

Castle Point Borough Cycling Action Plan

Highways/Transport Planning

January 2018



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Executive Summary

Essex Highways was commissioned by Essex County Council to produce a Cycling Action Plan (CAP) for Castle Point Borough, 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 Castle Point Borough and in Essex.

This Castle Point CAP is targeted towards the specific needs of Castle Point residents, which will assist Essex County Council (ECC) in tackling wider problems associated with poor health, pollution, traffic congestion and inequalities of opportunities for Castle Point'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 Borough;
- Prioritise funding for new cycling schemes in Castle Point;
- Create a usable, high-quality cycle network that connects residential areas with key employment locations, railway stations and town centres; and
- Create opportunities to increase recreational cycling in Castle Point.

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 Castle Point, 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

The compact shape of the Borough, its relatively flat topography in many areas (Canvey Island, Hadleigh and South Benfleet) and restricted entry and exit points offer great potential for much higher levels of utility cycling. Taking into account the current barriers to cycling in Castle Point and commuter flow analysis, a number of key recommendations have been made for cycle enhancements in the Borough:

- Review existing route signage and lighting;
- Improve maintenance of existing routes;
- Prioritise the North-South Flagship route, providing access to Benfleet rail station, the town centre and seafront;
- Provide new and improved cycle parking with a focus on satiating the demand for commuter trips at Benfleet railway station;
- 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;
- Promote and market Flagship Routes with 'Cycle Superhighway' style branding and disseminating techniques;
- A route to Benfleet station from the north west of the Borough to be prioritised;
- High quality cycle routes along the A13 and A129 corridor also to be developed, taking into account topography and the opportunity to reallocate highway space to dedicated cycling facilities (and preferably not shared-use footways) where possible;
- Develop the route identified in the Basildon CAP, to the Basildon Enterprise Corridor, which offers a significant advantage over the shortest motor-traffic route. Potential routes 15, 29 and 30 in the Basildon CAP address this link, connecting Thundersley with the Basildon Enterprise Corridor at Burnt Mills. The route utilises Burnt Mill Road, Benfleet Hall Road, Bridleway 183 and

Byway 150, connecting to an existing subway under the A130 and Rushbottom Lane in Castle Point Borough. From here potential routes 3, 4 and 5 provide a N-S link to the existing off road cycle route which provides access to Canvey Island; and

- Take advantage of the recreational and sports cycling opportunities provided by the Hadleigh Olympic Park in both attracting visitors to the area and providing new traffic-free cycle routes (e.g. bridleways) to the attraction.

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 Borough of Castle Point. This document provides an opportunity to develop and promote cycling in Castle Point through improved infrastructure, together with the wider promotion of cycling by Active Essex, Essex County Council (ECC) and Castle Point Borough Council (CPBC), 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.

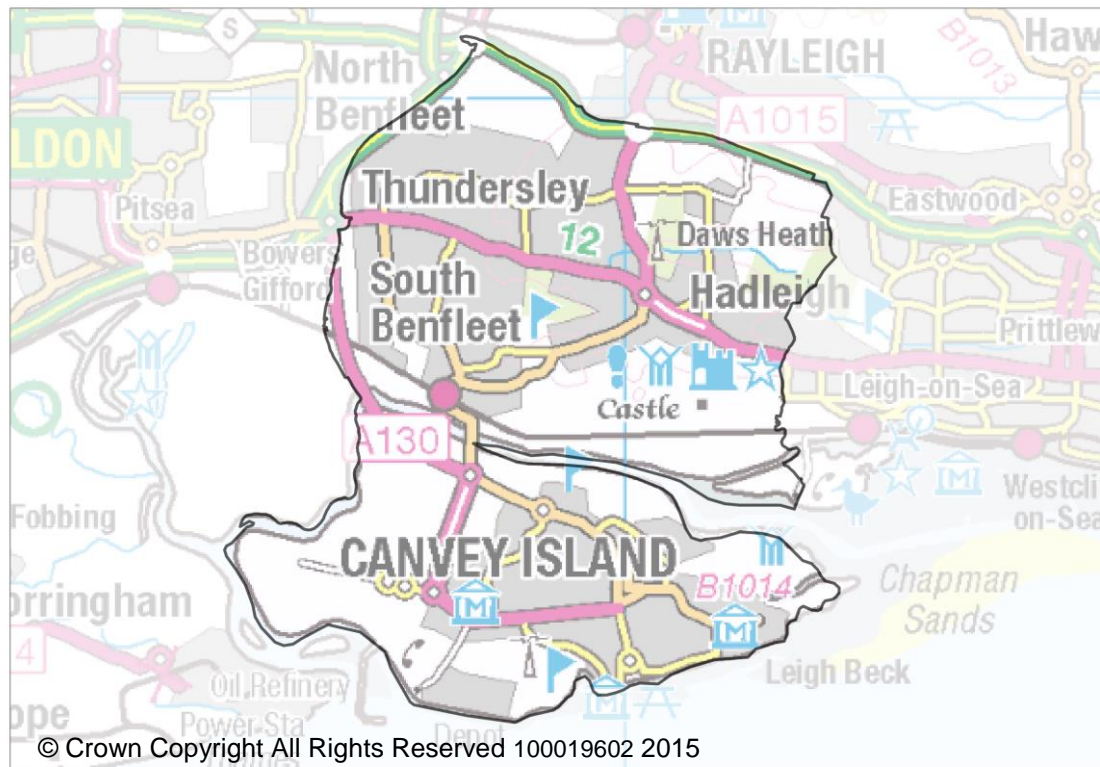
Table 1.1: Active Essex priority aims

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

Castle Point is a borough of considerable geographical diversity. The southern half comprises Canvey Island, linked to the mainland by two bridges, one of which is a short distance from Benfleet station. The island is predominantly flat and the whole population lives within 5km (an easy cycling distance) of Benfleet station. The northern side of the borough comprises three large settlements – Hadleigh, South Benfleet and Thundersley. This side of the borough has some significant topography which is likely to suppress the demand for cycling considerably, and needs to be taken into account when planning new facilities. Benfleet is the only railway station in the borough. The borough is home to the Hadleigh Olympic Park which reopened in 2015 as a major visitor attraction, and generates a lot of recreational and sports cycling in the borough.

Figure 1.1: Castle Point Borough map



The 2011 Census records the population in Castle Point borough at 188,000. Car ownership is an average of 1.4 vehicles per household. Motor traffic congestion is a major issue in the Borough especially on the two routes from and to Canvey Island in the morning and evening peaks respectively. If high quality and heavily promoted facilities are provided on routes with cycle-friendly topography, cycling has the potential to attract a lot of motorists by offering improved and more reliable journey times, as well as other benefits relating to fitness, health, pollution reduction and reduced parking space requirements.

1.3 Aims of the Action Plan

Although Essex County Council (ECC) and Castle Point Borough Council (CPBC) have been promoting cycling for many years, the lack of a planned and justifiable list of interventions aimed at widening the appeal of cycling within the Borough means that cycling has not always been prioritised.

¹ Office for National Statistics, NOMIS, Usual resident population in Castle Point, 2011

The aims of the action plan are to:

- Identify how cycling levels can be increased in the Borough;
- Prioritise funding for new cycling schemes in Castle Point;
- 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 Castle Point.

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 – Castle Point’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 Castle Point Adopted Local Plan (1998).

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, the Castle Point Borough Council Adopted Local Plan (1998) and other Supplementary Planning Documents, recognise the importance of good cycle provision both to cater for the needs of cyclists and the wider benefits that can be realised through encouraging the use of cycling, such as those relating to health, wellbeing and place.

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
- Cycling 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 safer 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:

- 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) seeks to achieve the following five broad outcomes:

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

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

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

- Working with schools and employers to improve facilities for cyclists;
- Improving access to local services by integrating the Public Rights of Way, walking and cycling networks to form continuous routes; and
- Providing training opportunities to school children and adults.

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

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

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

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

The *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 £880,000 and £1.76m 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 Districts/ Boroughs, 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 Castle Point Adopted Local Plan (1998)

Castle Point Borough Council withdrew the New Local Plan (2016) on 29th March 2017. Until such time as the New Local Plan is adopted, the 1998 Adopted Local Plan should be considered alongside the National Planning Policy Framework (NPPF). The Council has also adopted some Supplementary Planning Documents as guidance that will be taken into account when making planning decisions.

The Council will continue to use the 1998 Adopted Local Plan as amended and saved by the Secretary of State for Communities and Local Government in 2007, together with numerous non-statutory Supplementary Planning Documents to provide the context for planning in the Borough.

Objectives 9 and 10 in the Transport chapter of the Adopted Local Plan indicate that the Council “seeks to reduce growth in the length and number of motorised journeys” and “encourages alternative means of travel such as walking or cycling which have less environmental impact than private car usage.”

Policy T10, Cycleways, indicates that “the Council will encourage the highway authority to provide improved facilities for cyclists within the Borough, including the provision of cycleways on existing highways and will promote the provision of facilities for cycling, including the provision of bicycle parking when considering development proposals.”

Policy T11, Cycleway Construction, “seeks the provision of cycleways within the construction of new roads, where appropriate, with the long term intention of securing a Borough-wide network of cycleways.”

2.4.2 Canvey Town Centre Masterplan (2010)

The Council has also adopted some Supplementary Planning Documents as guidance that will be taken into account when making planning decisions. One such document is the **Canvey Town Centre Masterplan (2010)**, which identifies that “all decisions made in accordance with this masterplan should incorporate specific measures for enabling safe access by bicycle. These should include:

- (a) Formally signed on-street and off-street (where appropriate) walk/cycle routes that link the town centre to residential areas;
- (b) Provision of advanced stop lines at signalised junctions to provide cyclists with improved priority, visibility and awareness;
- (c) Significant increase in dedicated cycle parking, located at all key destinations in the town; and
- (d) Promotion and publicity to improve the image of walking and cycling on Canvey, encouraging more trips to be made in this way.

The community identified problems with movement as a fundamental weakness of the town centre. Two specific movement objectives are of relevance to cycling:

- Movement Objective M1: create a pleasant, calmed Town Centre environment that is an attractive place for walking and cycling while allowing vehicle movement; and
- Movement Objective M3: promote non-car travel and improved health and wellbeing by increasing walking and cycling.

3 Data Analysis

3.1 Introduction

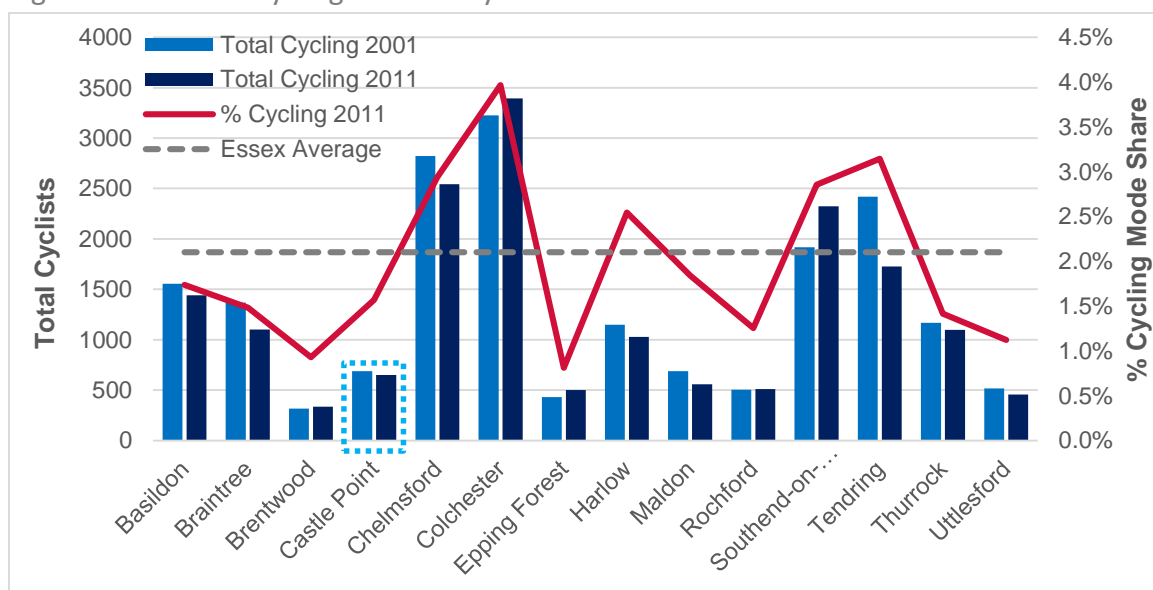
When planning for cycling infrastructure, it is important to first understand current levels and conditions for cycling. This section includes analysis of:

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

3.2 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, based on the 2011 Census data Castle Point has low numbers of cycle commuters when compared with most Essex Districts, with 651 people cycling to work every day. Only 1.6% of the journeys to work in Castle Point are made by bicycle, which is below the county average of 2.1%.

Cycling-to-work levels decreased marginally in the majority of Essex Districts between 2001 and 2011 Census. This slight decline has been widely observed across many shire counties in England and Wales, 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 infrastructure². Whereas, in urban areas, cycling to work increased due to the implementation of improved infrastructure, thus balancing the decline in rural areas.

More locally, in Canvey Town, 8% of internal journeys to work are made by bike, equating to 304 cyclists per day, placing it in the top 10 urban areas for cycling in the County. This is in stark contrast to the north of the Borough where only 2% of internal journeys are made by bike, and is likely to reflect the gentle topography and compactness of the island. If the level of cycling in Canvey is already at 8% then this identifies it as a potential cycling hot spot in the County that needs to be nurtured and developed.

Figure 3.2 and Figure 3.3 show the percentage cycling to work by origin in Canvey Island and Benfleet.

² <http://www.sustrans.org.uk/press-releases/governments-must-get-times-cycling-work-levels-stagnate-over-10-years>

Figure 3.2: Percentage cycling to work by bicycle in Canvey Island

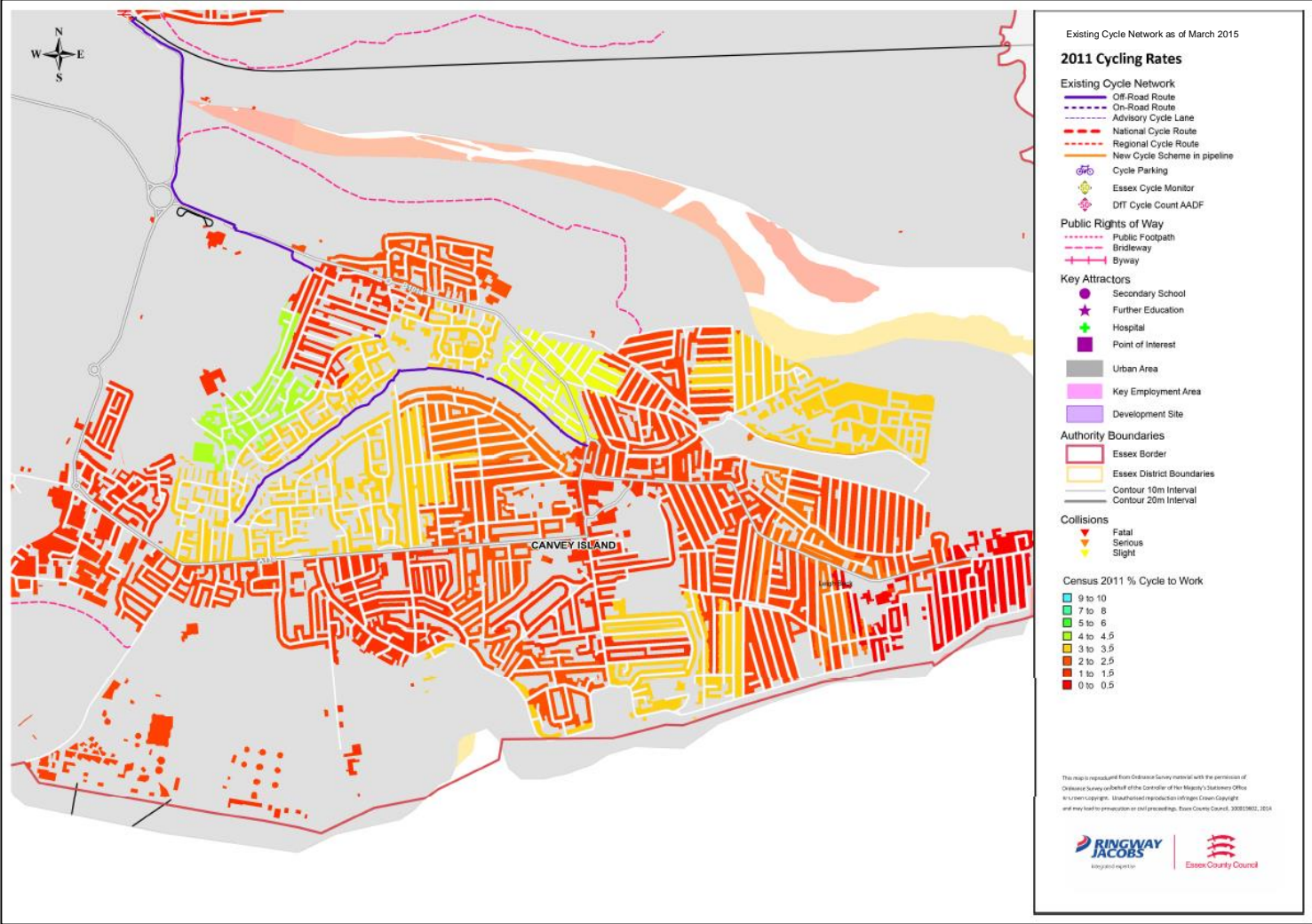
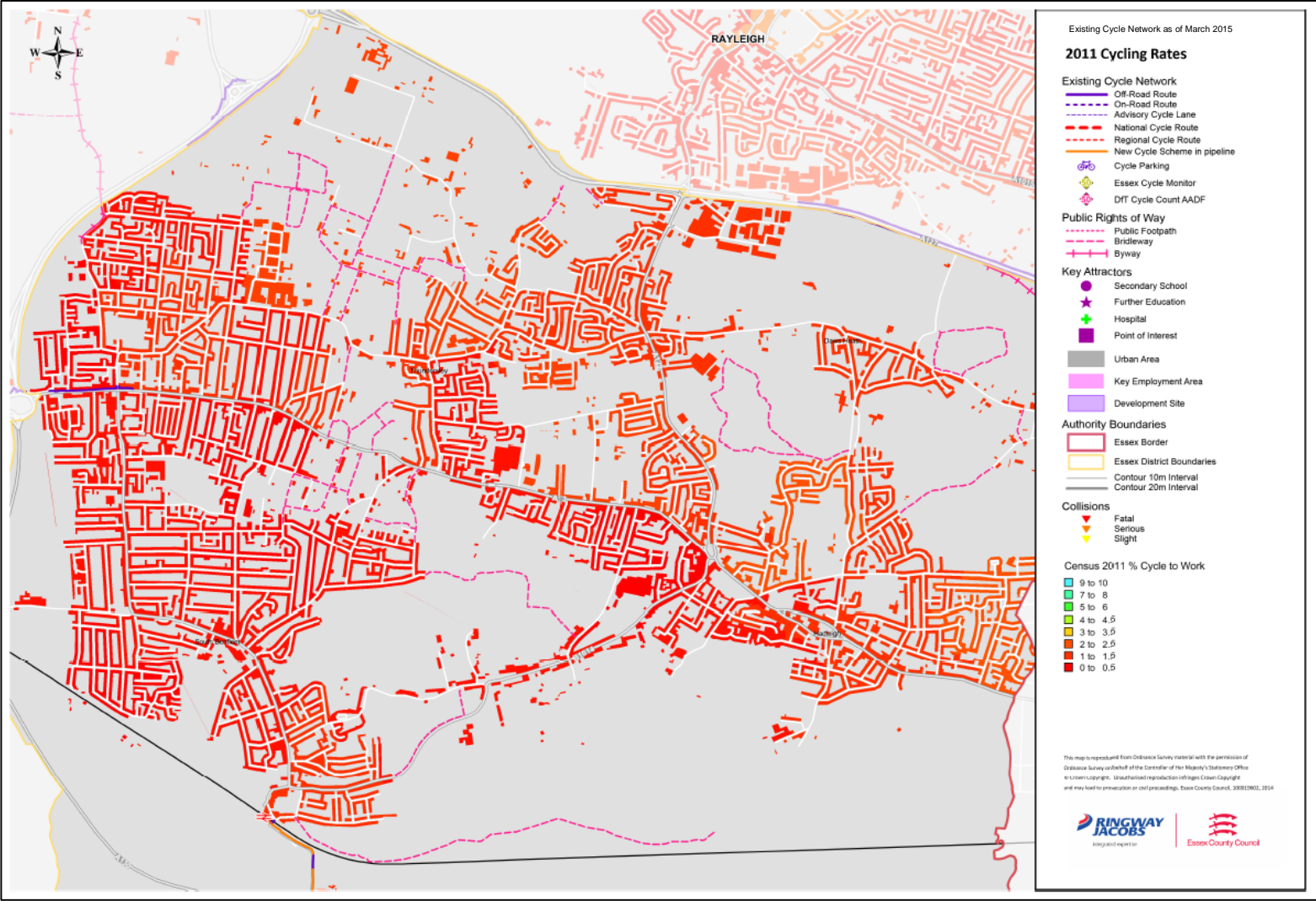


Figure 3.3: Percentage cycling to work by bicycle in Benfleet

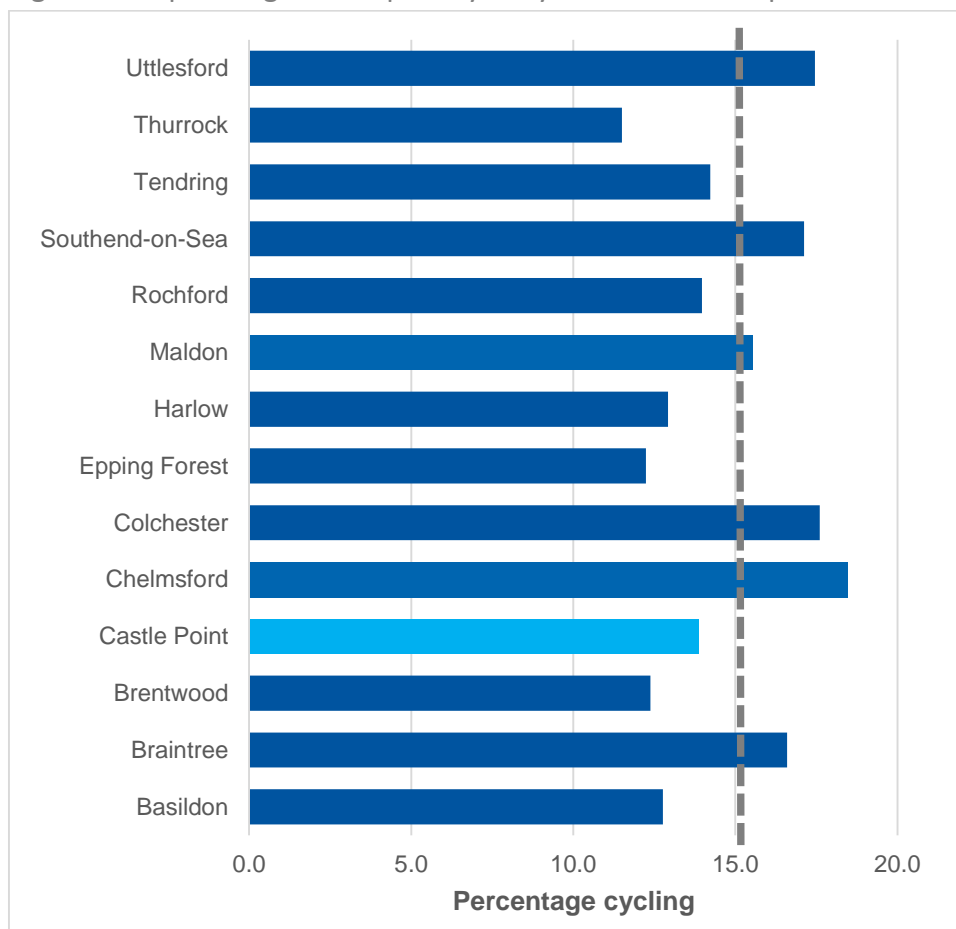


3.3 Sport England ‘Active People Survey’

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 3.4 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, Castle Point has slightly below average levels of residents cycling at least once a month, mirroring the census cycle-commuting data.

Figure 3.4: Sport England Propensity to cycle at least once per month 2010-2013



3.4 DfT Count Data

The Department for Transport collects vehicular flow data at various locations on the road network around the country. These counts record all vehicles using the carriageway, including pedal cycles, and are shown in Figure 3.5 and Figure 3.6. Of the 12 count sites located in Castle Point, the following 3 recorded more than 100 cyclists per day;

- 308 cyclists east of Benfleet station. The potential Flagship route passes through Benfleet station and will help to accommodate this high level of cycle demand.
- 200 cyclists on London Road (A13). Potential schemes 8, 9, 10 and 13 are along the A13, so will accommodate some of this high level of demand.
- 111 on Thorney Bay Road, Canvey Island. This is the location for potential scheme 23.

Figure 3.5: Existing cycle infrastructure in Canvey Island

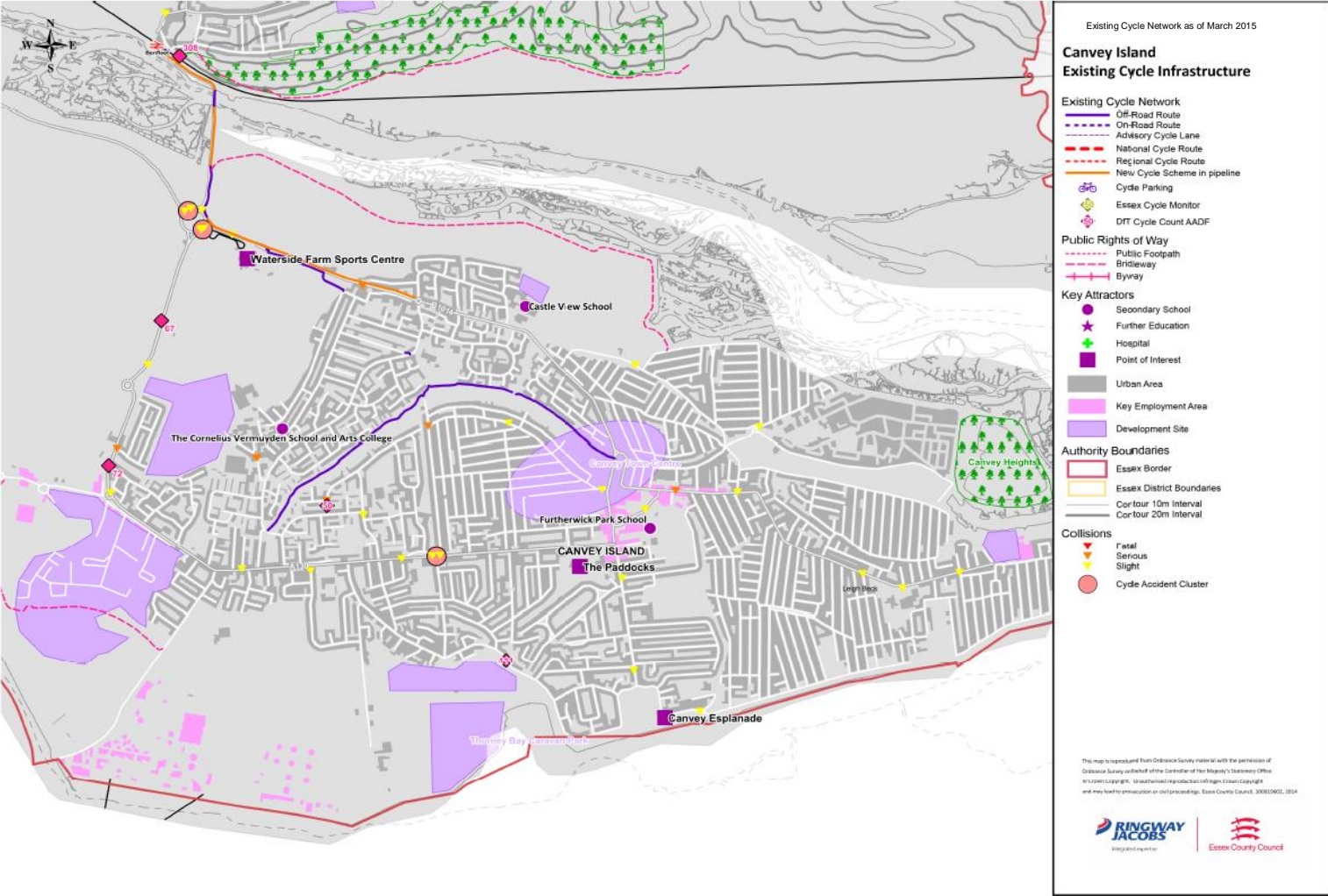
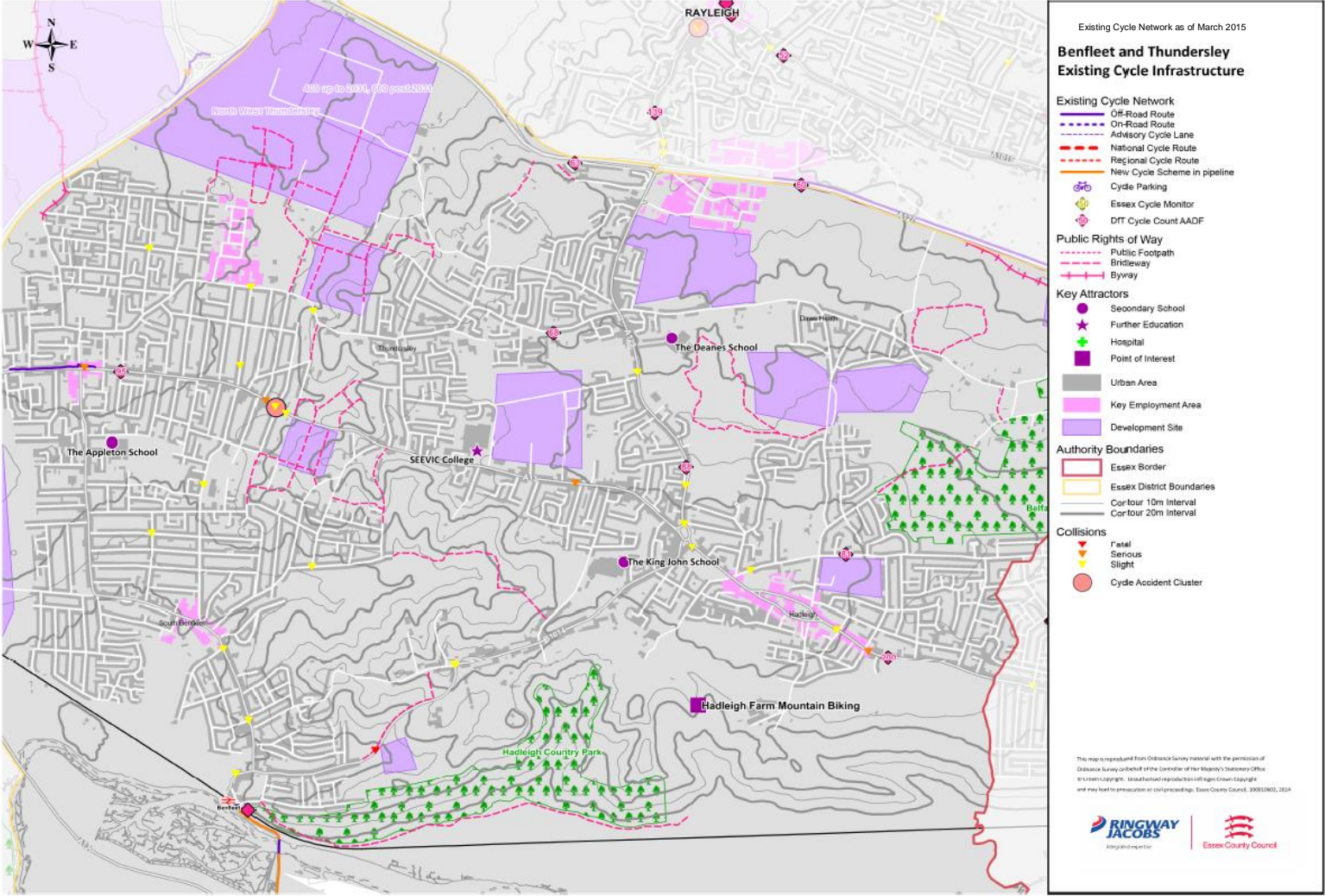


Figure 3.6: Existing cycle infrastructure in Benfleet and Thundersley



3.5 Collision Data

Fear of personal injury is often cited as the biggest barrier to cycling but while this is an important issue, it is useful to use statistics rather than just 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 (or borough) for the 5 year period between August 2012 and July 2017.

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

	Fatal	Serious	Slight	Grand Total	% of total cycle accidents in Greater Essex	Number cycling to work ³	% 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%

Castle Point has a relatively low number of injury collisions when compared with other districts in Essex (placed 10th out of 14). However, it is in 9th place for the

³ Source: ONS Cycling to Work Summary Table, taken from Census Table CT0015EW

amount of cycling (to work) that takes place suggesting that it has an average collision *rate* within the county. Three cluster sites have been identified:

1. A130/Craven Avenue, Canvey Island – one involved a pedal cyclist crossing the Pelican crossing in the amber phase. The explanation for the second collision is unclear. Potential scheme 22 passes through this site. A junction improvement has been earmarked for investigation as part of this potential scheme.
2. Seven collisions at the roundabout junction of the A130/B1014 (Canvey Way/Canvey Road). The potential Flagship Route for Castle Point passes through this junction, as well as potential scheme 25. Their design will be subject to further consideration to improve conditions for cyclists cycling through this junction. These involved:
 - cyclist on circulatory carriageway hit by a vehicle entering the roundabout
 - vehicle entering the junction from south crashed into cyclist on the roundabout
 - as the cyclist on the roundabout passed the Canvey Road exit a motorist pulled onto the roundabout and hit the cyclist's back wheel
 - cyclist on roundabout in nearside lane
 - cyclist was travelling around the roundabout from Benfleet
 - cyclist heading over roundabout towards Benfleet was clipped by an overtaking vehicle
 - vehicle collided into rear of cyclist on roundabout
3. Three collisions took place close to the junction of the A13 (London Road) and Rhoda Road: Potential scheme 8 will address these issues.
 - Cyclist on the main road hit by an emerging vehicle from the side road
 - The second appeared to involve the cyclist being struck by an overtaking vehicle (both heading west)
 - A single vehicle collision i.e. just involving the pedal cyclist

The cycle collision clusters are shown in Figure 3.5 and Figure 3.6.

3.6 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 considered to be under reported. Figures for both these constabularies are combined by District in Table 3.2, below. Note that the figures for 'Essex' exclude the Unitary

Authorities of Southend and Thurrock, figures for ‘Greater Essex’ include these areas.

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)

Castle Point has relatively low amounts of cycle crime in Essex, in terms of total numbers of reported crimes, where it is ranked 9th in the county with 3% of all cycle crime. In comparison, the rate of annual cycle thefts per cycle commuter is 0.13, which is below the average for Essex of 0.16 and achieves a ranking of 8th across the county as a whole.

3.7 Topography

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

determiner of the proportion that cycled to work in a District'⁴. A DfT fact-sheet observed 'although it is obvious that it is easier to cycle in flat areas, the extent of the differences is surprising, and has policy implications.'

Castle Point is a borough with widely varying topography. On the southern side (i.e. Canvey Island) the topography is very gentle, and will not have any impact on suppressing the demand for cycling. The northern half of the borough, however, has some of the county's steepest gradients and biggest hills, and new infrastructure will need to be planned very carefully to avoid expenditure on little-used facilities. Benfleet station is close to sea level so can potentially attract lots of trips from Canvey. Much of South Benfleet and Hope's Green is similarly flat. However, towards Tarpots the land begins to rise by 20m to 30m which could have some impact on demand for cycling. Between Benfleet and Thundersley/Hadleigh, the land rises by over 60m so cycling demand between these places will always remain low. On the higher ground, Thundersley and Hadleigh are at a similar level, so internal cycle trips between them are feasible given the right facilities, and both the A13 and A129 corridors have the topographical potential to support much more cycling. Although the A13 eventually drops to sea level in Southend, the gradient is very gentle and it would be a key route linking major settlements so higher levels of cycling should still be achievable. A route along the coast between Benfleet and Leigh would be relatively flat helping it to attract utility as well as recreational trips.

The topography of Castle Point is shown in Figure 3.5 and Figure 3.6.

⁴ Parkin, J. Wardman, M and Matthew, P. (2008) *Estimation of the determinants 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 Borough of Castle Point, situated on the coastline of south east Essex, on the northern side of the Thames Estuary has an area of 173 square miles and a population of approximately ⁵88,000 people. The southern half of the Borough is comprised of Canvey Island, which is linked to the mainland by two bridges, one of which is a short distance from Benfleet station. The northern side of the borough comprises the three large settlements of Hadleigh, South Benfleet and Thundersley. The nearest rail stations are Benfleet and Rayleigh (which is located outside of the borough in neighbouring Rochford).

4.2 Existing infrastructure

There is generally very little dedicated cycling infrastructure in Castle Point. Canvey Island has most of the Borough's cycling facilities, the best of which is a potentially very useful route from Canvey Town to Benfleet station which follows an attractive, 'traffic free' alignment on some sections e.g. on the northern side of The Lake. This was recently upgraded in 2016/17, to provide a continuous cycle route between Elsinor Avenue Roundabout along the B1014 to the Canvey Road bridge. There is a small section across the bridge where there is no provision for cyclists, as a result the route does not connect to the key attractors of Benfleet Rail Station and the existing cycle parking on the north side of the creek. The photographs in Figure 4.1 shows the shared footways on Somnes Avenue and Canvey Road.

⁵ Office for National Statistics, NOMIS, Usual resident population in Castle Point, 2011

Figure 4.1: Shared footways on Somnes Avenue and Canvey Road



The Canvey Road/Canvey Way roundabout is the only way onto and off the island but can be hazardous for cyclists and they can face significant delays crossing the arms. The cyclist pictured in Figure 4.2 was observed waiting two minutes for a gap in the traffic to cross this arm of the roundabout. There is a segregated left turn lane for traffic in this location, so cars are travelling fast and not required to slow down. The cyclist shown is not using an official crossing and would be required to cross 3 lanes of westbound traffic and 2 lanes of fast moving eastbound traffic on this arm, which is ill advised but there is no crossing point in the vicinity. Potential scheme 25 addresses this issue. A recently completed shared use footway conversion (20167/17), allows people to cycle adjacent to the southbound/ eastbound carriageway of the B1014 (Canvey Road/ Somnes Avenue), between the Elsinor Avenue Roundabout and the bridge across East Haven Creek. At this point, cyclists are currently required to dismount/ rejoin the carriageway as there is insufficient width on the bridge to enable the shared use route to continue. On the northern side of the bridge, cyclists can use the shared use footway conversion adjacent to the northbound carriageway, which finishes at the cycle parking on Ferry Road, located opposite Benfleet Rail Station. . These issues will be addressed by potential scheme 26, which aims to improve connectivity for cyclists in the vicinity of the bridge and railway station.

Figure 4.2: Canvey Road/Canvey Way roundabout and end of Canvey Road cycle route at Cycle Parking, Benfleet Rail Station



The route through the main part of the island follows a direct alignment and could appeal to a wide cross-section of cycle users. However, some improvements would be beneficial: the surface quality in places needs addressing (Figure 4.3 left, below); improve guidance highlighting which side pedestrians and cyclists should use (Figure 4.3 right); consider whether cyclists could be better accommodated on the Canvey Road bridge as this is currently a gap in the existing cycle route (potential scheme 26); and improve signage from Canvey town centre.

Figure 4.3: Cycle route on northern side of The Lake, Canvey



4.2.1 Cycle parking

There is a fair amount of short-stay cycle parking in the borough. However, some of it is poorly located e.g. away from the main shopping area in Canvey town centre (Figure 4.4, left) or a poor quality, insecure design (Figure 4.4, right).

Figure 4.4: Cycle parking in main shopping area, Canvey



Medium to long-stay cycle parking is needed for commuter and rail feeder trips. Benfleet station has a considerable amount of such parking (i.e. with some weather and theft protection) but recent additions have been located too far away from the station (Figure 4.5, left), so people have chosen to park their bikes informally closer to the station instead (Figure 4.5, right).

Figure 4.5: Cycle parking provision and usage at Benfleet Railway Station



4.3 Key Barriers

There are a number of major barriers to cycling movements in the Borough. Some of these (e.g. major junctions) could technically be cycled but many people would find them too intimidating.

The most difficult junctions and other obstacles in the Borough are likely to be:

- The A130 Canvey Road/ B1014 Somnes Avenue roundabout (a major cycle-collision hotspot) This location is on the alignment of the potential Flagship Route, as well as potential scheme 25. As such, consideration will be given to the design of the junction for cyclists with an aim to improving their safety and reducing cycle accidents.
- The A129 (Rayleigh Road)/A13 (Kiln Road/ London Road)/ B1014 (Benfleet Road) roundabout in Hadleigh (two lanes on the roundabout and at most entry/exit points). This location is at the point where potential schemes 8, 9

and 13 meet. They highlight the need for safe passage around the roundabout.

- The Rayleigh Road/Stadium Way signalised junction (especially the approaches and movements requiring cyclists to pull out across a lane of traffic). This location is on the alignment of potential scheme 14, which highlights the need for junction improvements at this point for cyclists.
- The A127/A129 roundabout on-carriageway (it is likely that some or most cyclists choose to use the pedestrian crossing facilities here) The need for improvements for cyclists at this junction has been identified in potential scheme 14.
- The bridge on the B1014 between Canvey Island and the mainland (relatively narrow carriageways and footways).
- The lack of a continuous bridleway provision on Hadleigh Country Park between Benfleet and Leigh on Sea railway stations This will be addressed by potential scheme 12.
- The one-way systems through Hadleigh and Canvey town centres requiring cyclists to follow circuitous routes for some local trips, and creating potentially hazardous conditions on carriageway due to weaving and excessive speed. The one-way systems in the town centres have been identified as issues for cyclists in potential schemes 9 (Hadleigh town centre) and 20 (Canvey town centre).

5 Castle Point's Cycling Potential

5.1 Introduction

This section provides a summary of existing travel behaviour within the Borough, as well as identifying the potential for cycling.

5.2 Commuter Flow Analysis

The 2011 Census shows how residents choose to travel to work as well as the location of their workplace. The aim of analysing this information is to establish the predominant local commuter movements that could feasibly be cycled. This data can then be used to estimate the commuter cycle-potential for an area.

The predominant commuter flows for the Castle Point borough have been calculated based on travel between Medium Super-Output Areas' (MSOAs). As journeys to work take place to and from all MSOAs within the Borough, only the top ten 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

The numbers for Canvey Island cycle trips are relatively low, as expected, but it is interesting to see where people are cycling. Figure 5.1 shows that the biggest flow (40 cycle trips) is within MSOA 010 on the north western side of the island, centred approximately around Cornelius Vermuyden school (school trips for pupils would not be included as it is commuter data). Other flows of 30 or more were between the central southern part of the island and a) the northern side b) the north-west (around Cornelius Vermuyden school).

5.2.2 Car trips

The main car trips within Canvey Island were: within the south western MSOA (211), between the south eastern and south western MSOAs (208), and within the north western MSOA (Figure 5.2). On the northern side of the borough, the main movement was to the northernmost MSOA (industrial estate between the A129 and the A127) (Figure 5.3).

5.2.3 Rail

Cycling is well suited as a station access mode for rail trips, as parking is usually free and the mode is less affected by congested traffic conditions. The 2011 Census only records main mode by distance, therefore assumptions must be

made when analysing journeys that would be multi-modal. Therefore, where commuters have stated their main mode of travel to work to be rail, it has been assumed that rail commuters would choose the closest station 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 assumed the majority would walk to the station.

There are a high number of rail trips to Benfleet from all parts of Canvey Island with over 500 from the northern side of the island, over 400 from the south west and south eastern sides, and 379 from the north-eastern side (Dutch Village and Winter Gardens area) – see Figure 5.4 and Figure 5.5. This equates to over 1700 trips. There is a similar number from the northern side of the borough assumed to be going to work by train via Benfleet, including 600 from the immediate MSOA where trips are most likely to be transferable (as trips from here would involve the most cycle-friendly topography).

Figure 5.1: 2011 Census Journey to Work trips by Bicycle

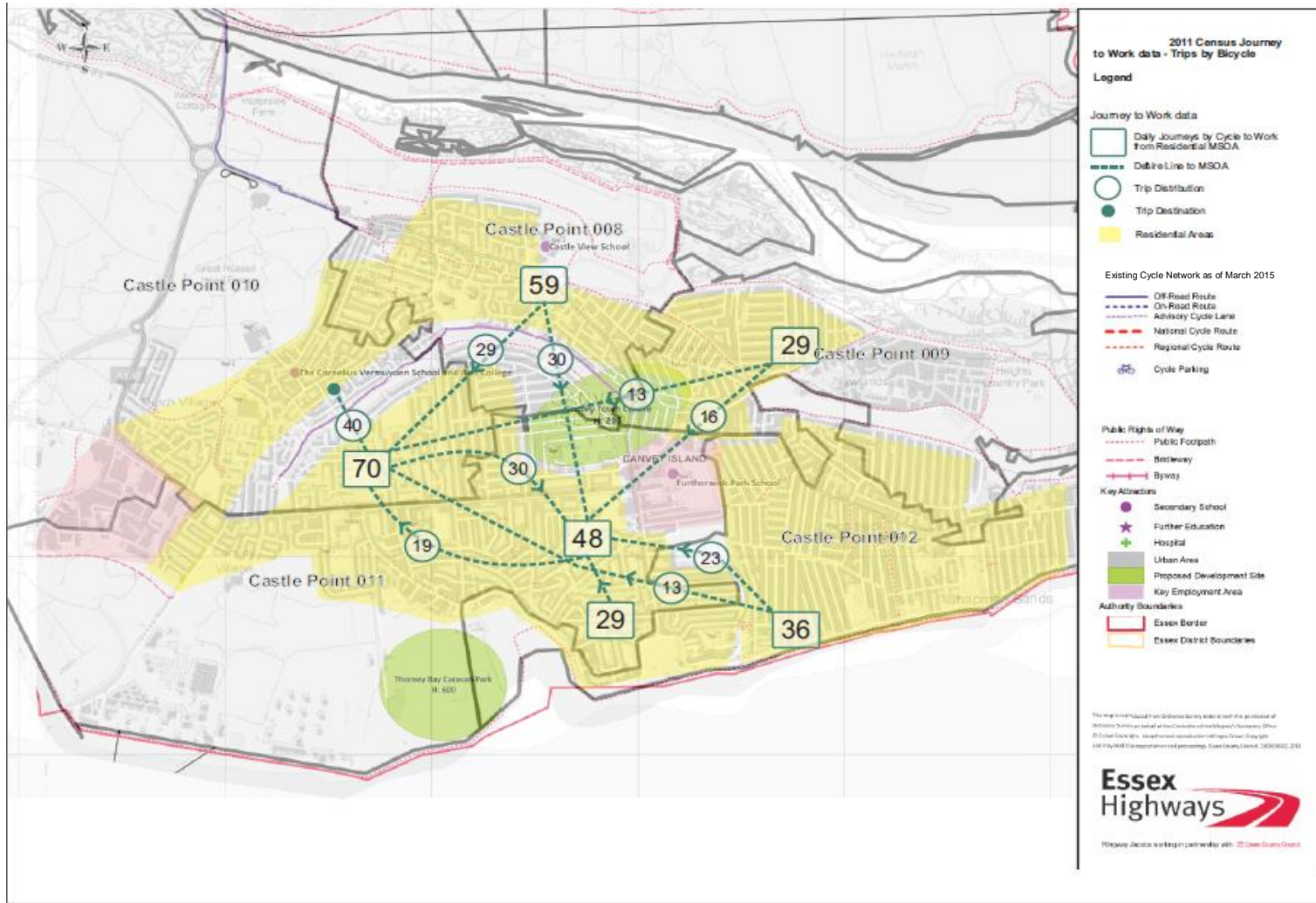


Figure 5.2: 2011 Census Journey to Work trips by Car Driver (Canvey Island)

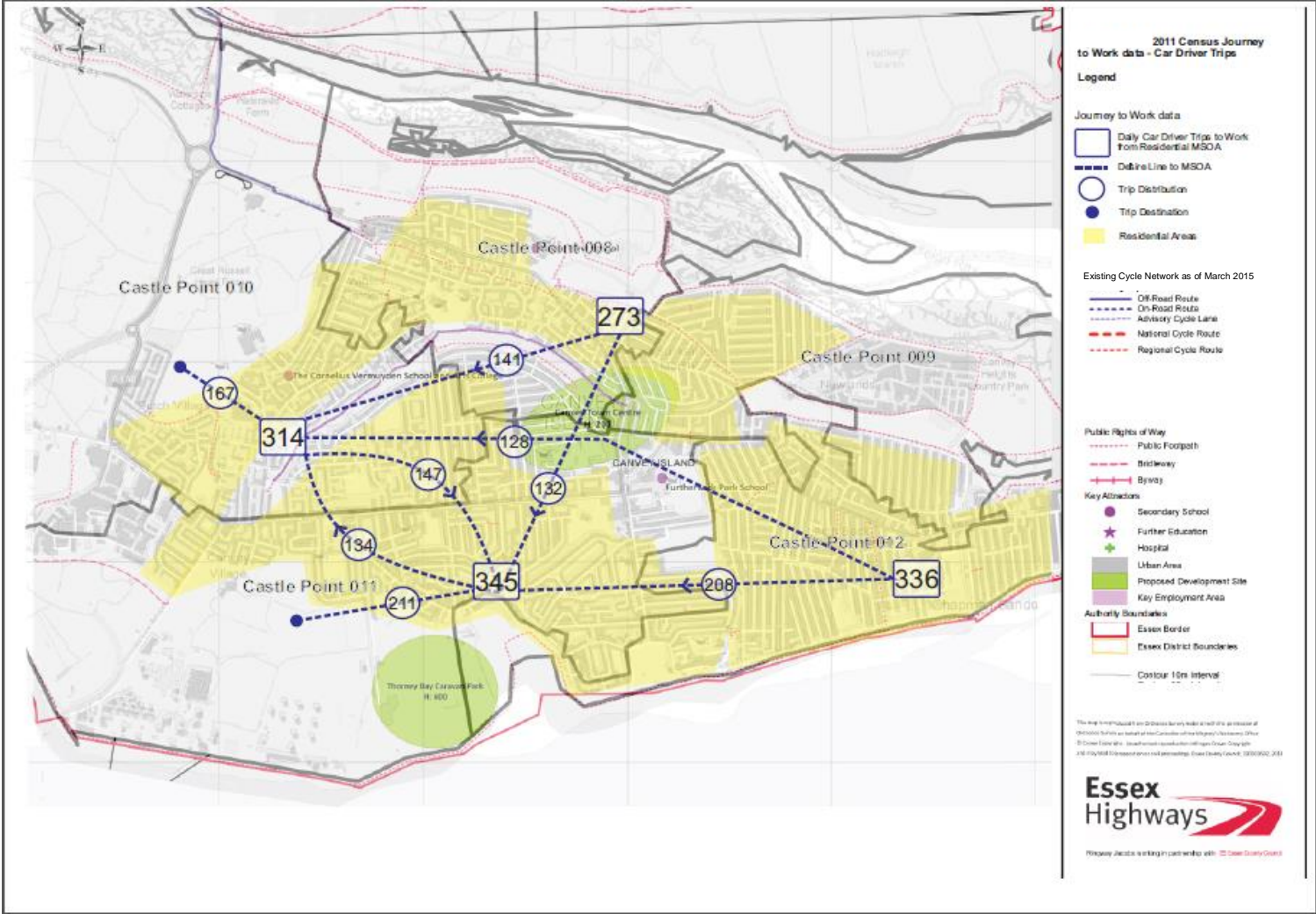


Figure 5.3: 2011 Census Journey to Work trips by Car Driver (Castle Point mainland)

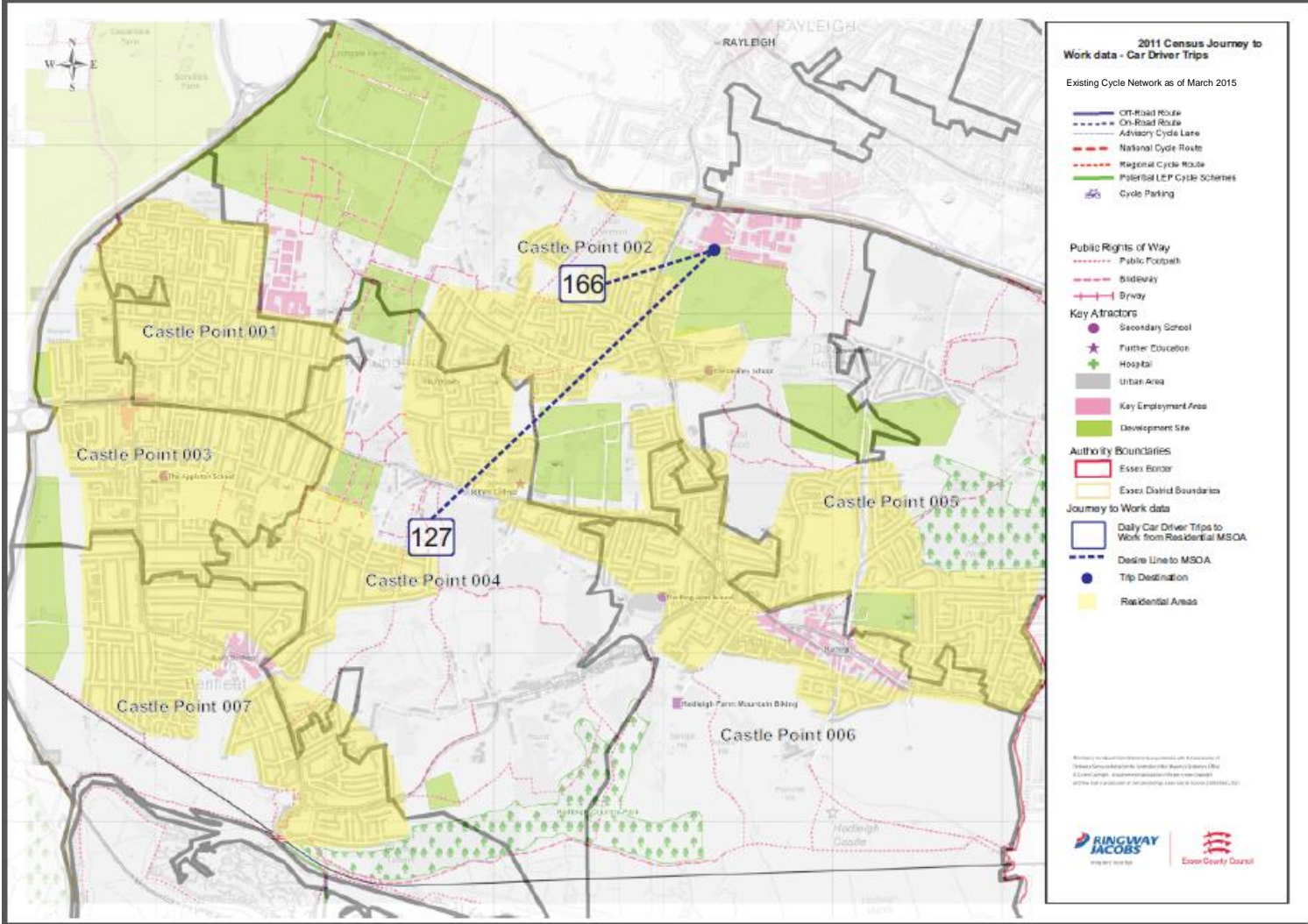


Figure 5.4: 2011 Census Journey to Work trips by Rail (Canvey Island)

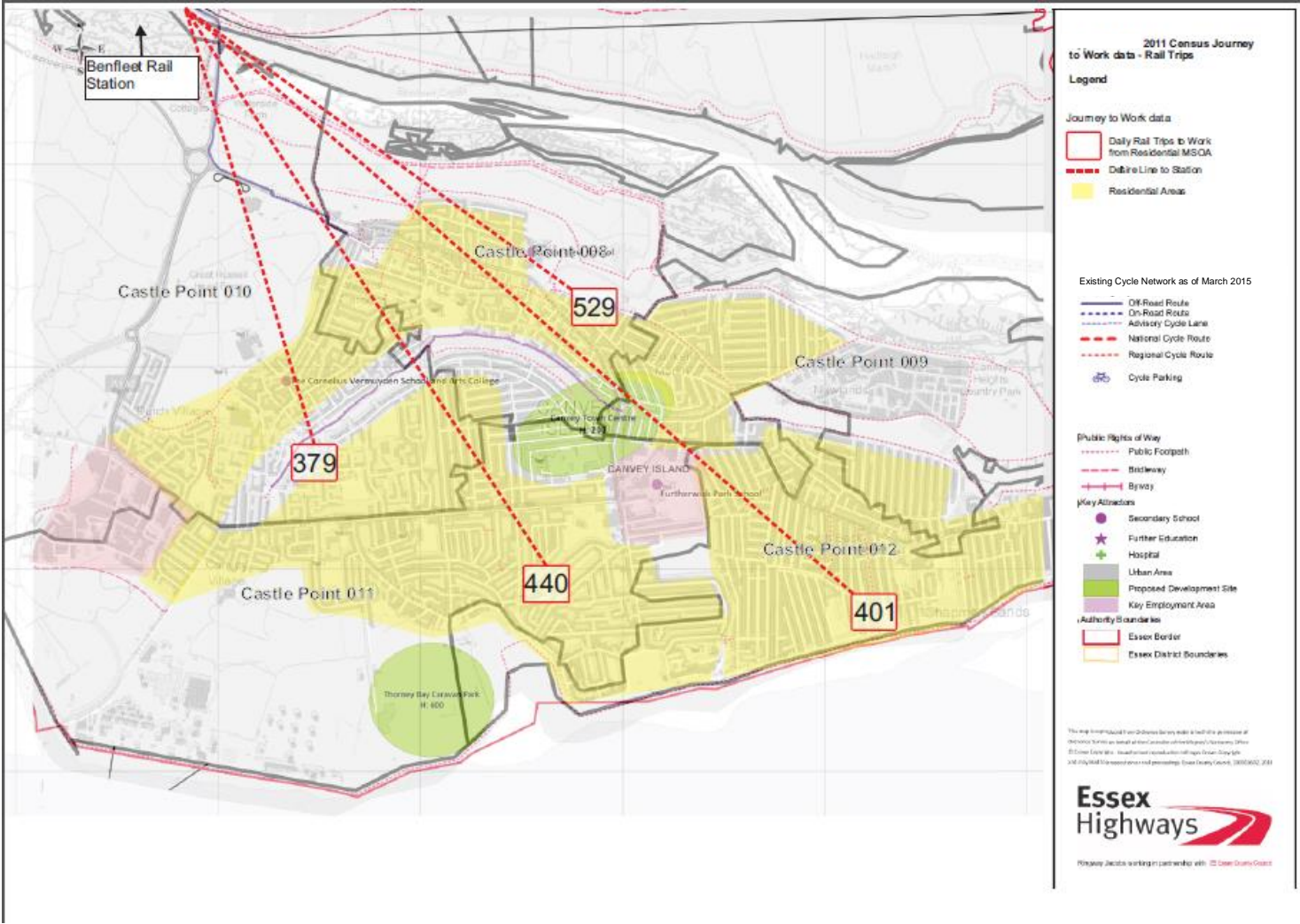
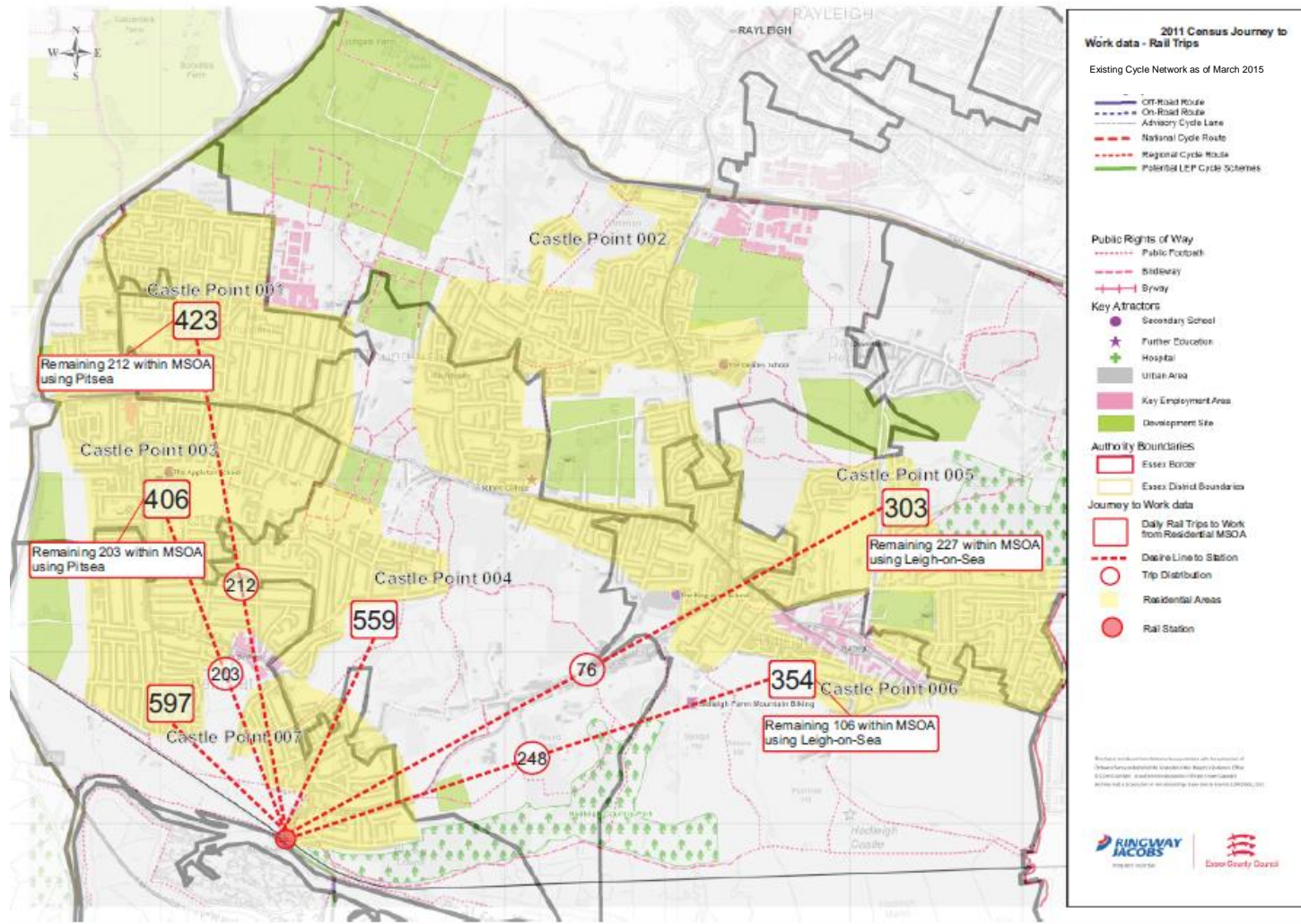


Figure 5.5: 2011 Census Journey to Work trips by Rail (Castle Point mainland)



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 Davies Gleave as an aid to cycling policy development, planning, implementation and evaluation. This was required to help target opportunity areas 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 cycle than those in the 'comfortable maturity' segment. This can then be applied to postcodes and displayed on mapping as shown in Figure 5.6 and Figure 5.7.

The Canvey Island MOSAIC segmentation data (Figure 5.6) does not show any pockets of residential area with a high propensity to cycle. They are all shaded in the lower propensity colours. This suggests that the topography and geographical constraints of the island have a stronger influence on cycling demand than demographic characteristics that MOSAIC picks up on. On the northern side of the borough (Figure 5.7), there are some pockets where residents would be expected to have a higher propensity to cycle due to their demographic characteristics. These include Essex Way and Benfleet Road (B1014), London Road (east of the Tarpots shops), and just south of the main A13 Hadleigh roundabout. The Essex Way/Benfleet Road B1014, however, is one of the hilliest roads in the Borough so once more this is likely to exert a stronger influence on cycling demand than the demographic characteristics of local residents.

Figure 5.6: MOSAIC Propensity to Cycle in Canvey Island

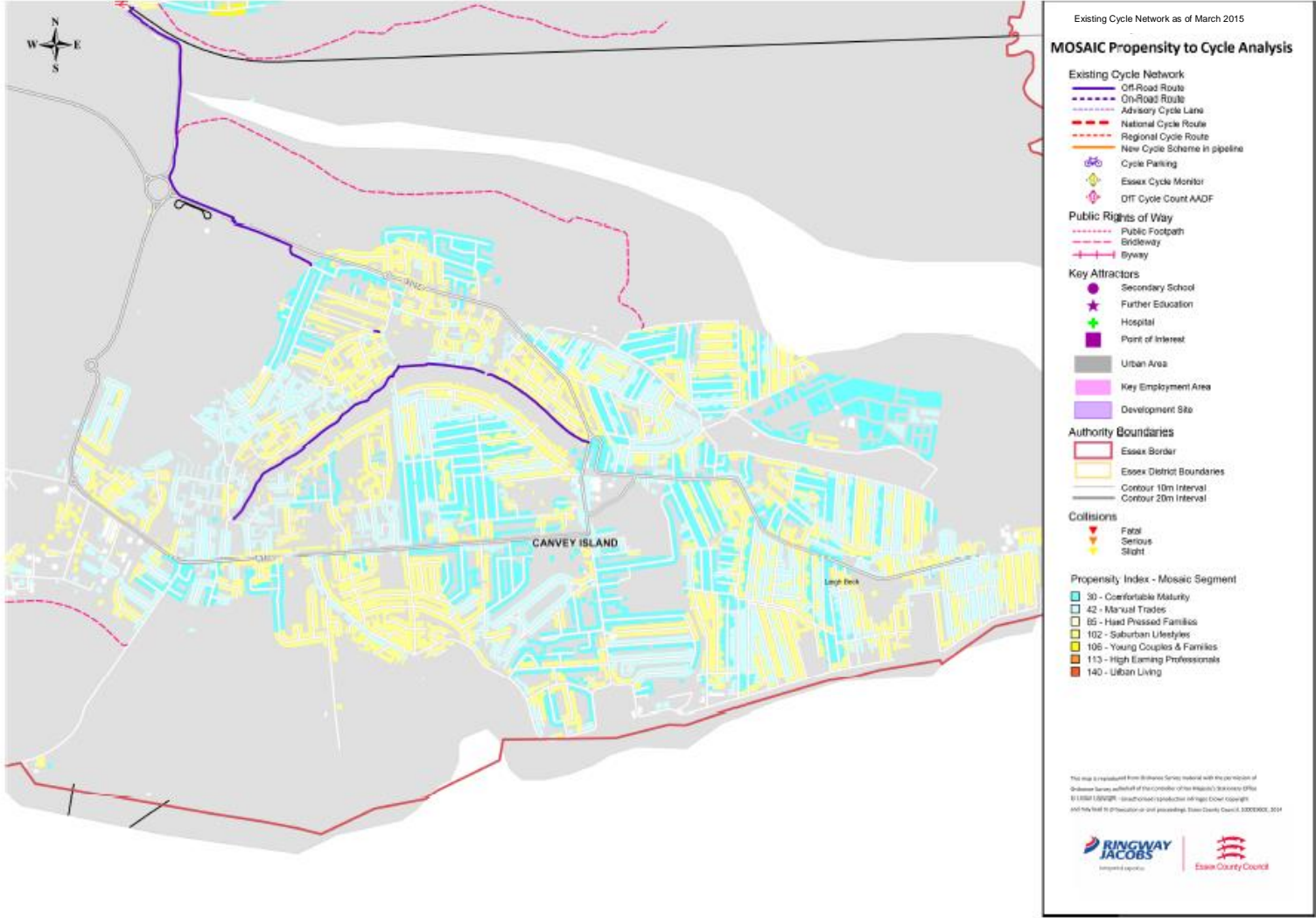
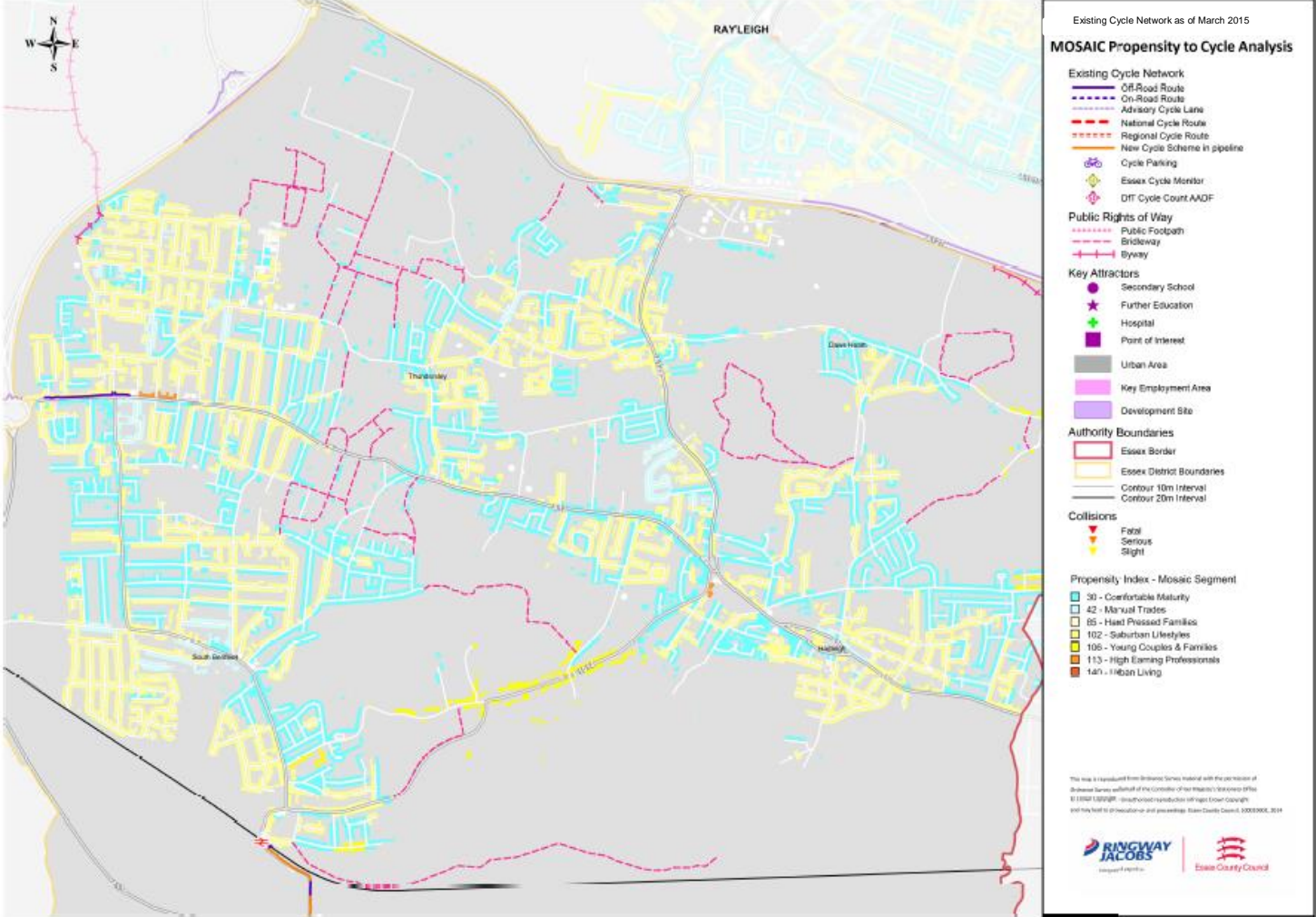


Figure 5.7: MOSAIC Propensity to Cycle in Castle Point Mainland



5.4 Summary of Potential

There are considerable numbers of people travelling a short cycle-able distance to work by car, or travelling to the local railway station (presumably mainly by car) such as in Canvey Island (short commuter car trips) and South Benfleet. These results support proposals to improve conditions for cycling both between Canvey Island and Benfleet railway station, within the island itself, and more selectively in the mainland part of the Borough (such as from the South Benfleet and Tarpots area to Benfleet station).

There is also a key opportunity to provide cycle access to Hadleigh Park, which reopened in 2015 as a major sports and recreational cycling attraction building of the 2012 Olympic legacy.

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 Borough have good quality, cycle-friendly routes to key services, railway stations and areas of employment.

A coordinated approach should be taken, whereby development planning and highway scheme delivery in Castle Point 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, as well as, within this, specific Flagship Routes. The Flagship Route for the District of Castle Point is 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 Borough. 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 area of Castle Point, including Canvey Island.

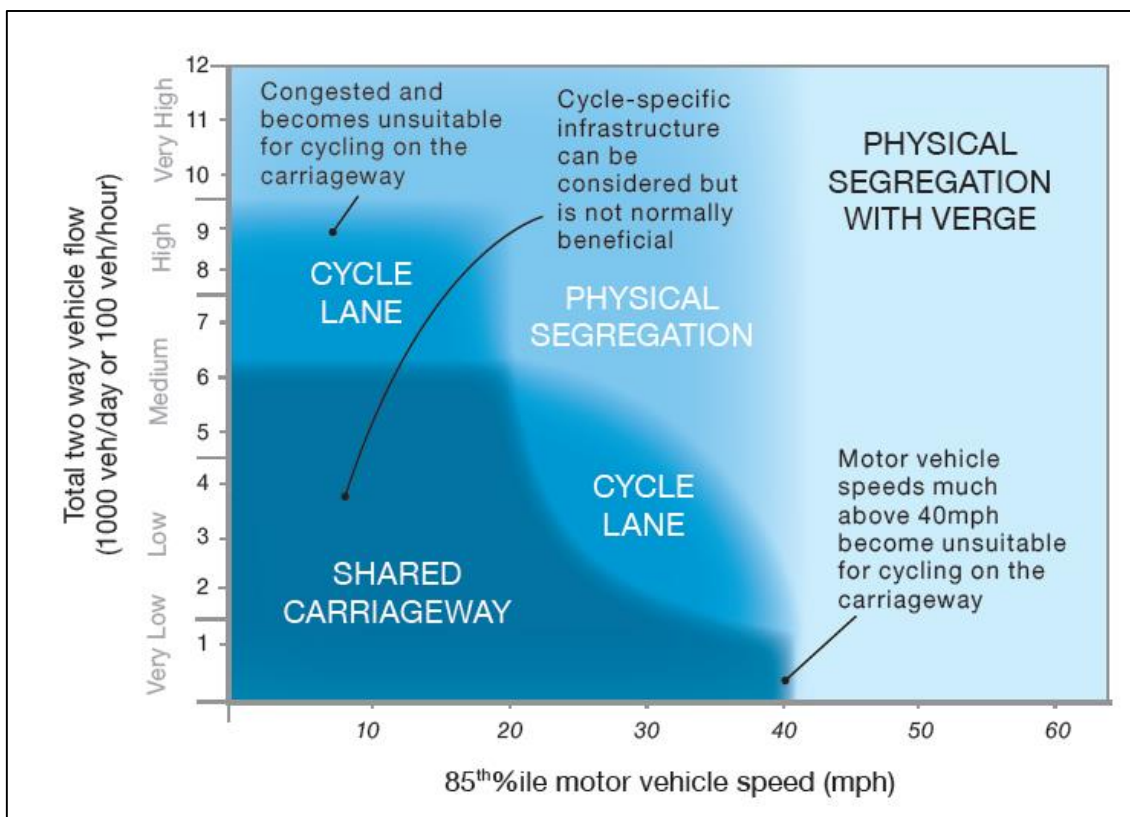
6.3 Methodology Statement

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. In some instances, 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, 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 flow⁶



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 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 footpaths conversion and/ or footway conversion to shared use is considered then further studies are

⁶ Sustrans Design Manual. Handbook for cycle-friendly design, Sustrans, April 2014

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.

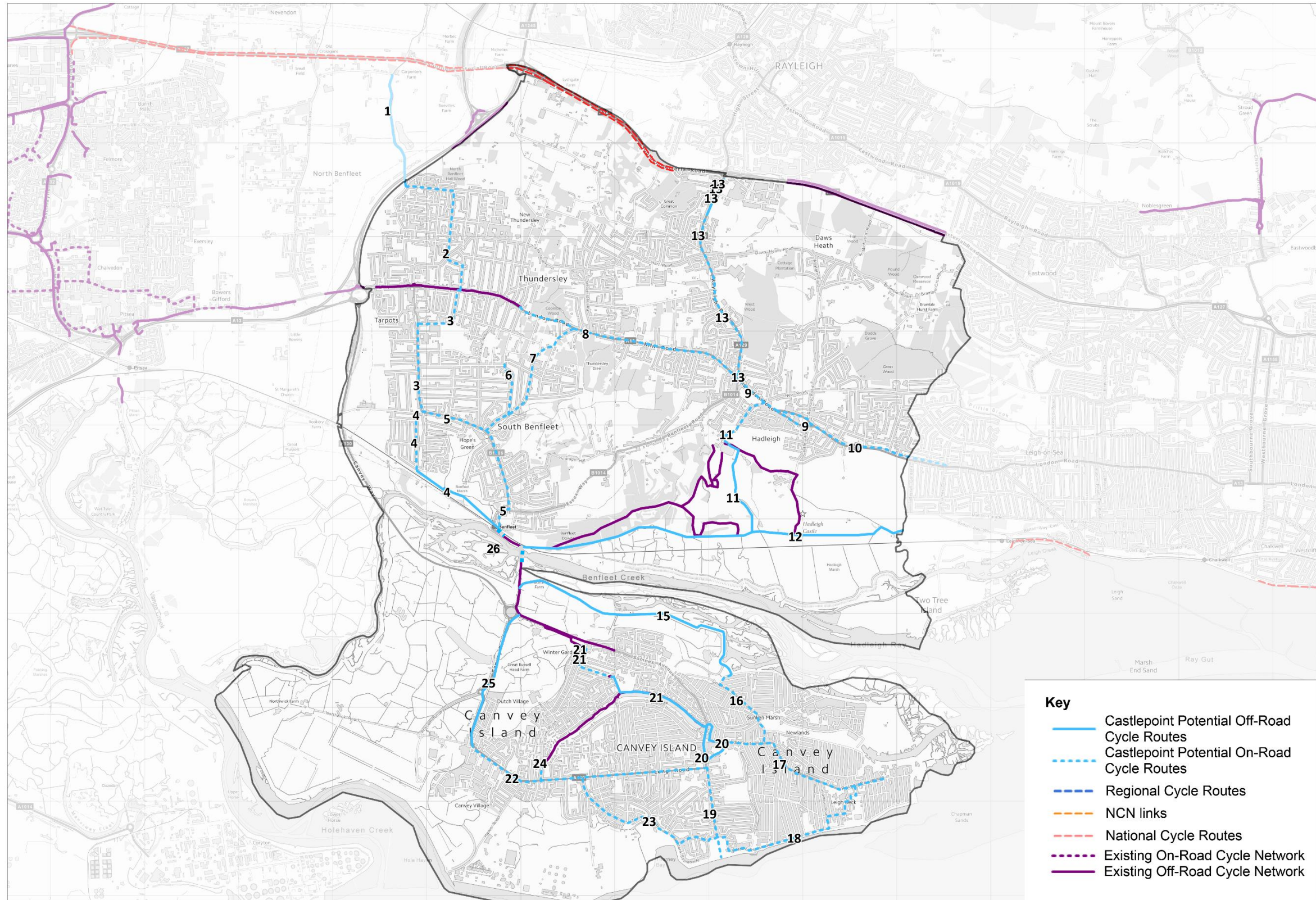
A full list of recommended schemes can be found in Table 7.1. The locations of these routes are shown in Figure 6.2, below.

6.4 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 Castle Point



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 Billericay, 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 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 Costs and Prioritisation of Potential Castle Point Cycle Schemes

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
1	North of the A130		Enhancement of existing Byway 150 north of the A130, connecting to Rushbottom Lane. Upgrade road going under the A130 for cyclists. Potential to extend routes to East Basildon (Pound Lane), utilising Bridleway (PROW 279_182) and/ or footpath (PROW 279-148), subject to further investigation. If extension to E Basildon could be enabled, would provide a useful link to potential scheme 15 in Basildon and Burnt Mills Industrial estate.	M	H
2	London Road (A13) to Basildon Enterprise Corridor	Links large residential area to large employment area via a route which is quicker and shorter than the road alternative	New N-S on road cycle route (quietway) along residential streets of Woodside Avenue, Moreland Avenue, Chancel Close, Maytree Walk, Waverley Road, from London Road (A130) to A13. Upgrade subway of A130 to be more cycle-friendly. New toucan crossing of A13.	M	L
3	London Road (A13) to Benfleet railway station	High demand route to railway station, good topography, poor existing conditions for cycling	New N-S on road cycle route along New Park Road, Croft Road, High Road (B1006) to B1006/ Jotman's Lane junction, from A13 (connecting to potential route 2) to Benfleet railway station. On carriageway cycle lane provision on B1006, cycle friendly treatments at key junctions. Signage only required on quieter roads on approach to London Road (Croft Road/ New Park Road). Convert existing puffin crossing of A13 to Toucan to provide link to North Benfleet and potential route 2. Sustrans recommends physical segregation along High Road, so it would be necessary to reduce vehicle speeds to comply with their guidance and provide a cycle lane.	M	L
4	South Benfleet to Benfleet Railway Station	Quiet route via residential roads and through parkland. Good alternative to B1006.	New N-S on road cycle route (quietway) from South Benfleet to Benfleet railway station, along Jotmans Lane, Appleton Road and Woodham Park Drive. Only signage required on residential streets. Sustrans recommends shared carriageway. Route connected with potential route 3 at B1006/ Jotman's Lane junction. Conversion of existing footpaths* PROW 41 and PROW 16 to off road shared use cycle track, through parkland, parallel to railway line. Route stops at PROW16/ Brook Rd junction to join footpath conversion to shared use through parkland to Benfleet station. Potential land ownership issues, and possible need for new structures over watercourses. Alternative is to continue along PROW16 to join Hall Farm Rd and PROW30 to Benfleet station.	M	H
5	London Road (A13) to Benfleet railway station		New E-W on road cycle route along B1006 (High Road) and B1014 High Street), from London Road to Benfleet railway station. Connects to potential routes 3 and 4 at Jotmans Lane/ High Road junction. Cycle friendly treatments at key junctions required.	H	L
6	Clarence Rd		New N-S on road cycle route along Clarence Road. Signing required (quietway).	M	L
7	Thundersley Park Road from B1006 to the A13	Has a sustained gradient climbing over 70m – enough to deter most from cycling. May still be useful route to sign, and promote as a fitness challenge rather than a standard cycling facility.	New N-S on road cycle route along Thundersley Park Road from B1006 to the A13. Some resurfacing improvements required, particularly at the top of the hill (northern section). Signage required along the route. Cycle markings/ features to assist cyclists making the right turn into the route from main roads at each end.	M	L
8	A13 Kiln Road from Rhoda Road to Rayleigh Road	Major east-west route with many cycle trip attractors and gentle topography.	New off road E-W cycle route along A13 (Kiln Road) between Kenneth Road and Rayleigh Road. Potential to provide hybrid cycle lanes. Reallocation of carriageway central hatching, footway and verges for new segregated cycle lane- continental standard. Carriageway is 8.7m wide plus 2m footway on each side. Where scheme 8 connects to scheme 9 at the A13/ B1014 roundabout, consideration must be paid to improving the safety of cyclists as this has been identified as a cycling accident cluster. Also consider cycle safety at junction with Rhoda Road. Sustrans recommends physical segregation, largely on account of volume of traffic.	M	H+

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
9	A13 (London Road) from Rayleigh Road roundabout to Hadleigh town centre one-way system		Part of a more strategic east-west route with some local use too. People currently cycling on it despite the poor level of service. One-way system in town centre results in challenging environment for cycling with large detours and intimidating traffic conditions. More detailed study required. Design must consider safe cycle passage across/ around the A13/ A129 roundabout where the schemes meet as this has been identified as a cycle accident cluster location. Sustrans recommends physical segregation along the A13.	M	H+
10	A13 (London Road) from Rectory Road to borough boundary (Tattersall Gardens)	A potentially attractive and useful section of cycle route on a key east-west corridor with gentle topography, good views, and potential for road space allocation.	New E-W hybrid cycle route along A13 (London Road) from Rectory Road to Tattersall Gardens (borough boundary). Reallocation of carriageway central hatching/ grass verges for new segregated cycle lane- continental standard. It would then comply with Sustrans recommendations for physical segregation.	M	H+
11	Chapel Lane from London Rd to Hadleigh Country Park bridleway		New N-S on road cycle route along Chapel Lane (quietway), from London Road to Hadleigh Country Park bridleway. Route then follows N-S footpath section (PROW 28) through parkland (off road). Footpath* would need to be converted to bridleway/cycle track. Resurface and widen signed footpath as appropriate. Potential land ownership/conversion to bridleway issues.	M	H
12	Hadleigh Country Park bridleway to Leigh on Sea railway station	A key recreational route and may also attract a utility trips as a flat, direct link between two towns and two railway stations.	Conversion of existing E-W footpath* (PROW 61) to bridleway or create new cycle track, linking Benfleet railway station through Hadleigh Country Park to Leigh-on-Sea railway station. Resurface and widen footpath/ bridleway as appropriate and provide signing. Potential land ownership/conversion to bridleway issues.	L	H
13	Rayleigh Road from Hart Road to London road (A13)	Cycle-friendly topography, space for continental-standard infrastructure, and connects key generators and attractors (Rayleigh Weir).	New N-S hybrid cycle route along Rayleigh Road from A127 to London Road (A13). Reallocation of carriageway central hatching/ footway for new segregated cycle lanes on each side of the road- continental standard. Sustrans recommends physical segregation. Consider footway conversion* to shared use around the A129/London Rd roundabout. Enhance the roundabout for cyclists as this location has been identified as a cycle accident cluster. Further investigation into improving conditions for cyclists is required at the A127/ A129 roundabout which is identified as a cycle accident cluster. Consideration also to be given to potentially improving the signalised junction of Rayleigh Road with Stadium Way to improve conditions for cyclists.	H	H+
15	Canvey Road (Waterside Farm) to Kellington Road via bridleway	Would provide a very attractive alternative route between Benfleet station and eastern end of Canvey Island	Upgrading of existing bridleway (PROW 45) to surface standards suitable for cycling and also pedestrians. This would provide a cycle route between Canvey Road (B1014) at Waterside Farm to Kellington Road. Signing, journey times and lighting to be considered.	L	H+
16	Kellington Rd/Dovervelt Rd/ Mitchells Avenue		New on road cycle route along Kellington Road, Dovervelt Road and Mitchells Avenue. Provides connection to potential routes 15 and 17. Wide footway/ verge on southern side that could be utilised to reallocate roadspace. Traffic calming measures to reduce vehicle speeds (to 33mph) would mean that a cycle lane would comply with Sustrans guidance. Current vehicle speeds mean that physical segregation would be recommended.	L	L
17	Point Road and High Street from Wall Road to Foksville Road	Connects large residential area in eastern Canvey with town centre. Other attractors include local shops, a museum and sports facilities. Several cyclist collisions (5 in the last 3 years).	New on road E-W cycle route along High Street and Point Road from Foksville Road to Wall Road. Provides a connection to potential routes 16 and 20. Traffic calming at the 20mph eastern end (built out chicanes causing uncomfortable movements by cyclists) is not cycle-friendly and would need to be modified. At western end, new calming may be needed to safely facilitate an on road cycling facility. Centre line removal to provide two	M	L

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
			advisory cycle lanes. Sustrans recommends cycle lane along High Street.		
18	Canvey Central park along Eastern Esplanade to Point Road		New E-W cycle route from Canvey Central Park along Eastern Esplanade, Seaview Road, South Parade, Leigh Beck Road, Southfalls Road to Point Road. Some cycle/bus friendly traffic calming and 20mph zones may be required on sections of the route but generally signage and occasional junction treatment will be sufficient. Sustrans recommends cycle lane.	H	L
19	Furtherwick Road from Eastern Esplanade	An obvious desire line linking a residential area and the seafront with the town centre, and virtually flat.	New N-S advisory cycle lane along Furtherwicke Road from Canvey Central Park to town centre one way system. Potential to reallocate space from verge to increase highway width if necessary. Sustrans recommends a cycle lane.	H	M
20	Town centre one-way system (High Street, Foksville Road, Furtherwick Rd)	Allowing two-way cycling would be very advantageous to remove the need for large detours, and avoid what is usually hazardous cycling conditions (in multi-lane one-way systems).	New off road cycle route around town centre one-way system. A number of techniques could be utilised: contra-flow cycle lanes, off-road tracks, shared use footways, etc. Should be appraised in a feasibility study.	H	#N/A
21	Benfleet station to Canvey town centre	Upgrading of existing route. Has controlled crossings attractive traffic-free sections, and uses quiet residential streets. The route could be greatly improved and its appeal broadened.	Utilise existing Lakeside Path (signed as a private path). Convert footpath* PROW 11 to shared use cycle track to create an E-W cycle route. Potential width issues which will require further study. Crossing required of Link Road (tiger) to enable route to continue along existing cycle path along Kingsdown Walk. Route joins signed quietway along Concord Road and Central Avenue, to a footway conversion* on Station Approach before joining the existing off road network along Winter Gardens Path. Route requires improved surfacing and clearer segregation on traffic-free sections, and implementation of journey time signs.	H	H
22	Long Road from Furtherwick Road to Northwick Road roundabout	A useful direct strategic route through the island, but is busy, narrow and has also seen many cyclist collisions in last three years.	New E-W on-road cycle route between Furtherwick Road and Northwick Road. 6m width carriageway means space is limited, so provide a cycle facility on one side of the road (in the most congested direction), remove centre line and improve traffic speed enforcement (reduce speed limit). The junction of the A130 Long Road with Craven Avenue has been identified as an accident cluster site, so consideration should be given to implementing improvements with a view to reducing cycle accidents. Reduction of traffic speeds will enable better compliance with Sustrans guidance.	M	L
23	Thorney Bay Road/ Western Esplanade to Canvey Central Park	Alternative East-West route avoiding town centre and majority of busy A130/ Also connects new development site to other parts of Canvey	New on-road cycle route along Thorney Bay Road/ Western Avenue to Canvey Central Park. Cycle/ bus friendly traffic calming and 20mph zones may be required on sections of route but generally signage and some junction treatments will be sufficient.	M	L
24	New Rd		Short section of new on road cycle route along Canvey Road, linking potential scheme 22 (Long Road) with existing off road cycle routes at Somnes Road and Canvey Road (north of roundabout). Two 6.5m carriageways, with a 1.5m central verge and additional 2.5m verge at each side. Ideally, reallocate one traffic lane to provide a segregated two way cycle lane (hybrid cycle lanes-continental standard segregated route)	M	M
25	Canvey Road from Northwick Road roundabout to Canvey Way roundabout	Only direct way to cycle from south west Canvey to the mainland. People already cycle (counts show 50+ per day, and 3 collisions in 3 years) despite conditions (2 lane dual carriageway with 50mph speed limit, and a narrow footway on one side).	New N-S off road (footway conversion*) cycle route along Canvey Road, between Northwick Road roundabout and Canvey Way roundabout (owing to fast vehicle speeds). Junction treatments required at both ends of the scheme, especially for the crossing of Somnes Avenue at the Canvey Rd/ Canvey Way/ Somnes Ave roundabout, which has been identified as a cyclist accident cluster site. Road is dual carriageway in both directions (6.5m wide each way), with a central reserve (2m) and verge on each side (3m on each side). Carriageway space could be	H	H

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
			reallocated to provide a segregated two way cycle lane on one side.		
26	Canvey Road - connectivity in vicinity of Benfleet Rail Station	Existing and newly upgraded cycle route along Canvey Road does not bring cyclists to the station or existing cycle parking on north side of Canvey Road	Investigate how existing Canvey Road cycle route may be extended across the bridge and provide a continuous link to Benfleet Station. Further consideration to be given to cycle connectivity in the vicinity of Benfleet station with a view to providing an improvement for cyclists accessing the station, station cycle parking or existing shared use subways.	H	-

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 North/South Flagship Route in Castle Point Borough

A North/South Flagship route can be created utilising some of the existing provision within Castle Point in particular the new cycle route along Somnes Avenue linking this with Eastern/Western Esplanade.

This key spine route could be supplemented by improved connections to residential and employment opportunities across the island. The potential Flagship Route is shown in Figure 8.1.

The potential Flagship Route passes through the A130/ B1014 roundabout, which has been identified as a cycle collision cluster site. Consideration should be given during its design to make this junction safe for people that cycle.

8.3 Prioritisation of Flagship Route

The Flagship Route has been considered against the four prioritisation criteria, as per the other potential schemes:

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

With the exception of the route through the parkland adjacent to Benfleet station, most of the potential route is located along highway boundary or Public Rights of Way. Even in the parkland area, adjacent to the station, there is an alternative route that could be considered along Public Rights of Way, if the

route shown cannot be obtained. The majority of the proposed route is considered highly deliverable, with a small section close to the station requiring closer scrutiny (which could be considered problematic and difficult to deliver) and a further short section utilising PROW footpath 11, which may be difficult to convert owing to width restrictions. Hence, the overall route has been rated as medium in terms of deliverability.

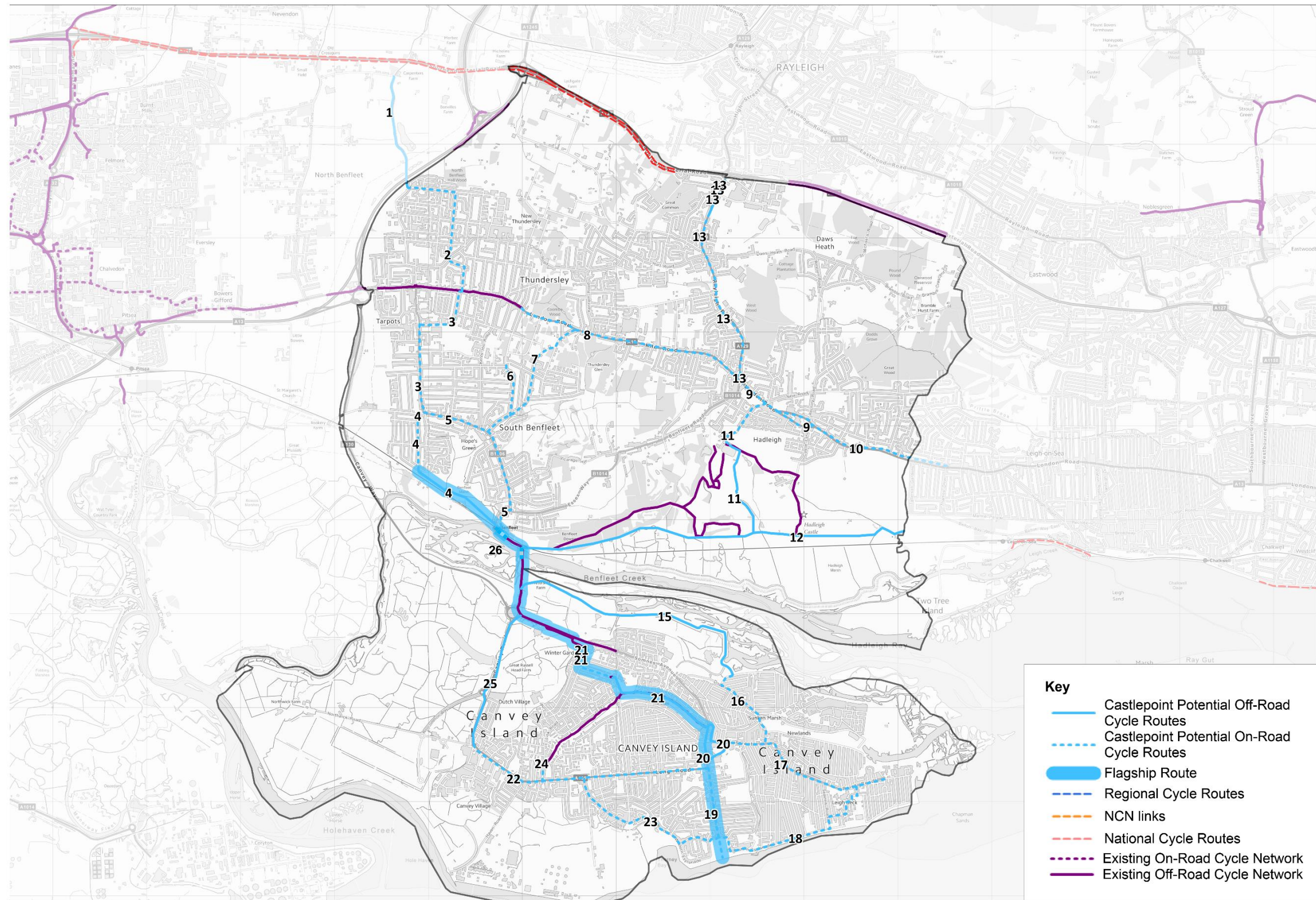
The route is relatively direct. It provides a direct link between South Benfleet, Benfleet station, Canvey Island town centre and the seafront, so it has been rated as high in terms of both directness and key attractors. Once delivered, it would provide a useful spine for other routes to connect into.

The existing cycle network in Castle Point is relatively sparse. However, the potential flagship route connects to (and utilises some of) the existing provision in Canvey Island. Hence, the Flagship Route has been given a medium rating in this regard.

Overall, the potential Flagship Route has achieved a high priority, although it is noted that further consideration needs to be given to land ownership issues in the two locations noted.

The inference from the prioritisation exercise is that it supports the basis for identifying the Flagship Route in the first instance, in that it is a key corridor, providing important benefits for cycling in Castle Point and should therefore be considered a high priority going forward.

Figure 8.1 Potential Flagship Routes for Castle Point Borough



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.

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. 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 Castle Point 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 some interest in cycling at a community level in South Benfleet, as demonstrated by the website *mapmyride.com* displaying over 900 routes recommended in the local area by its users.

9.3 Potential Local Considerations

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

- Creating a cycle map of Castle Point, in particular of Canvey Island to include isochrones and mode-switch motivational information;
- A district- wide recreational cycle maps should also be developed;
- Cycle access – promoting access to bicycles through the cycle to work scheme, cycle hire, provision of subsidised bikes;
- National Bike Week events to include a commuter challenge where people using different modes make the same journey in the morning peak – would normally show the 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;
- Take advantage of the recreational and sports cycling opportunities provided by the Hadleigh Olympic Park in both attracting visitors to the area and providing new traffic-free cycle routes (e.g. bridleways) to the attraction; and

- Canvey Island has possibly the greatest potential for an increase in utility cycling of any area in Essex due to its compactness, its topography, and its traffic congestion on the main routes leading to and from the mainland in the peak periods. Canvey Island could be treated like a ‘Cycling Demonstration Town’/ ‘Mini Holland with its own website, and heavily promoted, branded routes, especially the Flagship Route connecting to Benfleet station and Canvey Island. A programme of residential and local-employer cycle parking should go hand in hand with these activities, and measures to increase cycle ownership and provide cycle training should also be delivered.

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 Castle Point

The delivery of the potential schemes, soft measures and smarter travel measures will require additional funding and so for this cycling 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 Castle Point Borough 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 Castle Point, 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.

Analysis was undertaken to assess existing travel patterns, not only for cyclists but rail and car commuters as well. Alongside this, the propensity to cycle was also analysed to assess whether there were similarities between those that commute by other methods of travel and the areas where there is a high propensity to cycle.

The existing cycle networks in Castle Point Borough should be developed and the following key recommendations can be made for cycle enhancements:

- A review of existing route signage and lighting;
- Maintenance of existing routes;
- Enhancement of North – South routes through Castle Point urban area, as per the potential Flagship route, to a high level of design standards;
- Provide new and improved cycle parking with a focus on satiating the demand for commuter trips at railway stations;
- Fill any 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;
- Promote and market Flagship Routes with ‘Cycle Superhighway’ style branding and disseminating techniques;
- Maximise access to bikes (and cycle ownership generally) through wider promotion of the government’s Cycle to Work scheme, promotion of local cycle retail (particularly for utility bicycles) cycle hire schemes, and subsidised cycle supply (like that offered by the Birmingham Big Bike Giveaway) (www.birmingham.gov.uk/bbb);
- Prioritise a route to Benfleet station from the north west of the Borough;
- Develop high quality cycle routes along the A13 and A129 corridor, taking into account topography and the opportunity to reallocate highway space

to dedicated cycling facilities (and preferably not shared-use footways) where possible;

- Develop the route identified in the Basildon CAP, to the Basildon Enterprise Corridor, which offers a significant advantage over the shortest motor-traffic route. Potential routes 15, 29 and 30 in the Basildon CAP address this link, connecting Thundersley with the Basildon Enterprise Corridor at Burnt Mills; and
- Take advantage of the recreational and sports cycling opportunities provided by the Hadleigh Olympic Park in both attracting visitors to the area and providing new traffic-free cycle routes (e.g. bridleways) to the attraction.