



**BOROUGH OF  
BROXBOURNE**  
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# Local Cycling and Walking Infrastructure Plan



**September 2017**

**Planning Policy Team**



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## Summary

*The Local Cycling and Walking Infrastructure Plan (LCWIP) sits alongside the Transport Strategy to support the Local Plan 2018-2033. The Strategy combines an approach to providing new infrastructure and physical improvements with encouraging behavioural change to maximising the up-take of opportunities for active travel across the borough, linking existing and new residential and business areas with key destinations.*

*The objectives of the Walking and Cycling strategy are as follows:*

- a. improve walkability at town centres and other focal points;*
- b. provide a network of priority cycle corridors to make cycling a safe and convenient alternative to the car for local trips to key destinations;*
- c. remove physical and behavioural obstacles to walking and cycling;*
- d. increase walking and cycling to stations, schools, and workplaces;*
- e. locate and plan new development to maximise walking and cycling;*
- f. improve awareness of the leisure opportunities afforded by walking and cycling across the borough.*

*The key measures proposed in the Broxbourne LCWIP are as follows:*

- improvements to Hoddesdon, Waltham Cross and Cheshunt Old Pond town centres to make them more attractive and accessible to pedestrians and cyclists;*
- cycle corridors: Church Lane/Andrews Lane; Rags Brook; Cheshunt Reservoir; A1170/B176; the New River; Lee Valley Park, southern gateways;*
- creation of safer routes to school and safety zones around schools;*
- promoting key leisure opportunities and assets;*
- Improved public realm and signposting and 'cycle hubs' at stations;*
- Area-Wide Travel plans at employment areas;*
- Subway replacement at key locations;*
- A borough-wide crossing points programme;*
- Adjustable barriers to facilitate cycling on key routes;*
- Improved signage and wayfinding;*
- Improved street lighting;*
- Promotion of new and existing walking and cycling opportunities;*
- Preparation of a Public Realm Strategy for the borough; and*
- Preparation of an Area Action Plan for Waltham Cross to maximise opportunities for walking and cycling as part of a sustainable transport strategy for the area.*

*The Action Plan set out in Appendix A contains a list of projects associated with this and includes an indication of the potential funding and timeline. Appendix B contains a Cycle Network Plan.*

# 1. Introduction

## What is a Local Cycling and Walking Infrastructure Plan (LCWIP)?

Local Cycling and Walking Infrastructure Plans (LCWIPs), as set out in the Government's Cycling and Walking investment Strategy (April 2017), 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, and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle. The key outputs of LCWIPs are:

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

By taking a strategic approach to improving conditions for cycling and walking LCWIPs will assist Local Authorities to:

- Identify cycling and walking infrastructure improvements for future investment in the short, medium and long term
- Ensure that consideration is given to cycling and walking within both local planning and transport policies and strategies
- Make the case for future funding for walking and cycling infrastructure

According to the Department for Transport's Technical Guidance on LCWIPs, "*while the preparation of LCWIPs is non-mandatory, Local Authorities who have plans will be well placed to make the case for future investment.*"<sup>1</sup> Other benefits include ensuring that appropriate consideration is given to cycling and walking in all local planning and transport decisions, enabling authorities to seek appropriate contributions to the provision of cycling and walking infrastructure, and assisting developers in the preparation of Travel Plans, Transport Assessments and Statements.

The Broxbourne LCWIP follows the Technical Guidance around integration of walking and cycling with transport planning and land use planning. It sits alongside the Broxbourne Transport Strategy and the Broxbourne Local Plan. It has been prepared in consultation with Hertfordshire County Council as the Local Transport Authority.

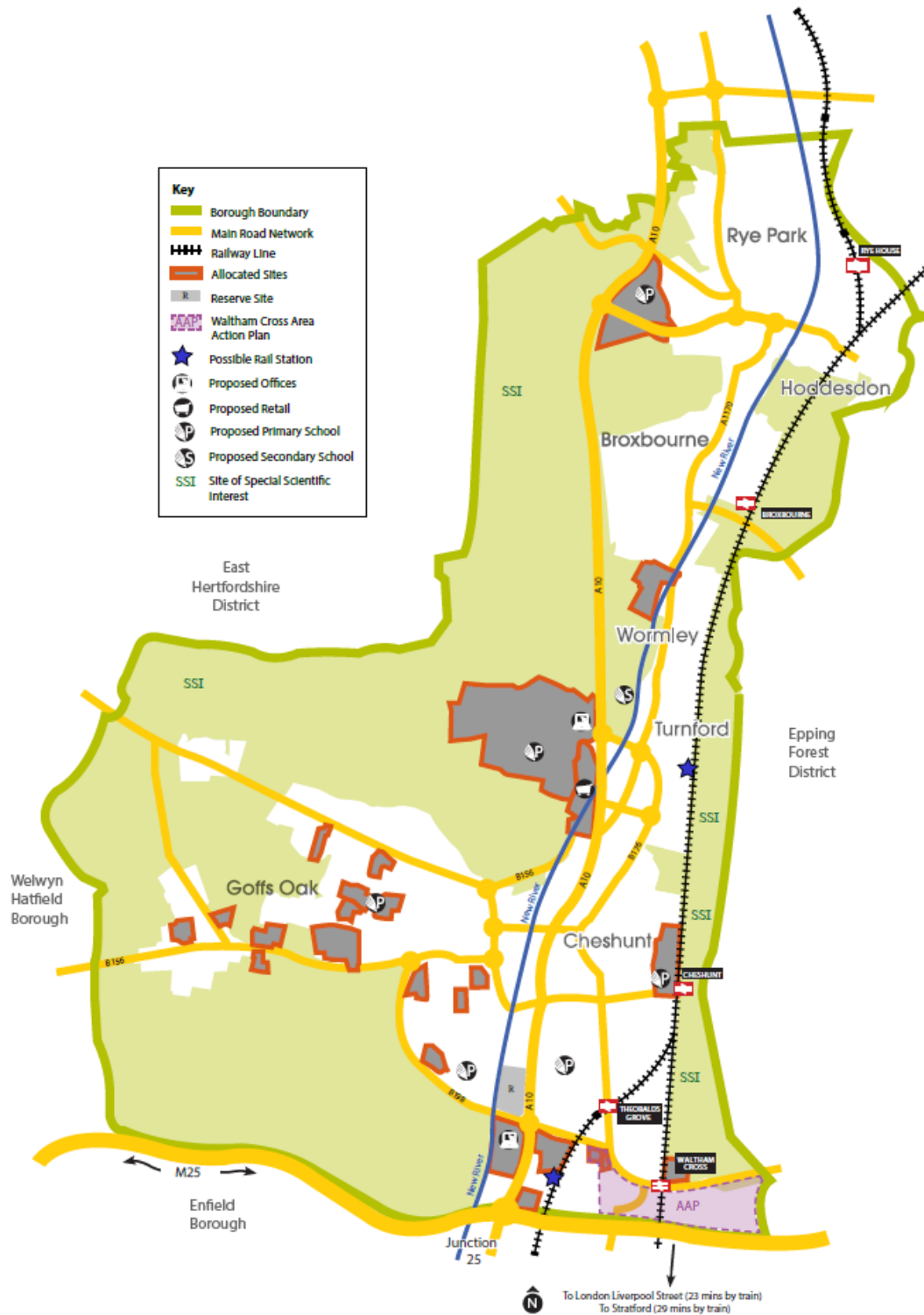
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<sup>1</sup> Local Cycling and Walking Infrastructure Plans: Technical Guidance for Local Authorities (Department for Transport, April 2017)

## Broxbourne Local Plan

Broxbourne Borough Council is seeking to deliver 7,700 new homes and 6,000-7,000 new jobs in the Borough during the period 2018-2033 through its new Local Plan. The location of the development sites is set out in the map below.

**Figure 1: Local Plan growth locations**



The preferred development sites have been selected in part on the basis of their ability to minimise the impact on the road network. Nevertheless, the proposed development will result in strains on transport networks and impacts on the quality of the local environment. At the same time, development also offers opportunities to achieve 'modal shift' from cars to walking and cycling for a proportion of local trips, making more efficient use of transport networks and simultaneously improving the quality of the local environment and improving the health of borough residents.

The Council's transport consultants have prepared a Transport Strategy to support the Local Plan and manage and mitigate these impacts, and the Walking and Cycling Strategy sits within the context of the Transport Strategy and the Local Plan.



The Walking and Cycling Strategy proposes a range of physical measures (new walking and cycling infrastructure), but also addresses behavioural measures which are designed to encourage a shift in attitudes to walking and cycling. In implementing the strategy the Broxbourne Council will need to work with a range of partner organisations, as well as using the Borough Council's planning powers to achieve effective delivery of the measures set out.

The strategy will provide a framework for more detailed work on feasibility and design which will follow in the coming years as the strategy is implemented in phases. It will help to ensure a joined-up approach to detailed work on implementation and feasibility which will follow in the next few years.

In preparing the Walking and Cycling Strategy, Broxbourne Borough Council is working closely with Hertfordshire County Council, which as Local Highways and Transport Authority is the key partner in implementation of the proposals contained in this document.

## 2. Core principles

The draft Broxbourne Transport Strategy (2017) identifies four 'core principles': a hierarchy of interventions; marginal gains, an integrated approach, and balancing priorities:

- **A hierarchy of interventions:** reducing the demand to travel through mixed-use development, home working and localised service provision; encouraging more sustainable forms of travel; making better use of existing infrastructure; and finally providing additional highway and rail based capacity. The Walking and Cycling Strategy is primarily focused on encouraging sustainable travel, but



*(left) The transport hierarchy  
(source: Broxbourne Transport  
Strategy 2017)*

- **Marginal gains:** providing small-scale, local level, low cost improvements to transport provision can have a cumulative impact on the travel choices individuals make. Transport should work at a human level to make the network more inclusive and convivial. Measures can include signing, surfacing, dropped kerbs, seating, lighting and street furniture.
- **Adopting an integrated approach to delivery:** land use planning, transport planning, and place-making should all operate together to achieve mutual benefit to all three. Walkability is an example of the results of a successful integrated approach (see next page).
- **Balancing priorities:** there are often contradictory demands placed on the transport network which have to be balanced to ensure that it caters for all. Examples include targeted investment vs widespread investment in schemes, and planning for traffic vs planning for people. The Walking and Cycling Strategy addresses the 'people' aspect of planning and demonstrates how the quality of life in the borough can be improved through a range of targeted measures which can be implemented within the overarching framework of the transport strategy.



'Walkability' of a place depends on the level of encouragement to walking provided by the urban environment as a whole. The American city planner Jeff Speck identifies 'ten steps to walkability' which he classifies into four categories: useful, safe, comfortable, and interesting.

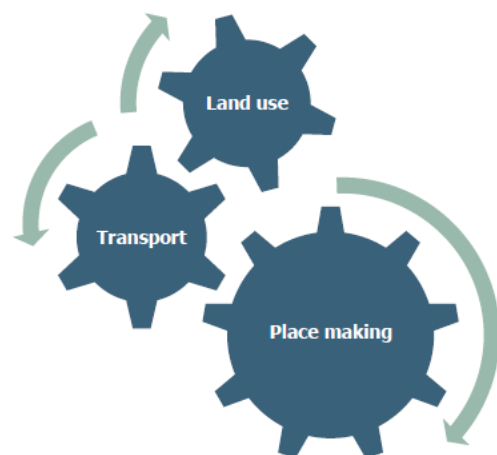
#### 'Ten Steps to Walkability'

- **Useful walk:** 1) putting cars in their place, wherever possible diverting them onto the main roads, or slowing them down, so that local roads are friendlier to pedestrians; 2) ensuring a mix of uses so day-to-day needs may be met within walking distance; 3) price parking appropriately to avoid inducing excess demand, which causes congestion and uses up valuable urban space; and 4) Design compact neighbourhoods around public transport nodes
- **Safe walk:** 5) slow traffic down through narrower highways and 'human traffic calming' rather than speed bumps, including shared space and removal of road signage, allow on-street parking to protect pedestrians on sidewalks, and avoid too many signalised crossings which kill walking momentum; and 6) welcome bikes, which are more compatible with pedestrians than cars, but create shared routes rather than segregated lanes in retail environments
- **Comfortable walk:** 7) create a sense of enclosure and avoid too much grey or green (parks and car parks) along walking routes, which create monotony; 8) planting trees to reduce ambient temperatures and provide shade in hot weather, slow cars, and reduce winds.
- **Interesting walk:** 9) encourage active street-level facades that invite walking – diversity of uses and interesting things to look at; and 10) focus walking strategies on locations with the best potential.

Source: Jeff Speck, Walkable City (North Point Press, 2012)

Integration between land-use planning, transport planning, and place-shaping is one of the four core principles underlying the Broxbourne Transport Strategy and the Walking and Cycling Strategy and the emerging Local Plan, all of which seek to embed these principles in the practice of planning for the future of the borough.

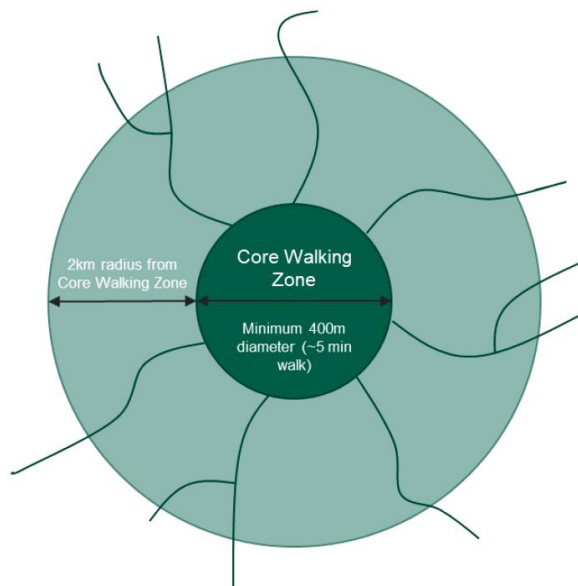
*The integrated approach*  
(source: Broxbourne Transport Strategy, 2017)



## Core Walking Zones and Key Walking Routes

The LCWIP Technical Guidance identifies a number of key principles to identify the most appropriate locations for walking and cycling infrastructure. This involves identifying the main trip generators, then identifying Core Walking Zones, and finally identifying Key Walking Routes.

Core Walking Zones (CWZs) usually consist of a number of key trip generators that are located close together, such as a town centre or business parks. An approximate five minute walking distance is suggested as the minimum extent of a CWZ. Within CWZs, all of the pedestrian infrastructure should be deemed to be important. Key Walking Routes comprise the important pedestrian routes that serve CWZs from a distance of 2km. The principles of Key Walking Routes linked to Core Walking Zones are set out in the diagram below.



Four CWZs are proposed in the borough, at Hoddesdon, Waltham Cross, Cheshunt Old Pond, and Brookfield. CWZs and Key Walking Routes are shown on the maps in Section 6.

## Reducing vehicular speeds

Reducing the speed of vehicular traffic can result in a significant reduction in pedestrian and cycle accidents and create a less threatening environment for vulnerable road users, thereby encouraging more walking and cycling.

Slower speeds can be achieved through a range of measures including reduced road widths, which can have the added benefit of creating more attractive and safer public realm for pedestrians and cyclists. Priority routes such as the A1170/B176 will be investigated for potential speed reductions.



### 3. Vision and Objectives

The draft Broxbourne Local Plan vision states that *“Broxbourne will be a pleasant, prosperous, safe, healthy and green place where people want to live, work, do business and spend their leisure time....Improved bus services and facilities for cyclists and walkers will provide alternatives to driving.”*

Relevant objectives from the draft Local Plan are as follows:

- **Transport:** Ensure that growth and regeneration can be safely accommodated by local roads, the A10 and the West Anglia mainline and that it encourages as many journeys as possible by, rail, walking and cycling so that people have a safe, viable and attractive alternative to driving.
- **Environment:** Protect and enhance the natural, historic and built environment for its visual beauty, leisure and recreation value, ecology, and heritage
- **Sustainable neighbourhoods:** ensure that growth and regeneration improves the physical quality and social and economic prosperity of neighbourhoods for residents, businesses, workers, and visitors
- **Health and wellbeing:** encourage active lifestyles and healthy choices through an integrated approach to active travel, play, clean and safe environments, and enhanced access to indoor and outdoor sports and recreation.

Taking account of the draft Local Plan strategy and objectives, a more specific vision for walking and cycling and set of objectives are set out below.

*“The Council’s vision is for walking and cycling in Broxbourne to become an integral part of the transport network, reducing people’s reliance on driving and providing opportunities for active travel to improve quality of life, health, and place across the borough.”*

#### Walking and Cycling Strategy Objectives

- g. improve walkability at town centres and other focal points;
- h. provide a network of priority cycle corridors to make cycling a safe and convenient alternative to the car for local trips to key destinations;
- i. remove physical and behavioural obstacles to walking and cycling;
- j. increase walking and cycling to stations, schools, and workplaces;
- k. locate and plan new development to maximise walking and cycling;
- l. improve awareness of the leisure opportunities afforded by walking and cycling across the borough.

## **4. Policy Context**

This section situates Broxbourne Borough Council's Walking and Cycling Strategy in the context of a number of documents and programmes produced by relevant authorities which shows how walking and cycling are promoted and encouraged at the local and national level.

### **National Policy Context**

#### **National Cycling and Walking Investment Strategy**

Encouraging more people to walk and cycle for leisure and for transport fits into several of the national government's objectives for transport and health.

The Department for Transport (DfT) published its draft Cycling and Walking Investment Strategy for consultation in spring 2016. This document sets out the government's approach for investing to improve conditions for walking and cycling in the coming years. It sets out the DfT's commitment to making England a walking and cycling nation:

*"Our long term goal up to 2040 is that walking and cycling should be a normal part of everyday life, and the natural choice for shorter journeys such as the commute to school, college, work or leisure trips."*

The DfT believes that to realise this goal will require sustained investment in infrastructure coupled with a change in the approach to transport planning that sees cycling and walking as transport modes in their own right, integrated into the transport network"

### **Local Policy Context – Broxbourne**

#### **Draft Broxbourne Local Plan (2017)**

An early draft of the Broxbourne Local Plan was subject to consultation in summer 2016. The Local Plan contains proposed development sites for 7,700 homes over the period to 2033, plus new business parks, retail and leisure developments. Strategic development sites proposed through the Local Plan are at Brookfield, Rosedale Park, Cheshunt Lakeside, and Park Plaza West.

A number of sites were ruled out in part because of poor accessibility and lack of potential for sustainable transport, which formed part of the criteria for the assessment of 'exceptional circumstances' necessary for release of sites from the Green Belt, as well as a consideration through the sustainability appraisal and site selection process set out in the development options reports.

The Local Plan draft Policy TM1: Sustainable Transport supports the Local Cycling and Walking Infrastructure Plan:

*To enable people to choose more sustainable modes of transport they must be safe, secure, direct, frequent and affordable. The Council will ensure that the options for sustainable modes of transport continue to increase. To facilitate this, we will bring forward major infrastructure improvements, working in partnership with rail and bus operators and the County Council.*

## **Policy TM1: Sustainable Transport**

### **Sustainability initiatives**

*I. The Council will expect all new development proposals to have explored ways to reduce the use of the car and promote alternative ways to travel. Detailed evidence of this process will be included in the Transport Assessment and supporting Travel Plan accompanying a planning application.*

### **Pedestrian movement**

*II. New development proposals must clearly demonstrate how pedestrian movement and connections have been prioritised and provided for. Development must not impact upon existing footpaths and public rights of way and proposals should, wherever possible, extend, enhance or provide for new pathways, rights of ways and equestrian routes.*

*III. New footpaths should be safe, direct, appropriately lit and signed. They should be suitably constructed for all users, and provide direct and easy access to services and facilities.*

*IV. The Council will support proposals that protect and enhance the New River towpath, pedestrian routes to, and within, the Lee Valley Regional Park and connections by foot to other open spaces.*

*This policy will also apply to the needs of wheelchair users for new community facilities.*

### **Cycling provision**

*V. New development proposals must provide for cycle facilities through the use of accessible and safe routes to and around the site, the provision of cycle storage and cycle parking areas. Appropriate provision should be made for showering facilities. The number of cycle spaces required in new developments can be found in Appendix D.*

### **Public transport and interchange facilities**

*VI. New development proposals should, wherever possible, improve public transport opportunities and interchange facilities, including infrastructure and revenue contributions for enhanced services.*

## **The Draft Broxbourne Transport Strategy (September 2017)**

Broxbourne Council's transport consultants WYG have produced a transport strategy to support the delivery of the growth and development set out in the emerging Local Plan. The draft document will be subject to consultation alongside the emerging Local Plan prior to submission to the Planning Inspectorate.

The strategy details measures through which to provide the capacity to accommodate an increase in demand to travel, interventions to improve connectivity to the new jobs and opportunities the Local Plan will facilitate, and targets schemes which will enable the creation of safe and attractive communities, where people will want to live and invest.

Key measures proposed to be taken forward include:

- **A10 Capacity Improvements.** A series of junction capacity enhancements from the M25 in the south through to Hoddesdon in the north, designed to improve the flow of both north-south and east-west traffic movements.
- **Brookfield.** The reconfiguration of the local road network to facilitate the development of Brookfield as a new local retail and commercial centre. The realignment of Halfhide Lane and provision of new links to open up the development site will ensure that it is accessible destination from across the borough
- **West Anglian Mainline.** Investment in the accessibility of stations on the main rail network into London to both reduce reliance on the car and take advantage of an increase in capacity on the line as part of the Crossrail 2 proposals being taken forward by TfL.
- **Bus Network Development.** A focus on new service and infrastructure provision to create a more attractive and accessible bus network. Bus services are proposed to link large developments at High Leigh, Park Plaza and Cheshunt Lakeside to the main towns centres and stations within the borough, with supporting investment in bus shelter improvements, prioritisation at signals, integrated ticketing, information and marketing to provide a realistic alternative to the car.

The interventions identified within the Strategy amount to around £130m worth of investment, representing the scale of works required to meet both current and future pressures associated with the travel demands development and economic growth generate.

The Transport Strategy is an integrated strategy which aims to show how the various modes of travel (bus, train, car, and walking and cycling) inter-relate. The Walking and Cycling Strategy is intended to sit within the framework provided by the transport strategy.

## **Broxbourne Borough Council Corporate Plan 2017-2020**

The Corporate Plan contains a priority to “Lobby for improved transport links and support sustainable transport such as bus, rail, walking and cycling”. Other related requirements in the Corporate Plan are as follows:

- Improve opportunities to walk in the Borough (5.4)
- Improve opportunities to cycle in the Borough (5.5)
- Support development of physical activities and sports locally particularly aimed at people who are currently less likely to be physically active (10.1)

## **Broxbourne Borough Council Health and Wellbeing Strategy 2014-2017**

Objective 2 is Enable residents to maintain a healthy weight through a healthy diet and physical activity. The associated action plan contains a specific task in the action plan associated with this objective as follows: Improve safety and facilities for cycling and walking in the Borough, particularly safe routes for children to cycle and walk to school, and links across the A10, working with Hertfordshire County Council.

## **Hoddesdon and Broxbourne Urban Transport Plan (2012)**

The UTP included a number of walking schemes which have been implemented including: town centre improvements to public realm; improvements to key connections including Esdaile Lane to the south and the provision of at-grade signalised crossings of the Dinant Link Road at Amwell Lane. A number of schemes identified in the UTP (including a number of cycle routes and at-grade crossings of Charlton Way) have yet to be implemented and so have been carried forward into the Walking and Cycling Strategy.



## **Cheshunt and Waltham Cross Urban Transport Plan (2010)**

The UTP included a number of walking and cycling schemes which have subsequently been implemented, including: a shared cycle/footpath and toucan crossing on the southern side of Winston Church Way; the A121 cycle lane as far as the White Water Centre; the Monarch’s Way/Abbey Road footpath; toucan crossing at Abbey Road; and walk/cycle route signage at key points to the Lee Valley Regional Park.

## **Local Policy Context – other bodies**

### **The Local Transport Plan (2050 Vision, autumn 2016)**

Hertfordshire County Council's *Local Transport Plan 3* (LTP3) was published in April 2011. The County Council consulted on a 2050 Vision in autumn 2016 as a prelude to LTP4. The consultation documents states

*“The LTP requires that we highlight problems in our current transport network, identify major transport schemes required and consider a wide range of options to help support future growth. At this stage our proposals include enhancing walking and cycling provision; better public transport between towns; technology to better manage traffic on our key routes; and embracing modern technology to facilitate more shared transport schemes such as lift-share and car clubs. We also propose some additional highway capacity on the most congested parts of the network, where conditions would otherwise deteriorate due to the forecast population and traffic growth. However we cannot simply build our way out of trouble, and we must consider ways of reducing the ever increasing demand for road space.”*

*“Achieving a modal shift in future years away from car use to more sustainable modes such as public transport, walking and cycling will greatly support delivery of the LTP objectives. The potential public health benefits of increased levels of active travel indicate this should be a high priority, and a key feature of the future transport system we are planning for.”*

The document sets out a number of challenges and opportunities which are addressed further in Section 6 below.

### **Hertfordshire Active Travel Strategy (2015)**

The Active Travel Strategy aims to promote more walking and cycling. The key objectives of the strategy are set out in italics below.

- *Targeting short journeys:* With over 56% of all trips in Hertfordshire under 5 miles or less, a significant amount of journeys in Hertfordshire currently take place by private car which could be undertaken by cycling or walking.
- *Focus on packages in urban areas:* Congestion is a significant issue in urban areas. Traffic forecasts are expected to increase by 20.9% by 2031, based on 2011 levels, justifying the need to target packages in areas of worst congestion.
- *Target Active Travel for Schools:* Whilst 51% of children walk to nursery or primary school, and 47% walk to secondary school, cycling only accounts for 3% of secondary school trips. Furthermore, in some parts of Hertfordshire, over 23% of children are classified as obese.
- *Target health ‘hotspots’:* Hertfordshire has several key settlements where health indicators could be improved through Active Travel.



## **Rights of Way Improvement Plan (February 2017)**

Hertfordshire County Council's Rights of Way service has produced a recent map showing suggestions for a number of routes in the Borough of Broxbourne. A number of the proposals in this plan have emerged during discussions which have taken place in the course of preparing the Borough's Walking and Cycling Strategy.

## **Lee Valley Regional Park Cycling Strategy (April 2017)**

The Strategy contains 9 measures to encourage and promote cycling in the Park:

- Develop key gateways to the Park
- Remove physical barriers to access
- Raise the profile of cycling in the Park
- Improve signage and wayfinding
- Introduce new routes to develop the existing network
- Improve the quality of paths for cycling
- Encourage considerate sharing of paths
- Develop cycle parking and hubs
- Explore options for cycle hire

The Authority's vision is *"for the Lee Valley Regional Park to be a world class destination for cycling"*.

## **London Borough of Enfield**

The Mayor of London's Mini-Holland programme awarded £30m each to three outer London boroughs - Enfield, Kingston and Waltham Forest - to help them create a network of cycle routes. This investment will also allow them to improve the streets and public areas along these routes for everyone. These schemes should be operating by March 2021.

The Cycle Enfield proposals include a proposal to develop a cycle route along the New River as far as the borough boundary with Broxbourne, and a major project to improve cycling infrastructure along the A1010 south of Waltham Cross.

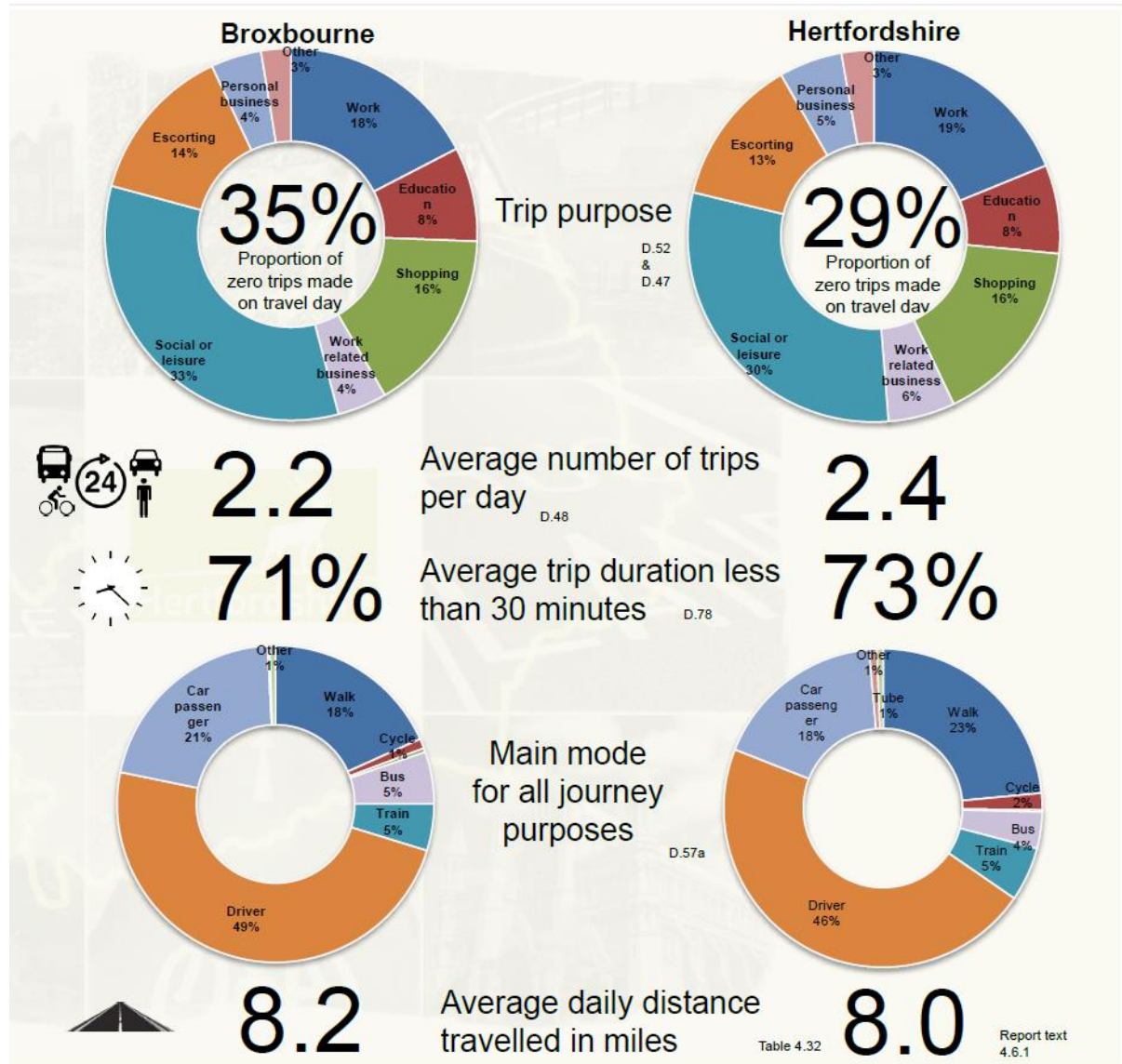
## **Essex County Council Cycling Strategy (November 2016)**

Essex County Council recently published a new Cycling Strategy for the whole county, which aims to double the number of cycling trips from 2014 to 2025. The strategy seeks to promote cycling both as a practical means of transport for short journeys and as an enjoyable participation activity for sport.

Within the countywide strategy sit district level Cycling Action Plans, whose aim is to improve the cycling network in local areas. The Epping Forest District Cycling Action Plan is most relevance to Broxbourne. Essex County Council is seeking to improve links with National Cycle Network 1.

## 5. Existing Conditions, Issues and Opportunities

Hertfordshire County Travel Survey (2015) is a questionnaire survey that investigates the travel behaviour of a large sample of Hertfordshire residents. For Broxbourne, 2,121 surveys were mailed out and 282 responses were received. The results are presented in the “Broxbourne District Profile”. Whilst not comprehensive, the Travel Survey data represents the best available indication of travel patterns in the borough. The headline results are presented below:



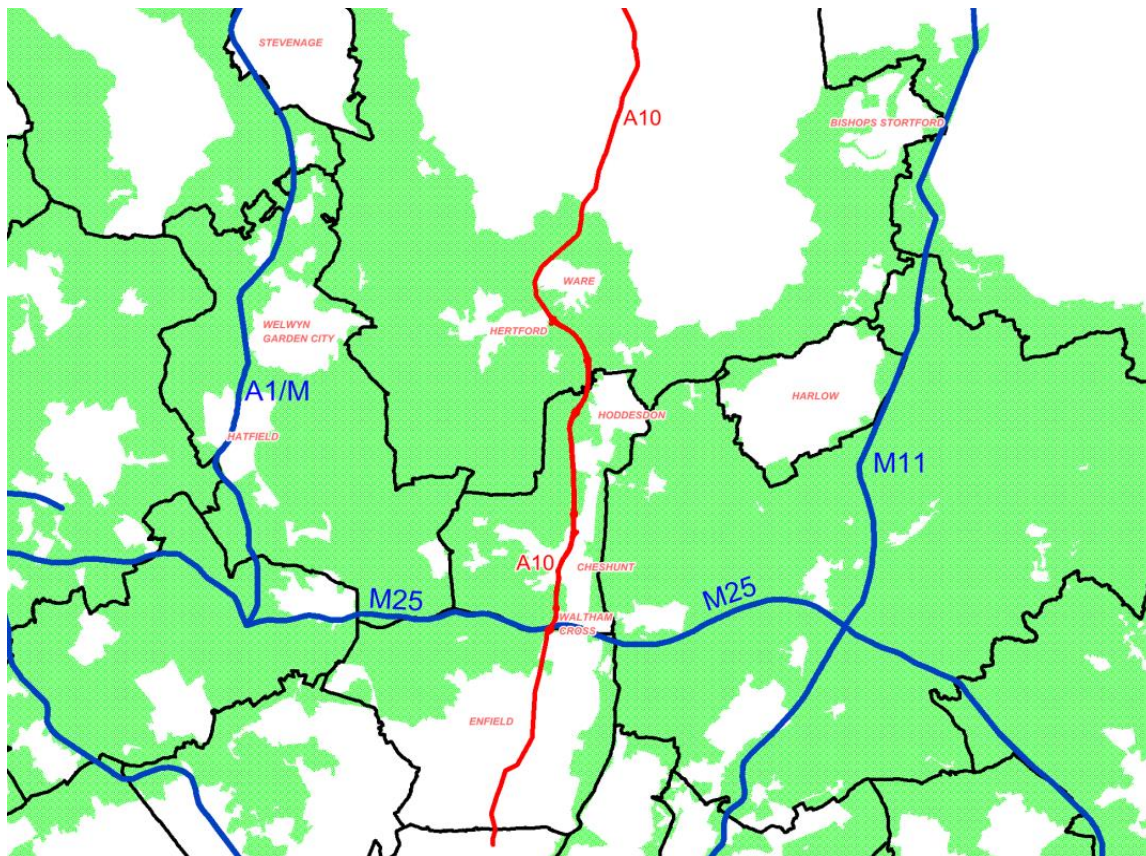
Hertfordshire County Travel Survey 2015 - Broxbourne District Profile



Opportunities for walking and cycling in Broxbourne:

**Large number of local trips:** the distance which people are prepared to walk and cycle depends on a range of factors including the individual, the nature of the trip, and indeed the weather. However, the Hertfordshire Travel Survey shows that a large number of trips in Broxbourne are local (less than 5km), a distance at which walking and cycling becomes a viable option for significant numbers of people.

**Geography:** the pattern of development in the borough is more characteristic of outer London than of Hertfordshire, including contiguous developments with connecting routes along lit streets. This contrasts with much of the rest of Hertfordshire, which comprises separate towns and villages with little opportunity for inter-settlement movement on foot or by bicycle. The diagram below shows the settlements outlined by Green Belt and the connection between settlements in Broxbourne along the A10, and the connection between Broxbourne and London. The compact nature of the borough (measuring only 20km by 10km) is also conducive to walking and cycling.



**Topography:** the majority of the borough east of the A10 lies within the Lee Valley basin and is therefore flat and ideally suited to easy walking and cycling, as well as being located near to the majority of key destinations including secondary schools, town centres, and railway stations. The exception is the west of the borough including Goffs Oak and Hammondstreet, which are also located furthest from services and facilities and where the opportunities for walking and cycling are more limited (although electric bicycles could offer opportunities here).

**Proximity to outer London:** Waltham Cross in the south of the borough is directly adjacent to the northern parts of the London Borough of Enfield, including employment areas such as Innova Park as well as large residential areas. For some residents of northern Enfield Waltham Cross provides their nearest town centre. Increased usage of the M25 crossings has the potential to significantly reduce the potential of car-based local trips.

**Local shops and facilities:** the borough contains a wide range of local shops and facilities, notably at the three main centres of Hoddesdon, Cheshunt Old Pond, and Waltham Cross. Proposals for Brookfield Riverside, located at a site which can be made easily accessible from both sides of the A10 on foot or by bicycle, means that in future there will be less need for borough residents to travel by car outside the borough for entertainment and leisure needs.

**West Anglia Main Line:** with the proposals for Crossrail 2 it is likely that there will be a long-term increase in usage of the railway in the borough, particularly at the proposed Crossrail 2 stations (Broxbourne, Cheshunt, and Waltham Cross). Given the constrained nature of the environs of the railway station, significant expansion of station car parking is not realistic and therefore it is anticipated that walking and cycling to the stations will become the preferred method of travel to the stations for many borough residents.

### Electric Bikes

Technical innovation in the field of electric bicycles means that cycling to work can be a realistic alternative for the majority of able-bodied people of whatever age who live within a 5-10km radius of their workplace.



Given the large number of residents who also work within the borough of Broxbourne, or nearby in Enfield, electric bikes therefore offers significant potential for switching of short commuter journeys away from the car. There are numerous advantages to electric bicycles, also known as e-bikes or pedelecs, as an efficient means of commuting to work:

- able to travel in cycle lanes, unlike light motorbikes
- a reliable e-bike with a decent range can be purchase for around £800
- less than a light motorbike and with no insurance, MOT or service costs
- can be recharged using a conventional plug socket at home;
- comfortable at speeds of 12-15mph with minimal effort;
- no driving license required.

There are a number of barriers to walking and cycling in Broxbourne:

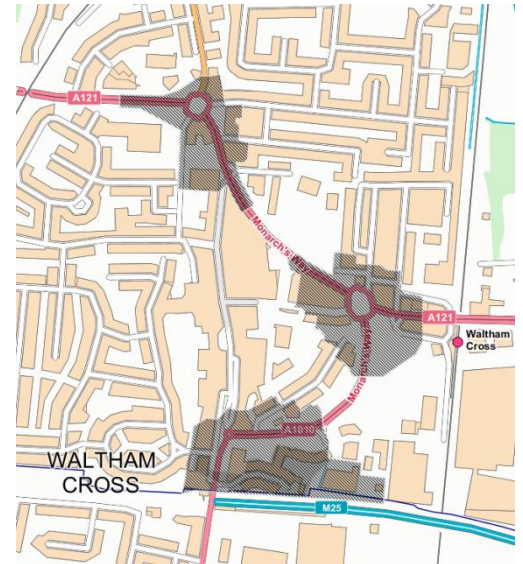
**Physical barriers:** there are a number of physical barriers which can discourage walking and cycling, most noticeably the A10 and the M25, but also some local roads such as the Dinant Link Road in Hoddesdon. The proposed closure of level crossings on the West Anglia Main Line means that access to the Lee Valley Regional Park and its network of leisure walking and cycling paths could become more difficult.

**Poor air quality:** queuing traffic at junctions causes poor air quality. Air Quality Management Areas have been designated in Waltham Cross (see right), and recently additional AQMAs have been designated along the A10 and the A1170.

**Hazardous walking and cycling conditions:** the volume of traffic on a number of Broxbourne's local roads means that there is a perception that walking and particularly cycling is unsafe. An example of this is the A1170 (see photograph below), which although



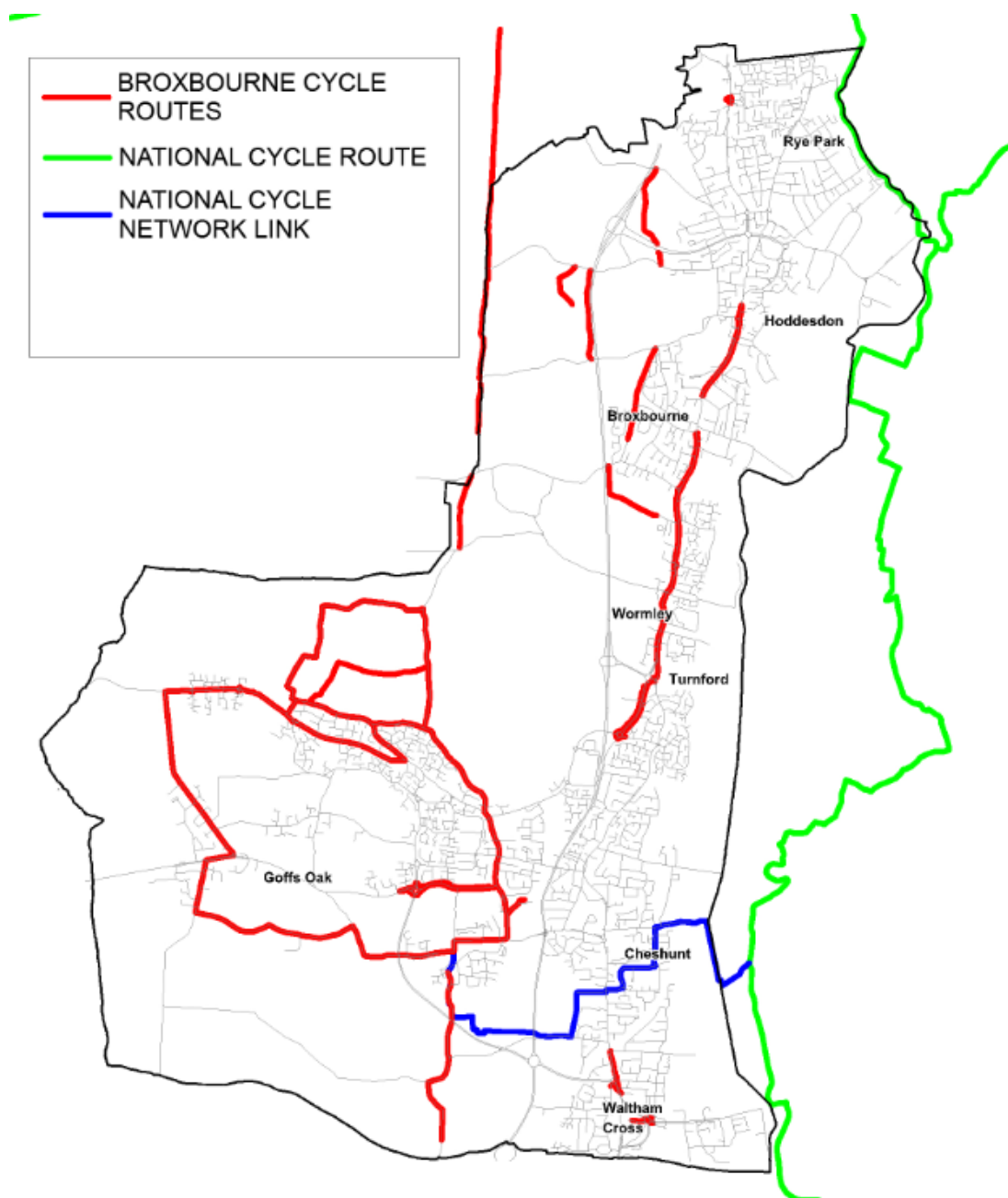
it has a cycle lane painted on the road can feel particularly hazardous because of the proximity of fast-moving traffic and parked cars in the carriageway. Car dominance can also discourage pedestrian movement in key shopping centres, for example at Cheshunt Old Pond.



**Poor facilities for cyclists:** although there are secure cycle parking facilities at Broxbourne and Cheshunt stations, in general provision for cyclists in the borough is poor. There are some token cycle parking locations dotted around, but these are generally poorly used because of concerns about security, and lack of cyclists due to hazardous cycling conditions.

**Fragmentation of existing walking and cycling routes:** over the years a number of local improvement schemes have been implemented, but in general these do not currently form a coherent cycle network, as shown in Figure 2 below. Good examples are the segregated cycle lane on the A1170 Great Cambridge Road as far as Beltona Gardens, and the cycle Lane past Goffs School at Goffs Lane. The only continuous cycle path in the borough is the route shown in blue linking Cheshunt station and St Mary's School/Dark Lane (shown in blue). A number of routes shown in red have previously been identified as cycle routes but in a number of cases (for example, Newgatestreet Road, Silver Street, Park Lane) there is no evidence of cycling infrastructure on the ground.

**Figure 2: Existing cycle network**



Source: Hertfordshire County Council

**Anti-social behaviour:** there have been incidents of anti-social behaviour in some of the quieter residential areas of the borough such as motorbike joy-riding and littering of residential gardens. The Council has addressed this in the past through the erection of physical barriers to motorbikes which also has the effect of discouraging cycling. In addition there are a number of underpasses of major roads (for example at Dinant Link Road, Hoddesdon, and at Monarch's Way, and Junction 25 of the M25 which feel unsafe and are uninviting. The Council has tried to improve some of these facilities by providing at-grade alternative crossings at Dinant Link Road and CCTV cameras and planting at the 3-way underpass at Eleanor Cross Road in Waltham Cross.

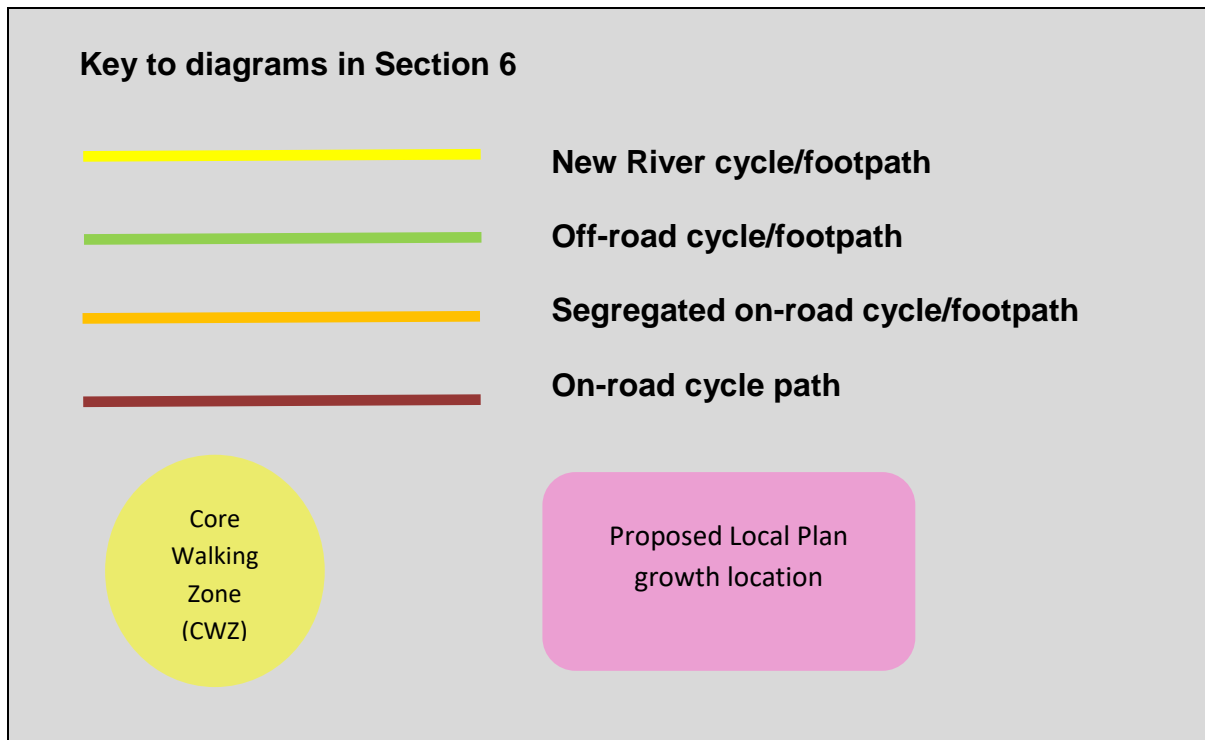
**Social attitudes:** inactivity has become an ingrained habit amongst large sections of the population nationally, and Broxbourne is no exception. Such attitudes are rooted in busy modern lifestyles and made possible by the cheapness of car travel. Amongst younger people walking and cycling may appear 'uncool': the social aspiration is to drive a car. Many people currently do not contemplate alternatives to the car, even for short journeys. Local traffic congestion may however present an opportunity to change such attitudes.

**An aging population:** in common with the rest of the country, the population of Broxbourne is aging. Whilst it is not to be expected that the very elderly or infirm should necessarily cycle, the health benefits of a daily walk as a form of gentle exercise are well established. Where this involves walking to a meeting place such, it can also have beneficial effects in terms of reducing isolation. For people in their 50s and 60s electric bicycles offers a realistic way of extending the possibilities beyond those offered by conventional bicycles.

**Bicycle ownership:** The Country Travel Survey 2015 indicated that rates of bicycle ownership in the Borough are lower than for Hertfordshire as a whole, at 31% for females (compared with 43% in Hertfordshire) and 48% of males (compared with 59% for Hertfordshire).

## 6. Proposals

This section proposes a range of measures at key points in the borough. It identifies proposals for each of the Local Plan development sites, town centres and priority cycle corridors. Diagrams have been prepared to indicate the broad location of proposed interventions for each of these areas, the key to which is shown below:



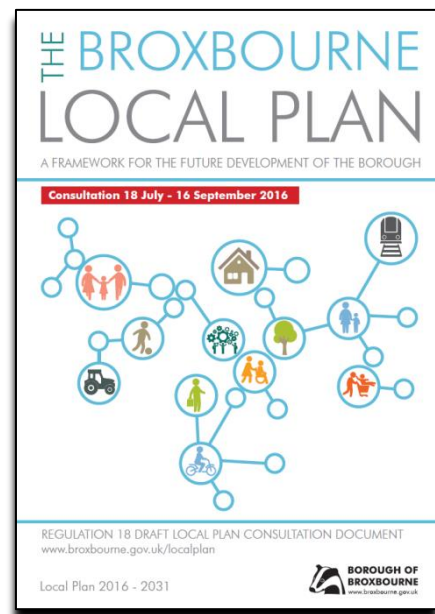
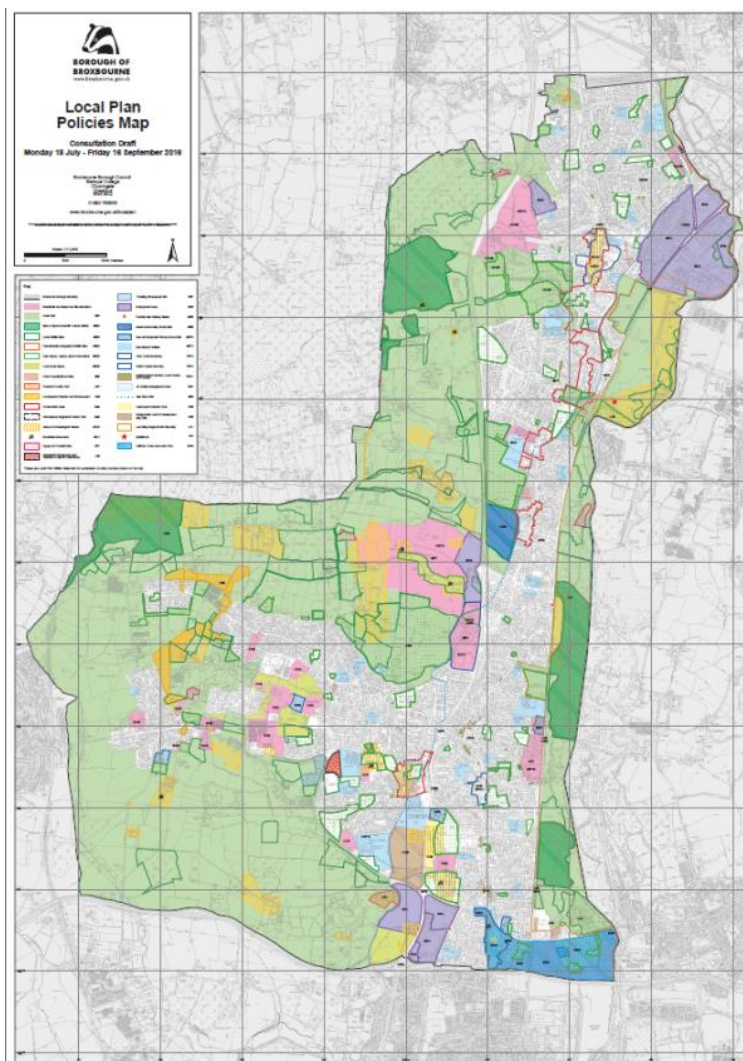
In addition to the physical measures shown in the diagrams, a number of measures are proposed for schools, leisure, rail and bus stations, and workplaces. These involve a mix of physical measures (such as providing improved facilities) and other measures such as education/promotion of the benefits of walking and cycling and the available opportunities. Finally, there are proposals for a range of local initiatives to improve the quality of the walking and cycling environment, including barrier replacement, improved lighting, improved signage.



## 6a. Local Plan Development Sites

Potential for active travel formed an important consideration in the site selection process for all the sites proposed in the draft Local Plan. A criteria-based approach was used to assist in the identification of appropriate locations, including minimising the need to travel by car, inclusion of and/or accessibility by public transport to a variety of destinations, walking and cycling connections, and accessibility to a range of services and facilities.

The following section sets out priorities for investment in physical infrastructure and designation/signage of a suitable network of walking and cycling routes, connecting the development sites with key destinations and providing alternatives to the car.



For more details see [www.broxbourne.gov.uk/localplan](http://www.broxbourne.gov.uk/localplan)

## Brookfield Riverside and Brookfield Garden Village

Brookfield is currently a car-dominated out-of-town retail park, characterised by large areas of surface level car parking. The draft Local Plan proposes to create a new town centre at Brookfield Riverside adjacent to the New River, comprising a mix of retail, leisure, employment and civic uses, as well as residential dwellings.

The Local Plan states that Brookfield Riverside will be characterised by “a series of interconnected public spaces and squares as well as a pedestrianized shopping street creating a stimulating pedestrian environment.” Brookfield Garden Village will be closely linked to the town centre, and the construction of a new primary school and attractive pedestrian and cycle linkages will encourage active travel rather than car usage.



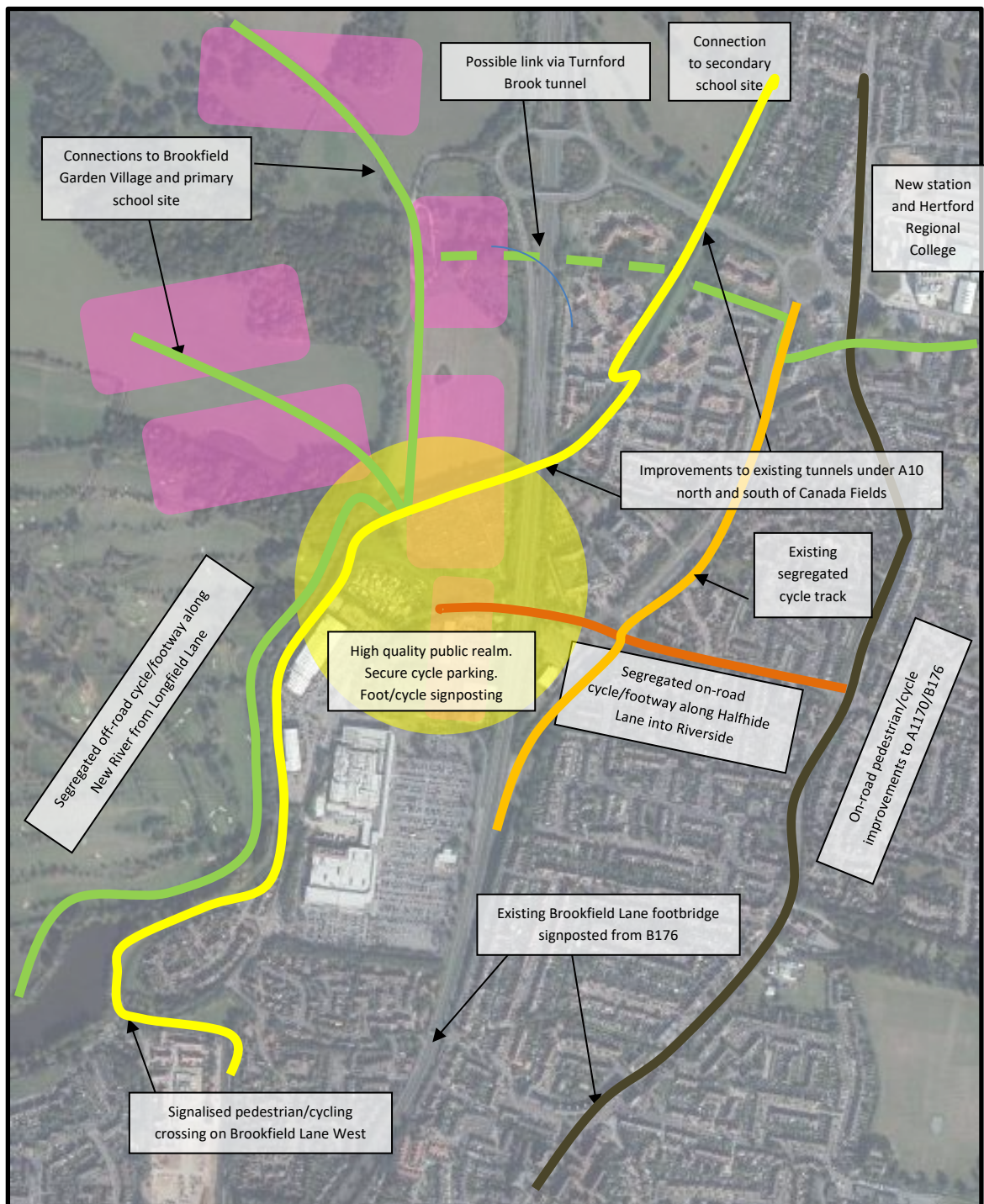
One of the most important spaces will be located around the New River which will provide a key corridor for both pedestrian and cycle access, including access into the town centre. From the south a new walking and cycling route is proposed on Council-owned land from Park Lane/Longfield Lane along the north bank of Cheshunt Reservoir and along the tree-lined riverbank into the heart of the new town centre. An unattractive subway parallel with the New River under the A10 will be properly lit and signposted and high levels of usage will make it feel safe.

Halfhide Lane is currently a busy main road but the construction of an alternative link road will enable the existing alignment of the route to provide easy access into the heart of the town centre from the east of the A10, and the construction of a segregated cycle lane under the A10 will encourage arrival by bike.

There is the potential for a further walking and cycling corridor using a large tunnel under the A10 at Turnford Brook, which could provide non-car access to the proposed Secondary School Site at Church Lane Wormley, utilising a connection via another stretch of the New River. Finally, there is an existing footbridge across the A10 at Brookfield Lane which provides access to Brookfield from Cheshunt Wash and should be better signposted.



**Figure 3: Walking and Cycling opportunities in the Brookfield Riverside area**



Source: Bing Maps

## Cheshunt Lakeside

The draft Local Plan proposes a 'mixed use urban village' at this site, currently the existing Delamare Road employment area, to include around 1,750 new homes. The site benefits from close proximity to Cheshunt station, from where rapid train services provide access to both London and Cambridge. The draft Local Plan proposes a mix of uses on the site, including a primary school and a local centre as well as business space, meaning that there will be considerable potential for a number of facilities to be accessed on-site without the need to travel.

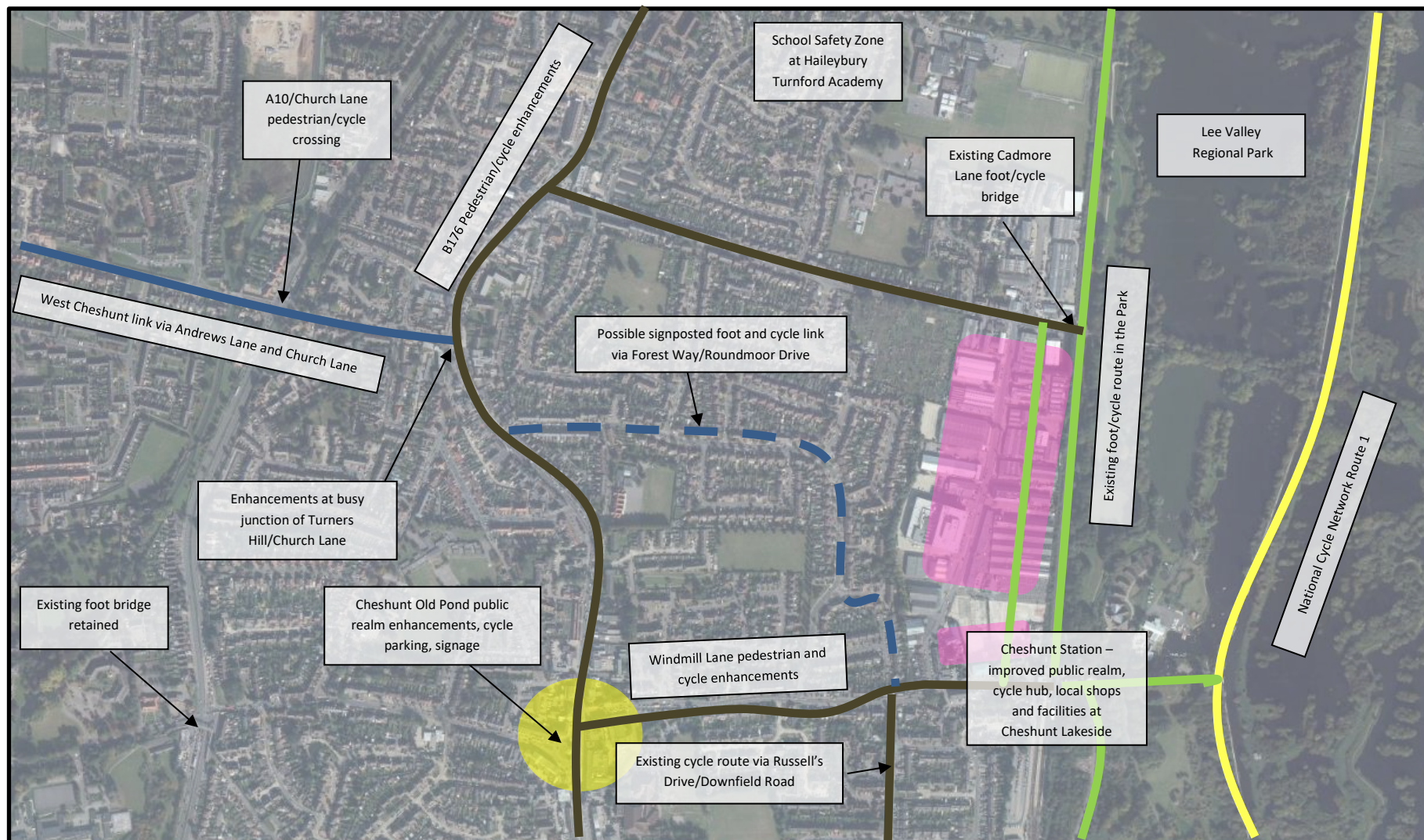
The emerging masterplan for the development proposes a green walking and cycling corridor north-south through the development, and secure cycle storage for residents and public seating areas will be provided, including a public walking route in a green wedge along the watercourse forming the western edge of the site.

The Lee Valley Regional Park is located adjacent to Cheshunt Lakeside to the east. Existing routes through the park provide cycle connections north and south, including to Hoddesdon and Waltham Cross and further afield, providing highly attractive leisure and potentially also commuter cycling routes. There are also good connections east across the park to settlements such as Nazeing and Waltham Abbey in Essex. There is currently a cycle bridge at the Cadmore Lane providing ramped access to the Park.

Cheshunt Lakeside lies approximately 600m east of Cheshunt Old Pond District Centre along Windmill Lane, a 5-10 minute walk for an able-bodied person. Given the width of Windmill Lane towards the western end there is potential for tree planting and greening of this route to provide shade and make it more attractive to walkers. With traffic speed restrictions it would also be an attractive cycle route connecting the Old Pond with the Lee Valley Regional Park.



**Figure 4: Walking and Cycling opportunities in the Cheshunt Lakeside area**



Source: Bing Maps.

## **Rosedale Park**

Rosedale Park is a Local Plan proposal to integrate open spaces with existing and planned residential areas to create a sense of identity for the area, based around a new public park and with Rosedale Sports Club at its heart. Rosedale Park North will provide a new public park at Rags Brook, and Rosedale Park South constitutes an area of semi derelict glasshouses.

The development will be structured around public rights of way through open space/green infrastructure networks which will provide access throughout the area, including to a new primary school north of the sports club, and encouraging local trips on foot and by bicycle.

A number of walking and cycling linkages with the surrounding residential areas are proposed, including from Goffs Lane and through Claremont open space to the south, along the western edge of the sports ground and from Peakes Way to the north, and along the eastern and southern edges of St James'.

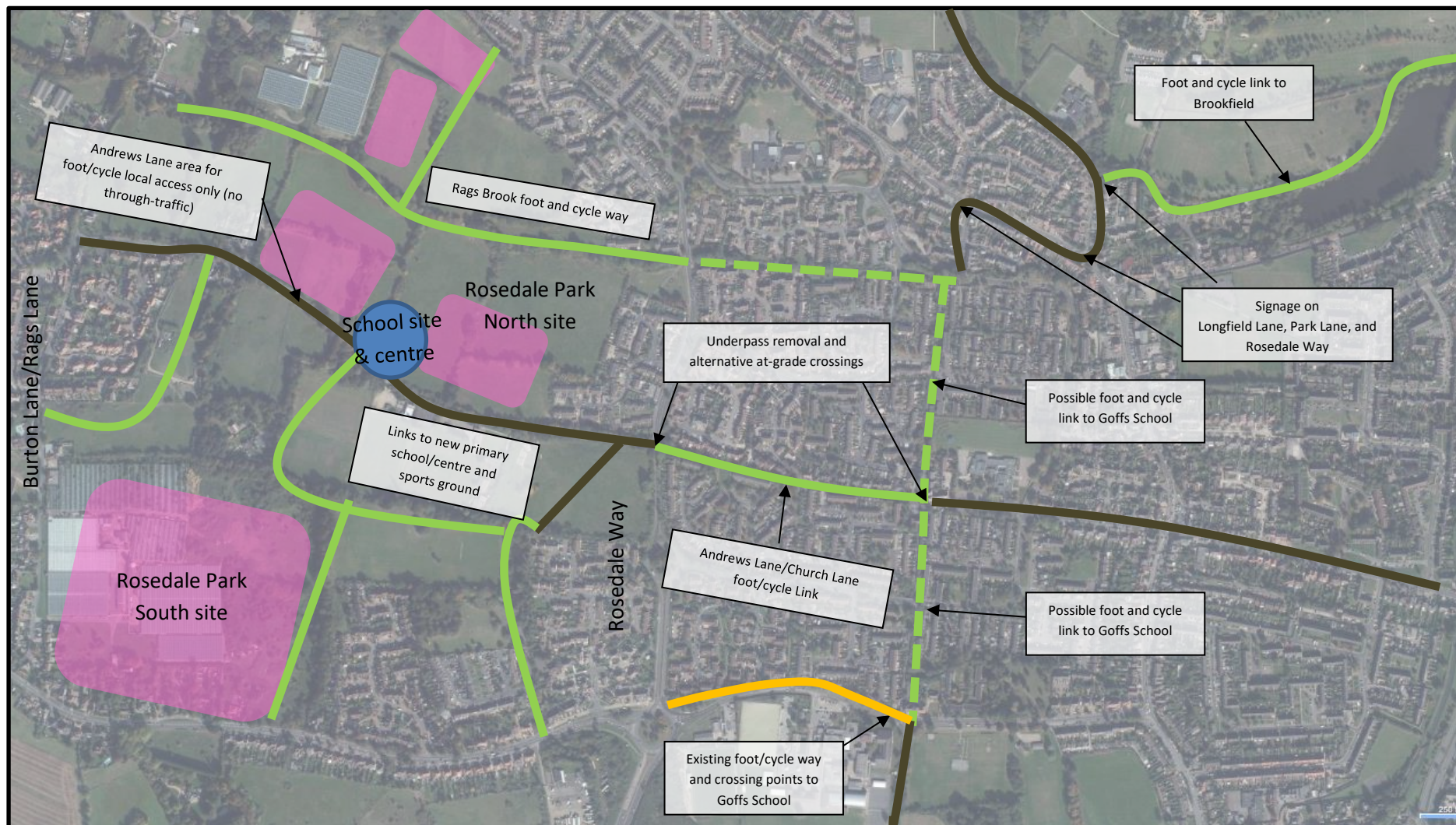
In addition to local linkages through Rosedale Park, there are two east-west strategic cycle corridors which are addressed further below.

Firstly, Andrews Lane provides a quiet, leafy route from Newgatestreet Road, Goffs Oak, to Church Lane, running between the northern and southern parts of the proposed Rosedale Park development. This route forms part of strategic cycle corridor which has the potential to connect the area with Cheshunt east of the A10 via an at-grade signalised pedestrian and cycle crossing of the A10 proposed in the draft Broxbourne Transport Strategy.

Secondly, Rags Brook will form the focus of the Rosedale Park North development, and the creation of a new public right of way along the brook offers the potential for a continuous pedestrian and cycle route connecting with Longfield Lane and on to the new Town Centre at Brookfield via the north bank of the Cheshunt Reservoir.

There are a number of obstacles along both routes, including an underpass and metal barriers at Andrews Lane/Rosedale Way and restricted widths at Rags Brook east of Rosedale Way. However, it appears likely that direct connections can be provided, which would provide attractive traffic-free pedestrian and cycle routes connecting residential areas with key destinations. This will need to be confirmed through feasibility work prior to consultation on detailed proposals.

**Figure 5: Opportunities for walking and cycling in the Rosedale Park/West Cheshunt Area**



Source: Bing Maps

## Park Plaza

This greenfield site is located west of Junction 25 of the M25, and is proposed for up to 10,000m<sup>2</sup> of business floorspace. It is being promoted to the types of industries that are prevalent and seeking space within the London Stansted Cambridge Corridor. There is an existing segregated cycle path along the southern edge of Winston Churchill Way which provides direct route to Park Plaza West from the B176.

Walking and cycling connections are proposed via Great Eastern Way between the site and a new railway station at Park Lane, and Waltham Cross town centre beyond. There is an existing toucan crossing of the A10 at Great Eastern Way which connects with the Public Right of Way which crosses the site to the New River past the listed historic buildings at Theobalds Park Farm. However, given the anticipated volumes of foot and cycle traffic wishing to cross the A10 as the site is developed it is considered that a new ramped foot and cycle bridge similar to the Paul Cully cycle bridge to the north should be provided to replace the toucan crossing in this location.



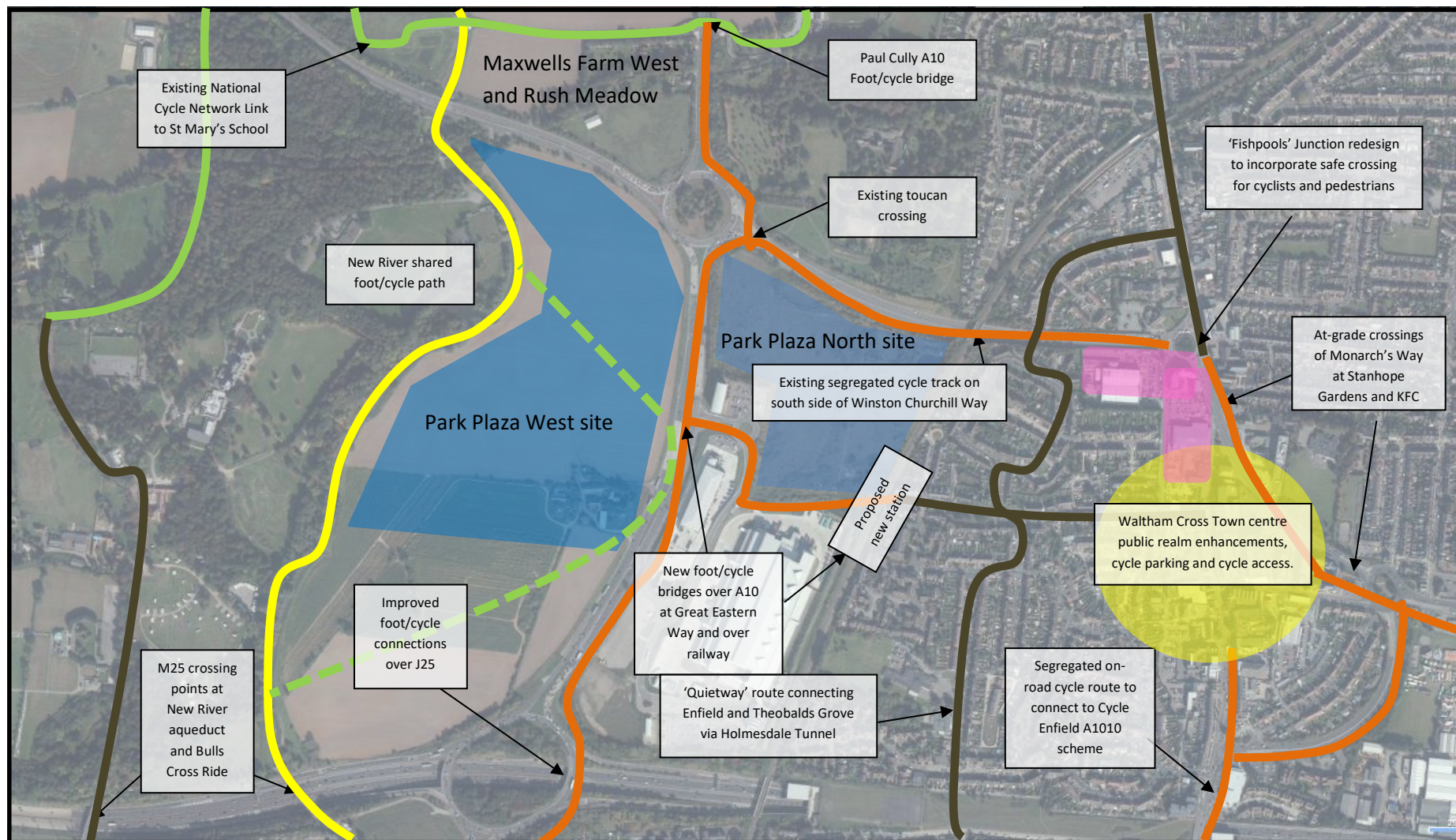
Prior to construction of the new station, it is anticipated that a proportion of workers and visitors to the site will arrive via the nearest existing station at Theobalds Grove. There is an existing cycle bridge over Winston Churchill Way which provides a pleasant route to Park Lane through existing residential neighbourhoods. Funding for a new ramped foot and cycle bridge has been

agreed and a preferred location identified.

The New River forms the western perimeter of Park Plaza West and should form a strategic walking and cycling route connecting the site with Enfield to the south and Cheshunt to the north. Enfield Council proposed creation of this route as part of the Cycle Enfield scheme, and has funding from the Mayor of London to implement the proposal.



**Figure 6: Walking and cycling opportunities in the Park Plaza and Waltham Cross Area**



Source: Bing Maps

## High Leigh Garden Village and Hoddesdon

Planning permission has been granted for up to 523 new homes, a residential care homes, a new primary school, a community hub contained a shop, hotel, restaurant, gym and office space, numerous green spaces and a network of walking and cycling routes. It lies adjacent to the Merck Sharpe and Dohme pharmaceuticals centre, a major employer in the borough.

Bramble Lane is an existing Public Right of Way through the centre of the site. It joins Hertford Road near the A10 on the northern edge of the site and passes underneath an elevated section of the A10/Dinant Link Road before emerging onto Lord Street. It is proposed that a 20mph zone should be enforced on Lord Street and signage erected to encourage usage of the street into cycle usage into the town centre. Beech Walk

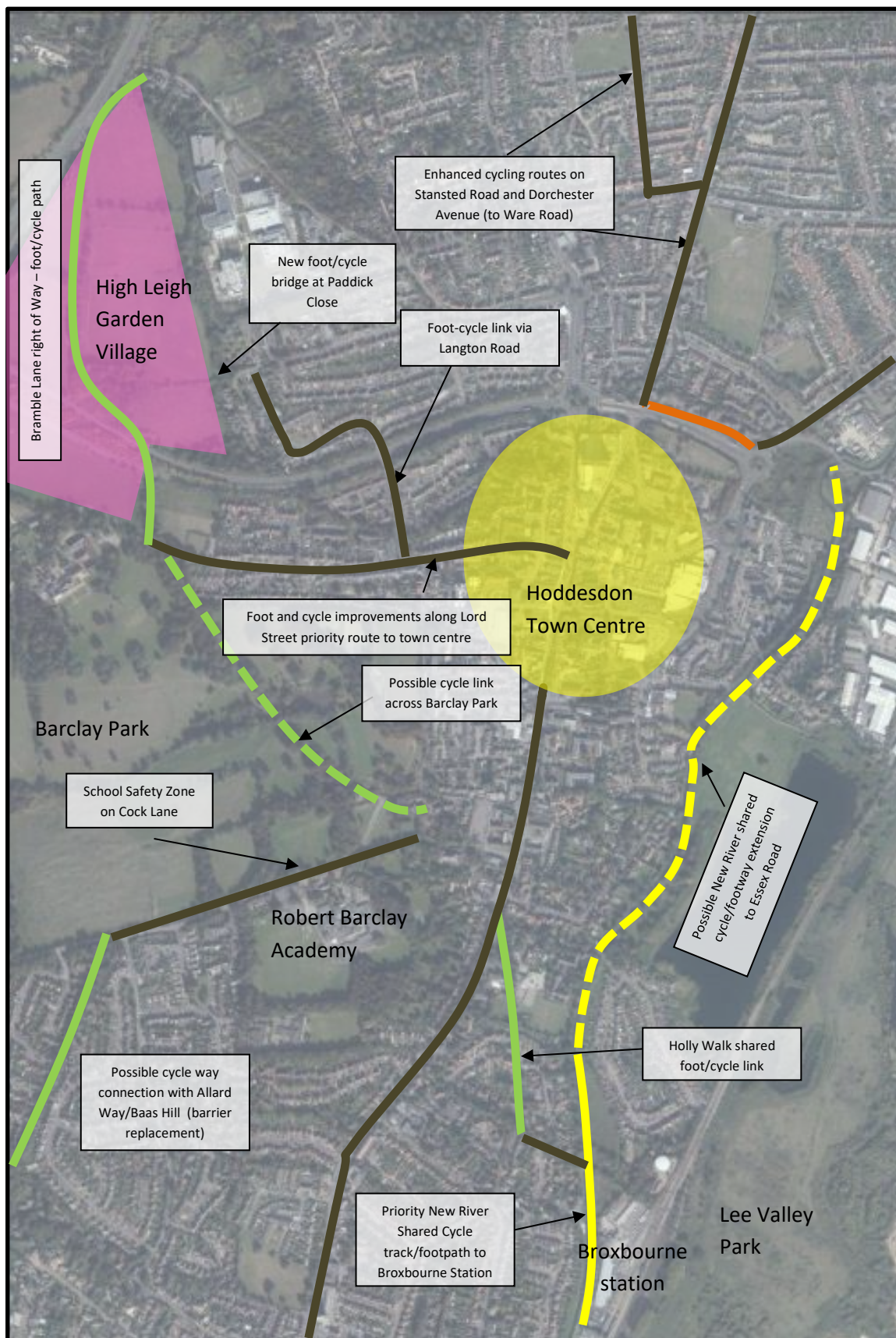
provides an attractive parallel alternative route to the town centre along the northern edge of Barclay Park for pedestrians only.

A foot and cycle bridge is planned to connect the High Leigh with Paddick Close across Woollen's Brook.



From here Langton Road provides a quiet residential street crossing the A10/Dinant Link Road and connection to Lord Street and the town centre. This forms part of a longer strategic cycle corridor as far as Broxbourne station, as set out in Section 6g below.

**Figure 7: Broxbourne, Hoddesdon and High Leigh**



Source: Bing Maps

## 6b. Key Centres

Hoddesdon and Waltham Cross are designated as Town Centres in the Local Plan retail hierarchy, and Cheshunt Old Pond is designated as a District Centre. This section addresses the town centres and the district centre as these are considered to be major destinations in their own right.

### **Hoddesdon Town Centre**

Hoddesdon Town centre offers a good range of shops and facilities. The High Street provides an attractive destination and there are areas of existing high quality public realm between Conduit Lane and Brewery Lane. Secure town centre cycle parking and potentially electric bike charging points could encourage a higher proportion of cycle trips, as would lowering of vehicular speed limits and clear designation of cycle corridors along key routes into the town centre such as Stansted Road and Lord Street to enable easy connections from High Leigh Garden Village.

The town centre is within easy walking distance of much of the extensive residential areas of Hoddesdon, and there are pleasant walking routes into the town centre from the west and south, although better signposting would help encourage more walkers. The Dinant Link Road provides a barrier to the north but there are already at-grade signalised crossing points in addition to the underpasses. To the east there are subways under Charlton Way but supplementing these with at-grade signalised crossings would make for a more pleasant and attractive trip into the town centre.

Figure 8: Walking and Cycling Opportunities in Hoddesdon Town Centre



Source: Bing Maps

## Cheshunt Old Pond District Centre

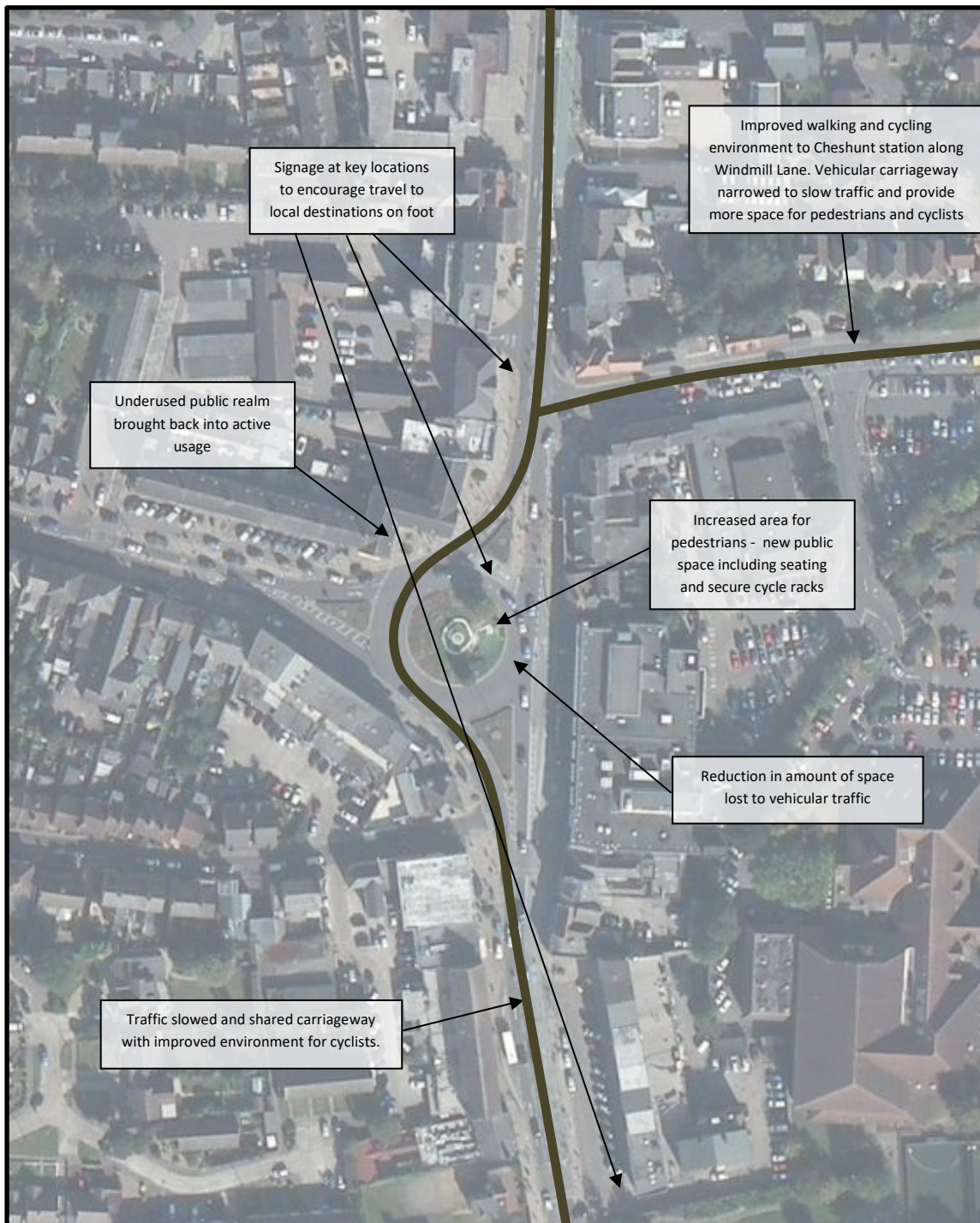
The Old Pond offers a reasonable range of convenience shopping as well as the grand Victorian Cheshunt Library and the adjacent Cheshunt Community Hospital. However, the Old Pond suffers from its current role as a major highways junction between College Road and the B176/Turners Hill. As a result the public realm suffers, the roundabout/fountain is inaccessible, and crossing on foot between shops on opposite sides of the roundabout is slow and unattractive.

The draft Borough-wide transport strategy proposes to implement a 20mph speed limited on the B176 to divert the majority of through-traffic onto the A10. Slower traffic speeds as part of a public realm-led strategy for the area also make the junction and the approach roads more attractive for both pedestrians and cyclists.



Slower traffic speeds also present an opportunity to reconfigure the junction and improve the public realm to create a market place, events space, or pocket park within which the fountain can be retained but made more accessible and attractive as a destination, with trees planted to provide shade and greenery to encourage visitors to linger. Replacement of the roundabout would also offer the advantage of reducing the length of time needed to cross the junction, integrating the shops and creating a sense of place, improving the area's attractiveness as a destination. As with other town centres, secure bicycle parking and electric bike charging points would encourage cycle trips. Detailed design proposals and options will need to be evolved in consultation with the local community and businesses as the basis for production of a Town Centre Strategy similar to those already produced for Hoddesdon and Waltham Cross.

**Figure 9: Cheshunt Old Pond Opportunities for improved walking and cycling**



Source: Bing Maps

## Waltham Cross Town Centre

The town centre offers a good range of both convenience and comparison shopping and a pedestrian precinct around the historic monument of the Eleanor Cross Memorial.

The *Waltham Cross Town Centre Strategy (2015)* proposes the creation of a new Town Square at the area to the south of the town centre known as 'the roundel', creation of a linear park/boulevard on the northern High Street and Eleanor Cross Road past the bus station, new/improved street furniture and street lighting, and cycle parking racks. The Strategy also proposes the limited reintroduction of vehicular traffic (following the successful implementation of similar scheme at Hoddesdon town centre), which would have the additional benefit of providing easy access for bicycle trips.

Severance caused by Monarch's Way discourages pedestrian trips to the town centre, and the existing pedestrian underpasses are uninviting.



Source: *Google Maps*

The Council already has plans for improvements to the subway complex at the Junction of Monarch's Way and Eleanor Cross Road, but plans will be prepared for the very unattractive and poorly lit subway at Stanhope Road. Future options for the road could include greening of the corridor through careful planting, possibly including green walls. These and other options will be considered through the proposed Waltham Cross Area Action Plan, which will address the considerable opportunities for sustainable transport in the area.

Connections with the proposed Cycle Enfield corridor along the A1010 as to Mollison Avenue/Bullsmoor Lane could attract pedestrians and cyclists from residential areas of northern Enfield, to which Waltham Cross is the nearest town centre. Improved walking and cycling connections between the town centre and both Park Plaza and Waltham Cross Station should be implemented.



**Figure 10: Walking and Cycling Opportunities in Waltham Cross town centre**



Source: Bing Maps

## **Goffs Oak**

Relatively steep gradients from Goffs Oak to the east along Goffs Lane limit the attractiveness of this route to all but the most energetic cyclists, although improved take-up of ebikes could help to overcome this challenge. There are a number of opportunities to promote walking and cycling in the local area arising from local trip generators, and also opportunities to promote leisure cycling in the rural area.

There is considerable scope for public realm improvements in the village centre in conjunction with improvements to the existing mini roundabout proposed as part of the wider transport strategy. This work is likely to be progressed through the proposed village improvement plan.

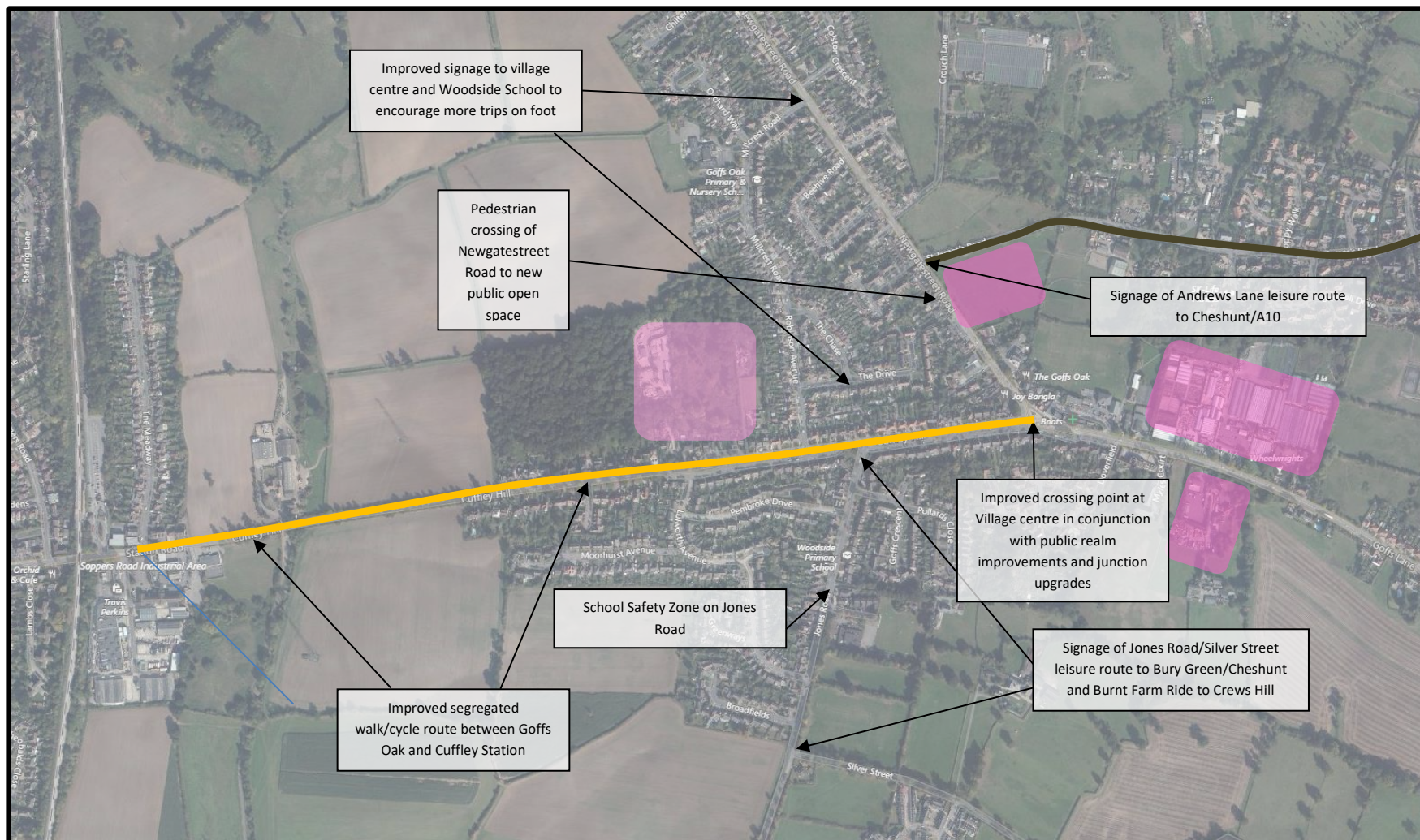
Goffs School lies approximately 2km west of the village centre therefore within walking distance of the nearer parts of the village. However the steep gradient on Goffs Lane may deter students from cycling home and therefore travel by bus and on foot are probably more realistic alternatives to the car. Improved signage could help in this regard.

The Local Plan proposes to expand Woodside Primary School from 1 Form of Entry (FE) to 2FE by expanding the school to the east. This means that there should be a long-term decline in the number of children from Goffs Oak needing to travel to Cuffley School, and a corresponding increase the number of local walking trips within the village. There is an existing desire line for school trips from the north of the village via Millcrest Road, Robinson Avenue, The Chase, and a pedestrian cut-through from The Drive to the pedestrian crossing on Cuffley Hill. Improvements to this route and better signposting/promotion could encourage more scooting/cycling to school with parents on foot.

Cuffley station lies approximately 1.5km west of Goffs Oak village centre. There is a wide footway along most of the route and this could be improved and walking and cycling encouraged with investment in improved infrastructure along this route. Contributions should be sought from the proposed developments in the village to enable the implementation of this infrastructure.

There are a number of potential leisure routes from the village for more energetic cyclists, including Silver Street to Bury Green, St James Road/Andrews Lane, and the wide footway along Newgatestreet Road for access to rural roads in the Broxbourne Woods area. Each of these could be better promoted and signed.

Figure 12: Walking and Cycling Opportunities in Goffs Oak

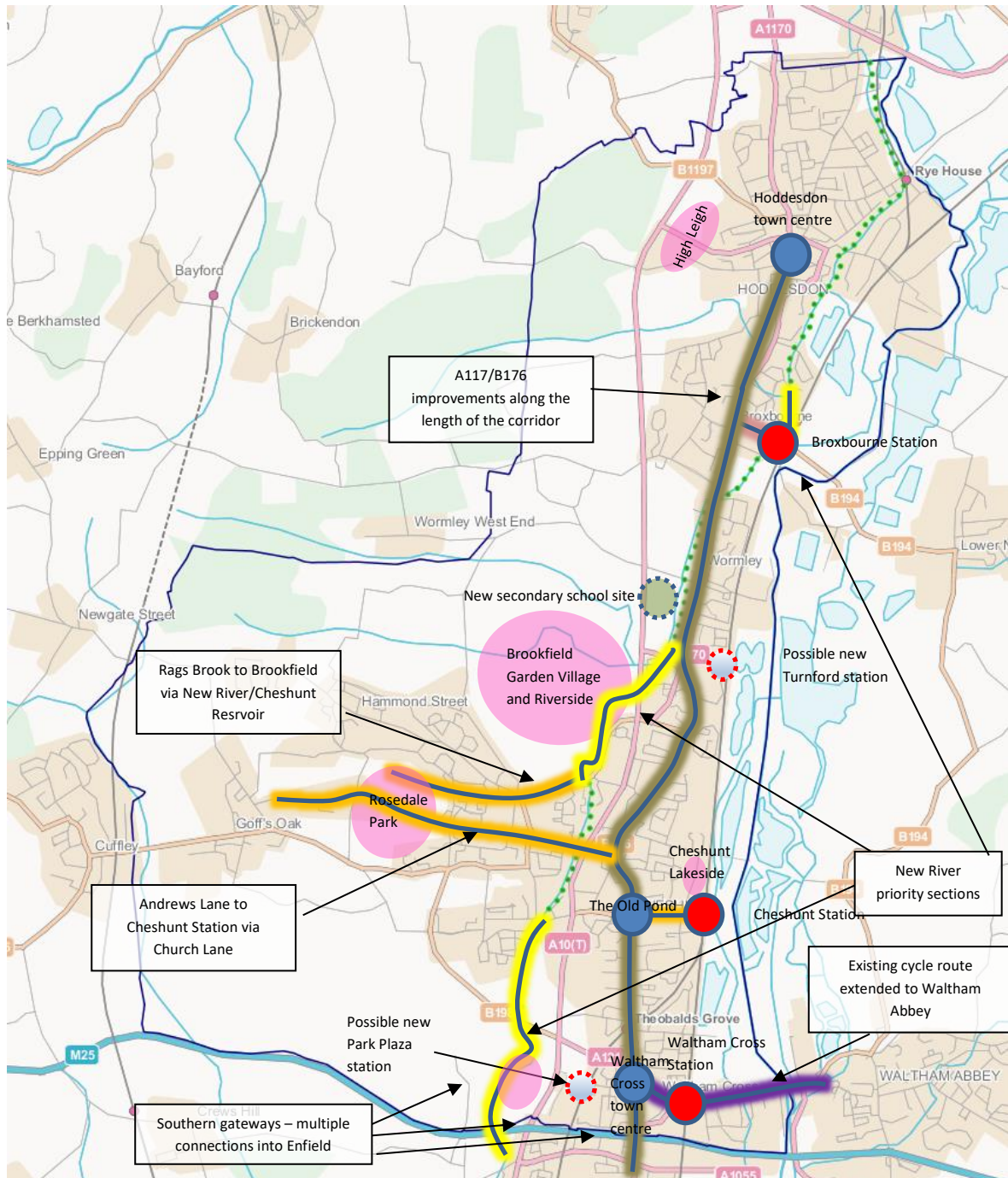


Source: Bing Maps

### 6c. Strategic Cycle Corridors

The creation of a network of high-quality cycle corridors connecting new and existing residential areas with key destinations. A detailed plan of strategic cycle corridors is provided in Appendix B and a high-level plan is shown below.

**Figure 13: Strategic cycle corridors**



A brief description of the proposed areas for investment is provided below.

- **A1170/B176 (old A10):** Linking key destinations including the town centres, schools, workplaces, and residential areas. The draft Broxbourne Transport Strategy proposes 20mph speed limits on the corridor in order to discourage through-traffic. This offers an opportunity to provide a safer on-road environment for cyclists, replacing the existing narrow cycle lanes. Feasibility studies may indicate the potential for more advanced schemes such as segregated cycle lanes similar to the A105 scheme in Enfield (see page 45)
- **Andrews Lane/Church Lane:** east-west corridor linking Goffs Oak, the Rosedale Park development site, Cheshunt, and the stations. The Draft Transport Strategy proposes signal timings and configuration of the Church Lane/A10 junction to create a safe at-grade crossing of the A10 for cyclists and pedestrians;
- **Rags Brook.** Linking Rosedale Park to Longfield Lane and joining up with the Brookfield Riverside route along Cheshunt Reservoir;
- **Cheshunt Reservoir.** Create a new a pleasant, safe, off-road route from Longfield Lane into Brookfield Riverside for pedestrians and cyclists;
- **The New River.** Priority sections from College Road to the M25 to link development sites with Enfield Borough Council's New River proposals; the approaches to Brookfield Riverside from north and south as far north as Church Lane Wormley to provide access to the proposed secondary school site; and implementation of current proposals at Broxbourne station;
- **Lee Valley Regional Park.** Working with the Park Authority to provide the 'missing links' in an off-road summertime alternative to the old A10 from Hoddesdon to Waltham Cross, including Spitalbrook and Britannia Nurseries;
- **Southern Gateways** - multiple routes into the London Borough of Enfield to provide an alternative to congested car routes. Routes to include A1010 Waltham Cross; A10 at Park Plaza using planned improvements to existing cycle crossing of Junction 25; Bulls Cross Ride; the New River; the River Lee; and possibly the Small River Lee to Mollison Avenue (subject to feasibility).

The cost of implementing all of the above routes significantly exceeds the currently available funding and therefore the Council will use this Strategy as a basis for future bids for funding to implement the above measures over the lifetime of the Local Plan (i.e. 2018-2033).

The cost of providing a full network of cycle tracks as indicated above is likely to be upwards of £10m. Cost estimates are very hard to confirm at this early stage, and will require more detailed feasibility and costing work to ascertain the specific requirements. The cost of providing a 3m wide segregated cycle track is around £300,000 per km<sup>2</sup>, although on-road routes will be considerably less.

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<sup>2</sup> Source: Broxbourne Transport Strategy, WYG

Table 1 below indicates the approximate distances involved for each of the main proposed cycle routes and the type of facility required.

**Table 1: Strategic cycle corridor type/distance**

Location	Off-road segregated (km)	On-road segregated (km)	On-road not segregated (km)	Total (km)
A1170/B176	-	2	6	8
Andrews/Church Lane	0.2	0.5	2.4	3.1
Rags Brook – Longfield Lane	1.2	0.2	-	1.4
Cheshunt Reservoir - Brookfield	1.5	-	-	1.5
New River – priority sections	6	-	-	6
Lee Valley Regional Park	3	-	-	3
Southern gateways	1	3	-	4
<b>TOTAL</b>	<b>12.9</b>	<b>5.7</b>	<b>8.4</b>	<b>27</b>

### Cycle Enfield

The London Borough of Enfield has been awarded £30m by the Mayor of London (supplementing £12m from the Council) to implement a network of cycle routes across the borough, with the aim of increasing cycling from the current levels of 1% of all journeys to around 5%. The proposals aim to create better streets and places in the borough's centres and connecting routes.

The A105 between Palmers Green and Enfield Town is the first major stretch of segregated urban cycle lane to be implemented (summer 2017)



*Residential parking has been moved away from the kerb to make space for segregated cycle lanes (above)*



*At local shopping parades on-street car parking has been relocated to side streets and a cycle phase has been introduced at major junctions (left)*

## 6d. Schools

School trips account for a significant proportion of car trips on the road network in the period 8am-9am and 3.30pm to 4.30pm. Increasing the proportion of walking and cycling trips to school would have significant benefits for child health and tackling child obesity as well as reducing pressure on the road network. A recent example of the way in which new cycling infrastructure can make a difference is provided in the box below.

### St Mary's High School

Broxbourne Borough Council developed a proposal for a new bridge, in conjunction with Hertfordshire County Council and Sustrans, designed to link together communities east and west of the busy A10. The new network extends to St Mary's School and Bury Green Road. The route was designed to provide a direct, convenient route to Waltham Cross town centre and nearby railway stations and amenities, giving all residents the same access to facilities.



### The difference

23,000 people living within half a mile of the bridge and paths now have easy access to schools and other amenities on foot and by bike. St Mary's High School directly benefits and over half of people using the route are children. Sustrans Schools Officer has encouraged more children to use the route by working directly within local schools to promote it. More people are cycling thanks to the route, with 1 in 10 people using it new to cycling.

*“Over a third of our schools population comes from the side of the road that is served by the footpath and bridge, so it has a big impact for us and I know that the parents and carers are very pleased that it is now in place. The bridge is a really important feature of our community. It has meant that our children can come to school safely and it allows more children to come and use these (St Marys School) facilities.”*

*- Stephanie Benbow, Head Teacher, St Mary's School*

A Youtube video about the new route to St Mary's is available at <http://tinyurl.com/yato3vm8>

A number of opportunities for encouraging walking and cycling to secondary schools have been identified, some of which may require infrastructure investment:

- **John Warner School, Hoddesdon:** speed restrictions and better cycle signage on Stansted Road could encourage cycle trips to school on this key route between Hoddesdon Town Centre and the school and sports centre/swimming pool.
- **Robert Barclay Academy, Hoddesdon:** there is an existing bridleway from Allard Way, Baas Hill, which could provide connections from the south. A potential all-weather walking/cycling connections across Barclay Park from the north should be investigated further;
- **Broxbourne School:** better signposting of walking routes through the residential estates surrounding the school.
- **Haileybury Turnford Academy:** adjacent to the Lee Valley Park Gateway which could provide summertime cycle access from locations to the north and south;
- **Goffs School:** there are two north-south paths through the residential area of Rosedale from the north which could be converted into cycle routes from the Hammondstreet area and Rosedale Park as well as the Andrews Lane Priority Cycle Corridor, subject to resolution of any community safety issues (see below). Dark Lane provides an existing cycle route from Bury Green to the south;
- **Cheshunt School:** a cycle route along the New River would provide connections from the existing St. Mary's cycle route to the south (connection with Waltham Cross) and provide safe access from the Council Offices to the north. The potential for a new zebra crossing on College Road should be investigated;
- **Proposed Secondary School Site, Church Lane, Wormley:** all-weather surfacing of the New River to provide safe summertime access from north and south, including potential extension into Brookfield through an existing tunnel under the A10 at the Turnford Brook;

**Three new primary schools** are proposed in the Local Plan as part of strategic development locations at Brookfield Garden Village, Cheshunt Lakeside and Rosedale Park. The design and masterplanning of these developments is being undertaken in a way that provides maximum encouragement to walking to school.

Thoughtless or dangerous parking by parent on the school drop-offs and collections is a common complaint of residents in the vicinity of schools and a combination of encouragement to walking and cycling combined with local parking restraint could improve the safety and environmental quality of local areas in this respect.

**School Safety Zones** were first developed to provide a safe highway environment for children entering and leaving school, this was to be achieved through highlighting the



presence of the school, reducing vehicles speeds to an appropriate level and restricting parking adjacent to accesses.

In most SSZs where a school lies in a 30mph speed limit area, an advisory 20mph speed limit will be introduced at school pick-up and drop-off times. Advisory flashing lights will warn people using the road of the 20mph limit. SSZs also aim to provide a similar 'identity' for the roads outside a school. When approaching drivers see the combination of signs and lines, they should immediately recognise their meaning and react accordingly.

**School Travel Plans** are developed, maintained and monitored by the whole school community, to promote and facilitate sustainable travel for the school journey. A STP sets out practical initiatives and measures to encourage active, healthy, safe and sustainable travel as an alternative to single occupancy car use. The main aim of a STP is to reduce single occupancy car use on the school journey, by promoting and encouraging sustainable travel. Increasing sustainable travel helps to reduce congestion and pollution, as well as improving the health and fitness of children and young people. A STP is developed and monitored by the school to:

- discover actual and preferred mode of travel for the school journey;
- identify issues to determine why people do not travel sustainably;
- set future targets to achieve or maintain modes of sustainable travel (for example to increase cycling; to maintain walking);
- lay out a plan of action for the tasks that the school will carry out to achieve their targets and aspirations;
- encourage the whole school community to travel in a safer, healthier and more sustainable way.

Established in 2007, Modeshift is a national membership organisation that specialises in sustainable and active travel, and provides behaviour change support for those working with children, young people, families, school communities, educational establishments and workplaces. Modeshift STARS (Sustainable Travel Accreditation and Recognition for Schools) provides a framework for the implementation of sustainable and active school travel activities. See <http://modeshiftstars.org>

The Council will work with Hertfordshire County Council to promote greater take-up of school travel planning across the borough.

## 6e. Workplaces

According to the Country Travel Survey (2015), 28% of work trips from Broxbourne are less than 5 miles. Conversion of a modest proportion of local car commuting trips to alternative modes, particularly walking and cycling, would create a significantly better environment within the borough.

- **Town centres** employ a large number of local people in retail and office jobs. Details of the measures taken to improve town centres are provided in Section 6b above.
- **Existing employment areas:** the largest designated employment area in the borough is at **Essex Road**. The Council has secured funding from the LEP to provide a new bridge as part of the 'Essex Road Gateway Scheme' which will alleviate traffic pressure on the existing narrow crossing and make possible the provision of safe cycle and walking routes into the area; in the longer term the Council will work with the Lee Valley Regional Park to secure the 'missing link' in the cycle route providing access to the area from the south through Spitalbrook.
- **Cross-boundary cycle commuting into Enfield:** considering the close proximity of Waltham Cross (including the Holdbrook and Lea Road industrial Parks) to the northern parts of Enfield (including the commercial areas of Innova Business Park and the Leaside Business Centre beyond) and the proximity of extensive residential areas in both boroughs there is considered to be significant cycling potential. Proposed 'Southern Gateways' form part of the 'Priority Cycle Corridors' within this document.
- The proposed new business park at **Park Plaza West** will be linked to a new station at Park Plaza via a new foot and cycle bridge over the A10 at Great Eastern Way. The New River will form a priority cycle corridor connecting with Enfield. **Brookfield Riverside** will be linked into the proposed network of cycle routes including the New River/Cheshunt Reservoir and Halfhide Lane, both of which will provide safe, segregated cycle lanes.

The Broxbourne Transport Strategy suggests that there is scope for Area Wide Travel Plans in the borough focused on large areas with a small number of employers, to avoid duplication in the production of a Plan, give them more collective strength to lobby for improvements, and enable them to pool resources to maximise the impact on travel choice. For example, the Blackmills Industrial Estate AWTP on the edge of Northampton could be replicated in Hoddesdon, Waltham Cross, Brookfield and Park Plaza. [www.brackmillsindustrialestate.co.uk/plan](http://www.brackmillsindustrialestate.co.uk/plan)

Broxbourne Council will work with Hertfordshire County Council to promote cycling to work, including the provision of cycling facilities such as secure cycle parking, showers, and changing rooms, and cycle purchase discounts, as well as investing in longer-term improvements to cycling infrastructure in the identified corridors and across the borough.

## 6f. Leisure

Walking and cycling for leisure addresses the objectives of improving mental and physical wellbeing. Borough residents are fortunate that there are a number of superb open spaces in the local area which provide enjoyable places for these activities.

The **River to Wood Trail** is an enjoyable 5-mile walk from Dobbs Weir in the Lee Valley through Hoddesdon and Barclay Park to the Broxbourne Woods.

**Broxbourne Woods National Nature Reserve** provides a network of public rights of way. The woods can be reached directly from much of the borough, with notable walking gateways along footpaths through Barclay Park under the A10 and from Appleby Street north of Hammondstreet. Brookfield Garden Village will also provide excellent access to the countryside from an area which is currently inaccessible. There is a network of bridleways through the woods which are suitable for mountain bikes, and on-road cycling opportunities along minor roads to small villages and hamlets scattered across southern Hertfordshire.

The area around **Cheshunt Common and Crouch Lane** also offer a network of public rights of way (including part of the 195-mile Hertfordshire Way) which provide options for attractive country walks.

The **Lee Valley Regional Park** offers a network of safe off-road walking and cycling trails through wetland scenery which can be accessed via multiple 'gateways' along the length of the borough. It is located within a short walk or cycle ride from the majority of the borough's residents east of the A10. The Lee Valley Regional Park Authority's Cycling Strategy (April 2017) states that "our vision is for the Lee Valley Regional Park to be a world class destination for cycling". The Strategy aims to improve access to the Park and improve awareness of the Park's cycling offer. National Cycle Network (NCN) Route 1 leads through the park.



In the longer term improvements to the Spitalbrook area east of the railway were identified in the Lee Valley Regional Park Authority's Spitalbrook Environmental Strategy (2012) as a potential 'missing link' in the cycle network between Nazeing Road and Dobbs Weir Road to the north.

The **New River Path** provides an attractive route through the centre of the borough through varied scenery and is currently used by ramblers groups as well as local people and dog walkers. The path conditions vary from surfaced to grass, and also vary in width. All-weather surfacing of the path will improve usage for leisure and active travel. Potential conflict between users will need to be carefully managed, through signage and configuration of the route, as for example currently on the Lee Valley Regional Park (see above) where there is an established code of conduct governing the various types of user.



Broxbourne Borough Council organises regular **Health Walks**, led by volunteers and lasting between 30 and 90 minutes at a variety of locations including Cedar's Park and Barclay Park, both Green Flag parks. The Council's Sport Development Officer can provide further details.

There are also a number of local '**heritage trails**' in the designated Conservation Areas which explore some of the most historically interesting parts of the borough. More details can be found on the Borough Council's website.

Leisure proposals for this Walking and Cycling Strategy are as follows:

- To promote the wealth of walking and cycling opportunities in the borough, including guided walks such as the Broxbourne Health Walks;
- To work with the Lee Valley Regional Park Authority to promote awareness of the walking and cycling opportunities in the park and promote access to the park, including improved signage to the Park gateways;
- To manage potential conflicts between path users through sensitive design and construction, in conjunction with a range of path users, and introducing a Code of Conduct for path users similar to that currently in operation along the River Lee Towpath

## 6g. Rail and Bus

Railway station patronage at the five stations in the borough has risen from around 4m trips per annum to 5.8m trips per annum between 2004/5 and 2014/15<sup>3</sup>. It is unlikely that continued increases in demand can be accommodated through provision of car parking, and therefore the role of sustainable transport, especially walking and cycling, is likely to become increasingly critical.

Many stations were not built to cope with the volume of vehicles they now attract, and many have been the subject of re-designed approaches and forecourts which have prioritised motor traffic above other modes of transport, placing vehicles, cyclists and pedestrians in conflict, even though the latter represents by far the most popular means of accessing stations. The railway stations at Broxbourne, Cheshunt, and Waltham Cross are already heavily used by London commuters and also offer access by rail to Stansted airport and Cambridge. In the event that plans for Crossrail 2 are approved, in the longer term it is expected that there will be significant increase in the usage of these stations.

Due to the constrained nature of the land around these stations, it is not anticipated that there will be a significant expansion of car parking at the stations, and on-street parking restraint will be necessary in these areas in order to ensure that local residents can continue to access their properties without hindrance. For these reasons it is essential that planning for safe and attractive walking and cycling approaches to the stations should be planned, and secure and plentiful cycle parking provided at the stations.

**Cycle Hubs** may provide: secure cycle parking, luggage storage, maintenance facility, bike sales, and bike hire. An example is the new cycle facility at Chelmsford, which provides secure parking for 1,000 bicycles

*Source: Sustrans*



**Bicycle wheeling ramps.** Helpful at stepped locations, such as the access to Broxbourne station from the New River, or at rail bridges where no cycle crossing is available.

*Source: Sustrans*

<sup>3</sup> Office of the Rail Regulator, cited in the Broxbourne Transport Strategy Table 4.2.

## **Broxbourne Station**

Funding and detailed plans and permissions are already in place for the implementation of an all-weather surface along the New River from St. Catherine's Road. This connection will provide local access on foot and potentially access from the majority of Hoddesdon by bicycle. The Lee Valley Park offers good routes to the south. Station Road appears to have sufficient width that, subject to feasibility study, may have the potential for segregated cycle lanes.



## **Cheshunt Station**

Windmill Lane will be a vital walking and cycling route connecting the Old Pond with both the station and the adjacent development proposed at Cheshunt Lakeside. Environmental improvements should be provided along the road, for example tree planting, landscaping, street furniture, lighting, and improved signage at both ends and at intervals along the road.

Cheshunt station lies on an existing cycle route via Russells Ride and Albury Ride and this should be promoted and signposting improved, as well as a potential new walk/cycle route along Roundmoor Drive connecting with the Church Lane/Andrews Lane strategic cycle corridor.

Additional secure cycle parking should be provided at the Windmill Lane entrance. Discussions should be had with the Lee Valley Park authority around provision of secure cycle parking in the Park on the east side of the line, to avoid the need to cross the railway line.

## Waltham Cross Bus and Rail Stations

The station is located some distance from the town centre and bus station. Improved signage and environmental enhancements such as tree planting, street furniture, and landscaping should be pursued. There is currently insufficient cycle parking at the station and a new cycle hub should be provided as soon as possible.



**Lack of dedicated cycle parking at Waltham Cross Bus station**

Completion of the Eleanor Cross Road cycle path, which currently terminates at the Lee Valley White Water Centre, should be continued into Waltham Abbey, working in partnership with Essex County Council and Epping Forest District Council.

The Council is working with the train operating company to progress **Station Travel Plans** to implement improved access to all three stations. Another option to consider is foot signage towards bus stops.

The Council is also working with Network Rail to investigate opportunities for **new stations and Turnford and Park Plaza**. It is anticipated that the majority of users of these stations will arrive on foot or by bicycle from the local area, although bus provision is also being pursued as set out in the Broxbourne Transport Strategy.

The preferred site of Turnford station is located approximately 2.7km south of Broxbourne station and 2.3km north of Cheshunt station. Turnford station is located adjacent to Hertford Regional College and is well located to provide a wide catchment for the residential areas nearby.

## 6h. Dealing with severance: Crossing points

The presence of a significant number of major roads in the borough serves to sever many residential areas from key destinations. Severance is caused by, for example the A10, Monarch's Way in Waltham Cross, Charlton Way and the Dinant Link Road in Hoddesdon, but also by a number of narrower roads which host relatively fast-flowing traffic and which make road crossings hazardous, especially for more vulnerable users. Over-frequent waits at crossing points can also impede the momentum of a journey on foot or by bicycle.

*(right) Flush dropped kerb with tactile paving.*



A number of measures are proposed as follows:

- Introduce pedestrian crossing facilities
- Slow traffic on key routes such as the A1170/B176 in order to create more pedestrian and cycle friendly environments and make road crossings safer;
- Explore the provision of raised tables and variations in road markings at key points to slow traffic and encourage pedestrian usage;
- Review the location and effectiveness of road configurations at key points including the location of pedestrian refuges
- The Broxbourne Transport Strategy proposes to signalise certain key junctions include existing roundabouts at Flamstead End and Church Lane, which would have an additional benefit of providing pedestrian crossings;
- Improve the quality and use of existing crossing points, such as the existing A10 foot and cycle bridges and underpasses, and improve signposting and wayfinding of these crossing points to raise awareness and promote usage;
- Installation of a new pedestrian and cycle bridge over the A10 at Park Plaza to link the proposed development site with the proposed new station site;
- Introduce dropped kerbs at appropriate crossing points to encourage crossing by wheeled users and pedestrians. Key locations likely to include shopping parades and centres, schools, and railway stations.
- Consider the implications of subway removal for safe crossing of roads (see next section)

The Council will introduce a Crossing Points programme to review the potential to improve crossings, and which will include a safety audit of identified crossing points prior to making a decision to implement any given scheme.



## 6i. Subways/Underpasses

Many of the existing walking routes in the borough are characterised by pedestrian subways designed to avoid conflict between pedestrians and vehicular traffic. In practice, over the years a number of these have become magnets for anti-social behaviour and are a nuisance for local residents and a deterrent to active travel.

In a number of cases the Council has installed alternative at-grade crossings, for example at Amwell Street on the Dinant link road north of Hoddesdon town centre. In other cases the Council is working to improve the subway environment, such as at the Monarch's Way/Eleanor Cross Road junction.

A number of further locations have been identified where it is considered that *either* at-grade crossings could be provided in addition to existing subways or the subway should be closed and replaced by at-grade crossings. These are as follows:

- **Rosedale** – intersection of Andrew's Lane/Rosedale Way (located on Andrews Lane Priority Cycle Corridor); Rosedale Way north-south pedestrian route to Goffs School, east of Bushbarns).
- **Charlton Way, Hoddesdon** – crossings from Lampits (north) to Brewery Road/Haslewood Road and Lampits (south) to Conduit Lane
- **Monarch's Way, Waltham Cross** – crossing from Stanhope Road to the Waltham Cross Northern High Street
- **Bridleway North, Hoddesdon** – crossing from Beechfield to the Chaucer Way shops (Hundred Acre estate).



The picture below shows the southern exit from the Waltham Cross ('KFC') roundabout where an at-grade pedestrian crossing has been added to avoid the need to use the underpass from the station to the town centre (although this does not follow the direct pedestrian 'desire line').



Source: Google maps

## 6j. Barrier replacement

Motorcycle riding on public rights of way has caused problems of anti-social behaviour in parts of the borough, notably parts of west Cheshunt.

The Council has installed a number of barriers on a number of key routes which discourages illicit motorcycle use but also provide an obstacle to potential cycle routes.

Preliminary investigations have revealed that there are a number of suppliers of alternative types of barriers which may enable the control of anti-social behaviour whilst facilitating the passage of bicycles.



Key points for investigation of such alternatives include:

- **Andrew's Lane:** between the proposed Rosedale Park development and Church Lane (photo above right);
- **the New River:** multiple gates at the priority corridor between Enfield and Park Plaza West.
- **Allard's Way, Hoddesdon:** route between Baas Hill and Cock Lane, could provide a safe cycle route to Robert Barclay School (photo below right).



## 6k. Signage

Good signage can help to improve rates of walking and cycling by acting as a cue to walk and cycle rather than using the car. Indication of distances and/or travel times can encourage usage. Where routes are signed it is important that safe and attractive route infrastructure should be in place.



Key locations for improved signage are as follows:

- Town centres
- Leisure routes
- Major junctions
- Strategic cycle corridors
- Railway and bus stations
- Schools

The Council undertake an audit of appropriate locations for the installation of signage, incorporating consideration of the most appropriate type of signage and the information shown.



## 6l. Lighting

Lighting is important to enable navigation during hours of darkness and to improve safety and security. It is also increasingly important in the design of public realm, with LED technology providing opportunities for low-cost 'mood' lighting which can lift the feel of a place and significantly improve its attractiveness, for example when combined with planting and landscaping (see example right).

Lighting should generally be provided on all routes where cycling can be expected after dark. Lighting will be particularly important on commuter routes and routes forming part of a safe routes to school network, where usage is sustained throughout the longer periods of darkness associated with the winter months.

Dutch experience shows that cycle routes remote from natural surveillance, such as those across parks, may not be used after dark once user levels have fallen, even if lighting is provided. In these cases a lit on-road alternative should be identified that matches the desire line as closely as possible and avoids heavily trafficked roads.

It is not expected that routes outside built up areas used primarily for recreation would normally need to be lit except where there are road safety concerns, such as at crossings or where the track is directly alongside the carriageway. The Lee Valley Park and the New River are considered to represent leisure routes and would therefore not be expected to be lit.

The provision of street lighting at locations where nuisance issues or anti-social behaviour is frequently reported can help reduce these problems.

Key locations for lighting improvements include the following:

- Existing cycle path next to St Mary's School;
- Improvements at underpass/subways, for example at Waltham Cross, Junction 25 of the M25, Monarch's Way Waltham Cross;
- Town centre locations as part of public realm improvement schemes.



## 6m. Public Realm

Public realm includes all the spaces between buildings that can be freely accessed by the public. It encompasses all outdoor areas including roads, parks, squares, pedestrian areas, cycle routes and other open areas as a continuum of wall-to-wall interconnected physical spaces. Good public realm is a place with attractive and successful outdoor areas, with a clean mechanism for maintenance and upkeep.

The experience of an individual moving through a city is directly linked to the accessibility, safety, legibility and quality of the spaces. Those places that positively provide these elements maximise their economic potential whilst those that are poor clearly fail across a range of physical and social indicators. Quality of life is an important factor in determining where businesses choose to invest and where people want to live. Quality of the public realm determines an area's health and vitality.

The Borough is marked by significant variations in the quality of its public realm as set out in the photographs below. The Council will prepare a Public Realm Strategy to identify key areas for attention, with specific proposals for interventions to improve the quality of places across the borough. The Public Realm Strategy will consider the needs of various users, appropriate design and materials, safety, and long-term maintenance.



Hoddesdon Town Centre



Waltham Cross High Street, south of Theobalds Grove station.

## 6n. Promotion

Return on investments in physical infrastructure and improved local environments will be maximised if a culture of walking and cycling can be created across the borough. In large part this will involve raising awareness of the opportunities and benefits of walking and cycling in order to change travel behaviour.

There is a significant body of evidence produced at a national level to indicate that relatively small investments in a 'smarter choices' programme can be a highly cost-effective way of improving rates of walking and cycling. One aspect of this is around travel planning, as already addressed in the sections on schools and workplaces above.

The Council also has a number of direct channels which could be used to 'nudge' residents into greater levels of walking and cycling. For example, people attending the Council's leisure facilities at the Laura Trott Leisure Centre in Cheshunt and the John Warner Leisure Centre in Hoddesdon may be receptive to messaging around active travel.

The Council publishes a residents' magazine, 'Broxbourne Life' (formerly Broxbourne News) several times a year. The magazine informs residents about recent improvements around the Borough as well as forthcoming developments and new services and could be used to reach a wide audience.

When progressing to the detailed design and implementation phase and further consultation, the Council will prepare a comprehensive Communications Strategy which will set out how the community will be engaged, as well as maximising promotion of the potential benefits and opportunities presented by the strategy.

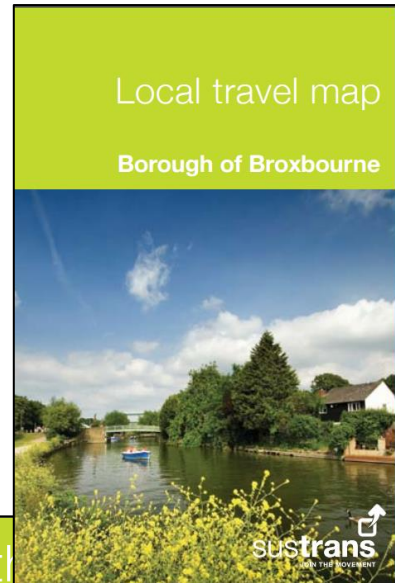


**Cycle Enfield** undertook a comprehensive communications strategy as plans evolved. Promotion included a dedicated website ([www.cycleenfield.co.uk](http://www.cycleenfield.co.uk)), weekly email newsletter, poster campaign, video, activities, and dedicated promotions to schools and workplaces.

Sustrans produced a pocket 'local travel map' for Broxbourne in 2010 (see below). The map shows the network of cycling routes across the borough. Production of the map coincided with the creation of the new A10 foot/cycle bridge and National Cycle Network Link route to St Mary's School (see Section 6d above).

Pocket maps form a valuable promotional tool and help to communicate the range of possibilities available to people in getting around their local areas. They may be distributed at a variety of venues such as libraries, leisure centres, Council Offices and public events as well as distribution to schools, workplaces and other locations.

The Council will update the local travel map as the implementation phase of the strategy progresses and construction gets underway.



Transport for London's 'tube walking map' shows the walking times between stations, to encourage walking. Similar principles could inform the development of wayfinding across the borough.

## 7. Implementation and Delivery

An Action Plan is set out in Appendix A. Proposals are arranged around Local Plan development sites wherever possible, and it is anticipated that the proposed developments will contribute towards the funding and implementation of the proposed measures (on and off-site) through an appropriate planning obligation (Section 106 contribution).

For other proposals, the Walking and Cycling Strategy will form a platform for the Council to prepare bids for investment to a range of funding bodies including Hertfordshire County Council, the Department for Transport, the Department for Communities and Local Government, and other opportunities as they arise. Should the Council introduce a Community Infrastructure Levy (CIL), a proportion of this may be used to seek funding towards walking and cycling infrastructure improvements.

The timescales for provision of the walking and cycling infrastructure are indicated in the Action Plan in 5-year phases. This is indicative. It is intended that the proposals will be included in the Council's Infrastructure Delivery Plan and the timing and updates around funding and implementation will be made at regular intervals throughout the plan period to 2033.

Following on from the Walking and Cycling Strategy, there will need to be detailed feasibility work undertaken on each of the proposals before implementation can commence. This is likely to include a range of work including detailed engineering drawings, safety audits and risk assessments, as well as legal agreements and investigation of the impacts on statutory utilities provision.

Consultation around this further work and more detailed proposals will be carried out with the relevant stakeholders as appropriate, whether local residents and businesses or schools, public transport bodies, and a range of specialists at relevant bodies. The Council has had positive experience of working with the sustainable transport charity Sustrans and it may be appropriate for the Council to seek targeted advice from Sustrans on a number of proposals in this document.

### **Scheme Prioritisation**

The LCWIP technical Guidance suggests a number of criteria based on effectiveness, policy, and deliverability:

#### **Effectiveness:**

- the forecast increase in the number of walking and cycling trips
- the population who directly benefit from the intervention
- the degree of deficiency of the existing infrastructure
- contribution of the scheme to the overall network development
- improvement in road safety
- air quality impact
- impact on other users



- integration with other schemes

#### **Policy:**

- delivery against policy objectives, such as improvements to health and inclusion
- importance of the intervention for particular target user groups, e.g. people without access to a car/van, or with higher levels of poor health
- classification by type of journey, e.g. education, workplace, utility, recreation, to aid alignment with particular funding streams
- performance against local transport plans/local plan policies
- priority/importance of the intervention as defined through the engagement process

#### **Deliverability:**

- scheme feasibility/deliverability
- public acceptability
- dependency on other schemes
- environmental constraints, e.g. conservation areas

Taking account of the broad range of factors, it is considered that the top priority measures should include the A1170/B176, routes into the proposed Brookfield centre, and measures at Cheshunt Old Pond and Waltham Cross town centre. Longer-term priorities are likely to include access to the stations, particularly linked to the proposals for Crossrail 2.

#### **Funding**

For the purposes of estimating a figure for the Infrastructure Delivery Plan, a standard figure of £300,000 per km of cycle track has been applied to the proposals for 27km of cycle track as set out in Section 6 of this document, yielding £8.1million total cycling infrastructure bill. However at this stage this figure is very approximate and scheme costs will need to be refined as detailed feasibility work progresses. At present no cost has been produced for walking infrastructure.

The Council will seek contributions from developers towards the implementation of schemes set out in this document. However, the tests applied to the funding sought, combined with the limitations of what viability appraisal of development schemes can reasonably afford, mean that a significant funding gap is expected.

This gap will need to be bridged by alternatively sources of funding. Broxbourne Council has argued that it should be identified as a Sustainable Travel Town within the County Council's Local Transport Plan, which is currently being prepared by Hertfordshire County Council. According to the Department for Transport's Technical Guidance on LCWIPs, *"while the preparation of LCWIPs is non-mandatory, Local Authorities who have plans will be well placed to make the case for future investment."*<sup>4</sup>

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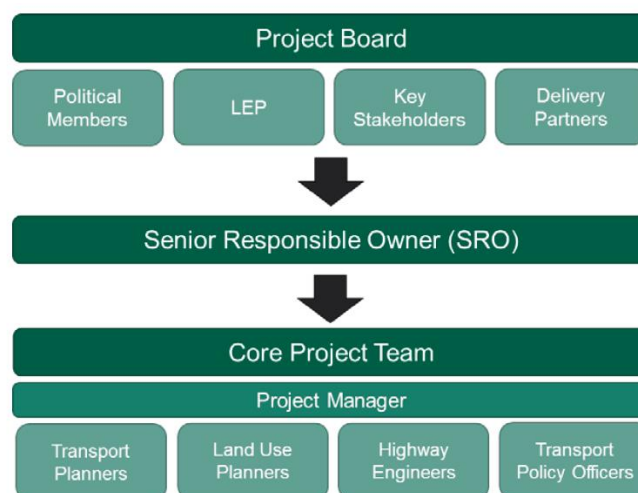
<sup>4</sup> Local Cycling and Walking Infrastructure Plans: Technical Guidance for Local Authorities (Department for Transport, April 2017)

The Council will use this document as a platform to make the case for investment in walking and cycling infrastructure in this document, to achieve the objectives set out in the Local Plan.

## Governance

Governance and delivery arrangements need to be proportionate to the scale and complexity of the LCWIP. In order to avoid duplication of effort, opportunities to use existing local delivery and governance arrangements should also be identified.

A project manager including a Senior Responsible Owner will be identified who will have overall accountability for delivering the plan. This is likely to be a senior manager within the Local Authority, who has the delegated responsibility to approve outputs and escalate issues. The Technical Guidance suggests the following governance structure:



In practice, the governance structure will need to incorporate both Members and Officers from Broxbourne Borough Council and Hertfordshire County Council, with representation from Enfield Council and the Lee Valley Regional Park Authority in relation to cross-boundary delivery.

Appendix A: Action Plan

No.	Proposal	Comments	Funding	Phasing
<b>A. Local Plan Development Sites</b>				
<b>Brookfield area</b>				
1	Pedestrian and cycle link from Longfield Lane to Brookfield Riverside along Cheshunt North Reservoir (New River north/west bank)	New proposal to facilitate access to Brookfield	S106	Years 1-5
2	New River shared cycle path from Brookfield Lane West to Church Lane Secondary School site	Route lies along Council-owned land at the edge of the Golf Course.	S106	Years 5-10
3	Segregated on-road cycle-footway along Halfhide Lane from B176 to Brookfield Riverside	Requires consideration as part of the Marriott roundabout enhancement.	S106	Years 1-5
4	Signalised crossing on New River at Brookfield Lane West	Blind bend – safety audit required.	S106	Years 1-5
5	Signage of key destinations and routes from multiple points in the area, including Brookfield Riverside, existing A10 footbridge.	Detailed consideration of the most appropriate locations required.	S106	Years 1-5
6	Turnford Brook tunnel cycle/footpath link	Initial work will need to explore the flood risk and mitigation measures as well as the impacts on the adjacent designated wildlife site. Close working with the Environment Agency required	S106	Years 5-10
7	High quality public realm at Brookfield Riverside	To be provided as part of the Brookfield Riverside development.	S106	Years 1-5
<b>Cheshunt Lakeside</b>				
8	Windmill Lane pedestrian and cycle enhancements between Cheshunt Lakeside and the Old Pond.	To be implemented as part of the Cheshunt Lakeside development	S106	Years 1-5

No.	Proposal	Comments	Funding	Phasing
9	Cheshunt Old Pond place-making enhancements	This will be set out in further detail in the Old Pond Strategy (forthcoming)	S106	Years 1-5
10	Walking and cycling routes through the development	Masterplanned as part of the development	S106	Years 1-10
11	High quality public realm in and around the proposed Local Centre opposite Cheshunt Station	Masterplanned as part of the development	S106	Years 5-10
	<b>Rosedale Park</b>			
12	Rags Brook foot and cycle way connection as far as Longfield Lane	Detailed feasibility study and public consultation required. As far as Rosedale Way to be delivered as part of the Rosedale Park development site.	S106	Years 1-5
13	Andrews Lane foot and cycle way connection as far as the A10		S106	Years 1-5
14	Possible foot and cycle path link to Goffs School	Community safety implications to be considered.	S106	Years 1-5
15	Underpass removal and replacement with at-grade crossings	Community safety implications to be considered.	S106	Years 1-5
16	Andrews Lane barrier replacement	Community safety implications to be considered.	S106	Years 1-5
17	Network of links through the Rosedale Park area	Liaison with Rights of Way team at Hertfordshire County Council	S106	Years 1-5
	<b>Park Plaza</b>			
18	New foot/cycle bridge across the A10 from Great Eastern Way.	Detailed engineering drawings and feasibility study required.	S106	Years 1-5
19	New River cycle path from M25 to College Road.	Legal agreement with Thames Water. Co-ordination with Enfield Council to ensure continuous path. Public consultation including with path users.	S106	Years 1-5
20	2 x cycle paths from New River to Great Eastern Road bridge	Masterplanning as part of the development to incorporate both routes	S106	Years 1-5
21	Enhancements to existing cycle path along east side of A10 connection between Great Eastern Road and M25 J25.	Feasibility to be considered alongside planning for J25 upgrades and planning application for development at Plot D adjacent.	S106	Years 1-5

No.	Proposal	Comments	Funding	Phasing
22	New pedestrian and cycle bridge to replace Park Lane level crossing	Preferred route identified and funding secured.	Network Rail	Years 1-5
<b>High Leigh Garden Village</b>				
23	Bramble Lane foot/cycle path	Included as part of the agreed masterplan. Hoddesdon and Broxbourne UTP (2012) p. 72-73	S106	Years 1-5
24	Paddick Close foot/cycle bridge	To be provided by developer as agreed through the S106 accompanying the High Leigh Garden Village planning permission.	S106	Years 1-5
25	Foot/cycle link via Langton Road	Signage to be provided.	S106	Years 1-5
26	Possible cycle link across Barclay Park	Feasibility study and public consultation to be undertaken.	S106	Years 1-5
<b>B. Towns and villages</b>				
<b>Hoddesdon</b>				
27	At-grade crossings of Charlton Way to supplement existing underpasses from Lampits	Hoddesdon and Broxbourne UTP (2012) p.60-63	TBC	TBC
28	Improved cycle parking and foot/cycle signage	Locations to be determined by audit of local area	TBC	TBC
29	Lord Street foot and cycle improvements	Feasibility study required and consultation with local residents.	TBC	TBC
30	Segregated foot-cycle route on west side of Charlton Way and at-grade crossing of Dinant Link road	New proposal to facilitate primary pedestrian network connection from northern Hoddesdon to town centre.	TBC	TBC
31	Cycle route between John Warner school/leisure centre and Burford Street		TBC	TBC
32	Quietway route from Ware Road to Burford Street via Dorchester Avenue.	Hoddesdon and Broxbourne UTP (2012) p.60-63	TBC	TBC
<b>Cheshunt Old Pond</b>				
	Improved walking and cycling environment to Cheshunt Station along Windmill Lane	See row 8.		

No.	Proposal	Comments	Funding	Phasing
	Cheshunt Old Pond place-making enhancements	See row 9.		
<b>Waltham Cross</b>				
33	Signed foot-cycle way from Waltham cross Town centre to Park Plaza via new cycle bridge replacing Park Lane level crossing (see row 22).		TBC	TBC
34	Eleanor Cross Road cycle route extension to Waltham Abbey.	Requires co-ordination with Essex County Council and Epping Forest District Council.	TBC	TBC
35	High Street opened to limited vehicular movements including cycling.	See Waltham Cross Town Centre Strategy	TBC	Years 5-10
36	Segregated cycle routes along both sides of Monarch's Way.	To be considered as part of the Waltham Cross Area Action Plan	TBC	TBC
37	Segregated foot/cycle way south from Waltham Cross town centre linking to Cycle Enfield A1010 (north) scheme	Requires co-ordination with Enfield Council	TBC	Years 5-10
38	Greening of Monarch's Way.	To be considered in the context of the Waltham Cross Area Action Plan and proposals for the A121 corridor.	TBC	TBC
39	High quality public realm improvements for Waltham Cross Town centre	See Waltham Cross Town Centre Strategy	TBC	Years 1-5
40	Creation of new town square	See Waltham Cross Town Centre Strategy	TBC	Years 1-5
41	North-south cycle 'Quietway' from Theobalds Grove Station to Enfield via Hedworth Avenue, Hurst Drive, and Holmesdale Tunnel.	Southern end requires co-ordination with Enfield Council.	TBC	TBC
<b>Goffs Oak</b>				
42	Pedestrian crossing to proposed new public open space on Newgatestreet Road			Years 1-5
43	Improvements to footpaths between village centre and Cuffley Station		S106	Years 1-5

No.	Proposal	Comments	Funding	Phasing
44	Pedestrian crossings at Newgatestreet Road junction to village centre	To be carried out in conjunction with proposed capacity enhancements to the Cuffley Hill/Newgatestreet Road junction and improvements to public realm in the village centre.	S106	Years 1-5
45	Signage	To encourage walking/cycling to the village centre and use of the proposed Andrews Lane cycle route.	S106	Years 1-5
<b>C. Strategic Cycle Corridors</b>				
<b>Old A10 (A1170/B176)</b>				
46	Introduce measures along old A10 including raised tables, widening of footways, possible narrowing of carriageways, and a review of speed limits	A feasibility study of the entire route will be required. See Hoddesdon UTP pp. 66-9.	TBC	TBC
47	Cheshunt Old Pond place-making enhancements.	See row 8 and row 9		
<b>Andrews Lane/Church Lane corridor to Cheshunt Station</b>				
	Andrews Lane foot and cycle way connection as far as the A10	See row 13		
	Underpass removal and replacement with at-grade crossings	See row 15		
	Andrews Lane barrier replacement	See row 16		
48	At-grade pedestrian and cycle phase of the A10.	Feasibility study required. Could include possible toucan crossing, Advance Stop Lines (ASLs) and feeder cycle lanes.	TBC	TBC
49	Safe crossing points and signage at High Street Cheshunt/Turners Hill parade.		TBC	TBC
50	Walk/cycle route to Cheshunt station along Forest Road/Roundamoor Drive.	Including signage at both ends.	TBC	TBC
<b>New River</b>				

No.	Proposal	Comments	Funding	Phasing
	New River cycle path from M25 to College Road.	See row 19 (Park Plaza)		
51	Pedestrian/cycle crossing of College Road to Whit Hern.	Safety audit required – blind bend with fast-moving traffic	S106	Years
52	College Road to Brookfield Lane West shared			
53	Pedestrian/cycle crossing of Brookfield Lane West.	Safety audit required – blind bend with fast-moving traffic	S106	
54	New River shared cycle path from Brookfield Lane West to Church Lane Secondary School site.	See row 2 (Brookfield area)		
55	Broxbourne Station to St Catherine's Road	Feasibility work complete and implementation awaiting legal agreement with Thames Water.	BBC capital programme	Years 1-5
56	St Catherine's Road to Essex Road	Funding bid required.	TBC	Years 10-15
	<b>Lee Valley Park</b>			
57	Spitalbrook 'missing link' walk/cycle path from B194 Nazeing Road to Essex Road, Hoddesdon.	See Spitalbrook Environmental Strategy (2012) To be achieved as part of a longer-term scheme for improvements to the area, working with the Lee Valley Regional Park Authority	TBC	TBC
58	Link between existing cycle/foot paths and Bryanstone Road via Britannia Nurseries site, Waltham Cross.	Implementation as set out in conditions associated with the planning permission.	S106	Years 1-5
59	Improvements to north-south and east-west linkages between stations	To be agreed with the Lee Valley Regional Park Authority.	TBC	Years 1-10
	<b>Leisure</b>			
60	Improved signage to raise awareness of Lee Valley Park gateways, New River, Broxbourne Woods	Audit of suitable locations required.	TBC	Years 1-5

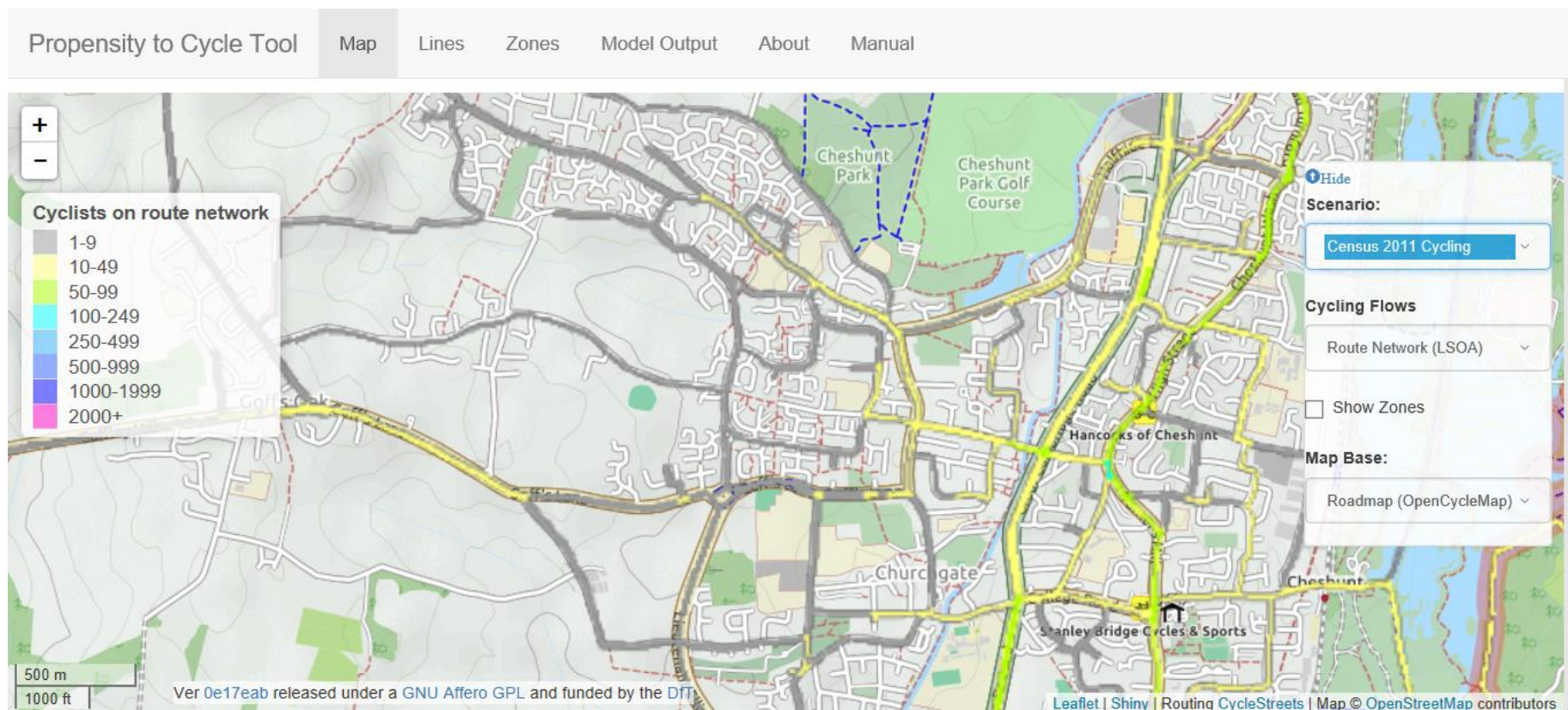


<b>No.</b>	<b>Proposal</b>	<b>Comments</b>	<b>Funding</b>	<b>Phasing</b>
61	Promotion of existing leisure trails such as the heritage trails and the River to Wood Trail, Lee Valley Park, National Cycle Network Route 1.	Promotional programme setting out the variety of walking and cycling trails in the borough.	Existing Council budgets	
62	New walk/cycle path from existing Lee Valley path through Britannia Nurseries site to Bryanstone Road.	Agreed as part of the planning application. Route to be determined in co-ordination with Lee Valley Regional Park	S106	Years 1-5
<b>Schools and Workplaces</b>				
63	Create School Safety Zones outside every school within the Borough, to prioritise pedestrians and other vulnerable road users over general traffic.	Work with Hertfordshire County Council to assess the implications/feasibility	TBC	Years 1-10
64	Area Travel Plans for main employment areas including Essex Road and Waltham Cross		TBC	Years 1-5
<b>Railway and Bus Stations</b>				
65	Working with Train Operating Companies to understand requirements and options through the preparation of station travel plans.			
66	Creation of additional secure cycle parking at Waltham Cross, Cheshunt, and Broxbourne stations.			
67	Signposting of stations and bus station from surrounding areas	Audit of key locations required		
68	Public realm improvements at bus and rail stations.	Station-specific surveys required to understand the potential. Appropriate street furniture and planting, dropped curbs, meeting points.		
<b>Promotion</b>				
69	Local travel map showing walking and cycling routes	To be updated as new walking and cycling infrastructure becomes available. Distribution at	TBC	Years 1-5

No.	Proposal	Comments	Funding	Phasing
		key locations and available on the Council website.		
70	Promotion of walking and cycling through Council communication channels including Broxbourne Life, website and other media.	Long-term communications plan to promote existing and new opportunities	Existing Council funding	Years 1-15
71	Public realm strategy		Existing Council budgets	Years 1-5

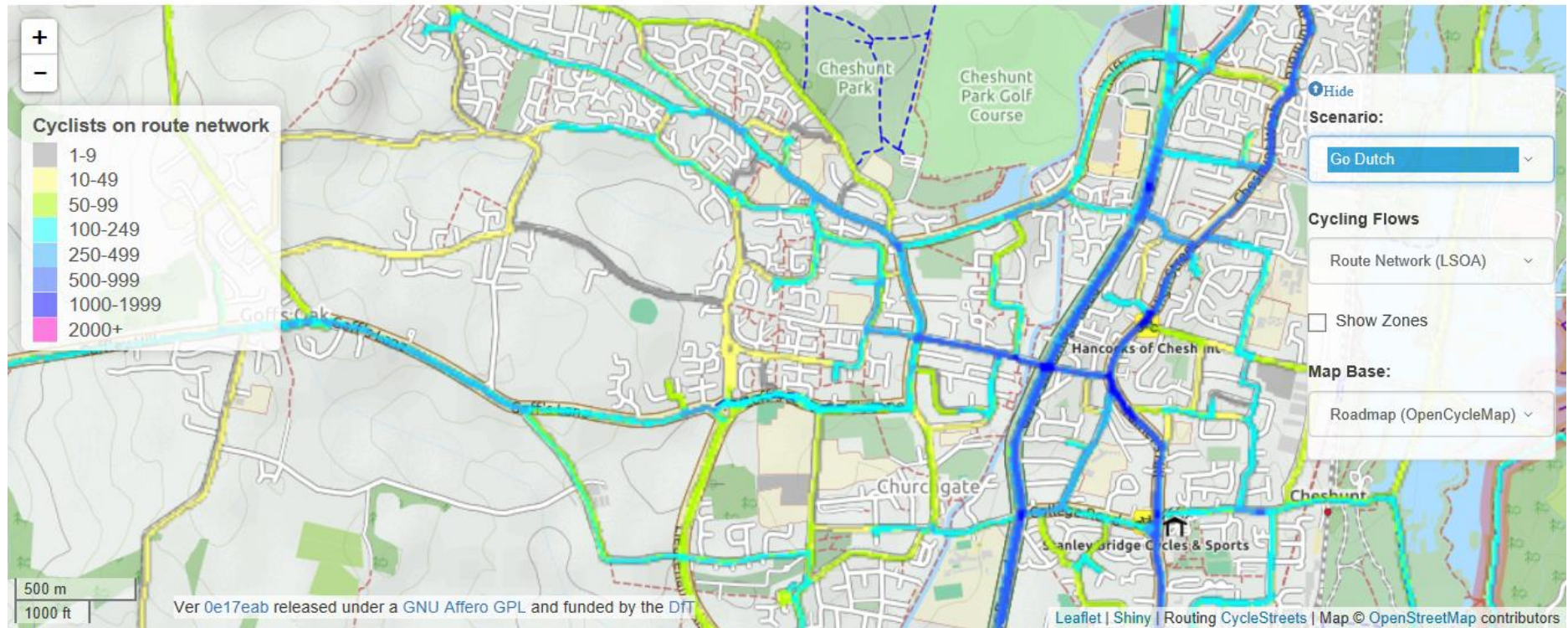
## Appendix B: Propensity to Cycle Tool

## 2011 Census cycling



Source: [www.pct.bike](http://www.pct.bike)

## 'Go Dutch' scenario – cycling potential



Source: [www.pct.bike](http://www.pct.bike)

## **Appendix C: Network Plans**

Please refer to separate A3 Network Plan