

Harlow District Cycling Action Plan

Highways/Transport Planning

July 2018



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Executive Summary

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

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/City 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 Harlow District and in Essex.

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

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), the Essex Cycle Monitor database, Department for Transport count data, collision data, cycle crime statistics and topography. Other relevant studies undertaken for the District have also been considered, including the Harlow Integrated Transport Package (2015).

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

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

Key Recommendations

Taking into account the current barriers to cycling in Harlow 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. This CAP has observed that the existing signage strategy is incomplete and will require updating, to ensure that cyclists are signed all the way to the key destinations. It is understood that issues regarding signage in the District are complicated by land ownership. Previous studies have identified that a small area of land, on which to house any new signposts, must first be adopted by Essex County Council, which leads to complications for maintenance;
- 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). It has been identified in this CAP that many of the surfaces of existing cycle routes in the District are in a poor state of repair and require improvement and improved maintenance;
- Develop a Flagship Route in the District through Feasibility Studies to Detailed Design;
- Prioritise the East-West Flagship Route, providing access to the town centre, the Pinnacles and Mark Hall;
- Review existing cycle parking across the District. Provide new and improved cycle parking with a focus on satiating the considerable demand for commuter trips at railway stations and at other key destinations, such as the town centre;
- Enable improved cycle access through the currently pedestrianised town centre by removing existing “cycling prohibited” signs and securing relevant legal approvals;
- Fill obvious gaps in the existing cycle-route network (on alignments with cycle-friendly topography), such as Howard Way and Partridge Road;

- Provide new infrastructure on key roads with cycle-friendly topography but no existing facilities, particularly with regard the proposed housing developments around the outskirts of Harlow;
- Actively encourage residents of the District to cycle, through the use of cycle hire schemes (similar to “Bike & Go” schemes at some Greater Anglia Stations, or using dockless bike hire), promotion and awareness campaigns, including the use of workplace and school travel plans;
- Promote the wider benefits of cycling locally with the aim being to foster a cycling culture across the District;
- 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;
- Review and update cycle route lining and marking, ensuring in particular, that shared use cycle and pedestrian facilities are marked as such;
- Promote and market the Flagship Route with ‘Cycle Superhighway’ style branding and disseminating techniques;
- Improve cycling links to the future Harlow and Gilston Garden Town;
- Improve cycle infrastructure links between the town centre and the two railway stations, Harlow Town and Harlow Mill;
- Increase the residential permeability of the existing cycle network; and
- Investigate, in more detail, the provision of cycle routes to education facilities, when the CAP is reviewed in the future. This CAP has identified that the existing, extensive cycle network in Harlow is not well used. It has also noted that cycle routes do not cater for complete journeys to school by bike.

Next Steps

This is a draft Action Plan and, although the potential schemes have been developed in discussion with District 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, Districts and Cities of Essex, including one for the District of Harlow. This document provides an opportunity to develop and promote cycling in Harlow through improved infrastructure, together with the wider promotion of cycling by Active Essex, Essex County Council (ECC) and Harlow District Council (HDC), 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 Borough/ District/ City has an up to date Cycling Action Plan (renewed every 5 years).

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

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

Coherent cycle networks will ensure that:

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

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

Table 1-1: Active Essex priority aims

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

1.2 Background

The District of Harlow is located in East Essex, on the borders of Hertfordshire to the north, Epping Forest District to the south and west and Uttlesford District to the east. Harlow was designated as a post-war New Town in 1947, with the original Masterplan creating several self-sufficient neighbourhoods within the town, each with shopping and community facilities. These are separated by landscaped wedges (known as green wedges) to enable pleasant transport links through the District.

Since 1947, residential expansion has largely occurred to the southwest with the Katherines and Sumners estates, to the southeast with the Church Langley estate, and to the east with the New Hall neighbourhood. Key employment areas on the outskirts include Pinnacles to the west and Temple Fields to the north, the latter being designated as a Harlow Enterprise Zone area with London Road North. The main retail areas are within Harlow Town Centre and on Edinburgh Way.

The District has two stations, both on the West Anglia Main Line (WAML). Harlow Town is located north of the Town Centre and sees a far more frequent service, and Harlow Mill is located to the north east, near Old Harlow.

The line serves London, Norwich, Peterborough, Cambridge and Stansted Airport. Journey times to London Liverpool Street are around 38 minutes, and return fares cost £13.80.

The 2011 Census records the population at 81,944, with 35,752 households.

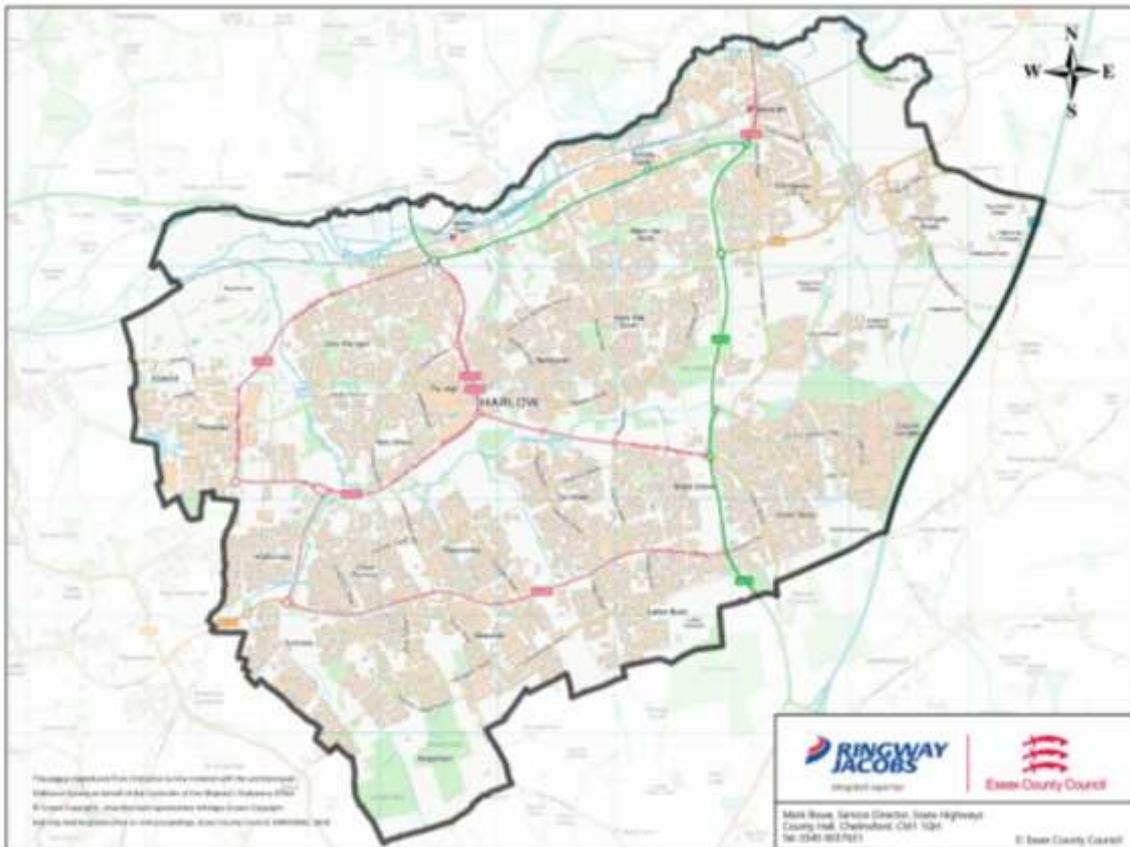


Figure 1.1: Harlow District Map

1.3 Aims of the Action Plan

Although Essex County Council (ECC) and Harlow District Council have been promoting and facilitating 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 been prioritised.

The aims of the Action Plan are to:

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

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 – Harlow’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: the UK Government's Cycling and Walking Investment Strategy (CWIS, 2017), the Essex Transport Strategy (2011) and the Draft Harlow Integrated Transport Package (2015).

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 Adopted Replacement Harlow Local Plan (2006), the Draft Harlow Integrated Transport Package (2015) and the Harlow Local Development Plan will be examined. These aim to improve cycle links to Epping, encourage a modal shift from car usage and to improve the convenience and safety of cycling facilities.

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 cycling and walking routes by 2040. By 2040, the ambition is to deliver:

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

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

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

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

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

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

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

- £50 million to provide cycling proficiency training for further 1.3 million children;

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

In addition, the government is investing an extra:

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

By 2020, the objectives of the CWIS are to:

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

2.2.2 Cycling and Walking Infrastructure Plans (CWIP)

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

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

Local Cycling and Walking Infrastructure Plans (LCWIPs), as set out in the Government's Cycling and Walking Investment Strategy, are a new, strategic approach to identifying cycling and walking improvements required at the local level. They enable a long-term approach to developing local cycling and walking

networks, ideally over a 10-year period, and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle.

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

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

2.3 Regional Policy Context

2.3.1 Essex Transport Policy

The Essex Transport Strategy (2011) 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 Borough this could see between £1.8m and £3.6m per year spent on improving cycling provision.

2.3.2 Essex Cycle Strategy (2016)

In response to the legal requirement, and also the requirements of the Essex Transport Strategy, the Essex Cycle Strategy has been prepared with the aim of setting out a strategy for providing coherent cycle networks. The purpose of the strategy is to set out the key elements of a long term plan that will lead to a significant and sustained increase in cycling in Essex, establishing it in the public's mind as a 'normal' mode of travel, especially for short a-to-b trips, and as a major participation activity and sport for all ages. The strategy has been produced in conjunction with Essex County Council, the 12 Essex Boroughs/Districts/Cities, 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, District or City 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 Adopted Replacement Harlow Local Plan (2006)

Harlow Council's Adopted Replacement Local Plan was adopted in 2006. The document sets policies and proposals for land-use requirements in Harlow applicable until 2011 to promote sustainable development. In terms of transport, the plan contains the following objectives:

- To reduce the negative impact of transport on the environment
- To provide an integrated transport system which meets the social and economic requirements of the District
- To reduce traffic created by new developments by funding, encouraging or providing a range of transport modes, and locating developments in accessible areas
- To improve the mobility of all members of the community
- To improve user safety and security

2.4.2 Harlow Council Corporate Plan

Harlow Council's Corporate Plan was published in 2014. It outlines the Council's priorities for service delivery for the next three years, focussing on community, leadership and resource management. The main priorities for residents, businesses and visitors to Harlow include:

- More and better housing
- Regeneration and a successful economy – which includes a focus on securing infrastructure appropriate for sustainable growth
- Wellbeing and social inclusion
- A clean and green environment
- Successful children and young people

2.4.3 Harlow Regeneration & Social Inclusion Strategy 2010 – 2015

This document establishes the framework for creating the social, physical and environmental regeneration of Harlow up to 2015. It focuses on encouraging inward investment, neighbourhood centre renewal and the provision of infrastructure to support a thriving economy and inclusive community.

Actions required include:

- Tackling congestion and improving access to strategic transport routes
- Improving the railway station, including its immediate environment and connectivity with the Town Centre and employment areas

2.4.4 Harlow Local Development Plan

The Harlow Local Development Plan will eventually replace the Adopted Replacement Harlow Local Plan in 2018, establishing a framework to guide development up to 2031.

Key issues raised in terms of transport included:

- Tackling congestion and the maintenance of existing infrastructure
- Improving access to the M11, with a new junction and bypass/link road
- Improving bus links between neighbourhoods and providing direct routes
- Improving parking facilities at Harlow Mill Station
- Extending the Central Line and improving access to Epping Central Line Station
- Improved cycle links to Epping
- Promoting sustainable modes of transport

2.4.5 Draft Harlow Integrated Transport Package (2015)

The Draft Harlow Integrated Transport Package, published by Ringway Jacobs in 2015, suggested various objectives to be achieved by 2031. Key objectives linked to cycling include:

- Encourage a modal shift away from car usage to minimise congestion, through investing in training and providing information to raise awareness
- Improve the safety and convenience of cycling and walking facilities, through measures including localised widening and upgraded crossing facilities to create high quality routes
- Provide information and improved signage to allow for improved wayfinding, increasing cycling levels
- An urban-area-wide cycle hire scheme is proposed to provide support to those without bicycles
- Providing secure cycle parking at key destinations

2.4.6 Harlow and Gilston Garden Town

In January 2017, funding was secured by East Herts District Council for a new garden town on the Essex-Hertfordshire border. Over 10,000 homes will be built to the north of Harlow by 2033.

2.5 Other relevant documents

2.5.1 Harlow and Gilston Garden Town Sustainable Transport Corridors Strategy and Delivery Plan

Published by Systra in January 2018, this document establishes potential sustainable transport corridors for Harlow. The document hopes to increase the use of sustainable transport by providing fastbuses, cross-town buses, and demand responsive shared transport. Furthermore, it aims to making cycling more attractive through the development of a network of “cycle and walk supergreenways”. These “spines” will form part of the sustainable transport corridors, and they aim to be easy to navigate, feel safe to use and manage conflicts by segregating modes. These form a west-to-east route across the district, and a north-to-south route, which intersect at the Town Centre. There is also an additional western route to the south of the district.

Work undertaken by Essex County Council to assess the traffic impacts of the development identifies the need to target a sustainable mode share of up to 60% for new development and 50% for existing development in accessible areas. The provision of two sustainable transport corridors (N-S and E-W) will be critical to enabling this high sustainable mode share to be delivered. In terms of cycling, existing routes in these corridors will be improved in a variety of ways:

- by treating the route as a linear park, providing regular stopping points, to improve the amenity of cycling;
- ensure people walking and cycling can take direct routes across junctions and do not have to take long diversions, at grade wherever possible. Pedestrians and cyclists to be given priority at side roads wherever possible; and
- provide frequent crossing points, ensuring there are crossing points near bus stops and side roads.

3 Data Analysis

3.1 Introduction

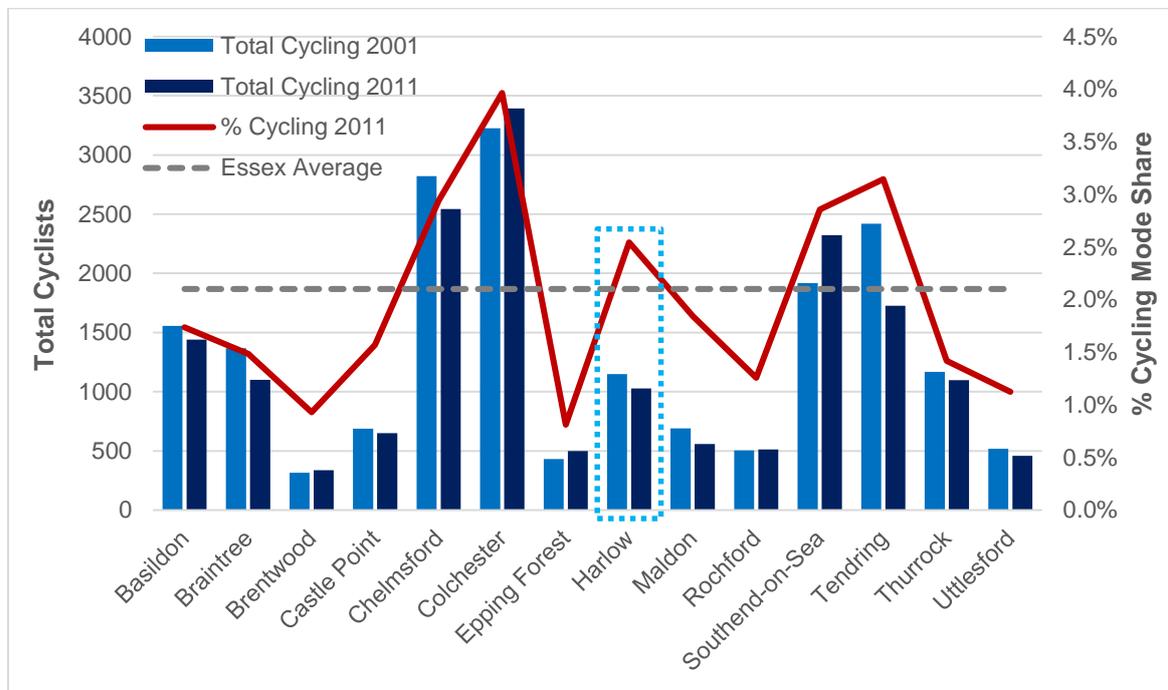
When planning for cycling infrastructure it is important to first understand current levels and conditions for cycling. This section includes analysis of:

- 2011 Census data;
- The Active People Survey (by Sport England);
- The Essex Cycle Monitor database;
- 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 shown in Figure 3-1 below.

Figure 3.1: Census Cycling to Work by Borough / District



As shown above, based on the 2011 Census data, Harlow has below average levels of cycling numbers when compared with other Essex Boroughs/Districts, with 1028 cyclists. However, the mode share is higher than the Essex average, at 2.5%.

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.

Figure 3-2 shows the percentage cycling to work by origin in Harlow at the Middle Super Output level. Towards the edges of the town in the south and east, the cycling levels are much lower than those towards the centre of the District, with the highest levels seen near Temple Fields and the Town Centre, both major employment areas.

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

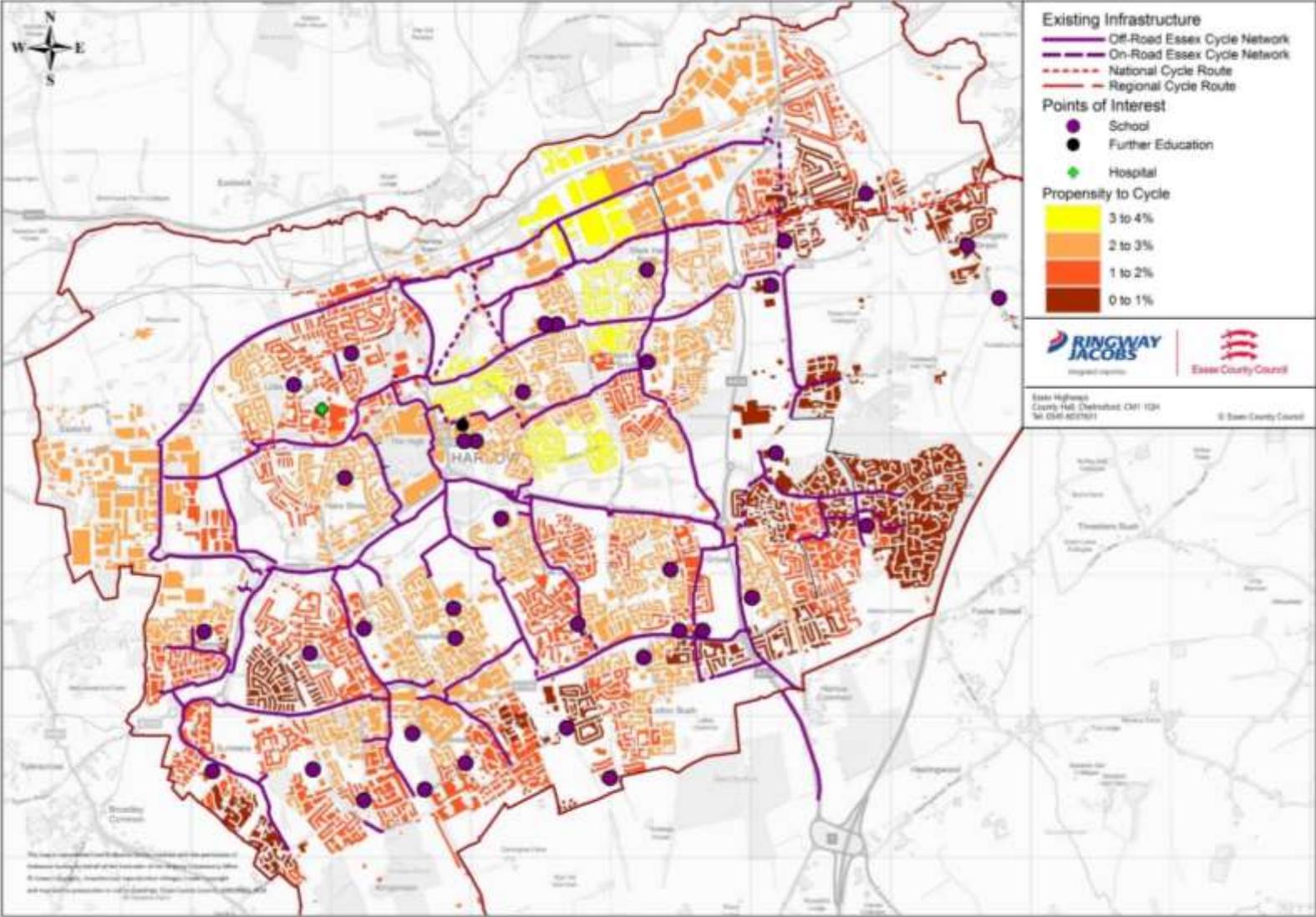


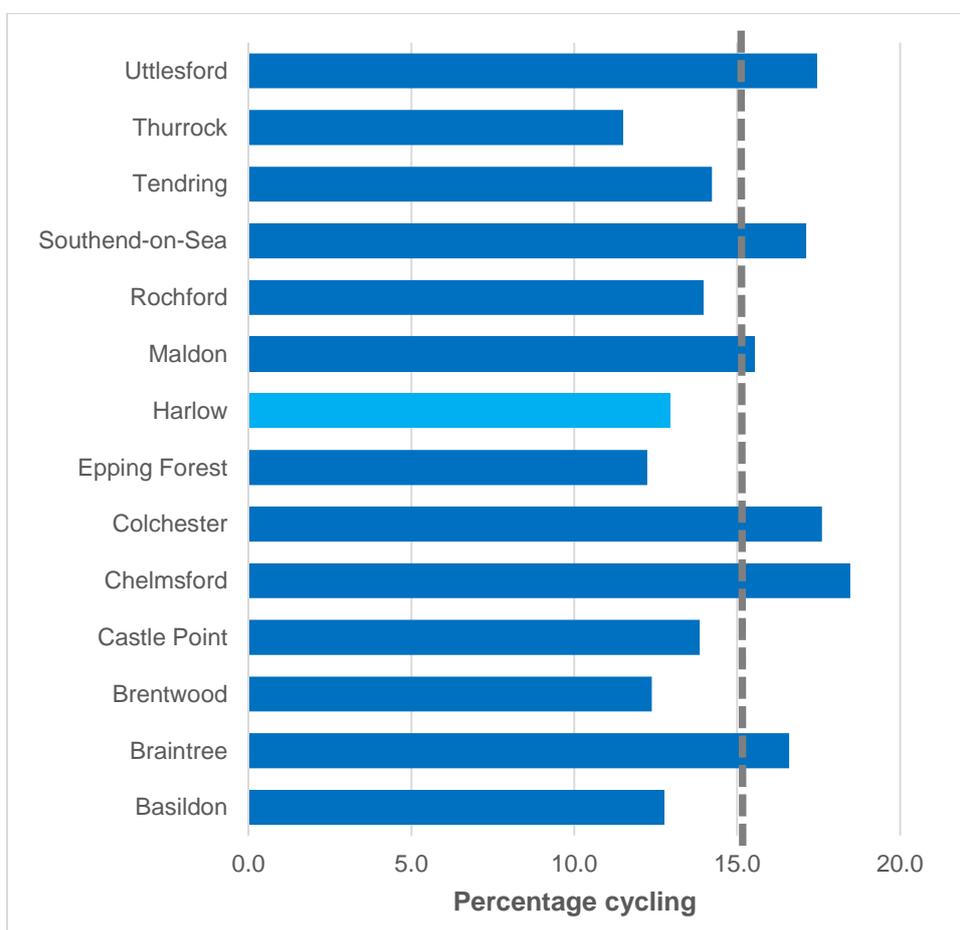
Figure 3.2: % Cycling to Work by Origin in Harlow

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. Harlow sees low levels of cycling, with the 5th lowest level of all Boroughs/ districts across Essex.

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



3.4 Essex Cycle Monitor

Essex County Council has an established network of over 50 cycle monitor counters located across the five urban areas of Basildon, Braintree, Chelmsford, Colchester and Harlow. The count sites continuously record hourly total cycle flow data and have a baseline of 2007. Figure 3-4, below shows May to October total 7-day flows by urban area, and Figure 3-5 shows the 7-day average cycle flows at various sites across Harlow in 2017.

Figure 3.4: Essex Cycle Monitor (2007-2015)

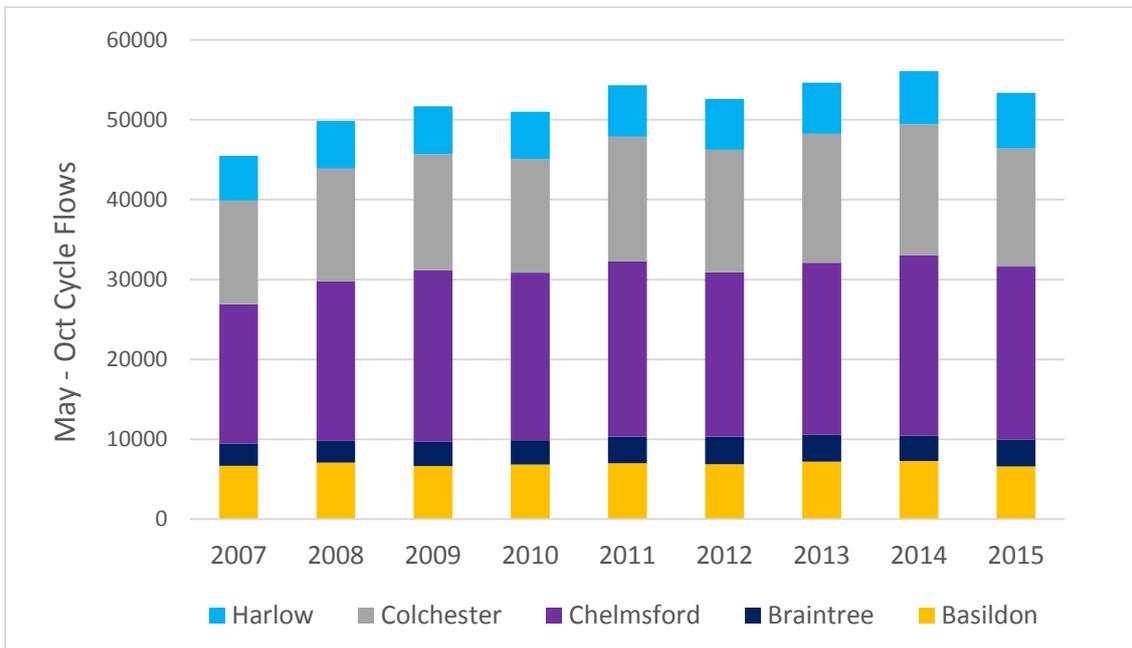
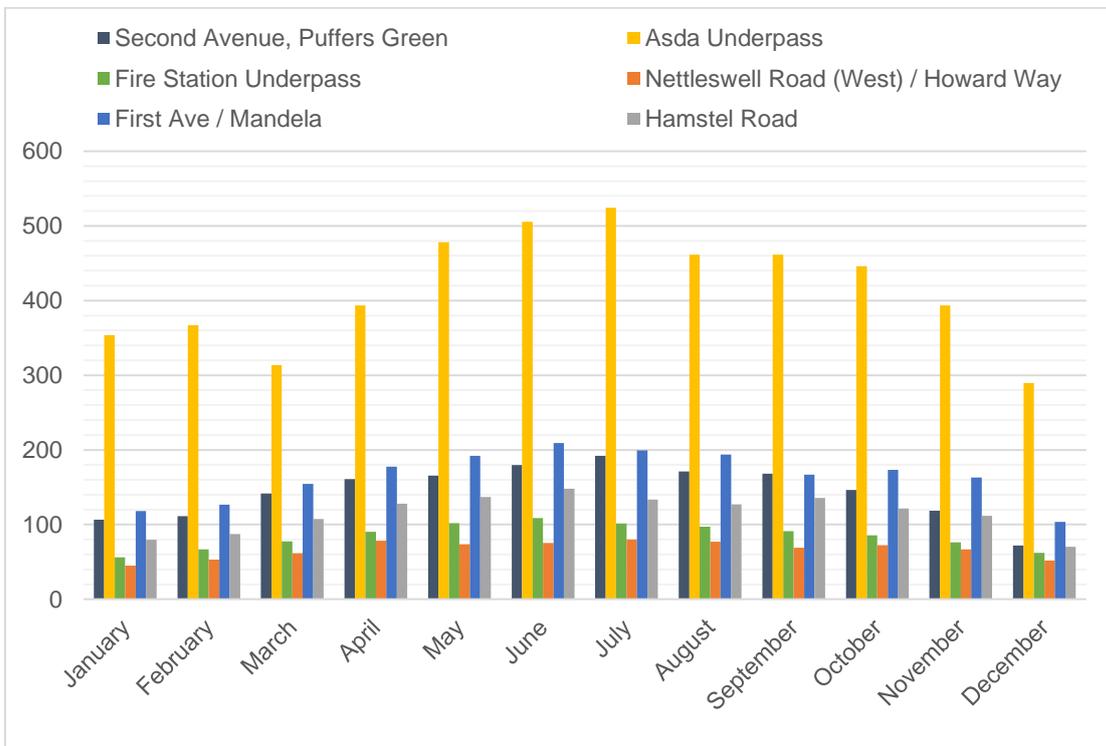


Figure 3.5: 7 day average cycle flows at Essex Cycle Monitor Sites in Harlow (2017)



The highest levels are seen at the Asda underpass, which connects to the Town Centre, a major employment area. This provides an easy route across a busy carriageway, the A1025 (Third Avenue).

3.5 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.

Using DfT Annual Average Daily Flow (AADF) data, information pertaining to numerous locations within the district was taken. The data provides a snapshot overview of the cycle usage along particular routes within the district

Table 3-1 below shows the Annual Average Daily Flow of pedal cycles across the District, and Figure 3-6 displays their locations. Routes that will be affected by potential routes and upgrades as indicated by this CAP are shown in bold.

Table 3-1: DfT Pedal Cycle Counts from 2016

Count location	Annual Average Daily Flow - Cyclists
Longbanks	21
Seymours	9
Water Lane	91
Well Lane	1
The Downs	19
The Fortunes	10
A1169 (West of Parnall Road) Eastbound	54
A1169 (West of Parnall Road) Westbound	40
A1025 (Between A1169 and A1019) Eastbound	53
A1025 (Between A1169 and A1019) Westbound	37
Elizabeth Way north of Roydon Road, Northbound	50
Elizabeth Way north of Roydon Road, Southbound	63
Fifth Avenue, north of Elizabeth Way, Northbound	11
Fifth Avenue, north of Elizabeth Way, Southbound	12
Edinburgh Way, east of Edinburgh Gate, Eastbound	34
Edinburgh Way, east of Edinburgh Gate, Westbound	44
A1019, adjacent to Gladwin Way, Northbound	39
A1019, adjacent to Gladwin Way, Southbound	33
A414 (between First Avenue and A1184) Northbound	1
A414 (between First Avenue and A1184) Southbound	3
A414 (Between Church Langley Way and First Ave) Nbound	9
A414 (Between Church Langley Way and First Ave) Sbound	9
Brays Head	16

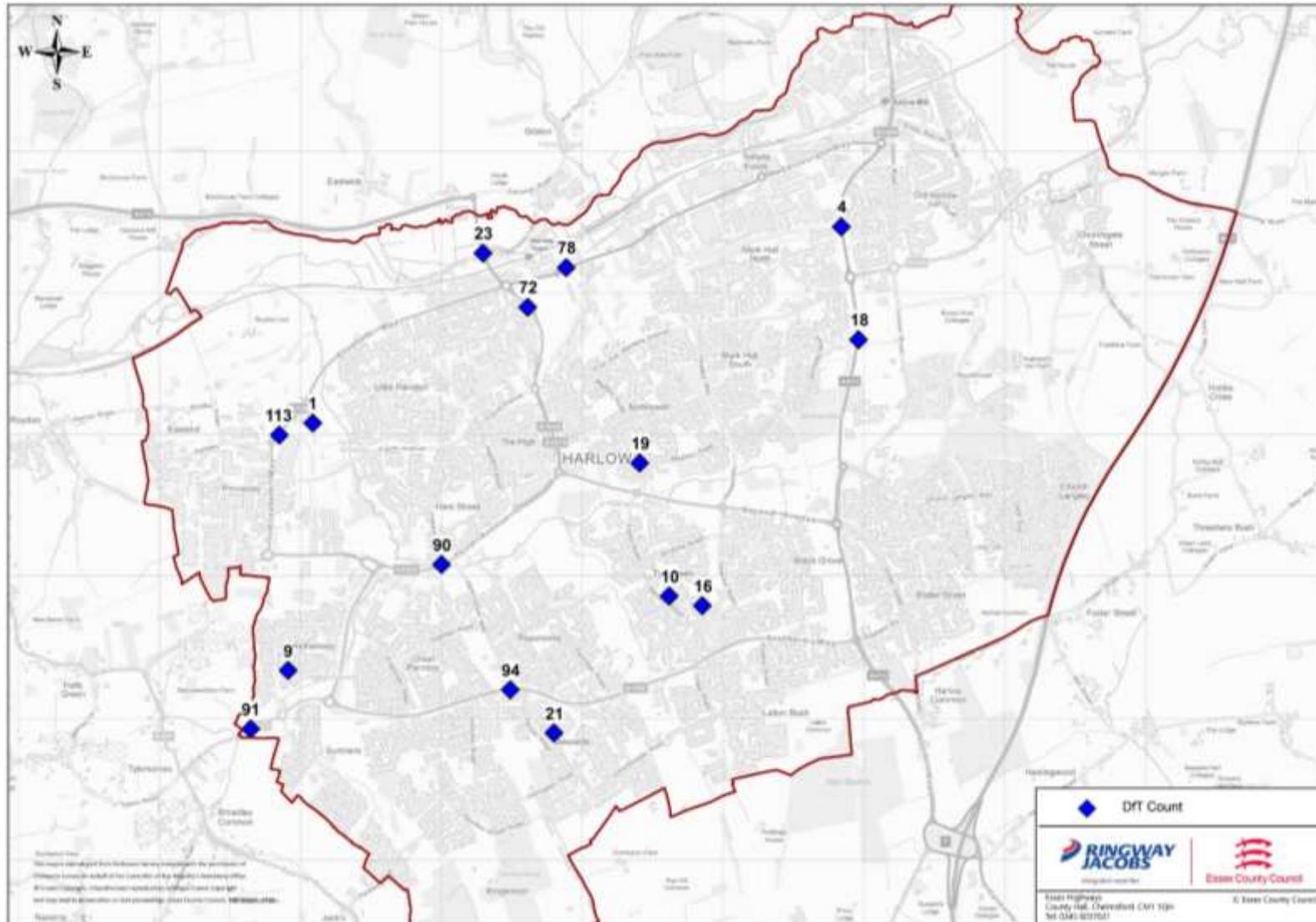


Figure 3.6: DfT Count Locations with AADF of pedal cycles

The previous map clearly demonstrates higher levels of cycling around the western part of the district. The highest levels are seen near the Pinnacles employment area, with a total of 113 seen along Elizabeth Way, north of Roydon Road. 94 cyclists are also seen at the A1169 (West of Parnall Road), and 90 were recorded on the A1025 (Between A1169 and A1019).

Routes that will be affected by potential routes and upgrades are shown in bold in Table 3-1.

3.6 Collision Data

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

Table 3-2 shows the number of recorded personal injury collisions (PICs) involving cyclists by District for the 5-year period between August 2012 and July 2017, with Figure 3-7 showing their locations. As a District, Harlow has the 4th lowest number of cyclist collisions in Greater Essex, with 75 in the time period; however, it has seen the 2nd highest levels of fatal incidents in Essex.

Table 3-2 also shows the total of number of people who cycle to work in each District and then the corresponding percentage for each district. For Harlow it shows that the District accounts for 6% of the total number of people who cycle to work in Essex, but it only accounts for 4% of collisions involving cyclists.

Figure 3.7, below, shows all of the collisions involving cyclists, between August 2012 and July 2017 across the District. It shows that a six accidents occur in the town centre along Fourth Avenue (5 slight and 1 serious). Four of the collisions involved cyclists crossing junctions or the road when a car has failed to see the cyclist, the other two collisions involved cars pulling out in front of bikes at junctions. The potential Flagship Route utilises Fourth Avenue for much of its length, with improved crossings at junctions and raised tables in places to raise awareness of cyclists. The route intends to improve safety for people who cycle and the improved infrastructure will raise awareness to other road users of the presence of cyclists, so further improving safety.

There is also another incident cluster in the vicinity of the First Avenue/Howard Way roundabout. These collisions all involved both drivers and cyclists not looking properly when using the roundabout. This junction is also on the alignment of the potential Flagship Route. The Flagship Route scheme, as already discussed will raise awareness of cyclists along the route and so, improve

their safety. In addition, the Flagship Route proposes that the northern arm of the First Avenue/ Howard Way junction will be improved, either by being upgraded to a toucan or tiger crossing, or even conversion to a Dutch style roundabout.

There are a cluster of accidents (2 slight and 1 serious) at and around the junction of Paringdon Road and the A1169. The majority of them were caused by drivers not seeing cyclists. Scheme 1 hopes to address this issue by implementing advisory cycle lanes as well as signage, in the hope that the presence of cyclists will be expected.

There were two fatalities in Harlow in this time period. The first fatality was at the uncontrolled pedestrian crossing at the roundabout of Third Avenue/Peldon Road/ Katherine's Way and was due to the cyclist losing control and colliding with the safety barriers thus obtaining a fatal head injury. The second fatality was due to a driver failing to respond to a cyclist crossing the traffic island on Elizabeth Way.

Table 3-2: Personal Injury Collisions involving Cyclists, August 2012-July 2017

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

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

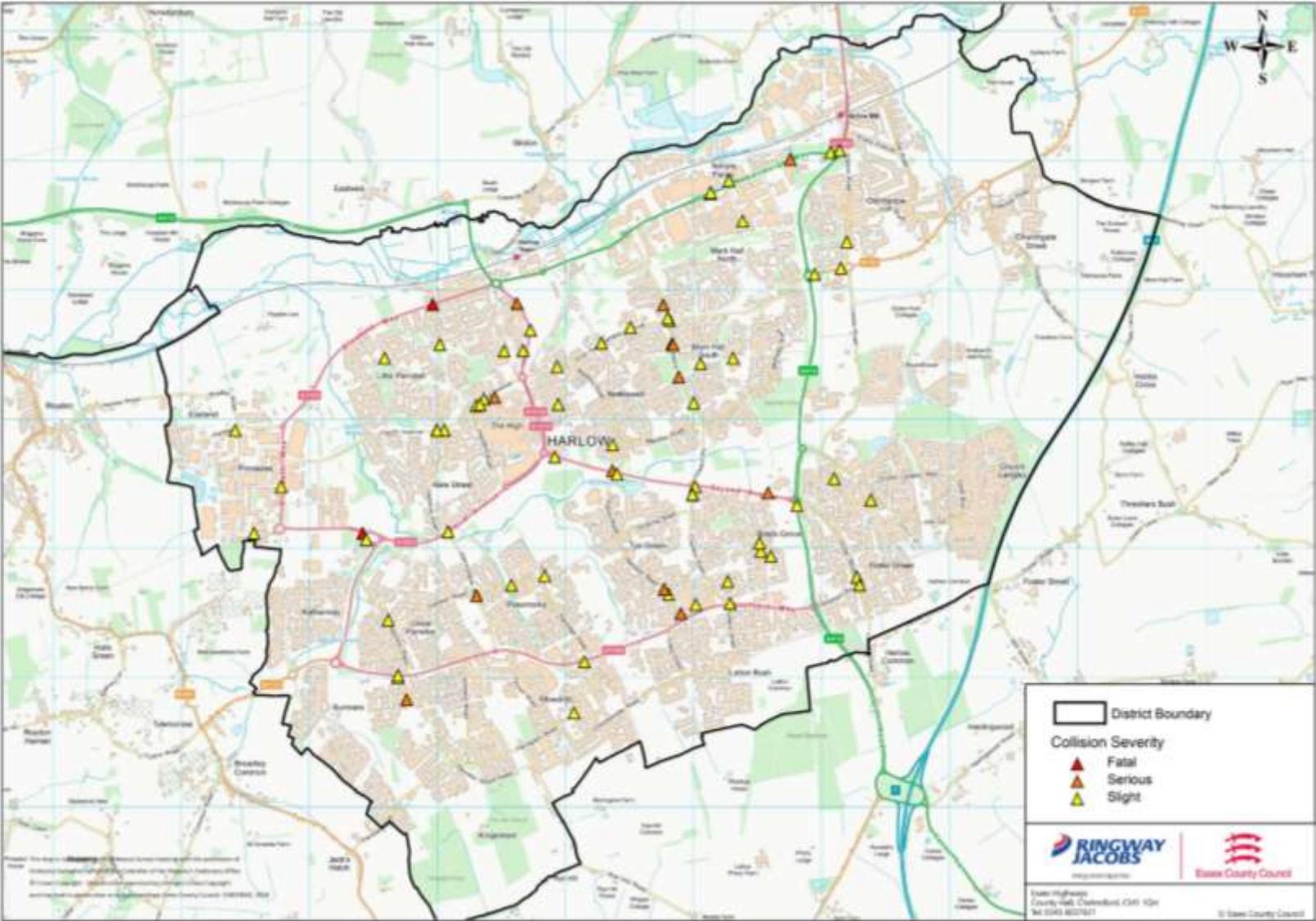


Figure 3.7 Location of pedal cycle PICs in Harlow

3.7 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 of these constabularies are combined by District in Table 3-3, below. Note that the figures for ‘Essex’ exclude the Unitary Authorities of Southend and Thurrock, figures for ‘Greater Essex’ include these areas.

Table 3-3: 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	1458	1877		0.14
Greater Essex	2213	2052	2112	2579	100%	0.16

* to Nov 20th only

² Based on 2017 thefts and Census 2011 Journey to work by cycle total for District/ Borough/ City (NOMIS)

Harlow has the highest annual number of cycle thefts per cycle commuter at 0.25 thefts per thousand trips, which is nearly double the Essex average of 0.14. Harlow also accounts for 9% of all cycle thefts in Essex in 2017, and is District with the 4th highest percentage of cycle thefts.

The number of thefts per thousand cycle trips would be lower if it were to be compared with all cycle trips, as this figure is based on 2011 Journey to Work data, and does not include leisure trips, children cycling to school and people cycling part of their journey to work but not being recorded.

Statistics from British Transport Police show that cycle crime at Harlow Town station, the main station serving the District, has reduced from 36 incidents in 2011 to 14 in 2016 (Table 3-4). This may be due to a police bike safety campaign in 2016, which increased high visibility patrols, and a “Lock It Mark It” campaign to highlight the importance of securely locking bikes.

Table 3-4: Cycle Crime at Essex Rail Stations 2010-2016 (British Transport Police)

Station	2010	2011	2012	2013	2014	2015	2016
Basildon	12	25	17	18	13	14	14
Chelmsford	69	77	73	58	16	15	39
Colchester	26	25	21	31	31	35	31
Leigh on Sea	3	3	19	29	13	11	19
Harlow Town	8	36	18	26	16	15	14
Billericay	29	27	26	21	8	7	5
Grays	11	17	14	16	10	14	12
Southend Victoria	12	9	13	12	13	13	12
Stanford le Hope	5	10	11	12	5	5	7
Audley End	5	6	7	11	8	17	13

3.8 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.

Topography in the District varies, although Harlow Town Centre itself is rather flat, at the top of a hill at 70m above sea level, as seen in Figure 3-8. The surrounding suburbs to the west see steeper inclines than those in the east.

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.

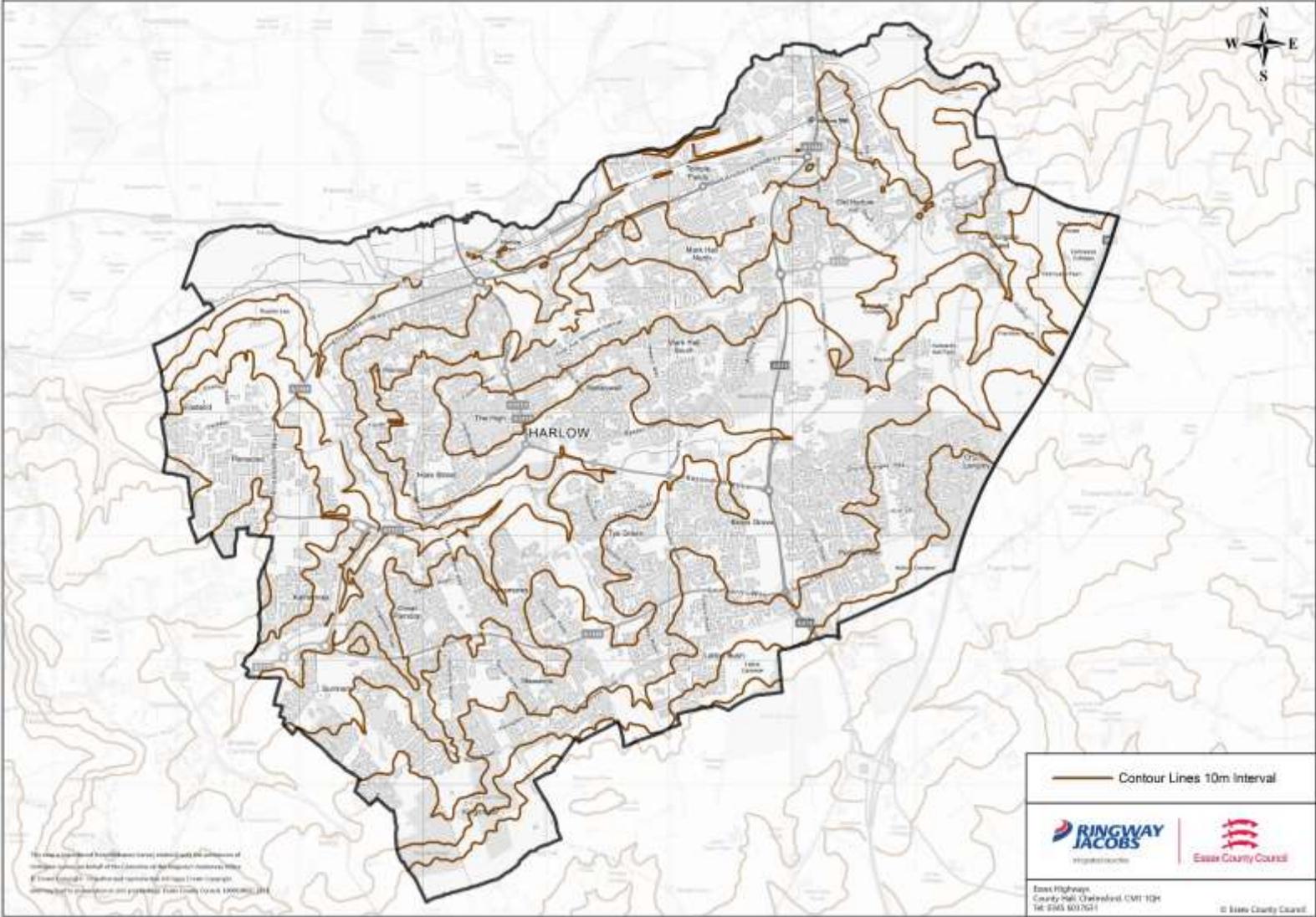


Figure 3.8: Height above sea level around Harlow Town Centre

4 Existing Network Provision and Barriers

4.1 Introduction

This section provides an overview of the existing cycle infrastructure within Harlow District, as well as identifying various barriers to cycling.

Harlow District, illustrated in Figure 1-1, is located on the western boundaries of Essex. Within Harlow, there are areas including Temple Fields, Old Harlow, Harlow Town Centre, Hare Street, Katherines, Passmores, Tye Green, Latton Bush, Potter Street and Church Langley. The District is served by two stations, located towards the northern edge of the district, at Harlow Town and Harlow Mill.

Harlow's layout is very typical of that found in other New Towns in Britain. The town is made up of a series of smaller communities each having their own parade of shops, green spaces and schools. All are within easy commuting distance of industrial centres, which in theory should favour the use of sustainable modes. In terms of transport, the road network provides wide carriageways in an almost grid-like layout which link the residential, retail, employment and industrial areas. Off road cycle routes are provided alongside many of the main roads in Harlow using both segregated and shared use footways / cycleways.

4.2 Cycling in Harlow District

As shown in Figure 4-1, much of Harlow's extensive cycle network is segregated away from main roads using a combination of segregated from and shared use with pedestrians, although many of the routes have poor, or incomplete, directional signage and would benefit from resurfacing. The extensive network is extremely beneficial in increasing the safety of cyclists, and will be helpful in encouraging beginners to take up cycling, although it is not well used at present. Furthermore, National Cycle Route 1 links the district to Roydon, Waltham Abbey and the Lee Valley to the south west, and Chelmsford in the east. Most of this route within Harlow is off-road.

Particularly important routes are around the Town Centre, which is both a major employment area and a destination in its own right. Harlow Town Station is connected to the network by off road shared and segregated use paths, although the route does not extend across the station access road to the station door. Harlow Mill station is indicated on mapping to connect to the network with a cycle

route, although this is not signed or marked out on the road. Potential scheme 26, identified in this CAP, will improve the link to Harlow Mill Station.

There are a number of roundabouts in Harlow and at most, cyclists are required to cross utilising traffic islands to re-join to shared use pathways. In some locations, subways connect shared use foot/ cycle paths across roundabouts, for example: the north-south movement across the western arm of the A414/ A1025 (Second Avenue) junction; the subway facilitating east-west movement across the A414 at Carters Mead; the east-west subway across the A414 at the First Avenue/ A414 junction; the east-west subway under the A1019 at Nettleswell Orchard, providing a useful traffic free route between Harlow Town station and Sainsburys; and the east-west subway across the northern arm of the A414/ A1169 (Southern Way) roundabout.

In contrast to the extensive cycle network in the New Town of Harlow, there is little cycling infrastructure in place around Old Harlow, with the routes there on-road, including the NCN 1, which has no on-road markings. The residential areas on the outer edges of Harlow, whilst connected to the wider network, would benefit from greater permeability, including the residential areas of Potter Street in the south-east, the outskirts of Latton Bush and parts of the Sumners and Great Parndon areas. Furthermore, there are no cycle facilities through Harlow Town Centre as this is currently a pedestrianised zone.

4.3 Key Barriers

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

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

- The width of some roads can restrict the possibility of adding a mandatory cycle lane. These roads include Paringdon Road, Station Approach, Partridge Road, Kingsdon Lane and Howard Way. Consequently, alternative schemes are offered (scheme numbers 1, 2, 5, 10 and 26)
- The speed of roads, including London Road (alongside Church Langley Playing Field), where an advisory cycle lane is unfeasible. Scheme 12 seek to reduce speed limits along Pyenest Road.
- Many roundabouts are 40mph, and these may be difficult to cross for cyclists, without signalling or re-engineering the roundabout to make it more cycle-friendly. A crossing at a roundabout is suggested in scheme 11.
- A lack of continuous signage may discourage individuals from taking up cycling. One of the key recommendations of this report aims to improve signage.
- Walking and cycling networks are often indirect and difficult to navigate, and some users do not feel safe using them.

4.4 Access to employment in Harlow

Temple Fields is an important employment area and is thus an important destination for cycling, in addition to the two stations in the district for onward journeys. The Pinnacles has also been identified as an employment area. Access to Temple Fields has been addressed by potential scheme 26.

Cycle connections to Temple Fields and the Pinnacles are good, although paths abruptly stop once cyclists wish to leave Edinburgh Way and Elizabeth Way respectively – potential scheme 23 aims to improve permeability into Temple Fields. Likewise, connections to the Town Centre are extremely good up until its boundaries, with no paths going through the pedestrianised centre. This is addressed in potential scheme 27.

Access to both stations in Harlow is along a shared carriageway, with no cycle markings currently on the carriageway surface. Both stations also have limited

cycle parking, with 52 and 10 cycle parking spaces each. Potential schemes 3 and 26 aim to improve cycle access to both stations.

4.5 Access to educational institutions in Harlow

Many schools are located near off-road cycle paths; however, several primary schools located in the residential areas are not located near a cycle route. These include Little Parndon School (this will be addressed by potential scheme 9), Jerounds School (potential scheme 12 will address this), Pureford Green School, Pear Tree Mead School, Millwards School (potential scheme 1 will address this), Kingsmoor School, Latton Green School (potential schemes 19 and 20 will link to the proposed development to the south of the school, creating opportunities to provide direct cycle links to the primary and nursery school if it were considered a priority), Aspire Academy, Commons Road (providing for children aged 4-16), William Martin School and Harlowbury School. Harlow College and other secondary schools, including St Mark's School, are well connected to the cycle network.

5 Harlow District's Cycling Potential

5.1 Introduction

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

5.2 Commuter Flow Analysis

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

5.2.1 Cycle trips

Figure 5-1 shows the ten most predominant commuter flows for journeys to work by bicycle from within Harlow, by Medium Super Output Layer (MSOA). The majority of flows go to the Harlow 004 and 002 MSOAs, Harlow Town Centre and around Temple Fields respectively, established as large employment areas.

5.2.2 Car trips

As shown in Figure 5-2, all of the ten largest car flows in the district go to Harlow Town Centre, located in the Harlow 004 MSOA. It is clear people are using their cars for very short distances to get to work with a considerable number of trips covering less than 2km being made. As there already is an established cycle network connecting the Town Centre, efforts could be focused on improving the existing infrastructure, and inspiring a modal shift via promoting events to raise awareness of and to encourage cycling in the District.

5.2.3 Rail

In many cases, cycling can form a key part of commuter rail journeys. The 2011 Census only records main mode by distance, therefore assumptions must be made when analysing journeys that would be multi-modal. Therefore, where commuters have stated their main mode of travel to work to be by rail, it has been assumed that rail commuters would predominantly choose the closest station to them. However, this may not always be the case, as Harlow Town sees more frequent services than Harlow Mill station.

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

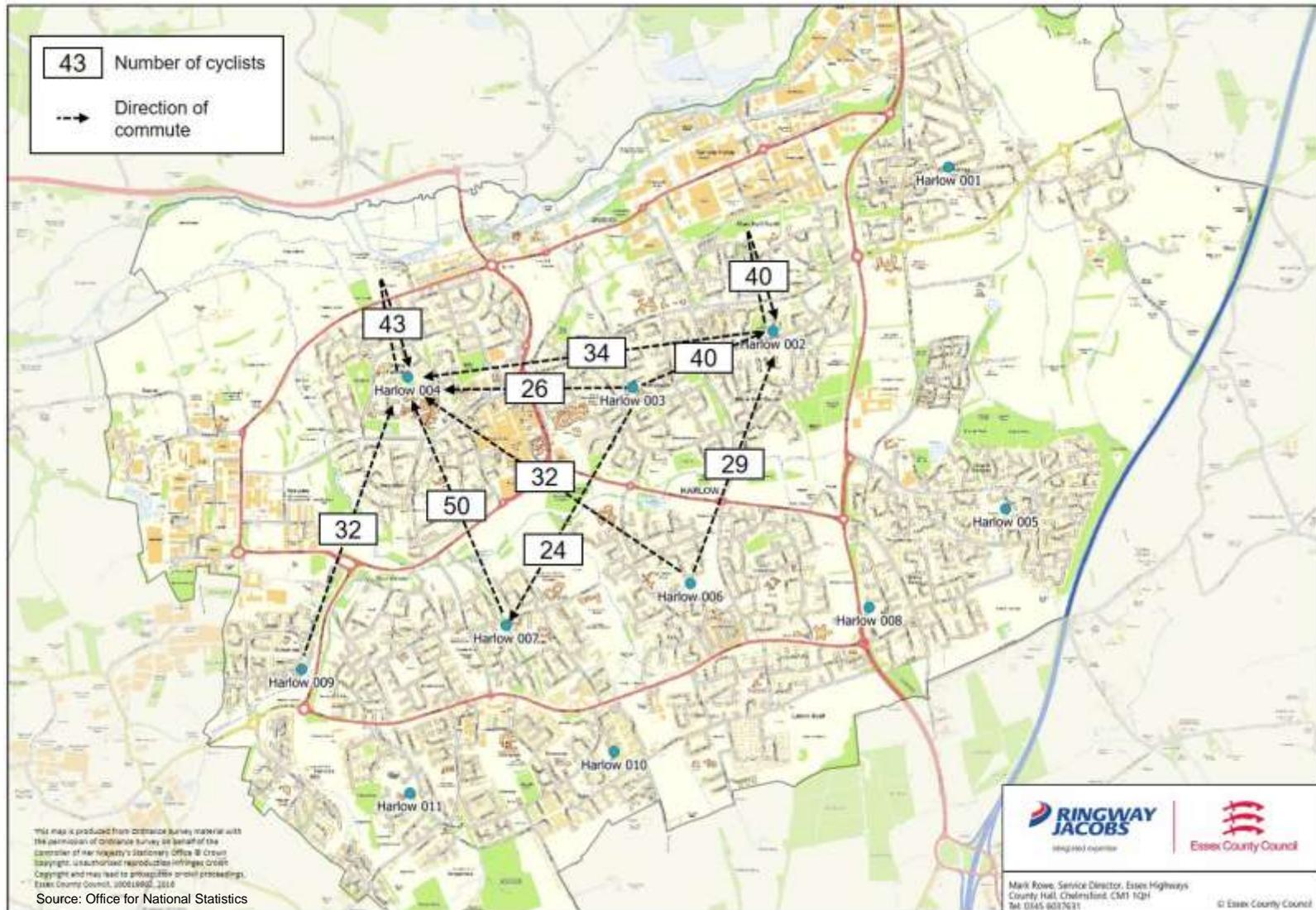


Figure 5.2 Predominant commuter flows for individuals who travel to work by car in Harlow

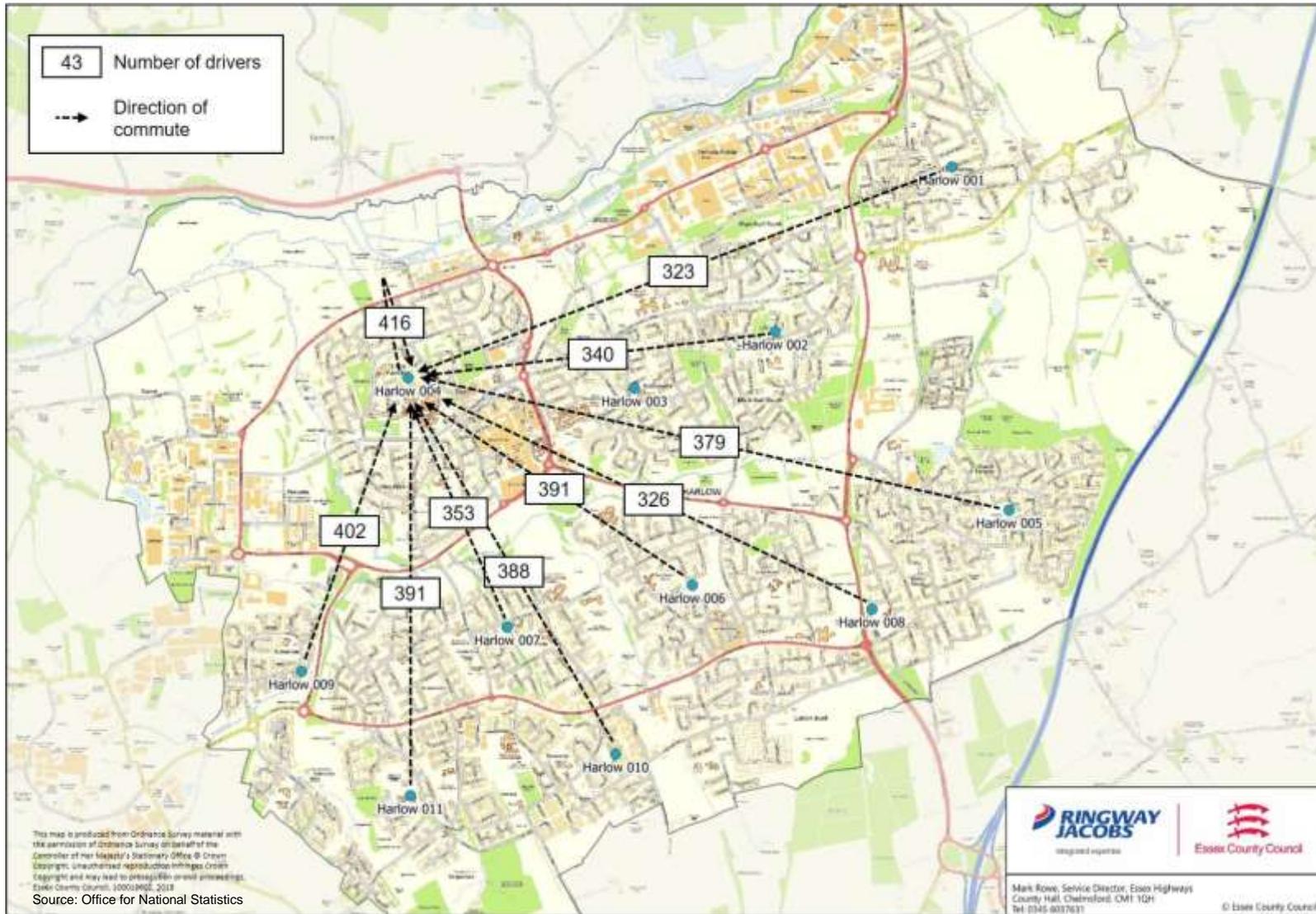
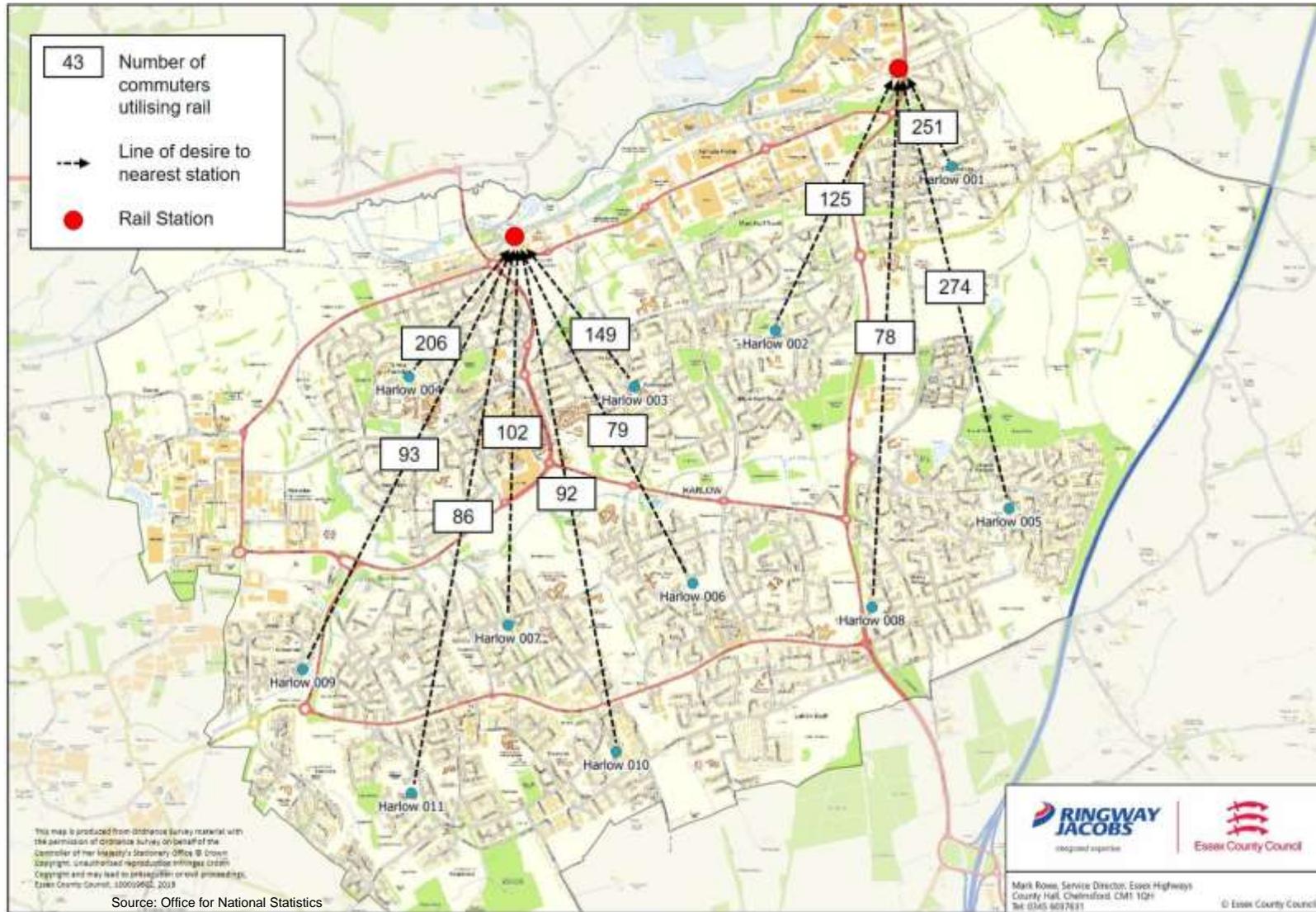


Figure 5.3 Predominant commuter flows for journey to work by rail in Harlow



5.3 Propensity to Cycle Tool

In previous Cycling Action Plans, the MOSAIC Propensity to Cycle tool has been examined to help target areas of opportunity to best increase mode share and assist in increasing trips. This, however, has now been superseded by the Propensity to Cycle Tool. The four scenarios examined here are:

- Government target – this represents a doubling of the level of cycling in line with the government’s target to double the number of ‘stages’ (legs of a trip using a single mode) cycled by 2025⁴. This is not uniform and at the local level being studied here will not be exactly doubled. For example, in an area with many short, flat trips and below-average levels of cycling, it may be projected to have more than doubled⁵.
- Gender equality – this represents the increase in cycling levels that would occur if women were as likely as men to cycle a given trip.
- Go Dutch – this represents what would happen if English people were as likely as Dutch people to cycle a trip of a given distance and level of hilliness. This would be if England had the same infrastructure and cycling culture as the Netherlands, but retained their hilliness and commute distance patterns.
- Ebikes – this represents the additional increase in cycling that would be achieved through the widespread uptake of electric cycles (‘ebikes’). This is generated by taking the baseline propensity to cycle and applying both the Dutch scaling factors from the Go Dutch scenario and applying Ebike scaling factors, which takes account of the fact that electric cycles enable longer journeys and reduce the barrier of hills.

5.3.1 Propensity to Cycle analysis of Harlow Town Centre

Around the Town Centre, the Government Target scenario is between 4-9% of the population cycling (Figure 5-4). Schools that fall into the areas with higher propensity to cycle under the Government Target scenario include Hare Street Community Primary School, St Mark’s West Essex Catholic School, The Downs Primary School and Nursery, Freshwaters Primary Academy, Harlow College, Sir Charles Kao UTC, Broadfields School, Burnt Mill Academy, St Alban’s Catholic Academy and Tany’s Dell Community Primary School and Nursery. Many schools

⁴ Department for Transport, 2014, Cycling as transport, <http://www.tandfonline.com/doi/full/10.1080/01441647.2015.1114271>

⁵ Lovelace *et al.* 2016, The Propensity to Cycle Tool: An open source online system for sustainable transport planning, <https://www.jtlu.org/index.php/jtlu/article/view/862/859>

are close to cycle routes; however, if future routes were to be considered, a route reaching Hare Street Community Primary School could encourage more parents and pupils to cycle.

The Gender Equality scenario shows the lowest levels of cycling across all four scenarios, with the areas north of the Town Centre seeing levels of 2-3%; the areas to the east of the Town Centre perform slightly better, seeing levels of 7-9%. The higher areas for propensity to cycle under this scenario include the following schools: Burnt Mill Academy, Broadfields School, The Downs Primary School and St Alban's Catholic Academy, with Tany's Dell Community Primary School and Nursery, and Spinney Junior School laying just on a boundary with a lower propensity to cycle area. The Town Centre itself falls into the 4-6% category, with the Princess Alexandra Hospital in the 2-3% category.

The Go Dutch scenario sees much higher levels of cycling around the Town Centre, with levels from 15 to 29%. Lower levels are seen to the west; this could be due to the steepness of the gradients in this area.

The ebikes scenario sees the highest levels of cycling, with many areas seeing 30-39%. The higher areas for propensity to cycle under this scenario include the following schools: Harlow College, The Downs Primary School, Burnt Mill Academy, St Alban's Catholic Academy, Little Parndon Primary School, Hare Street Community Primary School, Spinney Junior School, with Tany's Dell Community Primary School and Nursery laying just within a boundary of a lower propensity to cycle area.

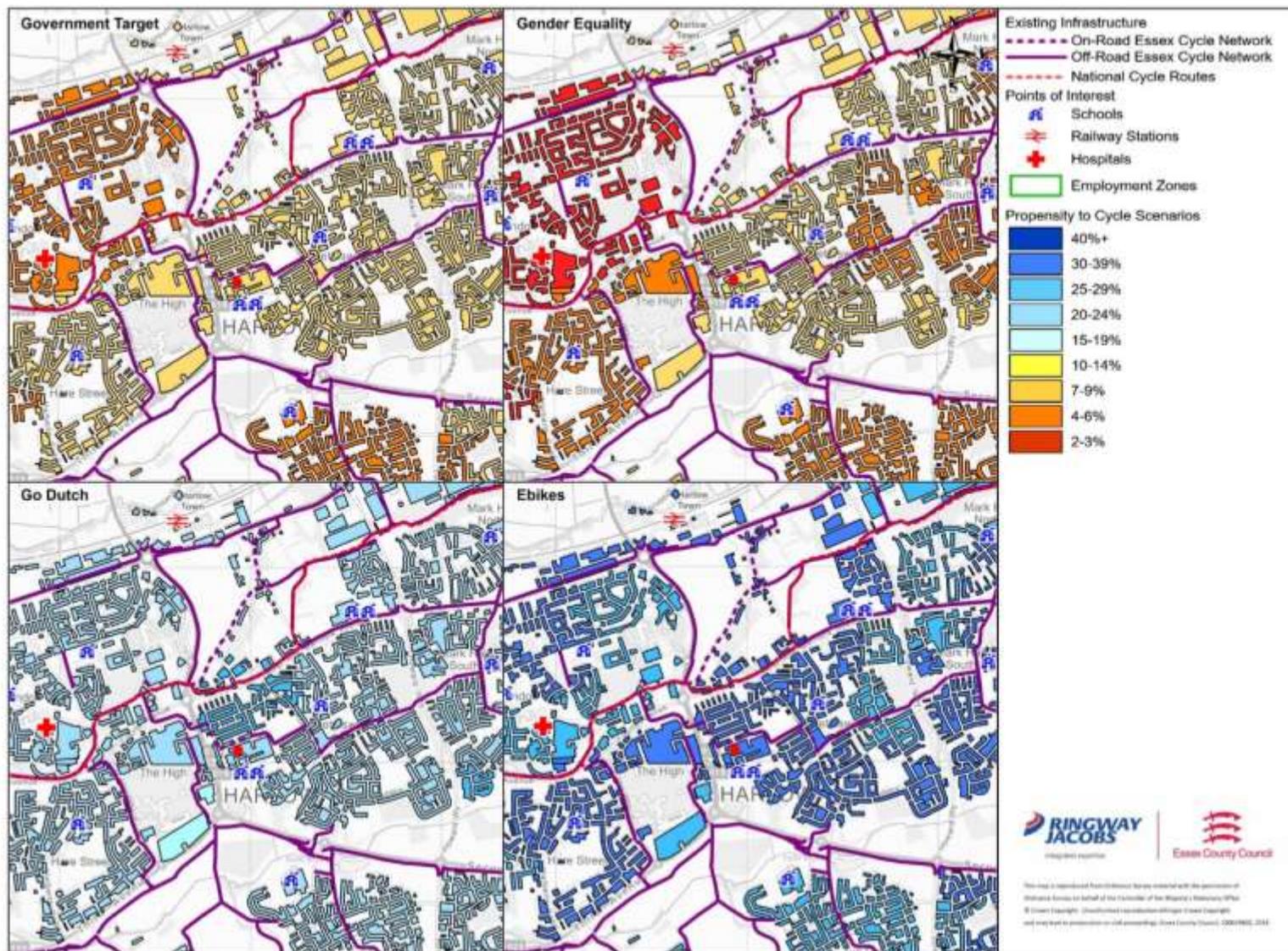


Figure 5.4: Propensity to Cycle scenarios for Harlow Town Centre

5.3.2 Propensity to Cycle analysis of Church Langley

Under the Government Target Scenario around Church Langley, cycle levels are between 2 to 9%. Purford Green Infant School, Spinney Junior School and Pear Tree Mead Primary and Nursery School lie within the higher bands of cycling.

Church Langley sees the lowest levels of cycling across the four scenarios under the gender equality scenario, with no area seeing higher than 9%. Spinney Junior School lies on the boundary of the higher boundary.

Under the Dutch scenario, the area around Church Langley sees levels between 10 and 29%, with none of the schools falling into the highest band.

The ebikes scenario sees the highest levels of cycling, with many areas seeing 30-39%. The following schools are within areas with higher propensities to cycle: Purford Green Infant School, Spinney Junior School and Pear Tree Mead Primary and Nursery School.

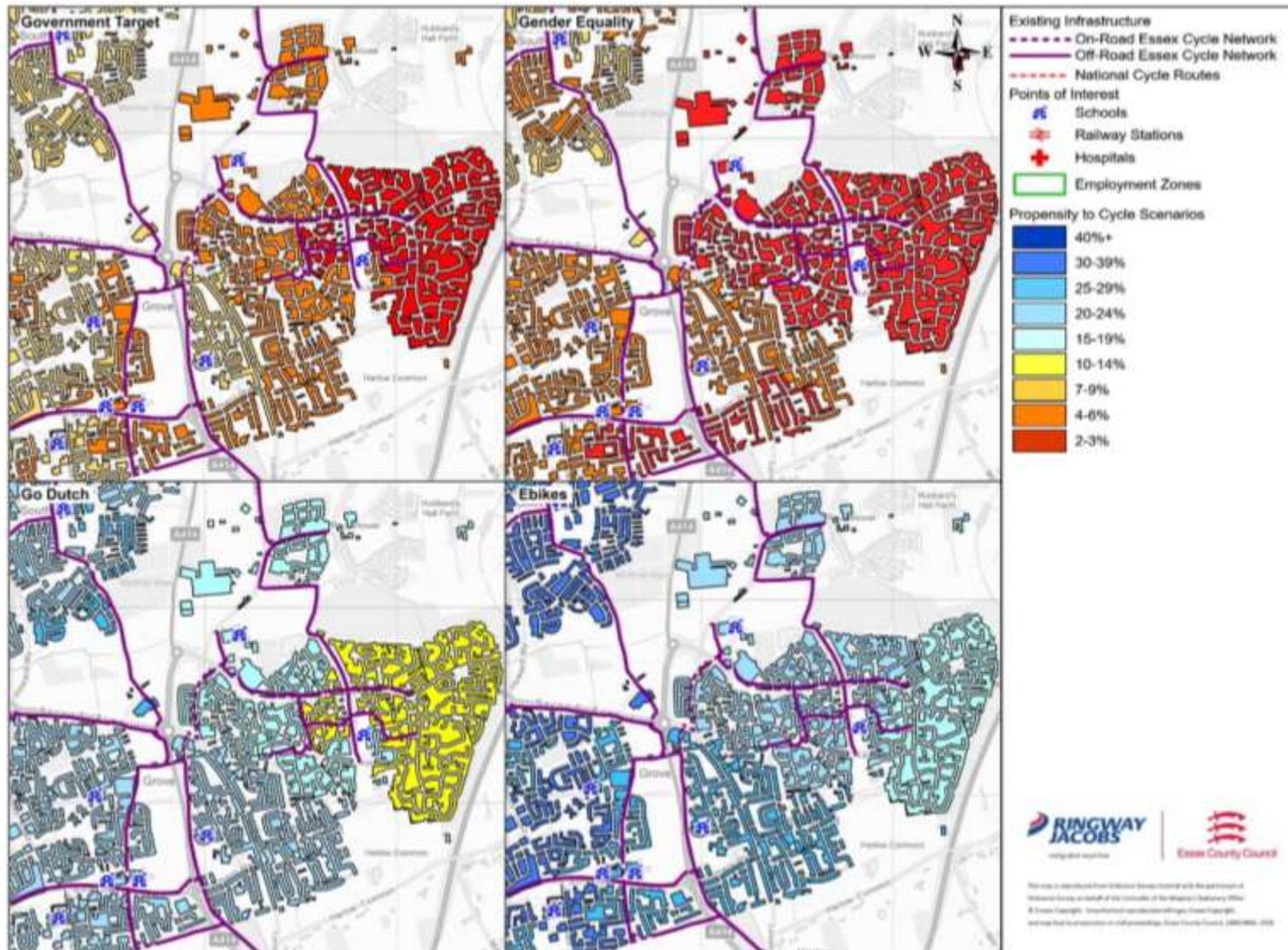


Figure 5.5 Propensity to Cycle scenarios for Church Langley

5.3.3 Propensity to Cycle analysis of Hare Street and The Pinnacles

Under the Government Target scenario, cycling in the area is between 4 and 9%. The Pinnacles employment area sees levels between 4 and 6%, whilst only the Hare Street residential area sees higher levels.

Under the gender equality scenario, the area around Hare Street and the Pinnacles sees levels between 2 and 6%. The only school lying in the higher band is Hare Street Primary School, with the Pinnacles also largely seeing the same levels.

The Dutch scenario sees this area achieve figures of 15-24%. Both Little Parndon Primary and Hare Street Primary Schools are within the higher propensity areas, whilst the Pinnacles area sees lower levels.

The ebikes scenario sees the highest levels of cycling, with many areas seeing 30-39%. Both Little Parndon Primary and Hare Street Primary Schools are within the higher propensity areas. The Pinnacles area sees levels of 25-29%.

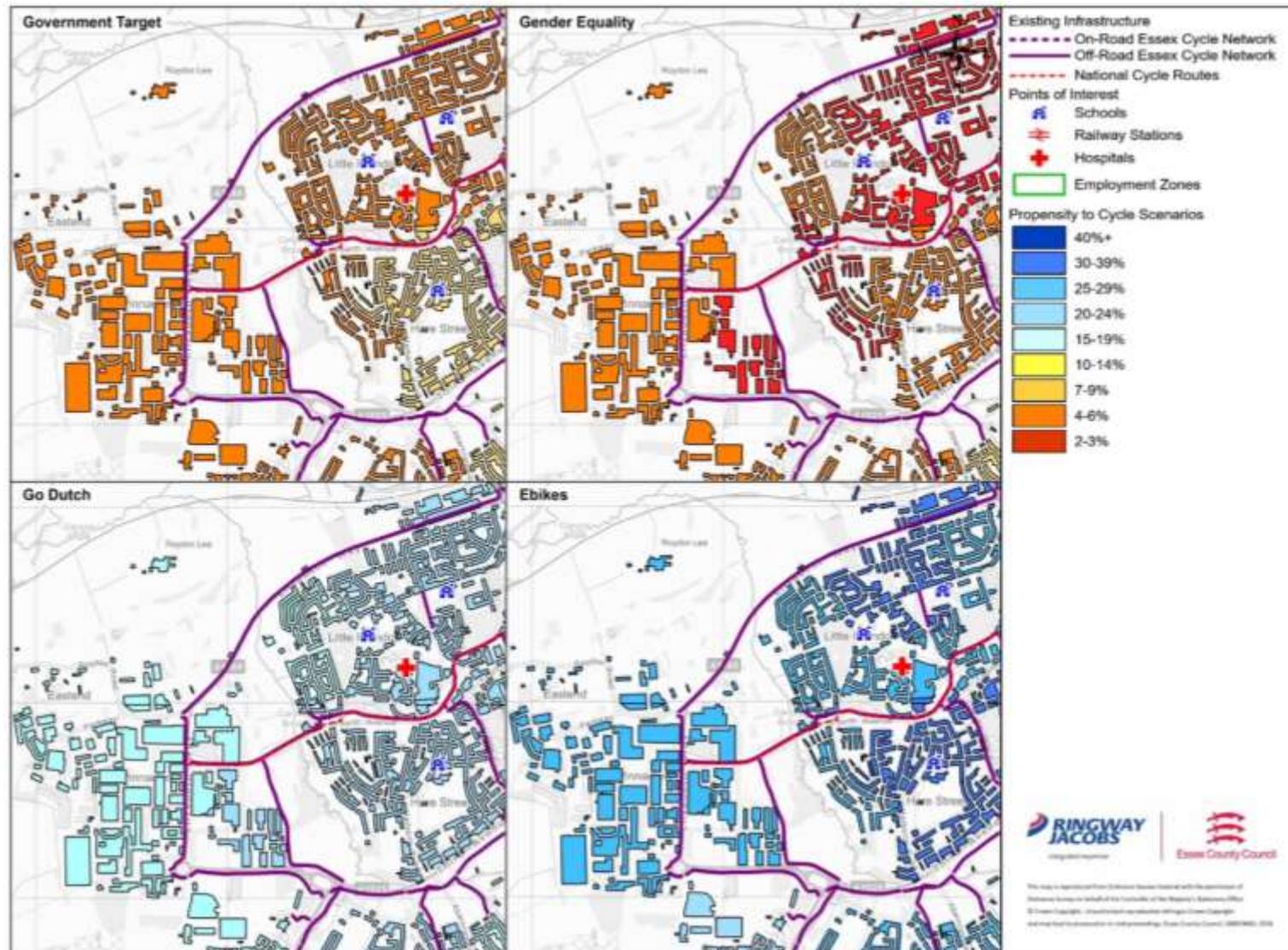


Figure 5.6: Propensity to Cycle scenarios for Hare Street and The Pinnacles

5.3.4 Propensity to Cycle analysis of Harlow Mill, Temple Fields and Old Harrow

This area sees cycling levels between 4 and 9% under the Government Target. All schools excluding Tany's Dell Community Primary School fall into the lower cycling propensity band.

Under the gender equality scenario, levels of cycling are between 2 and 9%. Tany's Dell Community Primary School, Burnt Mill Comprehensive and St Alban's Catholic Primary School fall into the higher levels of cycling, with Harlow Mill train station seeing levels between 4 and 6%. Temple Fields is split between 7-9% and 4-6%.

The Dutch scenario sees the areas around Old Harlow achieve levels of 15-24%; only Tany's Dell Community Primary School, Burnt Mill Comprehensive and St Alban's Catholic Primary School fall into the higher levels of cycling. Churchgate Street, to the east, sees lower levels; this may be due to a lack of cycle paths in the area.

The ebikes scenario sees the highest levels of cycling, with many areas seeing 30-39%, including Burnt Mill Comprehensive and St Alban's Catholic Primary School. Tany's Dell Community Primary School lies just next to the higher level area, and Harlow Mill station sees a propensity level of 25-29%.

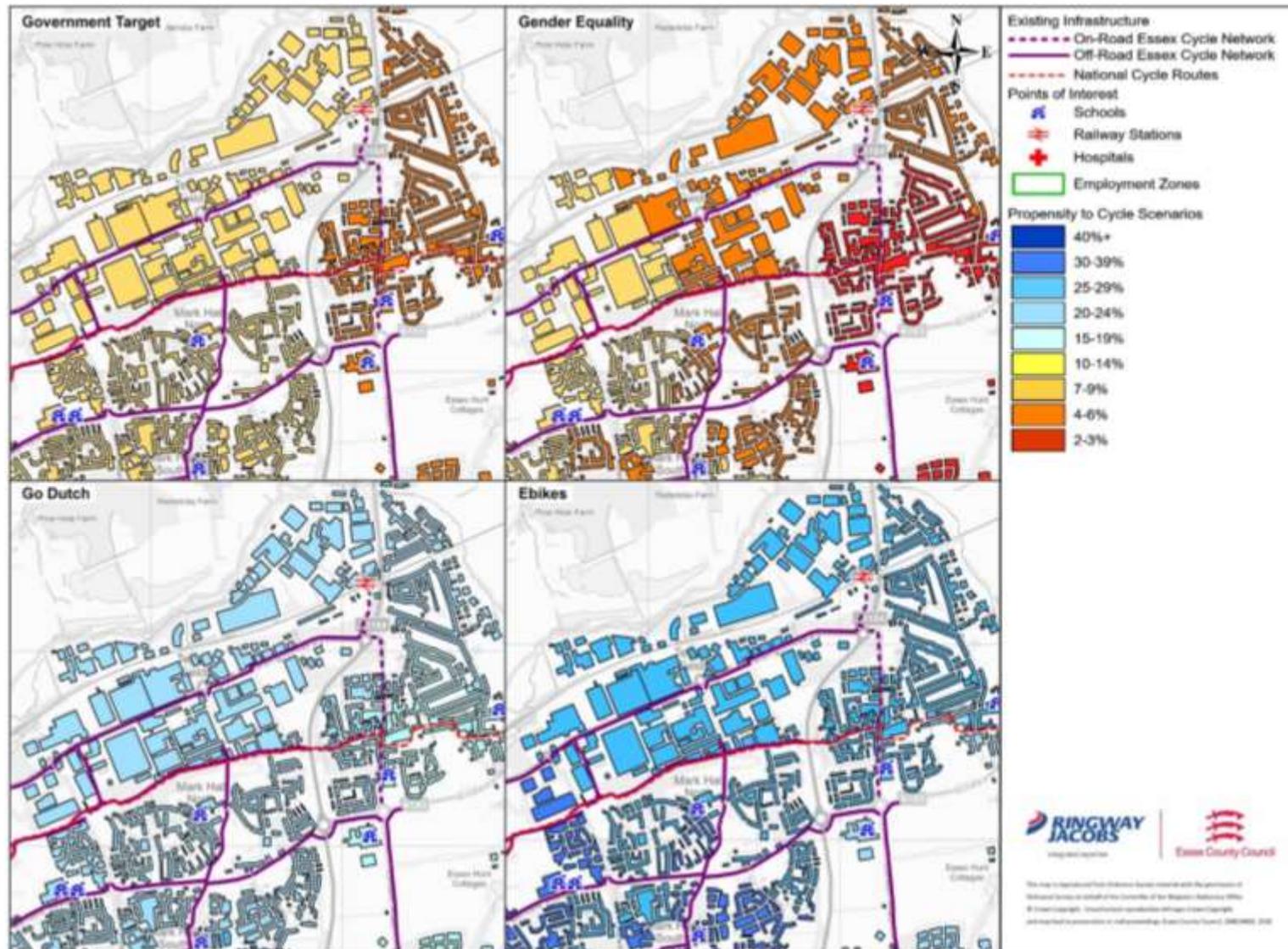


Figure 5.7: Propensity to Cycle scenarios for Harlow Mill, Temple Fields and Old Harrow

5.3.5 Propensity to Cycle analysis of Staple Tye

Under the Government Target scenario, the area surrounding Staple Tye, in the south of the District, sees cycling levels between 4 to 9%. Stewards School and Purford Green Infant School lie in the upper band.

The gender equality scenario sees cycling in the area vary between 2 and 9%, the lowest of all 4 scenarios for this area.

The Dutch scenario sees most of this area achieve levels between 15 and 24%. Jerounds Community Junior School, St Luke's Catholic Primary School and Passmores School and Technology College are all located in the higher band.

The ebikes scenario sees the highest levels of cycling, with many areas seeing 25-29%. All the schools in this area fall into the higher levels, including Milwards Primary, Passmore School and Technology College, Kingsmoor Primary, Stewards School, St James' Primary, Water Lane Primary, Jerounds Community Junior School, St Luke's Catholic Primary, Abbotsweld Primary and Katherines Primary School.



Figure 5.8: Propensity to Cycle scenarios for Staple Tye

5.4 Summary of Potential

Overall, the 4 scenarios show that cycling levels can increase from current levels. This analysis has identified a large number of short commuter trips are currently made by car. Existing cycle networks exist, which would facilitate many of these trips, but they are not currently used especially well. Around the Town Centre, cycling should increase due to its importance as an employment centre. However, a lack of a cycle path through the Town Centre may put off those whose employment is on the alternate side; consequently, a through route is recommended. Potential route 27 will provide an east-west cycle route across the northern end of the town centre.

The areas around the Pinnacles also see a potential increase from current levels (Figure 3-2 and Figure 5-6). However, crossing Elizabeth Way could be a barrier to cycling to this employment centre. In future, more crossings should be installed or upgraded along Elizabeth Way to allow for more direct commutes. The potential Flagship Route extends eastwards from The Pinnacles along Fourth Avenue. Part of this scheme is concerned with upgrading the existing crossing of Elizabeth Way.

6 Potential Infrastructure Improvements

6.1 Introduction

In order to overcome barriers to cycling and provide suitable infrastructure, it is essential that all new developments in the District include, where possible, cycling and walking links to key services and areas of employment.

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

It is also noted that some routes have been taken from Systra's draft report "Harlow and Gilston Garden Town Sustainable Transport Corridors Strategy and Delivery Plan", and from the Draft Harlow Integrated Transport Package.

6.2 Upgrading existing routes

As Harlow already has an extensive cycle network, existing routes will be reviewed and upgraded where necessary, particularly in regards to signage, lighting and surfacing. The site visit, undertaken in March 2018, observed that the surfacing, signing and lighting of much of the existing cycle network requires improvement.

6.3 Previous Studies

As shown in Figure 6-1, the Draft Harlow & Gilston Garden Town Sustainable Transport Corridors Strategy and Delivery Plan (Systra, 2018) hopes to enhance existing east-to-west cycle routes through the Town Centre, and to improve the junctions. It also plans for a future new route through green space to the south, towards Latton Bush. Furthermore, plans are made for routes into the new garden town which is to be built to the north, with a new route beside a carriageway, with two branches into the development.

These routes largely match the Strategy's Sustainable Transport Corridors (Figure 6-2), which aim to provide a high quality high frequency public transport service with attractive links for walking and cycling.



- Enhanced existing routes
- New routes beside carriageway
- - - New routes into development
- Enhanced route through green space
- New route through green space
- - - Potential new wider strategic walk/cycle connections
- Housing sites
- ★ Microhub - Park & Ride / Cycle
- ☼ Enterprise zones
- ⊙ Junction improvements to provide direct and over-looked walking and cycling facilities for all

Figure 6.1 Cycle route plans. Source: Draft Harlow and Gilston Garden Town Sustainable Transport Corridors Strategy and Delivery Plan



Figure 6.2: Sustainable Transport Corridors. Source: Draft Harlow and Gilston Garden Town Sustainable Transport Corridors Strategy and Delivery Plan

6.4 Potential cycle routes

Suggestions for new cycle routes have been made 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 and filtered permeability (e.g. convenient cut-throughs).

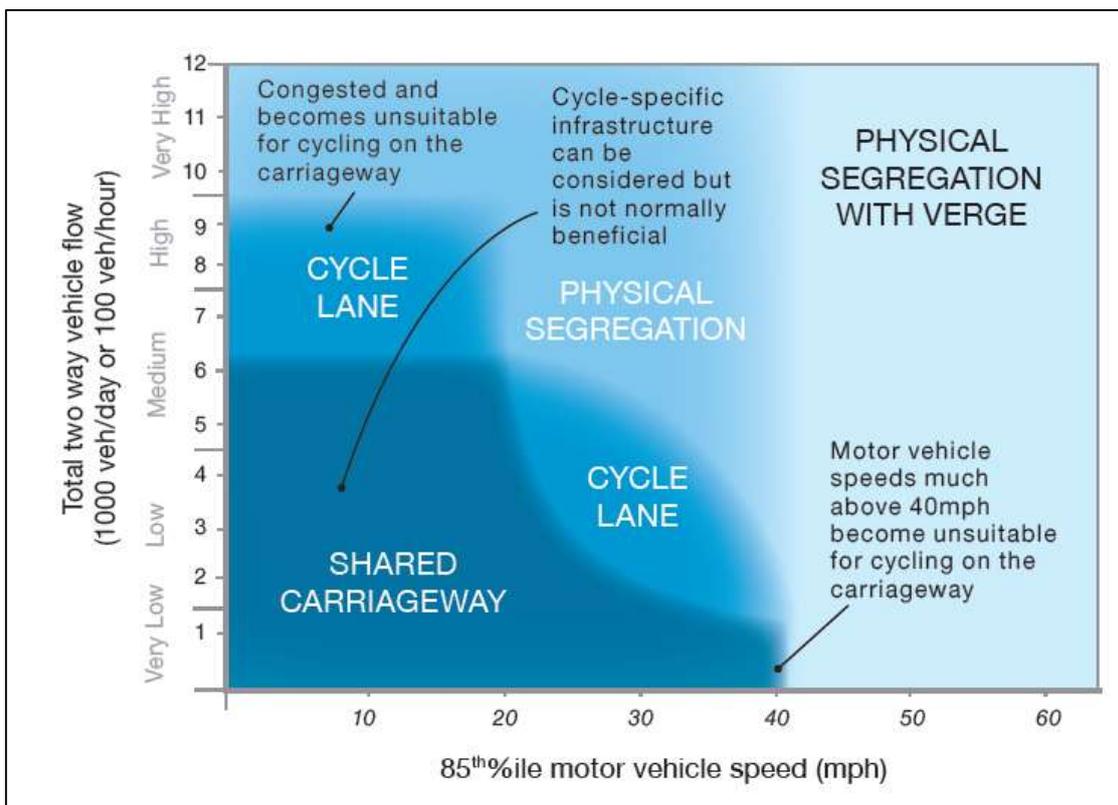
The tables and figures below provide a breakdown of and illustrate the specific interventions that have been suggested in each location.

6.5 Methodology Statement

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

Where traffic volume and speed data is available, the potential schemes have been subjected to Sustrans design principles, which recommend the type of scheme that should be considered under those conditions (Figure 6-1). Traffic volume and speed may influence the decision on the need to segregate cyclists from other traffic. For example, where low speeds and traffic volumes are evident, there is no need to segregate cycles 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 6.3 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.

⁷*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 undertaken to demonstrate that alternative options have been considered and 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.

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

⁷ The asterisk refers to schemes with footway conversions, listed in Tables 7.1, 7.2 and 7.3.

A full list of recommended schemes can be found in Table 7-1.

6.6 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.

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 to be less important, so may attract a lower score.

7.6 Overall prioritisation

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

The resulting prioritisation for each of the potential schemes is shown in Table 7-1.

7.7 Estimated costs of potential schemes

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

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

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

- VAT (costs are exclusive of VAT);
- 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 Cycle Schemes in Harlow District

Route ID	Route Name	Opportunity	Potential Solution	Overall Prioritisation	Est.Cost
1	Paringdon Road	To link the 3 schools on this road to the existing cycle networks	New marked and signed advisory cycle lanes along Paringdon Road, from Southern Way (W) until existing N-S off road cycle route adjacent to Barkey Croft. Additional traffic management to reduce traffic speeds would be beneficial, especially as there are 3 schools located along this road. 85 th percentile speeds are currently 32.9mph, with traffic volumes of 4,733. Network Assurance identify that there may be issues with installing speed cushions, due to the road being designated as PR2.	H	L
2	Potter Street / Kingsdon Lane	Improves direct access to the Town Centre from Potter Street	A signed on road Quietway link on Kingsdon Lane which will link to an existing off road shared use foot/ cycleway, which runs south of and parallel to Bellfield Gardens, connecting to Kiln Lane. Ideally, at the western end of Kingsdon Lane, the route will continue on road, northbound along Potter Street. However, traffic speeds are currently too high to allow any on-street cycle infrastructure to be recommended. Traffic management could be implemented to reduce traffic speeds below 20mph, from existing 85 th percentile speeds of 28.7mph (with volumes of 6,807), which would enable advisory cycle lanes to be provided. Feasibility study required. If infrastructure is able to be implemented it can link with existing provision on Second Avenue and Old London Road, which would improve cycle access for South Eastern residential areas of Harlow to the town centre.	H	TBC
3	Harlow Town Station	To create a higher-quality route for cyclists to the station	Provide new marked and signed advisory cycle lanes along Harlow Town Station's access road (Station Approach). This will provide a link to the existing off road shared use provision around the Edinburgh Way/ Elizabeth Way roundabout, and onward off-road links to the town centre (utilising Essex Cycle Network and part of National Cycle Route 1). This will create a complete link between Harlow Town Station and Harlow town centre. Harlow Town Station could also benefit from additional cycle parking (although there may be land ownership issues)	H	L
4	Spencers Croft / Tracyses Road	To improve the quality of the cycle path, an important north-south route in Latton Bush. To improve access to the school at the southern end of the route.	Improve signage on the existing north south route along Tracyses Road with directional signage from existing off road cycle path along Southern Way, indicating the route and advising of its link towards Passmores Academy, Church Langley and the Town Centre. At the southern end of Tracyses Road, there is space to provide a segregated off road shared use foot/cycle way conversion*, although this is currently signed as "end of route". This would provide a useful connection between the existing bridleway (Bridleway 37) access and Southern Way cycle route.	H	L
5	Partridge Road / Willowfield	To increase the number of areas with access to a high quality cycle route. Links to existing off-road route to the Town Centre, and to improve access for Abbotsweld Primary School	New footpath conversion* of PROW 185_116, linking existing off road cycle networks to north and south. Implement marked and signed on road quietway along Willowfield (E), from the existing off road cycle track around Harlow Fields, to Tendring Road. Note, there are significant amounts of on-street residential parking along Willowfield, on both sides of the road, which may need to be rationalised and tidied up- further consideration required. For a short section (35m), cyclists must continue on the carriageway along Tendring Road, between Willowfield and Partridge Road (signs and markings should continue). New on road N-S advisory cycle lanes, with signing and markings, continue the route along Partridge Road, between Tendring Road and existing E-W off road cycle route, following alignment of footpath (PROW 185_50). Note, significant amounts of on-street parking on western side of Partridge Road carriageway. Potential to provide advisory cycle lanes, with parking provision and occasional cycle refuge (will require removal of centre line). (ATC 3450, 85% speed 28mph)	H	L
6	Old Harlow Town	To provide an alternative route towards the new development at Harlowbury from the Old Harlow area, and to provide a higher quality route in Old Harlow itself	Potential to provide new on-road, marked and signed, advisory cycle lanes along Wayre Street, High Street and Mulberry Green (potential width issues in some places, feasibility study required), to improve the route along National Cycle Route 1 through Old Harlow. Additional opportunity to allow cycling through the currently pedestrianised section of the High Street outside of shopping hours as a trial (feasibility study required). If successful, allowing cycling at additional times could be considered, which would provide a more direct route for cyclists, as well as allowing access to shops and services offered by the High Street. (TrafficMaster indicates average speed at 3pm of up to 30mph)	H	L
7	Commonside Road	To connect with an existing off-road cycle lane that connects to Commonside Road near Copshall Close, to improve permeability and to provide onward connection to new development south of Harlow.	Implement new marked and signed on road advisory cycle lanes on Commonside Road (traffic volume 4113, 85% speeds of 30.4mph 08.03.18), between PROW 185_97 (identified as an existing cycle scheme but actually a footpath on iShare. At the northern end of this footpath at Paringdon Road, there is no signing to indicate that you can't cycle) and Tysea Road, linking to existing off road N-S cycle route may need to restrict on street parking in some places and remove centre lines. If traffic management could be implemented to reduce traffic speeds from existing 30mph to 20 mph, a shared carriageway would be appropriate	H	L
8	Kingsmoor Road	To connect Great Parndon to the existing off-road cycle path, and connects to two local schools	Implement traffic calming measures along Kingsmoor Road, between Southern Way and Pyenest Road, in order to bring the 85 th percentile speeds down (currently 36.8mph, 4236 veh/ day) to allow for new marked and signed on road advisory cycle lanes.	H	L
9	Hodings Road	To provide a link from Little Parndon to existing cycle networks; to increase permeability from the town centre, and linking to two schools	A new signed and marked on road quietway along Hodings Road (TrafficMaster indicates average speeds at 9am of up to 25mph), also implementing improved signage to link residential areas to the train station and local schools. Links with existing provision on the route connecting Hodings Road to Parish Way, and the existing provision on the route connecting Rectory Wood and Hodings Road.	H	L
10	Howard Way	To provide another north-south link in an area which	Convert* and widen existing eastern footway to a shared use foot/cycle way along Howard Way (ATC 16,582, 85% speeds 38.8mph) between Second	H	H

		only has an east-west link; to provide greater access to Temple Fields around Nettleswell	Avenue and First Avenue Mandela Avenue, with consideration of cycle friendly crossings of The Stow and Momples as appropriate. Install directional signage towards Temple Fields, Old Harlow, Harlow Town station and Church Langley.		
11	Katherine's Way	To reduce the journey times for cyclists around the roundabout between Katherine's Way / A1169 / Water Lane	Convert* and widen existing footway on the north-east side of the roundabout to a shared pathway, to extend existing Essex Cycle Network to the roundabout and other existing E-W Essex Cycle Network routes. Install directional signage towards the Town Centre, Sumners, Latton Bush and Katherines residential area. Consideration to be given to formalising/ improving cycle crossings of the eastern arm of the roundabout.	H	L
12	Pyenest Road	To provide an east-west link in Great Parndon; to connect to an existing off-road cycle path	Implement traffic management techniques in order to reduce speeds below 25mph to facilitate a new marked and signed on road quietway along Pyenest Road (ATC 2790, 85% speeds 34.1mph), between Paycock Road and Abercrombie Way. Potential scheme will connect potential scheme 8 to existing off road cycle path which runs north-south from Third Avenue to Southern Way. Reduced speeds would also benefit two schools on the route	H	L
13	Paycock Road	To improve access around Great Parndon to the existing off-road cycle network which bounds the area	Sustrans recommend a shared carriageway in this location. Continuation of potential scheme 8 along Paycock Road (ATC 1789, 85% speeds 33.3mph), between Pyenest Road and Katherine's Way, utilising new marked and signed on road advisory cycle lanes. Some traffic management may be advisory to keep speeds below 30mph and maintain safety for all road users.. Links to potential schemes 8 and 12 and existing Essex Cycle network.	H	L
14	Priory Ave	To improve access around Old Harlow; to increase permeability	Implement traffic management to reduce speeds below 25mph (ATC 2388, 85% speed 31.9mph) and enable a marked and signed on road quietway along Priory Avenue and Station Road to be implemented. Potential to go off road at the roundabout which connects the A414 to the A1184. A feasibility study will be required to determine crossing provision of the northern arm of the roundabout in order to provide access to the station approach (potential scheme 26).	H	L
15	Momples Rd	To improve access to residential areas in Mark Hall South	Create a new marked and signed on road quietway along Momples Road (Trafficmaster average speeds at 3pm do not exceed 25mph) from Howard Way to First Avenue.	H	L
16	River Stort Crossing/Fifth Avenue	To link to new housing developments	New off-road cycle path running alongside Fifth Avenue, from Edinburgh Way to Eastwick Road. The cycle route will extend into the proposed housing development to the north of Harlow as identified in Systra report. Will extend existing network (adjacent to southbound carriageway), which is an off road segregated foot/ cycle way and link to potential scheme 3, giving improved access to Harlow Town railway station. There is a pinch point where Fifth Avenue crosses the railway line as the bridge width is relatively narrow. Consideration to be given to how the cycle route will continue for this short stretch, or whether a new bridge is required. The existing cycle route finishes at Burnt Mills. North of here, new off road shared use foot/ cycle way to be provided on eastern side of carriageway, with new crossings where required, linking into new development. The potential scheme could include improved crossings of the eastern arm of the Edinburgh Way roundabout. Feasibility study required.	TBC	H+
17	East Harlow housing development	To link to new housing developments	New cycle route running to the north of the Newhall area. Will be provided on, or adjacent to, new road network and connect into proposed housing development to the east of Harlow, connecting to existing network on London Road. As road network has not yet been built, there is potential here to provide a high quality cycle link in collaboration with Systra to best encourage future residents to cycle.	TBC	TBC
18	Water Lane housing development	To link to new housing developments	New cycle route within the proposed Water Lane housing development. Opportunity here to provide high quality, useful cycle infrastructure in collaboration with Systra as highway network is not yet built.	TBC	TBC
19	South Harlow towards Latton Priory	To link to new housing developments	New N-S cycle route, connecting proposed South Harlow housing development to potential scheme 7 and existing cycle network adjacent to Southern Way. Opportunity to provide high quality cycle infrastructure-potentially an off-road cycle track through green space to the planned development Latton Priory. Identified in the Systra report.	TBC	TBC
20	Latton Priory	To link to new housing developments	Extension of potential scheme 19, within the Latton Priory housing development. Opportunity to provide high quality cycle infrastructure as highway infrastructure not yet built, in collaboration with Systra. Currently identified as a new off-road cycle path	TBC	TBC
21	Water Lane	To link to new housing developments	New E-W off-road cycle path running alongside Water Lane, between Brookside and proposed Water Lane housing development, connecting to potential scheme 18. There is a need to provide a cycle friendly route around the Brookside roundabout to enable the potential scheme to tie in effectively with the existing off-road cycle network adjacent to Broadley Lane and to the south of Water Lane. Identified in the Systra report.	TBC	TBC
22	Harlowbury / Gilden Way	To link to new housing developments	New off-road cycle path running alongside Gilden Way, between London Road and Sheering Road, linking to the proposed Harlowbury development. Connects to potential scheme 6 and existing network on London Road. Identified in the Systra report.	TBC	TBC
23	River Way	To improve access to Temple Fields employment area from the existing cycle network	New signed and marked on road advisory cycle lanes along River Way from Edinburgh Way, linking the Temple Fields employment centre to the existing network on Edinburgh Way which links to both railway stations, and the rest of the network. Pinch point where River Way crosses the railway lines, as road width narrows with limited footway width and guard railing. Advisory cycle lanes to continue across railway bridge, which will act as	TBC	TBC

			traffic management to slow vehicles and thereby further increase cyclist safety.		
25	Elizabeth Way Crossings	Upgrading existing crossing to a Toucan crossing in order to connect NCR1 to provision on Elizabeth Way, linking to New Horizon Business Centre.	As included in the Harlow Integrated Transport Package, an upgrade to the existing Pelican Crossing at the junction of Elizabeth Way and Fourth Avenue to Toucan Crossing is required in order to connect NCR1 to existing provision on Elizabeth Way and linking the Town Centre to New Horizon Business Centre.	H	H+
26	Temple Fields	Upgrading an existing route to deal with improved numbers of cyclists. Links the train station to the existing cycle network towards both Temple Fields employment area and to the town centre	Formalised shared carriageway facility, utilising new signed and marked on road advisory cycle lanes along Station Approach, connecting with existing segregated cycle lane on Edinburgh Way and providing a continuous link to Harlow Mill Station, where additional cycle parking spaces could be provided, subject to a feasibility study and potential land ownership issues. Signage needs to be improved from Harlow Mill Station to the National Cycle Route 1.	TBC	TBC
27	Town Centre permeability	To provide a route through the town centre, potentially reducing journey times. Connects the town centre with the existing cycle network for a more direct route to the station, as well as the planned transport hub	The town centre is currently a pedestrian zone and allowing cycling through it would improve accessibility. An experimental TRO may be useful to allowing cycling outside of shopping hours as a trial before potentially making access permanent. If such change is made permanent, an upgrade of the existing Pelican Crossing to a Toucan crossing will be necessary to facilitate cycling into the town centre from the existing route alongside Haydens road. Study required to investigate potential locations for signage.	TBC	TBC
28	Gladwin Way	To upgrade a link towards Harlow Town station	Install signage on existing shared use foot/ cycle way on Gladwin Way in between Newstead Way and the A1019. Currently, signage is incomplete to indicate that it is a shared use foot/ cycle way.	M	L
29	Carters Mead/Potter Street pathway	Improve access to the cycling network around Potter Street and provides an alternative for cyclists to use instead of the busy Potter Street	Existing footpath (PROW185_43) conversion to allow off-road shared use foot/cycle way from Carters Mead onto Potter Street, linking Potter Street Academy, subject to a feasibility study.	M	L
30	Carters Mead	Improve access to the cycling network around Potter Street and provides an alternative for cyclists to use instead of the busy Potter Street	New signed and marked on road quietway (traffic volume of 1144 means a quietway is suitable for speeds up to 40mph) along Carters Mead, extending from Southern Way to Pytt Field, providing access to Potter Street along Carters Mead (E-W). The route will connect to existing infrastructure at the junction with Pytt Field.	L	L

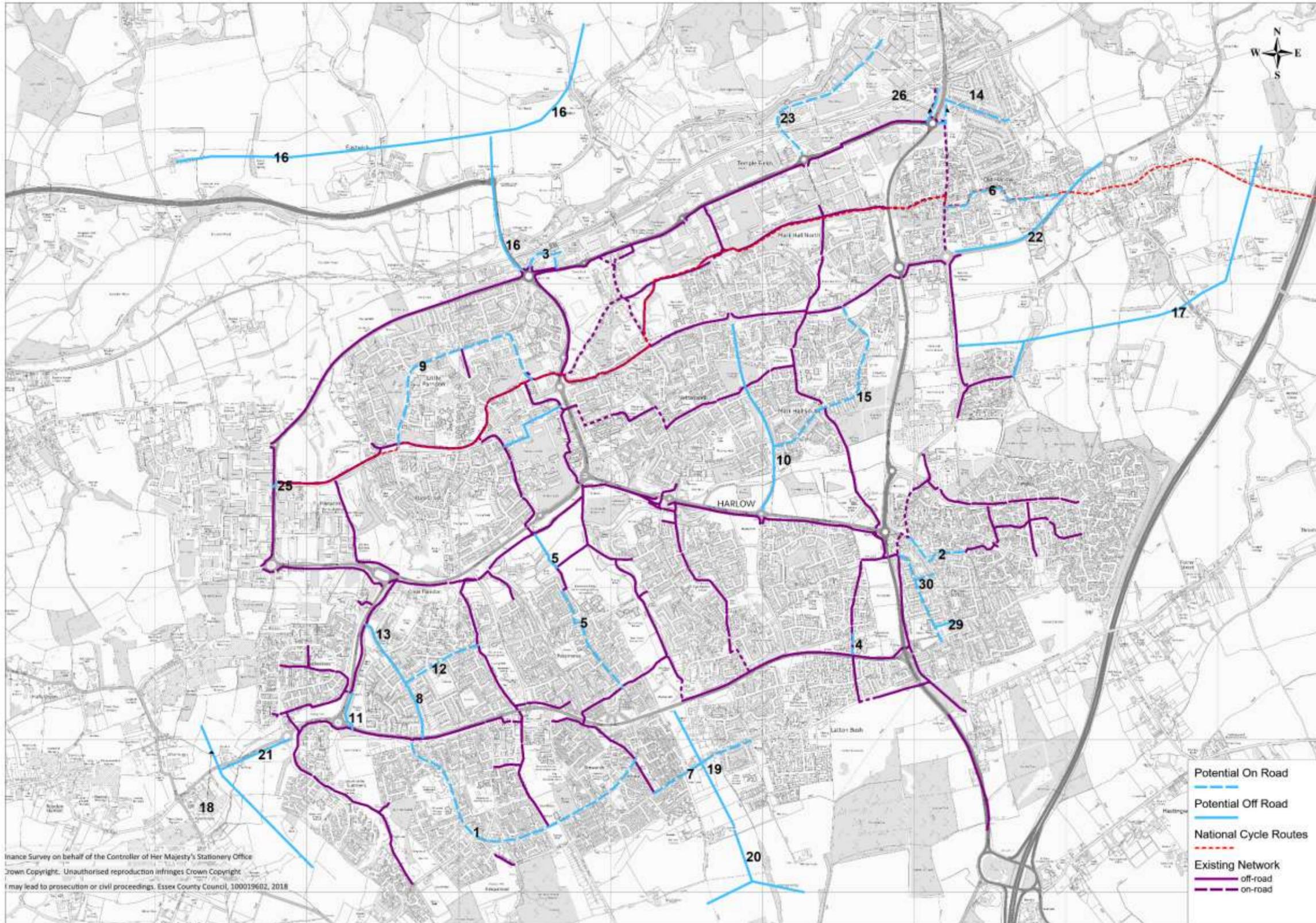


Figure 7.1: Existing and potential cycle routes in Harlow

8 Flagship Routes

8.1 Introduction

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

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

8.2 Potential Flagship Route

The current East-West flagship route identified for Harlow involves upgrading the existing route between the Pinnacles, the town centre and Gildea Way, along Fourth Avenue and First Avenue. It is currently the subject of scheme design with Essex Highways. It is proposed that the route will be segregated shared use with a total width ranging from 4.5m to 7m (cycle track 2.5m minimum). Resurfacing of the route will also be included as part of the development of the route, as required.

Starting from the west, the crossing at the Pinnacles will be upgraded to a toucan crossing. As the route crosses Hodings Road, a raised table priority crossing will be installed. At gate 3 of the hospital, cycle priority will be maintained, with further safety measures also being installed. Continuing eastwards, the path crosses Hamstel Road and Hodings Road; both of these crossings will have tiger crossings installed.

The path continues through the existing underpass, crossing the A1019. The path will cross Park Lane and School Lane. It is also proposed that the crossing at Howard Way's northern arm will be upgraded to either a toucan or tiger crossing, or even be converted to a Dutch-style roundabout. The underpass to the east of Mistley Road will also be upgraded, and a new connection will be implemented to the existing track under the subway.

At the B183, the pathway will be upgraded, or have a new alignment through the adjacent park. Furthermore, there are studies looking into widening the cycle path

between the A414 and London Road, although this would involve expanding onto private land.

8.3 Prioritisation of Flagship Routes

Flagship Routes are considered against the four prioritisation criteria, as per the other potential schemes:

- Deliverability;
- Directness;
- Extension of Existing Network; and
- Key attractors.

The proposed Flagship route was found to be relatively easy to achieve in terms of landownership, is relatively direct and will provide an East-West link across Harlow, going across the north of the town centre, across the town, connecting employment area The Pinnacles to the eastern areas of town. Furthermore, it will also incorporate some of National Cycle Route 1, which is already an established cycle route in itself. The proposed route connects to the existing and potential cycle network identified in this CAP, so provides good linkages to key attractors and is a useful extension of the Harlow cycle network.

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 Harlow and should therefore be considered a high priority going forward.

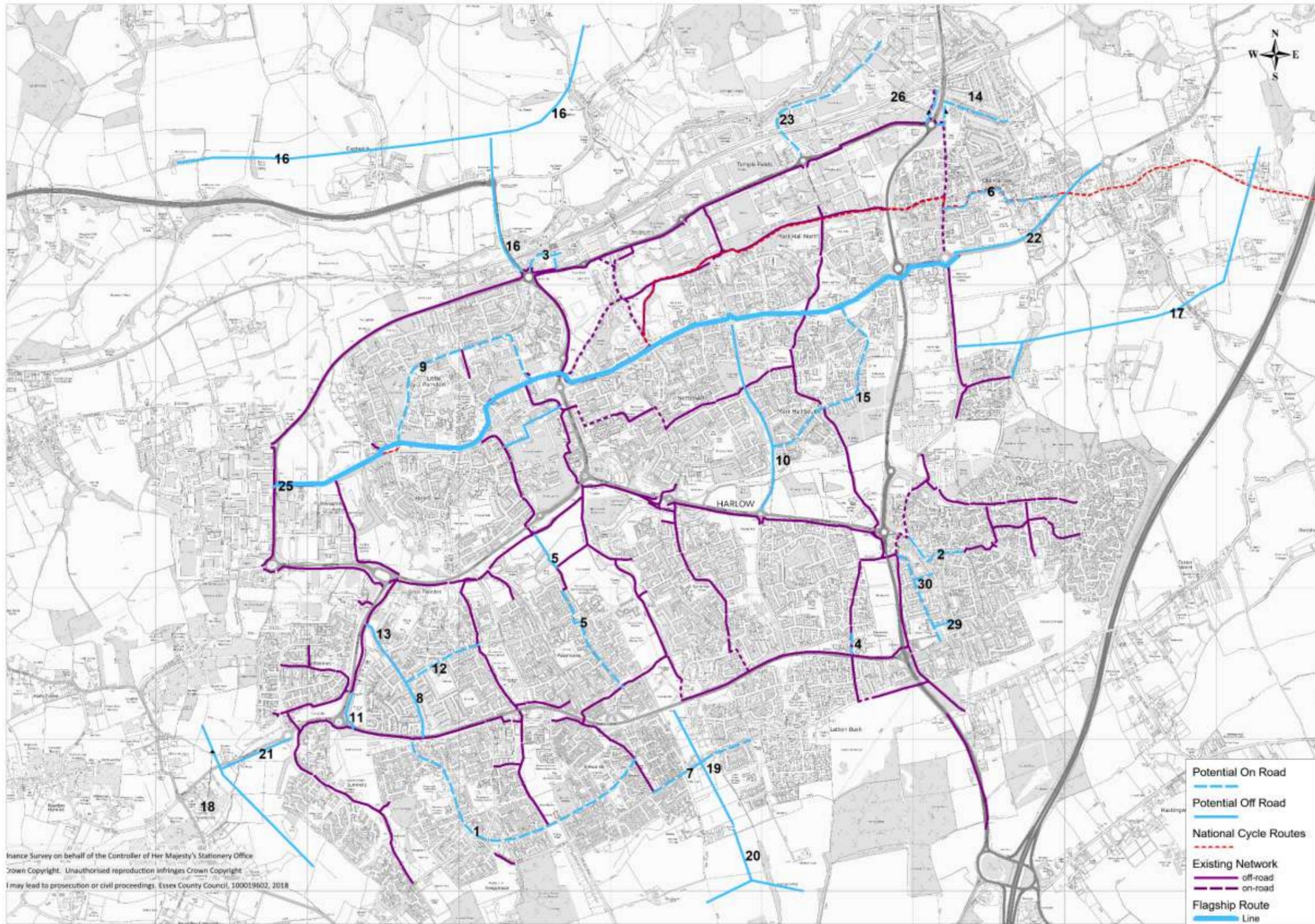


Figure 8.1 Potential Flagship Route For Harlow District, With Potential Cycle Schemes

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.

Smarter travel measures will be particularly important in Harlow, which already has an extensive network of cycle routes but low levels of cycling. A combination of “carrot” and “stick” approaches would be most effective and should be considered as a means to encourage people to choose cycling whenever possible. However, “stick” approaches can be unpopular and without good reasoning to support them could have undesired consequences.

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 the Tour of Britain, The Tour Series and 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 Harlow 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 Harlow, as demonstrated by the website *mapmyride.com* displaying over 2,500 routes recommended in the local area by its users.

9.3 Potential Local Considerations

Harlow has an extensive cycle network; however, cycling levels are low. Consequently, it can be concluded that simply introducing new infrastructure is not enough to improve cycling levels. In order to encourage cycling changes, it

will be essential to introduce softer measures and promote cycling locally, as well as giving consideration to making car journeys less convenient.

9.3.1 Promoting cycling locally

Introducing cycling campaigns such as Cycle to Work Day is a good means to promote cycling across the District and show people that cycling to work is a real alternative to car travel. Workplace and school travel plans should be encouraged, along with encouraging organisations to provide incentives to employees for sustainable travel where possible. Schools could also be encouraged to liaise with the District and other local schools to address any common barriers and solutions to encourage cycling amongst pupils.

Updating and sharing Harlow's existing cycle route map should be made a priority, potentially installing several copies in public spaces outside transport hubs, community centres and along popular routes, including the NCN 1.

Furthermore, bike rental could be offered at the District's transport hubs; the scheme "Bike & Go" is already implemented at some Greater Anglia stations, and could potentially be expanded to Harlow Town and Harlow Mill stations. This subscription scheme allows for the user to hire return the bike to any station which participates in the scheme. Brompton Bike Hire is another bike hire company, using foldable bikes for increased journey flexibility across London and several cities in the south and midlands. In both schemes, the bike does not need to be returned to the same dock, offering a good degree of flexibility for users.

Some towns and cities (London, Cambridge, Stockport, Greater Manchester, Sheffield, Oxford and Norwich) are introducing dockless bike hire schemes, which enable users to park bicycles within a defined district at a bike rack or along the footway in a responsible place. Users download the relevant app, use it to find the nearest bike and then scan the QR code on the bike using their phone to unlock it. The costs are in the region of 50p for a half hour journey, typically capped at £5 per day. Bikes are fitted with GPS trackers so they can always be located.

Cycle hire can be much more effective in improving cycling levels as cycles can be expensive and difficult to store, which may put some off cycling. Furthermore, there may be a greater appeal in sharing a bike, as if a theft or damage occurs, the user can simply hire another bike. Harlow Council should aim to work with similar cycle hire companies in order to improve cycle usage.

Ensuring cycle parking is safe, secure, convenient, sufficient in supply and available to use is important for cyclists. Cycle parking should be located where

it is visible with passing foot traffic and natural surveillance. This CAP recommends a review of cycle parking across Harlow.

Promote the wider benefits of cycling locally, including that: it is healthy (good for bodies and minds); it can help to reduce traffic and pollution; it encourages independence in young people; and it can facilitate independent travel by those with some physical disabilities (it is easier to cycle than walk for some). Fostering a cycling culture across Harlow would help to realise many of these benefits.

9.3.2 Addressing the convenience of the car journey

Investigate the costs of parking charges and availability of car parking at key destinations and ensure they are sensible. Currently, most Harlow residents are choosing to drive short distances to work and to other destinations because it is easy to do so, even with traffic congestion during peak times. If additional costs were imposed on these car journeys, the alternative means of travel would become more attractive. If car parking charges could be adjusted to reflect the real costs of travel by car (including traffic, pollution and health), a change in the numbers cycling and walking (and using public transport) could be seen for some trips, particularly if the infrastructure is in place to support it (most of the infrastructure is in place). In conjunction with workplace travel plans and incentives, a step change in cycling levels in the District could be seen, although this would be unpopular.

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/ Boroughs.

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;
- Section 106 (S106) monies.

10.3 Funding for Harlow

ECC Local Highway Panels (LHPs) are a source of capital funding for local highway schemes, and are an appropriate way for new cycle infrastructure to be funded. Cycle improvements should be considered as part of the above funding with other significant LHP schemes and synergies sought wherever possible. However it is unlikely that many will achieve funding in the immediate future.

Planning contributions from new developments is an important source of finance and can either provide funding towards new or improved cycle infrastructure in the Harlow 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, such as the recent announcement of the Access Fund for Sustainable Travel. 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 major road schemes;
- As part of road safety schemes;
- As part of health and safety schemes;
- Sustrans and Cycling UK;
- 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 Harlow District, 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.

To ensure the potential for cycling is fully realised, new infrastructure must be accompanied by high profile and targeted promotion of cycling to ensure the full cycling potential is realised in Harlow, particularly in urban areas. The following key recommendations can be made for cycle enhancements:

- Review existing route signage and lighting. This CAP has observed that the existing signage strategy is incomplete and will require updating, to ensure that cyclists are signed all the way to the key destinations. It is understood that issues regarding signage in the District are complicated by land ownership. Previous studies have identified that a small area of land, on which to house any new signposts, must first be adopted by Essex County Council, which leads to complications for maintenance;
- 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). It has been identified in this CAP that many of the surfaces of existing cycle routes in the District are in a poor state of repair and require improvement and improved maintenance;
- Develop a Flagship Route in the District through Feasibility Studies to Detailed Design;
- Prioritise the East-West Flagship Route, providing access to the town centre, the Pinnacles, Nettleswell and Mark Hall;
- Review existing cycle parking across the District. Provide new and improved cycle parking with a focus on satiating the considerable demand for commuter trips at railway stations and at other key destinations, such as the town centre;

- Enable improved cycle access through the currently pedestrianised town centre by removing existing “cycling prohibited” signs and securing relevant legal approvals;
- Fill obvious gaps in the existing cycle-route network (on alignments with cycle-friendly topography), such as Howard Way and Partridge Road;
- Provide new infrastructure on key roads with cycle-friendly topography but no existing facilities, particularly with regard the proposed housing developments around the outskirts of Harlow;
- Actively encourage residents of the District to cycle, through the use of cycle hire schemes (similar to “Bike & Go” schemes at some Greater Anglia Stations, or using dockless bike hire), promotion and awareness campaigns, including the use of workplace and school travel plans;
- Promote the wider benefits of cycling locally with the aim being to foster a cycling culture across the District;
- 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;
- Review and update cycle route lining and marking, ensuring in particular, that directions are clear and that shared use cycle and pedestrian facilities are signed and marked as such;
- Promote and market the Flagship Route with ‘Cycle Superhighway’ style branding and disseminating techniques;
- Improve cycling links to the future Harlow and Gilston Garden Town;
- Improve cycle infrastructure links between the town centre and the two railway stations, Harlow Town and Harlow Mill;
- Increase the residential permeability of the existing cycle network; and
- Investigate, in more detail, the provision of cycle routes to education facilities, when the CAP is reviewed in the future. This CAP has identified that the existing, extensive cycle network in Harlow is not well used. It has also noted that cycle routes do not cater for complete journeys to school by bike.