

Maldon District 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 Maldon District, as part of a commitment in the Essex Cycling Strategy to create Cycling Action Plans for every Borough/ District.

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

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

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

The aims of this Action Plan are to:

- Identify how cycling levels can be increased in the District;
- Enable any funding for new cycling schemes in Maldon to be prioritised;
- 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 Maldon;

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 Maldon, 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 Observations

Maldon District for the most part is relatively flat and contains a mix of urban, rural and coastal landscape and in many places is ideal for leisure cycling.

Significant new housing development is planned with 4,430 new homes required by 2030 which provides a number of opportunities to enhance and expand the cycle network. Various planning master plans recognise the key part cycling plays in delivering sustainable new developments with the District Council planning a new Green Infrastructure Strategy for the District.

Maldon has relatively low current levels of utility cycling though higher than other Essex rural Districts. A relatively high level of cycling to work occurs in Maldon town at 7% and there is significant opportunity to increase this further due to the high number of short local journeys being made by residents.

Collisions involving cyclists in Maldon are at low levels, although a couple of areas could be improved. Levels of cycle crime are the lowest in Essex.

National Cycle Route 1 passes through Maldon District from west to north and is a popular leisure route that should be enhanced further and its use encouraged.

All of the current off-road provision for cycling is entirely contained within the urban area of Maldon Town, most of this has been provided through development and utilising open space. The existence of these routes provides an opportunity to create a high quality and well-connected cycle network.

Key Recommendations

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

- Review existing route signage and lighting;
- Improve maintenance of existing routes (it is an aim of the Essex Cycle Strategy to prioritise more frequent and improved maintenance of the cycle network);
- Prioritise the North – South Flagship route, providing access to the western side of the town centre;
- Develop north-south links through Maldon town, including accessibility to the High Street;
- Provide new and improved cycle parking

- Fill obvious gaps in the existing cycle-route network (on alignments with cycle-friendly topography where possible);
- Where possible 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; and
- Improve connectivity between Heybridge and Maldon.

Next Steps

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

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

1 Introduction

1.1 Preamble

As part of the county-wide Essex Cycling Strategy, Cycling Action Plans are being developed for individual Boroughs and Districts of Essex, including one for the District of Maldon. This document provides an opportunity to develop and promote cycling in Maldon through improved infrastructure, together with the wider promotion of cycling by Active Essex, Essex County Council (ECC) and Maldon District Council (MDC), 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
- 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.

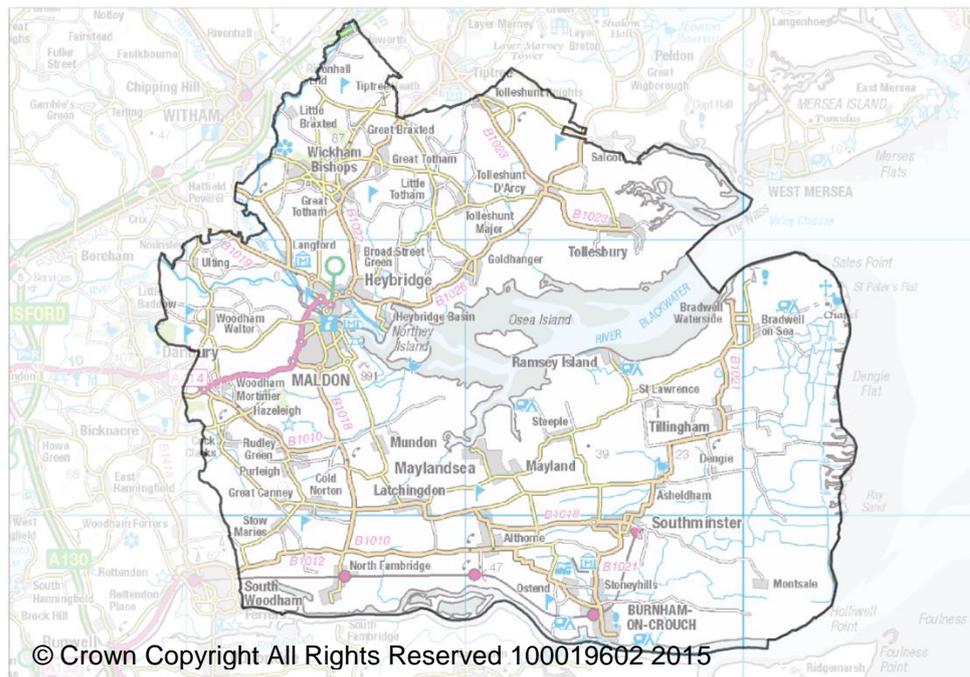
Table 1.1: Active Essex priority aims

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

Maldon District is a predominantly rural area in mid-Essex, which is largely flat and borders the coast to the east of the District. The largest settlements are Maldon and Burnham on Crouch. The District is bisected by the Blackwater Estuary, which splits the rural areas in two with the Dengie peninsular to the south and Blackwater to the north. Whilst Maldon town has no rail connection the Dengie is served by a branch line to London.

Figure 1.1: Maldon District Map



The 2011 Census records the population in Maldon District at 61,600 which is the smallest of any Essex District. Car ownership in the District, at an average of 1.6 vehicles per household is the second highest in Essex.

Tourism is a key characteristic of the area and Maldon attracts around 3 million visitors a year, with many coming from elsewhere in Essex. These visitors support nearly 3,000 jobs in the District which is around 10% of all employment.

Many of the coastal areas of Maldon are salt marsh and are important for nature conservation.

Maldon District is an ideal area for cycling with few steep hills and beautiful countryside. Better cycling conditions would encourage tourism, give Maldon District residents more travel options and thereby enable them to make more sustainable travel choices.

1.3 Aims of the Action Plan

Although Essex County Council (ECC) and Maldon District Council (MDC) 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 District means that it has not always prioritised.

The aims of this Action Plan are to:

- Identify how cycling levels can be increased in the District;
- Enable any funding for new cycling schemes in Maldon to be prioritised;
- 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 Maldon.

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 – Maldon’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, through consideration of the following documents: the UK Government's Cycling and Walking Investment Strategy (CWIS, 2017), the Essex Transport Strategy (2011) and the Maldon District Council Pre-Submission Local Development Plan (2014-2029) (which is awaiting the findings of an Examination Hearing).

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

At a local level, to support the planned growth in Maldon District and to enable more existing journeys to be made by bike, the provision of safe and direct cycling facilities, providing connections to town centres and surrounding communities, is emphasised in the Maldon District Council Pre-Submission Local Development Plan (2014-2029). The benefits of cycling as part of wider 'green infrastructure' links is recognised in the Maldon Strategic Framework (2014) document.

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
- cycle training opportunities for all children

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

- more high quality cycling facilities
- more urban areas that are considered walkable
- rural roads which provide improved safety for walking and cycling
- more networks of routes around public transport hubs and town centres, with safe paths along busy roads
- better links to schools and workplaces
- technological innovations that can promote more and safer walking and cycling
- behaviour change opportunities to support increased walking and cycling
- 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
- 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;
- £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
- £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.
- 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
- 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 £600,000 and £1.2m 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/ Districts, the two Unitary Authorities (Southend-on-Sea and Thurrock) and other key stakeholders. It has taken account of current UK policy, data on cycling levels within Essex and best practice from around the world. Specifically, it commits to:

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

2.4 Local Policy Context

The Local Development Plan has been delayed having been found unsound after an Examination Hearing in January 2015. As of January 2017 the Local Development Plan has been for examination in public and the results are awaited. Maldon District Council (MDC) will plan for a minimum of 4,410 dwellings between 2014 and 2029 (294 per annum) including provision for market housing, affordable housing, housing for an ageing population and other types of housing for specialist needs. MDC are aiming to contain growth to the main settlements of Maldon, Heybridge and Burnham-on-Crouch. In doing this, the aim is to maximise potential for walking, cycling and public transport.

Whilst still subject to the findings of the Examination Hearing, Maldon District Council's Pre-Submission Local Development Plan (2014-2029) is broadly supportive of cycling. Policy S3 (Place Shaping) outlines the requirements of the Garden Suburbs and Strategic Allocations at Maldon, Heybridge and Burnham-on-Crouch. This policy states that the community should be connected to the town centre by safe walking and cycling routes, as well as being fully integrated into the surrounding communities by a variety of modes, including cycling.

MDC highlight the importance of serving schools with a safe direct walking and cycling routes where appropriate.

Within Maldon, Policy S5 (The Maldon and Heybridge Central Area), indicates that MDC would like to maintain and encourage cycling by improving public spaces and connectivity between key local areas. This is also applicable to the tourist destinations in the local area.

Policy T2 (Accessibility) aims to provide safe and direct cycling routes to nearby facilities. MDC will promote cycling as an alternative means of transport that can improve accessibility.

The Maldon Strategic Masterplan Framework, 2014 sets out various infrastructure requirements, including an enhanced cycle network along with other 'green infrastructure' links. A future Green Infrastructure Strategy will cover all green infrastructure in the District including provision for cycle networks.

3 Data Analysis

3.1 Introduction

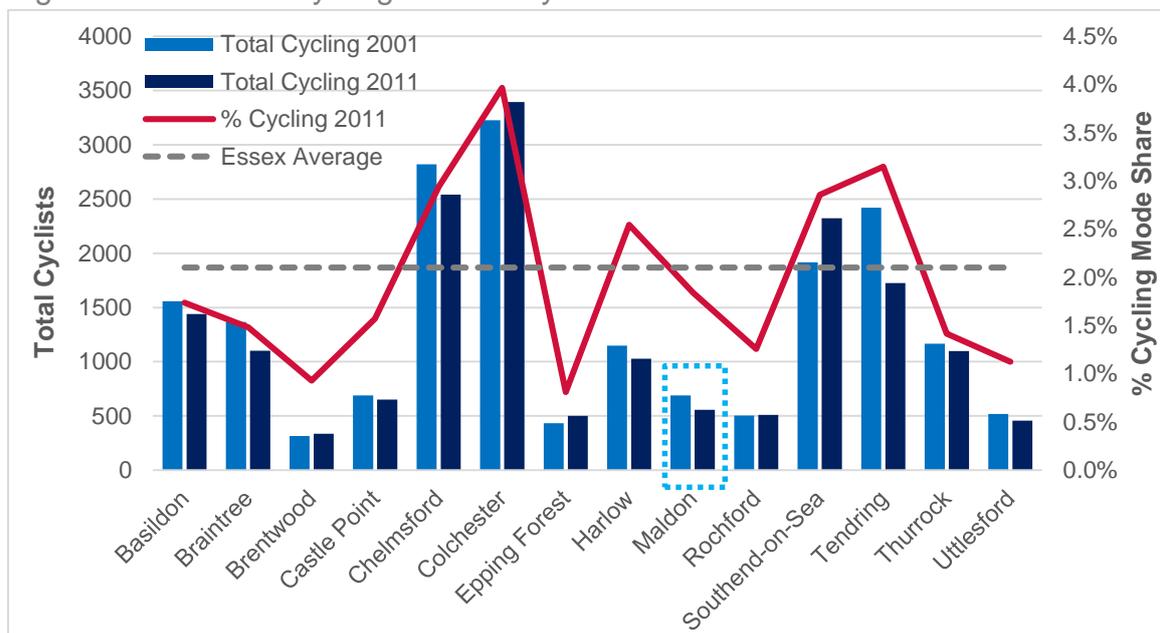
When planning for cycling infrastructure it is important to first understand current levels and conditions for cycling. This section includes analysis of:

- 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 2.1 below.

Figure 2.1: Census Cycling to Work by District



As shown above, based on the 2011 Census data Maldon has low levels of cycling numbers when compared with some Essex Districts, with 558 people cycling to work every day. This is equivalent to a mode share for cycling of only 1.8% in Maldon. So, 98.2% of commuters who lived in Maldon in 2011 travelled to work by a mode other than the bicycle.

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 infrastructure¹. Whereas, in urban areas, cycling to work increased due to the implementation of improved infrastructure, thus balancing the decline in rural areas.

In Maldon town 7% of internal journeys to work are made by bike, equating to 209 cyclists per day, putting it in the top 10 urban areas for cycling in the County. Figure 3.1 and Figure 3.2 show the percentage cycling to work by origin in Maldon and Burnham-on-Sea.

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

Figure 3.1 % Cycling to Work in Maldon (2011 Census)

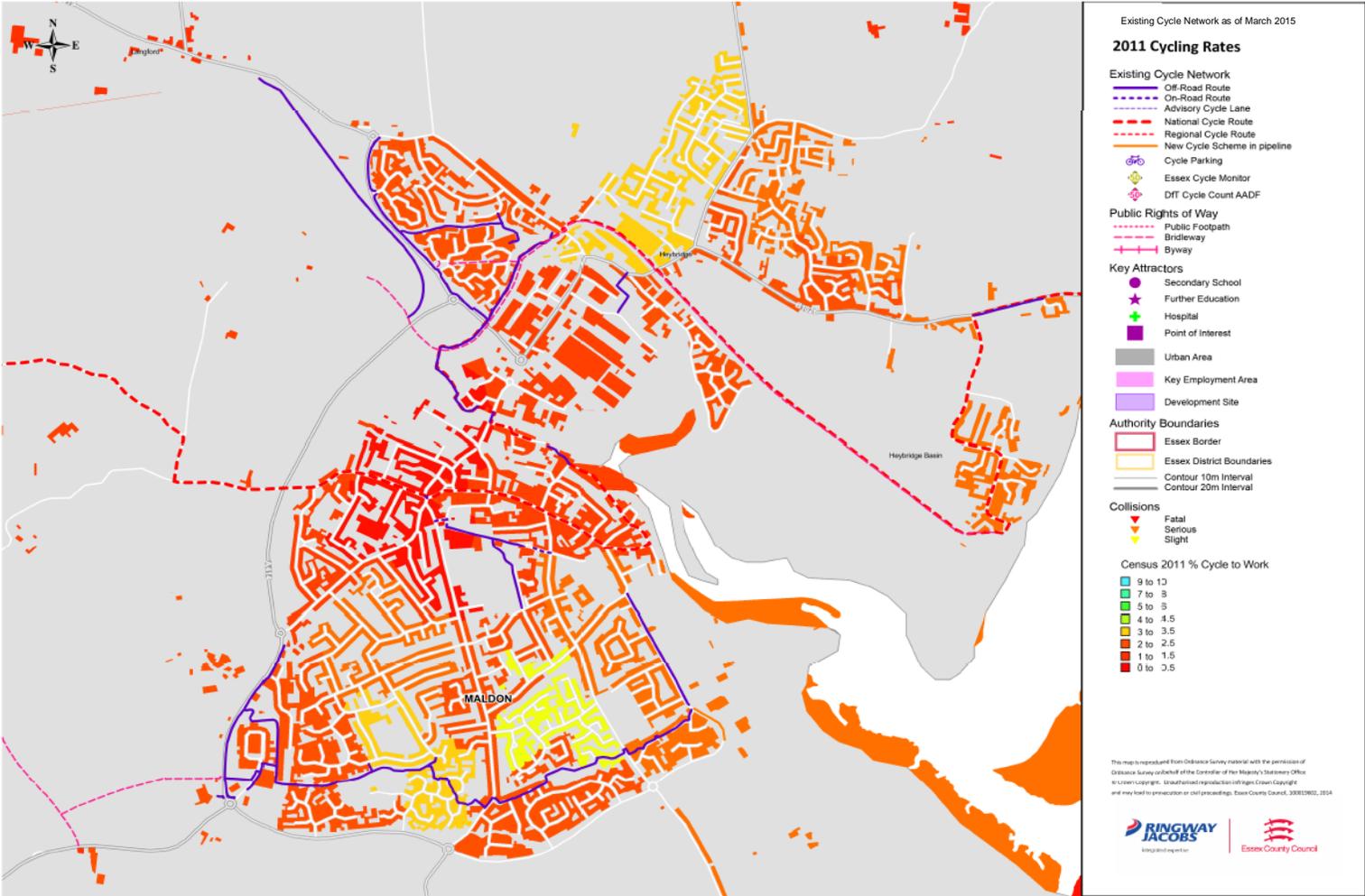
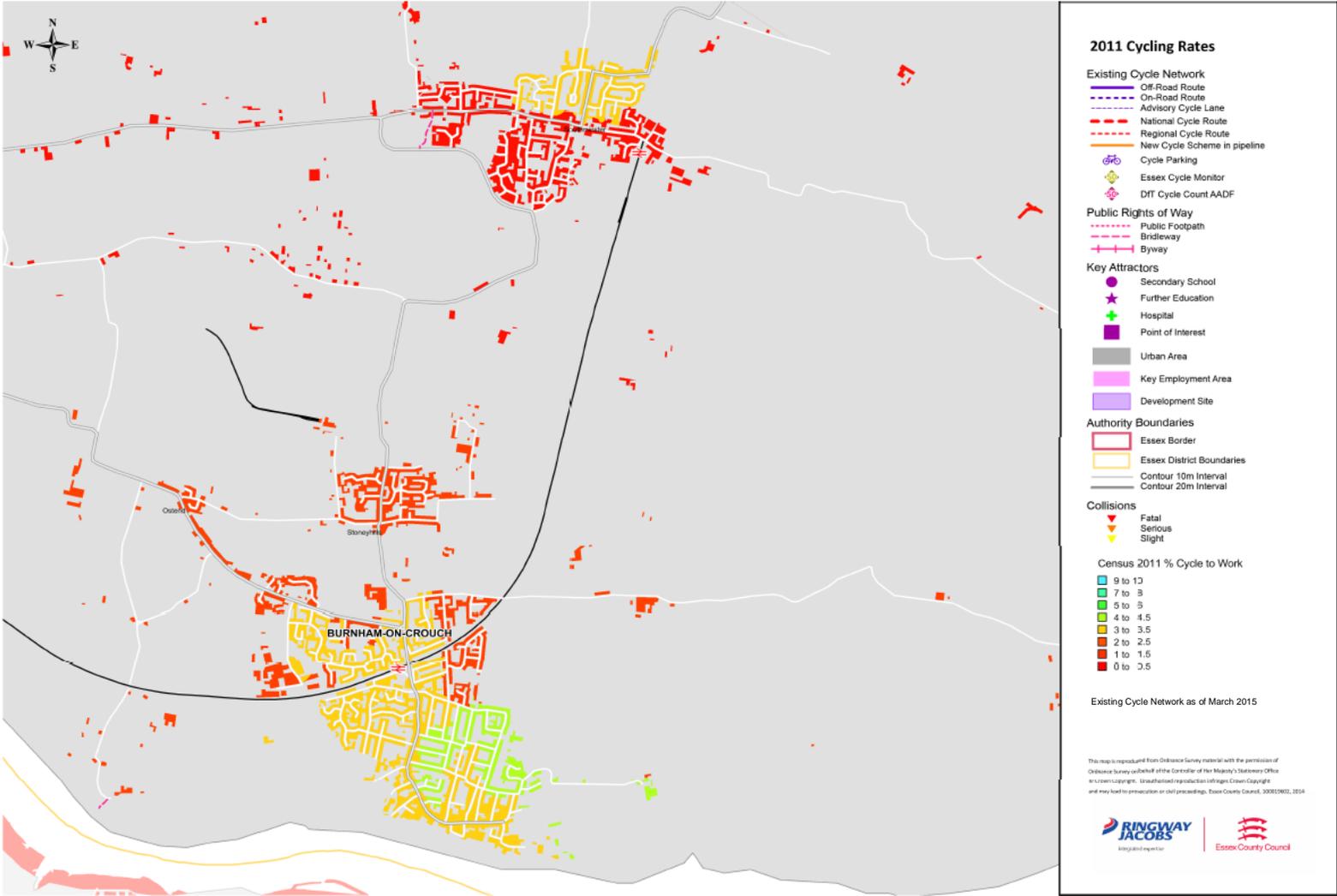


Figure 3.2: % Cycling to Work in Burnham (2011 Census)

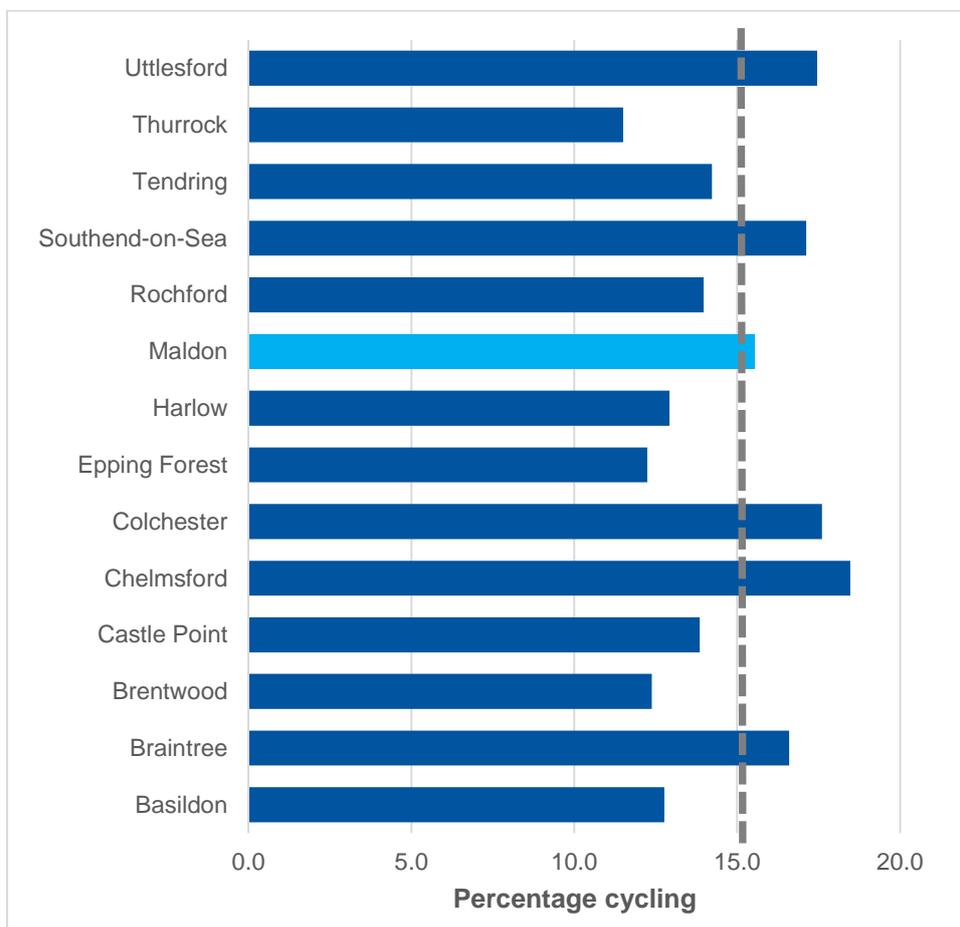


3.3 Sport England Active People Survey

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 3.3 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, Maldon has average levels of residents cycling at least once a month.

Figure 3.3: 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 cyclists. Of the 31 count sites located in Maldon, 5 sites record more than 50 cyclists per day, these are along two routes.

- B1028 Goldhanger/Maldon Road (NCN1), east of Heybridge
- B1021 Burnham Road, between Burnham and Southminster. This movement has already been identified as a high cycle demand in the Census Journey to Work analysis. This demand will likely be accommodated in the potential route 21 (Burnham to Southminster).

The current cycle network along with count locations in Maldon is shown in Figure 3.4 and Figure 3.5, below.

Figure 3.4: Maldon Existing Cycle Infrastructure

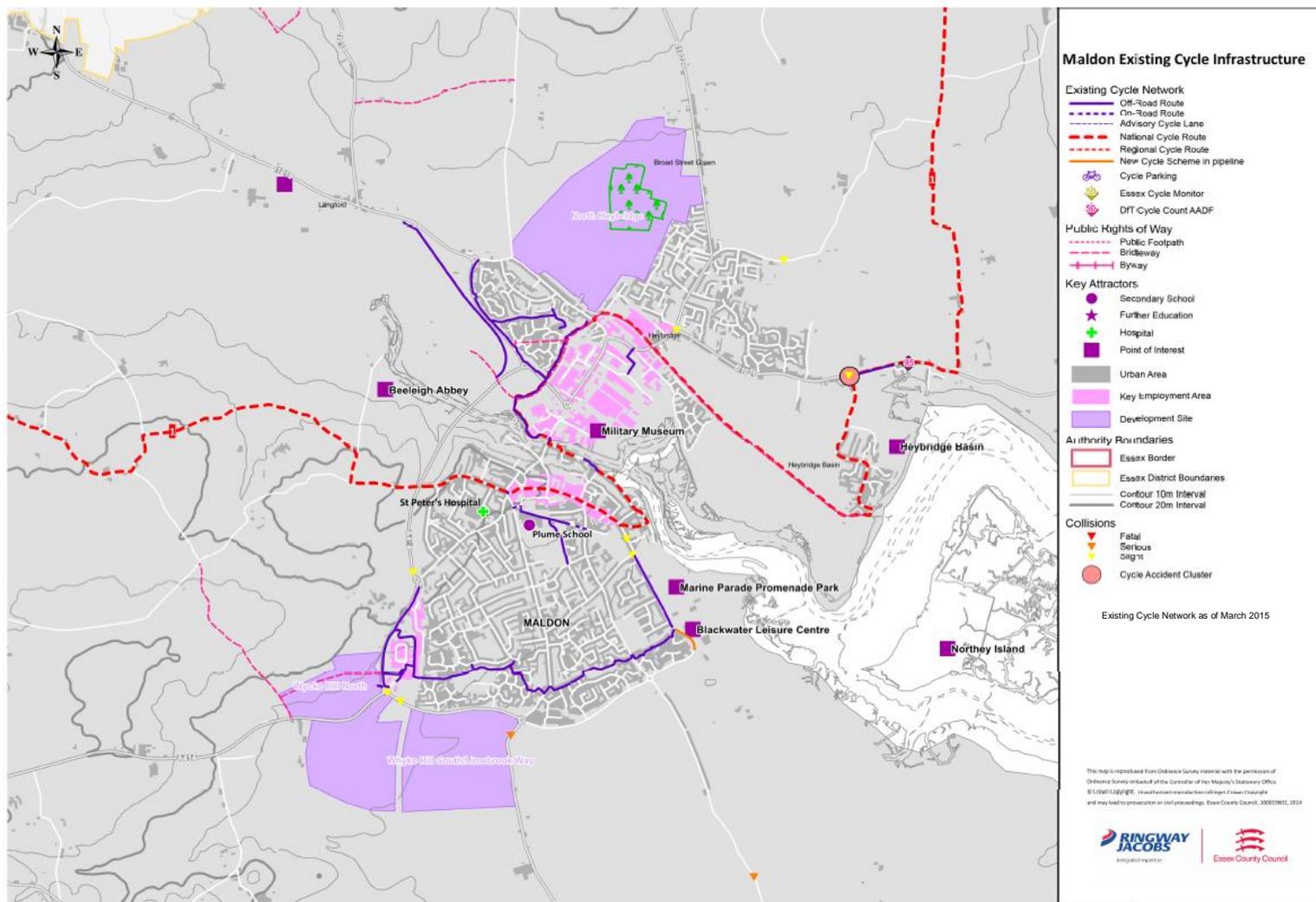
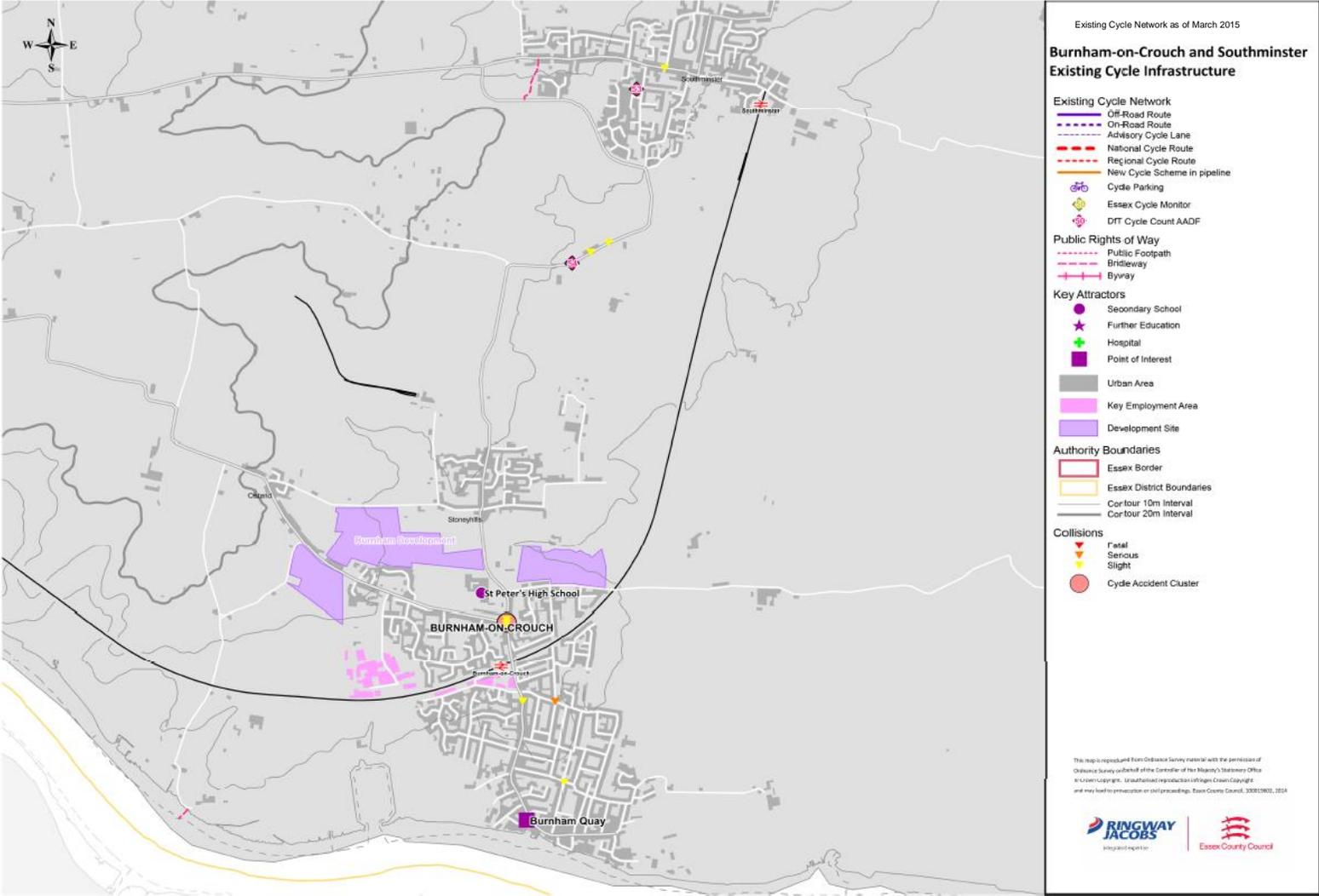


Figure 3.5: Burnham-on-Crouch and Southminster Existing Cycle Infrastructure



3.5 Collision Data

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

Table 3.1 shows the number of recorded Personal Injury Collisions (PICs) involving cyclists by District for the 5 year period between August 2012 and July 2017.

Table 3.1: Personal Injury Collisions involving Cyclists August 2012-July 2017

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

Maldon has relatively low rates of injury involving cyclist in Essex. Despite this however, two cluster sites exist.

1/ Goldhanger Road/Basin Road, Maldon. This is on existing National Cycle Route 1. Collisions at site 1 are due to vehicles turning right from Goldhanger

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

Road onto Basin Road and colliding with cyclists travelling in the opposite direction.

2/ Church Road/Maldon Road, Burnham. Collisions at site 2 are caused by vehicles turning right from Maldon Road onto Church Road and colliding with cyclists heading north.

There is an even urban/rural split but more incidents tend to have occurred on busier roads. Figure 3.4 and Figure 3.5 show the location of PICs in Maldon.

3.6 Cycle Crime

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

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)

3.7 Topography

There are a number of factors which determine the popularity of cycling in any given area. Of the geographical factors, by far the most significant is topography, as identified in many research studies and policy statements. These include research carried out by leading UK cycling academic Professor John Parkin who concluded; ‘hilliness was found to be, by far, the most significant determiner of the proportion that cycled to work in a District’³. 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.’

Maldon is, for the most part, a relatively flat District in Essex with most of the District under 30m. The topography does raise up in the north of the District around Wickham Bishops, on a ridge around Althorne and toward Danbury where some significant inclines do exist.

The main topographical barrier to utility cycling exists in Maldon town on Market Hill which will act to suppress cycling between Heybridge and Maldon to a degree, though the incline is only around 300m long.

The topography of Maldon is shown in Figure 3.4 and Figure 3.5.

³ 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

Maldon is a rural district situated along the Essex Coast, in the east of the county. It has a growing leisure sector and parts of the District are able to benefit from tourism. The largest areas of population are Maldon and Burnham-on-Crouch. The district covers the Dengie peninsula, as well as the area to the north of the Blackwater estuary

The District is located close to the A12, 45 miles from London and close to the city of Chelmsford. A branch railway line runs through the south of the District, connecting the stations of North Fambridge, Althorne, Burnham on Crouch and Southminster to London via Liverpool Street Station.

This section provides a summary of the existing cycle infrastructure within Maldon District as well as identifying various barriers and potential improvements.

4.1 Infrastructure

All of the current off-road provision for cycling is entirely contained within the urban area of Maldon Town. The majority of this has been provided through public space or new developments; and despite some design compromises, there are a number of useful sections of cycle network that have been provided and are shown in Figure 4.1, Figure 4.2 and Figure 4.3.

Most notably, there is a long east-west off-road cycle link between Spital Road and Park Drive towards the south of the town. This shared segregated route does require some intervention to reach its full potential, specifically to remove barriers, improve signing and resolve various legal issues that exist.

Whilst the route is important, it does not provide for journeys to the High Street.



Figure 4.1: Existing cycle network in south Maldon

There is a small but useful section of network through the playing fields, south of the High Street between the Plume School and District Council Offices. There is also one of the few examples of direction signage here.



Figure 4.2: Cycle network near Princes Road

In Heybridge there is a relatively dense network of off road routes along the Chelmer and Blackwater Navigation and Heybridge Approach into the western half of Heybridge. This route, though, does not connect to the town centre which discourages end to end journeys. The route would benefit from direction signage to raise its profile.



Figure 4.3: Mill Lane cycle route

Sustrans National Cycle Network (NCN) route 1 is a long distance route between Dover and the Shetland Islands, which passes through Maldon, from Chelmsford in the west to Colchester in the north. This route could be improved in various places such as reducing vehicle speeds on London Road and improving the tow path along the Chelmer and Blackwater Navigation.

In the more rural areas of the District, quiet and safe routes between settlements such as between Southminster and Burnham are limited due to the nature of the road network and there is a lack of off road cycle provision. Despite this, the Dengie Peninsular is well used by leisure cyclists due to its flat and rural nature.

There are also two dis-used railway lines, one known locally known as the Blackwater Rail Trail which once connected Maldon to Witham. Unfortunately this route is now severed outside Maldon by Benton Hall golf course and some residential properties (though these could be bypassed with landowner consent), the rest of the route still largely remains intact and improvements should be made starting from the Maldon end. The other former line connected south Maldon to the Crouch Valley line via South Woodham Ferrers. The alignment is largely preserved and has potential to become a useful greenway link to the countryside if right of access can be agreed over the land.

There are a number of useful locations of cycle parking in and around Maldon and Burnham High Streets, although they were not observed to be particularly well used at the time of the site visit. This was observed during a quieter time of year, although the weather was dry on the day in question.

Below are some current examples of cycle parking in Maldon.



Figure 4.4: Examples of cycle parking in Burnham and Maldon town centres

To the south of Maldon District there are four railway stations, located in North Fambridge, Althorne, Burnham-on-Crouch and Southminster. There is currently very low cycle parking demand at these stations with only one or two cycles parked daily. This is likely due to a combination of the compact nature of the settlements and rural surrounding, making walking or driving the default modes of access by most rail users.



Figure 4.5: Cycle parking at Burnham railway station

Provision of secure cycle parking may be appropriate at stations such as Burnham.

4.2 Infrastructure Development

In summary, the cycle network in Maldon should be further developed and prioritised in the following areas:

- Develop north-south links through Maldon town, including accessibility to the High Street;
- Improve connectivity between Heybridge and Maldon;
- Create high quality cycle networks in new developments that connect to the existing cycle network;
- Create a new, safe connection between Burnham and Southminster;
- Comprehensively sign and upgrade the existing cycle network in Maldon;
- Create new leisure cycling routes and connections to the countryside, specifically by developing the old railway line alignments; and
- Improve NCN1 throughout Maldon

The key cycle route desire lines are shown on Figure 4.6 and Figure 4.7.

Figure 4.6: Key Cycling Desire Lines in Maldon

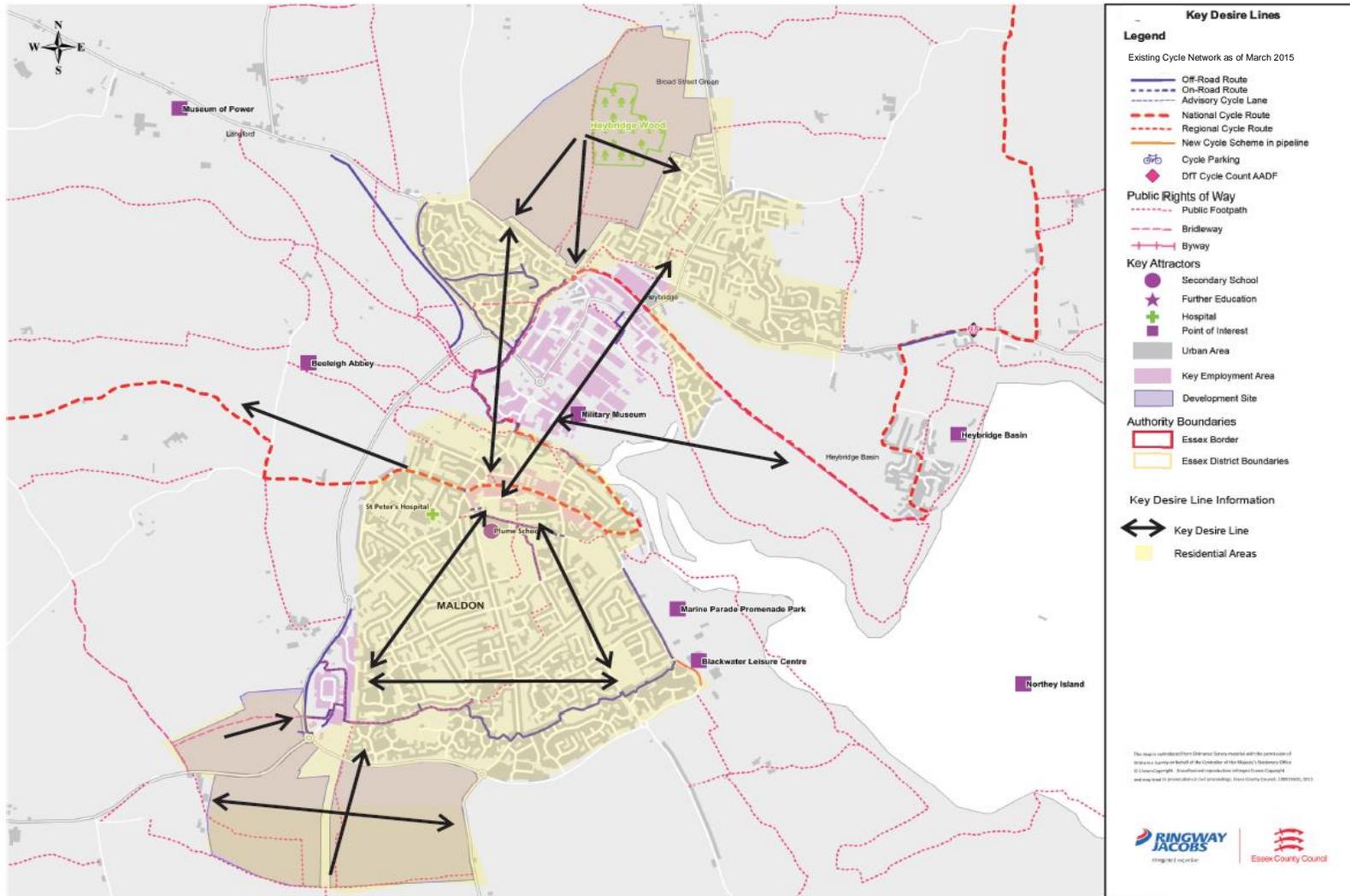
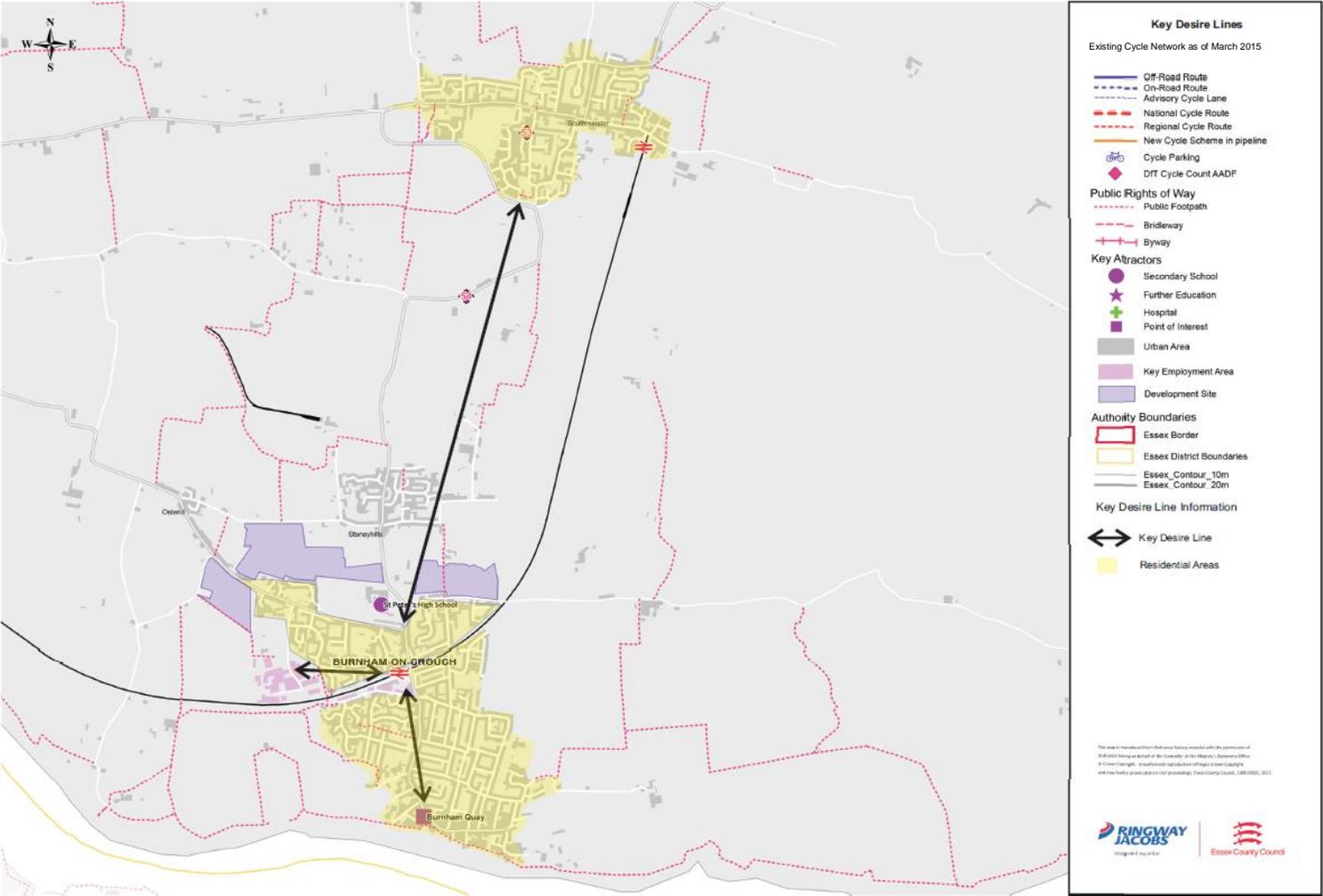


Figure 4.7: Key Cycling Desire Lines in Burnham on Crouch



5 Maldon's Cycling Potential

5.1 Introduction

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

5.2 Commuter Flow Analysis

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

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

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

5.2.1 Cycle trips

Figure 5.1 and Figure 5.2 show the predominant commuter flows for journeys to work by bicycle within Maldon, Burnham and Southminster. Although the numbers are relatively low, most of the 10 most popular District wide commuter journeys by bicycle were made within the Maldon Town.

The highest current cycling origin/destination pairs are from south Maldon and Heybridge to the High Street. Therefore connecting these residential areas to the town centre is a priority.

5.2.2 Car trips

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

Figure 5.3 shows that despite its relatively compact size, Maldon town has 1,600 residents who make internal commuting car trips, these trips make up 20% of all journeys originating from the urban area. Of these trips, over two thirds were to the town centre which is in easy cycling distance and so could be easily be made by bike if infrastructure linking to the town centre was provided.

Figure 5.1: Journey to Work Trips by Bicycle in Maldon (Census 2011)

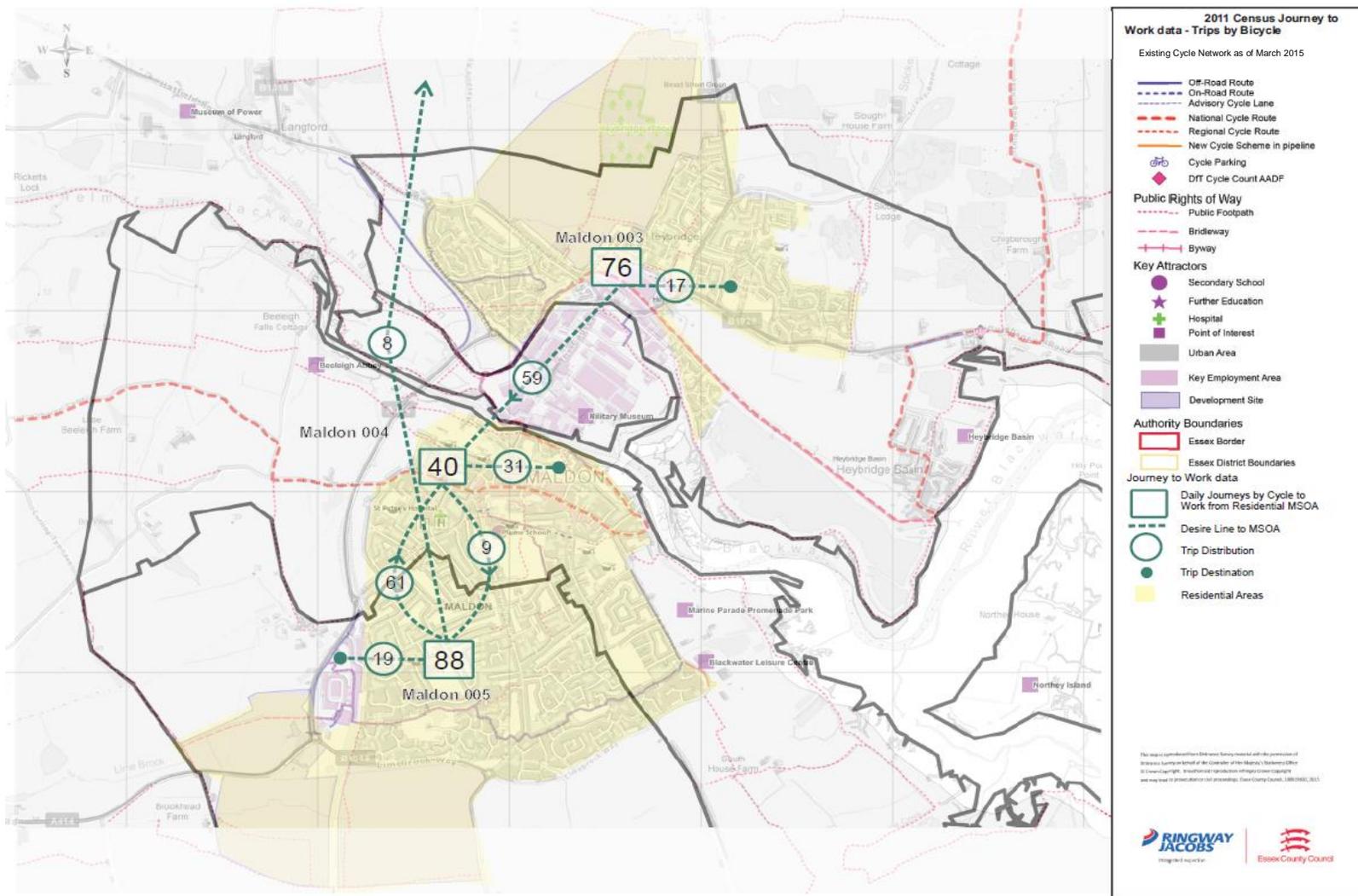


Figure 5.2: Journey to Work Trips by Bicycle in Burnham (Census 2011)

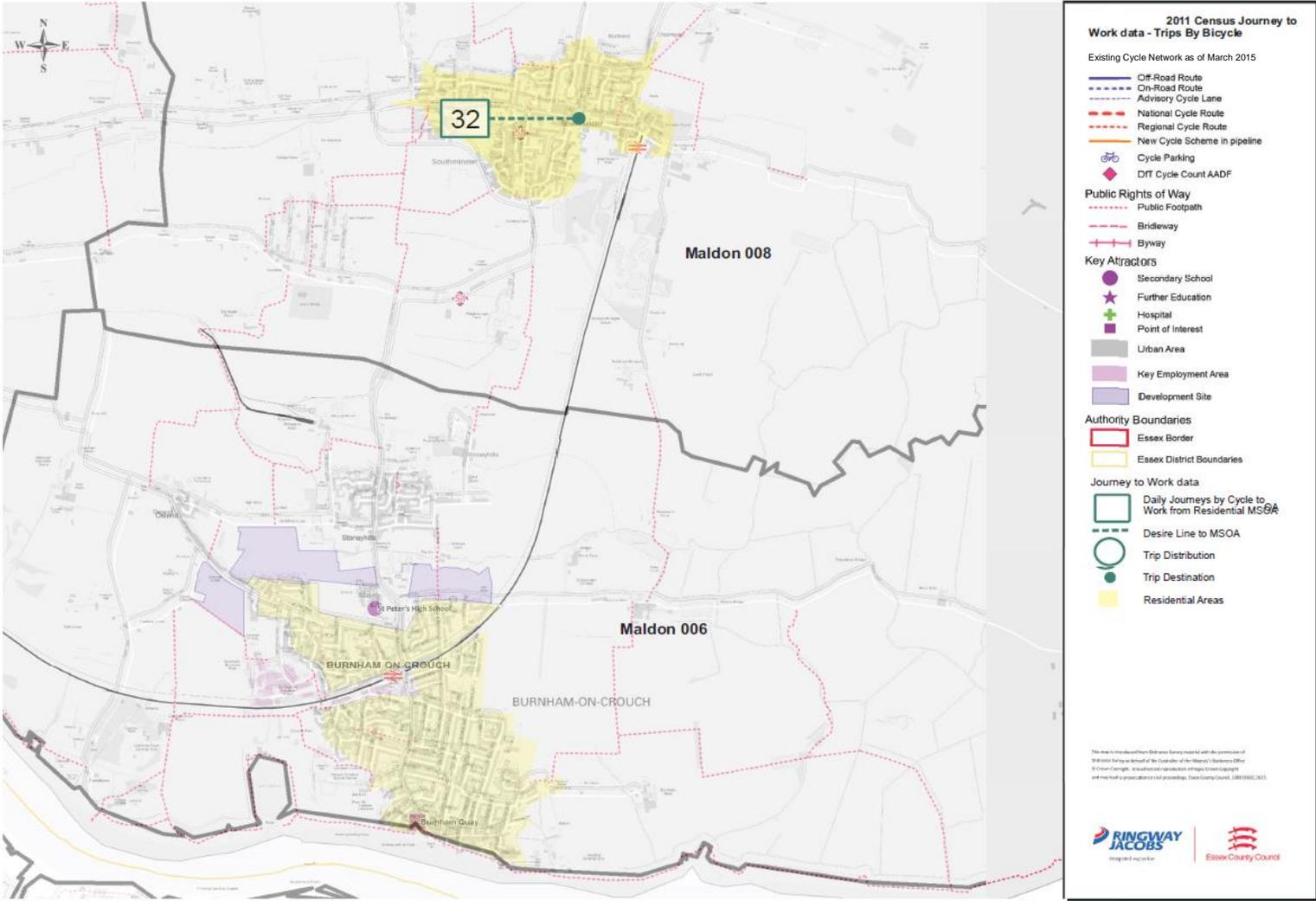


Figure 5.3: Journey to Work Car Driver Trips in Maldon (Census 2011)

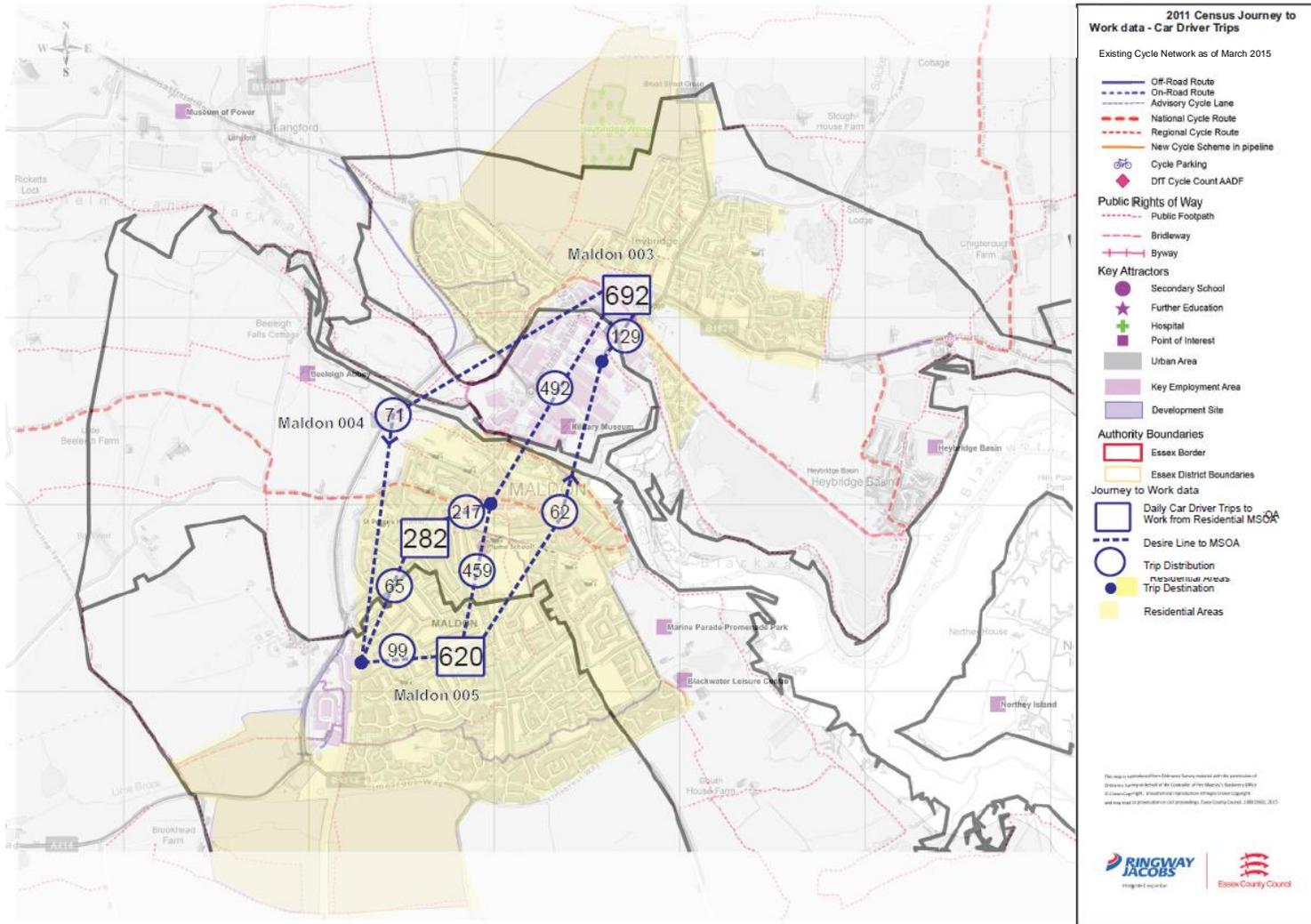
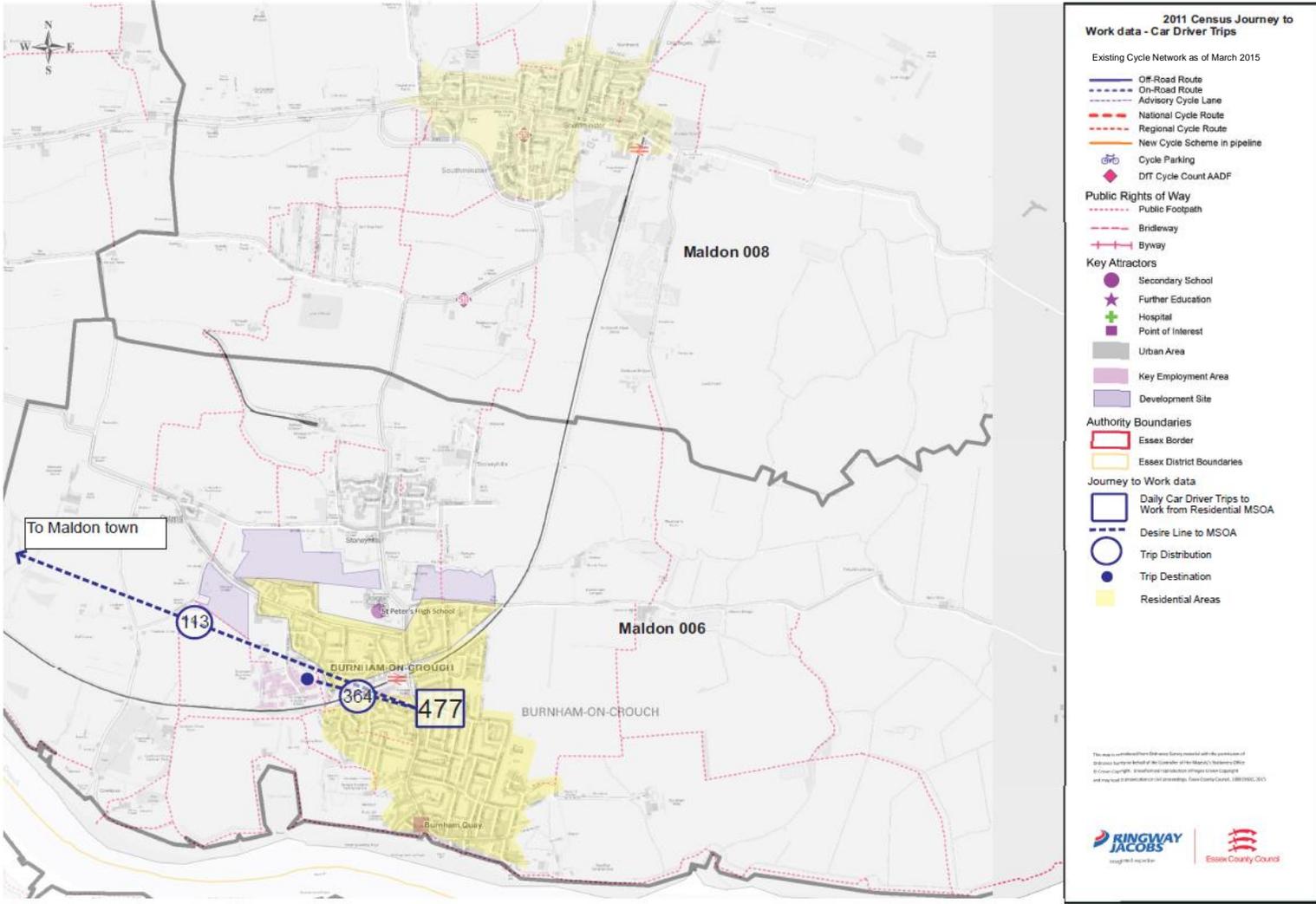


Figure 5.4: Journey to Work Car Driver Trips in Burnham (Census 2011)



Also of note are the 364 internal journeys to work by car in Burnham, again these could easily be made by bike if residents could be persuaded to switch modes.

It is however also worth mentioning that a number of cross boundary work trips are made to Chelmsford (443) and Braintree (123) which are on the extreme end of what could be considered a cycle-able journey.

5.2.3 Rail Heading

In many cases, cycling can form a key part of commuter rail journeys. The 2011 Census only records main mode by distance, therefore assumptions must be made when analysing journeys that would be multi-modal. Therefore where commuters have stated their main mode of travel to work to be by rail, as Maldon town has no rail station it has been assumed that commuters would predominantly choose the closest station to them. 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 stations in Burnham and Southminster, as it is expected the majority of those people would walk to the rail station.

Figure 5.4 shows that 500 residents of Maldon town are commuting to work by train, though the nearest station at five miles away is Hatfield Peverel, is on the edge of cycle-able distance. A suitable route could be promoted along quiet lanes. Some residents may also choose to use alternative stations at Witham or Chelmsford due to better service frequencies.

In addition, a fair number of residents also commute by rail from Burnham (176) and Southminster (86) where at present there is very little observed cycling (Figure 5.6). It is likely that walking will be more attractive in all but the very extreme edges of the settlements.

Figure 5.5: Journey To Work Rail Trips in Maldon (Census 2011)

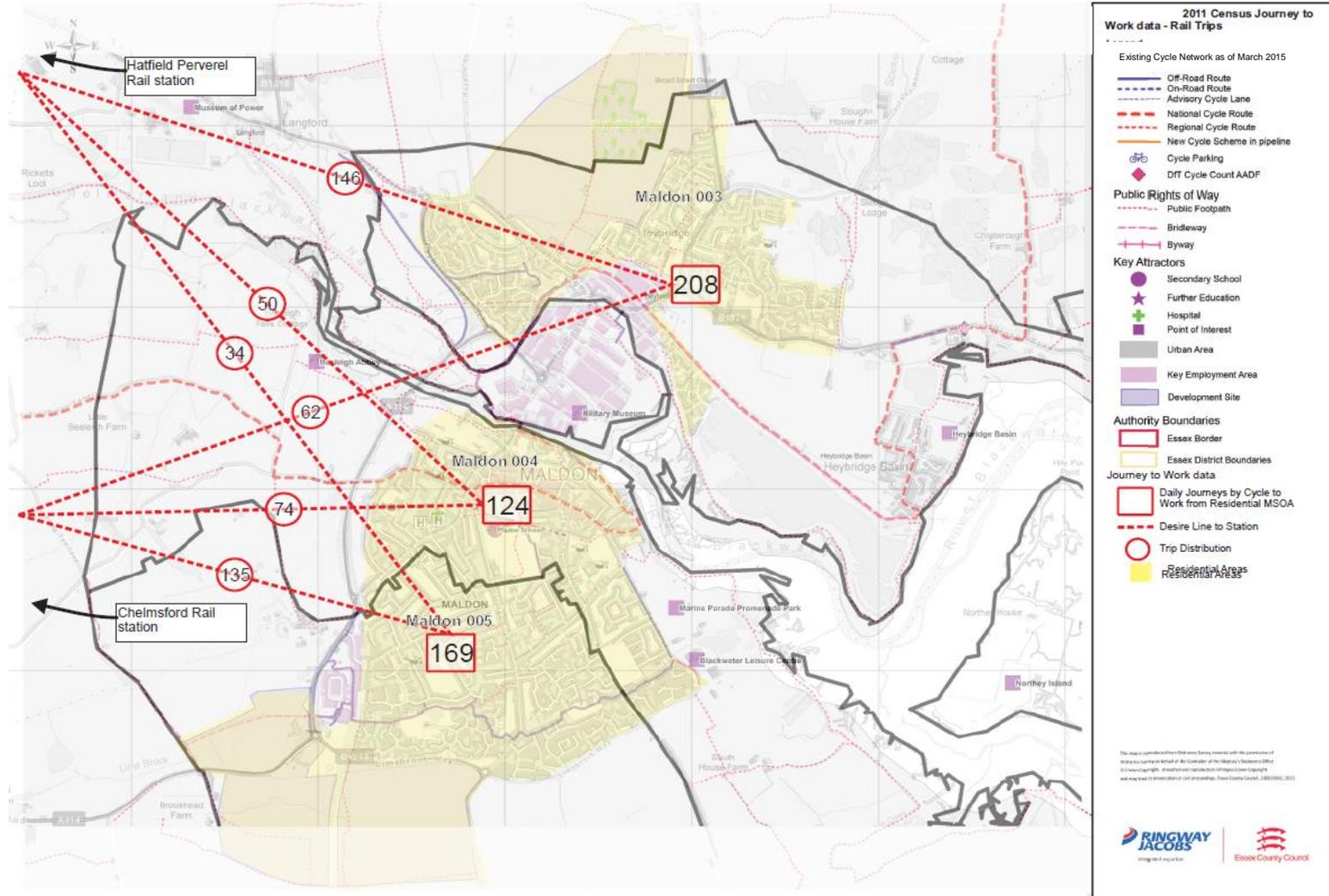
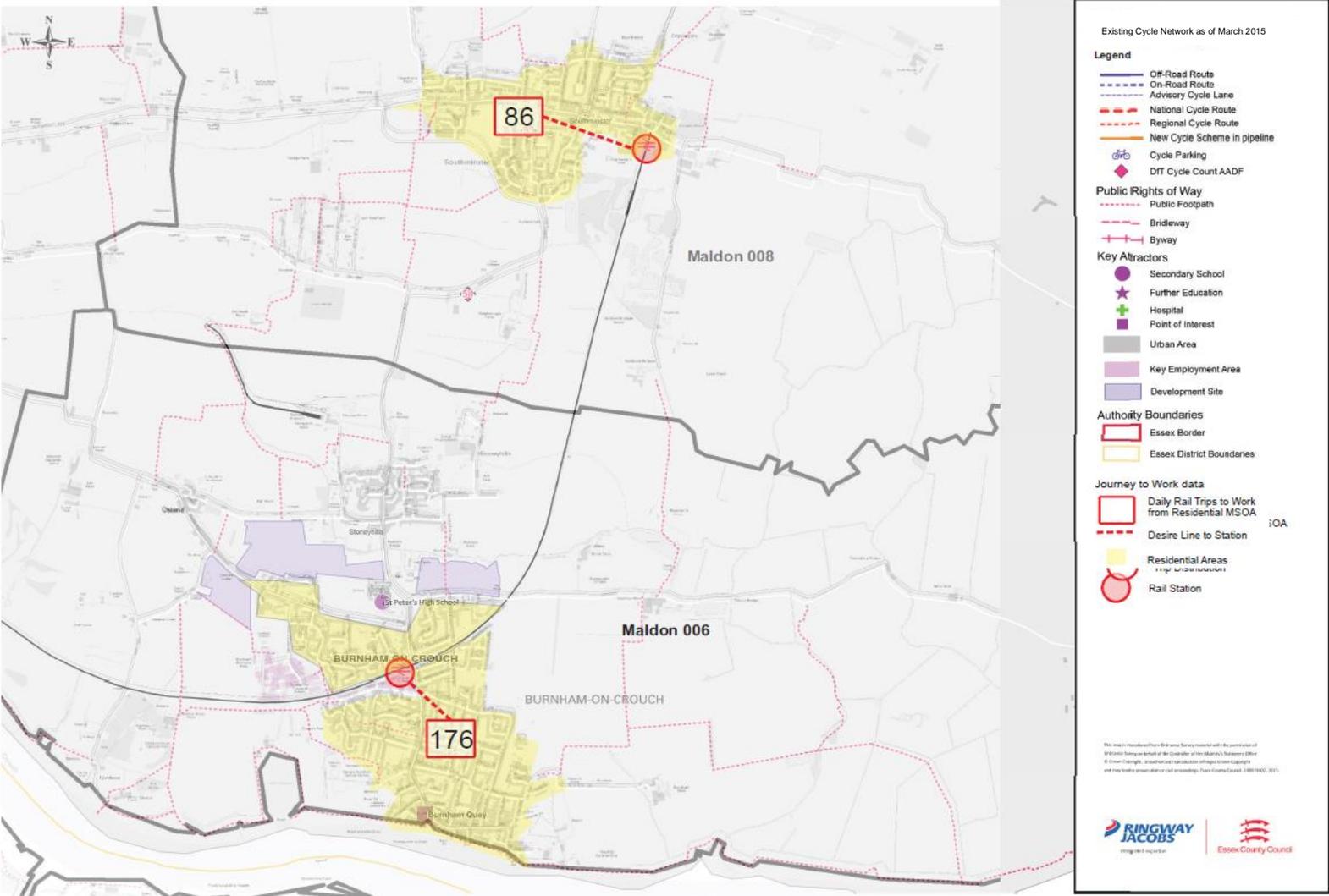


Figure 5.6: Journey To Work Rail Trips in Maldon (Census 2011)



5.3 MOSAIC Propensity to Cycle

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

The MOSAIC Cycling Segmentation was developed for TfL by Steer Davis Gleave as an aid to cycling policy development, planning, implementation and evaluation. This was required to help target 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 be a cyclist than those in the 'Comfortable Maturity' segment. This can then be applied to postcodes and displayed on mapping as shown in Figure 5.7 and Figure 5.8.

The segmentation analysis shows a concentration of residents with a higher propensity to cycle around the southern boundary of Maldon town, in parts of Heybridge, central Burnham and most of Southminster.

5.4 Summary of Potential

In Maldon town, a significant number of short journeys are being made by car that could be easily undertaken by cycle. If even a small proportion of these trips can be switched, local congestion issues would be improved. Therefore providing for existing cycle trips from Maldon and Heybridge residential areas to the High Street is a priority

Cross boundary trips could also be encouraged, particularly to rail stations in Hatfield Peverel, Witham and to Chelmsford, although these are longer distance journeys of 6 miles or more, so it may be difficult to achieve a great deal of mode shift.

Mosaic segmentation analysis reinforces the need to prioritise improvements to Heybridge and South Maldon.

Figure 5.7: MOSAIC Propensity to Cycle Analysis for Maldon

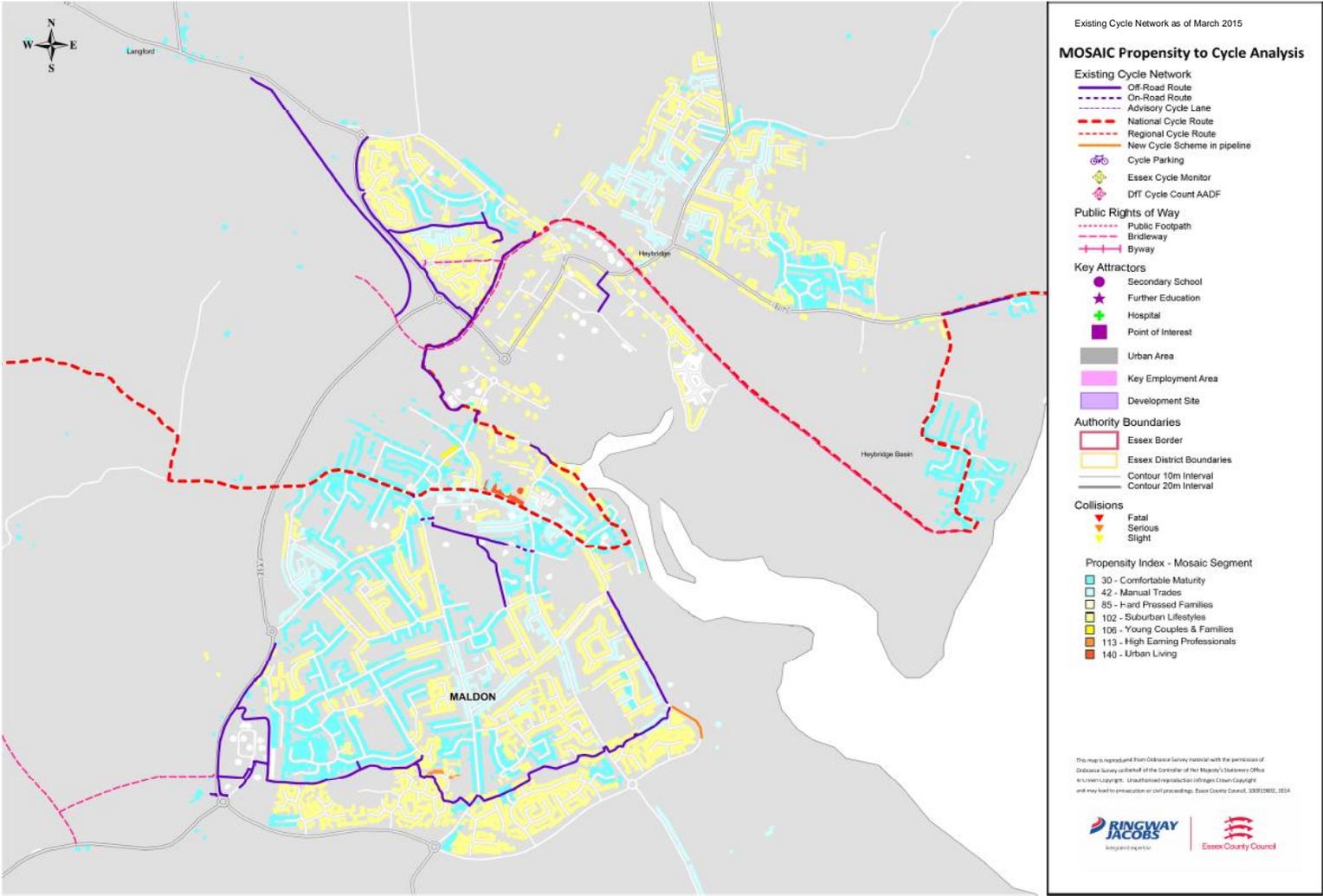
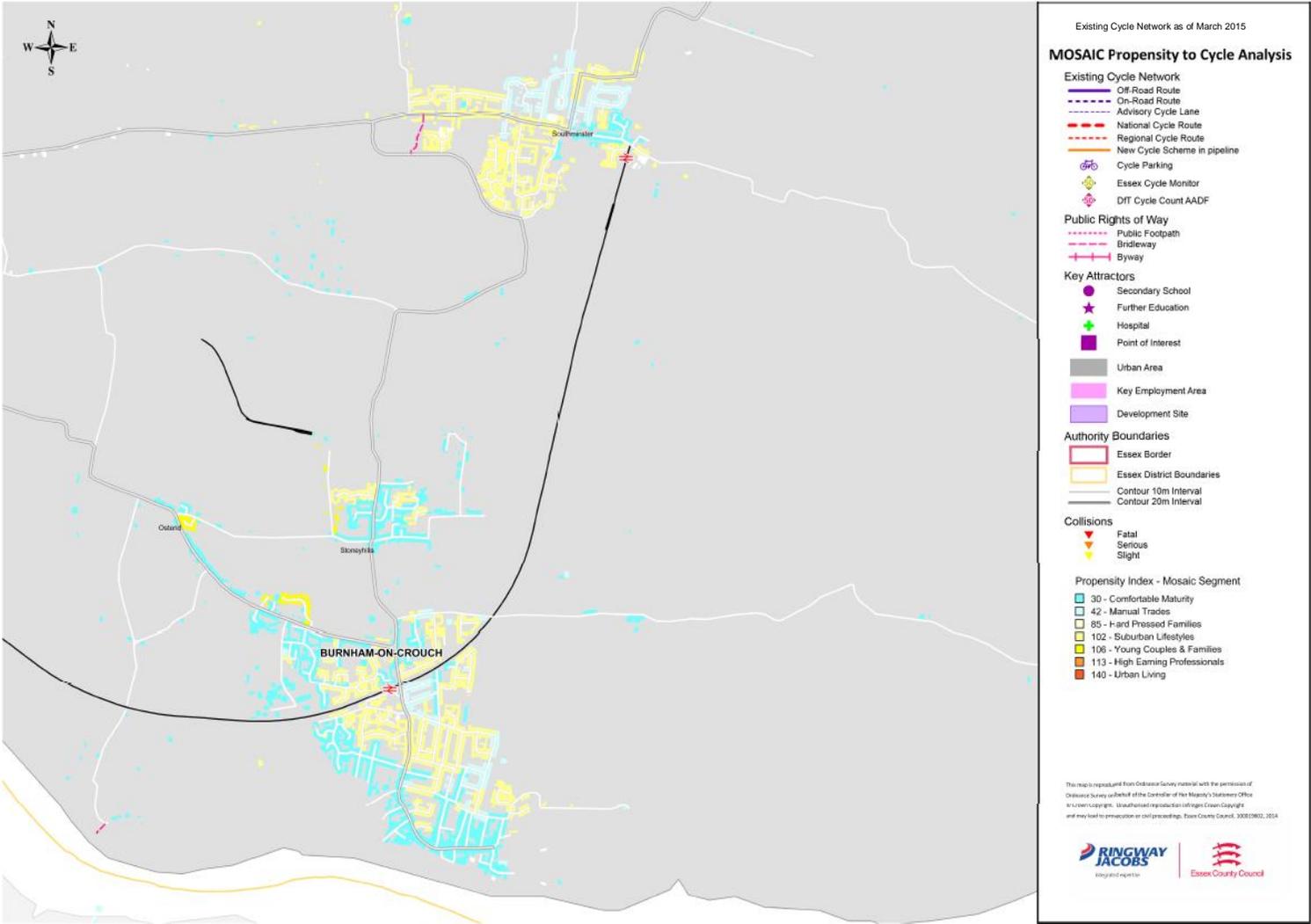


Figure 5.8: MOSAIC Propensity to Cycle Analysis for Burnham



6 Potential Infrastructure Improvements

6.1 Background

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

A coordinated approach should be taken, whereby development planning and highway scheme delivery in Maldon 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. These Flagship Routes for the District of Maldon are described later in this report, in Section 8.

6.2 Potential cycle routes

Potential new cycle routes have been identified to help create a step-change in cycling conditions across the District. These might include signed routes (with journey times and surface markings), networks of interconnected cycle routes on quiet residential streets, filtered permeability (e.g. convenient cut-throughs and contraflows) and, where appropriate, 2nd generation cycling infrastructure, such as Dutch, Danish or light segregation. Infrastructure improvements have been considered for the urban area of Maldon.

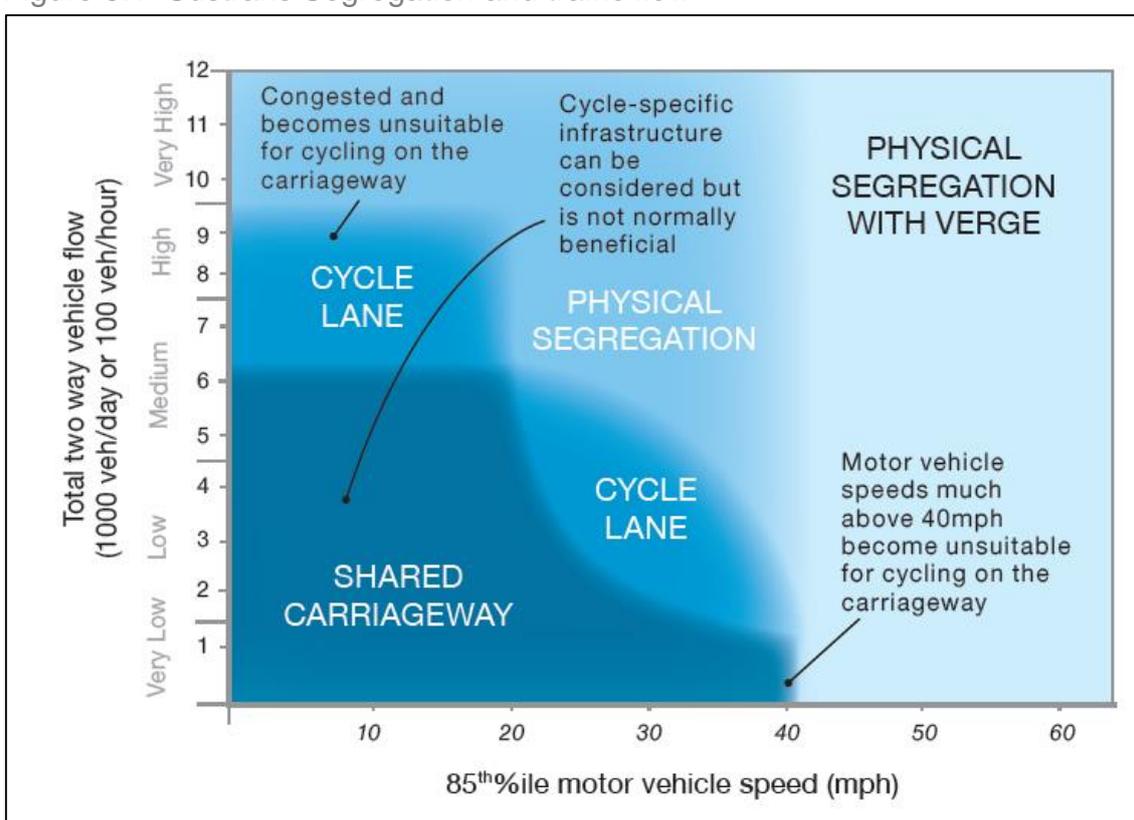
6.3 Methodology Statement

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 (or 950 vehicles/ hour), conditions become unsuitable for cycling on the carriageway and physical segregation with a verge is necessary. Where traffic volume and speed data are not currently available, it may be necessary to undertake a traffic survey to determine the provision that is required.

Figure 6.1 Sustrans Segregation and traffic flow⁴



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

⁴ Sustrans Design Manual. Handbook for cycle-friendly design, Sustrans, April 2014

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 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.

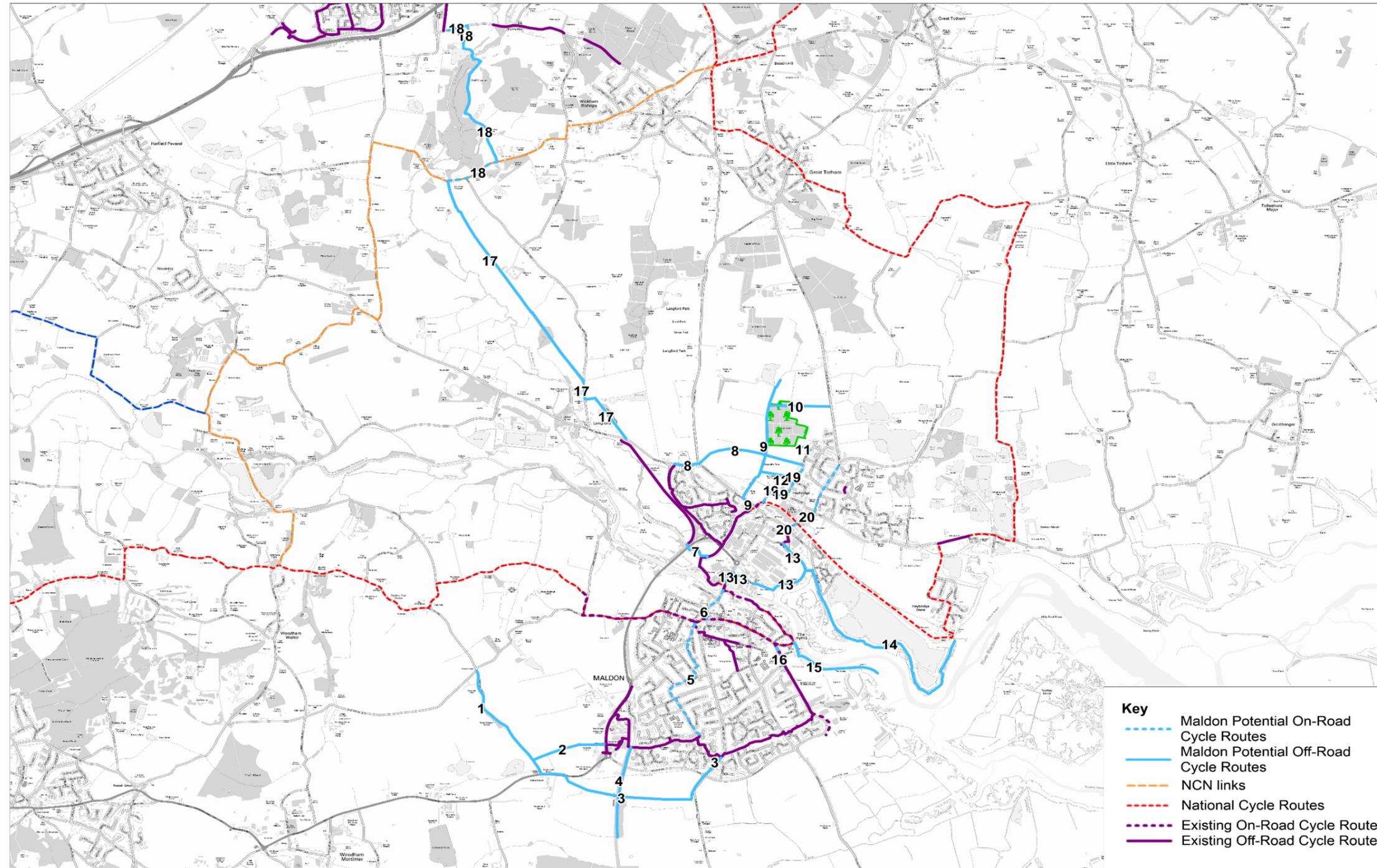
A full list of recommended schemes can be found in Table 7.1, and locations of these routes are shown in Figure 6.2, below.

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 Maldon



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.

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 beyond 2015 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 Maldon Cycle Schemes

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
1	Spital Road development; Bridleway 253 5, north of Spital Road	Leisure route extending north west from west of new development	New shared use off-road leisure route, extending north west from west of new Spital Road development along Bridleway 5. Newly constructed cycle track with adjacent grass verges for equestrians. New infrastructure within new development to meet current best practice standards.	L	H
2	North of Spital Road development	New route through development	Provide new shared use leisure route extending E-W through new Spital Rd development, along Bridleway 56, connecting to existing network east of A414 Spital Road. Newly constructed cycle track with adjacent grass verges to be provided for equestrians. New infrastructure within new development to meet current best practice standards. To link to existing provision, a toucan crossing of Wycke Hill is required when development is operational. Crossing location will need to consider new left hand slip at Limebrook Roundabout.	L	H
3	Spital Road development	New route through development	New off-road cycle track construction on northern side of Maldon Road, from Bridleway 5 to location of new crossing of Maldon Road. Provision of new crossing, type to be determined following traffic count. Construction of new shared use cycle track east-west through Maldon Garden development as far as Fambridge Road/ Limebrook Way roundabout. New crossing of Limebrook Way to be installed, type to be determined following traffic count along Limebrook Way. Provision of footway conversion* to segregated use from Limebrook Way crossing to existing segregated provision on Fambridge Road. Connects to potential scheme 1. Sustrans recommends physical segregation with verge, owing to high vehicle speeds.	L	H+
4	Former South Maldon railway	New N-S leisure cycle route	Good opportunity to create a new shared use off-road N-S cycle track along former South Maldon railway alignment as far north as existing cycle network. Bridge over Limebrook Way could be considered. Further investigation required into land ownership as railway line is in private ownership.	M	H
5	Wentworth Meadows, Granger Av, Essex Road		Provide N-S on-carriageway quietway route along Essex Road, Acacia Ave, Grainger Ave, Wentworth Meadows to Spital Road connecting to existing NCN1 on London Road in the north and existing cycle network in south. Signing and white lining required to denote Quietway from Essex Rd to the High St. Junction treatment required at High St/ Spital Rd (feasibility study required). Scheme 5 consists of improvements to existing route identified in Maldon cycle network map	H	L
6	Silver street, Cromwell Hill, Market hill		Provide an on-carriageway Quietway along Silver Street, Cromwell Hill and Market Hill, connecting to NCN1 north of R Chelmer and existing off road route. Improvements to signing required. Consider on-road improvements (advisory cycle lane) on uphill section (Southbound) of Market Hill as far as Cromwell Hill.	H	L
7	Between A414 and Mill Lane around play area	Widen and improve link to Blackwater	Connect existing Mill Lane route to Blackwater Rail trail. New construction cycle track around play area to existing provision. Widen and improve existing route. Further investigation required into land ownership.	M	M
8	Throughout North Heybridge development	New route through development	Provide new E-W off-road route through new North Heybridge development, linking to Heywood Way (existing residential area) in the east, and Maypole Road/ B1018 Heybridge Approach/ Holloway Road in the west. New on-carriageway section along Langford Rd. New crossing required at Langford Rd, east of Heybridge Approach to enable connection to existing off-road network N-S along Heybridge Approach. Extend along Langford Rd to connect with potential Blackwater Rail trail extension (scheme 16).	M	H
9	North Heybridge Development	New route through development	New off-road route through new North Heybridge development, along alignment of existing footpath PROW 19, linking to Holloway Road. New infrastructure within new development to meet current best practice standards.	L	H

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
10	North Heybridge Development	New route through development	Provide new off-road E-W link, connecting new network through new North Heybridge development to Broad Street Green Road (B1022)	L	M
11	North Heybridge Development	New route through development	Short off-road E-W link, connecting new North Heybridge development with existing residential area of Heywood Way	L	L
12	North Heybridge Development	New route through development	Short off-road E-W link, connecting new network within new North Heybridge development to Everest Way, following alignment of existing footpath PROW_16. New infrastructure within new development to meet current best practice standards.	L	M
13	Blackwater Trading Estate Fullbridge to Hall Road	New route through development	New off-road route through new development at Blackwater Trading Estate, linking existing off-road network, connecting to Hall Road and Fullbridge. Initially following the alignment of footpath PROW_45, then following Heybridge Creek quayside to Fullbridge. New infrastructure within new development to meet current best practice standards.	L	H
14	Heybridge Creek and Heybridge basin		Convert footpath 296 39 to bridleway, widen and improve surface from Heybridge Creek SE to Heybridge Basin. Link improves leisure network, along the River Blackwater and provides a connection to NCN1 at Heybridge Basin	M	H+
15	Sea front path from The Hythe to Blythnoth; Promenade park, near Marine Lake/play area	Convert Existing Route	Convert existing footpath (PROW_40) to shared use* to connect to new link along The Hythe, providing access to Promenade Park and NCN1. Provide new cycle parking at Promenade Park. Potential width and Highway Boundary issues and therefore requires further detailed consideration.	L	H
16	Mill Rd		Provide new link along Mill Road, connecting existing NCN1 with existing off-road route adjacent to Park Drive, Beaumont Way, Poulton Close, Johnston Way, Courtland Place. Vital link to High St and town centre – further study required to open up this link – potential for on carriageway contraflow.	M	M
17	Blackwater Rail Trail A414 to B1018,	Upgrade the existing route	Upgrade existing Blackwater Rail trail route-widen and improve surface. Extend route NW along former rail alignment, utilising Bridleway PROW 268_19. Cycle route from Maldon Rd via the old railway alignment onto footpath PROW 249_10 (conversion to shared use*). Route follows Witham Rd to a new off-road cycle route to utilise bridleway PROW 268_19 as a shared use cycle path and extend north-westwards until the B1018 near the cottages. Potential land ownership issues along this route where PROW is not complete- west of B1018 to PROW 269_19, and section north of B1018 to footpath PROW 249_10.	H	H+
18	Blackwater Rail Trail, through Benton Hall Golf Course		Upgrade existing Blackwater Rail route. Advisory cycle lane along the B1018 and Station Rd to footpath conversion to shared use* on PROW 268_2 up to the north of Drumochter Farm. Route to then follow the existing footpath (conversion to shared use*) through Benton Hall Golf Course northwards to Blue Mills Hill. The footpath is private and therefore potential land ownership issues. This then continues on-road westwards to join existing network and NCN. Safe crossing of Blue Mills Hill required.	M	H
19	Holloway Road to Hunt Avenue	Connection between existing NCN and Heybridge	New cycle track from The Square/ Holloway Road following alignment of existing footpath PROW 296_26* (Holloway Road and The Rootings). Part of this route is currently signed as "no cyclists", so this would need to be addressed. New cycle track to be constructed, linking The Rootings to Hunt Avenue, either to the north or south of existing residences on The Rootings. Quietway to be designated along Hunt Avenue. Exact routing to be subject to further investigation.	M	L
20	Hall Road to Heybridge	Connection between Maldon and Heybridge	New advisory cycle lane linking existing cycle network at Hall Road with Heybridge, along Hall Road, then Colchester Road up to junction with Scraley Road. Note that Colchester Road is relatively narrow and busy, with limited footway space. However, this would provide a key connection between	H	L

Route ID	Route Name	Opportunity	Potential Solution – subject to Feasibility Study	Overall Prioritisation	Est. cost
			Maldon and Heybridge. Further study into the most suitable provision is required.		
21	Burnham to Southminster		New safe leisure cycle route between Burnham and Southminster to be provided. Section 3 identified relatively high existing cycle to work flows, which this route would facilitate. Feasibility study required to determine alignment. Would provide a connection to Southminster and Burnham stations (although both on same railway line), as well as the coast/ River Crouch	M	

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 Maldon District

It is proposed that a North-South Flagship Route be created in Maldon, linking Maldon town centre with Heybridge in the north and residential areas to the south.

A North/South Flagship route can be created utilising some of the existing provision within the town (in particular the traffic free route from Fullbridge to Holloway Road) while making the most of new development opportunities in the north and south of the town. Linking Limebrook Way with Holloway Road this key spine route could be supplemented by improved connections to residential and employment opportunities. The potential Flagship Route is shown in Figure 8.1.

8.3 Prioritisation of Flagship Routes

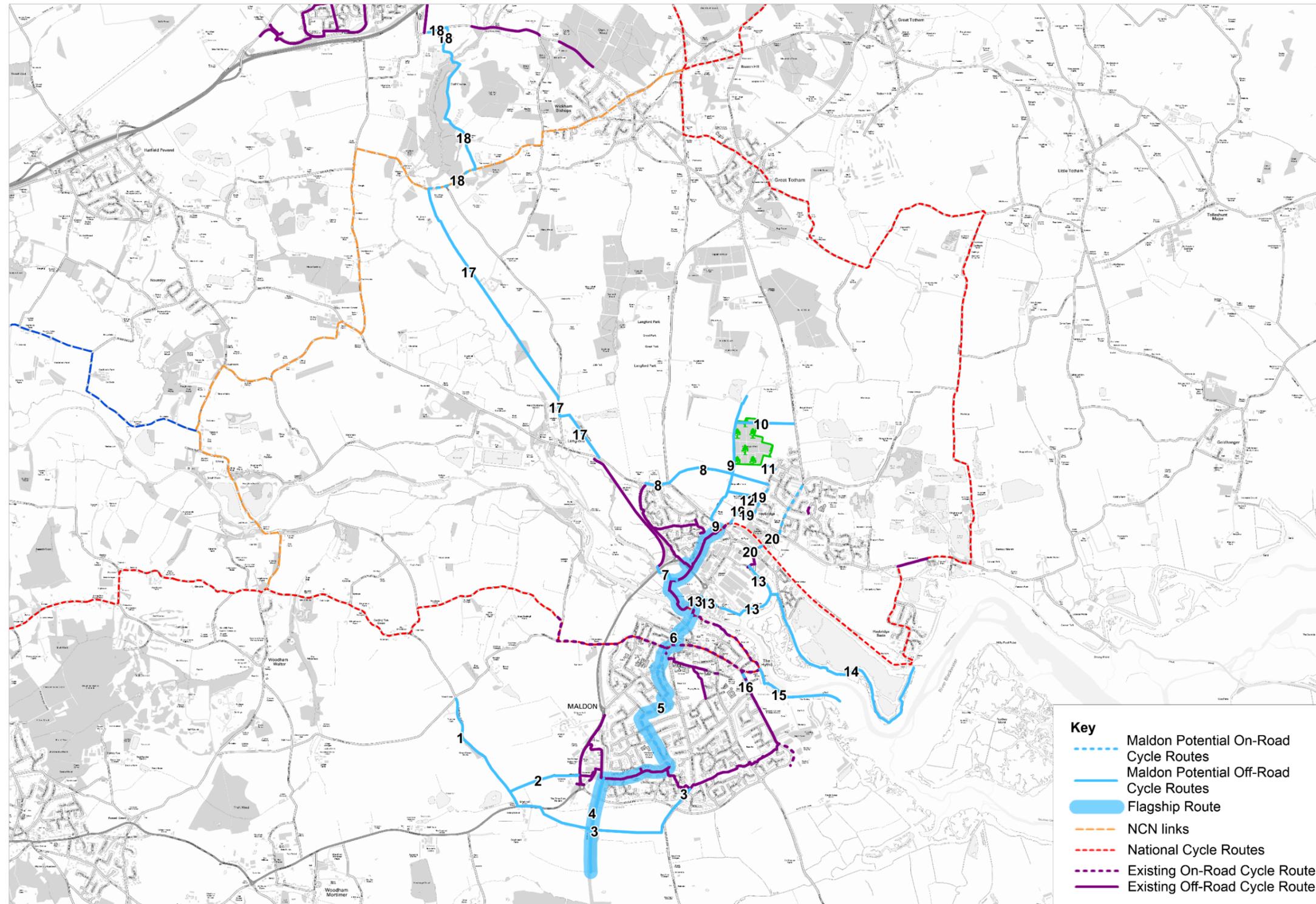
The Flagship Route has been considered against the four prioritisation criteria, as per the other potential schemes:

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

For the North/ South Flagship Route, this assessment found that the route would be relatively easy to achieve, is relatively direct, connects to the existing network in a number of locations and links the key attractors of Maldon town centre, South Maldon, new developments and onward links to industrial areas, The Hythe, Heybridge Basin and South Maldon. As such, this route would overall achieve a high prioritisation.

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

Figure 8.1 Potential Flagship Routes for Maldon District



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.

Maldon has been a focus for competitive cycling, including:

- Hosting the Dengie Marshes Tour until 2012;
- Host to the Burnham and Baddow Cycling Challenge, currently organised by Southend Wheelers Cycling Club, a 40km or 100km sportive; and
- MADCC also organise a number of Time Trial events throughout the year from a headquarters in Steeple.

Other cycling events have also been held in the District, including:

- The Southminster and Burnham Cycle Paths Association's 'Icycle Ride', traditionally held on New Year's Day in fancy dress and using quirky bicycles.
- Dengie Events also run triathlons and cyclo-sportives from the Promenade, North Fambridge and Bradwell.

These events raise the profile of cycling in Maldon in both the local area and beyond, showcasing what Maldon has to offer those who cycle.

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.

Maldon and District Cycle Club (MADCC) has over 150 members and organises regular weekend club runs along with weeknight club nights amongst other events, such as Cyclo-Cross races held in Battlesbridge during the winter season. Between 30 and 40 riders are known to attend MADCC runs.

MADCC have also provided 'Go Ride' cycling sessions at the Plume School in Maldon town for a number of years, helping to encourage children to be interested in cycling as a sport and primarily focussing on grass track racing. A number of cyclo-cross races have been held in the Town Park in association with Maldon District Council. These have been well attended, but not necessarily by local people.

Professional three-time national time trial champion and Giro d'Italia stage winner Alex Dowsett started racing as a teenager for MADCC and is currently on a pro-contract with Movistar, helping to further raise the profile of road cycling in the area.

There is also keen interest from local school children around street/trials riding activities such as BMX, which is seen as much 'cooler' than road riding. With some children making trips to the mountain bike course in Danbury, the indoor BMX park in Colchester and some travelling as far as Bedford, it can be shown that there would be a benefit to creating an improved local facility to harness and provide for this interest. Facilities elsewhere in Essex such as One Minet Park in Saffron Walden have been a success and any lessons learnt from their provision should be incorporated elsewhere in the County in places such as Maldon.

Though Maldon already has an all-weather BMX track and skate ramps in the Promenade Park which are used by local children, both could be improved and expanded upon to provide a first class facility suitable for all ages and abilities.

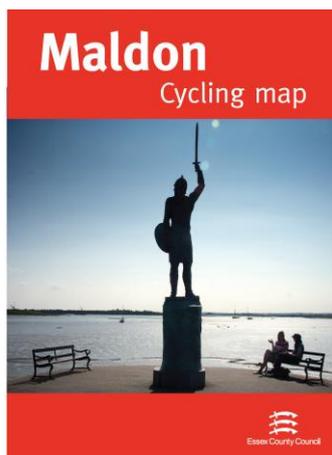
9.2.4 Cycling Maps

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.

Visit Essex and Maldon Tourist Information Centre promote various leisure rides in the District that can be found on the Visit Essex website. The site contains four individual ride leaflets, including 'Maldon and Witham' and 'Chelmsford and Maldon' leaflets. These maps highlight various routes that can be ridden in a variety of combinations. All of these leaflets are targeted at leisure cyclists, utilising quiet roads and highlight various points of interest as well as local pubs and other attractions along their routes.

None of these leaflets are being reproduced or updated and they exist solely as electronic versions for the public to print as needed. The maps are useful and should be refreshed as well and consideration made to making them available in a more printer friendly and customisable online format.

Essex County Council also publishes a cycle map of Maldon Town, the map is one of a series that cover towns in the County and has recently been updated and re-styled. This can be a useful tool in raising the profile of the existing cycle network.



In addition, in order to maximise the benefits of cycling maps, future cycling maps for Maldon 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 Maldon, 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 Maldon District include:

- Updating the existing cycle map of Maldon town to include isochrones and mode-switch motivational information;
- Cycle access – promoting access to bicycles through the cycle to work scheme, cycle hire, provision of subsidised bikes;
- 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; and
- Effort should be made to seek the return of Dengie Marshes Tour so as to provide a focus for local cycling promotion in Maldon.

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 Maldon

The delivery of the potential schemes, soft measures and smarter travel measures will require additional funding and so for this cycling strategy 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 Maldon District or, if in the vicinity, actually construct schemes as part of the development.

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

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

Other sources of funding also become available from time to time such as from the DfT (e.g. Pinch Point). 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 Maldon, 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 Maldon District should be developed and the following key recommendations can be made for cycle enhancements:

- Review existing route signage and lighting;
- Improve maintenance of existing routes (it is an aim of the Essex Cycle Strategy to prioritise more frequent and improved maintenance of the cycle network);
- Enhancement of the North – South Flagship route, providing access to the western side of the town centre;
- Develop north-south links through Maldon town, including accessibility to the High Street;
- Provide new and improved cycle parking
- 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; and
- Improve connectivity between Heybridge and Maldon.