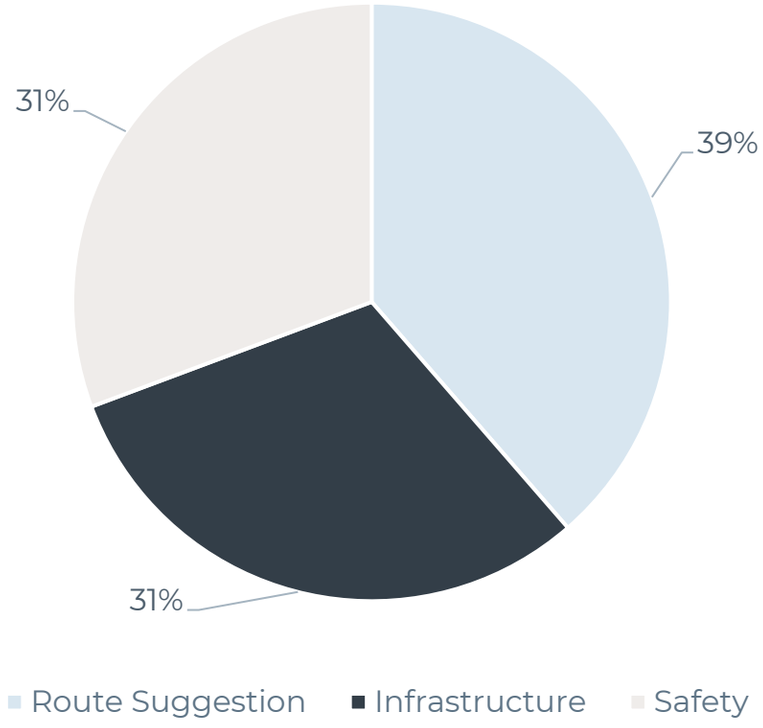

Figure 32 – Key Themes from Consultation Comments

Final Network Plans

Mid Essex

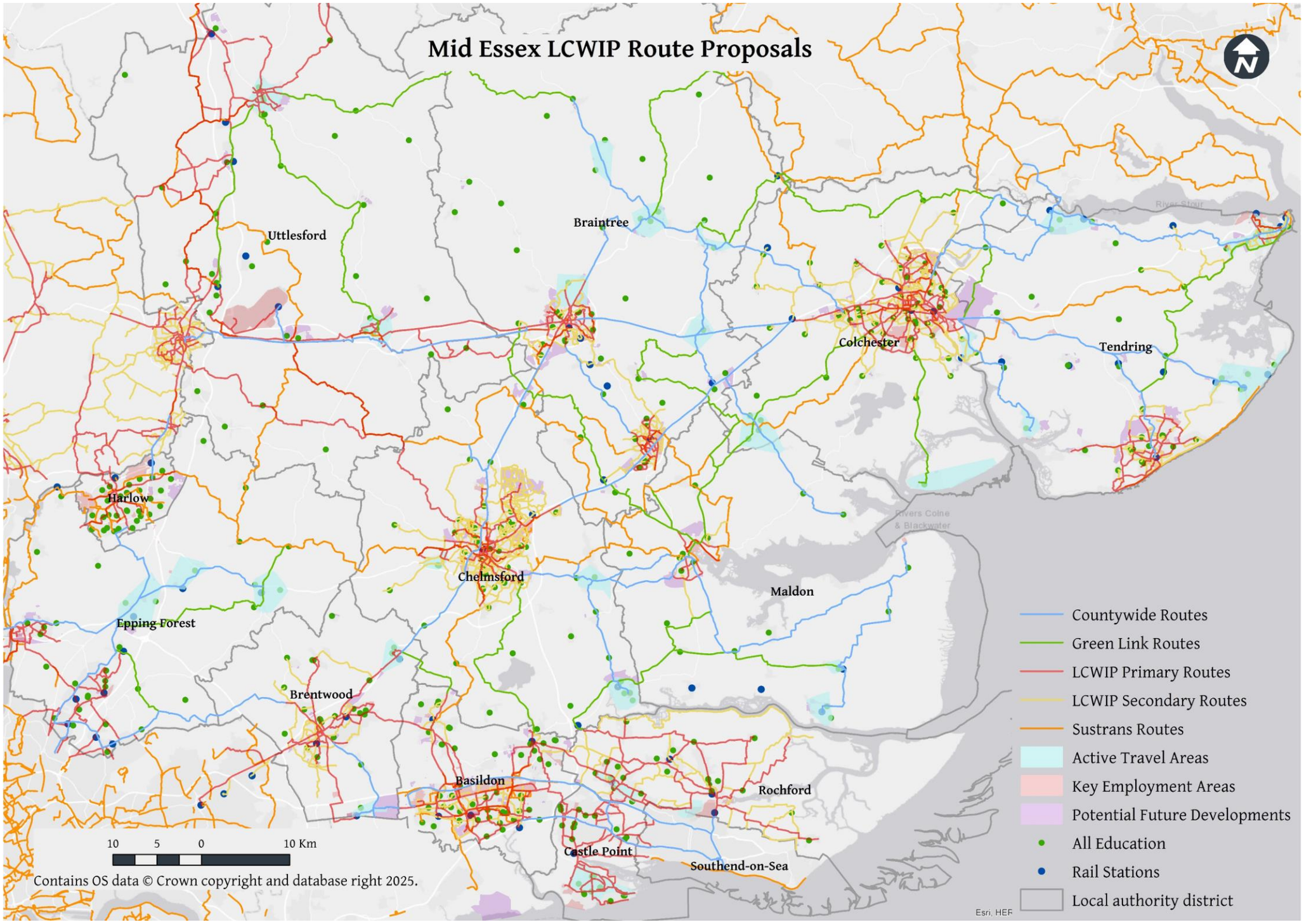

Figure 33 – Final Mid Essex Network Plan *(High-definition image available in Appendix B)*

Final Network Plans

West Essex

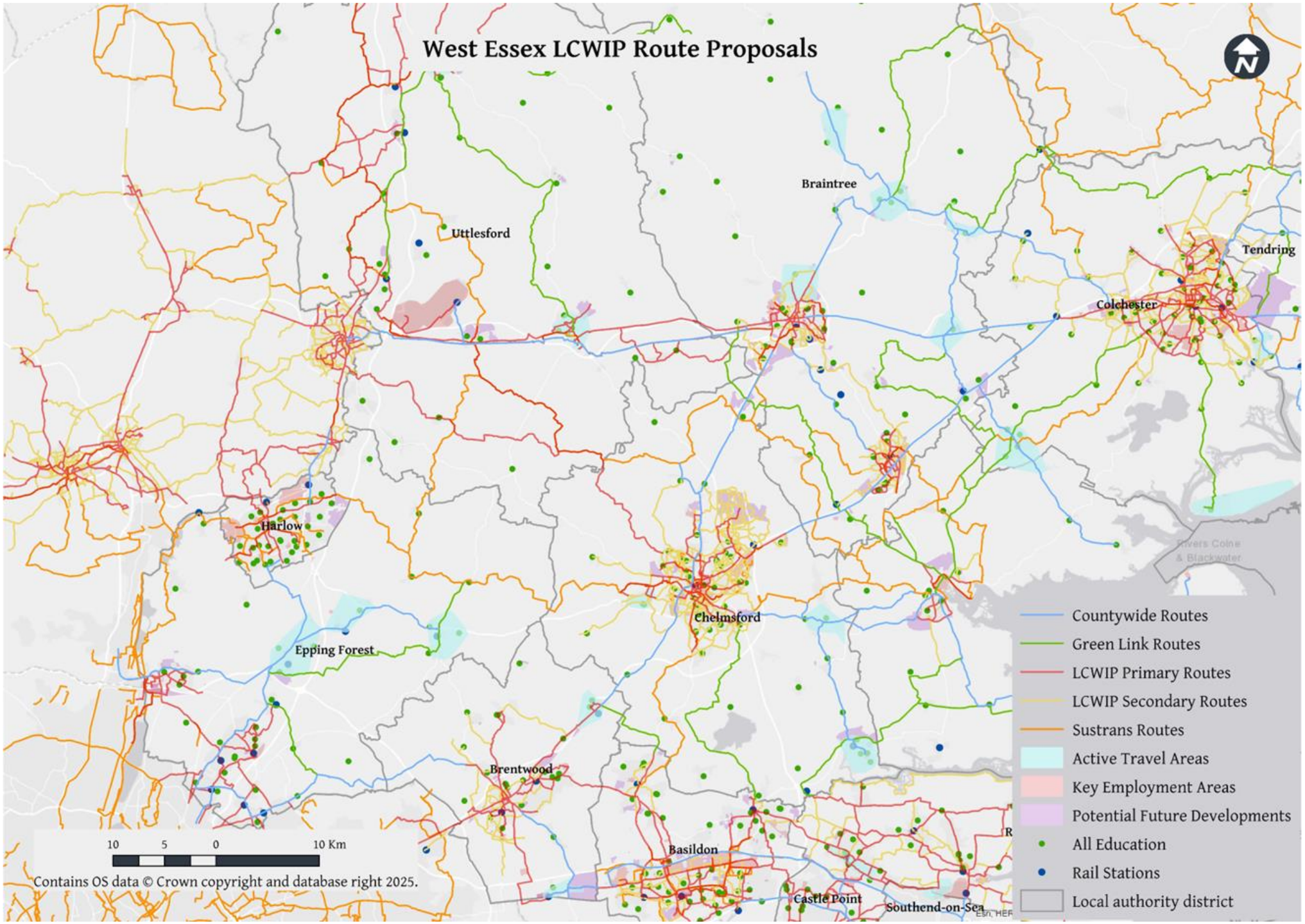

Figure 34 – Final West Essex Network Plan *(High-definition image available in Appendix B)*

Final Network Plans

South Essex

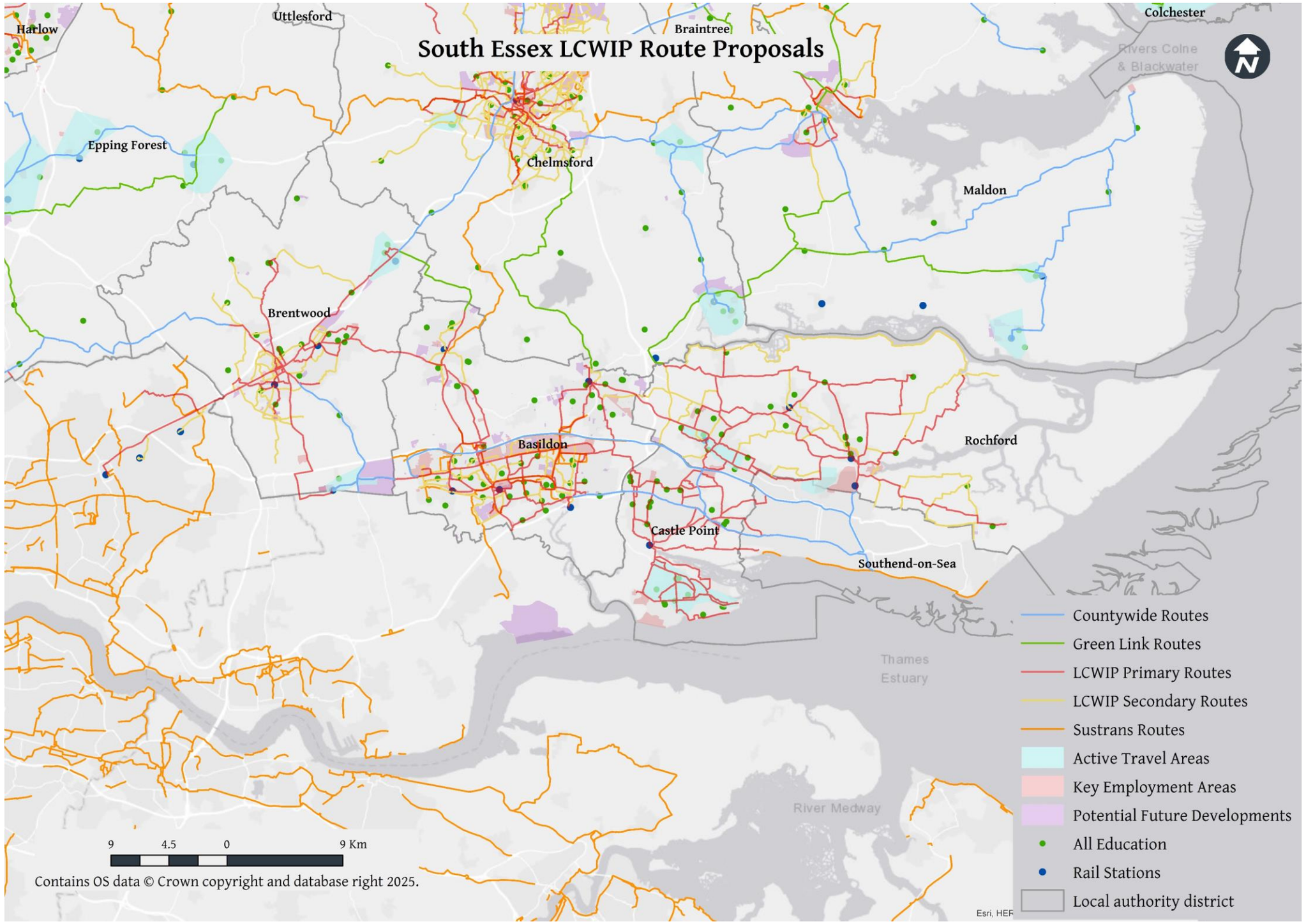

Figure 35 – Final South Essex Network Plan *(High-definition image available in Appendix B)*

Final Network Plans

Countywide

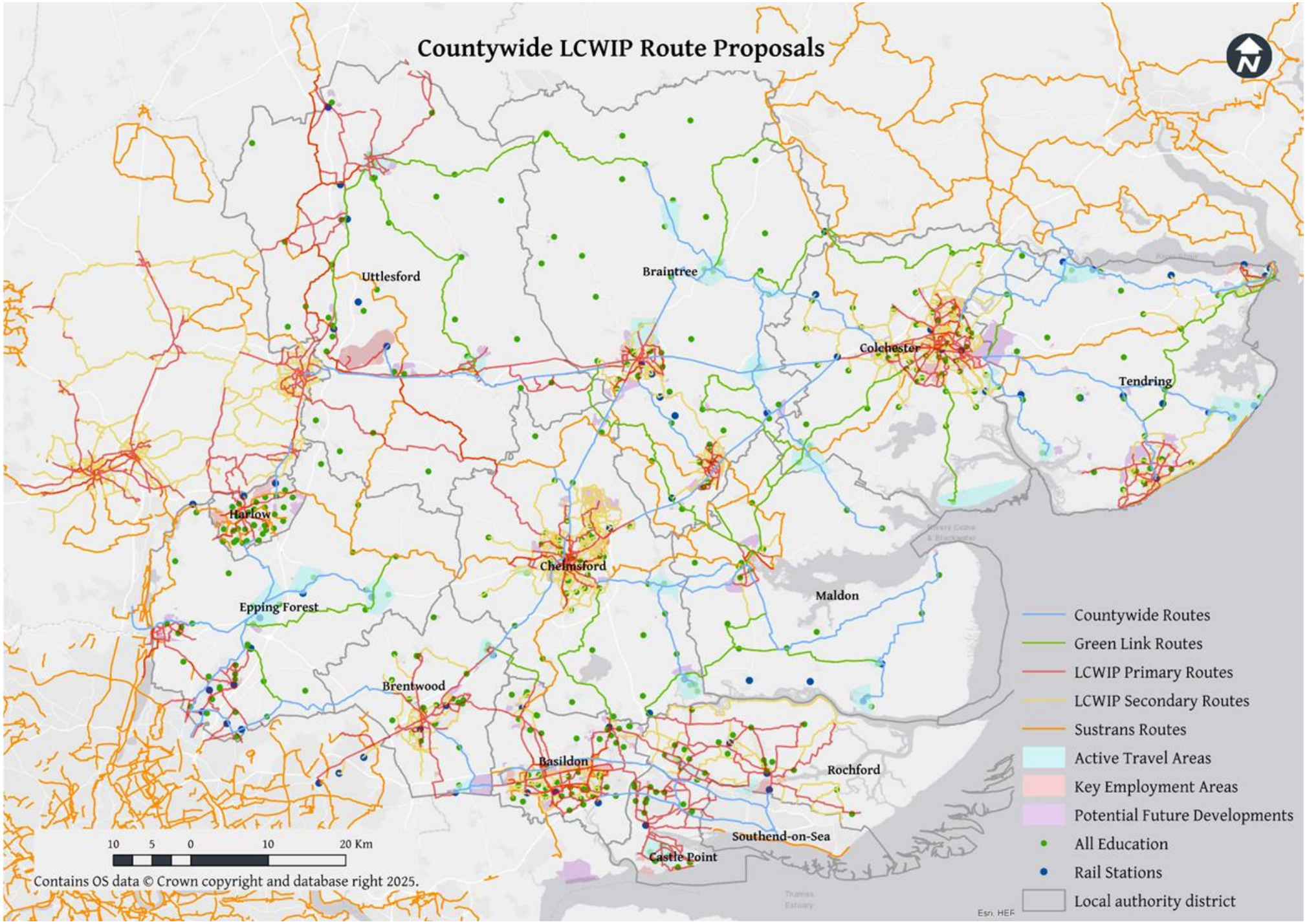

Figure 36 – Final Whole Countywide Essex Network *(High-definition image available in Appendix B)*

Identifying Infrastructure Improvements

Corridors & Active Travel Area Improvements

Essex County Council have prioritised specific routes and active travel areas to promote healthier streets across mid, west, and south Essex.

These selections reflect ECC's priorities and ensure a balanced geographic spread, avoiding a regional bias and benefiting diverse communities . The improvement maps propose a range of interventions, from connectivity with existing and proposed routes, to specific routes upgrade recommendations, as detailed below:

Key Considerations:

- Cross-County Connectivity: Routes extend across county boundaries for seamless travel.
- Unique Attributes: Each route and area has unique characteristics that enhance appeal and functionality.
- Employment Hubs: Prioritised routes serve key employment centres, supporting economic growth and sustainable commutes.
- Community Engagement: We engaged with local communities and stakeholders to ensure our decisions reflect their needs and preferences.
- By focusing on balanced distribution, connectivity, uniqueness, and access to employment hubs, we aim to create a more sustainable, inclusive Essex.

Countywide Routes – Corridor Improvements

- Woodford to Harlow – West Essex Cycle Route 1
- Great Yeldham to Colchester – Mid Essex Cycle Route 2
- Bishop's Stortford to Rayne – West Essex Cycle Route 3
- Basildon to Southend-on-Sea – South Essex Cycle Route 6

Active Travel Areas – Area-based Improvements

- Halstead
- South Woodham Ferriers
- Great Dunmow

Route Feasilbility

Prioritised Routes & Active Travel Areas

Active Travel Route Overviews

The countywide routes and active travel areas chosen for optioneering are shown in **Figure 37.**

A detailed breakdown of the optioneering plans for the prioritised countywide routes and active travel areas are available in **Appendix E**.

Active Travel England Route Check Tool

Active Travel England's RCT is designed to be used throughout the design process. It has been developed in line with national guidance and Active Travel England's assessment framework, each scheme was reviewed against the six active travel policy principles: coherence, directness, safety, comfort, attractiveness, and inclusivity. These principles ensure that infrastructure is not only functional but also accessible and appealing to all users. Applying these principles early in the design process helps identify critical issues and align proposals with ATE expectations for high-quality active travel networks.

Each of the four identified Active Travel Corridors has been assessed independently to highlight key safety considerations. Given the extensive distances these routes cover, and rural nature of the network common themes emerged across the assessments. As a result, a set of high-level design recommendations has been identified to help address these issues and ensure alignment with the six active travel policy principles.

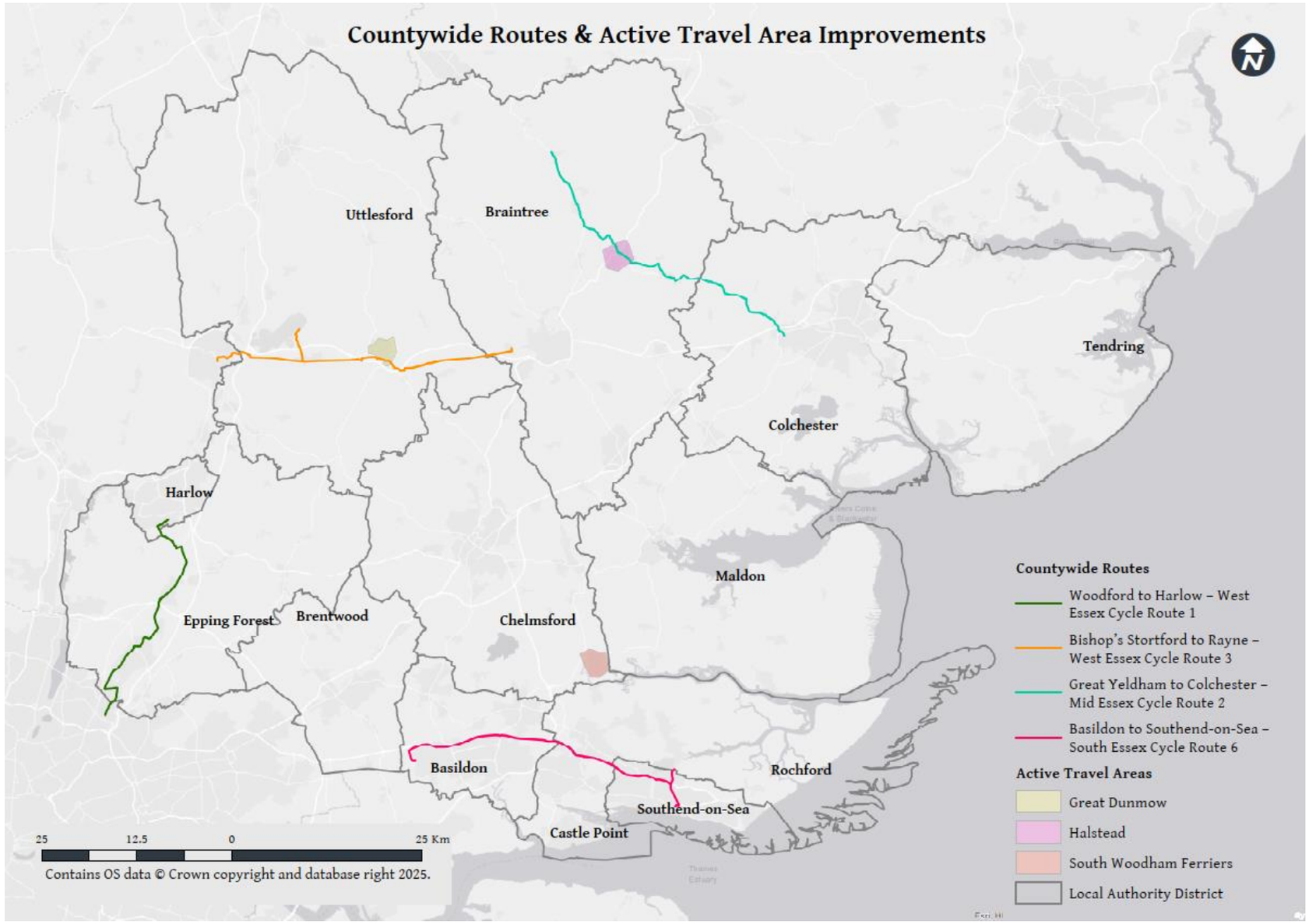

Figure 37 – Countywide Routes & Active Travel Area Improvements

High-Level Infrastructure Improvement Identification

There are two key checks within the RCT: the policy check and the safety check. Within the policy check, there are six key criteria that schemes must adhere to. These have been considered during the scheme development process:

- Are cyclists separated from pedestrians?
- Is the route free from barriers such as chicane barriers, steps, or dismount signs?
- Does the route feel direct, logical, and intuitive for all road users?
- Are surfaces suitable for all users?
- Is appropriate lighting provided?
- Does the route connect with other facilities as part of a holistic, integrated network?

In developing infrastructure improvement options for each of the four identified active travel corridors, the schemes were assessed against the safety metrics outlined in Table 5. While the RCT is not a pass/fail assessment, it provides a level of service rating and highlights areas where the route requires the most improvement to enhance safety for people walking, wheeling, and cycling.

Table 5 – Methods for Addressing Metrics Relating to Infrastructure Conflicts

Metric	**Method for Addressing**
Conflict at Side Roads and Priority Junctions	Introduction of continuous footways at side roads and cycle priority at appropriate Priority Junctions
Conflict at Roundabouts and Signal Junctions	Introduction of cycle priority at appropriate Roundabouts and Signal Junctions
Lane Widths	Lane narrowing where people cycling are on roads and widths are between 3.25m – 3.90m
Trip Hazards	Ensure continued structure of maintenance of footways and overgrown vegetation
Kerbside Activity	Ensure that cycle infrastructure addresses key conflict points
Provision of Crossings	Where high volumes of vehicles exist, appropriate crossings to be provided at pedestrian desire lines
Standard of Crossings	Ensure that for high volume streets, appropriate crossings are provided (e.g. signalised crossings)
Motor Traffic Speed	Introduce speed reduction measures where there are conflicts between vehicles and cyclists
Motor Traffic Volume	Ensure that cyclists do not mix with traffic where volumes are high
Pedestrian Crossing Speed	A preference for fewer and narrower traffic lanes can reduce crossing times for pedestrians
Footway Widths	A preference for increased footway widths can increase pedestrian comfort / reduce traffic speeds
Cycling Surface and Maintenance Defects	Ensure continued structure of maintenance of cycle infrastructure
Walking/Wheeling Surface and Maintenance Defects	Ensure continued structure of maintenance of footways
Guard Railing	Removal of guard railing and replacement with speed reduction measures where possible

Optioneering

Countywide Route-Specific Infrastructure Improvements

Infrastructure Improvements Overview

High level concept plans for each route were then developed, with designs that are compliant with the latest government guidance on pedestrian and cyclist facilities in line with LTN 1/20.

An overview of the route-specific recommendations for infrastructure improvements is outlined in **Table 6**.

It is important to note that at this stage, scheme concept plans are high level and indicative. It is expected that as part of later design processes, schemes will be further consulted on, and additional feedback will be incorporated into any final scheme.

A detailed breakdown of the optioneering plans illustrating infrastructure improvements recommended for each of the four routes are shown in **Appendix E**.

Table 6 – High-level route-specific recommended infrastructure improvements

Route	Route-Specific Infrastructure Improvements
West Essex Cycle Route 1 Woodford to Harlow	• Introduction of shared use, with widening, resurfacing & introduction of a verge • Wayfinding to PRoW • Introduction of crossings with dropped kerbs / tactile paving • Advanced Stop Lines (ASLs) • Resurfacing of shared use • On street cycle infrastructure • Junction improvements and radii reductions • Vegetation clearance and enhanced lighting provision • Resurfacing and repaving
West Essex Cycle Route 3 Bishop's Stortford to Rayne	• Introduction of shared use, with widening, resurfacing & introduction of a verge • Wayfinding to PRoW • Introduction of crossings with dropped kerbs / tactile paving • Resurfacing of shared use • On street cycle infrastructure • Junction improvements Introduction of entry / exit to Flitch's Way – barriers removal • Vegetation clearance and enhanced lighting provision • Resurfacing and repaving • Increased number of rest areas
Mid Essex Cycle Route 2 Great Yeldham to Colchester	• Introduction of shared use, with widening, resurfacing & introduction of a verge • Wayfinding to PRoW • Introduction of toucan crossing • Resurfacing of shared use • On street cycle infrastructure • Junction improvements
South Essex Cycle Route 6 Basildon to Southend-on-Sea	• Introduction of shared use, with widening, resurfacing & introduction of a verge • Wayfinding to PRoW • Resurfacing of shared use • On street cycle infrastructure • Junction Improvements • Proposed pedestrian signalised junction • Improved cycle / pedestrian crossing across High Road • Wayfinding to signalised junction further south • Extension of shared use on both sides of carriageway to signalised crossing as well as upgrade to toucan crossing • Improved pedestrian / cycle crossing • Introduction of toucan crossing • Introduction of additional pedestrian crossing to cater for desire lines

LCWIP Concluding Session

The close out session of the initial phase of the Emerging County Wide Strategic Network was held on the **1st April 2025**.

The workshop invited all 12 districts, Thurrock and Southend, and neighbouring districts (Hertfordshire), as well as Essex County Officers to present the updated proposed county wide LCWIP cycling network. The workshop also held an interactive activity, analysing who are our potential partners and projects, funding opportunities available, and key issues for rural cycling in Essex.

The outcome of the workshop identified key areas to be discussed and considered in the future of the emerging Essex strategic network lifespan.

From the three working groups the following key synergies were common themes throughout.

<u>Potential partners and projects.</u>

- Local Authorities (Town Centre Regeneration)
- Developers
- Education (schools/colleges/university)
- Essex County Council
- Health (NHS)
- ATE
- Transport providers

<u>Funding</u>

- DFT
- ATE
- Parishes/Towns
- Airports (Southend/Stansted)
- National Highways
- Developers
- Local Highways Panel
- BIDS
- Essex County Council

Figure 38 – Final Countywide workshop to conclude Phase 1

<u>Rural cycling issues</u>

- Distance
- Safety
- Lighting
- Speed
- Wayfinding
- Connectivity
- Land (ownership)
- Lack of space
- Maintenance

Prioritisation

Overview

As part of the six LCWIP key stages the fifth stage is scheme prioritisation. It is important that any scheme taken forward through the ECC Active Travel pipeline demonstrates sufficient demand for active travel, strategic links, connectivity with the existing network and can incorporate future development. Therefore, a prioritisation tool has been developed to consider such factors and to allow ECC to make strategic decisions based on evidence, data, and local priorities in a consistent and repeatable way.

Several factors are considered within the tool itself, such as alignment with national and ECC policies, connectivity to existing routes/provision, train stations and schools, levels of public and stakeholder support, affordability and deliverability.

Prioritisation and Next Steps

With over 450 LCWIP routes forming our strategic network it is imperative that we compare LCWIP routes relative to others in Essex. Upon completion of each district/borough/countywide LCWIP we will populate the tool with each route and review the outputs as appropriate.

The Prioritisation tool forms an integral part of the Active Travel Design and Infrastructure pipeline. The tool will help determine short, medium, and long-term priorities to be considered for future funding bids, feasibility, prelim/detailed design and ultimately construction. The priorities for development could be whole routes, packages of measures, junction improvements, or a suite of area-based projects.

Route	Alignment with ECC policies	Connectivity to existing network	Links to Railway Stations	Links to Schools	Level of Stakeholder Support	Affordability	Deliverability
Essex Route X	✓	✓	✓	✓	✓	✓	✓

Figure 39 – Route Prioritisation Checklist

The LCWIP Guidance recommends that infrastructure improvements are prioritised into 3 categories:

- **Short Term <3 years** – improvements which can be quickly implemented or are under development
- **Medium term <5 years** – improvements where there is a clear intention to act, but delivery is dependent on further funding availability or other issues)e.g. detailed design, securing planning permissions, land acquisition
- **Long term >5 years** – more aspirational improvements or those awaiting a defined solution

Summary

Summary

The Countywide LCWIP aims to reflect recent developments in active travel at both national and county levels, including new funding opportunities, cycle infrastructure design guidance, and changes in post-pandemic working practices and travel behaviours.

The objectives of the LCWIP included proposing countywide cycle routes, green link cycle routes and active travel areas for the Essex county and producing a summary report that aligns with local and national changes. The methodology used for the LCWIP involves reviewing previous work and policies, gathering data, running GIS model analyses, reviewing the Essex Town LCWIPs. drafting network plans, conducting stakeholder workshops, and finalising network plans and reporting.

The report has reviewed key policy and guidance from national and local levels, including the Department of Transport's LTN 1/20 Cycle Infrastructure Design Guidance and Gear Change strategy, as well as Essex's own cycling strategy and transport plans. It also emphasises the need for inclusive design in walking and transport infrastructure.

Data gathering included analysis of current travel patterns, collision risks for pedestrians and people who cycles, and socio-economic conditions to identify areas of high demand and risk. The report presents the draft countywide cycle routes, green link cycle routes and active travel areas, considering feedback from stakeholder engagement and consultation.

In conclusion, the report underscores the importance of the countywide LCWIP to ensure it is fit for purpose and responsive to the current and future needs of the community, promoting safer and more accessible walking and cycling options throughout the whole of Essex.

Figure 40 – The Essex Countywide Active Transportation Team
Source: Google Images

Next Steps

Next Steps

Stage 6 of the LCWIP process considers how the Essex LCWIP will be integrated into policies and strategies. This document represents a step-change in the focus on active travel in Essex, and the delivery of the plan will require sustained investment in active travel infrastructure. The plan will aim to:

- Identify appropriate funding sources to deliver the aspirations of the Essex LCWIP. This will include local contributions, developer contributions, central government funding and other innovative funding mechanisms as appropriate to the scale of ambition.

- Consider the latest rural guidance developed by Active Travel England. This will provide further information on connectivity, health & wellbeing, economic benefits, environmental impacts and prioritised investment.

- Monitor and evaluate the benefits of investment in delivering the LCWIP schemes, which will be an important component in making the case for future investment in developing the walking and cycling networks. These networks will be implemented in stages over the next 10 years.

Figure 41 – Cycle infrastructure in Harlow, Essex.
Source: Essex County Council

Glossary

Active Travel: Travel that involves a level of physical activity such as walking, cycling, or wheeling.

Active Travel Area: The next largest settlements that don't have an LCWIP, nor are they of a sufficient size to warrant a network. However, they would benefit from Area Based Scheme interventions.

Baseline Network: The initial network of cycling and walking routes identified in the LCWIP which will be updated over time in line with changes to land use, new developments, and local priorities.

Consultation: The process of seeking feedback from stakeholders and the public on proposed plans and policies.

Countywide Route: Strategically planned network designed to connect towns and cities within a county, integrating with local town LCWIPs. These routes aim to enhance regional connectivity, promote active travel, and support economic and social interactions across the county..

Devolution: The process of transferring powers and responsibilities from central government to local and combined authorities.

ECC: Essex County Council, responsible for local government functions in Essex.

Funding Bids: Applications for financial support from various sources to fund infrastructure projects.

GIS: A geographic information system (GIS) is a system that creates, manages, analyses, and maps all types of data. GIS connects data to a map, integrating location data (where things are) with all types of descriptive information (what things are like there).

Green Links: Strategically planned pathways connecting key locations like schools, railway stations, and villages, designed to enhance accessibility and promote active travel in both urban and rural areas.

Index of Multiple Deprivation (IMD): Measures the proportion of the population experiencing deprivation relating to seven domains, income, employment, health, education, crime, barriers to housing and services and living environment.

Integrated Transport Strategy: A comprehensive plan that outlines how different modes of transport will be coordinated and developed to meet the needs of the community.

Internal Delivery Group: A team of representatives from various stakeholders responsible for overseeing the implementation of the LCWIP.

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

LCWIP GIS Model: Developed by WSP to address limitations in the Propensity to Cycle Tool (PCT) methodology, which only considers cycling journeys to work and schools, excludes future developments, and is based on 2011 Census data. It uses flexible assumptions, agreed with ECC, to map cycle trips on the existing network and create a heat map. This model incorporates the latest data on current and planned origins, such as Experian Mosaic postcode data from 2019/20 and new housing allocations.

Local Plan: A document that sets out local planning policies and identifies how land is used, determining what will be built where.

LTP4: Local Transport Plan 4 is the statutory local transport plan currently being developed and will be known as the Essex Transport Strategy. It will provide an overarching plan for transport across Essex.

LTN 1/20: The local transport note (LTN), produced by the Department for Transport, provides guidance to local authorities on delivering high-quality cycle infrastructure, including planning for cycling, space for cycling within highways, transitions between carriageways, cycle lanes and cycle tracks, junctions and crossings, cycle parking and other equipment, planning and designing for commercial cycling, traffic signs and road markings, construction and maintenance.

Pedestrian: The term pedestrian refers to individuals travelling on foot or wheelchair, scooter, pushchair, or mobility scooter at or around average walking pace (maximum 4ph).

Prioritisation: The process of determining the order in which projects will be progressed based on factors such as demand, impact, and alignment with funding criteria.as need, impact, and available funding.

Propensity to Cycle Tool (PCT): This tool ranks and selects roads based on a) cycling potential, estimated from PCT data and 2011 census information, and b) available space, e.g., roads with wide lane widths or have spare capacity due to additional running lanes.

Public Rights of Way: These comprise Footpaths, Bridleways, Restricted Byways, and Byways Open to All Traffic.

S106 Monies: Funds collected from developers through Section 106 agreements, used to mitigate the impact of new developments on the community.

Stakeholder Engagement: The process of involving individuals, groups, and organizations with an interest in the project to gather input and build support.

Wheeling: Wheeled mobility devices including wheelchairs, scooters, pushchairs, and prams.

Appendix A

Evidence Base Plans

Essex Countywide LCWIP Study Area

8 km Buffer

Local Authority District Boundary

25 12.5 0 25 Km

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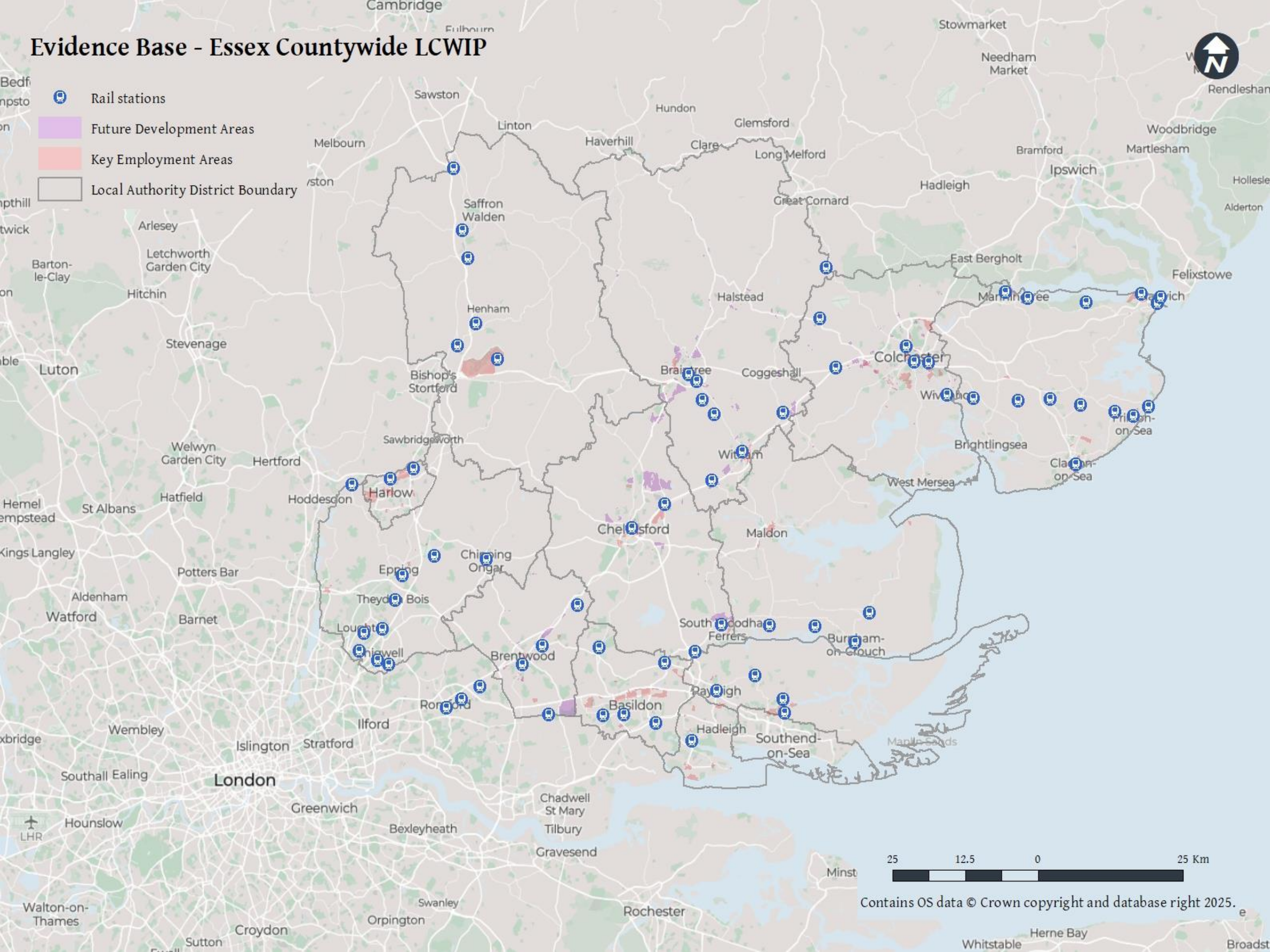
Evidence Base - Essex Countywide LCWIP



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GIS Model : Cycling Outputs - Essex Countywide LCWIP

Networks with Trips - Cycling

- 0 - 11
- 12 - 71
- 72 - 452
- 453 - 2863
- 2864 - 18100
- Local authority district boundary

10 5 0 10 20 Km

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GIS Model : Walking Outputs - Essex Countywide LCWIP

Networks with Trips - Walking

- 0 - 2
- 3 - 13
- 14 - 90
- 91 - 649
- 650 - 4690
- Local authority district boundary

10 5 0 10 20 Km

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Index of Multiple Deprivation - Essex Countywide LCWIP

Index of Multiple Deprivation decile

- 1 (most deprived)
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 (least deprived)
- Local authority district boundary

10 5 0 10 20 Km

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Collision involving cyclists - Essex Countywide LCWIP

Collision involving cyclists (2018 - 23)

- Fatal
- Serious
- Local Authority District Boundary

25 12.5 0 25 Km

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Collision involving pedestrians - Essex Countywide LCWIP

Collision involving pedestrians (2018 - 23)

- Fatal
- Serious
- Local Authority District Boundary

25 12.5 0 25 Km

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Appendix B

Final Network Plans

Mid Essex LCWIP Route Proposals

Uttlesford
Braintree
Colchester
Tendring
Harlow
Chelmsford
Maldon
Epping Forest
Brentwood
Basildon
Rochford
Castle Point
Southend-on-Sea
River Stour
Rivers Colne & Blackwater

10 5 0 10 Km

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Countywide Routes
Green Link Routes
LCWIP Primary Routes
LCWIP Secondary Routes
Sustrans Routes
Active Travel Areas
Key Employment Areas
Potential Future Developments
All Education
Rail Stations
Local authority district

Esri, HERE

West Essex LCWIP Route Proposals

Braintree
Uttlesford
Tendring
Colchester
Harlow
Chelmsford
Epping Forest
Brentwood
Basildon
Castle Point
Southend-on-Sea
Rivers Colne & Blackwater

10 5 0 10 Km

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- Countywide Routes
- Green Link Routes
- LCWIP Primary Routes
- LCWIP Secondary Routes
- Sustrans Routes
- Active Travel Areas
- Key Employment Areas
- Potential Future Developments
- All Education
- Rail Stations
- Local authority district

South Essex LCWIP Route Proposals

Harlow
Uttlesford
Braintree
Colchester
Rivers Colne & Blackwater
Epping Forest
Chelmsford
Maldon
Brentwood
Basildon
Rochford
Castle Point
Southend-on-Sea
Thames Estuary
River Medway

- Countywide Routes
- Green Link Routes
- LCWIP Primary Routes
- LCWIP Secondary Routes
- Sustrans Routes
- Active Travel Areas
- Key Employment Areas
- Potential Future Developments
- All Education
- Rail Stations
- Local authority district

9 4.5 0 9 Km

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Esri, HER

Countywide LCWIP Route Proposals

Uttlesford
Braintree
Colchester
Tendring
Harlow
Chelmsford
Maldon
Epping Forest
Brentwood
Basildon
Rochford
Southend-on-Sea
Castle Point

10 5 0 10 20 Km

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Countywide Routes
Green Link Routes
LCWIP Primary Routes
LCWIP Secondary Routes
Sustrans Routes
Active Travel Areas
Key Employment Areas
Potential Future Developments
All Education
Rail Stations
Local authority district

Esri, HER

Appendix C

Stakeholder Consultation Comments

Consultation Comments

Mid Essex

Route	Route Location	No of comments	Route Suggestion	Infrastructure	Safety
Mid Essex cycle route 1	Great Yeldham - Colchester	13	7	2	6
Mid Essex cycle route 2	Earls Colne – Tollesbury	1	0	0	0
Mid Essex cycle route 3	Coggeshall – Marks Tey - Feering	10	1	6	8
Mid Essex cycle route 4	Colchester – Harwich	28	5	9	17
Mid Essex cycle route 5/5A	Colchester – Clacton/Frinton	7	2	1	3
Mid Essex cycle route 6	Colchester - Brightlingsea	11	5	8	6
Mid Essex cycle route 7	Braintree – Ingatestone	6	2	1	3
Mid Essex cycle route 8	Chelmsford – Maldon	1	1	0	0
Mid Essex cycle route 9	Danbury – South Woodham	2	2	0	0
Mid Essex cycle route 10	Chelmsford – Witham	3	0	1	2
Mid Essex cycle route 11	East Bergholt – Manningtree	1	0	0	1
Mid Essex cycle route 12	Burnham – Bradwell	16	6	7	14
Mid Essex cycle route 13	Maldon – Bradwell	7	3	3	3
Mid Essex cycle route 14	Ardleigh - Manningtree	10	4	2	3
Mid Essex cycle route 15	Braintree- Witham	1	1	1	1

Consultation Comments

Mid Essex

Route	Route Location	No of comments	Route Suggestion	Infrastructure	Safety
Mid Essex Green Link Route 1	Halsted – Boxted	3	3	2	0
Mid Essex Green Link Route 2	Braintree – Hatfield Peverel	2	2	0	0
Mid Essex Green Link Route 3	Hatfield Peverel – Maldon	1	1	0	0
Mid Essex Green Link Route 4	Coggeshall – Maldon	2	2	0	2
Mid Essex Green Link Route 6	Little Clacton - Harwich	1	1	0	0
Mid Essex Green Link Route 7	Halstead – Sudbury	2	1	0	1
Mid Essex Green Link Route 8	Abberton – West Mersea	4	4	0	0
Colchester Town LCWIP	Colchester	17	1	13	7
Manningtree ATA	Manningtree	2	0	2	0
Coggeshall ATA	Coggeshall	1	1	1	0
Brightlingsea ATA	Brightlingsea	4	2	5	1
Burnham ATA	Burnham-on-Crouch	6	0	6	3
Chelmsford Town LCWIP	Chelmsford	14	4	12	6
Colchester	Colchester	1	0	1	0
Maldon	Maldon	14	13	5	4
Tendring	Tendring	1	1	0	0
Chelmsford	Chelmsford	1	1	0	0
NCN 1	Langham Hall - Chelmsford	2	2	0	0
NCN 13	Sudbury – Billericay	1	1	0	0
NCN 50	Great Leighs	1	1	0	0
NCN 51	Brightlingsea - Colchester	2	0	0	0
NCN 150	Jaywick - Frinton	3	3	2	1

Consultation Comments

Mid Essex

Route	Route Location	No of comments	Route Suggestion	Infrastructure	Safety
Brightlingsea Town Council	Tendring and Colchester	32	9	12	13
Colchester Cycle campaign	Colchester, Tendring, Braintree	32	15	12	6
Cllr Rik Andrews - Wivenhoe	Colchester	29	0	3	6
Halstead Town Council and Greenway North Essex	Braintree	40	14	14	1
Wivenhoe Town Council	Colchester	6	3	1	3
Cllr Rik Andrews - Wivenhoe	Chelmsford	8	0	3	0
Sunshine Coast Greenway	Tendring	6	1	1	1
Sustrans - (share with wider team)	Essex Wide	11	4	2	1

Consultation Comments

West Essex

Route	Route Location	No of comments	Route Suggestion	Infrastructure	Safety
West Essex Route Cycle Route 1	Epping Forest – Harlow to Woodford Green	24	8	10	11
West Essex Route Cycle Route 2	Waltham Abbey to Cheshnut	11	8	4	4
West Essex Route Cycle Route 3	Flitch way – Uttlesford (Rayne to Bishop Stortford)	37	24	2	16
West Essex Route Cycle Route 4	Harlow Mill to Sawbridgeworth	3	3	3	3

Consultation Comments

South Essex

Route	Route location	No of comments	Route Suggestion	Infrastructure	Safety
South Essex Cycle Route 1	Southend Artieral Road to Victoria Avenue	2	0	1	0
South Essex Cycle Route 6	London Road to Southend Central Station	2	1	0	0
South Essex Green Link Route 1	Battlesbridge – South Woodham	1	1	0	0
South Essex Green Link Route 2	South Woodham – Mundon	1	1	1	1
South Essex Green Link Route 3	Chelmsford - Wickford	2	2	0	0
South Essex Green Link 4	Ingatestone to Billericay	1	0	0	0
South Essex Green Link Route 5	Cold Norton – Southminster	14	14	0	8
NCN (Southend sea front route)	Chalkwell Esplanade to Shoeburryness	1	1	0	0

Appendix D

Consultation Outputs – Changes to Network

Final Network Plans

Consultation Outputs – Changes to Network

Area	Route	Changes
Mid Essex Cycle Routes	Mid Essex Cycle Route 4	Realigned through Wrabness and the link from Ardleigh to Lawford now follows Grange Road a much quieter route
	Mid Essex Cycle Route 6	Realigned off Church Road to access Brightlingsea via Samson's Road and Bateman's Road
	Mid Essex Cycle Route 7	Extended to connect to Great Waltham and NCN 50
	Mid Essex Cycle Route 8	Extended to connect Cycle Route 8 and NCN 1 along Little Baddow Road and The Ridge
	Mid Essex Cycle Route 12	Realigned between Burnham-on-Crouch and Southminster in line with Cycle Greenway proposals
	Mid Essex Cycle Route 14	Realigned down Dedham Road
	Mid Essex Cycle Route 15	Realigned between Braintree and Witham through Black Notely, White Notley and Falkbourne
	Mid Essex Cycle Route 17	Realigned to follow Halstead Town Council and Greenway North Essex.
Green Links	Mid Essex Green Link 1	Extended from Boxted to Dedham connecting via National Cycle Network Route 1
	Mid Essex Green Link 3	Extended to Hatfield Peverel Leisure Facilities
	Mid Essex Green Link 8	Extended from West Mersea to Monkwick
	Mid Essex Green Link 10	Added to link Colchester and Ardleigh via Crockleford Hill/Bromley Road to support journeys from Greenstead and the East Colchester garden community
Countywide Routes	West Essex Cycle Route 1	Redirected up Rye Hill to link to Harlow via Latton Priory housing site
	West Essex Cycle Route 2	Redirected via Parklands rather than Farm Hill Road to Waltham Abbey
	West Essex Cycle Route 3	Extended to Stansted Airport, previously only identified on the Town LCWIP's
	West Essex Cycle Route 3	Requires further discussion regarding alternative route from Flitch Way to Bishops Stortford due to the M11. Alternative routes identified aerially but audits required to understand accessibility and cyclability
	West Essex Cycle Route 4	Extended to Old Harlow and to National Route 11 of the National Cycle Network, which will connect Harlow in Essex with Wigginhall St Germans (south of King's Lynn) in Norfolk via Cambridge and Ely
	Added West Essex Cycle Route 5	To join Epping to Chipping Ongar via North Weald and A414 where at least there new housing developments are planned
Countywide Routes	South Essex Cycle Route 1	Extended to National Route 16 of the National Cycle Network
	South Essex Cycle Route 6	Extended to London Southend Airport and Business Park via Manners Way

Appendix E

Optioneering & Plans

N

Map Legend

- Countywide - Mid Essex Cycle Route 9
- Proposed School Streets
- Industrial
- Non-residential developments
- Cycle Parking
- Junction Improvements
- Existing Liveable Neighbourhood
- 20mph Zone
- PRoW
- Station Access Improvements for Pedestrians & Cyclists

South Woodham Ferrers

wsp

0 250 500 m

N

Map Legend

- Countywide – Mid Essex Cycle Route 1
- Countywide – North Essex Cycle Route 1
- Proposed School Streets
- Industrial
- Non-residential developments
- Cycle Parking
- Junction Improvements
- Existing Liveable Neighbourhood
- 20mph Zone
- PRoW
- Station Access Improvements for Pedestrians & Cyclists

Halstead

wsp

0 250 500 m

N

Map Legend

- Countywide – West Essex Cycle Route 4
- Proposed School Streets
- Industrial
- Non-residential developments
- Cycle Parking
- Junction Improvements
- Existing Liveable Neighbourhood
- 20mph Zone
- PRoW
- Station Access Improvements for Pedestrians & Cyclists

Great Dunmow

wsp

0 250 500 m

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Improve connection with shared use along A127

Improved cycle / pedestrian crossing across High Road

Wayfinding to signalised junction further south

Proposed Toucan Crossing

Proposed pedestrian signalised junction

School Ave

A127 Southend Arterial Road

W Mayne

Shared Use Wayfinding Maintenance

Continuous shared use crossing

Wayfinding to PRoW

Extension of shared use on both sides of carriageway to signalised crossing as well as upgrade to toucan crossing

Continuous shared use crossing

Wayfinding to PRoW

Continuous shared use crossing

Improved crossing connectivity with PRoW

Basildon to Southend-on-Sea

wsp

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Wayfinding to PRoW

Removal of street clutter

Wayfinding to PRoW

A127 Southend Arterial Road

A127 Southend Arterial Road

Improved pedestrian / cycle crossing

Introduction of toucan crossing

Shared use to be introduced in existing gap

Continuous shared use crossing

wsp

Basildon to Southend-on-Sea

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

A127 Southend Arterial Road

A127 Southend Arterial Road

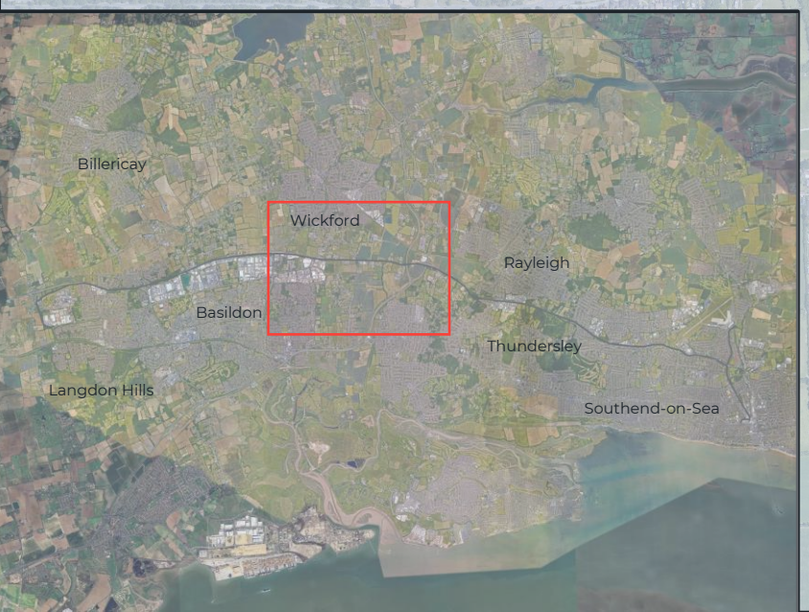
Continuous shared use crossing

Improved pedestrian / cycle crossing

Improved pedestrian / cycle crossing

Wayfinding to PRoW

Continuous shared use crossing



Basildon to Southend-on-Sea

N

Improved pedestrian / cycle crossing

Move signage off footpath

A127 Southend Arterial Road

Wayfinding to PRoW

Provision of shared use on Arterial Road through carriageway narrowing

Continuous shared use crossing

Continuous shared use crossing

Upgrade of existing to toucan crossings

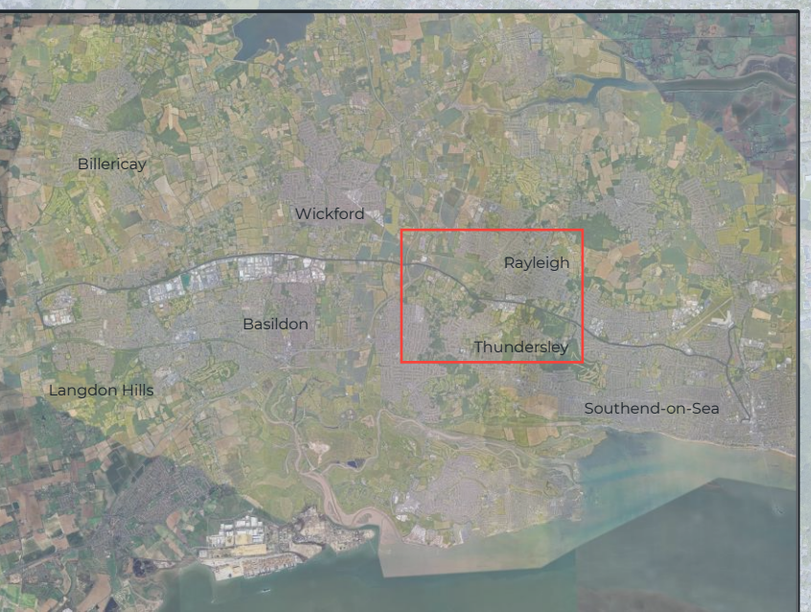
Introduction of toucan crossing at side road with Claydons Lane

Improved pedestrian / cycle crossing

A127 Southend Arterial Road

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements



Basildon to Southend-on-Sea

N

Map Legend

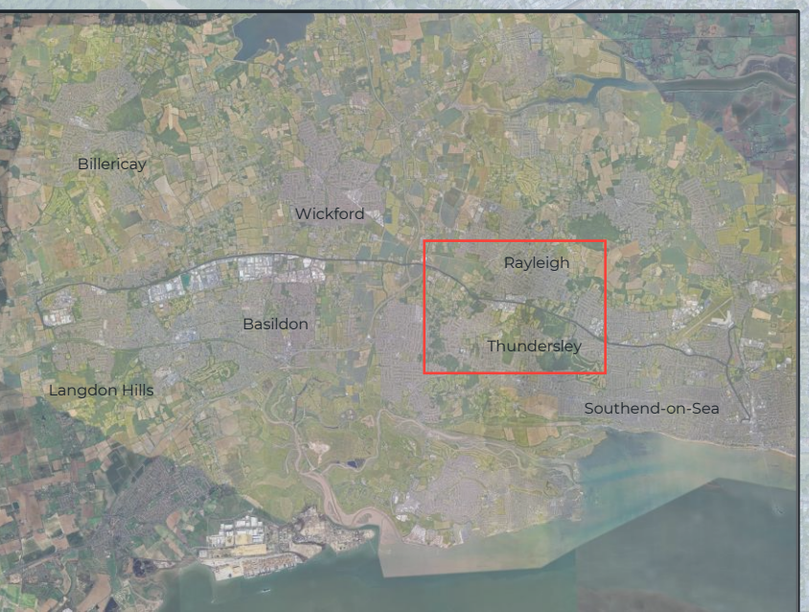
- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

A127 Southend Arterial Road

Introduction of additional pedestrian crossing to cater for desire lines

Upgrade existing roundabout to ease north-south crossing

A127 Southend Arterial Road



Basildon to Southend-on-Sea

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

A127 Southend Arterial Road

Manners Way

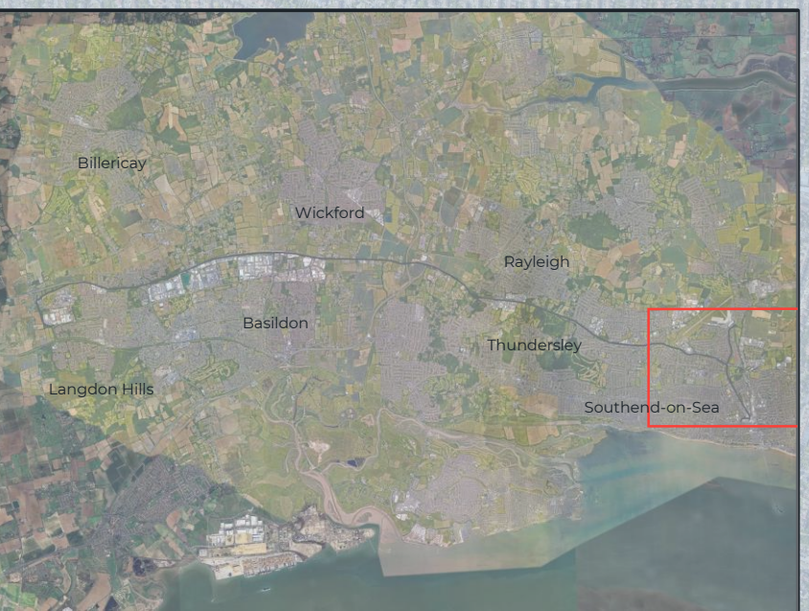
Victor Avenue

Remove informal on street parking

Upgrade existing roundabout to ease north-south crossing

Introduction of additional pedestrian crossing to cater for desire lines

Replacement of underpass footway with signalised pedestrian crossing



Basildon to Southend-on-Sea

Woodford to Harlow

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Reduce junction radii to facilitate safer pedestrian crossing

King's Ave – Footway resurfacing and widening to allow for pedestrian/cycle shared use

High Rd – Footway resurfacing and widening to allow for pedestrian/cycle shared use

Footway resurfacing and widening

Dropped kerbs and tactile paving

Wayfinding to PRoW

Vegetation clearance along High Rd

Westbury Ln - Restrict footway parking

Vegetation clearance

Introduction of pedestrian crossings with dropped kerbs and tactile paving at all junction corners to cater for desire lines

Restrict footway parking

Reduce junction radii to facilitate safer pedestrian crossing, with dropped kerbs and tactile paving

Wayfinding to PRoW

Reduce junction radii with footway buildout for desire line

Queen's Ave

King's Ave

Station Way

Westbury Ln

Palmerston Rd

Buckhurst Way

Albert Road

High Rd (A121)

Woodford to Harlow

wsp

Woodford to Harlow

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Incorporate shared use facility with footway widening and resurfacing

Church Hill - Vegetation clearance and increased lighting provision

Wayfinding to PRoW

Improved pedestrian / cycle crossing / footway widening

Introduction of toucan crossing on desire line

England's Ln - Restrict footway parking and resurface / widen footway

England's Ln - Vegetation clearance and increased lighting provision. Footway resurfacing and widening necessary

England's Ln – Remove heavy vegetation overgrowth, resurfacing and widening on both sides

Wayfinding to PRoW

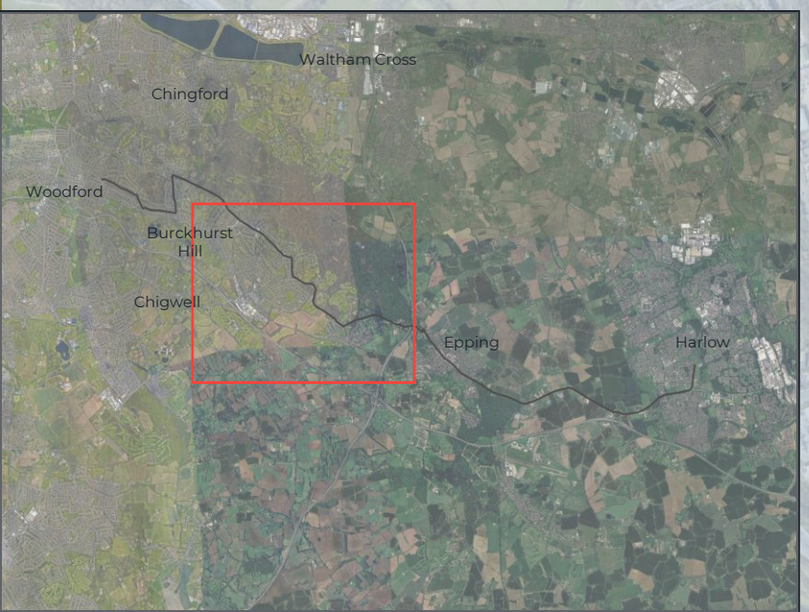
High Rd (A121)

Church Hill (A121)

England's Ln

Deepden Ln

Loughton Ln



N

Woodford to Harlow

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
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- Junction Improvements

Piercing Hill – Vegetation clearance and increased lighting provision. Footway implementation needed for increased continuity

High Rd – Vegetation clearance and increased lighting provision

Loughton Ln – Vegetation clearance and increased lighting provision. Footway resurfacing needed

Wayfinding to PRoW

Introduction of toucan crossing

Loughton Ln

Piercing Hill

Theydon Rd

High Rd (B1393)

Woodford to Harlow

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Wayfinding to PRoW

High Rd – Vegetation clearance, Incorporate shared use facility with footway widening and resurfacing, and increased lighting provision

Wayfinding to PRoW

London Rd – Vegetation clearance and increased lighting provision

Introduction of toucan crossing

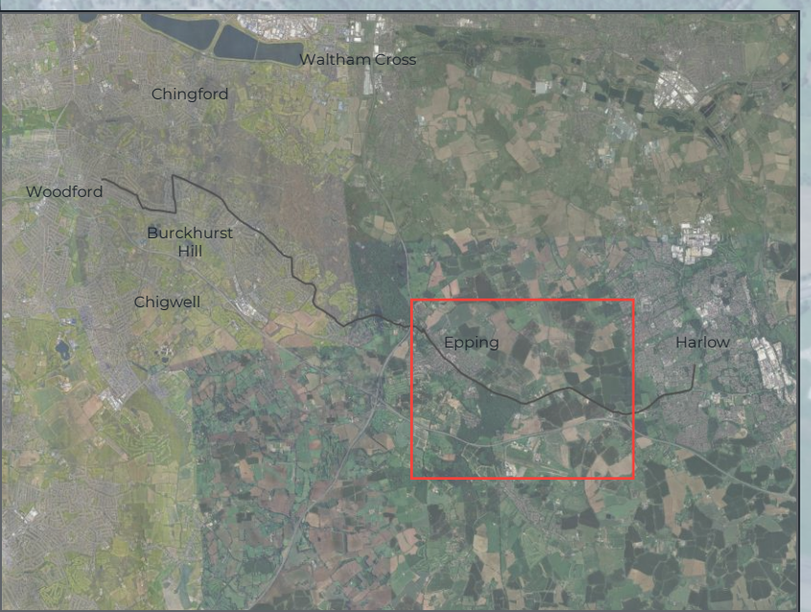
Advanced Stop Lines (ASLs)

Wayfinding to PRoW

Wayfinding to PRoW

High Rd (B1393)

London Rd (B1393)



Woodford to Harlow

N

Map Legend

- Resurfacing of shared use
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- Wayfinding
- Junction Improvements

Second Ave (A1025)

A414

A414

Wayfinding to PRoW

Wayfinding to PRoW

Vegetation clearance and increased lighting provision

Introduction of toucan crossing

wsp

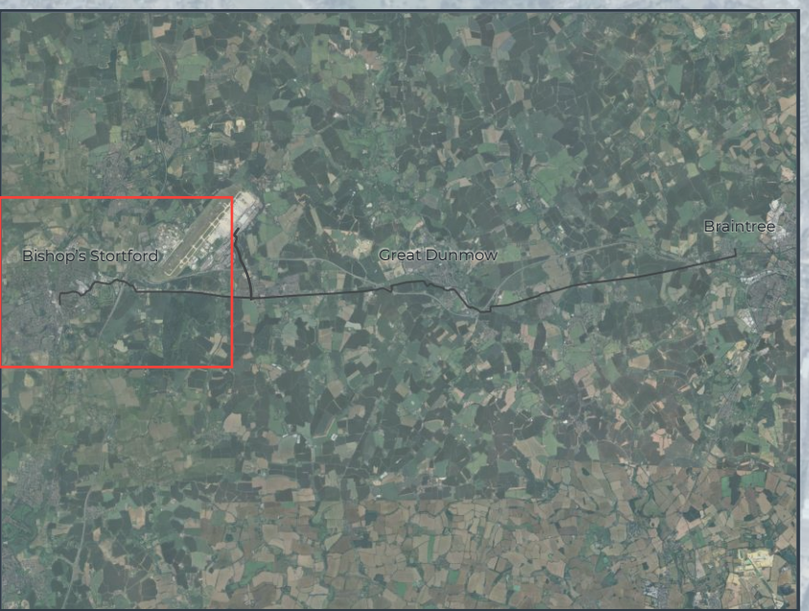
N

"Flitch Way" route (PRoW) – Explore potential for walking and cycling friendly improvements including the following:

- Re-surfacing and repaving for enhanced accessibility and drainage
- Footpath widening
- Improved and greater wayfinding signage provision
- Enhanced lighting provision
- Increased number of rest areas / benches on route
- Vegetation maintenance
- Removal of barriers

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements



Bishop's Stortford to Rayne

Bishop's Stortford to Rayne

N

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- Removal of barriers

Terminal Road N

Parsonage Road

Flitch Way

Flitch Way

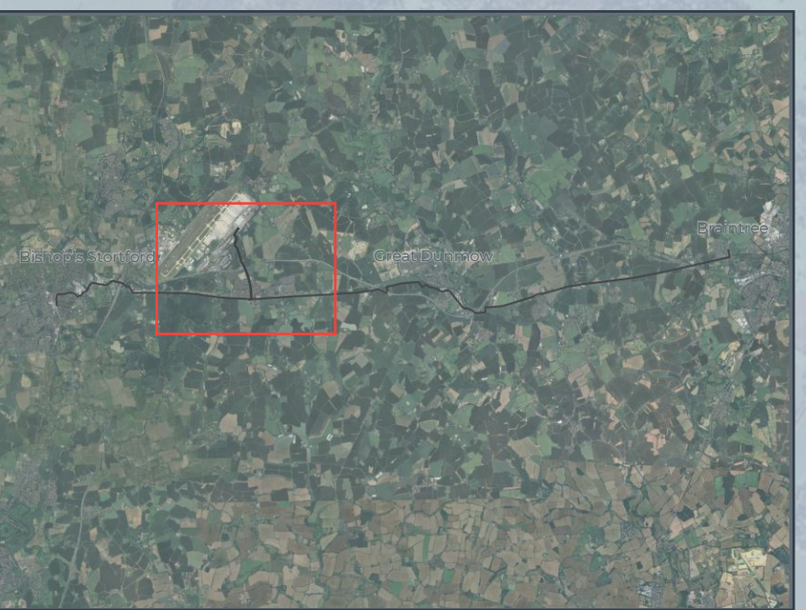
Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW

Removal of barriers

"Flitch Way" route (PRoW)



Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
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- Wayfinding
- Junction Improvements

N

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Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

"Flitch Way" route (PRoW)

Wayfinding to PRoW

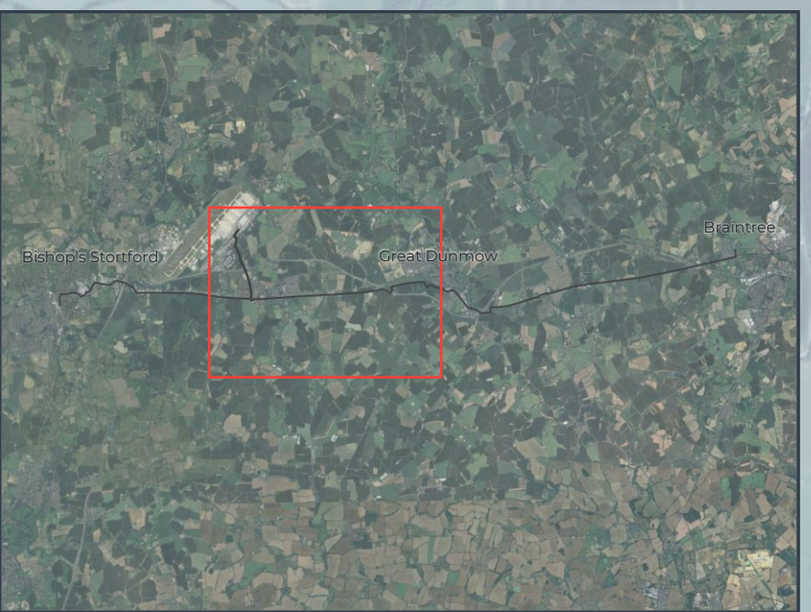
Flitch Way

Flitch Way

Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW



Bishop's Stortford to Rayne

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

"Flitch Way" route (PRoW)

Wayfinding to Chelmsford Road

Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW

Ash Grove

Chelmsford Rd

Flitch Way

Flitch Way

Flitch Way

"Flitch Way" route (PRoW) – Explore potential for walking and cycling friendly improvements including the following:

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- Footpath widening
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- Enhanced lighting provision
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- Vegetation maintenance
- Removal of barriers

Bishop's Stortford to Rayne

Bishop's Stortford to Rayne

N

"Flitch Way" route (PRoW) – Explore potential for walking and cycling friendly improvements including the following:

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- Footpath widening
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- Enhanced lighting provision
- Increased number of rest areas / benches on route
- Vegetation maintenance
- Removal of barriers

"Flitch Way" route (PRoW)

Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW

Flitch Way

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
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- Junction Improvements

N

"Flitch Way" route (PRoW) – Explore potential for walking and cycling friendly improvements including the following:

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Map Legend

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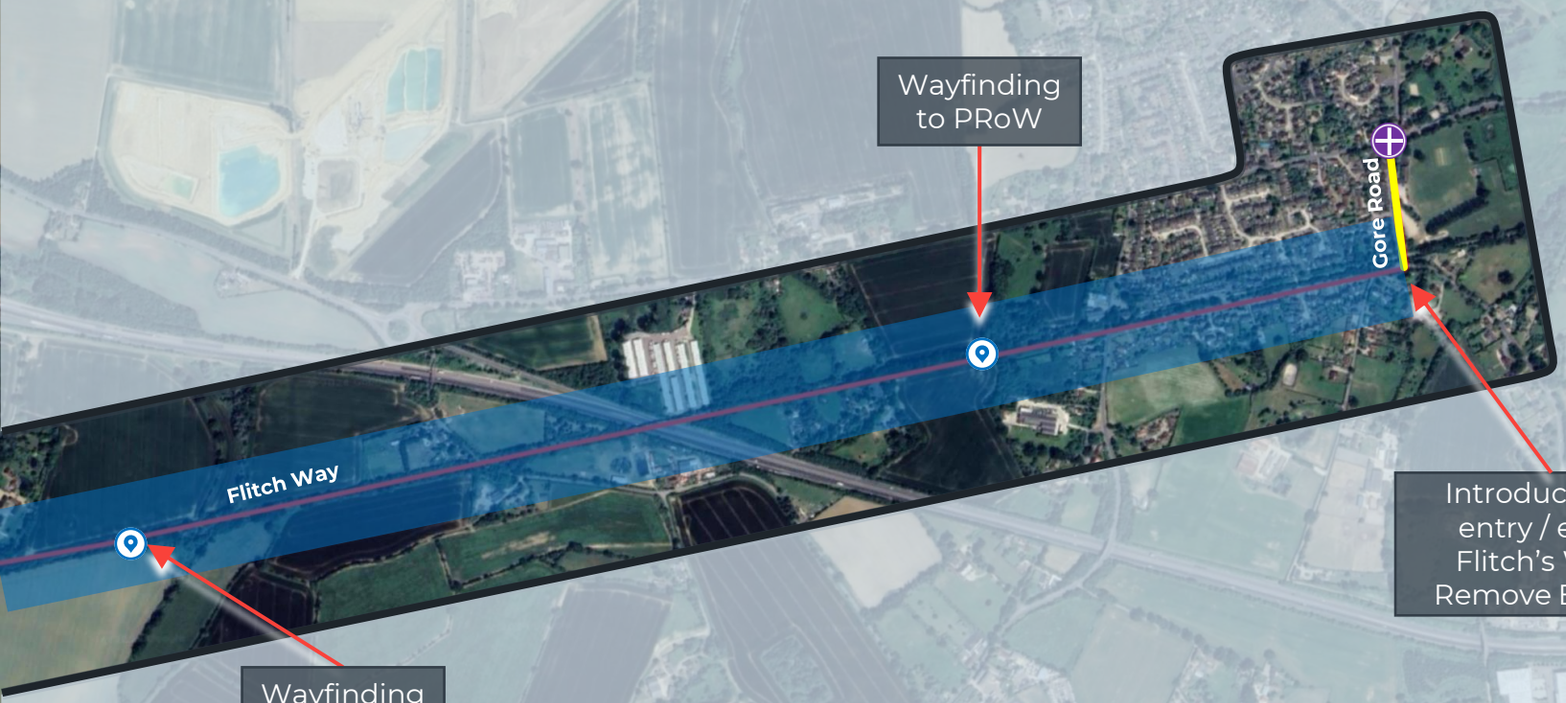
- Wayfinding
- Junction Improvements



Bishop's Stortford to Rayne

Great Yeldham to Colchester

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Wayfinding to PRoW

Wayfinding to PRoW

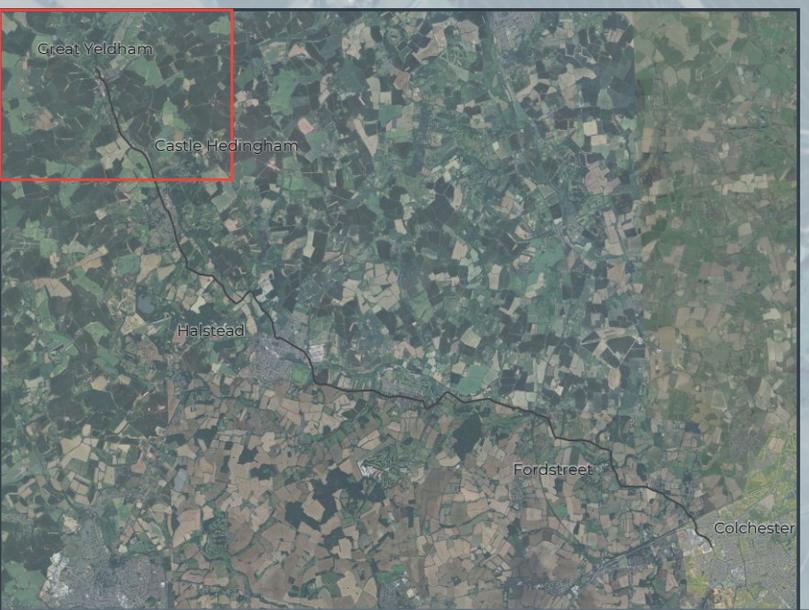
Wayfinding to PRoW

Church Rd (A1017)

High Street (A1017)

Poole Street (A1017)

Dickett's Hill Street (A1017)



wsp

Great Yeldham to Colchester

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Dickett's Hill (A1017)

Yeldham Rd (A1017)

Swan Street (A1017)

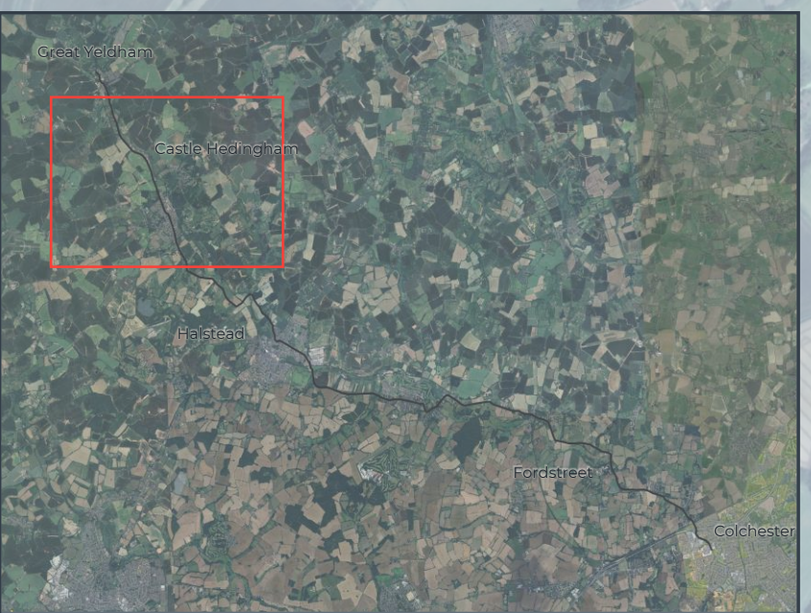
Potter Street (A1017)

Wayfinding to PRoW

Wayfinding to PRoW

Remove pedestrian refuge island

Wayfinding to PRoW



Great Yeldham to Colchester

N

Potter Street (A1017)

Wayfinding to PRoW

Halstead Road (A1124)

Wayfinding to PRoW

Hedingham Road (A1124)

Hedingham Road (A1124)

Wayfinding to PRoW

Head Street (A131)

Colchester Rd (A1124)

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

wsp

Great Yeldham to Colchester

N

Colchester Rd (A1124)

Wayfinding to PRoW

Stonebridge Hill (A1124)

Halstead Rd (A1124)

High Street (A1124)

Church Hill (A1124)

Lower Holt Street (A1124)

Upper Holt Street (A1124)

Wayfinding to PRoW

Wayfinding to PRoW

Remove pedestrian refuge island or upgrade crossing

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Great Yeldham to Colchester

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Upper Holt Street (A1124)

Lower Holt Street (A1124)

Colneford Hill (A1124)

Colchester Rd(A1124)

Colchester Rd(A1124)

Tyburn Hill (A1124)

Wakes Street (A1124)

Colchester Rd (A1124)

Colchester Rd (A1124)

Wayfinding to PRoW

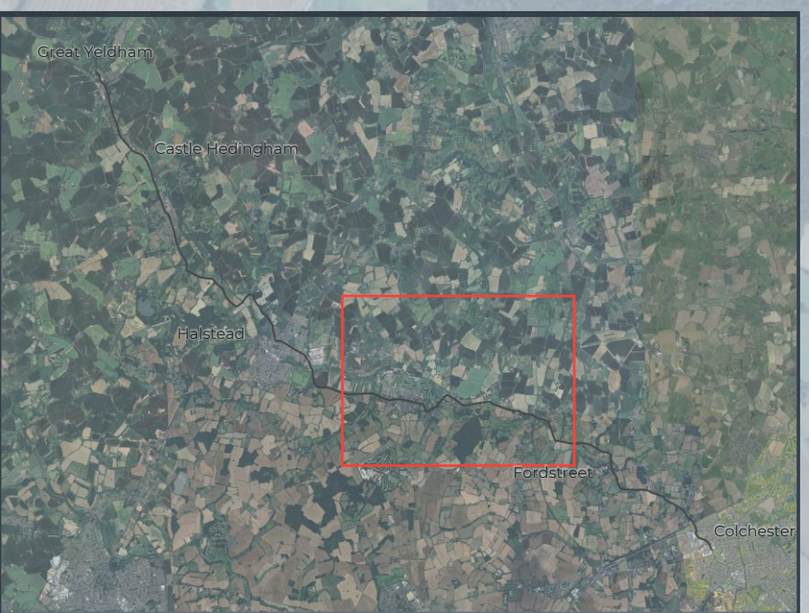
Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW

Wayfinding to PRoW



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Great Yeldham to Colchester

N

Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Colchester Rd (A1124)

Halstead Rd (A1124)

Remove pedestrian refuge island or upgrade crossing

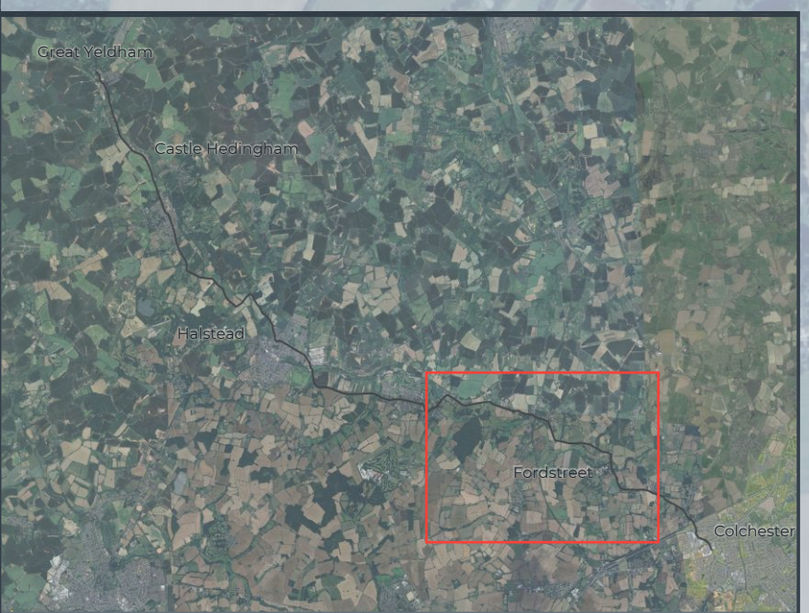
Wayfinding to PRoW

Halstead Rd (A1124)

Wayfinding to PRoW

Halstead Rd (A1124)

Wayfinding to PRoW



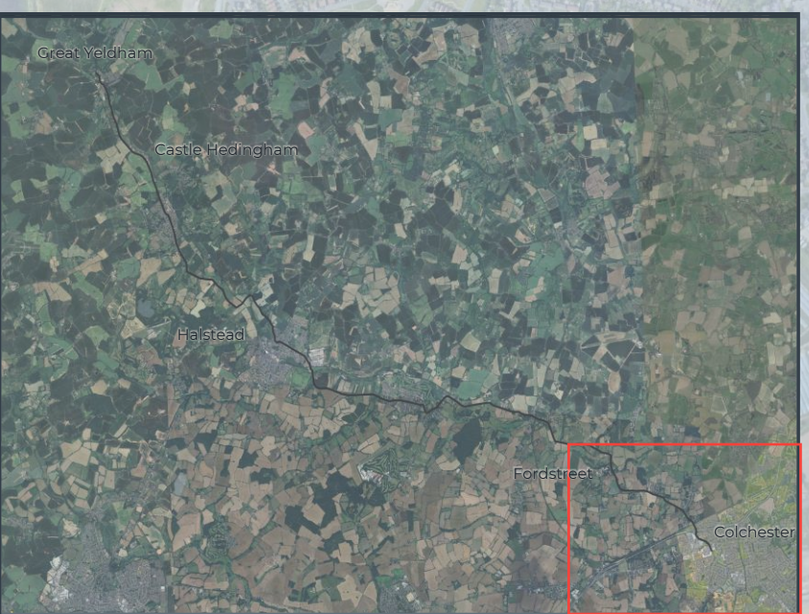
Great Yeldham to Colchester

N

Halstead Rd (A1124)

Essex Yeomanry Way (A1124)

Tollgate Rd



Map Legend

- Resurfacing of shared use
- Introduction of shared use, with widening, resurfacing & introduction of a verge where possible
- On street cycle infrastructure
- Wayfinding
- Junction Improvements

Appendix F

Optioneering Costings

Optioneering Active Travel Areas and Corridors

Costing

Route	Location	Unique Infra Ref	Category of Infrastructure (self-populates)	Size of Infrastructure (metres/square meters/Kilometers)	Size of Infrastructure (square metres)	Minimum Number of Instances*	Maximum Number of Instances*	Lower cost (£ unit cost)	Upper cost (£ unit cost)	Lower cost (£ cost)	Upper cost (£ cost)
Route 1- Basildon to South end on sea	B148/ W Mayne, School Ave/A127	A5	Cycle Track Resurfacing	1380				40	70	£ 55,200	£ 96,600
	Mandeville Way/W Mayne, A127-Improved crossing connectivity with PRoW	B4	Raised entry over side road			2	2	5000	10000	£ 10,000	£ 20,000
	Mandeville Way/W Mayne Junction, School Ave/A127, A127/A130,A1245/A127, Along A127	F2	Signs			20	20	300	500	£ 6,000	£ 10,000
	School Ave/A127, A127/A176, Nevendon Junction, Claydons Lane	C4	Toucan Crossing			4	4	50000	75000	£ 200,000	£ 300,000
	Along A127	A1	Off-road fully segregated cycle track	24050				216	322	£ 5,194,800	£ 7,744,100
	Mandeville Way/W Mayne Junction, School Ave/A127, W Mayne/School Ave, A127/High Rd, A1245/A127, Along A127 - Continous Shared Crossing	B4	Raised entry over side road			16	16	5000	10000	£ 80,000	£ 160,000
	A129/A127 Junction (Upgrade)	C6	Upgrade puffin to toucan			2	2	20000	45000	£ 40,000	£ 90,000
	Improvements in cycle and pedestrain crossings and Roundabout improvments (Considered for Zebra Crossings)	C1	Zebra crossing			12	12	10000	15000	£ 120,000	£ 180,000
	Signalised Junction	C7	Signalised Junction			2	2	15000	20000	£ 30,000	£ 40,000
	Moving of signage - Along A127	F2	Signs			4	4	210	350	£ 840	£ 1,400
									TOTAL	£ 5,736,840	£ 8,642,100

Route	Location	Unique Infra Ref	Category of Infrastructure (self-populates)	Length of Infrastructure (metres)	Size of Infrastructure (square metres)	Minimum Number of Instances*	Maximum Number of Instances*	Lower cost (£ unit cost)	Upper cost (£ unit cost)	Lower cost (£ cost)	Upper cost (£ cost)
Route 2- Woodford to Harlow	Junction Improvements	B4	Raised entry over side road			19	19	5000	10000	£ 95,000	£ 190,000
	Wayfinding and Signage along the route	F2	Signs			28	28	300	500	£ 8,400	£ 14,000
	Toucan Crossing along A127	C4	Toucan Crossing			1	1	50000	75000	£ 50,000	£ 75,000
	Advanced Stop Lines (ASLs)	C8	Parallel Crossing			1	1	12500	15000	£ 12,500	£ 15,000
									TOTAL	£ 165,900	£ 294,000

Route	Location	Unique Infra Ref	Category of Infrastructure (self-populates)	Length of Infrastructure (metres)	Size of Infrastructure (square metres)	Minimum Number of Instances*	Maximum Number of Instances*	Lower cost (£ unit cost)	Upper cost (£ unit cost)	Lower cost (£ cost)	Upper cost (£ cost)
Route 3- Bishop's Stortford -	A1250 - On-street Cycle Infrastructure	A3	On-road cycle lane	2042				5	71	£ 10,210	£ 144,982
	A120/B1256, Chelmsford Rd	A1	Off-road fully segregated cycle track	5503				216	322	£ 1,188,648	£ 1,771,966
	Junction Improvements	B4	Raised entry over side road			**16**	**16**	5000	10000	£ 80,000	£ 160,000
	Wayfinding	F2	Signs			**76**	**76**	300	500	£ 22,800	£ 38,000
									TOTAL	£ 1,301,658	£ 2,114,948

Route	Location	Unique Infra Ref	Category of Infrastructure (self-populates)	Length of Infrastructure (metres)	Size of Infrastructure (square metres)	Minimum Number of Instances*	Maximum Number of Instances*	Lower cost (£ unit cost)	Upper cost (£ unit cost)	Lower cost (£ cost)	Upper cost (£ cost)
Route 4-Tollgate Centre park - Great Yeldham	Along A1017/ A1124	A1	Off-road fully segregated cycle track	26034				216	322	£ 5,623,344	£ 8,382,948
	A1017/ Swan street, A1124/ Colchester road	A3	On-road cycle lane	2266				5	71	£ 11,330	£ 160,886
	Wayfinding	F2	Signs			82	82	300	500	£ 24,600	£ 41,000
	Junction Improvements	B4	Raised entry over side road			35	35	5000	10000	£ 175,000	£ 350,000
									TOTAL	£ 5,834,274	£ 8,934,834