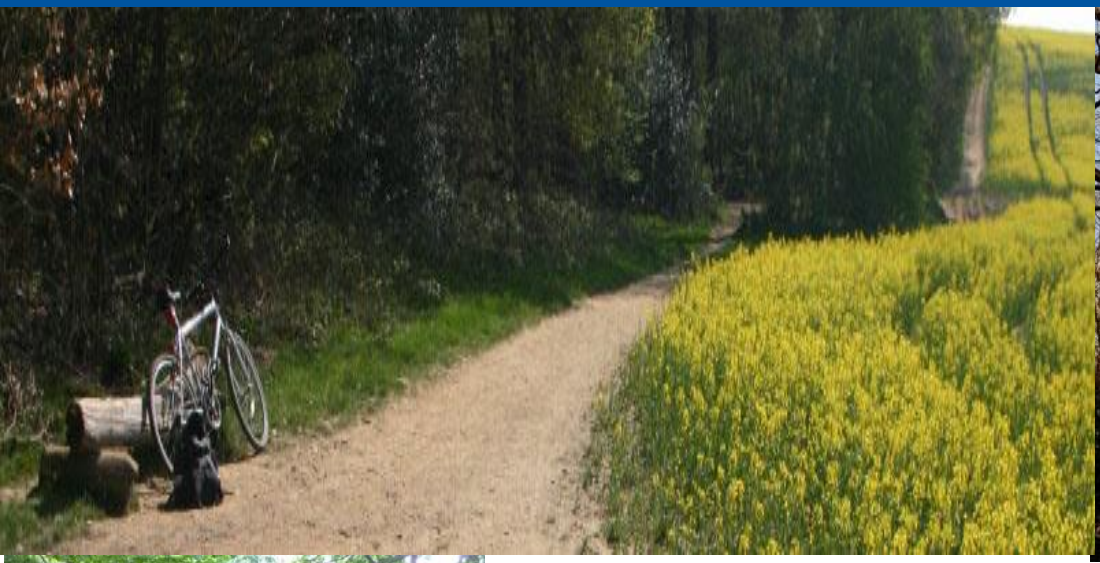
Essex Highways

Rochford District Cycling Action Plan

Highways/Transport Planning

January 2018



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Essex County Council

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Executive Summary

Essex Highways was commissioned by Essex County Council to produce a Cycling Action Plan (CAP) for Rochford District, as part of a commitment in the Essex Cycling Strategy to create Cycling Action Plans for every Borough/ District.

The purpose of the Essex Cycling Strategy is to set out the key elements of a long term plan that will lead to a significant and sustained increase in cycling in Essex, establishing it in the public's mind as a 'normal or regular' mode of travel, especially for short A-to-B trips, and as a major participation activity and sport for all ages.

To help achieve this, Essex is committed to establishing a coherent, comprehensive and advantageous cycle network in every major urban area, utilising a combination of on-carriageway and off-carriageway cycle facilities. To enable this, each Borough/ District in Essex will have an up to date Cycling Action Plan (renewed every five years). These are seen as key elements of a long term plan that will lead to a significant and sustained increase in cycling in Rochford District and in Essex.

This Rochford District CAP is targeted towards the specific needs of Rochford District's residents, which will assist Essex County Council (ECC) in tackling wider problems associated with poor health, pollution, traffic congestion and inequalities of opportunities for Rochford's youth population and people on low incomes.

The aims of this Action Plan are to:

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

Understanding current levels and conditions for cycling has been important in developing this CAP, which has involved analysis and consideration of 2011 Census data, the Active People Survey (by Sport England), Department for Transport count data, collision data, cycle crime statistics and topography.

In order to create an environment where cycling is normal for the residents of Rochford, it will be necessary to remove existing barriers to cycling and a series of cycle routes provided, with the aim of creating a connected cycle network over

time. Cycling infrastructure should provide for both key utility journeys and encourage leisure cycling.

The key recommendations and schemes are listed in Sections 6, 7 and 8 of this CAP and are summarised in Section 11 and below.

Key Recommendations

Taking into account the current barriers to cycling in Rochford District, commuter flow analysis and locations of committed development, the following key recommendations have been made for cycle enhancements in the District:

- Review existing route signage and lighting;
- Improve maintenance of existing routes;
- Develop Flagship Routes through Feasibility Studies to Detailed Design;
- Prioritise North – South and East-West Flagship routes, upgrading existing cycle network along Ironwell Lane and extension east to Ashingdon Road towards Rochford town centre, and west to Hockley, as well as providing a link to Southend Airport Business park;
- Provide new and improved cycle parking with a focus on satiating the demand for commuter trips at railway stations, and give consideration to provision in Hockley town centre;
- Fill obvious gaps in the existing cycle-route network (on alignments with cycle-friendly topography);
- Provide new infrastructure on key roads with cycle-friendly topography but no existing facilities;
- Update the existing cycle map every two years taking on board new innovation in cycle-map design, and promote it and disseminate it widely through a range of channels and outlets;
- Promote and market Flagship Routes with ‘Cycle Superhighway’ style branding and disseminating techniques;
- Improve Connectivity to London Southend Airport from Rochford & surrounding areas (incorporate the Joint Area Action Plan (JAAP) scheme proposals);
- Improve access to railway stations for people who cycle;
- Begin to develop a cycle network in Rayleigh; and
- Develop cross boundary routes to Castle Point, Basildon, Chelmsford and Southend-on-Sea, primarily through the proposed National Cycle Network and JAAP routes.

To ensure the potential for cycling is fully realised, new infrastructure must be accompanied by high profile and targeted promotion of cycling to ensure the full cycling potential is realised in Rochford District, particularly in urban areas. This should include the promotion of leisure cycling to take advantage of the green space within the District e.g. Hockley Woods.

Next Steps

This is a draft Action Plan and, although the potential schemes have been developed in discussion with Council representatives, further consultation is required before the overall Action Plan can be finalised.

The character of the existing highway network has been taken into account, when developing potential cycle routes and schemes – in particular existing traffic levels. Broad costs of schemes have been identified, as well as broadly prioritising schemes against deliverability, directness, extension of the existing network and proximity to key attractors. However, the potential routes and schemes have not been constrained to a set budget and the feasibility and the precise cost of the routes can only be established through further study.

1 Introduction

1.1 Preamble

As part of the county-wide Essex Cycling Strategy, Cycling Action Plans are being developed for individual Boroughs and Districts of Essex, including one for the District of Rochford. This document provides an opportunity to develop and promote cycling in Rochford through improved infrastructure, together with the wider promotion of cycling by Active Essex, Essex County Council (ECC) and Rochford District Council (RDC), to establish it in the public's mind as a 'normal' mode of travel, especially for short a-to-b trips, and as a major participation activity and sport for all ages.

Two key commitments of the Essex Cycling Strategy are to:

- Establish a coherent, comprehensive and advantageous cycle network in every major urban area, utilising a combination of on-carriageway and off-carriageway cycle facilities; and
- Ensure each District has an up to date Cycling Action Plan (renewed every 5 years).

The Cycling Action Plans should help to identify high quality and well planned infrastructure which will be vital in encouraging cycling and improving safety. ECC will ensure that every urban area has a well-planned cycle network that:

- Connects key destinations;
- Supports a network of recreational routes; and
- Caters for all users and abilities.

Coherent cycle networks will ensure that:

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

In addition, Active Essex (County Sports Partnership) priority aims and how cycling helps achieve these aims are included in Table 1.1.

Table 1.1: Active Essex priority aims

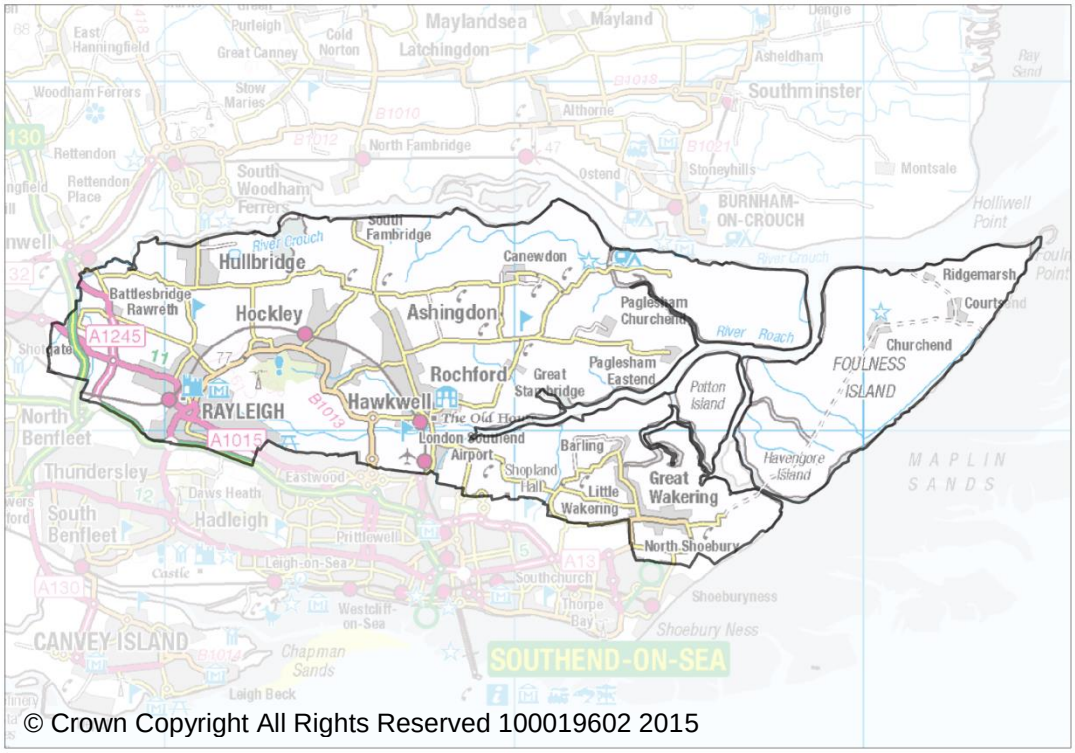
Active Essex priority aims	How cycling helps achieve these aims
Increase participation in sport and physical activity	Cycling is one of the most popular sports in Essex and can be enjoyed by people of all ages
Encourage healthy and active lifestyles	Cycling provides a means of active transport that can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

1.2 Background

The District of Rochford is situated on a peninsular between the River Thames and River Crouch and is bounded to the east by the North Sea, and to the west by the Basildon District and the City of Chelmsford. The District covers an area of 65 square miles, but has a distinctly differing character throughout. The south-west is an extension of urban areas of Southend and Castle Point, but the north and east is a sparsely populated rural coastal landscape.

The District contributes significantly to development in South Essex with plans to enlarge London Southend Airport to cater for around two million passengers per annum by 2020, and build around 250 new homes across the district each year until at least 2025. The Rochford District Core Strategy 2011 contained an Economic Development Objective to ensure the growth of local employment opportunities and deliver an additional net 3,000 local jobs by 2021. All of the above provide an opportunity to enhance and expand the cycle network across the District.

Figure 1.1 Rochford District Map



The 2011 Census records the population in Rochford District at 83,300 with most of the population living in Rayleigh, Hawkwell, Hockley and Rochford. The population has a higher proportion of older residents than national and regional averages. In addition, car ownership in the District, at an average of 1.47 vehicles per household is the third highest in Essex.

A significant proportion of the population commutes out of the District for work with 30% working in Southend alone.

1.3 Aims of the Cycling Action Plan

Although Essex County Council (ECC) and Rochford District Council (RDC) have been promoting and facilitating cycling for many years, the lack of a planned and justifiable list of interventions aimed at promoting cycling within the District means that cycling is not always prioritised.

The aims of the Cycling Action Plan are to:

- Identify how cycling levels can be increased in the District;
- Prioritise funding for new cycling schemes in Rochford;

- Create a usable, high-quality cycle network that connects residential areas with key employment locations, rail stations and town centres; and
- Create opportunities to increase recreational cycling in Rochford.

This is a draft Action Plan and, although the potential schemes have been developed in discussion with Council representatives, further consultation is required before the overall Action Plan can be finalised.

1.4 Report Structure

The remainder of this Action Plan is set out as follows:

- Section 2 – Policy Review;
- Section 3 – Data Analysis;
- Section 4 – Existing Network Provision and Barriers;
- Section 5 – Rochford's Cycling Potential;
- Section 6 – Potential Infrastructure Improvements;
- Section 7 – Prioritisation and Costings of Potential Schemes;
- Section 8 – Flagship Routes;
- Section 9 – Smarter Travel Measures;
- Section 10 – Delivery and Funding; and
- Section 11 – Key Recommendations.

2 Policy Review

2.1 Introduction

This section provides a summary of the relevant national, regional and local policies related to cycling. Relevant National, Regional and Local Policy contexts have been examined through consideration of the following documents: the UK Government's Cycling and Walking Investment Strategy (CWIS, 2017), the Essex Transport Strategy (2011) and the Rochford District Local Plan (2016).

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

At a local level, to support the planned growth in Rochford District and to enable more existing journeys to be made by bike, extending and upgrading the cycle networks is a key objective, along with promoting their use. Evidence shows that future traffic growth in the district will lead to significant parts of the highway network operating at or above capacity, causing delay.

2.2 National Policy Context

2.2.1 Cycling and Walking Investment Strategy (CWIS)

Under the Infrastructure Act 2015, the UK Government is required to set a Cycling and Walking Investment Strategy (CWIS) for England. A Draft First CWIS was published at the end of March 2016, which set out the UK Government's ambition for creating a walking and cycling nation, the targets and objectives they are working towards, the financial resources available to meet their objectives, the strategy for delivering the objectives, and the governance arrangements that will review this delivery. Following consultation, a final version of the Strategy was published in 2017.

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

Better Safety (a safe and reliable way to travel for short journeys), through:

- Streets where cyclists and walkers feel they belong, and are safe;
- Better connected communities;
- Safer traffic speeds, with lower speed limits where appropriate to the local area; and
- Cycle training opportunities for all children.

Better mobility (more people cycling and walking – easy, normal and enjoyable), through:

- More high quality cycling facilities
- More urban areas that are considered walkable;
- Rural roads which provide improved safety for walking and cycling;
- More networks of routes around public transport hubs and town centres; with safe paths along busy roads;
- Better links to schools and workplaces;
- Technological innovations that can promote more and safer walking and cycling;
- Behaviour change opportunities to support increased walking and cycling; and
- Better integrated routes for those with disabilities or health conditions.

Better streets (places that have cycling and walking at their heart), by:

- Places designed for people of all abilities and ages so they can choose to walk or cycle with ease;
- Improved public realm;
- Better planning for walking and cycling;
- More community-based activities, such as led rides and play streets where local places want them; and
- A wider green network of paths, routes and open spaces.

The document recognises that great progress has been made on cycling in the past six years. Cycling rates have increased in areas where dedicated funding has been made available and spend on cycling has risen from around £2 per person in 2010 to £6 per person in England in 2016-17. The Government want to build on these successes and to help achieve this have made over £1 billion of Government funding available to local bodies that may be invested in walking and cycling over the next five years. The £1.2 billion is allocated as follows:

- £50 million to provide cycling proficiency training for further 1.3 million children;
- £101 million to improve cycling infrastructure and expand cycle routes between the city centres, local communities, and key employment and retail sites;
- £85 million to make improvements to 200 sections of roads for cyclists;
- £80 million for safety and awareness training for cyclists, extra secure cycle storage, bike repair, maintenance courses and road safety measures;
- £389.5 million for councils to invest in walking and cycling schemes; and
- £476.4 million from local growth funding to support walking and cycling.

In addition, the government is investing an extra:

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

By 2020, the objectives of the CWIS are to:

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

2.2.2 Cycling and Walking Infrastructure Plans (CWIP)

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

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

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

While only focusing on cycling it is hoped that ECC's suite of Cycling Action Plans will contribute to the future development of an Essex CWIP by providing:

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

2.3 Regional Policy Context

2.3.1 Essex Transport Policy

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

- Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration;
- Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation and technology;
- Improve safety on the transport network and enhance and promote a safe travelling environment;
- Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use; and
- Provide sustainable access and travel choice for Essex residents to help create sustainable communities.

'Policy 14 – Cycling' states that Essex County Council will encourage cycling by:

- Promoting the benefits of cycling;
- Continuing to improve the cycling facilities within the main urban areas of Basildon, Chelmsford, Colchester and Harlow;
- Developing existing cycling networks in other towns where cycling offers an appropriate local solution;
- Working with schools and employers to improve facilities for cyclists;

- Improving access to local services by integrating the Public Rights of Way, walking and cycling networks to form continuous routes; and
- Providing training opportunities to school children and adults.

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

Improving the safety of the cycling network is also a key concern within the *Essex Transport Strategy*. Policy 14 of the plan sets out Essex County Council's approach to encouraging cycling, which includes developing cycle networks within towns across Essex and improving access to local services and schools for cyclists.

The *Infrastructure Act 2015* includes a new legal requirement for the Government to produce a cycling and walking investment strategy. The DfT's *Cycling Delivery Plan (2014)* refers to a new national cycling target, to double the number of cycling stages (trips) nationally over a 10 year period. This new target will be adopted by Essex County Council as part of the *Essex Cycle Strategy (2015)*.

Additionally, the Government has introduced a £6bn Local Growth Fund for cycling and walking. It has also set a target of achieving an annual cycling spend of £10 to £20 per head of the population. In the District this could see between £0.8m and £1.7m per year spent on improving cycling provision.

2.3.2 Essex Cycle Strategy (2016)

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

I. Establishing a coherent, comprehensive and advantageous cycle network in every major urban area, utilising a combination of on-carriageway and off-carriageway cycle facilities;

II. Ensuring each Borough or District has an up to date cycling action plan (renewed every 5 years);
III. Providing well placed and high quality cycle parking at key public destinations such as town centres, leisure facilities and railway stations;
IV. Ensuring that all new housing includes secure and easily accessible cycle storage and that new secure cycle storage is facilitated in existing housing developments;
V. Ensuring that cycling is prioritised over motorised transport in all new developments – making it easier to carry out short trips by bicycle than by car. Cycle routes within commercial and residential developments will be more direct and convenient than car routes and will connect in to existing cycling infrastructure on leaving the site;
VI. Prioritising more frequent and good maintenance of our cycle network;
VII. Providing a clear and consistent standard of good quality, well placed cycle signage – to an appropriate density, with provision of journey times as well as distances (to cater for all audiences) where possible;
VIII. Continuing to improve cycle safety at sites with actual and perceived safety problems; and
IX. Developing an improved mechanism for the reporting of safety issues.

2.4 Local Policy Context

2.4.1 Rochford District New Local Plan (2016)

The Council is in the process of preparing a new Local Plan, which will set the strategy for the future development of the District beyond 2025 (the current plan period for the adopted Core Strategy. The new Local Plan will be part of the Local Development Plan and on its adoption it will supersede a number of policies within the current adopted Local Development Plan.

It will set out the Council's strategic vision, policies and land allocations, where necessary, for meeting future needs (including housing, employment, community facilities, transport and other infrastructure needed to support development). It will also identify areas for protection, such as sites that are important for wildlife and open space.

2.4.2 Rochford Local Development Framework- Core Strategy (2011)

Rochford Local Development Framework (LDF) 2011, states that all new development sites must link and provide enhancements to the local pedestrian and cycling environment. The aim of Rochford District Council is to *'make Rochford the place of choice in the 'county to live, work and visit',* with 4,600 new homes required by 2021.

Various policies in the LDF seek to reduce the populations' reliance on the private car through development in sustainable locations accessible by alternative transport method and the delivery of new infrastructure which enables alternatives such as walking and cycling.

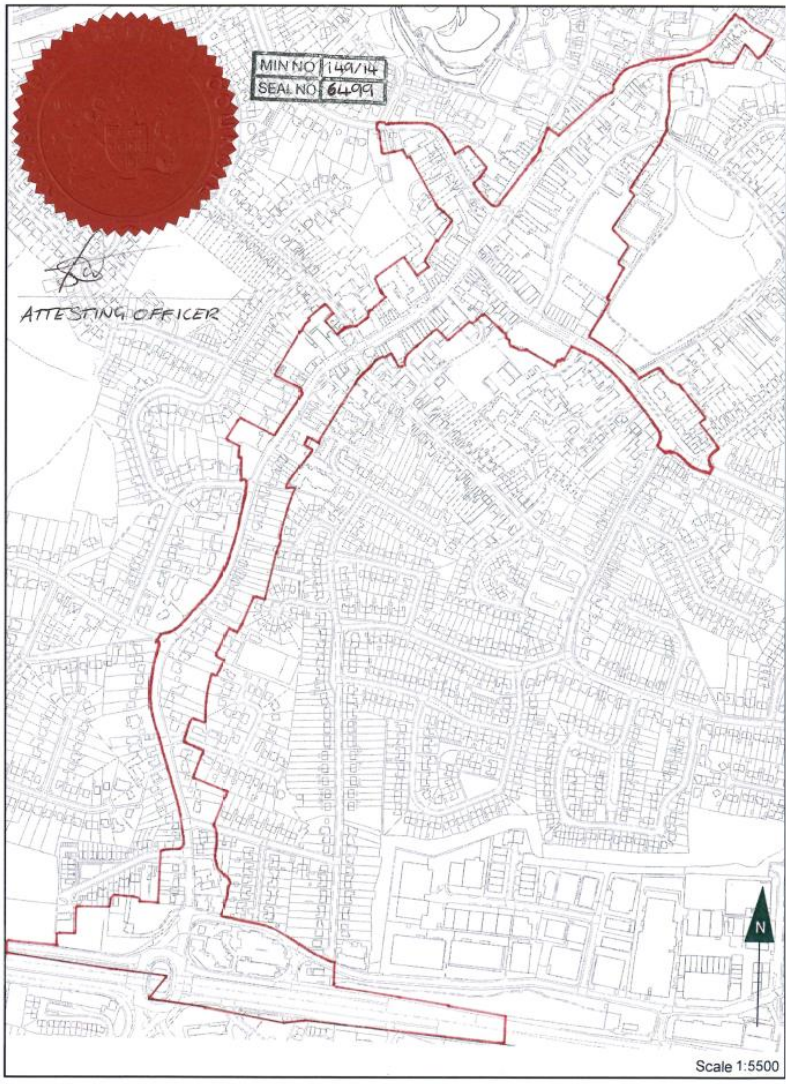
The framework also seeks to develop both formal and informal leisure facilities to which cycling could also be included as well as reducing the carbon footprint of the District. Rochford District Council is particularly committed to providing for green tourism to help sustain the local economy, particularly in rural areas.

The Wallasea Island Wild Coast Project where Crossrail tunnelling spoil is being used to create a new RSPB wetland reserve presents a particular new tourism opportunity. The formation of this new wetland reserve is a key part of Crossrail's sustainability strategy and so it is important that the reserve can be accessed by sustainable means in order to promote the underlying sustainability theme, as opposed to encouraging car access which will bring increased pollution to the area. Essex County Council in partnership with Rochford District Council have been working with Essex Highways to identify options and approximate costs for the provision of two new cycle routes linking to Wallasea Island, one connecting Rochford Rail Station to Wallasea Island and another connecting Wallasea Island to Battlesbridge and National Cycle Network 135.

Cherry Orchard Jubilee Country Park is situated within the Upper Roach Valley. The Upper Roach Valley is the large 'green lung' bounded by the towns of Rayleigh, Hockley, Rochford and Southend and includes the SSSI of Hockley Woods, already popular with recreational cyclists. The Core Strategy states that the Upper Roach Valley will be protected from development which would undermine the area's role as a green space providing informal recreational opportunities.

Also, it is important to note that an Air Quality Management Area (AQMA) has recently been declared in Rayleigh town centre in 2015, due to a marginal exceedance of the annual average level of nitrogen dioxide (NO_2), a pollutant closely associated with vehicle exhaust emissions. This is in accordance with Part IV of the Environment Act 1995 Local Quality Management. The extent of the AQMA is shown in Figure 2.1 below. Potential routes 23, 25 and 30 pass through or across Rayleigh town centre.

Figure 2.1 Rayleigh Air Quality Management Area



2.4.3 London Southend Airport and Environs Joint Area Action Plan (JAAP)

London Southend Airport, whilst modest in size compared to Stansted, is planned to grow into a successful regional airport with plans to deliver an additional 6,200 jobs to the area. The Southend Airport and Environs Joint Area Action Plan (JAAP) 2014 seeks to ensure good connectivity to the development area by all modes of transport, with appropriate improvements to sustainable transport and the highway network.

Two reports have been prepared by Sustrans, which detail proposed cycling improvements in the area. The London Southend Airport and Environs Joint Area Action Plan Walking and Cycling Improvements document details a draft study undertaken on behalf of Southend-on-Sea Borough Council, Essex County

Council and Rochford District Council (September 2014). In addition, the London Southend Airport and Environs Joint Area Action Plan Walking and Cycling 'Greenway Network'- Linking the Community was a study undertaken on behalf of Southend Borough Council, Essex County Council and Rochford District Council in December 2015, revised in February 2016. Both documents provide details of proposed cycle routes in the study area.

The JAAP sets key targets that seek to ensure that the public transport mode share of air passengers should be at least 20% by 1.5million passengers per annum. It states that the staff transport mode share by car alone should not exceed 65% and the development of the wider cycle network is key to this objective.

2.4.4 National Cycle Network Route 135, Stock to Southend 2014

Sustrans undertook a feasibility study, for Rochford Local Highways Panel, to develop a new National Cycle Network (NCN) cycle route (NCR135) between Stock and Southend.

In addition, neighbouring Southend Borough has been a high profile cycle town for a number of years and has been successful in both securing funding and providing new infrastructure.

3 Data Analysis

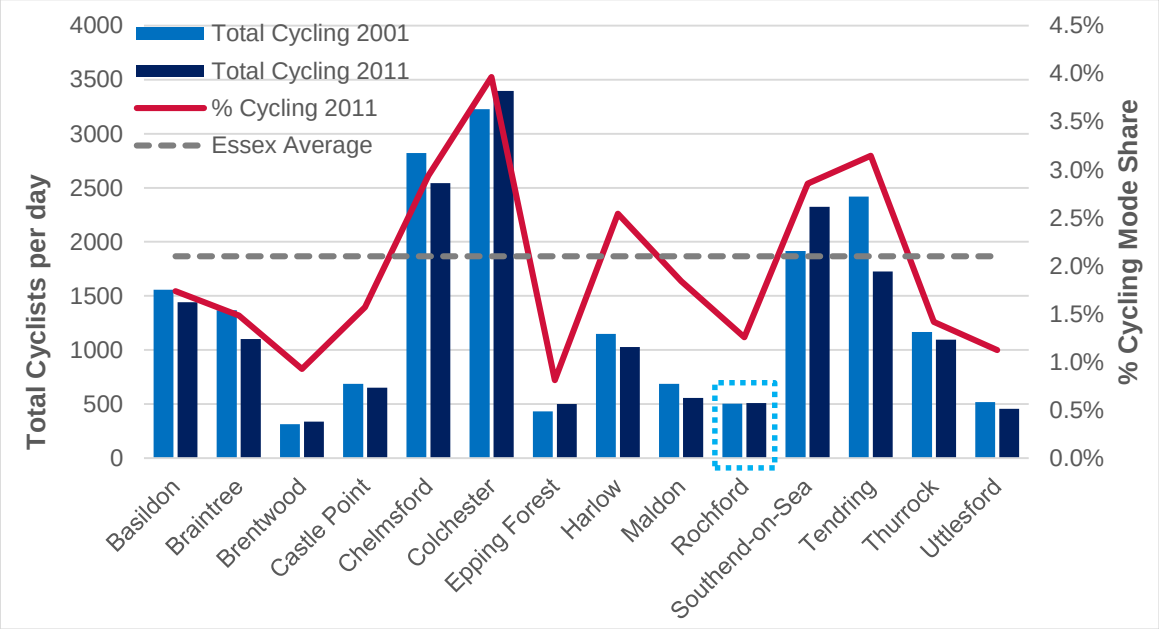
When planning for cycling infrastructure it is important to first understand current levels and conditions for cycling. This section includes analysis of:

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

3.1 Census Data

As part of the 10 year national census, respondents are asked to state their main mode of travel to work by distance. The 2011 Census results for Essex are provided in Figure 3.1 below.

Figure 3.1 Census Cycling to Work by District



As shown above, according to the 2011 Census, Rochford has low levels of people cycling to work when compared with some Essex Districts, with 511 people cycling to work every day (1.3%).

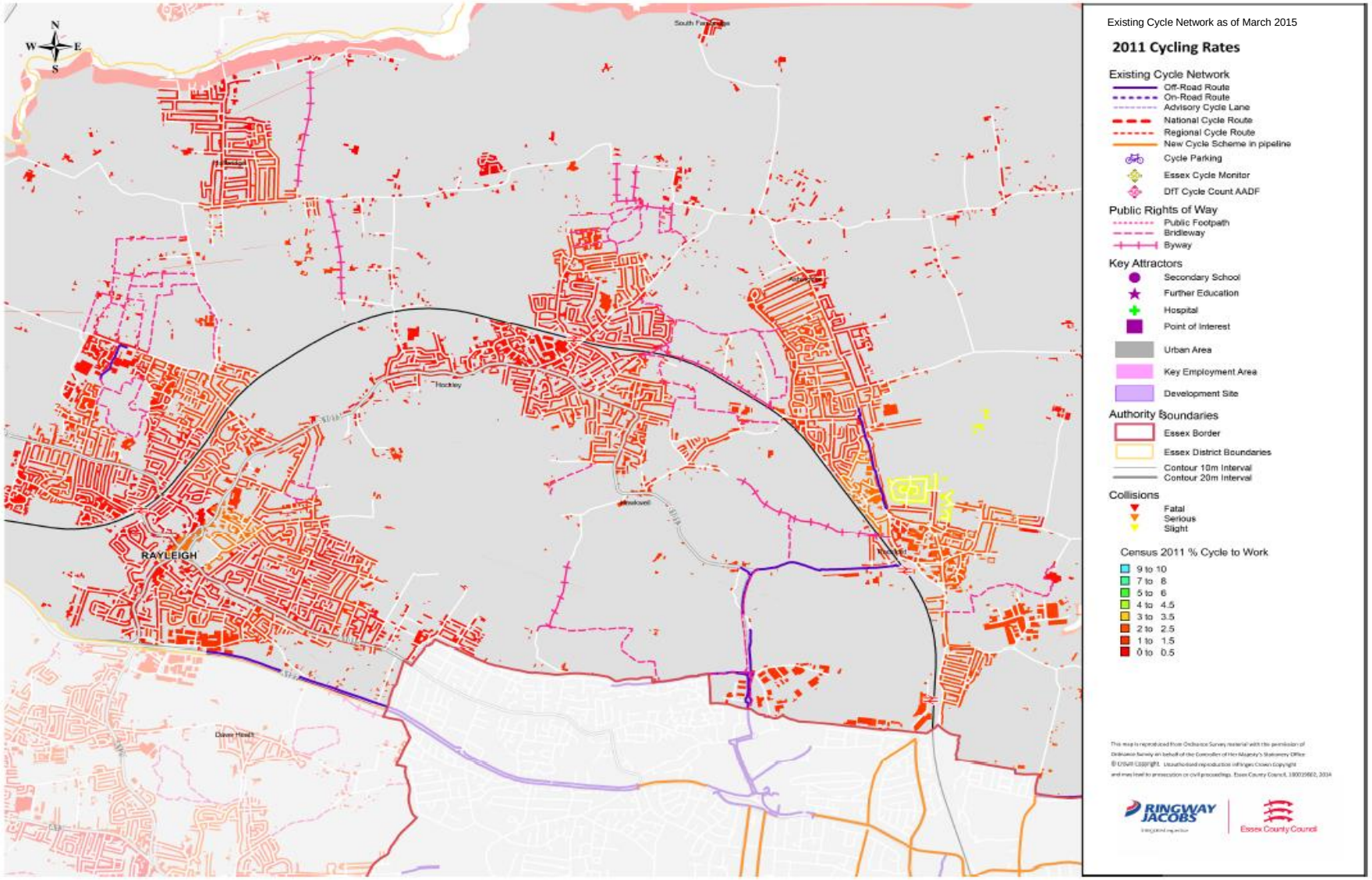
Cycling-to-work levels decreased marginally in the majority of Essex Districts between the 2001 and 2011 Census, with Rochford being an exception to this trend. Despite the number of people cycling to work growing by 90,000 between 2001 and 2011, the proportion remained the same at 2.8%. The decline in cycling to work in Essex and many other shire counties has been attributed to failures in local policy and a lack of

infrastructure[1]. Whereas, in urban areas, cycling to work increased due to the implementation of improved infrastructure, thus balancing the decline experienced in rural areas.

For residents of Rochford District, 16% (6423) of journeys to work are made by train and with 4 rail stations in the District, trips to rail stations are important. Figure 3.2 shows the percentage of people cycling to work by origin in Rochford.

[1] http://www.sustrans.org.uk/press-releases/governments-must-get-times-cycling-work-levels-stagnate-over-10-years

Figure 3.2 % Cycling to Work by Origin in Rochford

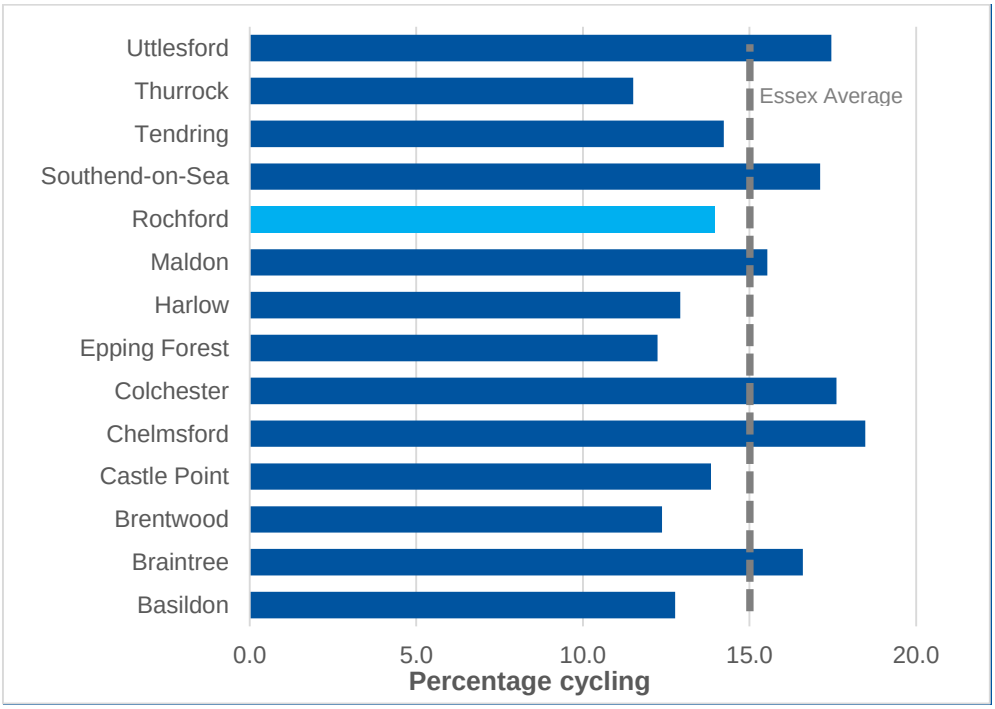


3.2 Sport England Active People Survey

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

Figure 3.3 below shows 2010-2013 average propensity to cycle at least once per month for any purpose based on the Sport England data. The results show that across Essex, Rochford has around average levels of residents cycling at least once a month in the county.

Figure 3.3 Sport England Propensity to cycle at least once per month 2010-2013



3.3 DfT Count Data

The Department for Transport (DfT) collects vehicular flow data at various locations on the road network around the country. These counts record all vehicles using the carriageway, including cyclists. Of the 31 count sites located in Rochford, 10 sites record more than 50 cyclists per day. These figures indicate a fair amount of cycle use across the district. These are spread across a number of locations:

- Rayleigh Town Centre;
- Down Hall Road, Rayleigh;

- B1013, Hockley;
- Ashingdon Road corridor; and
- Rocheway, Rochford.

Consideration should be made to improving the cycling environment in these areas. Whilst none of the potential routes identified in this CAP pass through Rayleigh town centre directly, potential scheme 20 will improve conditions in one of the locations where high cycle flows have bene recorded, to the south east of the town. The high flows recorded to the south of Rayleigh town centre on the A129 could be accommodated on potential route 21, which will provide an alternative route northwards.

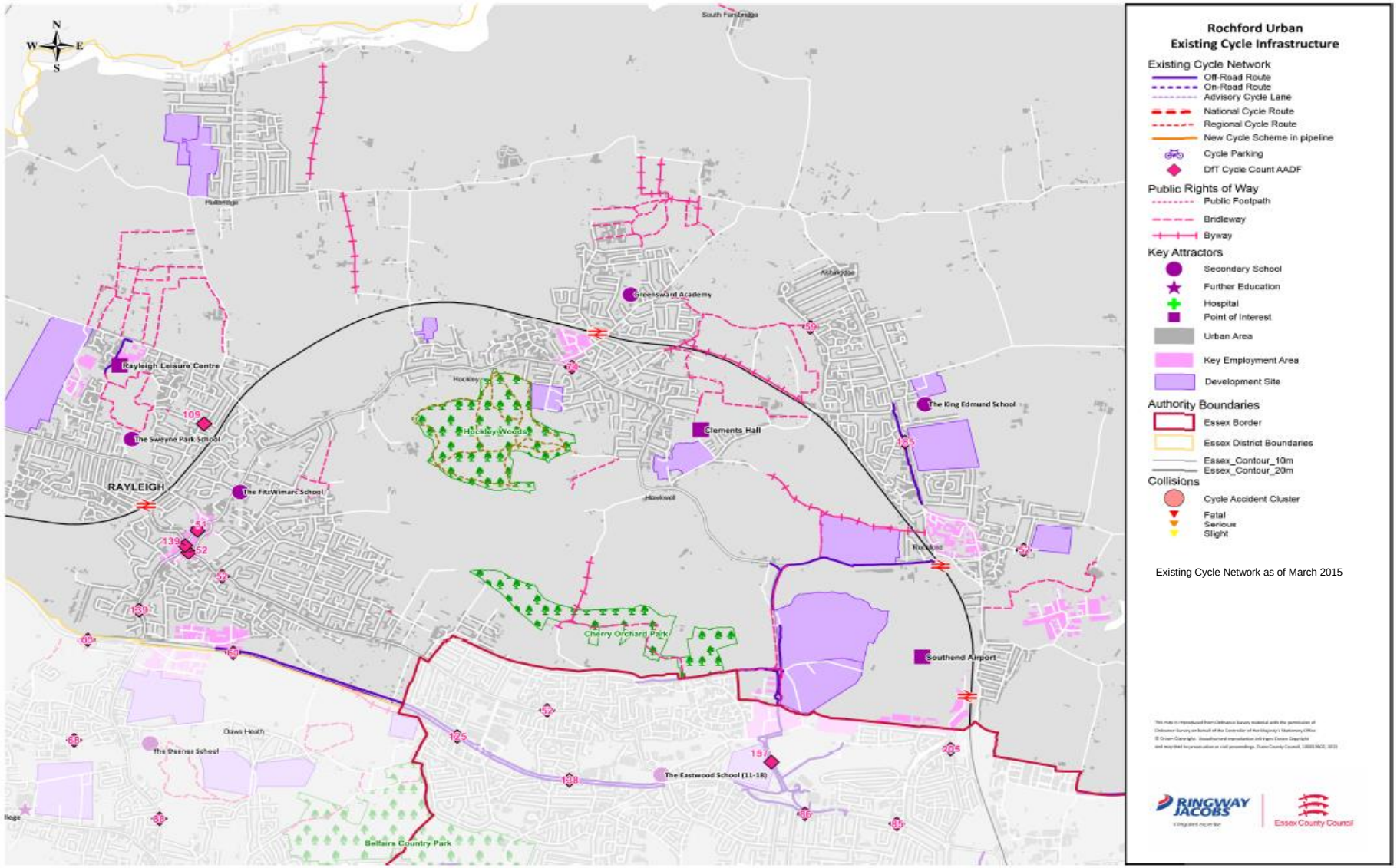
High flows have also been recorded on the B1013, in Hockley. This is part of a proposed National Cycle Network Route (NCN Route), as well as being on the alignment of potential scheme 12.

The existing cycle provision on the Ashingdon Road corridor will be extended by potential route 1. An alternative, parallel route, will also be provided by potential route 2, which could accommodate some of this demand.

High cycle flows were recorded in a number of locations along the A127. Whilst this CAP does not propose any potential schemes on the A127 itself, it has considered a parallel route (potential schemes 16, 17, 18 and 19), which links Southend Airport with Rayleigh town centre and could provide an alternative route for local bike trips.

The current cycle network (as at March 2015) along with count locations in Rochford is shown in Figure 3.4 below.

Figure 3.4 Existing cycle infrastructure in Rochford



3.4 Collision Data

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

Table 3.1 shows the number of recorded Personal Injury Collisions (PICs) involving cyclists by District for the 5 year period between August 2012 and July 2017. Figures below for 'Essex' exclude the Unitary Authorities of Southend and Thurrock, figures for 'Greater Essex' include these areas.

Table 3.1: Personal Injury Collisions involving Cyclists, August 2012-July2017

Cycle Accidents	Fatal	Serious	Slight	Grand Total	% of Total cycle accidents in Greater Essex	Number cycling to work[2]	% of Total cycling to work in Greater Essex
BASILDON	0	37	135	172	8%	1412	8%
BRAINTREE	2	37	90	129	6%	1070	6%
BRENTWOOD	0	16	41	57	3%	320	2%
CASTLE POINT	0	24	69	93	5%	631	4%
CHELMSFORD	2	56	194	252	12%	2486	14%
COLCHESTER	0	72	227	299	15%	3310	19%
EPPING FOREST	1	36	105	142	7%	482	3%
HARLOW	2	13	60	75	4%	1018	6%
MALDON	1	15	42	58	3%	548	3%
ROCHFORD	**1**	**25**	**63**	**89**	**4%**	**498**	**3%**
SOUTHEND	1	63	266	330	16%	2260	13%
TENDRING	3	28	117	148	7%	1683	10%
THURROCK	0	35	101	136	7%	1078	6%
UTTLESFORD	0	18	41	59	3%	433	3%
ESSEX	**12**	**412**	**1285**	**1709**		**13891**	
GREATER ESSEX	**13**	**475**	**1551**	**2039**	**100%**	**17229**	**100%**

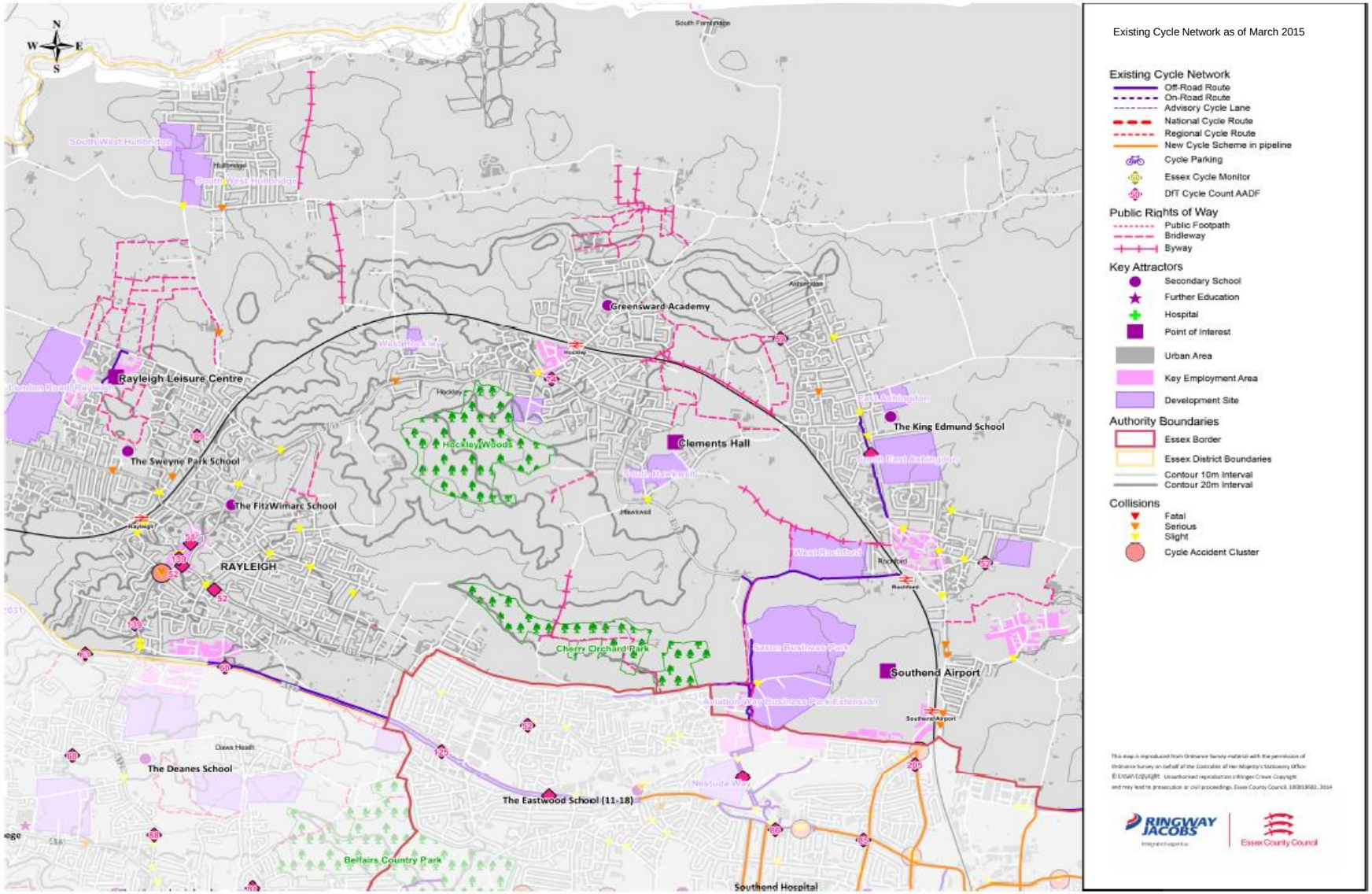
[2] Source: ONS Cycling to Work Summary Table, taken from Census Table CT0015EW.

Rochford has relatively low rates of injury involving cyclists in Essex, with just 4% of total Greater Essex collisions. It has the 10th highest number of cyclist collisions in the County but the 8th highest amount of monthly cycling (from the Sport England survey) and 11th highest amount of cycle commuting. Despite this however, two accident cluster sites exist at the following locations:

1. Crown Hill/High Road/Eastwood Road – Rayleigh. Potential scheme 23 will provide an alternative, quieter parallel route along Love Lane, with an improved crossing of the High Street for people who cycle.
   Site 1 has no discernable accident pattern but provision of mini roundabouts are well known to impact on cycle safety.
2. Poynters Lane/Wakering Road – south of Great Wakering
   Issues at site 2 are caused by poor visibility for vehicles pulling out of Wakering Road onto Poynters Lane.

In addition there have been a number of serious collisions along Southend Road between Rochford and Southend Airport, with a cluster at the airport roundabout (in Southend) highlighting the priority for good quality cycle infrastructure along this corridor. Figure 3.5 shows the location of PICs in Rochford.

Figure 3.5 Location of PICs (Personal Injury Collisions) in Rochford



3.5 Cycle Crime

Cycle crime (mainly theft) is reported both to Essex Police and British Transport Police, although it should be noted that cycle thefts are generally accepted as being under reported. Figures for both of these constabularies are combined by District in Table 3.2 below.

Table 3.2 Total reported Cycle Crime by District

All Essex Reported Cycle Thefts	2013	2014*	Year ending June 2016	Year ending June 2017	% of all cycle thefts in Greater Essex (2017)	Annual number of cycle thefts per cycle commuter[2]
Basildon	221	208	173	203	8%	0.15
Braintree	116	98	160	154	6%	0.15
Brentwood	63	59	34	71	3%	0.23
Castle Point	45	73	63	81	3%	0.13
Chelmsford	292	274	334	450	17%	0.19
Colchester	355	373	247	390	15%	0.12
Epping Forest	37	53	69	53	2%	0.12
Harlow	127	108	166	244	9%	0.25
Maldon	26	28	14	21	1%	0.04
Rochford	**43**	**50**	**51**	**23**	**1%**	**0.05**
Southend-on-Sea	450	326	403	467	18%	0.22
Tendring	180	167	124	160	6%	0.10
Thurrock	217	205	251	235	9%	0.23
Uttlesford	41	30	23	27	1%	0.07
Essex	1546	1521	1889	2344		0.14
Greater Essex	2213	2052	2112	2579	100%	0.16

**to Nov 20th only*

2. Based on 2017 thefts and ONS Census 2011 Journey to work by cycle total for District/ Borough/ City (ONS Cycling to Work Summary Table, taken from Census Table CT0015EW)

Rochford has a relatively low level of recorded cycle crime, with just 1% of the total cycle thefts in Greater Essex and a rate of just 0.05 annual cycle thefts per commuter, which is the 2nd lowest level in Essex.

Statistics from British Transport Police show that none of the rail stations suffer from significant cycle theft.

3.6 Topography

There are a number of factors which determine the popularity of cycling in any given area. Of the geographical factors, by far the most significant is topography, as identified in many research studies and policy statements. These include

research carried out by Dr John Parkin who concluded; 'hilliness was found to be, by far, the most significant determiner of the proportion that cycled to work in a District'[3].

Rochford for the most part is a relatively flat District due to its low lying coastline, with most of the District under 30m above mean sea level, however the topography towards the west of the District is rolling in places. Whilst this is not significant enough to deter widespread cycling, there is a notable incline from Rayleigh railway station to the High Street, in particular. Figure 3.5 shows the topography of Rochford .

[3] Parkin, J. Wardman, M and Matthew, P. (2008) *Estimation of the determinents of bicycle mode share for the journey to work using census data*. Transportation, 35 (1). pp. 93-109.

4 Existing Network Provision and Barriers

4.1 Introduction

The District of Rochford is situated on a peninsular between the River Thames and River Crouch and is bounded to the east by the North Sea, and to the west by the Basildon District and the City of Chelmsford. The District is served by a railway line, to which access is possible from stations at Rayleigh, Hockley, Rochford and London Southend Airport. This section provides a summary of the existing cycle infrastructure within Rochford District as well as identifying various barriers and potential improvements.

4.2 Existing infrastructure

4.2.1 Cycle Routes

Most of the current off-road provision for cycling is north and west of Rochford rail station and along the boundary with London Southend Airport (Figure 3.4). The majority of this has been provided through the development of London Southend Airport and further expansion of these facilities are recommended in the Joint Area Action Plan for the area. These existing routes provide a useful foundation for expanding infrastructure further in the area.

A further small section of cycle network has also been provided as part of development around Priory Chase in North West Rayleigh. In addition, across the District's southern boundary there is a cycle route along most of the A127 and into Southend via Nestuda Way. However the A127 does present a barrier to a north-south movement due to limited crossing points.

Figure 4.1 Shared segregated network along Ashingdon Road, Rochford and along Priory Chase, Rayleigh

Of this existing cycle route provision, further improvements are needed to connect individual routes together to form a coherent core cycle network. There is also a general lack of route signing, compared to the neighbouring Borough of Southend-on-Sea, which could potentially pose a barrier to those wishing to cycle between Southend and Rochford.

Along with the routes detailed above, various leisure cycle routes exist through Hockley Woods, Cherry Orchard Jubilee Country Park and Sweyne Park (Figure 4.2) utilising various Byways and Bridleways. However these routes are incomplete and have inconsistent surfacing, though they have huge potential to form a greenway network in the District.

Figure 4.2 Cherry Orchard Jubilee Country Park and Sweyne Park

The surface of these routes varies in quality with a number of areas suffering from drainage issues and some needing a more permanent surface. The further development of these greenways would increase their leisure use and in some cases even provide for utility cycling. Potential routes 13, 14 and 25 will provide improved cycle access to and through Hockley Woods and potential route 27 will improve access to Cherry Orchard Jubilee Country Park for people that cycle. Potential route 24 will provide improved cycle access to Sweyne Park.

Furthermore, a new Sustrans National Cycle Network route 135 (NCR 135) is planned from Stock, Chelmsford in the west to Southend in the east, and passes through Rochford District for about 7 miles, between Hullbridge in the north-west and Cherry Orchard Way in the south. This route mainly follows quieter roads and the September 2014 report *'Walking and Cycling Improvements: National Cycle Route 135, Stock to Southend'* details a large number of potential improvements to make the route cycle friendly.

The current cycle network in the Rochford District is shown in Figure 6.2.

4.2.2 Cycle Parking

Rayleigh High Street has a good spread of cycle parking provision along its length. All Sheffield stands are in uncovered locations. In Rochford town centre there is also relatively good provision with new stands recently added to the Market Square and where new development has occurred to the north.

Figure 4.3 shows some examples of cycle parking in Rayleigh and Rochford town centres.

Figure 4.3 Examples of cycle parking in Rayleigh and Rochford town centres

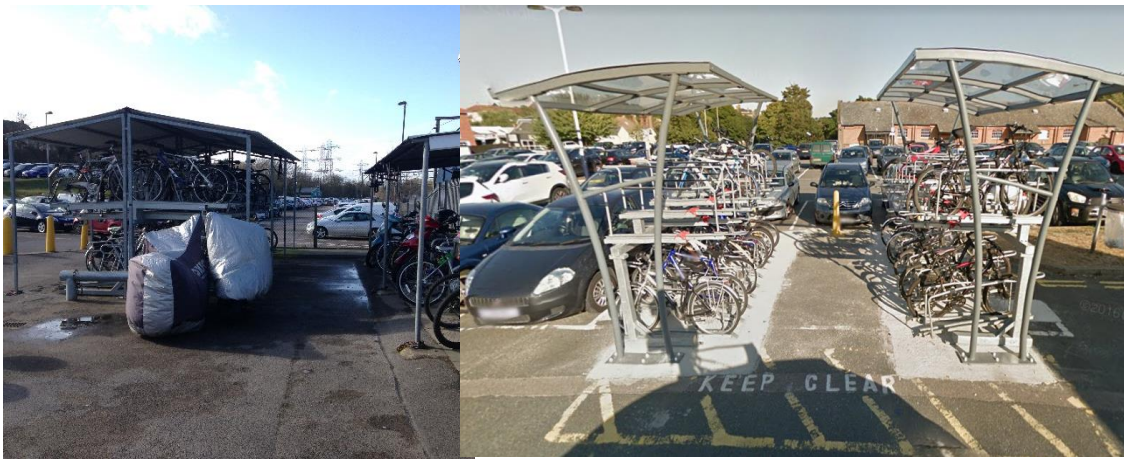
The District has four railway stations on the Shenfield – Southend line, located in Rayleigh, Hockley, Rochford and London Southend Airport. Each station has widely differing levels of cycle parking provision as shown in Table 4.1 below. Numbers have been taken from National Rail Enquiries website, and are up to date as of 24th May 2017.

Table 4.1 Cycle parking supply at stations

Station	Cycle parking spaces (type)
Hockley	80 (wheel racks)
Rayleigh	110 (42 sheffield stand spaces and 68 2-tier racks). Cycle storage is sheltered with CCTV
Rochford	40[4] sheltered double stack spaces, 6 sheltered Sheffield stands with CCTV
London Southend Airport	10

Whilst there are no issues with cycle parking capacity at rail stations in Rochford, the quality of facilities varies widely. Some, but not all, of the cycle parking is covered. There is no provision of secure parking at all. Whilst the lack of cycle network leading to the stations is likely to be a key factor in supressing demand, a step change in the quality of parking facilities is also needed. Essex County Council has recently been successful in obtaining funding from the South East Local Enterprise Partnership (SELEP) and has improved facilities at Rochford and Rayleigh stations. Cycle access to railway stations in the area will be improved through potential routes 23 in Rayleigh, 29 in Hockley, 5/28 Rochford and 7 at London Southend Airport Station.

Figure 4.4: Examples of cycle parking at Rayleigh and Rochford stations



[4] Note, cycle parking facilities have recently been upgraded and improved at Rochford station, so this number of cycle parking is not yet shown on the National Rail Enquiries website

4.3 Key Barriers

There are a number of barriers to cycling in the District. These include:

- Insufficient infrastructure to encourage cycling in certain areas of the District e.g. lack of cycle parking in Hockley Town Centre; and
- Lack of official and recognised cycle routes outside of Rochford Town Centre. A number of potential routes have been identified by this CAP, which will enable safer cycling within and between the urban areas of the district.

A number of improvements in the district would assist in encouraging cycling demand. They include:

- Improved connectivity to London Southend Airport from Rochford. Potential routes 5, 7 and 28 will improve access between the airport and Rochford;
- Development of the cycle network in Rayleigh. Potential routes 20, 21, 23, 24 and 25 will improve cycle links in Rayleigh;
- Improved connectivity between urban areas and committed development sites. In combination, a number of routes will provide better connections between the urban areas of Rayleigh, Hockley and Rochford (potential routes 25, 13, 14, 15, 16, 3, 11, 12 and 13);
- Enhancement and provision of new leisure greenways utilising open space. Potential routes 25, 13, 15, 16, 17 and 18 will provide cycle facilities through open space and parkland;
- Development of cross boundary routes to Castle Point, Basildon, Chelmsford and Southend-on-Sea; and
- Provision of additional cycle parking at railway stations.

5 Rochford's Cycling Potential

5.1 Introduction

This section provides a summary of the existing travel behaviours within Rochford District as well as identifying the potential for cycling.

5.2 Commuter Flow Analysis

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

The predominant commuter flows for Rochford District have been calculated based on travel between medium super output areas (MSOAs). As journeys to work take place to and from all MSOAs within the district, only the top 10 most popular commuter journeys per mode have been highlighted.

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

5.2.1 Cycle trips

Although the numbers are relatively low, all of the 10 most popular District wide commuter journeys by bicycle were made within the urban areas of western Rochford. Figure 5.1 shows the predominant commuter flows for journeys to work by bike within Rochford.

The highest current cycling origin/destination pairs are within Hockley and trips to the Purdeys Way industrial area. Potential route 6 and its onward connections (via potential routes 5 and 7), will improve cycle access to the Purdeys Way industrial area.

5.2.2 Car trips

Cross district boundary analysis for car drivers has been excluded, as all the top 10 most popular origin / destination journeys to work by car occurred within the District.

Figure 5.2 shows that despite the compact nature of the 3 urban areas, they all have a significant number of short internal commuting trips by car, with 723 people in Rayleigh, 362 in Hockley and 351 in Rochford driving to work locally. A

large proportion of these trips could potentially be made by bike if the right infrastructure was provided.

Most other journeys were to three primary locations, Hockley/Hawkwell, Rochford town centre and Purdeys Way industrial area. All of these work journeys are less than 4 miles and so could be made by bike if appropriate infrastructure was provided.

Potential route 6 and its onward connections (via potential routes 5 and 7), will improve cycle access to the Purdeys Way industrial area. Potential routes 3, 11 and 12 could capture part of the existing car driver demand between Hockley and Rochford. Potential route 1 could accommodate some of the high car driver demand between north Rochford and Purdeys Way.

Within Rayleigh, potential routes 23 and 24 could accommodate some of the high car driver demand to the northern and south eastern areas of Rayleigh and may result in some car drivers switching mode to cycle.

Of note is the lack of trips between Rayleigh and Hockley.

5.2.3 Rail

In many cases, cycling can form a key part of commuter rail journeys. The 2011 Census only records main mode by distance, therefore assumptions must be made when analysing journeys that would be multi-modal. Where commuters have stated their main mode of travel to work to be by rail, it has been assumed that rail commuters would predominantly choose the closest station to them, unless a main line station is located within a similar proximity. In such a case, it is assumed the preference would be the main line station. An additional assessment has been made which excludes a percentage of rail commuters living within 1km of the rail station, as it is expected the majority of those people would walk to the rail station.

Figure 5.3 shows that Rayleigh station has by far the highest potential in the Rochford District for cycle journeys, with over 2,000 people commuting there from a relatively short distance away making improved access here a priority. Potential route 23 would accommodate some of this demand, providing a useful E-W link across Rayleigh and linking residential areas to the town centre and station. To a lesser extent, potential also exists to Rochford station along the N-S Ashingdon Road corridor. Potential route 28 would accommodate some of this demand.

Whilst 853 commuters use Hockley station from the surrounding MSOA, the relatively short distances involved will make walking more attractive for most.

Figure 5.1 Predominant commuter flows for journey to work by bicycle in Rochford

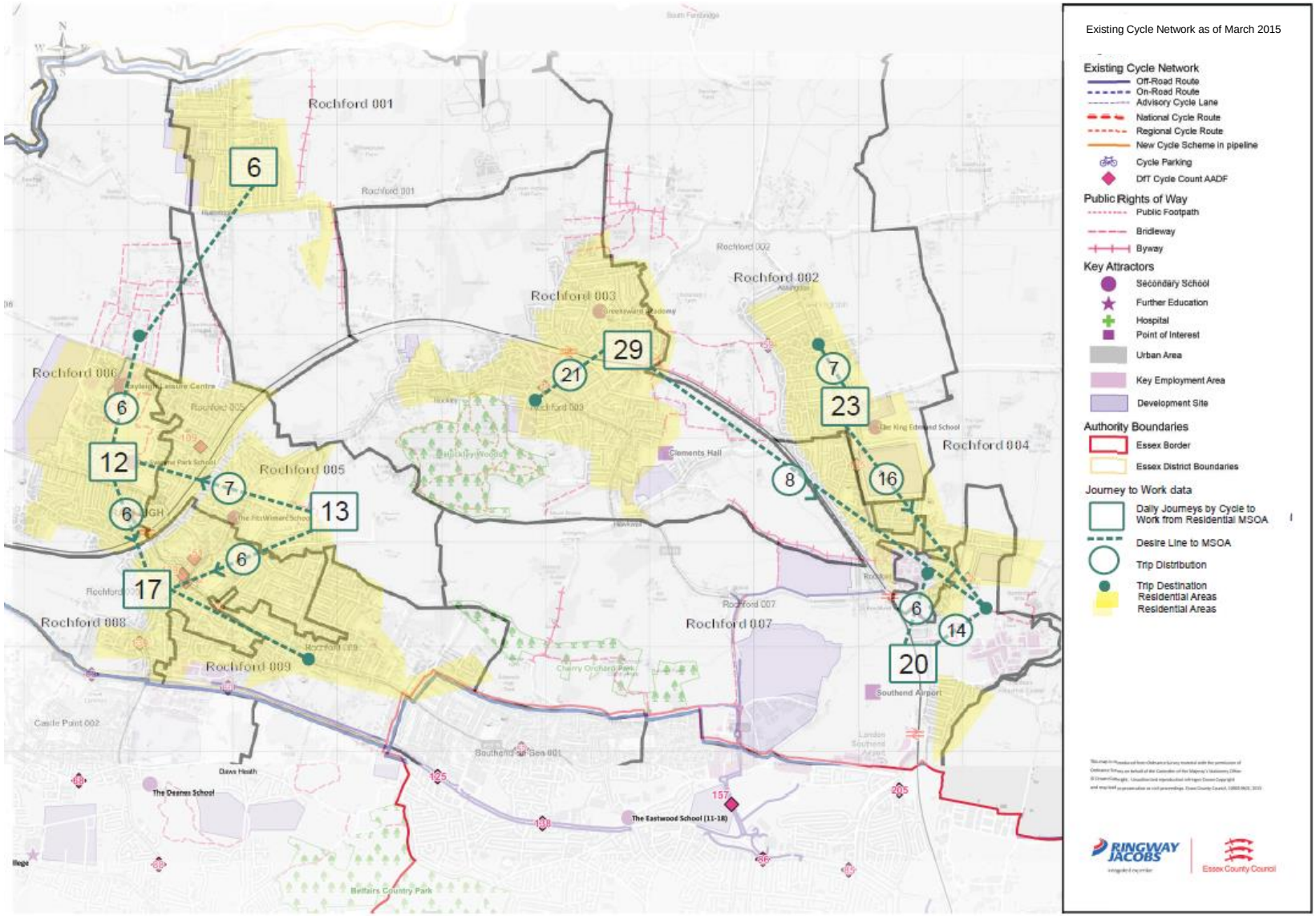


Figure 5.2: Predominant commuter flows for journey to work by car in Rochford

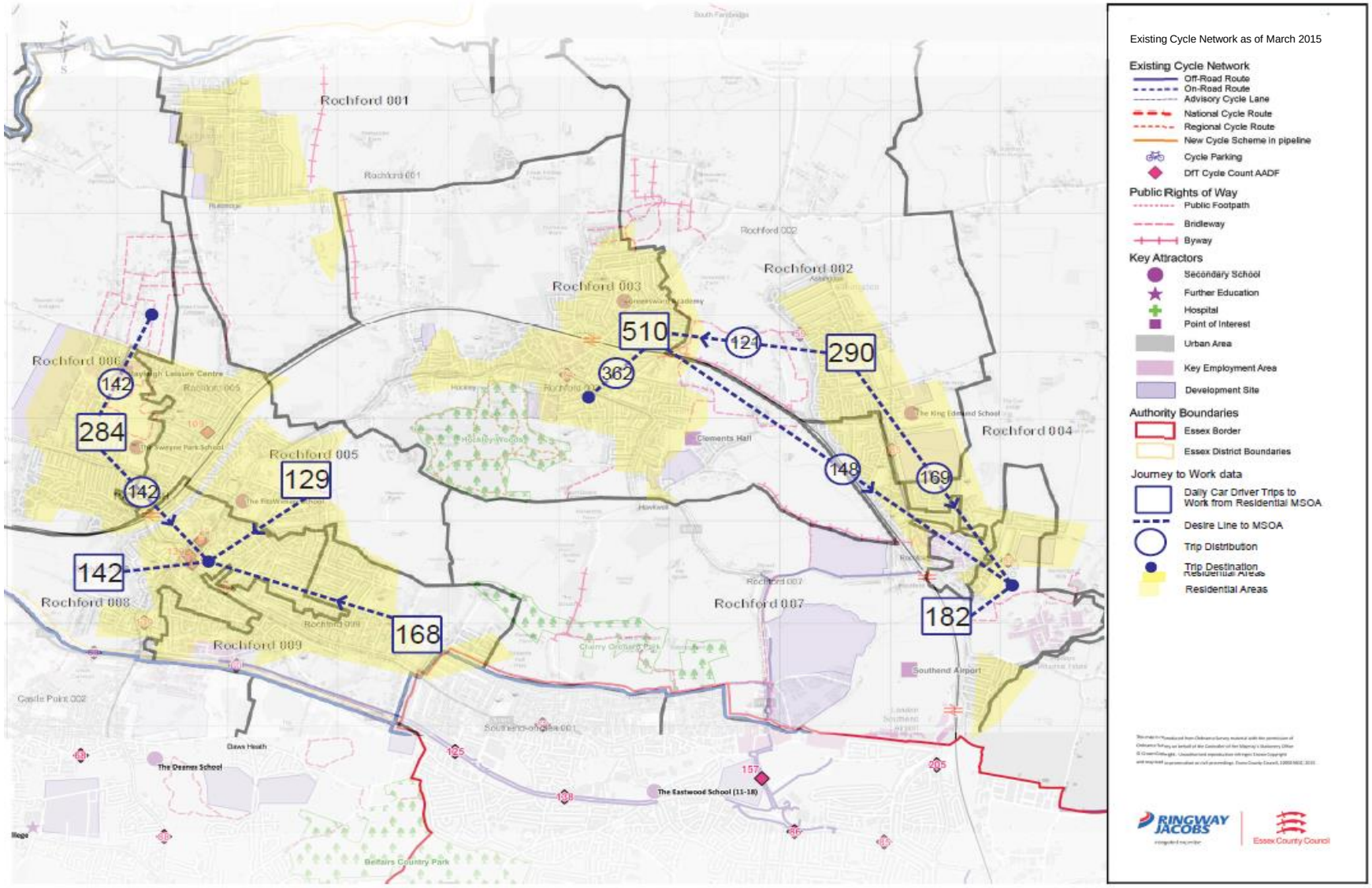
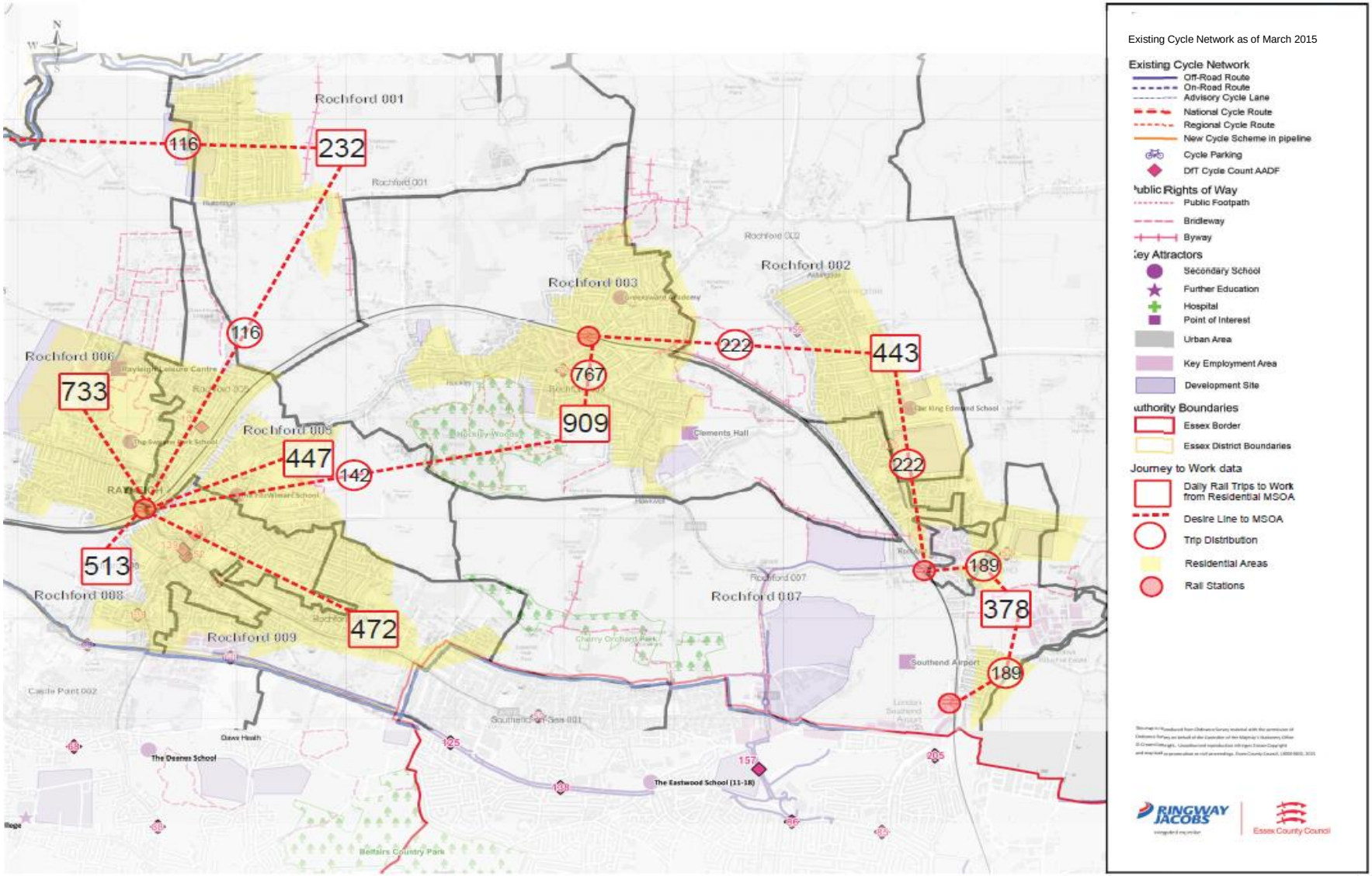


Figure 5.3 Predominant commuter flows for journey to work by rail in Rochford



5.3 MOSAIC Propensity to Cycle

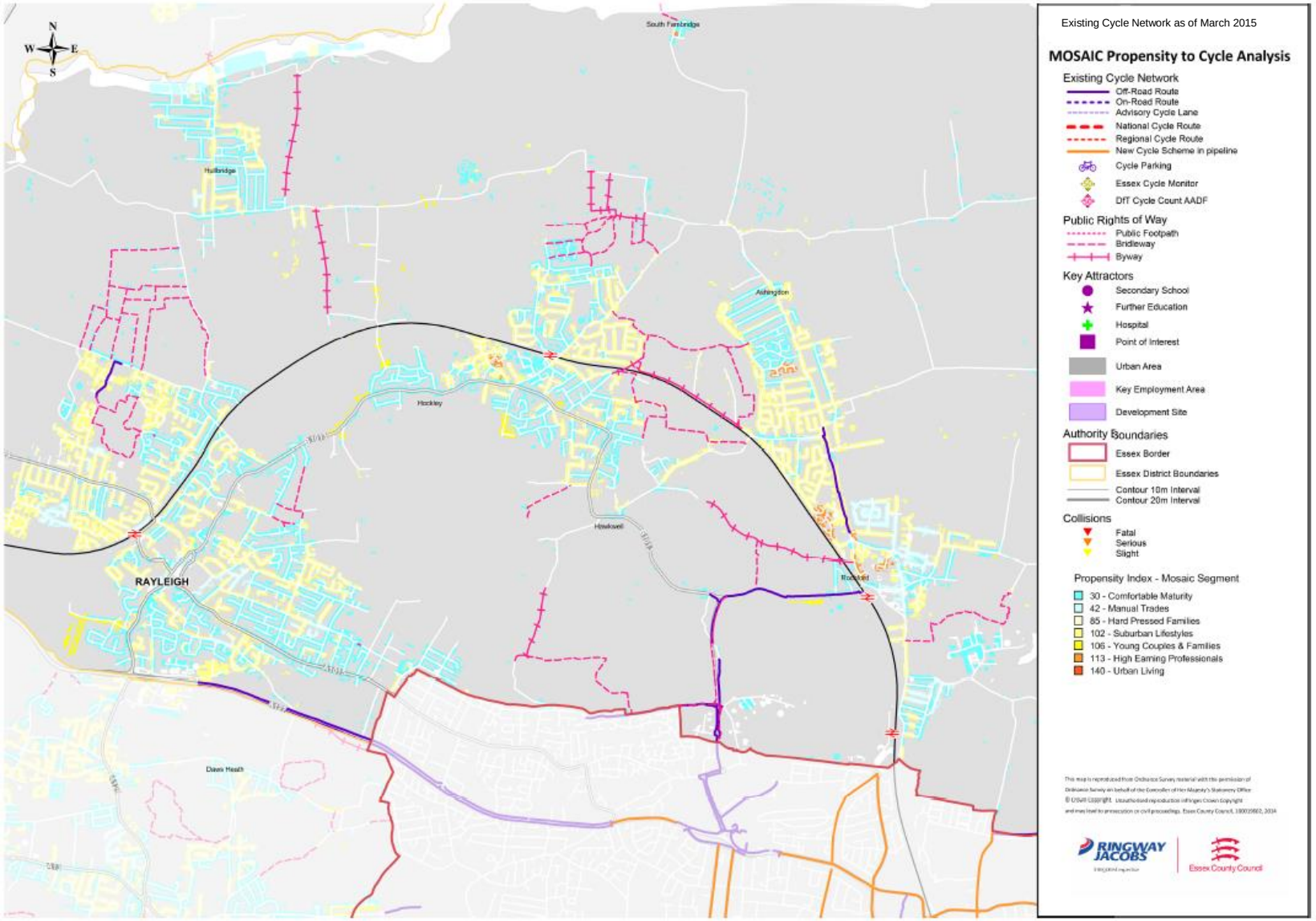
Market segmentation is concerned with grouping together a diverse range of people to understand their current behaviour and the likelihood and triggers for maintaining or changing how they act in the future.

The MOSAIC Cycling Segmentation was developed for TfL by Steer Davis Gleave as an aid to cycling policy development, planning, implementation and evaluation. This was required to help target areas of opportunity to best increase mode share and assist in increasing trips.

The MOSAIC Cycling Segmentation classifies the population into seven segments, each with a different propensity to cycle e.g. those in the 'Urban Living' segment are 4.6 times more likely to be a cyclist than those in the 'Comfortable Maturity' segment. This can then be applied to postcodes and displayed on mapping as shown in Figure 5.4.

The MOSAIC data for Rochford District shows that areas of residents with a higher propensity to cycle are: north of Rochford town centre; along the Ashingdon Road corridor (where some infrastructure already exists); and the western side of Rayleigh. Future infrastructure improvements should take account of the demographic of these areas and be prioritised accordingly. Potential routes 23 and 24 will provide improved cycle access to/ from western Rayleigh.

Figure 5.4 MOSAIC Analysis – Propensity to Cycle in Rochford



5.4 Summary of Potential

As previously identified, there are a significant number of people driving short distances to access work (4 miles or less). The majority of these trips occur to the Purdeys industrial area. Therefore, providing improved cycle routes and marketing targeted towards car drivers who commute along these routes could provide the biggest gains in terms of mode shift towards cycling. Potential route 6 and onward links (for example, via potential routes 5 and 7) will greatly improve cycle access to this industrial area.

Significant mode shift potential also exists for trips to Rayleigh rail station which although has a fair level of existing cycle use, would benefit from improved cycle infrastructure. This combined with west Rayleigh's higher propensity to cycle makes improvements in this vicinity a priority. Potential routes 23, 24, 28, 20 and 25 will improve cycle access in Rayleigh.

The Ashingdon Road corridor also shows good potential from both rail commuters and the MOSAIC segmentation, so should also be further improved. This has been identified and potential scheme 28 will address this issues.

6 Potential Infrastructure Improvements

6.1 Background

In order to remove barriers to cycling and provide suitable infrastructure, it is essential that all new developments in the District have good quality, cycle friendly routes to key services, railway stations and areas of employment. To this end, all potential developments associated with the Rochford Local Plan should contribute towards creating a wider network of cycle-friendly routes with provision along key corridors and desire lines.

A coordinated approach should be taken whereby development planning and highway scheme delivery in Rochford District is linked with infrastructure provision, complemented by soft measures that promote cycling as part of a range of alternatives to single-occupancy car travel.

This CAP is identifying a network of strategic cycle routes, which incorporate the JAAP proposals within Rochford, as well as identifying, within this, specific Flagship Routes. These Flagship Routes for the District of Rochford are described later in this report, in Section 8.

6.2 Potential cycle routes

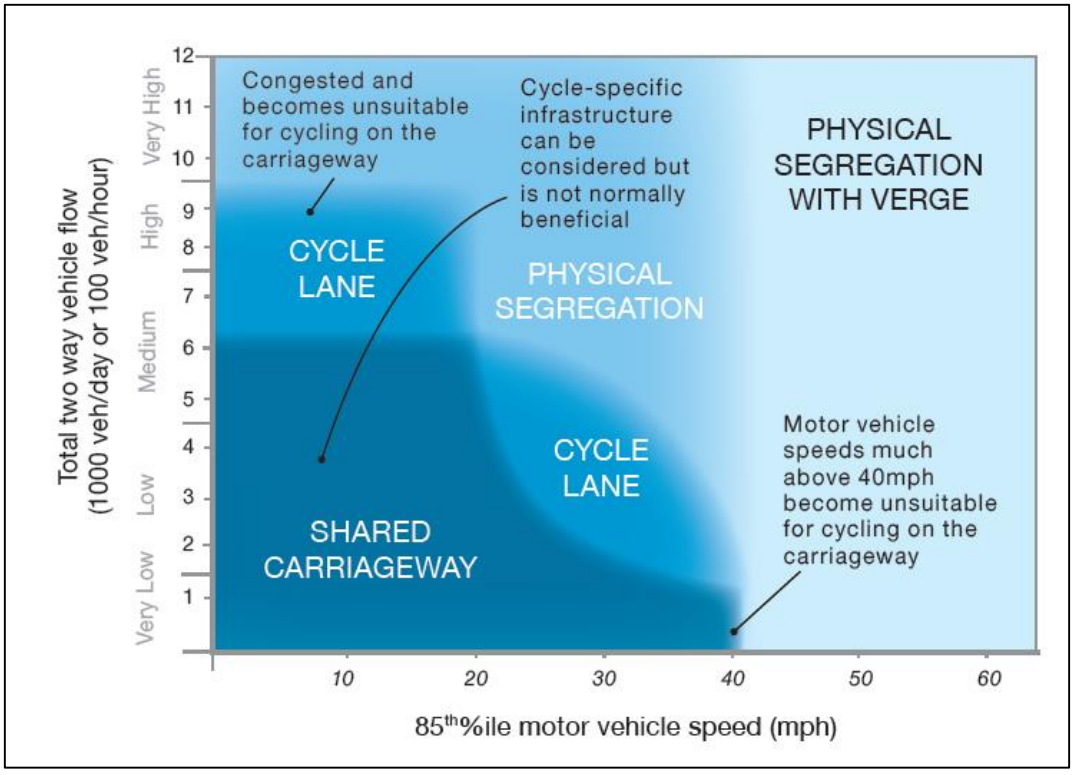
Potential new cycle routes have been identified to help create a step-change in cycling conditions across the District. These might include signed routes (with journey times and surface markings), networks of interconnected cycle routes on quiet residential streets, filtered permeability (e.g. convenient cut-throughs and contraflows) and, where appropriate, 2nd generation cycling infrastructure, such as Dutch, Danish or light segregation. Infrastructure improvements have been considered for the urban areas of Rayleigh, Hockley and Rochford, as well as linkages into London Southend Airport. These routes also incorporate JAAP route proposals.

6.3 Methodology Statement

The potential routes have not, at this stage, been subject to detailed scheme design or feasibility, they are the result of an initial scoping study which is recommending a strategic network. Local knowledge, obtained through Stakeholder Consultation, has been used to inform this process. Where possible, the Sustrans Design Manual has been used to inform provision, particularly with regard to the acceptable provision related to traffic speed and volume conditions in specific locations.

Where traffic volume and speed data is available, the potential schemes have been subjected to Sustrans design principles, which recommend the type of scheme that should be considered under those conditions (Figure 6.1). Traffic volume and speed may influence the decision on the need to segregate cyclists from other traffic. For example, where low speeds and traffic volumes are evident, there is no need to segregate cycle and other traffic and a shared carriageway is acceptable. As traffic speeds and volumes increase, cycle lanes are found to be more desirable, until the threshold is reached whereby physical segregation is required. Beyond this point, where 85 percentile traffic speeds exceed 40mph, and/ or volumes exceed 9500 vehicles/ day (or 950 vehicles/ hour), conditions become unsuitable for cycling on the carriageway and physical segregation with a verge is necessary. Where traffic volume and speed data are not currently available, it may be necessary to undertake a traffic survey to determine the provision that is required.

Figure 6.1: Sustrans Segregation and traffic flow[5]



[5] Sustrans Design Manual. Handbook for cycle-friendly design, Sustrans, April 2014

In some locations, it has been noted that cycle-friendly crossings will be required. In most instances, further work and traffic surveys will be required to enable the exact type of crossing provision to be determined.

There are some examples[6]* where footway/footpath conversions to shared use have been identified. The conversion of footpaths and footways to permit bicycle use is not regarded as a general or area wide remedy, but has been confined to specific links and locations. It is recommended that where footpath conversion and/or footway conversion to shared use is considered then further studies are undertaken to demonstrate that alternative options have been discounted and that clear benefits can be derived. In such situations it is vital that the benefits to the cyclist are balanced against the increased risk and inconvenience to pedestrians.

ECC aims to limit the use of footway conversion/ shared use paths and Engineers and Designers should first consider alternative options.

A full list of recommended schemes can be found in Table 7.1, the locations of these routes are shown in Figure 6.2 and the JAAP cycle proposals are shown in Figure 6.3**,** below.

6.4 Joint Area Action Plan Proposals

A number of cycle routes in the CAP area have been proposed in the London Southend Airport and Environs Joint Area Action Plan (JAAP) report. They are shown in Figure 6.3. Some of these proposed cycle routes have also been identified as potential routes in this CAP. For those that are not detailed in this CAP, further information about the detail of the JAAP schemes can be found in the London Southend Airport and Environs Joint Area Action Plan walking and cycling improvements document (September 2014), prepared by Sustrans on behalf of Southend–on-Sea Borough Council, Essex County Council and Rochford District Council.

Further details of JAAP cycle routes can also be found in the London Southend Airport and Environs Joint Area Action Plan Walking and Cycling ‘Greenway Network’-Linking the Community (December 2015, revised February 2016). This document was prepared by Sustrans on behalf of Southend Borough Council, Essex County Council and Rochford District Council. In particular, it provides details about the subway described as part of potential scheme 27.

[6] The asterisk refers to schemes with footway conversions, listed in Table 7.1

6.5 Construction Design and Management (CDM)

The potential new cycle routes identified in this CAP all require further feasibility assessment before they can be finalised or confirmed. In some cases, the alignment of the routes may need to be amended to ensure that the safest scheme design, in terms of operation, construction design and management, is identified. In some cases, a route might need to be deleted entirely, if it is determined that CDM risks cannot be reasonably mitigated through early design stages.

Some of the potential routes are alongside or cross features such as high speed roads, water courses or railway lines and may either require a new structure or widening of an existing structure in order to be implemented. It is recognised that these features raise the potential for significant risk (and indeed cost) during construction and operational management and they will need to be given particular consideration during the feasibility assessment.

Figure 6.2 Existing and potential cycle routes in Rochford

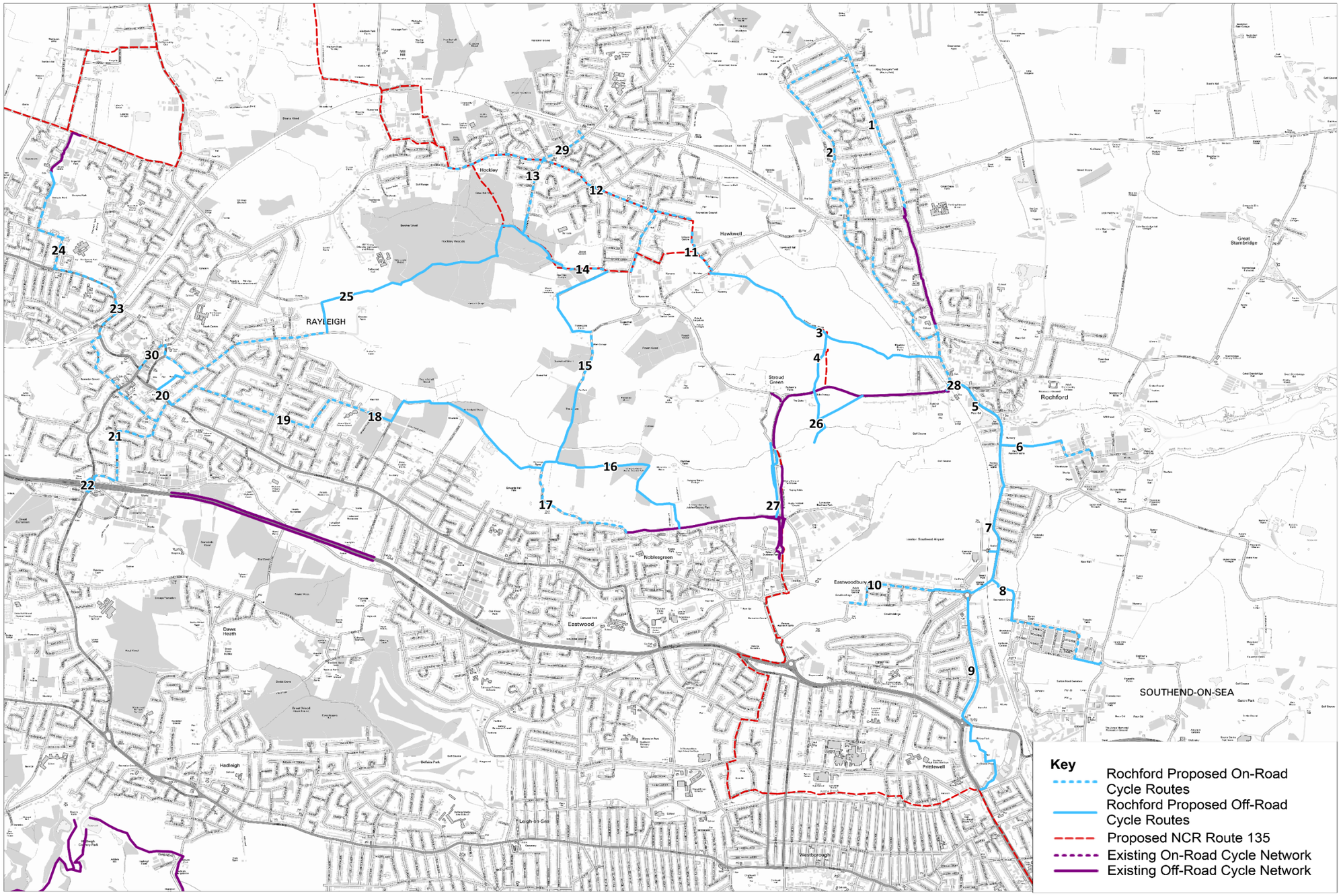
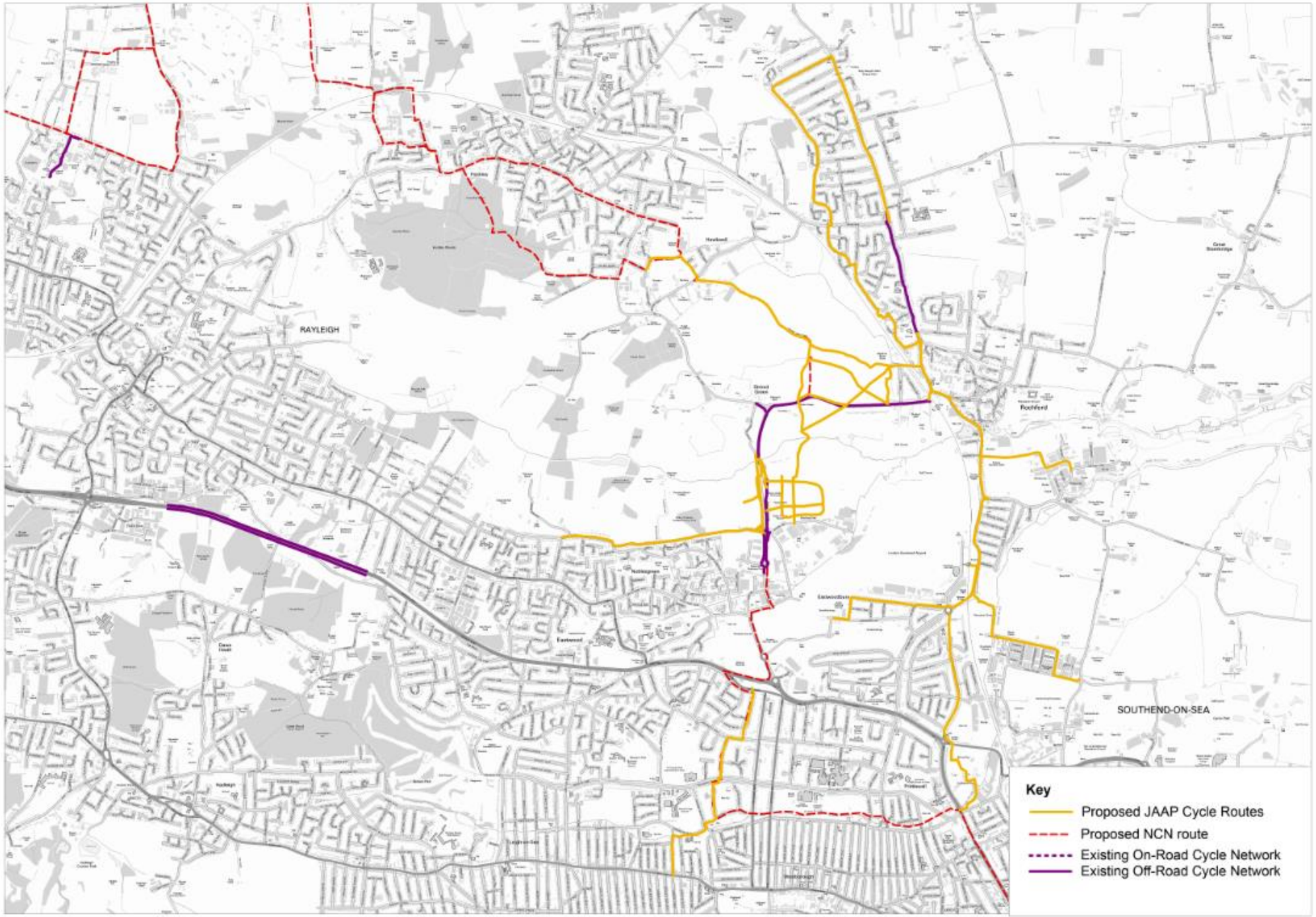


Figure 6.3 JAAP cycle routes in Rochford



7 Prioritisation and Costings of Potential Schemes

7.1 Prioritising Schemes

The potential schemes have been prioritised according to four criteria of their design:

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

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

7.2 Deliverability

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

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

7.3 Directness

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

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

7.4 Extension of existing network

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

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

It should be noted that in some urban areas, for example Hockley, there is little or no existing network to connect to, so most of the potential schemes will achieve a low score in this case.

7.5 Key attractors

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

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

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

7.6 Overall prioritisation

Once a score has been obtained for each of the four criteria (Deliverability, Directness, Extension of Existing Network and Key Attractors), its overall prioritisation can be determined, giving an overall score of low (L), medium (M) or high (H). As a general rule, the most frequent score obtained across the four criteria will be the resulting overall score. Where there are an equal number of different scores, there may be some element of subjective judgement used to decide the overall result.

The resulting prioritisation for each of the potential schemes is shown in Table 7.1.

7.7 Estimated costs of potential schemes

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

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

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

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

Realistic unit costs have been derived for each of the elements that are identified in the potential schemes and they have been applied to a length of route where appropriate and as a series of elements to enable the overall cost of each scheme to be built up. The resulting estimated cost for each scheme is included in Table 7.1.

Table 7.1: Potential Rochford Cycle Routes with Costs and Prioritisation

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
1	Ashingdon Road Corridor, Rochford	Corridor has high mode shift potential	Extend existing Ashingdon Road cycle route northwards from Rectory Rd to Clifton Rd. Potential to extend further northwards to connect to proposed Wallasea Island route. Entire corridor should be reviewed to ensure consistent and safe design along whole route. Part of proposed JAAP routes. The Ashingdon Road corridor has been identified as an area with high levels of cycle flows. This high level of demand/ use should be considered in the design of the final scheme. Sustrans recommends physical segregation. Further study required.	H	H
2	Clifton, Rectory Avenue, Banyard Av, Hainult Av, Lesney Gardens	Alternative quietway route into town, instead of using Ashingdon Road corridor	Signed and marked on-road quietway from Ashingdon Rd /Clifton Rd to Roche Avenue/Ashingdon Rd via Clifton Rd, Rectory Avenue, Banyard Way, Parklands, Lesney Gardens, Barbara Close and Roche Avenue. Traffic calming measures on Rectory Rd (speed limit of 20mph).. Introduce flush kerbs between Parklands and Lesney Gardens. Part of proposed JAAP routes. Sustrans recommends shared carriageway.	M	L
3	Rochford to Hockley via Ironwell Byway E-W	High mode shift potential. Upgrade E-W Ironwell byway , including section through Hall Road development	Upgrade Ironwell Lane byway. Signed byway (PROW 285_19) conversion to shared use from Ironwell Lane (west) to bridleway PROW 290_55. Shrub clearance may be required but to maintain character, trees should not be felled. Could be enhanced with artwork or inventive signage. Create shared use greenway within the Hall Rd development and country park from the Iron well byway/bridleway junction as an E-W link to Ironwell Lane (east). The new shared use path will run south of and parallel to PROW 285_19 byway, and should be considered as part of development agreement. Parallel PROW 296_19 section remains unchanged and no works required, but inventive signage should be considered. Surface improvements and solar stud lighting should be considered along the shared use route. Removal of the hawthorn separating the byway and development should be considered. Part of the proposed JAAP cycle routes.	M	H+
4	Ironwell Byway N-S		Create new north-south shared use (cycling/walking) link through country park that includes signed bridleway (PROW 290_55) upgrade from the byway PROW 285_19 junction southwards, and diverges west of the bridleway into the country park and runs south to Halls Rd. Two uncontrolled crossing points on Hall Rd should be considered with suitable surfaces, lighting, and signage. Greater use of signage, road markings and coloured surfacing and kerb-line modifications are often appropriate to increase driver awareness and reduce crossing distances, particularly where traffic flows are higher. Part of proposed JAAP cycle routes.	M	M
5	Rochford to London Southend Airport Terminal- Bradley Way/South End Rd	Improve access to Southend Airport	Upgrade the footway* on Bradley Way and Southend Road for shared use by cyclists as well as pedestrians –widen by at least 1m. Widen islands on existing uncontrolled crossing points and side road treatments where necessary- reduced width, tight radii, raised crossing and contrasting surface. Part of proposed JAAP cycle routes. Sustrans recommends physical segregation, however, footway conversion comes with challenges, e.g. land ownership, integration with private driveways and width restrictions. Further study required.	H	M
6	Rochford to London Southend Airport Terminal	Improve access to Southend Airport	Signed bridleway (PROW 290_38) and footpath (290_19) conversion* to shared use from Tinker's Lane to Brickfields Way. Minimum 3m wide path with 1m mown verges where width permits. Sealed surface is imperative where intended for commuting and other utility trips –28mm bare course bitmac (without surface dressing) may be appropriate along the entire length. Suitable for shared use and equestrians alike. Signed quietway along Brickfields Way and Purdeys Way to Roche Hall Way junction. Part of proposed JAAP cycle routes. A high number of cycle and car trips have been identified as heading to the Purdeys Way industrial area. Improving cycle access would benefit these existing cyclists, as well as potentially encouraging mode shift from car.	M	M
7	Rochford to London Southend Airport Terminal	Improve access to Southend Airport	Upgrade the footway* on Southend Road as far as Harp House Roundabout, for shared use by cyclists as well as pedestrians-widen by at least 1m. Enhance Southend Rd/Sutton Rd roundabout for cyclists. Provide cycle parking at Southend Airport train station. Tiger crossing at Southend Rd/Ravenswood Chase 5m wide (3m pedestrians 2m cyclists). New cycle bridge near retail park- Approximately 27m span bridge – 3m wide between parapets. Part of proposed JAAP cycle routes. Sustrans recommends physical segregation, however, footway conversion comes with challenges, e.g. land ownership, integration with private driveways and width restrictions. Further study required.	M	H+

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
8	London Southend Airport Southern Access	Improve access to Southend Airport	Off-road greenway along the district boundary between Rochford and Southend. Signed remote footway conversion* to shared use (minimum 3m, 4m ideal, with 1m mown verges) from Rochford Rd through the recreational ground to Journeymans Way. Restrictive access controls should be avoided on the greenway and all entry points made flush. Increase cycle parking provision at Southend Rugby Football Club. Resurfacing and appropriate enhancements should be considered. Route continues as on-road quietway along Journeymans Way to Chandlers Way- sign and mark route. Signed and widened footway conversion* to shared use on Chandlers Way from Journeymans Way to Sutton/Fossetts Way roundabout. Part of proposed JAAP cycle routes.	H	M
9	South of Southend airport	Improve access to Southend Airport	Signed and widened footway conversion* to shared use on the southbound side of A1159 Manners Way from the Rochford Rd roundabout to the A127 Prince Avenue roundabout. Side road treatment (Sherbourne Gardens, Oakengrange Drive, Thornford Gardens) – reduced width, tight radii, raised crossing and contrasting surface. Remove existing on carriageway cycle feeder lanes from Manners Way at A127 roundabout. Convert zebra crossings to tiger crossings (Manners Way) and pelican crossings to toucans (Priory Crescent). Route then follows a signed footpath conversion* to shared use through Priory Park. Suitable lighting along route required. Part of proposed JAAP cycle routes.	M	H
10	London Southend Airport Western Access	Improve access to Southend Airport	Enhance uncontrolled crossings around Harp House roundabout or add tiger crossings. Signed and widened (by 1m) footway conversion* to shared use on Eastwoodbury Crescent from Harp House roundabout westwards to Wells Avenue. New signed on road quietway along Wells Avenue and Avro Rd, and new signed on road advisory cycle lane along Eastwoodbury Lane. Part of proposed JAAP routes.	M	M
11	Clements Hall Way		New uncontrolled crossing of Rectory Rd to link Ironwell Lane with Clement Hall Way. Signed and marked on-road quietway along Clements Hall Way, Sweyne Avenue past Leisure Centre north (along a footpath conversion* to shared use using PROW 285_23 for a short section) to Hawkwell Park Drive. New, signed on road quietway continues along Hawkwell Park Drive to B1013 Main Rd. Introduce 20mph speed limits on these roads. Part of proposed JAAP routes.	M	L
12	B1013		Village Gateway, Signed on road advisory cycle lane along B1013 Main Rd from Folly Lane to Mount Bovers Lane. Carriageway is 5.5-7m wide. Centre line removal on B1013 Main Rd. Revised junction layout at B1013/ Spa Rd roundabout. The B1013 has been identified as a road with high cycle flows. This level of use/ demand must be considered when the potential route is designed.	M	L
13	Hockley South East	Improve connections between green areas.	Signed quietway along Woodlands Lane from B1013/Spa Rd roundabout to Tyrells Avenue. Signed footway conversion* to shared use along existing remote footway from Woodlands lane southwards into Hockley Woods.	M	M
14	Hockley Town Centre	Encourage cycling in Hockley	Signed restricted byway (PROW 285_28) upgrade along Holyoak Lane from Mount Bovers Lane to the edge of Hockley Woods. Route then follows a remote footway conversion* to shared use from Holyoak Lane through Hockley Woods to the west of Woodlands Rd. Routes proposed in Hockley Woods go through private land, and therefore potential land ownership issues.	M	M
15	Hockley South East	Improve connections between green areas.	Signed bridleway (PROW 285_29) upgrade along Mount Bovers Lane, south to join footpath (PROW 290_32) conversion* to shared use and signed on-road quietway eastwards and southwards along Gusted Hall Lane. Route continues along signed byway (PROW 290_2) upgrade until junction with PROW 290_51 and 290_2. Surface improvements required.	M	H
16	Rayleigh East	Provide new east-west route. Improve access to Rayleigh town centre.	Signed footpath (PROW 289_51) conversion* to shared use from Eastwood Rise along byway (PROW 290_2) and bridleway (PROW 290_51) conversion* to shared use, running east-west across green spaces. Route (PROW 290_51) continues south past Blatches Farm across Blatches Chase, and south to the footpath running parallel to Green Lane/Western Approaches. PROW 290_51 ends at the Southend Boundary and therefore connections will need to be considered with SBC. Existing levels of cycle flow are high along the A127 and Rayleigh Road. Some of this demand could be accommodated on this potential route and this should therefore be considered in the design of the scheme.	M	H+
17	Flemings Farm Road		Signed on-road quietway on Flemings Farm Rd from PROW 290_30 to Green Lane. Resurfacing should be considered along Flemings Farm Rd and potential widening. Signed on-road provision along Green Lane from Flemings Farm Rd to connect to existing cycle network. Existing levels of cycle flow are high along the A127 and Rayleigh Road. Some of this demand could be accommodated on	M	L

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
			this potential route and this should therefore be considered in the design of the scheme.		
18	Rayleigh East	Provide new east-west route. Improve access to Rayleigh town centre.	Utilise existing pedestrian route that continues from PROW 289_51 westward past New England Wood to Connaught Rd and new on road quietway along Connaught Road to existing E-W track on Grove Rd. Resurfacing and improvements required along this route. Existing levels of cycle flow are high along the A127 and Rayleigh Road. Some of this demand could be accommodated on this potential route and this should therefore be considered in the design of the scheme.	L	H
19	Rayleigh East	Provide new east-west route. Improve access to Rayleigh town centre.	Signed quietway route from Grove Rd to Eastwood Rd via Albany Rd, Warwick Rd and Queens Rd, Enhancements at junctions at Grove Rd/Clarence Rd, Warwick Rd/The Chase, Trinity Road/Broad Oak Way and Broad Oak Way/Queens Road for cyclists. Speed limit of 20mph on Warwick Rd. Sustrans recommends shared carriageway/ cycle lane, so traffic speed reduction measures would be beneficial. Existing levels of cycle flow are high along the A127 and Rayleigh Road. Some of this demand could be accommodated on this potential route and this should therefore be considered in the design of the scheme.	L	L
20	Rayleigh to Thundersley	Connect Rayleigh with employment at Rayleigh Weir and connect with Castle Point	Signed footway conversion* to shared use along Eastwood Rd. Widen and convert zebra crossing to tiger crossing on Eastwood Rd to King Georges Park. Widen and convert existing pedestrian route through King Georges Park to Websters Way and Stile Lane. The A1015 Eastwood Road has been identified as an area with high levels of cycle flow. This should be considered in the final design of the scheme. In addition, some of the existing high levels of cycle demand on the A129 could be diverted onto this scheme.	L	M
21	Rayleigh to Thundersley		Signed on-road advisory cycle lane along Daws Heath Rd from Eastwood Rd junction to Roach Avenue. There is potential to reallocate footways along Daws Heath Rd to create more width if necessary. Route continues as signed quietway on Roach Avenue and south via Weir Gardens to High Rd via Brook Rd. Enhance junctions for cyclists. Convert crossings around Rayleigh Weir junction, via a cycle contraflow along Brook Rd into Weir Gardens. Speed limit 20mph along Weir Gardens. Sustrans recommends shared carriageway/ cycle lane. It should be noted that high cycle flows recorded on the A129 may mean some of the existing demand could be transferred onto this scheme.	L	L
22	Rayleigh to Thundersley		A129/A127 junction. Signed and widened footway conversion* on the A129. Convert all crossings from pelican to toucan. No entry exception at Brook Rd to A129.	L	M
23	Rayleigh North	Connect North Rayleigh to rail station	Signed quietway from Daws Heath Road, across A129 High Rd, to Crown Hill via Castle Road, Love Lane, Leaseway and Love Lane. Cycle contra flow at Love Lane/Crown Hill. Signed on road advisory cycle lane on Crown Hill/Station Rd/London Rd. Enhance junctions where required. Upgrade crossing to toucan at London Road/Pearsons Avenue. Identified as an area from which a high number of short car trips to the station are being made. Improvements to cycle infrastructure may encourage some mode shift. This route will provide improved cycle access to the station and High Street from eastern areas of Rayleigh. Identified in the Consultation as a key missing link in Rayleigh and will provide improved connectivity to High Street, station and E/W Rayleigh.	M	M
24	Sweyne Park		Signed quietway on Pearsons Avenue, Cheapside West and Victoria Avenue. Route then follows existing bridleway (PROW289_71) through Sweyne Park to Priory Chase. Signed bridleway (PROW 289_71) conversion* to shared use through Sweyne Park Upgrade Sweyne Park bridleway routes and provide dropped kerbs to provide better cycle access into and out of the park. Cycle slow on Hill in Sweyne Park and provide 3m sealed surface and lighting from Sweyne Park to Priory Chase. Remove “dismount” signs at Priory Chase and Rawreth Lane. Identified as an area from which a high number of short car trips to the station are being made. Improvements to cycle infrastructure may encourage some mode shift.	L	H
25	Hockley to Hockley Woods	Provide access to popular leisure cycling destination	Signed quietway route from High Street towards Hockley Woods via Stile Lane, Websters Way and Bull Lane. Signed footpath (PROW 289_49 and 289_65) conversion* to shared use from Bull Lane to the edge of Hockley Woods. Signed footpath conversion* to shared use through Hockley Woods and connects with Scheme 14 west of Woodlands Lane. Routes proposed in Hockley Woods go through private land, and therefore potential land ownership issues.	M	H+
26	Extension of Ironwell Byway N-S		Extension of the Ironwell Byway N-S link from Hall Rd through green fields to Brick Fields area adjacent to Cherry Orchard Way. Signed footpath conversion* to shared use of PROW 290_5 from Hall lane until the intersection with	L	H

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Priorit-isation	Est. cost
			potential extended Ironwell Byway N-S link (potential scheme 4). Potential land ownership issues. Enhancement of bridge over the River Roache. Part of proposed JAAP routes and identified within Consultation as a desirable route within development. Route is proposed to continue through development under JAAP proposals, providing a continuous link to Airport Business Park.		
27	B1013 Cherry Orchard Way	Detail on subway upgrades can be found in London Southend Airport and Environs Joint Area Action Plan Walking and Cycling 'Greenway Network'- Linking the Community	Signed bridleway (PROW 290_48) upgrade parallel to B1013 Cherry Orchard Way on the western side from PROW 290_10 northwards to Cherry Orchard Lane. Subway under B1013 Cherry Orchard Way to eastern Cherry Orchard Lane. Part of proposed JAAP routes.	L	H
28	Ashingdon Rd from Dalys Rd to West St and Hall Rd.		This area has a series of complex road junctions, relatively narrow carriageway and roundabout, further detailed concept study required. Part of proposed JAAP routes. Identified as a high cycle demand corridor, as well as having potential to assist with mode shift from car driver to cycle if facilities can be improved. Junctions at West Street/ Hall Road and Ashingdon Road/ Ironwell Lane were identified during consultation as requiring improvements for cyclists and as a key issue/ high priority along this high demand corridor. Design should be consistent with rest of Ashingdon Road corridor, which is also proposed to be reviewed as potential scheme 1.	H	#N/A
29	Spa Road and Station Approach link to Hockley Station		New on-road advisory cycle lane along Spa Road and Station Approach to provide a cycle route to Hockley Station. Potential to reallocate roadspace to provide a higher quality facility, potentially continental style. Further study required to determine exact provision.		
30	High Street cycle contraflow, Rayleigh		New on road contraflow advisory cycle lane to be provided along High Street, Rayleigh, between Websters Way and Crown Hill. This would provide much improved access to and through the High Street for people who cycle. Further study required to determine exact provision and to ensure junctions are safe and convenient for cycle use.		

8 Flagship Routes

8.1 Introduction

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

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

8.2 Potential Flagship Routes in Rochford District

It is proposed that two Flagship routes for Rochford are created: an East/ West Flagship Route and a North/ South Flagship Route. The potential Flagship Routes are shown in Figure 8.1.

8.3 East/West Flagship Route (FR1)

An East/West Flagship route can be created by upgrading the existing cycling network that runs along Ironwell Lane and by creating new provision along Main Road from Ashingdon Road in the East to Hockley in the West. Particular focus will be required linking Ironwell Lane to the traffic free provision on Ashingdon Road.

This key spine route could benefit from upgraded provision and can be supplemented by improved connections to the town centres of Hockley, Hawkwell and Rochford, NCR 135, the rail stations and various residential areas.

8.4 North/South Flagship Route (FR2)

A North/South Flagship route can be created linking Ironwell Lane with Southend Airport Business Park. Particular focus will be required crossing Hall Road and attention will be needed where the route links Hall Road and the Business Park.

This key spine route could be supplemented by improved connections to residential opportunities and Cherry Orchard Jubilee Country Park.

8.6 Prioritisation of Flagship Routes

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

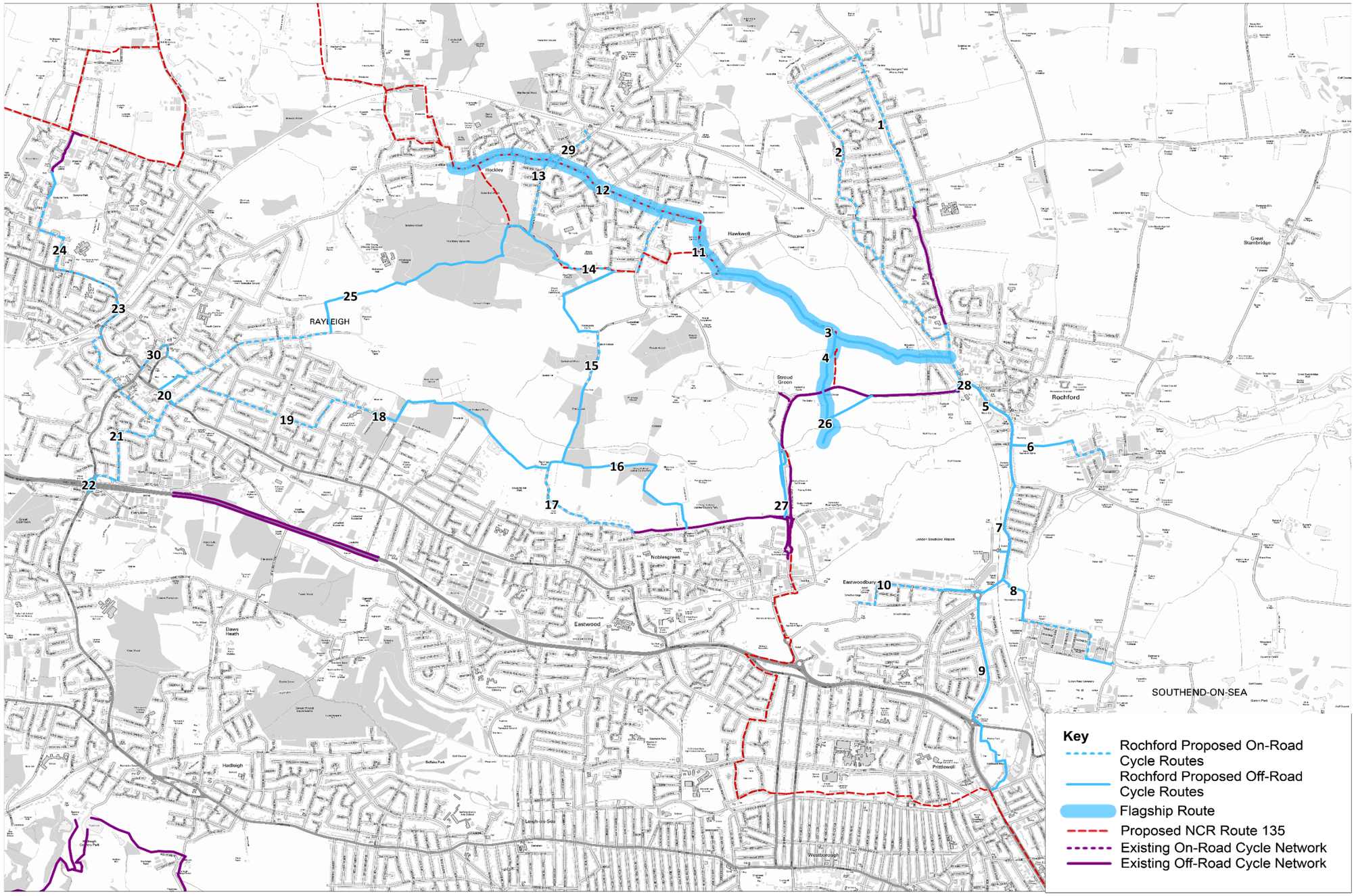
- Deliverability;
- Directness;
- Extension of existing network; and
- Key attractors.

For the East/ West Flagship Route (FR1), this assessment found that the route utilises existing Byways, which are often slightly more problematic to deliver than routes on highways land. The route would provide a direct connection between Hockley and Rochford, with potential direct onward links/ extensions to Southend Airport, hence taking in key attractors in the area. The existing network in the area is sparse, so there is no connection to it with this route. This route (FR1) has achieved a high prioritisation overall.

The North/ South Flagship Route (FR2) would connect the East-West Flagship Route (linking Hockley with Rochford) to Southend Airport. This would be a direct link, improving access to the airport from Hockley especially. Again, this route utilises existing footpaths, so achieves a medium score in terms of deliverability, a high score for directness and a medium score for extension of existing network, as it connects to an existing cycle route. It achieves a high score as it connects the key attractor in the area (London Southend Airport) with the potential cycle network. Overall, this potential Flagship Route would achieve a high priority as it will be a key link between the airport and the rest of the potential cycle network.

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

Figure 8.1 Existing and potential cycle routes in Rochford including flagship routes



9 Smarter Travel Measures

9.1 Introduction

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

Local promotion of cycling should be increased to convince residents that cycling is a normal and accessible activity for all as well as highlighting the health benefits of cycling.

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

9.2 Marketing and promotion

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

9.2.1 Cycle Essex

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

9.2.2 High profile events

Essex has been successful in attracting high profile cycling events to the County that have been well attended by the public, such as hosting Stage 3 of the 2014 Tour de France. ECC would like people to continue to support these events but also give cycling a try through further mass event, car free days in town centres and bike festivals.

9.2.3 Support for local initiatives

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

The presence of the ‘green lung’ of Hockley Woods and Cherry Orchard Jubilee Country Park in the centre of the Rochford District provide a huge opportunity for leisure cycling. Cycle use around Hockley Woods alone is already at notable

levels and should be further encouraged in an environmentally sensitive manner due to the SSSI status. A local “no cycling” byelaw also currently exists here. Subject to the byelaw being revoked, leisure cycle hire could also be provided here or in Cherry Orchard Jubilee Country Park.

9.2.4 Cycling Maps

Cycling maps (digital and on paper) aid in navigation and are an effective marketing tool for raising the profile of cycling. Once a more established cycle network is in place, a cycle map should be produced of the Rochford District, including the urban areas and access to leisure routes. If the maps are legible, well designed and effectively disseminated, they can be the nudge that is needed to motivate the ‘near market’ to start making some trips by bike.

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

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

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

For example, there is considerable interest in cycling at a community level in the District, with more than 1,500 routes recommended in the Rochford/ Rayleigh area, by users of *mapmyride.com*.

With a high number of local journey to work trips being made, a programme of targeted workplace travel planning should be implemented with a focus on cycling where network has been provided.

9.4 Potential Local Considerations

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

- Updating the existing cycle map of Rochford town to include isochrones and mode-switch motivational information;
- Cycle access – promoting access to bicycles through the cycle to work scheme, cycle hire, provision of subsidised bikes; and
- National Bike Week events to include a commuter challenge where people using different modes make the same journey in the morning peak – would normally show the advantageousness of cycle travel in the peak time) and a cycle commuter's breakfast where free refreshments are laid on at a central location for all those who arrive by bike.

10 Delivery and Funding

10.1 Delivery

The recent Infrastructure Act (February 2015) places a commitment on the Government to produce a Cycling and Walking Investment Strategy. The strategy would specify the objectives to be achieved and the financial resources available. This new bill shows a change in the government's thinking and a clear commitment to providing for cycling as well as accepting responsibility for targets and funding.

The Department for Transport's Cycling Delivery Plan (October 2014) refers to a new national cycling target, to double the number of cycling stages (trips) nationally over a 10 year period. This new target will be adopted by Essex as part of this strategy.

The Government has also set a target of achieving an annual cycling spend of £10 to £20 per head of the population. In Essex this would equate to approximately £17million to £34million per year spent on cycling.

A step change in the provision of cycling infrastructure and promotion will require an increase in funding over and above the current level of funding for cycling in Essex. Essex County has committed to:

- Ensuring a consistent level of revenue and capital funding to support the delivery of this strategy;
- Increasing the level of funding in Essex from its current level of £2 - £3 per head of population to £10 per head of population by 2025;
- Increasing the utilisation and prioritisation of other funding sources such as developer contributions and central Government grants/allocations; and
- Developing a clear and cohesive methodology for the allocation of cycle funding across Essex Districts.

This will ensure that new proposals are not frustrated by a lack of funding and designers and promoters are set free to develop measures that will lead to a consistent growth in cycling numbers, frequency and safety.

10.2 Funding Options

There are a range of funding sources available for the potential schemes identified in the Cycling Action Plans which are as follows:

- Local Highways Panels (LHPs);
- South East Local Enterprise Partnership (SELEP) funding;
- DfT Access Fund;
- Local Growth Funds (LGFs); and
- Section 106 (S106) monies.

10.3 Funding for Rochford

The delivery of the potential schemes, soft measures and smarter travel measures will require additional funding and so for this Cycling Action Plan to be successful, it is imperative that funding is provided and sustained over a number of years.

ECC Local Highway Panels are a source of capital funding for local highway schemes and are an appropriate way for new cycle infrastructure to be funded.

Planning contributions from new developments are an important source of finance and can either provide funding towards new or improved cycle infrastructure in Rochford District or, if in the vicinity, actually construct schemes as part of the development.

Current UK Government spending is £2.50 per person per year; the aim is to increase this to at least £10 per person per year by 2020/2021. Essex will also aim to spend £10 per person per year, with an initial increase to £5 by 2017.

The Government has a £6 billion Local Growth Fund for cycling and walking and wishes to reduce the administrative budget Local Authorities have to use in bidding for funding.

Other sources of funding also become available from time to time such as from the DfT. Therefore it is important that there are schemes readily available to be put forward for funding, should such opportunities arise.

In addition to the above, other possible funding options include:

- As part of road safety schemes;
- As part of health and safety schemes;
- Sustrans;
- Local growth funds;
- Network Rail and/or rail operating companies;
- Active Essex / Essex Health;
- SELEP Local Growth Funds for local sustainable transport programme;
- European Union funding (e.g. European Regional Development Fund and Rural Development Programme); and
- Acquire and investigate corporate sponsorship opportunities for any high profile public schemes/events.

11 Key Recommendations

In order to create an environment where cycling is normal for the residents of Rochford, existing barriers to cycling should be removed and a series of cycle routes provided with the aim of creating a connected cycle network over time. Cycling infrastructure should provide for both key utility journeys and encourage leisure cycling.

Taking into account the current barriers to cycling in Rochford District, commuter flow analysis and locations of committed development, the following key recommendations have been made for cycle enhancements in the District:

- Review existing route signage and lighting;
- Improve maintenance of existing routes;
- Prioritise North – South and East-West Flagship routes, upgrading existing cycle network along Ironwell Lane and extension east to Ashingdon Road towards Rochford town centre, and west to Hockley, as well as providing link to Southend Airport Business park;
- Provide new and improved cycle parking with a focus on safely accommodating the demand for commuter trips at railway stations, and consideration of provision in Hockley town centre;
- Fill obvious gaps in the existing cycle-route network (on alignments with cycle-friendly topography);
- Provide new infrastructure on key roads with cycle-friendly topography but no existing facilities;
- Update the existing cycle map every two years taking on board new innovation in cycle-map design, and promote it and disseminate it widely through a range of channels and outlets;
- Develop Flagship Routes through Feasibility Studies to Detailed Design; and
- Promote and market Flagship Routes with ‘Cycle Superhighway’ style branding and disseminating techniques;
- Improve Connectivity to London Southend Airport from Rochford & surrounding areas (incorporate the Joint Area Action Plan (JAAP) scheme proposals);
- Improve access to railway stations for people who cycle;
- Begin to develop a cycle network in Rayleigh; and
- Develop cross boundary routes to Castle Point, Basildon, Chelmsford and Southend-on-Sea, primarily through the proposed National Cycle Network and JAAP routes.

To ensure the potential for cycling is fully realised, new infrastructure must be accompanied by high profile and targeted promotion of cycling to ensure the full cycling potential is realised in Rochford District, particularly in urban areas. This should include the promotion of leisure cycling to take advantage of the green space(s) within the District e.g. Hockley Woods.