

APPENDIX 3
Hertsmere LCWIP

Hertsmere Local Cycling and Walking Infrastructure Plan Final Technical Report



23/03/2026



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1 Introduction

1.1 What is an LCWIP and what will it do?

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

This LCWIP represents a first stage in the councils' aspirations for active travel network development across the borough, with the LCWIP approach being applied across the rest of the county in due course. As such, the Hertsmere LCWIP will be revisited periodically and updated as infrastructure is built throughout the borough. This means that initially the areas and routes in the borough being considered are those where the greatest potential for cycling and walking exists and therefore where targeted infrastructure improvements could help generate the greatest number of new active trips.

Key outputs from this LCWIP include:

- Primary and secondary cycle network
- Primary and secondary walking network
- Prioritised routes across the area in scope
- Concept-level infrastructure proposals for priority routes
- A prioritised and costed list of interventions
- A Technical Report and appendices

The Hertsmere LCWIP has been developed as partnership project between Hertfordshire County Council (the Highway Authority), Hertsmere Borough Council (the Local Planning Authority) and consultant partner WSP.

1.2 Why do we need an LCWIP?

In April 2017, the Department for Transport (DfT) published the first National Cycling and Walking Investment Strategy (CWIS).

The CWIS is based around the ambition to make cycling and walking 'the natural choices for shorter journeys, or as part of longer journeys' the strategy seeks to support the transformation of local areas where the dominance of the motorised vehicle will be reduced to tackle congestion, support local economies and improve physical and mental health.

The CWIS identified short to long term objectives for cycling and walking with short term targets focusing on increased journeys by active modes including an increase in the

percentage of children that walk to school. Short term safety targets have also been identified which will reduce the rate of cyclists killed or seriously injured on England's roads.

Table 1-1 presents the long term (by 2040) DfT aspirations relating to cycling and walking.

Table 1-1: DfT Walking and Cycling Ambitions

Government Ambition	Objectives
Better Safety – ‘A safe and reliable way to travel for shorter journeys’	▪ Streets where cyclists and walkers feel they belong and are safe ▪ Better connected communities ▪ Safe traffic speeds, with low-speed limits where appropriate ▪ Cycle training opportunities for all children
Better Mobility – ‘More people cycling and walking – easy, normal and enjoyable’	▪ More high-quality cycling facilities. ▪ More urban areas that are considered walkable. ▪ Rural roads which provide improved safety for cycling and walking. ▪ More networks of routes around public transport hubs and town centres. ▪ Better links to schools and workplaces. ▪ Technological innovations that can promote more and safer cycling and walking. ▪ Behaviour change opportunities to support increased walking and cycling. ▪ Better integrated routes for those with disabilities or health conditions.
Better Streets – ‘Places that have cycling and walking at their heart’	▪ Places designed for people of all abilities and ages. ▪ Improved public realm. ▪ Better planning for walking and cycling. ▪ More community-based activities such as led rides. A wider green network of paths, routes and open spaces.

1.3 What is the standard LCWIP process?

The Hertsmere LCWIP was structured into six phases which broadly align with the first five stages of the LCWIP process outlined by the DfT in the LCWIP technical guidance (2017). The LCWIP process and main outputs of each stage are illustrated in **Figure 1-1**.

Figure 1-1: LCWIP Process



This LCWIP Technical Report reflects this structure, with each chapter addressing a different stage of the process:

Chapter 2: Defining the approach

A Scoping Report was produced, which outlines the methodology this LCWIP has adopted and its alignment with the DfT recommended process. This chapter summarises the scope of the LCWIP agreed in the Scoping Report, as well as the key governance process and approach to stakeholder engagement.

This aligns with Stage 1 of the DfT LCWIP process which is to: *“Establish the geographical extent of the LCWIP and arrangements for governing and preparing the plan.”*

Chapter 3: Information Gathering and Baseline Analysis

In Stage 2, a Background Evidence Report was produced to present the background information collected as part of this LCWIP including the extent of existing infrastructure and analysis of potential walking and cycling desire lines.

This chapter sets out the key findings from the Background Evidence Report and also outlines findings from early public engagement.

This aligns with Stage 2 as defined in the DfT LCWIP guidance: *“Identify existing patterns of walking and cycling and potential new journeys. Review existing conditions and identify barriers to cycling and walking. Review related transport and land use policies and programmes.”*

Chapter 4: Network Planning

This chapter presents the primary and secondary walking and cycling networks and outlines how these have been informed by the baseline analysis.

This aligns with the first steps of Stage 3 and Stage 4 in the DfT LCWIP guidance:

Stage 3 is to *“Identify origin and destination points and cycle flows. Convert cycle flows into a network of routes and determine the type of improvements required.”*

Stage 4 is to *“Identify key trip generators, core walking zones and routes, audit existing provision and determine the type of improvements required.”*

Chapter 5: Infrastructure Planning

This chapter summarises the concept-level proposals for infrastructure improvements on the identified routes that are compliant with latest government guidance on walking and cycling infrastructure design.

This aligns with the first steps of Stage 3 and Stage 4 in the DfT LCWIP guidance:

Stage 3 is defined in the guidance as: *“Identify origin and destination points and cycle flows. Convert cycle flows into a network of routes and **determine the type of improvements required.**”*

Stage 4 is defined in the guidance as: *“Identify key trip generators, core walking zones and routes, audit existing provision and **determine the type of improvements required.**”*

Chapter 6: Route Prioritisation and Cost Estimation

This chapter sets out how high-level cost estimates were calculated for the infrastructure proposals contained within the scheme concepts, and how these were fed into a Multi-Criteria Appraisal Tool (MCAT) tool in order to rank the schemes according to their alignment with agreed criteria

This aligns with Stage 5 of the DfT LCWIP guidance, defined as: **“Prioritise improvements to develop a phased programme for future investment.”**

Chapter 7: Integration and Application

This chapter considers how the LCWIP should be integrated into local policy, strategies and plans, as well as possible practical application of outputs.

This aligns with Stage 6 of the process in the DfT LCWIP guidance, defined as: **“Integrate outputs into local planning and transport policies, strategies, and delivery plans.”**

2 Defining the Approach

2.1 Overview of scoping work

The first stage of the Hertsmere LCWIP was to agree a clear scope for the project.

In November 2023, project objectives, governance structures and the geographical scope were agreed by the project team and Project Board, along with the agreed methodology for the LCWIP process and stakeholder engagement plan.

While the objectives of producing an LCWIP as set out in Chapter 1 are applicable to all geographic areas, each district and borough in Hertfordshire operates within a unique geographic, political and social context, and therefore the objectives for the Hertsmere LCWIP are tailored specifically to the transport needs of this area.

2.2 Objectives of the Hertsmere LCWIP

The Hertsmere LCWIP aims to achieve the following objectives:

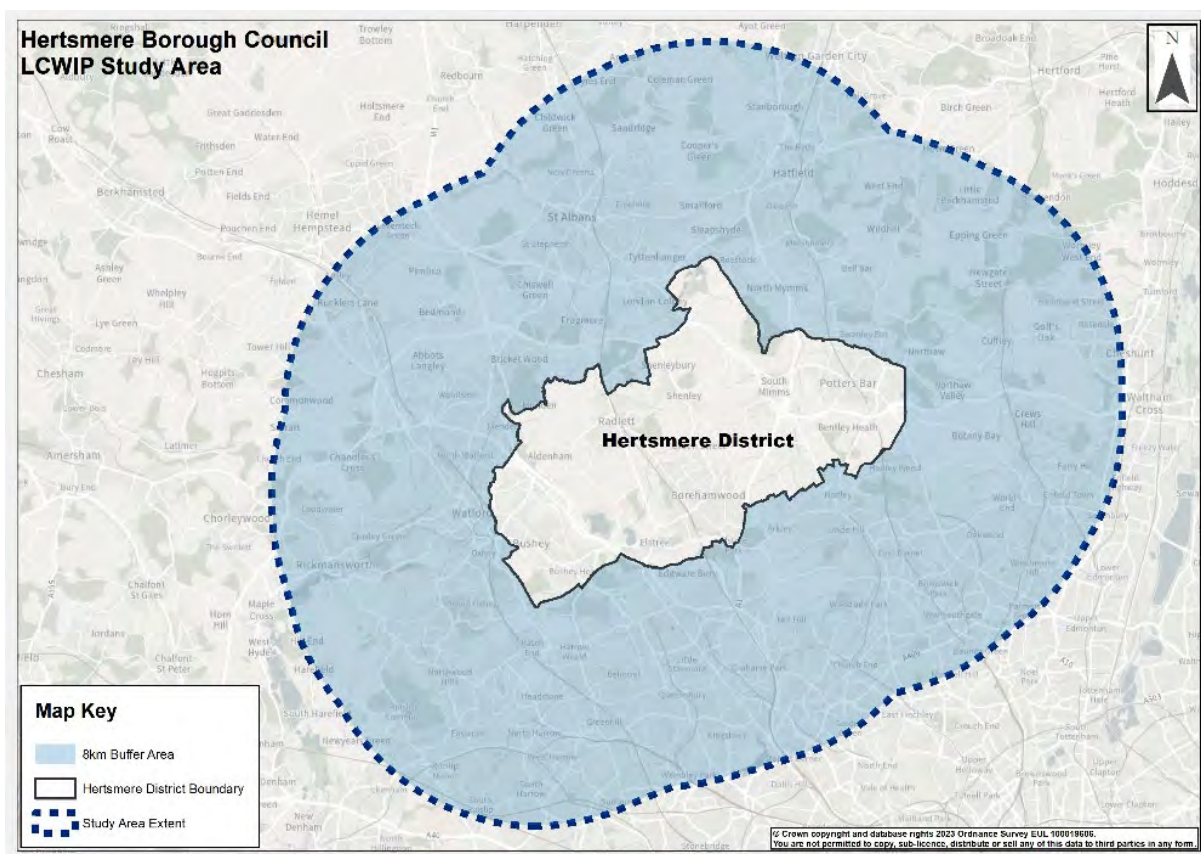
- **To offer safe, attractive alternatives to the private car:** to make walking and cycling safe, attractive, and comfortable, to reduce car dependency, and reduce road danger;
- **To encourage healthy lifestyles:** to offer residents the opportunity to lead active and healthy lifestyles through their transport choices, and improve health outcomes;
- **To tackle climate change:** to enable Hertsmere Borough, Hertfordshire County and residents to reduce transport emissions in order to reach local and national Net Zero targets;
- **To improve air quality:** to reduce pollution associated with vehicular transport and ensure Hertsmere residents benefit from clear air;
- **To reduce congestion:** to enable a shift towards active travel and therefore reduce congestion and associated negative economic and health impacts
- **To inform and enable sustainable growth:** to identify key walking/cycling routes and required improvements to ensure existing and new developments are sustainably located and benefit from a range of active and sustainable travel links, and to develop an evidence base that can be used in local planning processes including securing s106 and 278 agreements.

2.3 Geographic scope

The routes and infrastructure plans contained within this LCWIP do not extend beyond the Hertsmere Borough boundary. However, these routes and infrastructure plans are influenced by the potential for journeys coming in and out of the borough from nearby settlements. As such, when developing this LCWIP, a wider area (8km from the borough boundary) has been studied. This is shown in **Figure 2-1** along with the Hertsmere borough boundary for context.

This 8km (5 mile) distance was selected based on the DfT's Gear Change document, which refers to this as a distance that is 'suited to cycling' for 'many people'. Key settlements within this distance from Hertsmere include St Albans, Watford, Hatfield, Rickmansworth, Barnet, Enfield, Harrow. The LCWIP has therefore considered trips to/from these settlements and has developed plans for the higher potential connections.

Figure 2-1: Hertsmere LCWIP Study Area



For the purposes of analysis and infrastructure planning, Hertsmere Borough has been further broken up into four areas, sometimes referred to as 'phases' (note that this does not

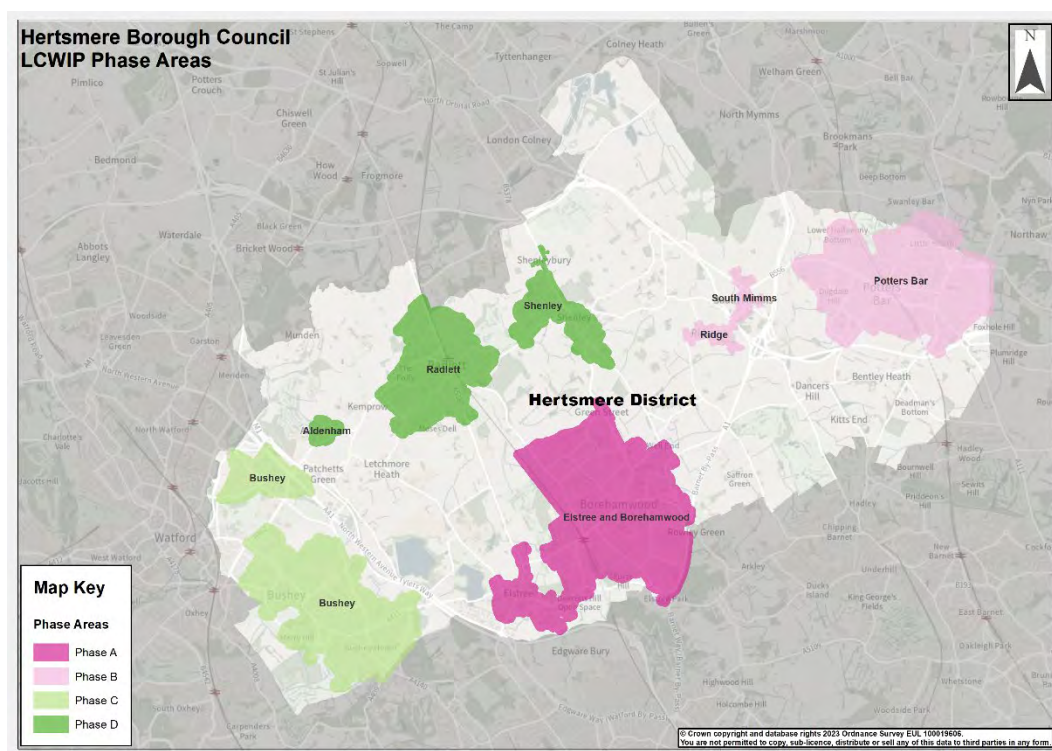
confer any type of priority to each of the phases over another; they are all of equal priority and may be brought forward in any order):

- o Phase A: Elstree Village and Borehamwood Cycling and Walking Network
- o Phase B: Potters Bar Cycling and Walking Network
- o Phase C: Bushey Cycling and Walking Network
- o Phase D: Shenley, Radlett and Aldenham Cycling and Walking Network

In addition, the LCWIP will consider inter-urban connections into neighbouring local authorities and other nearby key villages within the borough.

Figure 2-2 shows the four Phases of the Hertsmere LCWIP and their geographical location.

Figure 2-2: Hertsmere LCWIP Phase Areas



2.4 Approach to identifying priority routes in and around rural areas

It is anticipated that the desire lines of greatest weighting will be in the few major urban areas, with some additional inter-urban connections. This means that although villages and rural areas will be included in the geographic scope from the outset, it is unlikely that many plans for infrastructure in the villages will be included in this first iteration of the LCWIP.

We also agreed to identify connections *between* areas where the model suggests there are high levels of walking/cycling demand – for example, between Elstree and Bushey.

Phase A (Elstree & Borehamwood) also considers connections to Centennial Park, slightly outside of the settlement boundary shown in the geographic scope maps, in line with the network mapping outputs and with the South Central GTP Package 21.

2.5 Engagement Approach

As part of LCWIP engagement process, several engagement meetings, as shown in **Table 2-1**, were held with both councillors and stakeholders throughout the LCWIP development. The engagement process involved discussions from HCC, WSP and HBC to all relevant stakeholders and councillors. This provided opportunities for local involvement by making use of a public GIS system to allow for inputs and changes to the transport network and infrastructure planning with local knowledge. A list of stakeholders is provided in Appendix A. It should be noted that other stakeholders may also have been contacted through other channels or if they signed themselves up for updates.

Table 2-1: LCWIP Engagement Meetings

Date	LCWIP stage	Activity
October 17 th and 24 th 2023	1	Councillor Briefings (HBC and HCC) Teams meetings to introduce the LCWIP project to HBC & HCC Councillors, covering LCWIP background, process and project programme.
January 2024	1	Awareness-raising campaign A public engagement campaign was led jointly by HCC and HBC to raise awareness of this project and allow residents to register their interest in the project and sign up for updates. During this period, local stakeholders and Councillors were contacted to ask for any local knowledge and information about priority routes for improvement, or existing proposals and ideas that may need to be integrated into the LCWIP.

Date	LCWIP stage	Activity
May – June 2024	2	Community feedback on draft network plans A 6-week early engagement period was held to gather feedback on our draft network plans and receive suggestions for locations that need improvements. We attended a wide range of community events, including farmers markets, parent and toddler groups, parish/town council meetings, youth council meetings, and drop-in sessions at the Civic Centre in Borehamwood. We also held the Big Green Transport Talk, with panel discussion, stalls and interactive activities to host wider discussions about the future of transport in Hertsmere.
January 2025	3 & 4	Specialist stakeholder feedback on draft infrastructure plans We held online workshops for specialist stakeholders, community representatives and local HCC / HBC Councillors to review and leave feedback on our draft infrastructure plans. This was followed by a 2-week window for feedback-gathering.

3 Evidence Gathering and Baseline Analysis

3.1 Information gathering

In the 'evidence gathering' stage of the LCWIP, we collated the following types of information and data that can inform the development of a walking and cycling network:

- ***Review of existing policies and plans***

To ensure the LCWIP aligns with other strategic objectives on a national, county-wide and local level, relevant policies have been reviewed alongside plans for future active travel routes. This includes existing transport studies and published strategies, such as the South Central GTP.

- ***Review of local context, data and evidence***

Data and evidence regarding local demographic information (geodemographic information such as socioeconomic status, areas of deprivation, and age profiles) was analysed to provide a better understanding of how active travel potential and requirements may differ from one town to another as well as in comparison to other settlements in Hertfordshire.

- ***Review, map and classify existing infrastructure***

Existing infrastructure considered as part of this process includes cycle infrastructure, severance issues, previous local plan allocations, public transport provision and classification of highways.

- ***Identify desire lines***

A GIS model has been developed to identify potential new journeys that could be walked and cycled. Census data and information on large, planned developments have been used to determine trip origins (where trips start), whilst destinations incorporate employment sites, schools, supermarkets, hospitals, GPs and leisure centres. The outputs of this model have been presented alongside the DfT's Propensity to Cycle Tool to show key desire lines for walking and cycling.

3.2 Policy context

By assessing local, county-wide and national policies relating to walking and cycling improvements, we identified that most published documents fall into four key themes:

- **The climate emergency:** policies and strategies that aim to tackle climate change through decarbonisation of the transport sector and improvements to sustainable methods of transport such as public transport and active travel.
- **High quality infrastructure:** policies and strategies that aim to increase the quality of new and existing active travel and sustainable transport infrastructure by providing design guidance and standards, such as LTN 1/20.
- **Public health:** policies and strategies that aim to improve public health and prevent declining health among many populations in the UK. As physical activity is a key determiner of health outcomes for many, active travel is often recognised as an important means of achieving public health objectives.
- **Transport access and inclusion:** policies and strategies that aim to improve connectivity and accessibility of key facilities for all, through improved transport connections, infrastructure, and inclusivity – including access to rural areas and for those with additional needs.

A summary of each of these themes and some of the relevant policies is provided in this section. The full list of relevant policies and strategies as well as a summary of each document can be found at **Appendix B**.

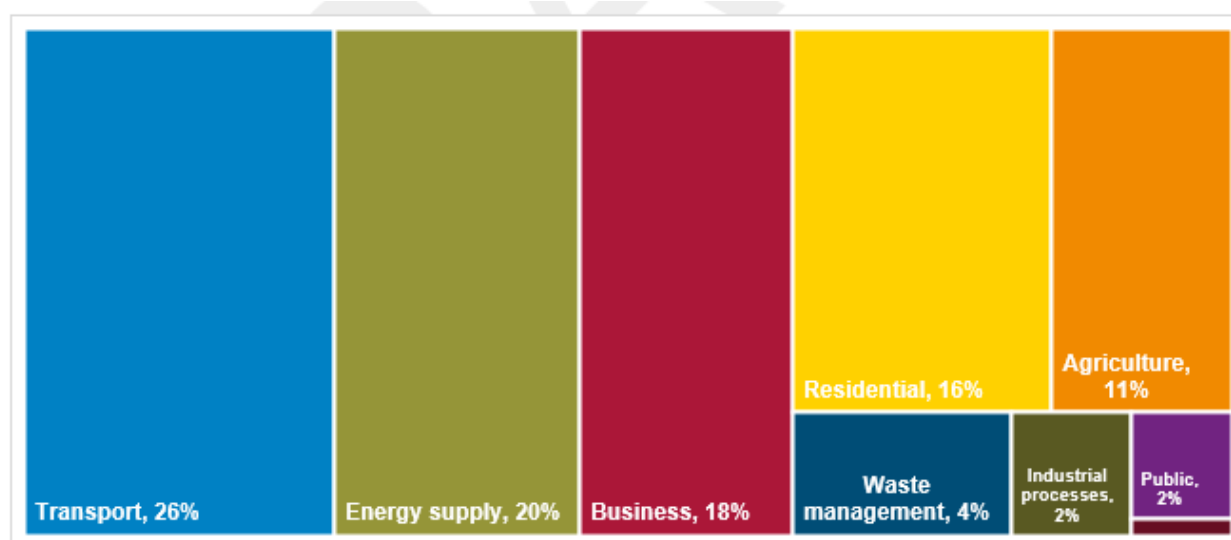
3.2.1 The climate emergency

Transport contributes more than a quarter (26%) of UK Green House Gas (GHG) emissions (BEIS, 2021), making it the largest source of UK net territorial greenhouse gas emissions in the UK, greater even than the energy supply. The main source of emissions in this sector is the use of petrol and diesel in road transport, and therefore decarbonising our transport network is fundamental to ensure the country is working towards its target to be net zero by 2050.

At a national level, the **DfT's Decarbonising Transport (2021) paper** states that passenger cars and taxis were responsible for 55 per cent of domestic greenhouse gas emissions in 2019, a share that remains almost unchanged from 1990. The paper also sets out a path to Net Zero, citing a reduction in emissions from domestic transport as essential to meet the UK's net zero targets. One way of achieving this is by facilitating a mode shift away from passenger cars towards zero emission modes like walking and cycling for shorter journeys.

A breakdown of UK territorial greenhouse gas emissions by source is shown in **Figure 3-1**.

Figure 3-1: Estimated % of territorial greenhouse gas emissions by source, 2021



Both Hertfordshire County Council and Hertsmere Borough Council declared a climate emergency in 2019, with Hertfordshire County Council doing so in July and Hertsmere Borough Council in September. These declarations signify their commitment to addressing climate change, aiming for carbon neutrality and sustainable practices. Hertfordshire County Council's goals include achieving carbon neutrality by 2030 and enhancing biodiversity, while Hertsmere Borough Council aims for net zero emissions by 2050 and promotes sustainable development. Both councils are actively working on strategies and partnerships to meet these objectives. Emissions from transport make up approximately 31% of Hertsmere Borough's total emissions (Hertsmere Climate Change and Sustainability Strategy, 2017), highlighting the importance of modal shift in the local area.

At a county level, the **Sustainable Hertfordshire Strategy** (2023) sets out the ambitions needed to embed sustainability across all council operations and services and throughout the county. The document recognises that the council has three levels of influence:

- To lead in our own operations, (reaching Net Zero for the organisation by 2030)
- To enable sustainability through policy and decision-making
- To inspire businesses and residents to take action

The need to provide and encourage uptake of active travel infrastructure falls within all three levels of influence and is noted within the strategy as being key to introducing and supporting a low (and, eventually, zero) carbon transport network in order to be ready for future climate, be a net-zero county by 2050 and have cleaner air for all by 2030.

In Borough policy, the **Hertsmere Climate Change and Sustainability Strategy** identifies a wide range of transport-related actions, including an action to improve the quality, safety and connectivity of cycleways to local centres, and to implement a cycle hire scheme (which is currently present in Borehamwood and Bushey in collaboration with Beryl). It also specifies that all new developments should be within walking/cycling distance of key facilities, and should make provision for secure, accessible cycle parking, showing facilities and connection to local travel centres. The strategy also identifies aims to encourage 1-mile journeys to be carried out foot and to carry out awareness and marketing campaigns.

Embracing new modes of sustainable transport, such as e-cycles and other emerging technologies will also create opportunities to access longer journeys using active transport.

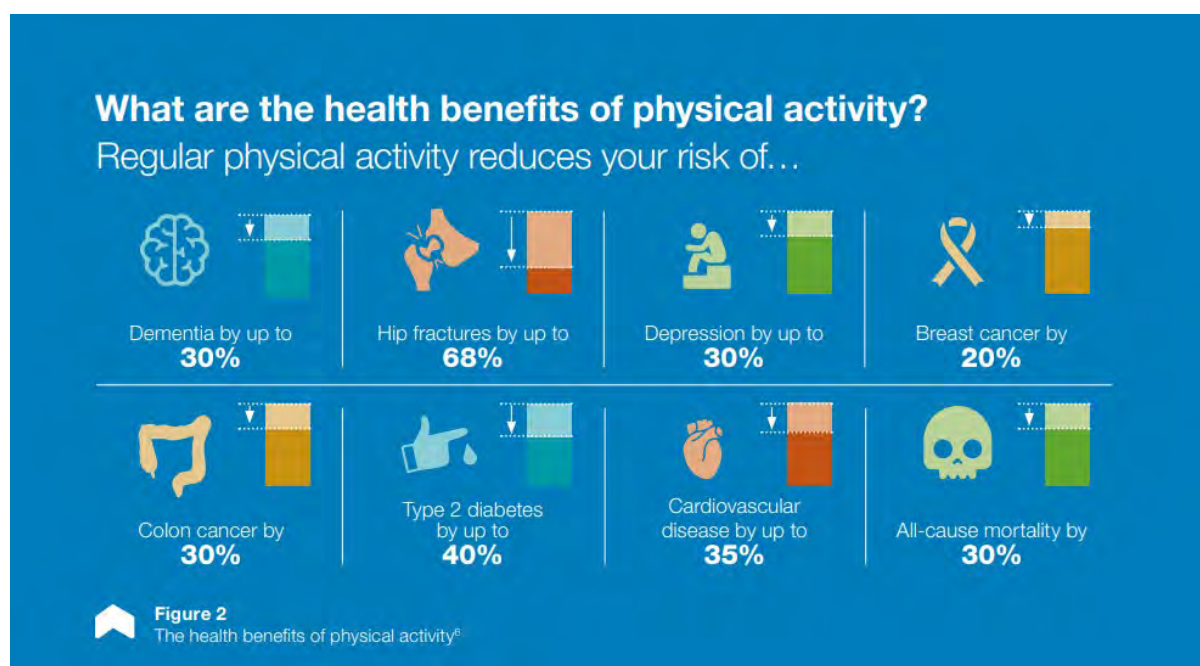
3.2.2 Public health

LCWIPs are an important component of using the built environment to promote health and wellbeing to the local population.

As outlined in gear change, physical inactivity remains an issue and cause of health conditions across the country. This results in direct costs of up to £1bn and indirect costs of £8.2bn every year. The benefits of promoting walking and cycling over other forms of transportation allow for physical activity / exercise to be embedded into everyday routines as part of commuting for work, leisure, shopping etc. This allows for more opportunities for people to realise the benefits of increased and consistent exercise patterns on their own public health, with far more likelihood in benefits to an individual's health than damage it.

An outline of the potential health benefits that can be realised from increased physical activity can be seen in **Figure 3-2** below:

Figure 3-2: benefits of physical activity (Gear Change, 2020)



3.2.3 High quality infrastructure standards

The level of active travel infrastructure that the LCWIP proposes to implement across Hertsmere aims to be of high quality and comfortable for users, to update the existing quality of infrastructure which remains inconsistent in provisional quality. The infrastructure proposals will follow the national standards as outlined in LTN 1/20 which aims for higher quality walking and cycling provision, with wider cycle lanes, safer separation between active users and motor vehicles and improved crossing opportunities. LTN 1/20 provides the framework to allow for high quality active travel networks across urban areas of the United Kingdom, utilising best case practise across from both UK and abroad.

Although all existing locations have not been assessed for suitability to the proposals within LTN 1/20 at this stage of scheme proposals, the proposals will aim to implement the highest quality provision in line with LTN 1/20 standards.

3.2.4 Transport access and inclusion

To ensure equitable access to cycling, walking and wheeling infrastructure for all community members, we will gather evidence through surveys, focus groups, and existing data reviews.

Stakeholder engagement will involve community workshops and partnerships with local organisations. Site assessments will include accessibility audits and infrastructure mapping. Baseline analysis will examine population distribution, socioeconomic factors, usage patterns, safety, and accessibility of current infrastructure, as well as physical and social barriers to access. This comprehensive analysis will inform targeted interventions to enhance cycling and walking infrastructure, ensuring it is accessible and inclusive for all residents. These findings and recommendations will be incorporated into the LCWIP, guiding the development and implementation of inclusive transport policies and projects.

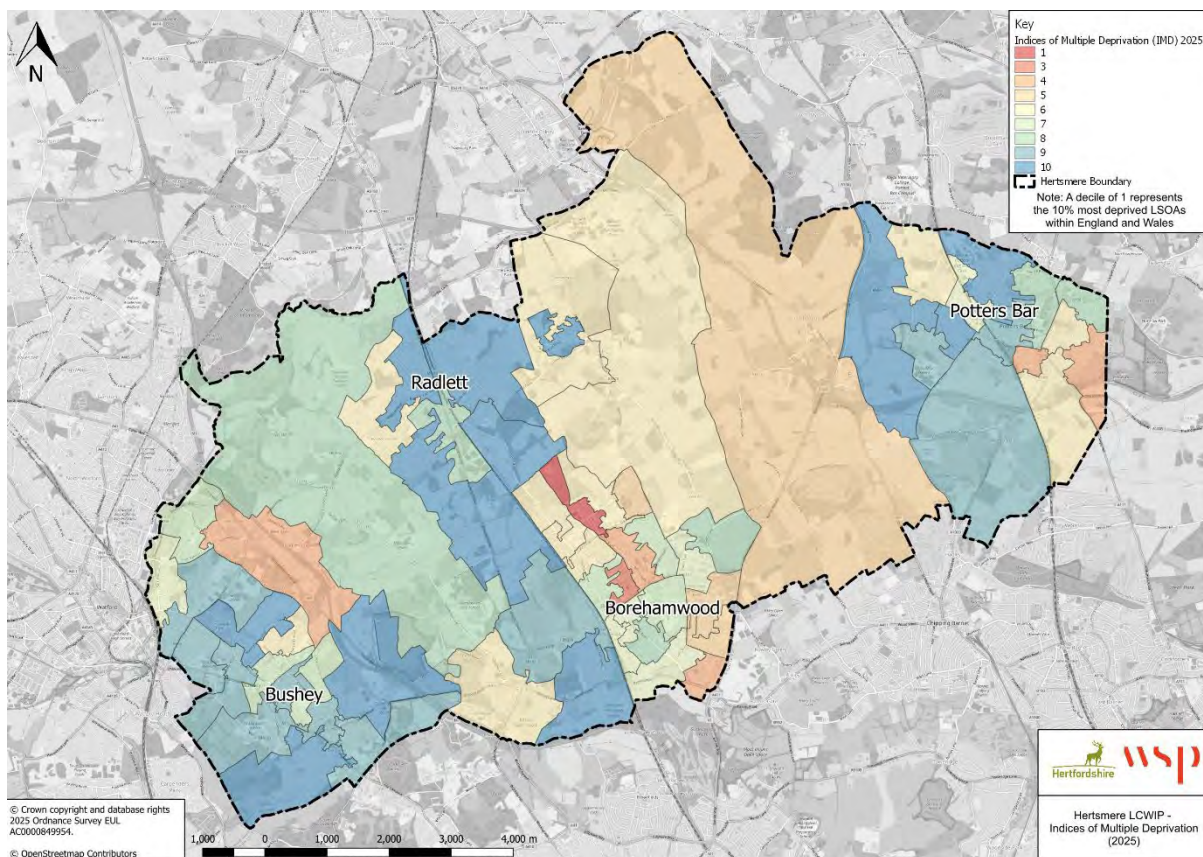
3.3 Demographic context

Local indices of multiple deprivation (IMD) indicate the different levels of deprivation across the county. Overall deprivation is measured with reduced access to high incomes / employment, Healthcare, Education, Adequate housing and the living environment. Crime levels are also taken into account in terms of deprivation and is outlined for all Lower-layer Super Output Areas (LSOAs)* s in both England and Wales. Hertsmere as a whole is a fairly affluent area with an average IMD rank of 7 (where 1 represents the most deprived 10% of the country and 10 represents the 10% least deprived of the country).

**LSOA: A small geographic area created by the Office for National Statistics for reporting small-area statistics. LSOAs are built from groups of Output Areas, usually four or five, and are designed to have a consistent population size — typically between 1,000 and 3,000 residents or 400 to 1,200 households.*

The levels of deprivation across Hertsmere can be found in **Figure 3-3** below:

Figure 3-3: Indices of multiple deprivation (IMD) across Hertsmere



Although deprivation remains relatively low, several pockets of increased deprivation can be found in some urban areas, with Borehamwood and northern Bushey having the most notable pockets of deprivation.

3.4 Local geographic context and data

Hertsmere is located on the southern border of Hertfordshire, with the London Boroughs of Harrow, Barnet & Enfield to the south. Watford and Three Rivers districts border to the West, St. Albans district borders to the north and Welwyn Hatfield covers the North Western border. The key road networks within the Hertsmere borough include several motorways including the M1, A1(m) and M25, all providing connections to throughout Hertfordshire and the rest of England. The A41 and A1 also run through the borough, providing major road connections to surrounding boroughs. Smaller arterial routes also exist throughout the borough along with rural routes between settlements and smaller villages. It should be noted that some of the larger roads throughout the borough act as significant severance to previous communities and active travel routes. Many of the large road junctions create difficulty for active modes of transportation and favour car movements.

3.4.1 Local public transport Services

Rail services transect the borough with North / South alignments providing connection to both London and key cities north of Hertfordshire. The rail lines that can be found in Hertsmere include:

- East Coast Mainline (ECML)

Provides connection to London to the south (Moorgate, Kings Cross and Sevenoaks) as well as Cambridge to the north.

Potters Bar currently provides the only station to access services on the ECML.

- Midlands Mainline (MML)

Provides connection to London, Gatwick Airport and Brighton to the South as well as St. Albans, Luton (including the airport) and Bedford to the north.

Stations accessing the MML include Radlett and Elstree & Borehamwood.

Additional stations are also located outside of Hertsmere but provide close access to rail lines. Bushey Railway Station is located just outside of Hertsmere borough but offers the most direct rail access to both London and Birmingham on the West Coast mainline / London Overground line. Watford Junction and North Watford stations also provide close rail access to the West Coast mainline and Abbey line. The rail lines and rail station (including usage) can be found in **Figure 3-4** below:

Figure 3-4: Local Rail Services and usage



To supplement the gaps in existing rail services, several bus routes currently exist connecting smaller settlements up to larger urban areas with access to rail stations. The larger settlements within Hertsmere offer local bus services to provide transport for residents to access services within the town itself. Additional interurban bus corridors exist, providing public transport access between settlements including:

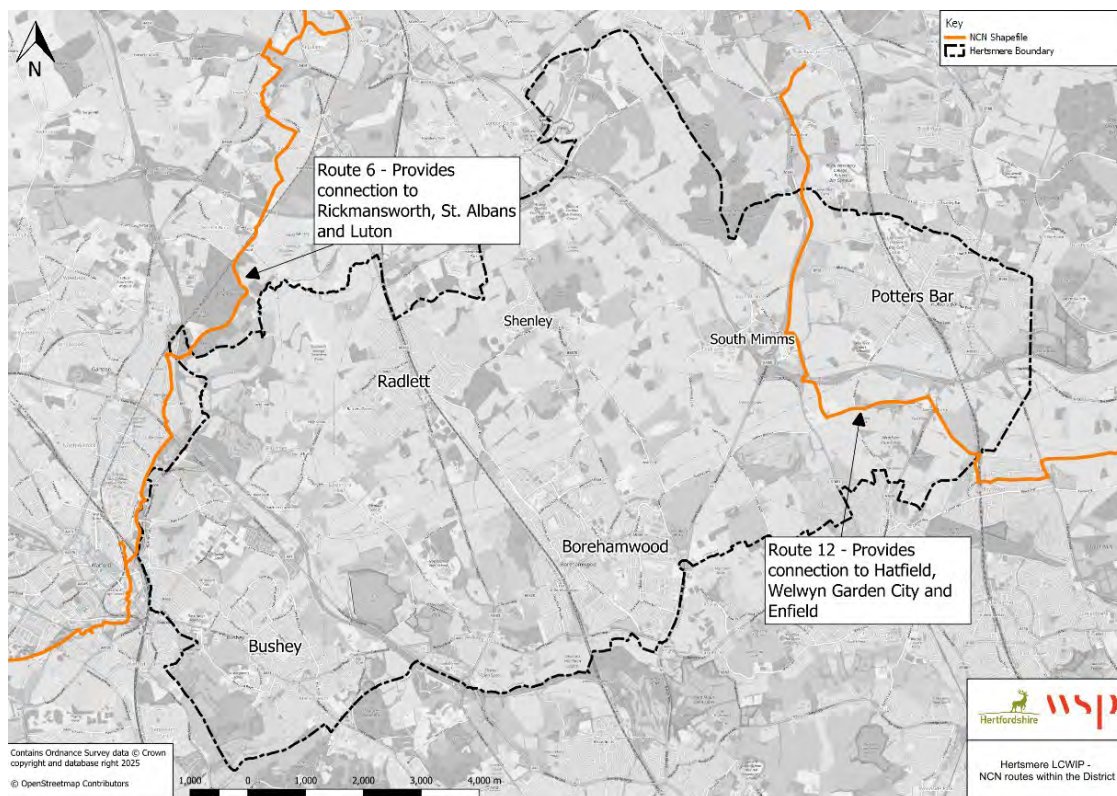
- 602 - connecting Bushey and Radlett (30-minute frequency)
- 601 / 361 – both connecting Radlett and Borehamwood
- 398 – Connecting Borehamwood and Potters Bar
- 107 – Connecting Elstree and Borehamwood

The importance of public transport should be included within the development of active travel improvements, as it enables opportunities for multi-modal trips for first mile or last mile movements. Active travel can also offer opportunities to bridge gaps that exist in the existing public transport network, enabling an alternative to private car travel throughout the county. In terms of the wider cycle network, the national cycle network managed by Walk, Wheel and Cycle Trust (previously Sustrans) is present in the borough with several key cycling routes connecting different settlements. The routes present in the borough include:

- Route 12: Accessible West of Potters bar, providing connection to Hatfield, Welwyn Garden city and Stevenage to the north and Enfield to the south.
- Route 6: Accessible West of Bushey (outside of Hertsmere Borough boundary), providing connection to Rickmansworth to the West and St. Albans and Luton to the north.

The locations of the NCN routes are highlighted in **Figure 3-5** below.

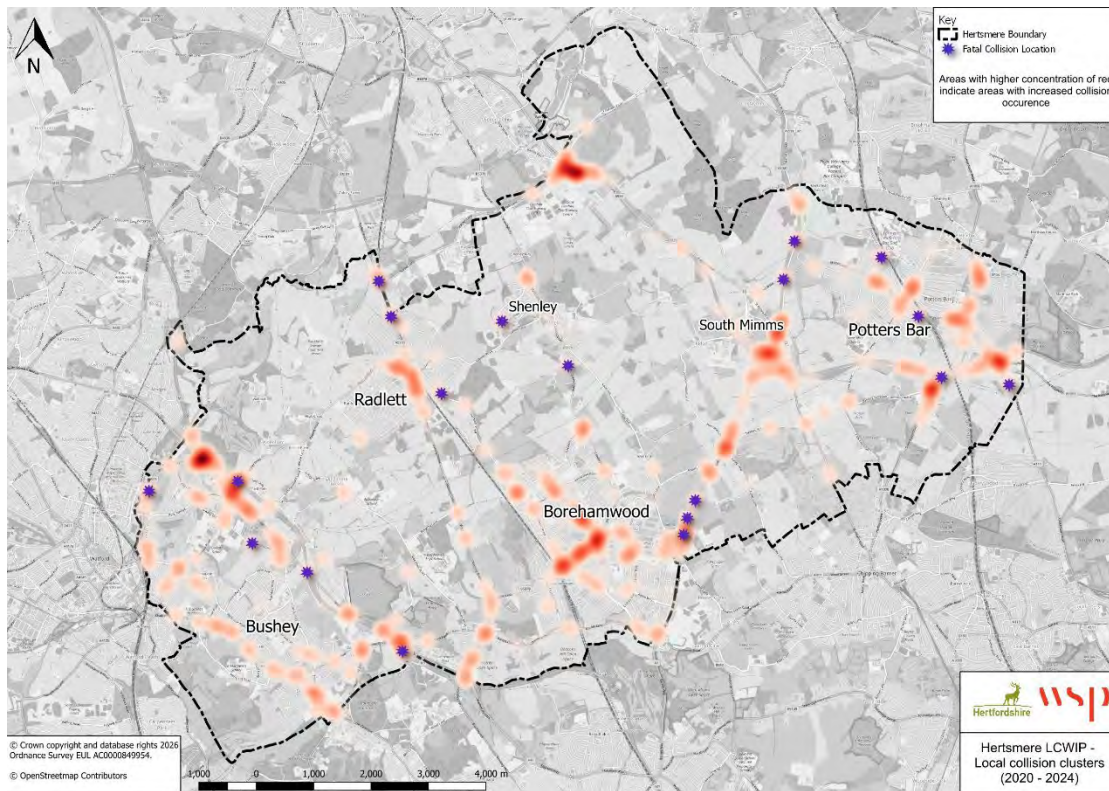
Figure 3-5: National Cycle Network



3.4.2 Local road collisions within Hertsmere

Within Hertsmere, there have been 1,149 collisions from 2020-2024 on existing highways within the borough. This number of collisions represents 14% of all collisions taken place within Hertfordshire. The severity varies across the borough with 80.8% of collisions including slight injuries, whereas 17.6% and 1.7% refer to serious and fatal collisions respectively. Collisions vary across the borough with different hotspots located in different locations. The distribution of accident data is provided in **Figure 3-6** below.

Figure 3-6: Local collision clusters



A small majority of collision are found in rural parts of Hertsmere, representing 57% of the total Hertsmere collisions. For collisions found within the main urban settlements, a breakdown of the following is identified:

- Borehamwood and Elstree - 275 (44%)
- Bushey - 163 (26%)
- Potters Bar - 110 (17%)
- Radlett - 64 (10%)
- Shenley - 14 (2%)
- South Mimms - 5 (1%)

3.4.3 Local public cycle hire schemes

Public cycle hire schemes operate in a limited capacity within Hertsmere, with Beryl bicycles available in Borehamwood and Bushey. As shown in **Figure 3-7**, Beryl provides 45 standard bicycles and 40 e-bikes across the two locations, supported by 31 designated parking bays, although bicycles can also be left outside bays where permitted. This offers opportunities for people to access active travel provision without the upfront cost whilst also not having to worry about bicycle theft / loss. This offers an attractive alternative to private car travel for people not well versed in cycling and can be an introduction to active modes.

Figure 3-7: Local Beryl Bicycle Bay Locations



However, there is a distinct lack of public cycle infrastructure schemes throughout Hertsmere (and Hertfordshire) with many other urban areas lacking in provision. This is likely inhibiting potential growth in active travel / multi modal movement trips. Even with the recent onset of public micromobility (e.g. e-bikes, e-scooters), subsequent active travel infrastructure improvements should be sought to help provide increased attractiveness for active modes over private vehicles.

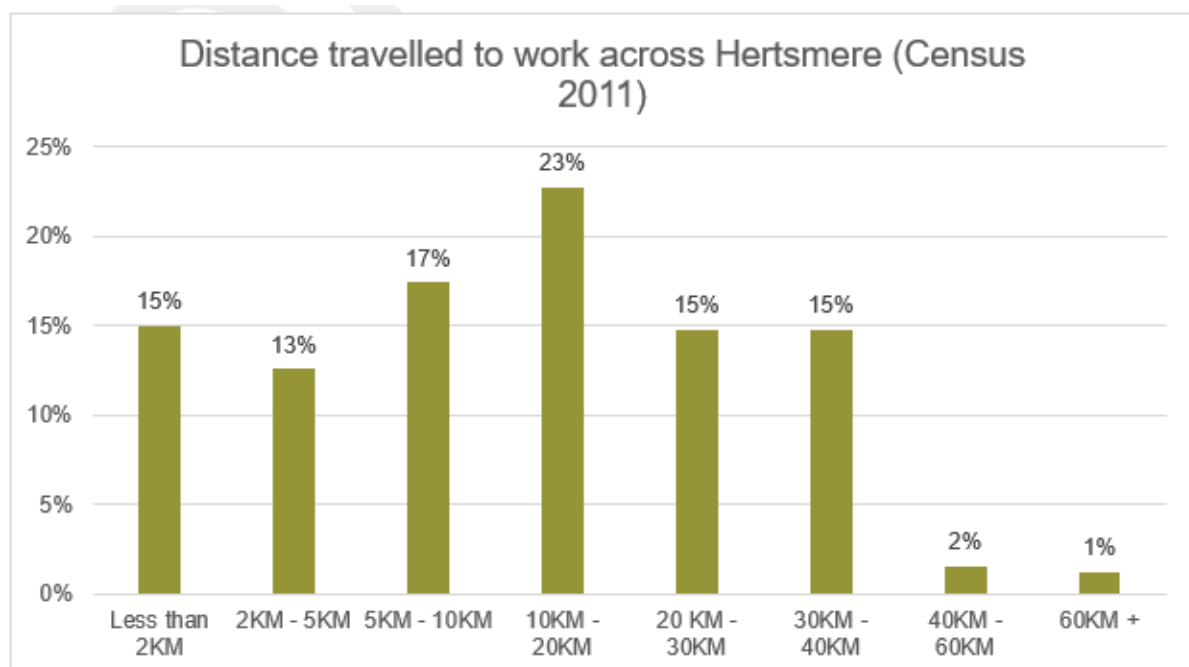
3.5 Identifying active travel potential

3.5.1 Distance travelled to work

Assessing the existing conditions of Hertsmere is the key way to identify what current levels of active travel take place as well as the potential for active travel to be expanded. Data from the 2011 Census has been used, as the 2021 Census does not provide reliable

travel-to-work information due to the impacts of the Covid-19 pandemic and associated lockdowns. The average distance travelled to work across the borough from the census data is 10.7km, meaning that the average commute is beyond typical walking and cycling distances, however there is still a significant amount of commuting with shorter distances below 5km (representing almost 30% of all commuting). This indicates a large amount of the population living within an easy cycle distance of their specific workplace. 15% of the population had a workplace within 2km of their home – a distance which is easily walkable. The distribution of distance from workplace can be found in **Figure 3-8**.

Figure 3-8: Average distance travelled to work across Hertsmere



However, the census data indicates limited active travel usage for work across the borough, particularly for cycling. Walking to work makes up 8% of all work journeys whereas cycling makes up only 1%. The majority of commuting trips are made via single occupancy private car driving with 57% of the entire modal share. This indicates that although roughly 30% of commuting is within distances that can be easily walked or cycled, many people are deciding to rely on private car travel and are not up taking either walking or cycling habits.

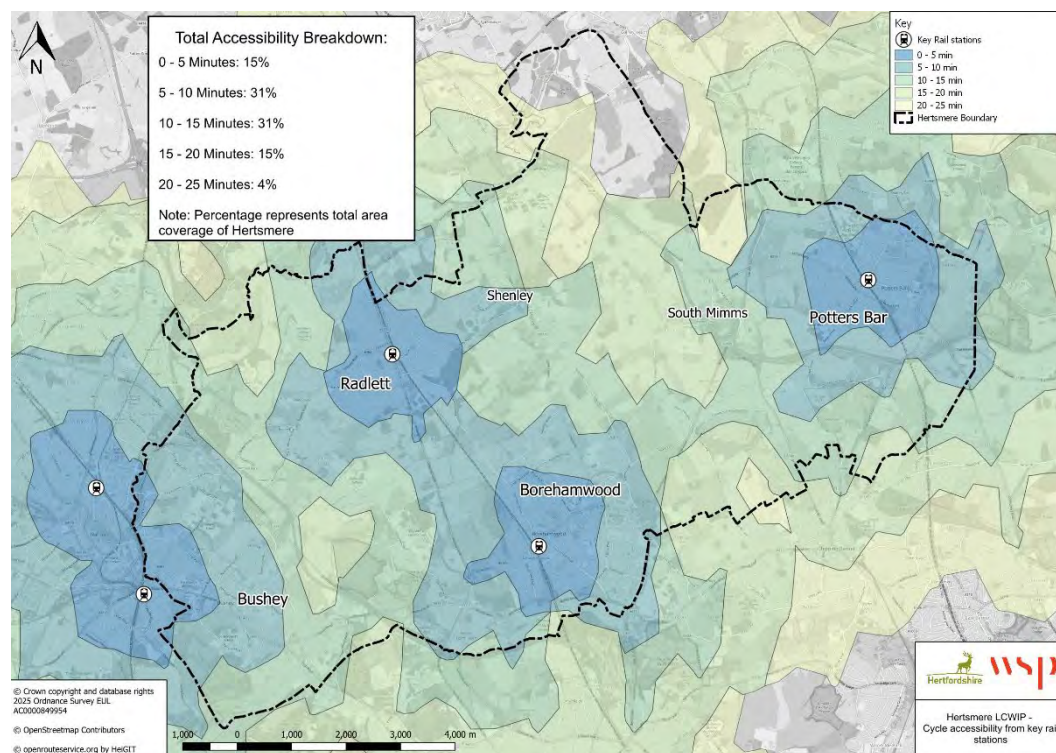
There is potential for increased active travel movements to be undertaken within Hertsmere based on the proportion of commuting less than 5km (roughly 25-minute cycle). However, there appears to be additional barriers to increasing active travel habits, likely originating

from the lack of safe and attractive active travel infrastructure / provision. The car dominance of both infrastructure investment and existing habits exists within Hertsmere lead to walking and cycling remaining unattractive. These patterns are similar to the rest of Hertfordshire with 60% of commutes using private vehicle and 11% using walking and cycling.

3.5.2 Multi-Modal journey opportunities

There is also potential for active travel to provide access to other modes of transport such as the train or bus. Hertsmere sees roughly 17% of all commuting movements by train (or London Overground services) and 5% via bus. The majority of Hertsmere is within accessible cycling distance from a key rail station (and in most cases an urban centre / key employment area). The breakdown of accessibility to nearby stations via active modes can be found in **Figure 3-9**.

Figure 3-9: Active Travel Accessibility Across Hertsmere.



3.5.3 Hertfordshire Countywide Travel Survey

In light of the 2021 Census outcomes not being representative of accurate movement patterns, Hertfordshire County Council undertake a county wide travel survey every 3 years to understand broader travel behaviour. The data from the latest survey (2025) indicates that there is relatively limited active travel usage for both main modes of travel as well as for multi-modal journeys. Pedestrian commuting accounts for 22% and 30% for commuting and part commuting* respectively, and cycling makes up 0.6% for both commuting and part commuting. The survey also indicates that Hertsmere is the most car dominant borough in Hertfordshire with 46.2% of all journeys being made by private car driving. Bus movements are however the highest in Hertfordshire, with 3.9% and 5.5% for commuting and part commuting respectively. Rail usage remains at 5.4% and 6.6% for main mode commuting and part commuting respectively (with tube usage showing 1.8% and 4% for main and part commuting respectively). The outcomes of the traffic survey indicate that active travel is not a very popular form of travel with the lowest rate found within Hertfordshire, leaving the borough with the highest level of car dominance in the county.

**Part commuting referring to multi-modal trips using more than one mode of transport for commuting*

In terms of main transport issues, the barriers to active travel modes vary across Hertsmere. The local residents indicated that active travel infrastructure does not remain a significant barrier to active travel uptake with only 10% of the respondents in the county overall indicating it to be a significant issue. However, personal safety and road condition remained at 34.5% (highest in Hertfordshire) and 62.1% respectively. This indicates that personal safety such as the threat of potholes are likely some of the main barriers to active travel uptake. LCWIP proposals will plan to take into account these issues, to ensure well lit, secure and good condition walking / cycling provision across Hertsmere.

3.6 Review of existing network and infrastructure

The existing active travel infrastructure varies across the borough with certain towns having more high quality networks for active modes than others. The most notable level of existing active travel provision currently exists within Borehamwood, where networks of dedicated and advisory cycle lanes can be found across several key links within the town. Recent developments have provided a substantial shared use path network surrounding the new

Sky Studios, providing safe and secure cycle access from the centre of Borehamwood to a key employment area. There is also infrastructure providing access to the northern parts of the town with a combination of advisory cycle lanes and shared use paths.

However, there is significant lack of dedicated cycling provision throughout the other key settlements. Cyclists are expected to use roads and share space with private vehicles. There is also a significant lack of 20 mph zones across Hertsmere, leading to increased risk for cyclists (and crossing pedestrians) whilst sharing space with private vehicles. This likely leads to a reduction in the attractiveness of active modes across the borough, inhibiting active travel uptake.

Rural active travel connections also have poor active travel provision with minimal infrastructure to support movements between towns and villages in the area. Although the existing public right of Way (PROW) network is relatively extensive, many paths are unpaved and unlit making them unsuitable for regular or year round use. There is also little cycle provision for the PROW network, making active travel unattractive. Interurban movements are very unattractive due to this lack of infrastructure.

Early stakeholder engagement

In the very early stages of the project, prior to the development of any technical outputs, all background data and information was assessed. Councillors at Hertsmere Borough Council and Hertfordshire County Council were invited to attend a briefing meeting with officers from both Councils:

- 17th October 2023, 6.30-7.30pm: HBC LCWIP briefing for Councillors (Teams)
- 24th October 2023, 5.30-6.30pm: HCC Member briefing (Teams)

At these meetings, the aims and objectives of the LCWIP were introduced, along with the wider policy context.

Councillors were then asked to identify priority walking/cycling routes and/or any previous community-led work or reports associated with active travel in their areas that they wished for the project team to be aware of when developing the walking/cycling network maps.

Early public engagement

Following early engagement with local Councillors, an awareness-raising campaign for the Hertsmere LCWIP was undertaken in January 2024.

A dedicated 'Hertsmere LCWIP' engagement platform was launched online to serve as a central point of information about the project throughout every part of the life cycle.

The purpose of the engagement exercise was to raise awareness of the project and its potential benefits, and to invite local residents, businesses, schools and other stakeholders to register their interest in taking part. By registering to take part, residents and other stakeholders could be notified directly of updates to the project and the opportunity to participate in feedback-giving activities and surveys.

As part of this awareness-raising exercise, a social media campaign was organised along with a joint press release, as shown in **Figure 3-10**.

As a result, almost 300 people signed up and registered their interest in the project and were then directly notified by email of the next public engagement survey opening in May 2024.

Figure 3-10: Hertsmere LCWIP Social Media Campaign.



4 Network Planning for Walking and Cycling

4.1 Introduction

4.1.1 Overview and Methodology

DfT guidance advocates the usage of the Propensity to Cycle Tool (PCT), an online resource funded by the department to support the planning of cycle networks, to identify current and potential future distribution of cycling trips by making use of 2011 census data. It does this by reflecting existing data through several scenarios – including government targets, current (2011 census based), and a high uptake ‘Go Dutch’ framework – to better understand the potential growth routes for cycling, which may be then translated by planners and data analysts into corridors and schemes that may be a barrier to said uptake.

The PCT is itself limited, not solely because of the age of the data but due to limitations in relative scope of focusing almost entirely on commuter trips and excluding where there may be latent demand for other journeys not suitably served or accounted for.

HCC’s approach, to mitigate this, has been to establish a GIS model that is instead built around origin and destination points to better assess – at a network level – where trips may be undertaken. This includes future development and employment sites, to ensure the LCWIP is catering both for expected growth and the needs of the existing network.

The GIS model has been developed by the consultant to interface with existing HCC owned and used systems and is intended for use on all LCWIPs across the county to ensure a consistent approach. More information on this model, including the outputs and data sources, are included later in this document.

Prior to establishing and running this model, HCC reviewed data from numerous sources to better inform existing patterns, potential areas of improvement, and whether key barriers are evident in the data. These data sets include:

- PCT data
- Bikeability
- Rapid Cycleway Prioritisation Tool Data
- Strava data
- Widen My Path data

Analysis of this data and key findings are presented on the following pages.

4.1.2 Propensity to Cycle Toolkit (PCT)

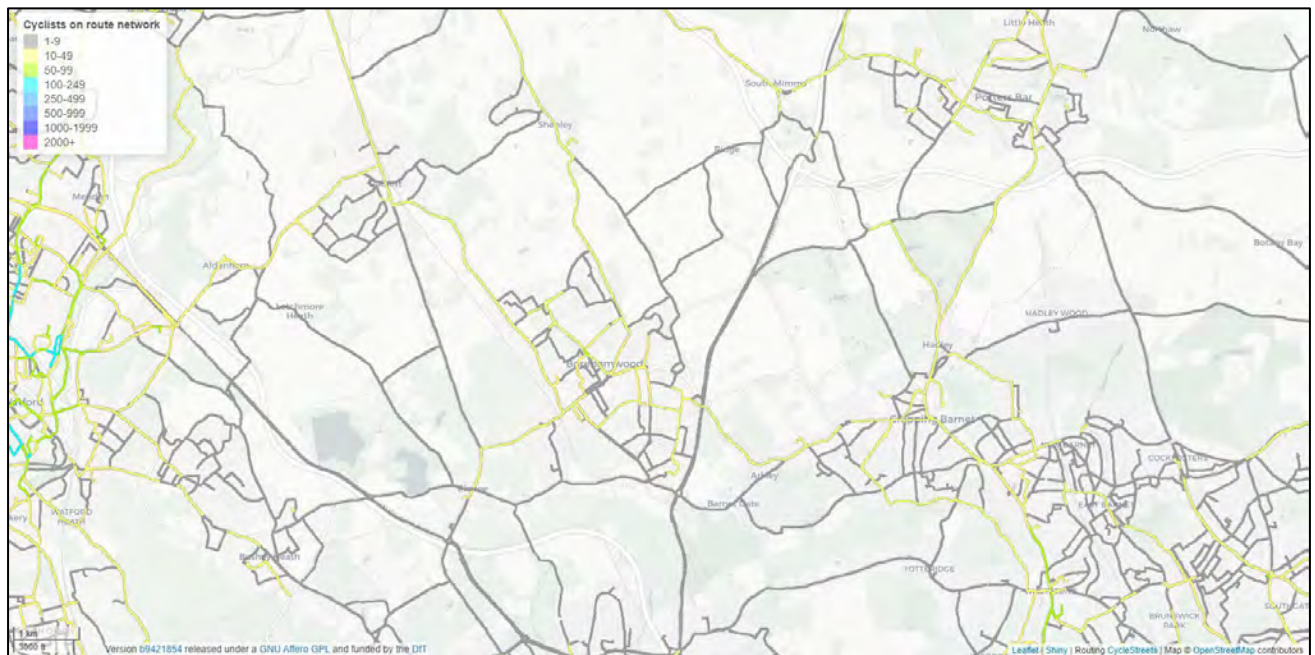
One of the principal ways in which LCWIPs seek to identify the potential for cycling journeys in the local area is using the DfT Propensity to Cycle Tool (PCT). The PCT covers travel behaviour data for commuting and travel to school. Cycle commuting data is based on the 2011 Census and cycle to school based on the 2011 school cycling Census. These represent the most up-to-date sources of publicly available, official origin-destination data on cycling levels available at high geographic resolution nationwide. Note that the PCT therefore does not show desire lines for other trip purposes and does not reflect more recent census data. There may therefore be other desire lines associated with other trip purposes, not picked up by the PCT.

In all scenarios examined for this LCWIP, cycle potential is calculated using a function based on trip distance and hilliness – as people are more likely to cycle short journeys and in less hilly areas. All outputs are shown in terms of the number of *people* using that link, not the number of trips. Three different scenarios have been examined for Hertsmere using the PCT.

The first scenario (as shown in **Figure 4-1**) is a '**government target (near-market) scenario**'. This scenario considers not only trip distance and hilliness, but also integrates sociodemographic factors (age, sex, ethnicity, car ownership, and income deprivation) and current trends associated with propensity to cycle for commutes in England and Wales, as illustrated in [New PCT Commute layer: Government Target \(Near Market\) – PCT blog](#). It therefore can pick up areas where there is a low level of existing cycling but their potential future cycle commuters are demographically similar to current cyclists.

Figure 4-1 shows expected cycle flows under the Government's 'near market' scenario, with road and path segments grouped into bands representing the estimated number of cyclists using each route. This illustrates where cycling demand is projected to be highest across the network, with local settlement patterns and boundaries providing context.

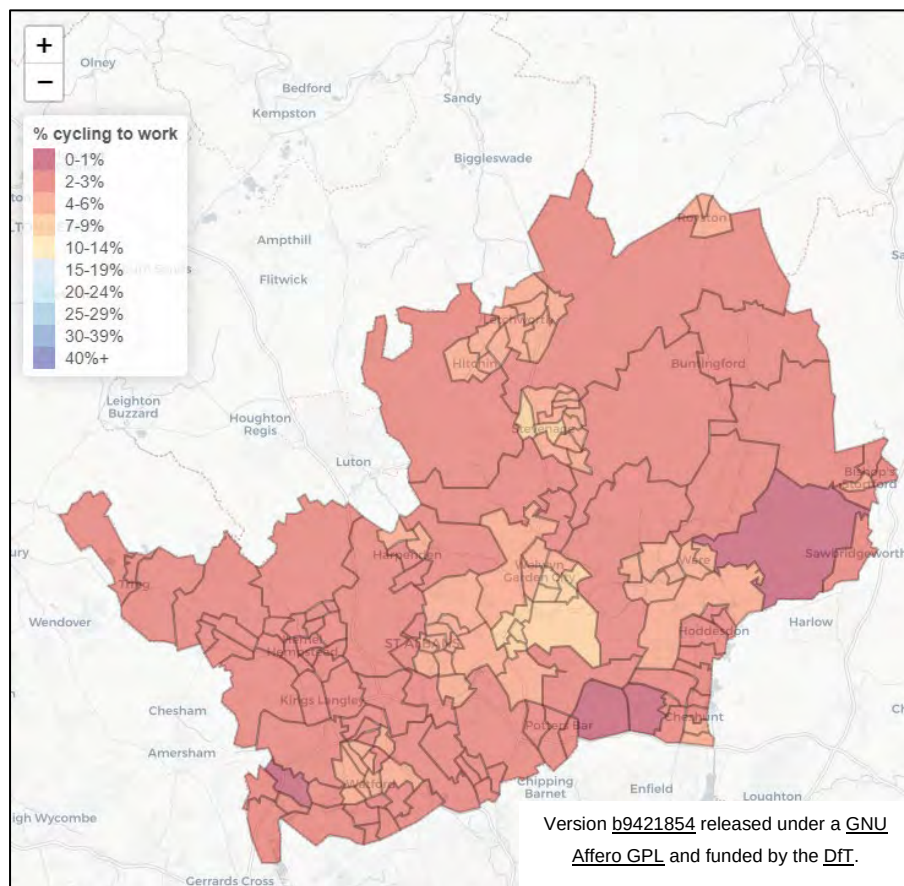
Figure 4-1: Government target (near market) expected cycle flows



In this near-market scenario, numbers of cyclists across Hertsmere stay relatively low, with the highest-demand routes estimated to be used by just 10-49 cyclists in total.

However, as shown in **Figure 4-2**, this would still represent an increase in line with government targets: most places in Hertsmere would have a cycle to work mode share of 2-3%, and Bushey (near Watford) may have 4-6%. Over the whole County, the highest levels of cycling under this scenario would be in Stevenage and Hatfield.

Figure 4-2: Government Target (near market) expected cycle usage



The PCT 'Go Dutch' scenario (as shown in **Figure 4-3**) identifies trips across the local network, then estimates how likely a Dutch person would be to cycle that trip, using Dutch data. For example, it has been estimated that a 2km trip at a 1% average gradient would have a 46% probability of being cycled in the Netherlands and so trips with these properties in the local area are assigned this probability.

In this scenario, cycling numbers increase quite significantly, with some links seeing 100-249 cyclists or even 250-499 cyclists. The highest-demand routes in this area for commuting are found within urban areas and on interurban routes. There is particularly high potential within Borehamwood, and between Borehamwood and Radlett, as well as along Potters Bar Darkes Lane and towards South Mimms. There is also good potential in Bushey, and particularly between Bushey and Watford.

The 'Go Dutch' scenario in **Figure 4-4** for school travel is similar, with the addition of some routes through more residential areas and away from the major road network to link to schools. Demand in Bushey increases quite significantly under this scenario, although

interurban routes are generally lower in demand, suggesting that the Radlett/Borehamwood link via Theobald St would be more closely associated with commuter flows.

Figure 4-3: “Go Dutch” expected cycle flows

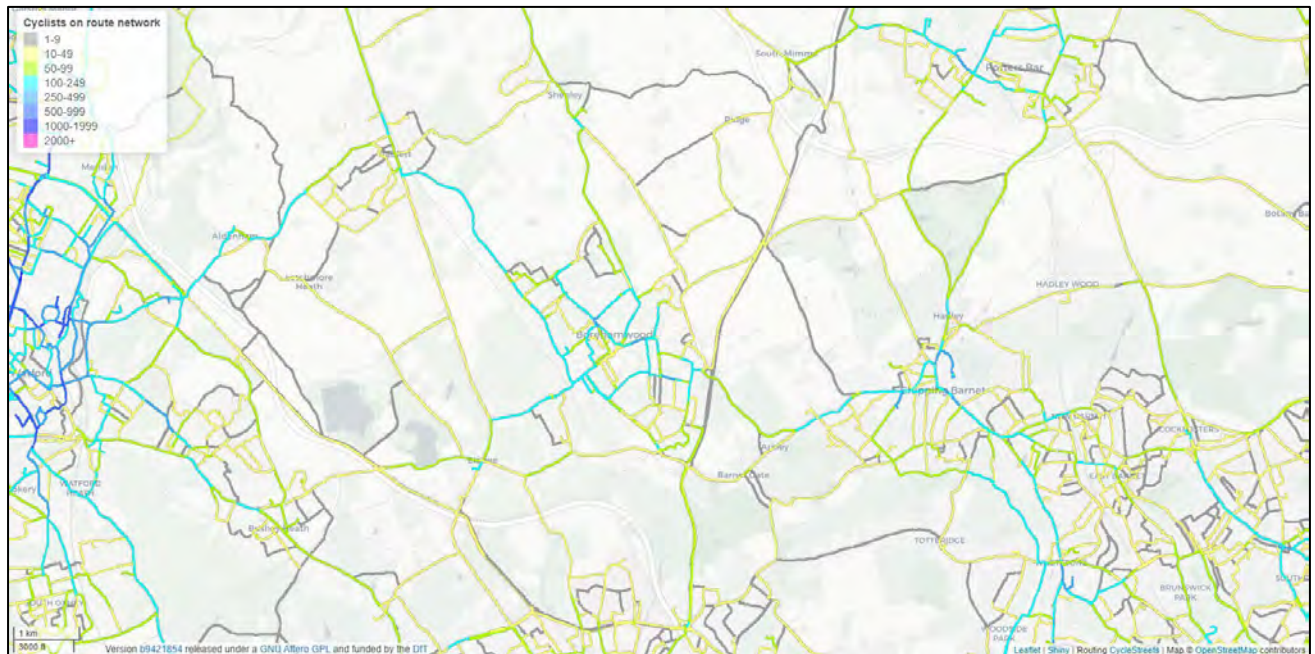
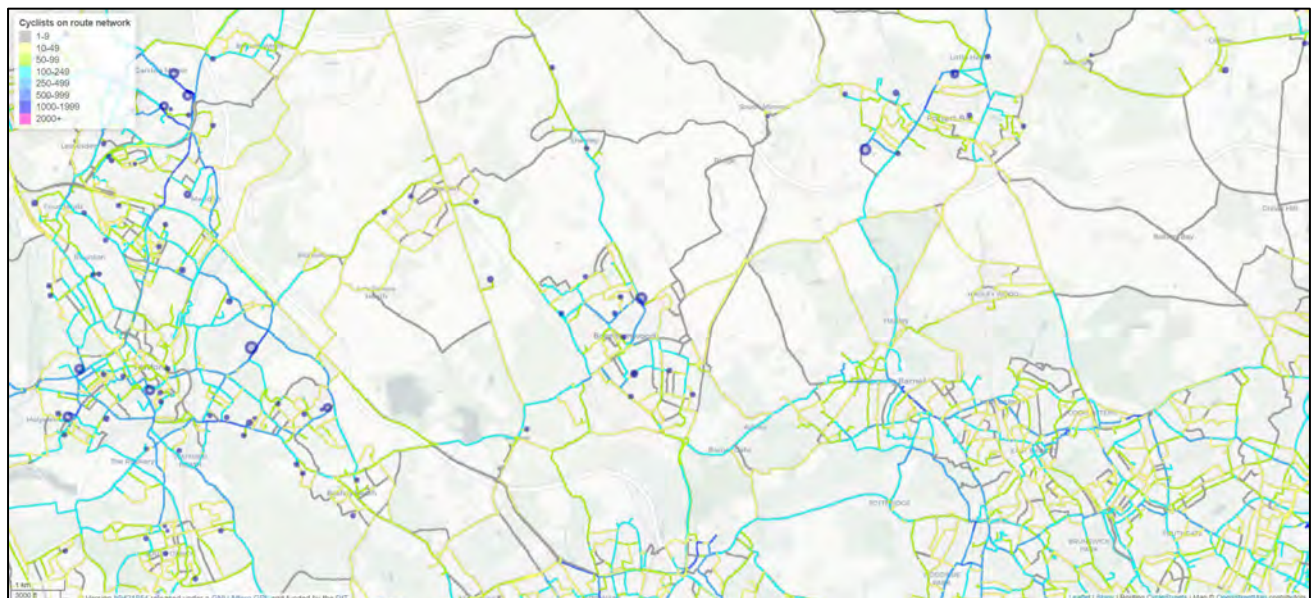
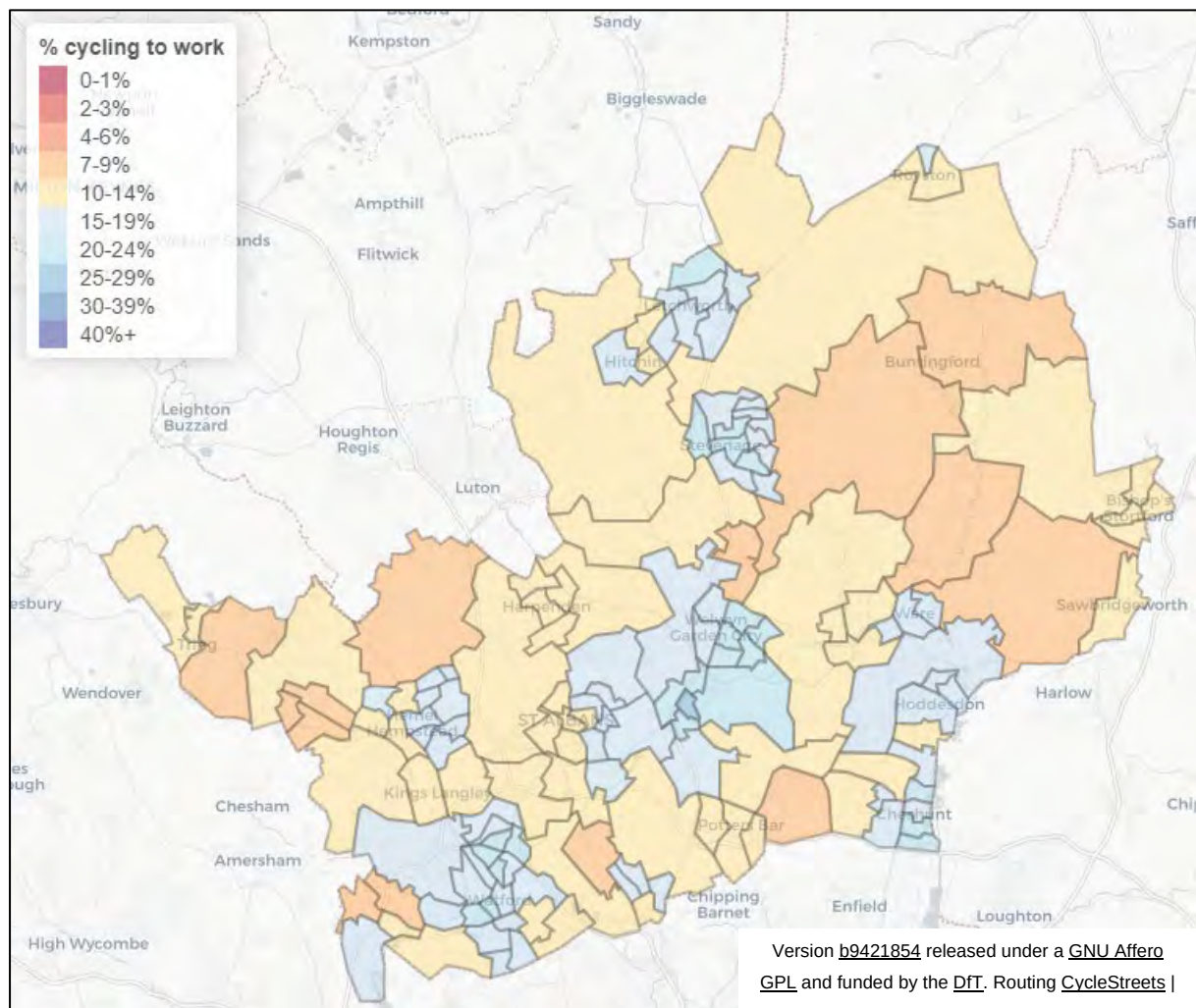


Figure 4-4: “Go Dutch” expected school travel cycle flows



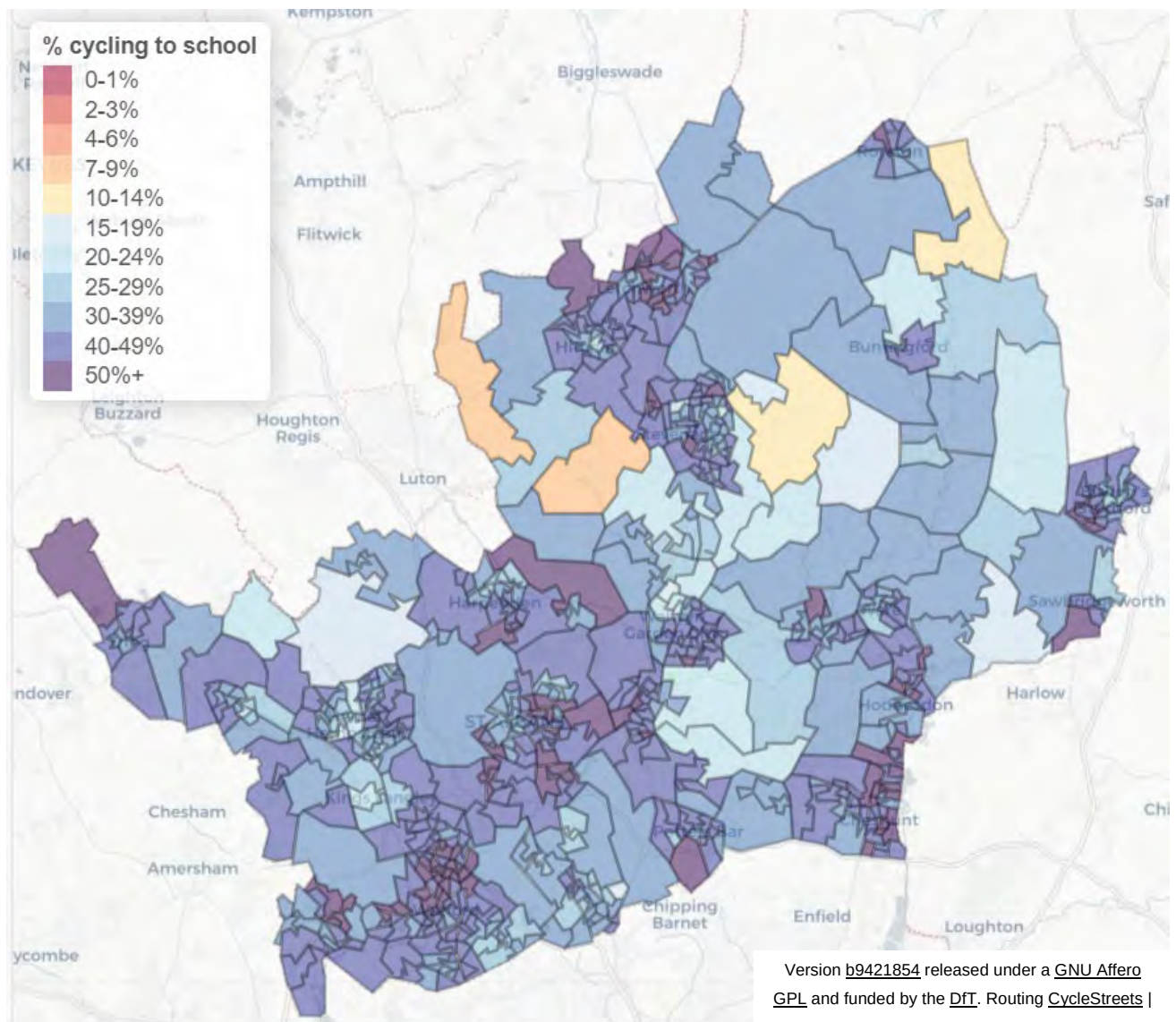
As shown in **Figure 4-5**, this could lead to a significant overall increase in the % of people cycling to work. Across most of Hertsmere, as many as 10-14% could be cycling to work, with even 15-19% cycling to work in Borehamwood and Bushey.

Figure 4-5: “Go Dutch” expected area cycle usage – County wide



The effect on school travel would be potentially even greater – as shown in **Figure 4-6**, according to the ‘go Dutch’ scenario for school travel, most of Hertsmere could see over 20% of school pupils cycling to school, with higher levels still in Potters Bar, some part of Borehamwood, Bushey and part of Radlett.

Figure 4-6: “Go Dutch” expected area school travel cycle usage – County wide



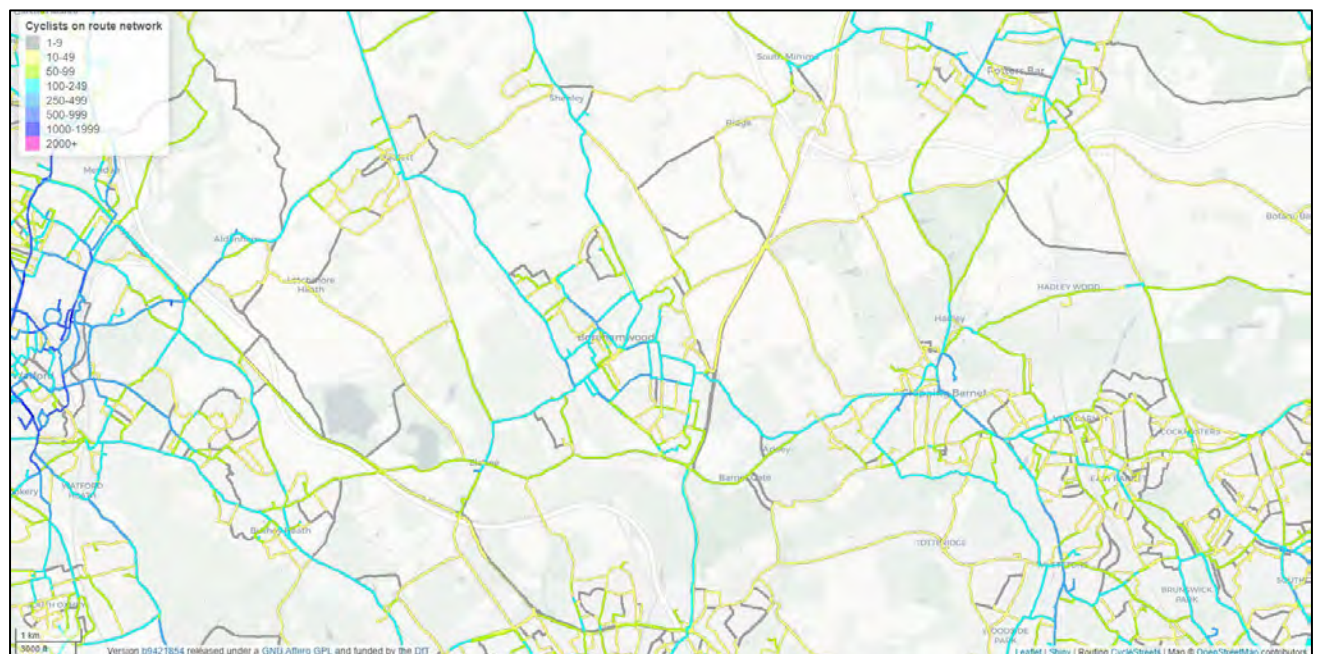
More detailed imagery of the Go Dutch scenario are provided in **Appendix C**.

The PCT ‘E-Bikes’ scenario (as shown in **Figure 4-7**) models the additional increase in cycling that would be achieved through the widespread uptake of electric cycles (‘e-bikes’). This scenario is built as an extension of the Go Dutch scenario, making the further assumption that all cyclists in the Go Dutch scenario own an e-bike. It builds on the Go Dutch scenario by applying three additional E-bikes scaling factors to account for the increased willingness of e-bike users to cycle long distance, hilly and simultaneously long distance and hilly routes, as outlined in [PCT Bike England User Manual](#).

In this scenario, cycling numbers increase yet again, and there is much higher potential demand on interurban routes between:

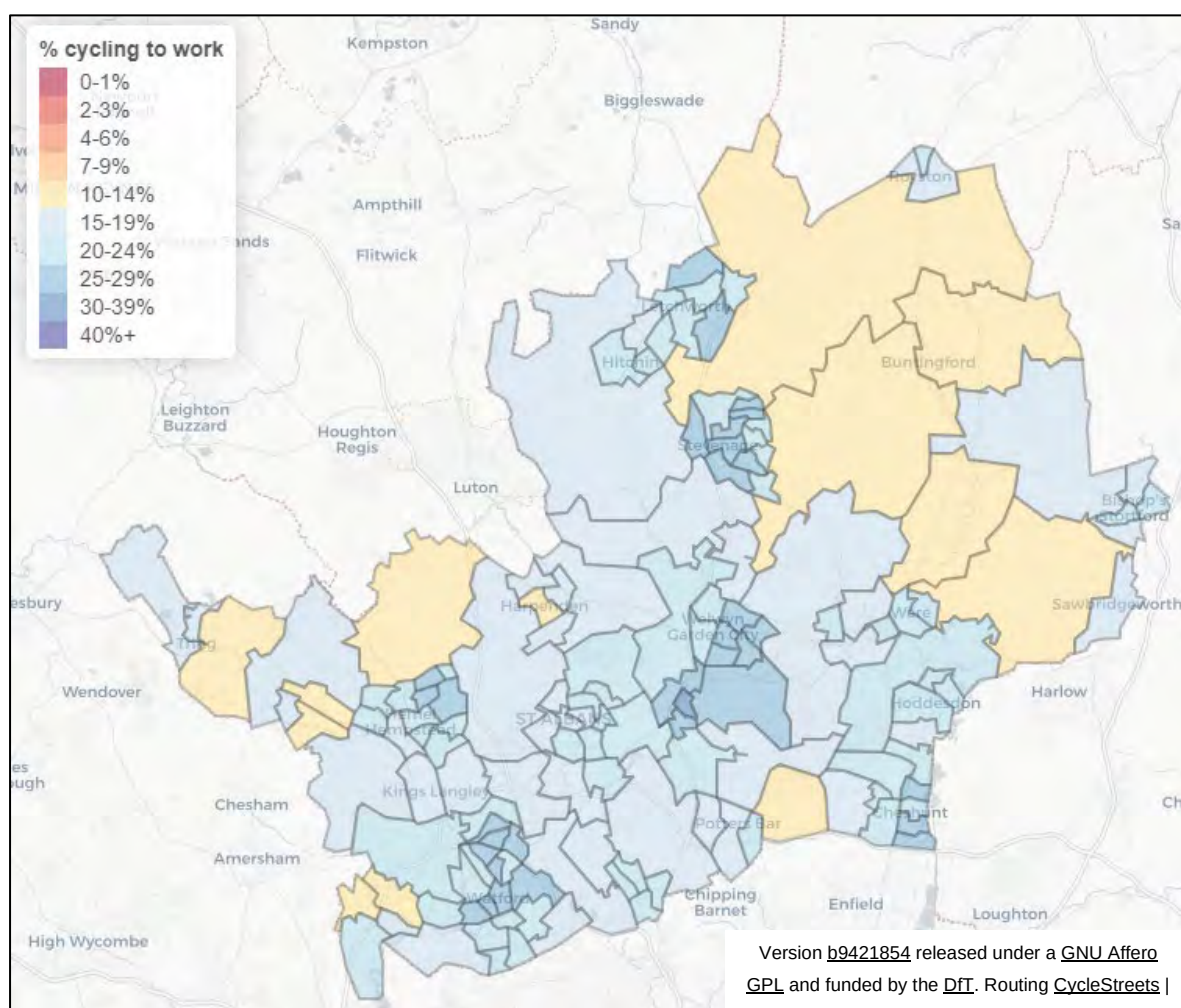
- Borehamwood and Radlett
- Aldenham and Radlett
- Borehamwood and Shenley
- Potters Bar and South Mimms
- Borehamwood and Barnet
- Bushey and Watford
- Bushey and Stanmore.

Figure 4-7: “E-bikes” scenario expected cycle flows



As shown in **Figure 4-8**, this would lead to an increase in the percentage of people cycling to work across Hertsmere to at least 15% in most places, and 20% in Borehamwood, parts of Potters Bar, and Bushey.

Figure 4-8: “E-bikes” scenario expected area cycle usage



4.2 Widen my Path

The Widen My Path platform allows members of the public to place comments on an interactive map. The site asks respondents to locate where issues are present, and where they felt investment in walking and cycling infrastructure would be valuable.

Data was exported from this website to further understand key issues and user needs on the walking and cycling network to support the LCWIP process. Maps showing the location and contents of comments in **Figure 4-9**, **Figure 4-10**, **Figure 4-11**, **Figure 4-12**.

The Widen My Path comments reflect local knowledge and priorities and align with issues identified in other strategies or by local officers. The key issues are summarised in **Table 3**.

Table 3: Comment themes from Widen My Path

Town	Key issues & themes
Borehamwood	• Lack of cycling provision along Allum Lane, Theobald St & the Elstree Way Corridor, and Green Street • Uneven cycleway along Shenley Road towards Cowley Hill
Elstree	• No cycleway along Elstree High St and Elstree Hill south to link to Centennial Park • Lack of crossings on the A41
Potters Bar	• Lack of cycling provision near the station / on Darkes Lane, on Mutton Lane, Baker St • Desire for 'share with care' facilities to allow cycling and walking along some key footways and footpaths
Ridge / South Mimms	• Need improved cycling facilities along the NCN route (Swanland Road / near South Mimms services) • Need for vegetation cutback at various locations • Narrow pavements
Radlett	• Need for junction improvement at Harper Lane • Desire for shared use pathway along Watling St • Need better access to bridleways to the north of the settlement
Shenley	• Need improved access to the bridleway from Radlett Lane • Request for better signage for the bridleway towards Colney Heath
Aldenham	• Need better cycling connections to Radlett
Bushey	• Concern about vehicle speeds • Request for better cycling links along Aldenham Road • Lack of safe crossings across the A41 • Lack of good cycleway provision along the A41 – too narrow or inconsistent / discontinuous • Request for better connections towards Watford e.g via Bushey Arches / Cockram Road • Requests for vegetation cutback / maintenance of footpaths

Figure 4-9: Widen my Path Comments breakdown - Borehamwood

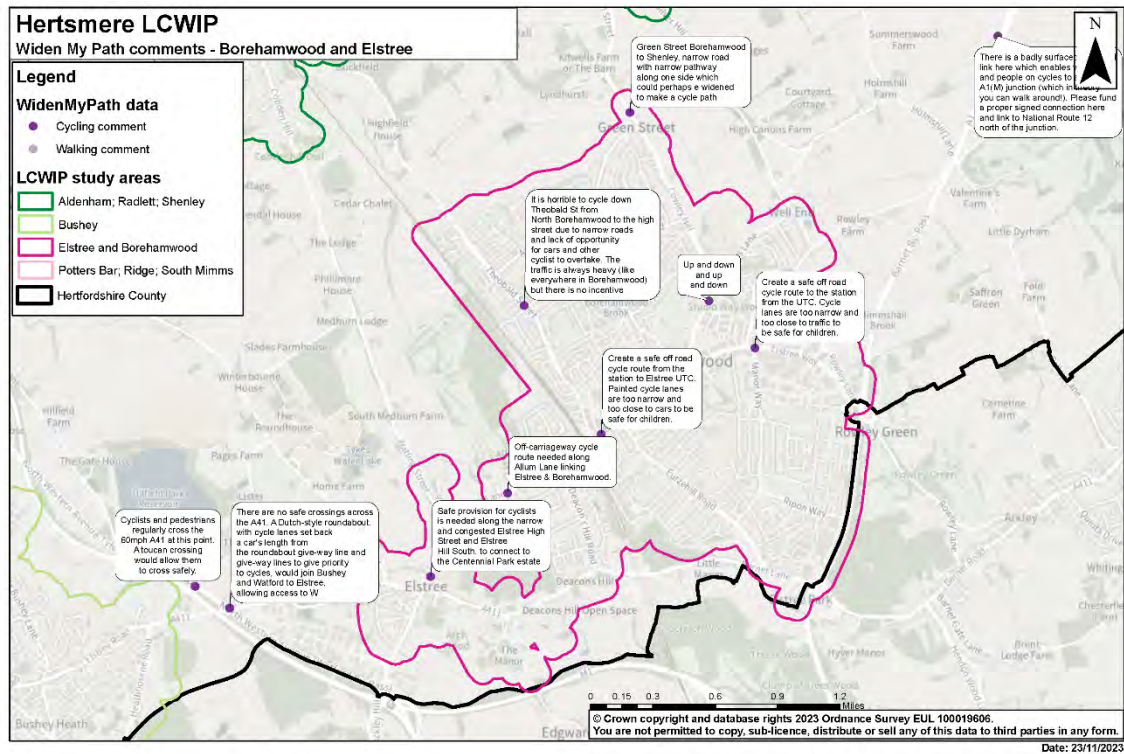


Figure 4-10: Widen my Path Comments breakdown - Bushey

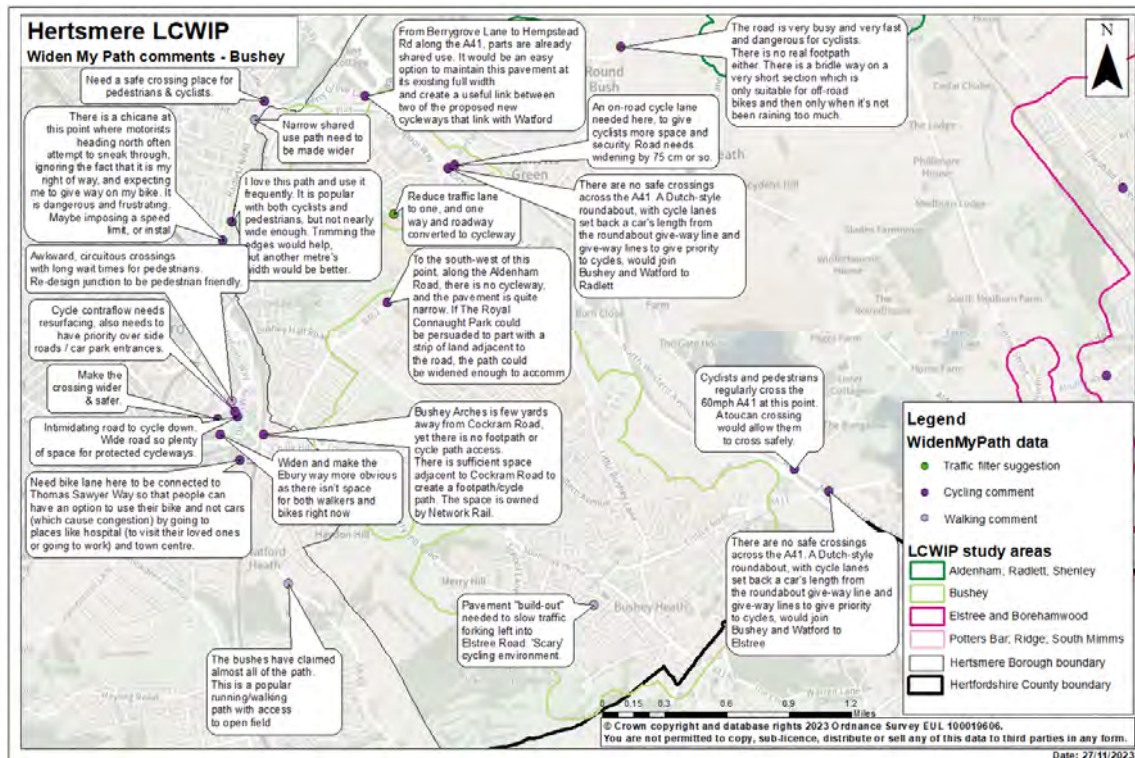


Figure 4-11: Widen my Path Comments breakdown – Potters Bar, Ridge & Shenley

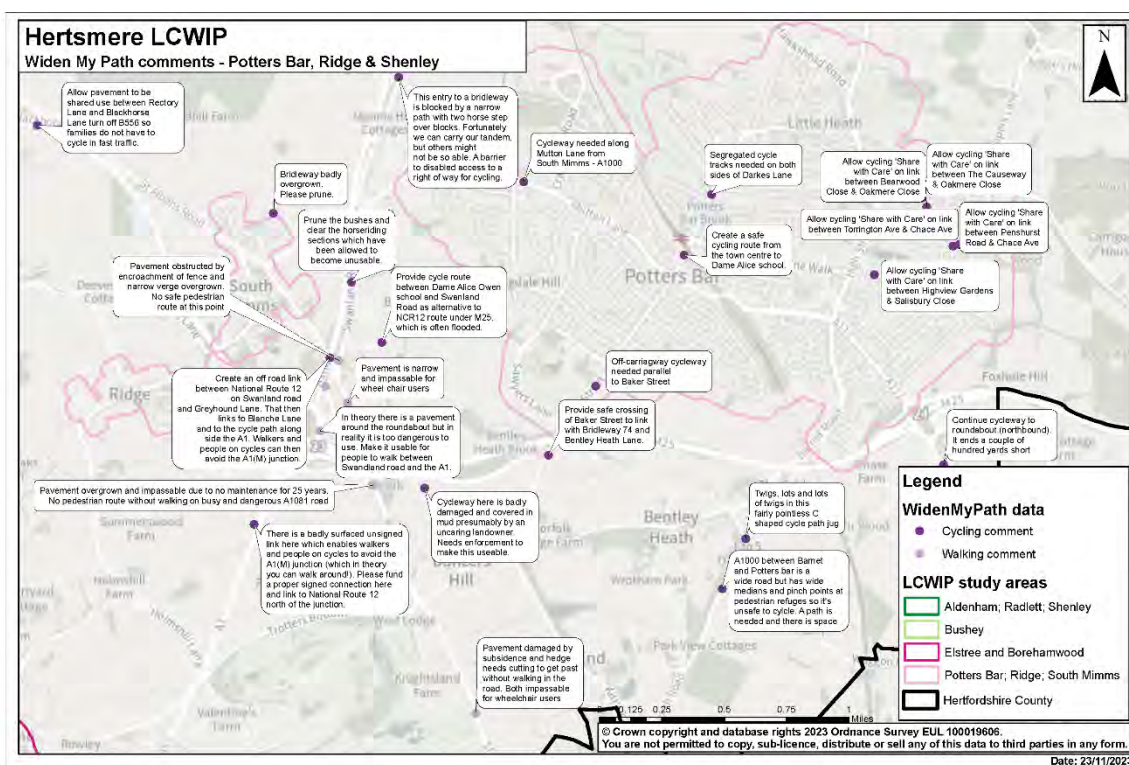
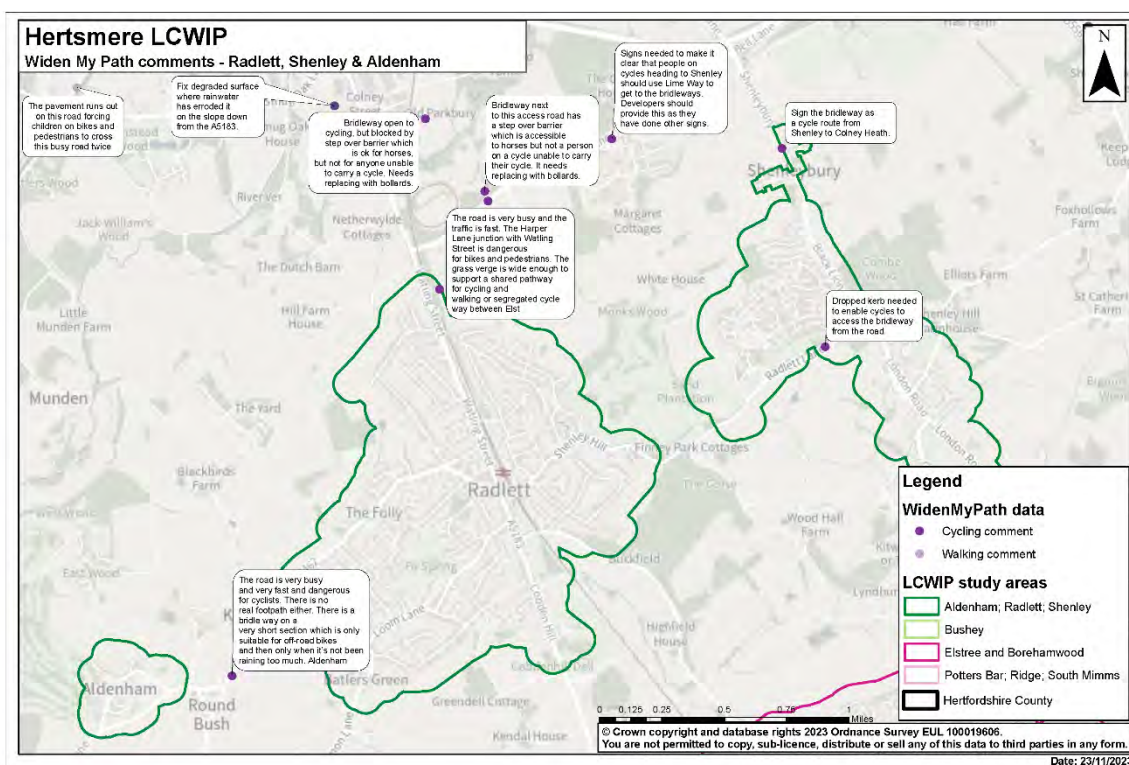


Figure 4-12: Widen my Path Comments breakdown – Radlett, Shenley & Aldenham

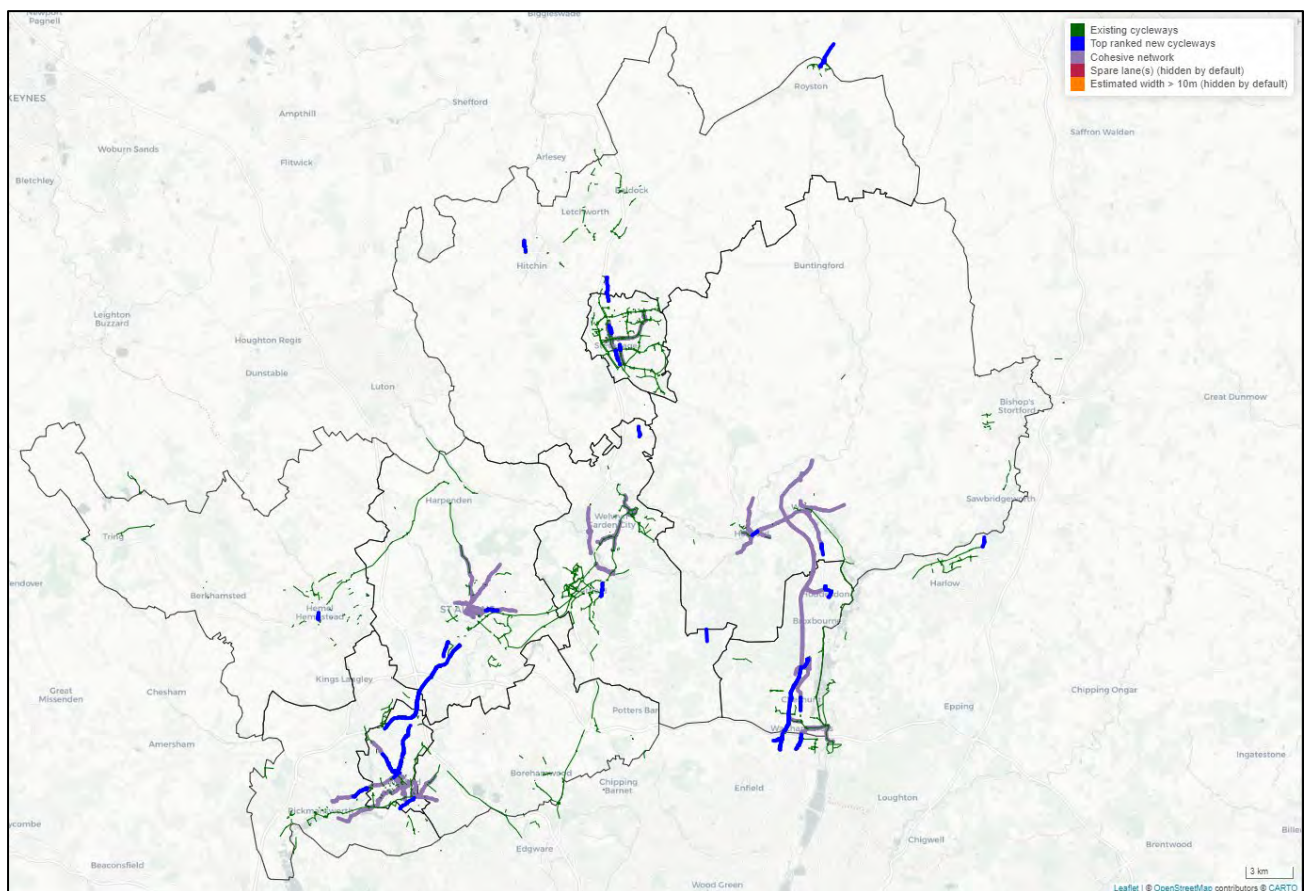


4.3 Rapid Cycleway Prioritisation Tool

The Rapid Cycleway Prioritisation Tool (as shown in **Figure 4-13**) was developed, at haste, in response to the Emergency Active Travel Fund as a means of allowing authorities without well-developed cycling strategies or network plans to identify potential cycling routes and corridors. Primarily built on data from the PCT, the tool ranks and selects roads based on:

- Cycling potential, estimated from PCT data and 2011 census information
- Spare space, those being roads that appear to be either overly wide or have spare capacity due to additional running lanes.

Figure 4-13: Rapid Cycleway Prioritisation Tool – Countywide



In addition, the tool generates what is termed the 'cohesive network' which is intended to show what an integrated cycle network could look like if more measures were able to be considered, up to and including one-way systems or full road closures, on roads with a high potential but without the expectation of spare carriageway space. This is recognised as being principally useful for long term planning. The cohesive network is shown in purple, potential new routes shown in blue.

It should be noted that the tool operates at a county level and therefore identifies top-priority routes across all 10 boroughs. There are no top ranked new cycleways identified in Hertsmere, although part of the 'cohesive network' shows how links between Bushey and Watford could be improved, which aligns with findings in other tools such as the PCT.

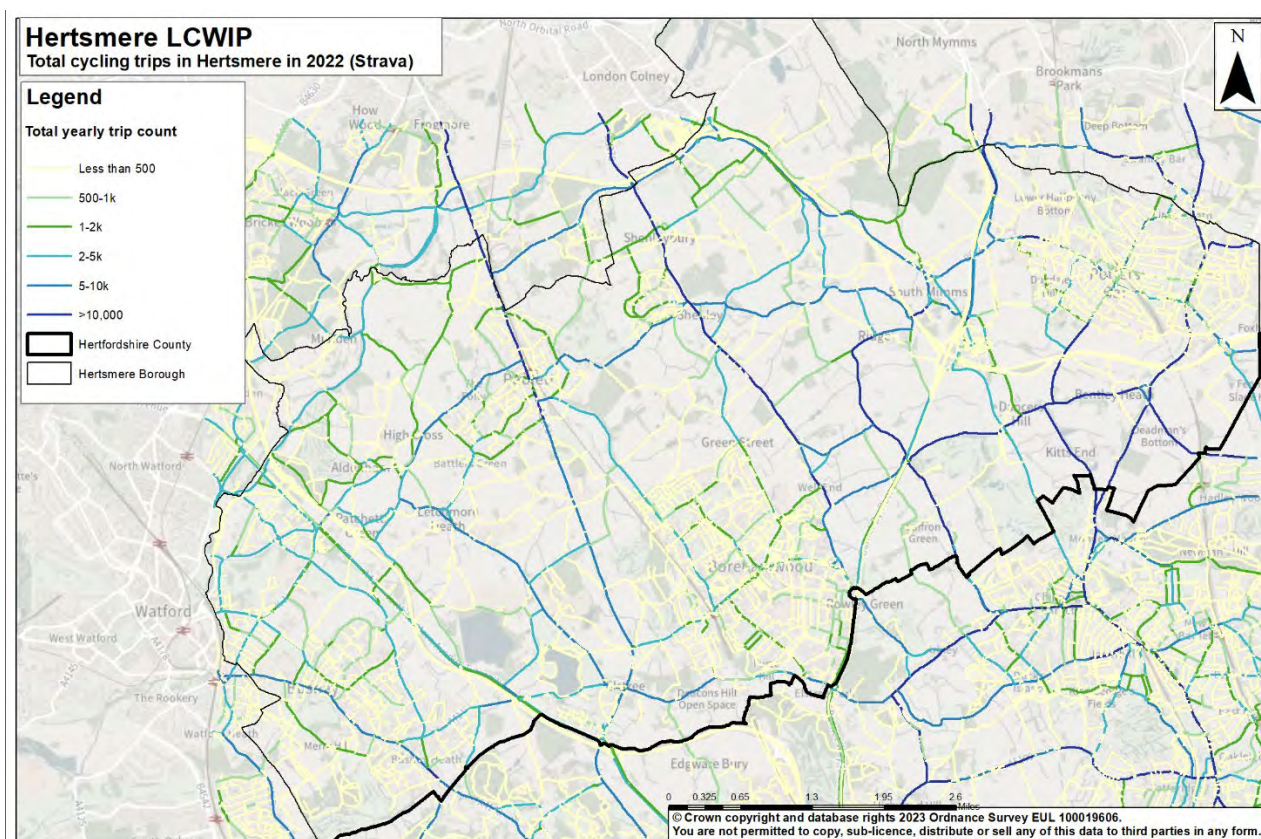
4.4 Strava data

An extract from Strava data for 2022 covering roads in Hertsmere is shown below in **Figure 4-14**. This shows the number of cycling trips on each section of road over the full year.

While Strava can be used to record many different types of journeys, approximately 85% of the trips recorded in this geographic area were for 'leisure' purposes, and just 15% were for 'commute' purposes. More journeys on Strava were also recorded on Saturdays and Sundays than other days of the week, suggesting a high prevalence of leisure rides not associated with work or school commitments during the week. In Strava datasets, 'leisure' refers simply to all non-commute activities. This could be riding for exercise or fun at the weekend but could also include 'leisure' trips to visit friends or family or carry out social activities in other parts of the Borough. According to the 2022 Hertfordshire County Travel Survey, 'leisure, social or recreation' journeys made up 34% of all journey purposes, followed by an additional 15% for shopping and 10% on personal business. Just 18% of journeys were to go to or from participants' usual place of work.

As such, all data from Strava can be used to inform where there is demand for cycling journeys that could replace car trips, and our analysis is not only limited to the road links where 'commute'-type trips have been recorded.

Figure 4-14: Yearly recorded cycle trips on Strava - Hertsmere



Particularly high numbers (over 10,000) of cycling trips were recorded on:

- B5378 / Black Lion Hill / London Road
- A5183 / Watling St
- Holmhill Lane, Galley Lane and Trotters Btm
- Dancers Hill Road

While not included within the limitations of the data extract, there was also a very high number of trips recorded along Coursers Road, just to the east of London Colney.

4.5 GIS Model Outputs

WSP has built a GIS model for Hertfordshire County Council (HCC) to use in their LCWIPs. This model incorporates the latest origin and destination data and applies it to a custom network. This provides further indication of potential demand for cycle and walk trips beyond the commute and the school run and also considers potential demand from housing built since 2011 and housing planned in the future.

The model consists of a custom network (which trips are assigned to), a series of origin points (based on existing and future housing locations) and a series of destination points. Potential walk and cycle trips are then assigned to the network to link these origins and destinations, based on a set of assumptions agreed between WSP, HCC and HBC. This gives an indication of where in the network there may be suppressed demand for walking and cycling trips, and/or potential future demand.

Assumptions

- Not all origin points are linked to all destination points. For most destination types, origin points are only linked with the closest of each type (e.g., the closest library, the closest supermarket).
- For some destination types, such as schools, origin points were linked with the nearest 3 or 5 destinations of that type.
- For a small number of destination types, including town centres and key employment areas, origin points were linked with every destination of that type.
- Where origins linked with multiple destinations of a type, the model assigned more trips to closer destinations and, in the case of key employment areas, it additionally factored in the likely number of jobs (based on the size of the key employment area) and would assign more trips to larger, closer employment sites.
- Origins are linked with destinations along the shortest route available on the network, as directness is a key factor when considering walking and cycling desire lines.
- Trips over 2km in length are excluded from the walking model, as the focus in an LCWIP is on short utility trips. 2km is length referred to in the LCWIP guidance, and most people can walk this distance in 20-30 minutes.

Trips over 8km in length are excluded from the cycling model for a similar reason. Gear Change refers to trips up to 5 miles (roughly 8km) in length as journeys 'perfectly suited to cycling' for 'many people'.

The model's network consists of all the roads and paths which are assumed to be walkable and cyclable in Hertfordshire and its surrounding areas.

It is acknowledged that not every road or path on the network will be walkable or cyclable. The model's purpose is to identify potential demand, which includes suppressed demand due to lack of facilities. Where footways aren't present, this will likely be identified during the audit stage in any case. One-way streets have been modelled as two-way on this network.

For cycling, this is to reflect the fact that many one-way streets can often be converted to two-way streets for cycling with relative ease. This allows us to see where interventions may be beneficial.

The distribution of the model outputs routes for cycling are available in **Appendix D** and the model outputs for walking routes are available in **Appendix E**.

4.6 Planning Cycling Networks

This section details how the steps undertaken in Chapter 2 have been used to develop a draft cycling network for Hertsmere Borough.

The stakeholder engagement helped to determine key areas where LCWIP development can be used to resolve high carbon emissions and other social problems including road safety and personal security.

A key goal in this stage of the LCWIP was to determine where the greatest propensity for cycling exists. In other words, areas where targeted investment in infrastructure could generate the greatest number of new cycling journeys.

The process for planning the cycling network is identified in this figure. The Propensity to Cycle tool has assisted in identifying desire lines for cycle traffic for trips to help inform network development, while the GIS LCWIP Model has analysed origin and destination data relevant to Hertsmere.

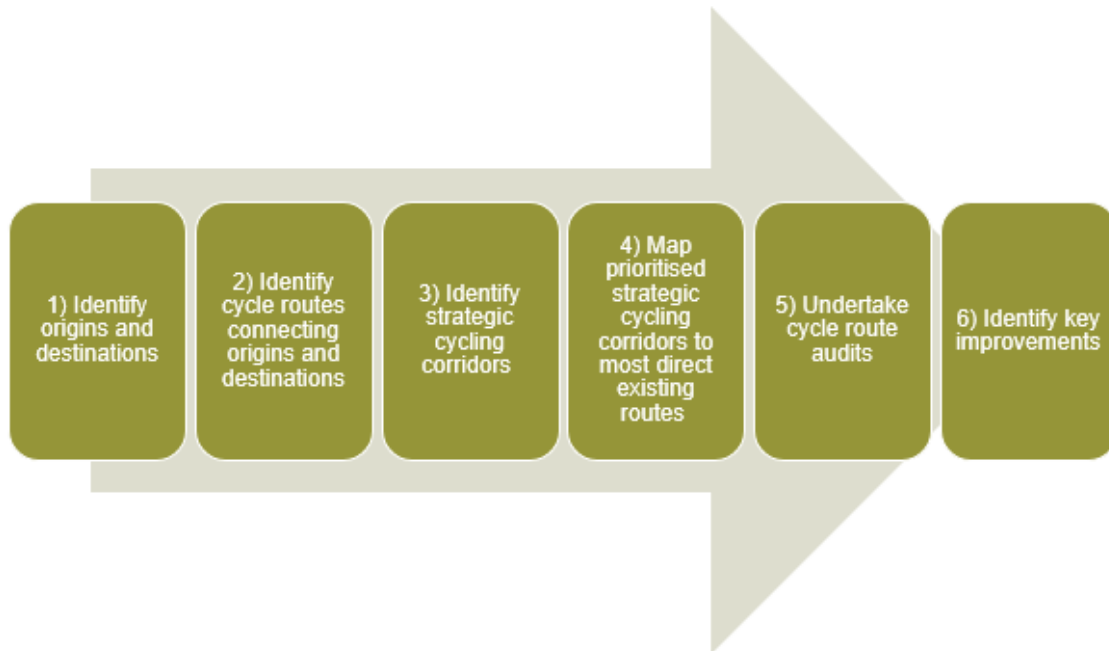
The flow diagram in **Figure 4-15** shows the six stages to planning a cycling network according to the DfT Technical Guidance for LCWIP design. Each of these stages were undertaken throughout this LCWIP development process.

As part of the LCWIP design, primary and secondary routes have been identified. Primary routes provide links to key destinations including commercial areas, schools, large housing developments and key links through and between the towns.

The main primary routes were seen around the centre of the four key settlements within Hertsmere as well as links within the settlements accessing key employment sites and / or educational facilities that may be located outside of the core areas of the settlement or in the peripheries of the settlement itself (e.g. A1 Employment site located in Borehamwood) due to the reduction of residential and employment sites found further away, the primary network is reduced with the secondary network taking its place.

Secondary routes provide further connections to schools and smaller housing developments and are feeder routes to the primary network.

Figure 4-15: Cycle Network Planning Process



4.7 Draft cycling networks

The cycling networks underpinning the entire LCWIP process are located in close proximity to key urban centres and employment areas. The decision of identifying the network routes took into account expected cycle demand along each key highway route within the key settlements of Hertsmere. High streets and access to key public transport services are located adjacent to primary routes, which carry along key highway links to provide local connection via cycling to employment and services for the local settlement populations. Several key employment sites and educational facilities outside of the main settlement centres can be accessed via cycling, prompting the inclusion of primary routes to provide additional improved access opportunities.

Several interurban routes have also been provided as primary routes including the following:

- Bushey – Radlett
- Bushey – Elstree – Borehamwood
- Radlett – Borehamwood
- Radlett – Shenley
- Shenley – Borehamwood
- Potters Bar – Welwyn Hatfield

- Links between Bushey and Watford
- Links Between Bushey and London

The interurban routes act as key routes that may not have substantial demand in the GIS model but have opportunities to provide alternative to existing car travel. The inclusion of interurban cycle travel opportunities allows for connections between different rail lines across the borough, opening new public transport options to be accessed via active modes. There is a lack of connection in the primary network between Potters Bar and the other settlements within Hertsmere, this is due to the long distance making the uptake of cycling (primarily for commuting) unlikely to happen. Instead, a secondary route has been provided along Trotters Bottom and Rowley Lane to provide connection to Borehamwood.

4.8 Planning for Walking Networks

Similarly, to the cycling network plans, the information gathered in Chapter 2 was used to develop a draft network plan for walking, with core walking zones and key walking routes. The draft network was presented to stakeholders, amended and then used to determine the relative importance of different routes and thus which routes to audit and develop infrastructure plans for.

A key goal in this stage of the LCWIP was to determine where the greatest propensity for walking exists – where targeted investment in infrastructure can generate more journeys on foot.

The flow diagram in **Figure 4-16**, shows the six stages to planning a walking network. according to the DfT Technical Guidance for LCWIP design. Each of these stages were undertaken throughout this LCWIP development process.

Figure 4-16: Walking Network Planning Process



4.9 Network Plans

Following from the Walking and cycling network analysis, draft network plans for both travel modes were produced outlining the key networks. The network plans for both walking and cycling are available in **Appendix F**.

4.10 Stakeholder engagement on the Network Plans

Several stakeholder engagement sessions were held between the Hertsmere LCWIP project team and all relevant stakeholders to the development of the LCWIP, as shown in **Table 4-1**. The purpose of these consultation events listed below focus primarily or include discussions relating to the walking and cycling networks within Hertsmere, allowing stakeholders to input comments / discussions.

Following from councillor and stakeholder engagement, early public engagement for the Hertsmere LCWIP was undertaken in May/June 2024. A comprehensive range of communications activities were conducted, both online and in-person, to engage with the community. In April, Hertsmere News featured a newsletter article sent to all residents, announcing the upcoming engagement and promoting the 'register your interest' form. This

was followed by a press release and news article on the HBC website on 14th May. Emails were sent to all identified stakeholders, including schools, Housing Associations, and residents who expressed interest in the project. Additionally, news was disseminated through HBC newsletters and the HCC Highways and Sustainable Hertfordshire 'UpdateMe'. Posters were distributed to stakeholders for display in local spaces, leisure centres, libraries, and shared in-person with Aldenham Parish Council.

Engagement efforts included several meetings, such as a councillor workshop on 15th May and a stakeholder workshop on 16th May. A poster competition was organised for all primary schools in Hertsmere, receiving over 50 entries. The winning posters were announced after PERP, and all submissions were showcased at the Big Green Transport Talk. In-person events featured a market stall in Potters Bar on 19th May, parent & toddler groups in Bushey and Borehamwood on 21st May, and various other events attended by the Community Engagement Officer before 31st May. Additionally, a Borehamwood Town Centre Partnership meeting with businesses was scheduled for 7th June, a Borehamwood drop-in session at the Civic Centre on 10th June, and the Big Green Transport Talk on 12th June.

Social media efforts were robust, with regular posts on Herts Highways accounts and the Walking, Wheeling & Cycling account, complemented by a new short video on HCC Corporate Instagram, TikTok, and Facebook.

Figure 4-17 summarises the early engagement phase, highlighting the volume of feedback received, promotional activity undertaken across Hertsmere, contributions from local schools, and attendance at in-person events.

Figure 4-17: Early Engagement Summary: Key Participation Metrics



Table 4-1: Stakeholder Engagement Activities Summary

Date	LCWIP stage	Activity
14 th May 2024	2	Review of Draft Walking and Cycling Networks (HCC and HBC Councillors) A briefing and interactive workshop was held on Tuesday 14th May 2024 to present the draft walking and cycling network plans for Hertsmere's LCWIP at the start of the public engagement period. This included a presentation on the draft network plans across Hertsmere and guidance on how to use the online platform to submit feedback.
16 th May 2024	2	Review of Draft Walking and Cycling Networks (Specialist stakeholders) A briefing and interactive workshop was held on Thursday 16th May 2024 to present the draft walking and cycling network plans for Hertsmere's LCWIP to specialist stakeholders such as walking/cycling groups, schools, and other community representatives. This included a presentation on the draft network plans across Hertsmere and guidance on how to use the online platform to submit feedback.

Date	LCWIP stage	Activity
May-June 2024	2	Early Engagement Period (Public) A six-week consultation period was held in May-June 2024 to log feedback on the network from the key stakeholders mentioned above and the wider public. The feedback from the online consultation, along with feedback received in the above meetings, were then used to refine the LCWIP network. During this engagement period, we held many online and in-person events, including: • Potters Bar Market: 19th May 2024, 10am - 2pm on Darkes Lane. Pop by our stall to find out more - no booking required • Hertsmere Walking and Cycling Drop-In Session: Monday 10th June 2024, 2pm-5.30pm @ Hertsmere Civic Offices, Borehamwood. Come along to find out more about the project or ask questions. No reservation required
12 th June 2024, 6-9pm	2	Hertsmere's Big Green Transport Talk Residents and communities were invited to the first ever 'Big Green Transport Talk', an engaging event for all ages dedicated to exploring active and sustainable transport solutions across Hertsmere Borough. The event included a panel discussion with experts from a range of teams and organisations to talk about ways we can work together towards a greener transport future for all, an audience Q&A, interactive stalls and a local school art exhibition. 100 spaces were available for residents and stakeholders, and the free event 'sold out' in advance. All attendees were encouraged to take part in the Hertsmere LCWIP engagement survey as part of the event.

The outcomes of the stakeholder engagement enabled the project team to make changes to the primary and secondary walking and cycling routes in an adaptive and iterative process. Sections of the key highway network were introduced into the walking / cycling network of the LCWIP where notable stakeholder interest was present, providing the local knowledge and interest that the technical LCWIP approach may miss. However, it should be noted that the GIS model still remained as a key dataset. This means that the stakeholder proposals would be compared to the expected usage from the GIS model outputs to indicate if it should be added to the network.

Key examples of changes to the network that resulted from the stakeholder engagements were the inclusion of more inter-urban routes as part of the primary and secondary cycling network, these were key points included in the stakeholder engagement, which mentioned to help provide connections within Hertsmere as well as to elsewhere in Hertfordshire as well as the northern London Boroughs.

5 Infrastructure Planning for Walking and Cycling

5.1 Overview of Infrastructure Planning

Following the route audits, auditors generated plans of the high-level infrastructure improvements that would be needed to enable significant mode shift to walking and cycling. This was originally done individually by auditors (i.e., walking infrastructure improvements were generated separately from cycling infrastructure improvements). The plans were then checked against one another (to ensure there were no contradictions where walking routes and cycling routes overlapped), then combined into individual infrastructure plans for the four key settlements within Hertsmere.

The completed and detailed walking and cycling audit forms are not included in this report but have been retained by HCC for use when schemes are taken forward.

The completed walking audit forms (and associated documentation) contain the specific information on what specific footway improvements (e.g., widening, resurfacing, lighting) would be needed where in order to bring walking provisions in line with current best practice. The plans shown in section 5.8 (and in **Appendix G / Appendix H**) do not go into this level of detail for footway improvements as this is simply too much information to convey in the report format. The plans in the report and appendices instead identify the locations where footway improvements are needed (without specifying precisely what these are), alongside the locations where there is a need for new / improved crossings and other relevant walking (and cycling) infrastructure. In addition, several minor junction improvements have not been shown in the infrastructure plans, this is primarily due to most junctions requiring dropped kerbs and tactile paving. It is assumed that the footway improvements will assume the inclusion of dropped kerbs and tactile paving where appropriate.

In terms of cycle infrastructure, all the detail of the suggested improvements is contained in this report and its appendices. Certain specifics are not included (for example bus stop treatments where segregated cycleways are proposed) but general principles and assumptions are given where possible.

The infrastructure improvements identified in this section of the report have not been taken through feasibility design. Rather, they are concepts of the types of infrastructure which are believed possible, should be investigated further and, if implemented correctly and in appropriate packages, should bring about modal shift.

There are also many other types of complementary infrastructure improvements and associated projects which have not been specifically proposed through the LCWIP process, but which will be taken into full consideration through other workstreams and later design stages to support behaviour change. For example:

- Secure cycle parking must be provided in a convenient and safe location close to destination points – for example, in town centres or near key services, schools, healthcare facilities and employment areas. These should be linked to existing and potential future cycle routes, and any scheme aimed at increasing cycling should consider whether appropriate levels of parking have been incorporated in alignment with primary cycling networks and trip generators.
- Mobility Hubs should be considered as part of plans to improve public transport services and could be a good opportunity to facilitate and increase multi-modal trips where a mixture of public transport and active transport could help to achieve modal shift for longer journeys. Mobility hubs are a form of transport hub that combined different forms of “mobility” together in one location, extending from the traditional travel modes (car, public transport, Cycle parking etc.) and also incorporates public cycle infrastructure, car club / rental schemes and Electric Vehicle Charging Provision (EVCP). The use of Mobility hubs also provides amenities for commuters to both travel and work within the mobility hub (E.G. public Wi-Fi, Co-working spaces, Café / dining facilities and information desks). HCC and HBC will explore opportunities for mobility hubs in relevant locations if funding becomes available.
- Bike hire and/or bike share schemes can be a very effective and easy way of promoting cycling within a specified area, with the existing Beryl bike scheme available in Borehamwood and Bushey HCC and HBC will work together to explore the opportunity for an expansion for the existing bike share scheme as well as potential for additional cycle hire schemes throughout Hertsmere should any funding opportunities come forward for this purpose.

The proposed locations of new cycle parking, bike hire hubs, mobility hubs will be informed by the network and infrastructure plans set out in the LCWIP, subject to relevant design guidance and safety standards within the feasibility design stages.

5.2 Walking audits

The Walking Route Assessment Tool (WRAT) process considers the needs of all users, including vulnerable pedestrians, such as those who are older; visually impaired; mobility impaired; hearing impaired; with learning difficulties; buggy users or children. The process of scoring routes against the criteria in the WRAT identified issues (e.g. lack of crossing points) which informed the identification of infrastructure solutions (e.g. new zebra or signalised crossings).

Audits took place throughout August 2024 across the four main urban centres in Hertsmere between both HCC and WSP. Individual walking audit routes were identified and audited to garner details and experience of the existing infrastructure within Hertsmere. Details identified for junction treatments, crossing improvements and footway provision were undertaken within the audits. The route audits determined which levels of pedestrian infrastructure improvements are likely to be required throughout the borough.

Once route audits were complete, infrastructure improvement plans were developed for walking and cycling. The improvements identified in this report are high level and not been taking through to design stages. The following pages provide an overview of the varying infrastructure improvements which have been considered for Hertsmere Borough.

5.3 Cycle audits

The majority of cycling route audits also took place in August 2024 and were undertaken by WSP and HCC personnel using bicycles, which provides a more accurate perception of the conditions along the route and challenges / issues that are present for cyclists that currently use the route. This subsequently assisted in developing infrastructure improvements that are bespoke to the issues present on each route.

5.4 Infrastructure on secondary routes and in rural areas

Infrastructure proposals will still be provided for secondary and interurban / rural routes where possible. Infrastructure primarily focuses on the primary routes as these have been identified as the most important routes for implementing modal shift, however the influences

of stakeholders and public engagement may impact infrastructure proposals where identified.

For rural and inter-urban routes, little guidance exists from active travel England / Department for transport on rural active travel design. Many interurban routes have been specified as future active travel ambition routes. There is interest in producing an interurban connection across key settlements, but without design guidance and an understanding of local land ownership, the decision of level of infrastructure cannot be made.

5.5 Intervention types

Information on each type of intervention shown in the infrastructure plans is given below:

- **Minor junction improvement (side road):** where a need for minor junction improvements has been identified at side roads, this typically denotes a need to build out the footways (to tighten junction geometry, reduce turning speeds and shorten crossing distances) and add dropped kerbs and/or tactile paving where missing. In some cases, there may be potential for additional measures, such as banned turns, raised tables, continuous footway or cycleway crossings or modal filters.
- **Minor junction improvement (mini roundabout):** where a need for minor junction improvements has been identified at junctions which are currently mini roundabouts, this denotes a review against LTN 1/20 guidance and potentially tightening of the junction geometry and/or improving the crossing facilities. In some cases, especially where there are double mini roundabouts it may be better to simply replace them with unsignalised priority T-junctions.
- **Medium junction improvement:** at mid-size junctions, improvements typically denote a need for pedestrian crossings and protected cycle infrastructure on all arms. In some cases, this might mean signalising the junction.
- **Large junction improvement:** at large junctions where a need for junction improvements has been identified, this typically denotes a need for pedestrian crossings and protected cycle infrastructure on all arms. At particularly large junctions this might mean a Dutch-style roundabout (with parallel crossings on each arm) or a signalised 'CYCLOPS' style junction (as have been installed in Manchester in recent years). Some large junctions which are roundabouts may need converting to signalised crossroads or other forms of signalised junction to be able to provide the required improvements to pedestrians and cyclists.

- For all junction improvements, it should be noted that road space reallocation and potential changes to overall capacity may be required to achieve meaningful improvements for walking and cycling within the space available. Changes will be made in line with the Local Transport Plan Transport User Hierarchy and supporting documents, with consideration given to the Place & Movement function of the road and the most appropriate use of the space.
- **New / improved pedestrian crossing:** where these are included in the plans, this denotes providing new priority (controlled) crossings for pedestrians to reduce severance or improving existing crossings. In some cases, this might mean installing new zebra or signalised pedestrian crossings. In other cases, this may refer to improving an existing crossing, for example by increasing the green time available at signalised crossings or replacing informal traffic island crossings with zebra crossings. This has the added benefit of reducing pinch points on the carriageway for cyclists.
- **New / improved pedestrian + cyclist crossing:** where these are included in the plans, this denotes providing new priority (controlled) crossings for pedestrian and cyclists. In some cases, this might mean installing a new parallel crossing, or a new signalised pedestrian and cycle crossing (ideally not toucan crossings as these rely on shared use which is discouraged in LTN 1/20). In other cases, it might mean improving an existing crossing, for example by upgrading a zebra crossing to a parallel crossing which cyclists can also use.
- **Potential areas for traffic calming:** traffic calming denotes adding cycle-friendly traffic calming features to streets and/or reducing speed limits to safe levels for cyclists following LTN 1/20 guidance. For example, reducing speeds to 20mph on roads with lower volumes of traffic can help people to feel more confident and safe cycling on the carriageway and may be a more cost-effective intervention in some circumstances. The LCWIP network plans and infrastructure improvement plans will therefore be used to shape and guide discussions about speed limit changes in the local area, although all changes to speed limits will need to be considered in conjunction with the Speed Management Strategy.
- Where traffic calming features are considered, these should be cycle friendly (e.g., narrowing traffic lanes and carriageways, removing centre lines, or raising tables). Traffic calming features such as speed cushions should be avoided. Additional measures could include parking restrictions, resurfacing and gulley cover replacement. Some traffic-calmed streets may also be suitable for contraflow cycling (either with or without cycle lanes/tracks) – this has been indicated on the plans where it may be especially useful for the cycle network.

- **Potential areas for traffic filtering:** Areas in which traffic filtering is suggested are areas in which there's a need for reduced traffic volumes and / or speeds. Methods of implementing this include traffic filtering using modal filters, banned turns, or one-way systems. For example, a modal filter can be used as a low-cost intervention to help reduce rat-running in residential areas, where there are other alternative and more appropriate routes for through-traffic available and/or insufficient space for other measures such as segregated cycleways. Modal filters can be used as an opportunity to change the environment and reduce traffic volumes as well as speeds, therefore making on-road cycling safer and more comfortable while still allowing vehicle access for residents and their visitors.
- **Footway improvements:** this could refer to a number of different types of footway improvement. It could denote ensuring footways have 1.5m clear width to allow wheelchairs and buggies to pass, widening and/or relocation of permanent/temporary footway obstructions as necessary (including footway parking). It could also denote resurfacing to fix surface issues (patching, trenching, uneven surfaces, trip hazards), lighting improvements, and/or the removal of excess bollards, guard railing and vegetation.
- **Segregated cycleway:** this denotes the addition of LTN 1/20 compliant segregated cycle facilities such as kerb-segregated tracks, stepped cycle tracks, footway level tracks, off-road cycle tracks or lightly segregated cycle lanes (whichever is judged most suitable in feasibility design). It also includes the necessary traffic calming and speed limit changes need to make the route LTN 1/20 compliant, as well as bus stop redesign (i.e., to bus stop bypass or shared use bus border) resurfacing, wayfinding, and gulley cover replacement as necessary. Generally, where this is shown on the plans, a single red line will refer to a one-way cycle facility on both sides of the road. In some cases, a two-way track on one side of the road may be preferable. Indications of where this may be the case have been given in text boxes on the plans in **Appendix G / Appendix H** but all options should remain open for investigation at the feasibility design stage.
- **Signalised shuttle system:** this denotes the installation of a signal-controlled system to alternate flows on a narrowed section of road. This is proposed where there are width constraints (e.g., under a rail bridge) and the street currently provides traffic lanes in both directions at the expense of having very narrow footways for pedestrians. By installing a shuttle system, footways can be widened making this a more appealing, comfortable, and safe route for pedestrians and cyclists.

- **New/Improved Pedestrian and Cycle Bridge:** these are shown on the plans where a long-term plan for a new pedestrian and cycle bridge or widening of an existing pedestrian and cycle bridge might bring benefit to the walking and cycle networks. These are accompanied by text boxes giving additional information.
- **Shared use:** A shared use path is a path that is designed for both pedestrians and cyclists to use and can be created from new or existing footpaths. Shared use paths can be segregated or unsegregated.
- **Mixed traffic:** Where cyclists are on-carriageway, mixed with other roads users. It should be noted that this is only appropriate where speeds and vehicle numbers are low and other existing or proposed traffic management, and calming measures are in place.
- **Future Ambition Active Travel:** Identified future improvements for active travel interurban and rural connections

The plans also show existing Rights of Way and National Cycle Network routes, and existing shared footways. In some cases, these are of a decent standard and upgrading them should not be an immediate priority (in favour of instead creating new infrastructure). In other cases, some improvements to these have been suggested on the plans (both through other infrastructure proposed and suggestions in the textboxes). However, as the GIS model does not show significant cycle flows or expected increases, there is limited need to include these additional routes into the list of prioritised routes.

5.6 Stakeholder engagement on the infrastructure plans

Several consultation events were held with stakeholders in early 2025 regarding the proposed LCWIP infrastructure plans, as shown in **Table 5-1**. The list of consultation events which included reference or discussion inclusion of infrastructure planning can be found in the table below (note: consultation primarily focussed on network planning aspects are not included in this table, see section 4.9 for the relevant engagement events).

Table 5-1: LCWIP Infrastructure Engagement Activities Summary

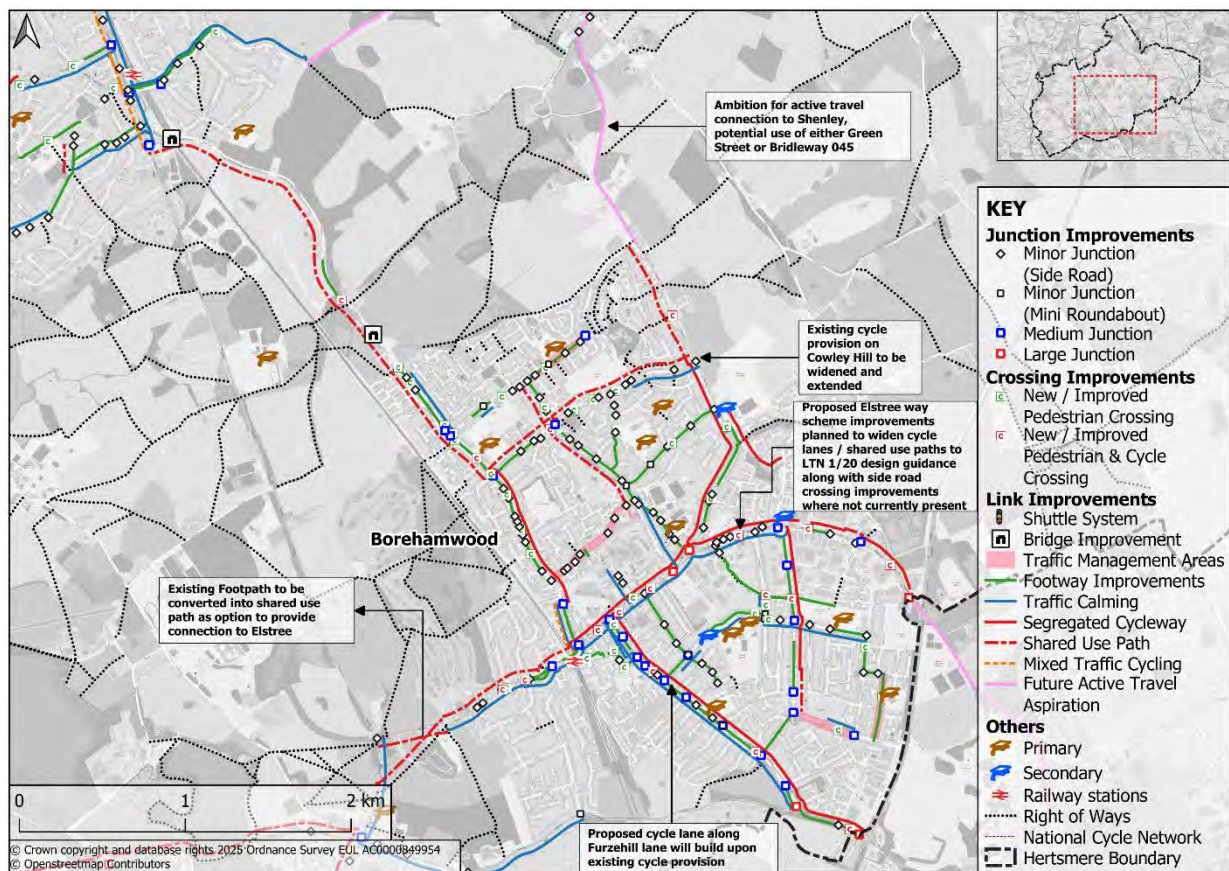
Date	LCWIP stage	Activity
23 rd January 2025	3 & 4	Review of Infrastructure Improvement Plans (HCC / HBC Councillors and Community / Specialist Stakeholders) This online workshop formed part of the second round of engagement. County and borough councillors and officers, as well as organisations external to HCC and HB, were shown the draft infrastructure improvement maps that were produced based on the audits undertaken. Participants were given information on how to use the engagement platform and were able to comment on the identified improvements and make any further suggestions.
23 rd January 2025 to Monday 10 th February 2025	3 & 4	Stakeholder Engagement Period A two-week engagement was held to log feedback on the infrastructure plans from the key stakeholders and Councillors from both Councils. The feedback from the online consultation, along with feedback received in the above meetings, was then used to refine the infrastructure plans.

5.7 Final infrastructure plans

Four individual infrastructure plans were produced for Hertsmere, representing the four key settlements within the borough. These plans highlight the proposed infrastructure along with any information relevant to specific proposals with addition text labels. The infrastructure plans for Hertsmere LCWIP settlements can be found in **Appendix G / Appendix H**.

5.7.1 Borehamwood Infrastructure Plan

Figure 5-1: Infrastructure Plan - Borehamwood



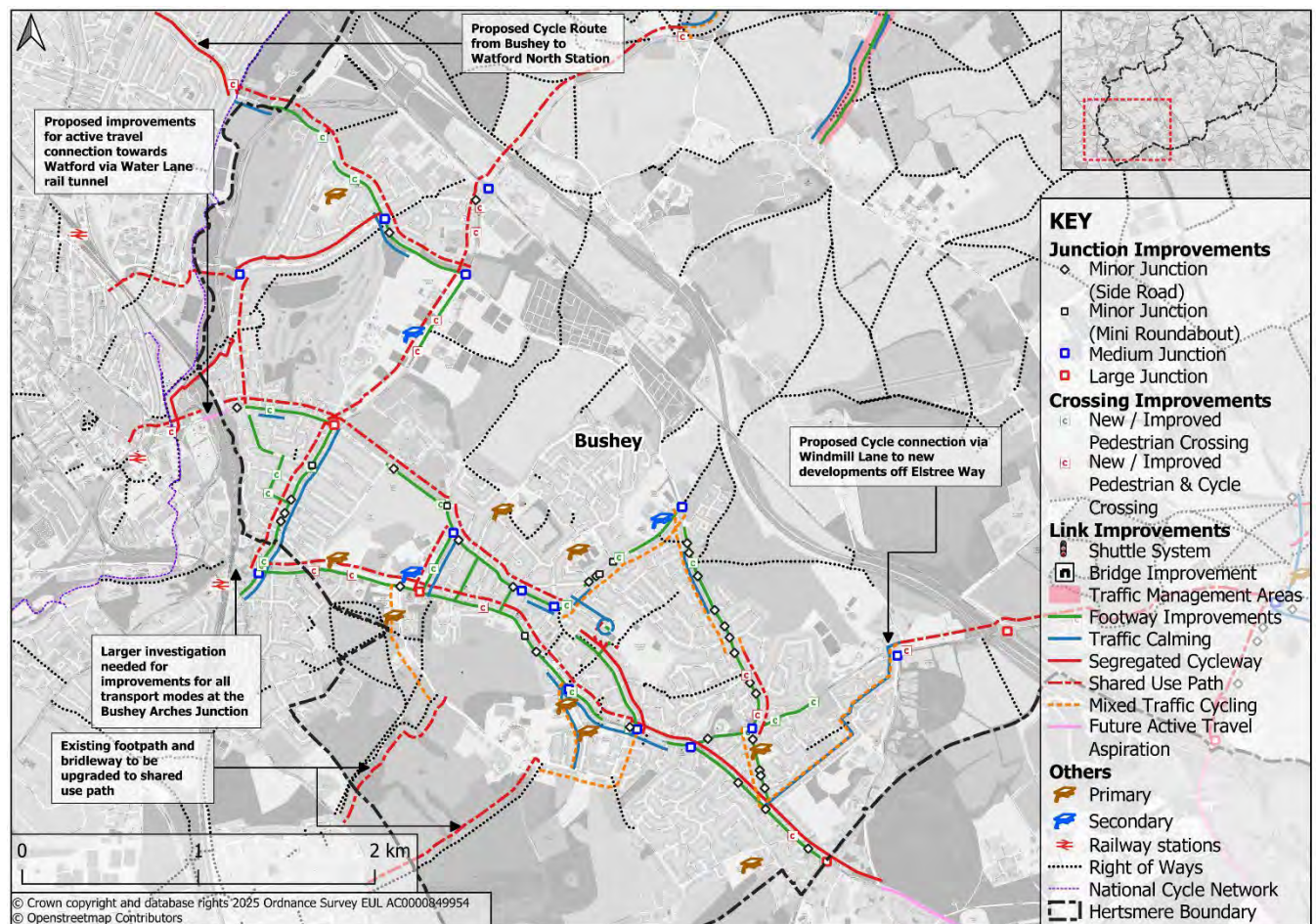
Infrastructure improvements are proposed across the Borehamwood Highstreet (including Elstree Way) with a dedicated cycleway with footway improvements and junction improvements. In addition to the central active travel improvements, key routes connecting to the centre of Borehamwood are proposed varying across shared use paths and traffic calmed/mixed cycle routes. Several improvements to junctions are identified across the settlement, ranging from the addition of tactile paving to improved crossing opportunities on the A1 / A5135 junction.

The infrastructure proposals also plan to provide interurban active travel routes for the following locations:

- Elstree – Provided by shared use path and traffic calming improvements along Allum Lane (B5378) and Elstree Way (A5183).
- Radlett – Provided by a shared use path along Theobald Street.
- Bushey – Provided by a shared use path and large junction improvement along Watford Road, Elstree Road (A411) and crossing the A41.
- Shenley – Identified as a future active travel aspiration route along Green Street (B5378).

5.7.2 Bushey Infrastructure Plan

Figure 5-2: Infrastructure Plan - Bushey



Infrastructure improvements in Bushey highlights proposed active travel routes across the wider Bushey High Street with a mix of shared use paths, dedicated cycleways and footway improvements (along with occasional junction improvements). This provides a core active travel corridor across Bushey whilst providing connection to the local Bushey railway station. Separate parallel routes along Herkomer road and Chiltern Avenue also see a mix of shared use paths and footway improvements, with improved connection to the Bushey High Street as well. Additional shared use paths are provided towards the northwest of Bushey with additional shared use paths.

Additional crossing improvements have also been provided along the A41 where key junctions exist, this will help reduce the segregation between Bushey and surrounding settlements. In addition to the A41, future investigation into improvements for active travel crossings at the Bushey Arches junction. The Bushey Arches junction is a notable congestion hotspot for all transport modes, meaning a larger investigation is required to

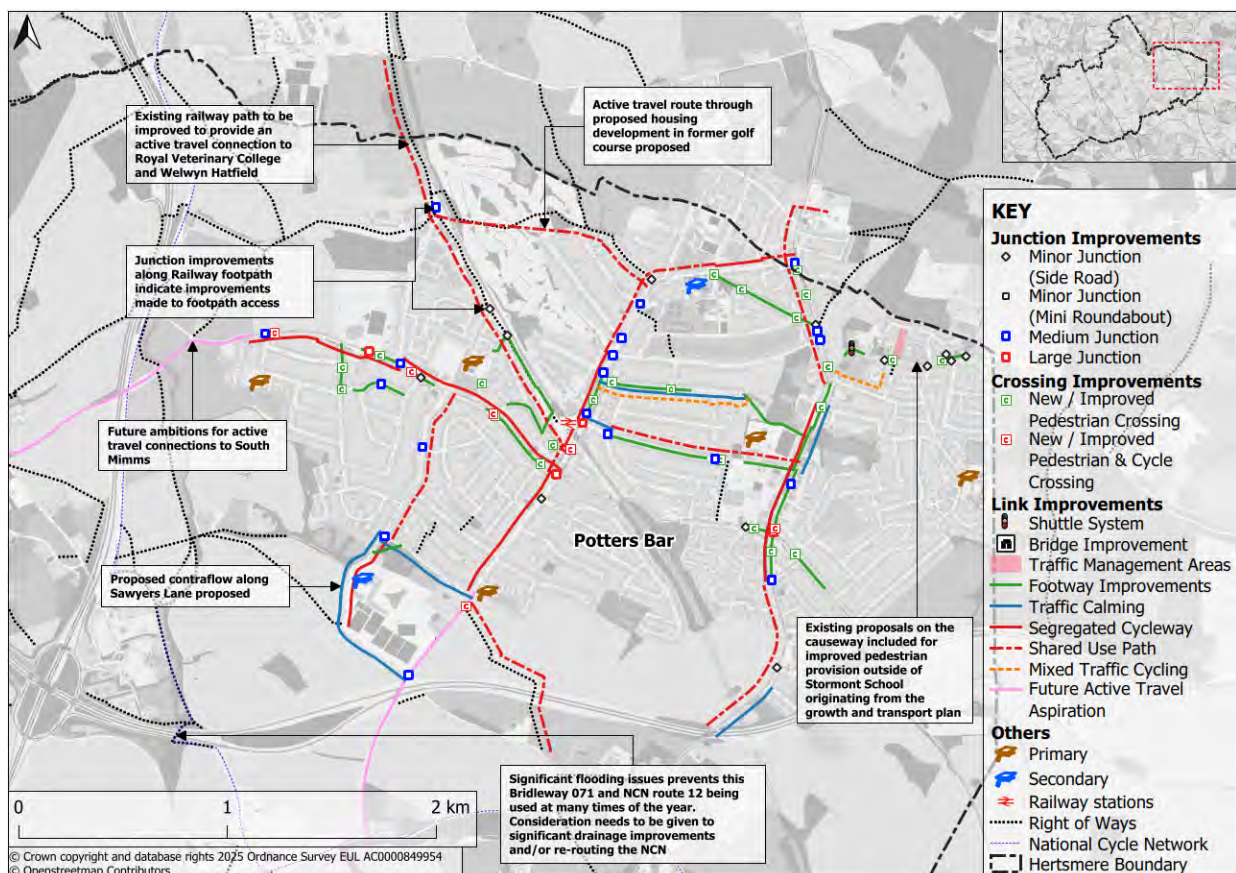
provide the most effective option possible for providing improvements for pedestrians and cyclists to reach southern Watford from Bushey.

External connections are also provided including:

- Elstree and Borehamwood – Provided by a shared use path connection and large junction improvement Along Elstree Road / Watford Road (A411) and a Large Junction Improvement over the A41.
 - Aldenham and Radlett – Provided by a shared use path connection Along Hartspring Lane (B462) with a crossing on the A41.
 - Watford – Provided by shared use path connections via Footpath Bushey 002, Link Road (near Watford Junction station) and Water Lane. This provides active travel connection to NCN route 6 and surrounding rail stations.
 - Carpenders Park – With upgrades to existing PRoWs to shared use path (Bushey 025, 013, 065, 031).
- London Borough of Harrow – Dedicated cycle and footway improvements (along with a large junction improvement) along the Common (A4140).

5.7.3 Potters Bar Infrastructure Plan

Figure 5-3: Infrastructure Plan – Potters Bar



Potters Bar consists of improved active travel routes across the two main central roads within the settlement (Darkes Lane and A1000 High Street) with a mix of traffic calming,

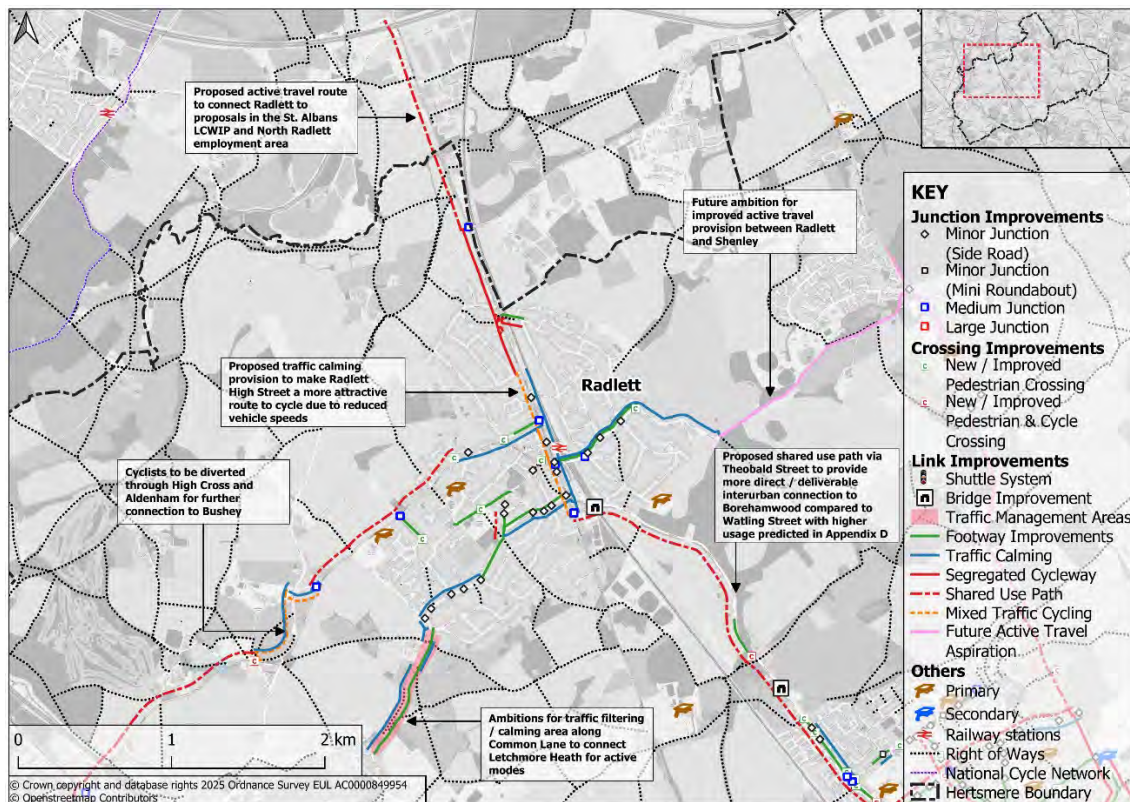
dedicated cycleways and shared use paths. Several key junctions are proposed to see improvements including the Mutton Lane / Baker Street Junction and the Potters Bar station access. Additional East / West connections also exist with traffic calming and shared use path connections, providing access to both central areas of Potters Bar. Shared use paths and footway improvements are also proposed for southern and western Potters Bar, providing access to Dame Alice Owens school along with the Mutton Lane shop parade (including Furzefield leisure centre).

Further active travel improvements are proposed to surrounding areas:

- Welwyn Hatfield Borough – Though the upgrade of PROW 009 / 008 / 080 to shared use path up to the Royal Veterinary College.
- London Borough of Barnet – Provided by a future active travel aspiration route along Baker Street.
- South Mimms – Provided by a future active travel aspiration route along Cecil Road (B556).

5.7.4 Radlett Infrastructure Plan

Figure 5-4: Infrastructure Plan – Radlett



Improvements to the existing active travel provision within Radlett highlights a focus on providing key active travel improvements to central Radlett where possible, with additional

connections along key routes branching from the centre. This provides several active travel corridors towards the centre of Radlett, allowing for easy access to Radlett Station.

Interurban infrastructure improvements are also proposed to surrounding areas including:

- St. Albans – Provided by dedicated cycleways and shared use paths along the A5183 Watling Street to the north.
- Borehamwood – Provided by a shared use path connection along Theobold Street.
- Aldenham / Bushey – Provided by a shared use path connection along Radlett Road (with traffic calming inside Aldenham itself)
- Letchmore Heath – Provided by a traffic calming scheme to provide safer active travel access for pedestrians and cyclists on Common Lane.
- Shenley – Provided as a future active travel aspiration route along Shenley Road.

Higher resolution versions of these maps can be found in **Appendix H**.

6 Route Prioritisation

6.1 Overview of Route Costing

Each infrastructure improvement or 'scheme' was given a high-level costing estimate based on the type of infrastructure alone. Indicative costs were sourced from LCWIP guidance and reference schemes in Hertfordshire and nearby counties and are the same as those used in the North Herts and Welwyn Hatfield LCWIPs. They are given in **Table 6**.

Table 6: High Level Cost Estimate by Infrastructure Type

Infrastructure	Cost
Segregated cycleway (incl. Shared Use Path)	£1,200 per metre
Traffic calming	£350 per metre
Footway improvements	£200 per metre
Large junction improvement	£1,580,000
Mid-size junction improvement	£500,000
Minor junction improvement*	£600 / £30,000
Pedestrian crossing	£65,000
Pedestrian / cycle crossing	£65,000
Modal filter	£20,000
Signalised shuttle system	£750,000
New pedestrian and cycle bridge	£2,000,000

**Minor Junction improvements vary between the addition of tactile paving / dropped kerbs and more extensive changes to junction infrastructure. This has prompted the need for two additional price points with £600 for tactile paving upgrades and £30,000 for wider junction improvements. It should also be noted that the tactile paving options are not provided on the infrastructure plans.*

It is important to note that these costs are high level approximations of construction costs only. They do not account for inflation and do not include design, risk, and contingency costs. They also do not account for optimism bias. Further feasibility design work accompanied by a more detailed costing process will be needed for any scheme which is being considered for funding or further development.

6.2 Approach to Route Prioritisation

Individual infrastructure improvements were grouped to form a selection of 'prioritised routes', which combine all the infrastructure improvements on an alignment – including both pedestrian and cycling improvements. (It should be noted that some 'routes' are not linear and are therefore referred to as 'groups' instead). Each route/group was considered in terms of its alignment and the infrastructure proposed and then scored in terms of:

- How likely walking and cycling trips are to increase in this location (based on the GIS model introduced in section 4.3)
- How much of a difference the infrastructure proposed is likely to make
- How well it fits with existing strategic priorities
- Whether it supports new housing developments
- Whether it supports access to jobs
- How well it aligns with LTN 1/20
- How technically feasible it is likely to be
- Its dependency on other schemes and projects

The total scores of each were then used to rank the routes/groups in a prioritised list. Concurrently, the costs of individual infrastructure items were summed to create a total cost for each prioritised route/group, although cost has not factored into the prioritisation of routes/groups.

The costed, prioritised list of routes can be seen in separate document **Appendix I**.

6.3 Scoring Criteria and Ranges

Different scoring ranges were given for the agreed criteria, based on their perceived relative importance. Details of the scoring ranges of the different criteria are outlined in **Table 7**, along with a commentary of how they were scored.

Table 7: Scoring Criteria, Score Ranges and how infrastructure was scored

Criteria	Range	Description of How Scheme Was Scored
Increase in walking & cycling trips	0 to 2	Locations of proposed route were compared against the outputs from the relevant LCWIP GIS Model run (e.g., footway improvements were compared against the walking model output; segregated cycleways were compared against the cycling model outputs). Where outputs indicated higher potential for trips, higher scores were given.
Impact on active travel	-1 to 3	The type of infrastructure improvement and its role within the network was considered in these scores. For example, large junction improvements, segregated cycleways, modal filters, and crossings were considered high impact, and scored higher, compared to minor junction improvements and traffic calming.
Strategic fit	-1 to 1	Where routes were on or connected to existing or planned strategic connections, these were scored higher than routes which were far from any strategic routes.
Support for new housing	0 to 2	Where routes were on or connected to routes to potential future housing, these were scored higher than infrastructure improvements which were further away.
Access to jobs	0 to 2	Where routes were on or connected to routes to key employment areas, these were scored higher than infrastructure improvements which were further away.
LTN 1/20 compliance	-1 to 3	Where routes strongly supported the principles of LTN 1/20 (e.g., modal filters, segregated cycleways), these were scored higher than other infrastructure improvement types (e.g., traffic calming).
Technical feasibility	-2 to 1	Routes with no significant technical or land ownership obstacles were considered 'quick wins' and scored higher than those with such challenges.
Dependency	-1 to 1	Routes which could be implemented in isolation and would still bring benefit if implemented were scored higher than routes which were dependent on the implementation of other infrastructure for success.

The total number of points a proposed route could score was 15. Routes were then sorted by total score, creating a 'ranked order' of prioritised routes.

6.4 Overview of Prioritised Routes

Throughout Hertsmere there were a total of 65 routes included in the prioritisation across the main urban areas of Hertsmere. These are shown in **Appendix J**. The distribution of routes across the settlements include:

Bushey: 22 routes
 Borehamwood: 20 routes
 Potters Bar: 15 routes
 Radlett: 8 routes

The top scoring routes vary across the four settlements. Several of the highest scoring prioritised routes can be found in **Table 8**, all ranking between 1-15 out of all 65 routes.

Table 8: Scoring Criteria, Score Ranges and Infrastructure Assessment Method

Route	Rank	Route Description
Bushey 15	1	Route between Melbourne Road connecting to Little Bushey Lane towards the East of Bushey.
Potter Bar 8	2	Route connecting Potters Bar's Western and Eastern highstreets through both Byng Drive and the shared use route through Parkfield.
Bushey 10	3	Routes between Bushey Highstreet (A411) and St. Margaret's School including Merry Hill Road and School Lane.
Borehamwood 18	4	From Borehamwood Highstreet to Aycliffe Road including Eldon Avenue modal filter.
Potters Bar 6	5	A1000 Hatfield Road between School Road and B196 (The Causeway)
Bushey 12	5	Water Lane and Bushey Hall Road (includes the Water Lane rail tunnel)
Bushey 1	5	Aldenham Road between Bushey rail station and Bushey Hall road along with route through Vernon Road and Bushey Grove Road
Borehamwood 1	5	Borehamwood High Street
Borehamwood 9	5	Route along Elstree Way from Borehamwood High Street to the A1 Junction

Route	Rank	Route Description
Borehamwood 11	5	Path through Maxwell Park and King George Playing Field (including Bullhead Road)
Borehamwood 14	5	Route along Cardinal Avenue from Borehamwood Highstreet to Elmwood Avenue
Borehamwood 15	5	Stratfield Road along with pathway through Malden Road and Audley Close
Borehamwood 20	5	Route along Gateshead Road Connecting Theobald Street to Cowley Hill (also including connection to Leeming Road)
Potters Bar 5	5	Route encompassing the A1000 from Barnet Road to High Street (Via Mutton Lane and Southgate Road)
Radlett 5	15	The Pathway and Loom Lane along with Letchmore Road
Potters Bar 7	15	Church Road and Quakers Lane
Borehamwood 16	15	Shenley Road and Cowley Hill along with Studio Way Woodland
Borehamwood 2	15	Theobald Street between Borehamwood and Radlett
Borehamwood 8	15	Furzehill Road and Barnet Road (along with rail station links)
Borehamwood 12	15	Hillside Avenue
Borehamwood 19	15	Aycliffe Road
Bushey 4	15	A411 between Central Bushey and Bushey rail station (including the Bushey rail viaduct)
Bushey 6	15	Route along A4140 between Stanmore and central Bushey
Bushey 20	15	Colne Valley Cycle Route
Bushey 21	15	Bushey Mill Lane between Watford North station and Mill Way
Radlett 8	15	Route encompassing Watling Street between North Radlett and St. Albans
Potters Bar 2	15	Route along Darkes Lane between Church Road and Potters Bar rail station car park
Potters Bar 13	15	Dugdale Hill Lane

Route	Rank	Route Description
Potter Bar 14	15	Route encompassing The Causeway, Oakmere Close and Cotton Road
Borehamwood 4	15	Route encompassing Allum Lane and Footpath 006

Many of the top scoring routes included the following types of infrastructure improvement, which may reflect the higher ‘impact on active travel’ and ‘LTN 1/20 compliance’ scores these types of infrastructure received:

- Mid-size junction improvement
- Large junction improvement
- New parallel crossing
- New/improved signal crossing
- Modal filter
- Segregated cycleway

Indicative costs given for routes are high-level estimates and were not included in the overall scores for each type of infrastructure. The indicative costs can be used to request contributions from relevant developments, or to inform funding bids.

6.5 Route prioritisation: Access to new housing

Given the current status of the Hertsmere Local Plan any aspects of access to new housing are not considered within the prioritisation or establishment of priority routes in this version of the LCWIP. The location of future housing developments would usually be included within the prioritisation process with a score given to each route based on how much it is expected to promote active travel opportunities with improved infrastructure proposals to the new development sites.

The Hertsmere Local plan has not yet identified final preferred housing development locations Therefore the current approach to the Hertsmere LCWIP prioritisation is to exclude the scoring of access to new housing developments in the prioritisation process temporarily for the March submission. The prioritisation table in **Appendix I** has included a column for access to housing, however all routes have been identified as “TBC”. It is expected that when Hertsmere have submitted the final local plan, the LCWIP will be updated to include

the scoring of the access to the proposed housing developments. It is possible that the priority routes may also be lightly updated, with either new routes or changes to existing route alignments potentially arising from the sites.

6.6 Benefits and limitations of this approach to route prioritisation and costing

Packaging infrastructure improvements into routes has many benefits. One principal benefit is that it fits with HCC's method of taking schemes forward and makes it easier to apply for funds, which are often deliberately targeted at corridor schemes (for example, requiring the use of the DfT's Active Mode Appraisal Toolkit). Another benefit is that it combines pedestrian and cycling improvements, to ensure that both modes of transport are catered for when plans are taken forward.

One limitation of this approach is that it can double, triple or even quadruple count junction improvements, as junctions often sit at the intersection of multiple routes. Therefore, summing the total cost of all improvements in this LCWIP would count junctions' multiple times and therefore be inaccurate. Care must also be taken when schemes are taken forward that junctions are not just improved to facilitate the connection that is being made along the single linear corridor being developed.

Another limitation of packaging infrastructure into routes is that there are a number of schemes identified in this LCWIP that do not easily align with any particular routes, such as individual crossings by schools on streets which were not audited (or do not require other improvements). It is important that these infrastructure improvements are not forgotten about simply because they don't fit neatly into a linear route. Similarly, just because an infrastructure improvement (such as a crossing) has been packaged into a particular prioritised route doesn't mean that it can't or shouldn't be taken forward on an individual basis if there is a good opportunity to do so.

Stakeholder feedback will be captured and stored for work on future projects where relevant, so that requirements for infrastructure are recognised even where they have not been included in this iteration of the LCWIP.

In addition, the HCC Active & Safer Travel teams regularly work with schools on travel planning. By engaging with the travel planning process and adopting a Modeshift STARS travel plan, schools can collect further information about the barriers to walking/cycling to

school for their pupils, and this can be used to unlock further funding and improvements to crossings and other infrastructure on the route close to their school.

7 Integration and Application

7.1 Integration with Transport Policy

This LCWIP has identified specific walking and cycling infrastructure schemes that can be incorporated into local transport policy and capital investment programmes.

Hertsmere's Infrastructure Delivery Plan (which is a live publication) will utilise the information and priorities identified in the LCWIP as part of the transport infrastructure planning to support the new Local Plan. By setting out the importance and priorities for active travel infrastructure this can also inform planning decisions.

The Local Plan will be informed by the LCWIP and also emerging outputs from development frameworks for the borough's key settlements together with design and site work on key regeneration areas and strategic sites. This may feed into a further future update to the LCWIP. The LCWIP forms a key focus on where and why targeted investment in active travel infrastructure will be taken across the borough linked to capital investment and funding bids.

The LCWIP will also support other local policy such as the County Council's Local Transport Plan and Active Travel Strategy, as well as cross-border strategic documents such as Growth & Transport Plans.

7.2 Integration with Highways Delivery Programmes

Once adopted by both Councils following public consultation, LCWIP prioritised routes can be progressed through a variety of potential delivery routes, including Development Management processes (using s106 or s278 agreements), core funding, and external funding opportunities for Active Travel schemes.

Once some packages of routes/schemes to be delivered in the short-term have been identified and confirmed, these should be added into HCC's highways delivery programmes. This would then see schemes go through HCC's project validation process, have concept designs developed, undergo further stakeholder engagement and, if there are no major obstacles and funding is available, the schemes can then be designed in detail and delivered. Further consultation will be carried out on highways schemes prior to delivery.

Highway improvement programmes separate from the LCWIP will continue to be delivered in the coming years but there are a few key steps that could be taken to align delivery of non-LCWIP highway schemes with the LCWIP, most of which would be covered by a firm

commitment to following the principles of Gear Change and the design guidance contained in LTN 1/20 when delivering new highways infrastructure. Some important examples of this would be:

- Minimising the delivery of shared footways on new schemes and instead seeking to provide separate facilities for pedestrians and cyclists wherever possible.
- Committing to avoiding speed cushions when adding traffic calming to streets, instead referring to LTN 1/20 for guidance on cycle-friendly traffic calming
- Using cycle-friendly gulley covers (i.e., gulley covers which wheels can't get stuck in) and replacing dangerous gulley covers for cyclists

Consideration will also be given to the interaction of LCWIP schemes with other packages of works, such as the Bus Service Improvement Plan, where limited carriageway space may lead to competing or supporting proposals for road space reallocation for walking, cycling and bus priority measures.

7.3 Future Bids for External Funding

HCC will explore any opportunities to apply for funding from external sources, such as any future Government capital grants or funding competitions for active travel infrastructure such as future tranches of the Active Travel Fund. In these instances, additional business case development may be undertaken on schemes outlined in this LCWIP to help form the basis for strong applications to secure funding for design and delivery.

7.4 Process of Review and Update

This LCWIP represents the culmination of a first round of developing cycling and walking networks and infrastructure improvement plans.

The next formal revision of the LCWIP should include audits of any primary routes which were not audited in this first iteration of the LCWIP. It should include further audits and infrastructure proposals for rural communities and interurban links that could not be prioritised in this first iteration of the LCWIP, but where there is still local demand for improvements, or where local stakeholders have made us aware of a need for improvements through the public engagement process.

HCC and HBC will therefore review and update this LCWIP document going forward in response to new funding and delivery opportunities as a commitment to having an on-going and sustained investment plan for active travel infrastructure.

Appendices

The following appendices support the findings and analysis presented in this LCWIP report. These appendices are provided separately and are not included within the main body of this document.

Appendix A – Stakeholder List

Appendix B – Policy Section

Appendix C – PCT Outputs

Appendix D – Cycling Model Outputs

Appendix E – Walking Model Outputs

Appendix F – Network Plans for Walking and Cycling

Appendix G – Infrastructure Plans

Appendix H – Detailed Infrastructure Plans

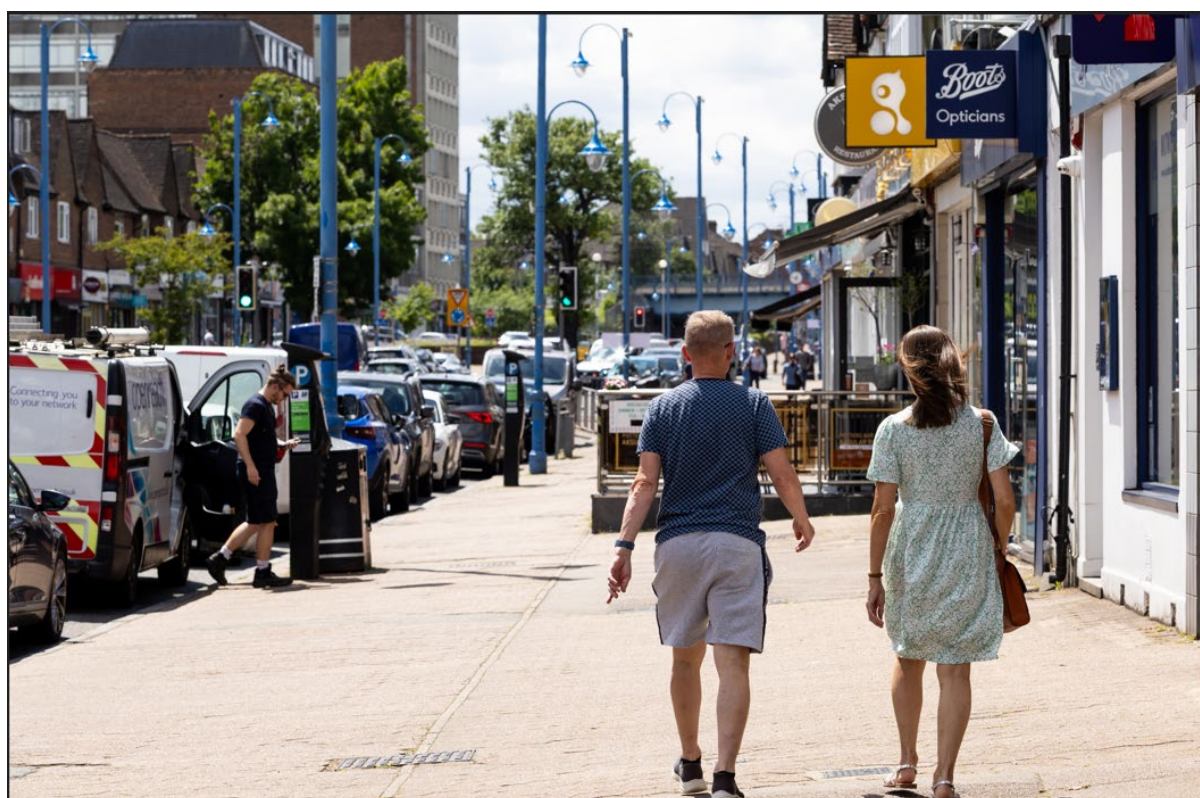
Appendix I – Prioritised Costed List of Infrastructure Improvements

Appendix J – Key of Prioritised Route Plans

Appendix K – Glossary of Acronyms

Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX A – Stakeholder List



Appendix A - Stakeholder List

A stakeholder list showing the organisations and individuals involved in or affected by the LCWIP and the roles they played in its development.

Table 1: Stakeholder List

Stakeholder Group	Organisations
Hertfordshire County Council	Primary Schools; Hertfordshire County Council internal teams; Hertfordshire Members
Hertsmere Borough Council	Hertsmere Borough Council Councillors; Hertsmere Borough Council internal teams
Town & Parish Councils	South Mimms and Ridge Parish Council; Shenley Parish Council; Elstree & Borehamwood Town Council; Elstree & Borehamwood Town Council – Youth Council; Aldenham Parish Council
Neighbouring Authorities	Watford Borough Council; Three Rivers Borough Council; St Albans District Council; Welwyn Hatfield Borough Council; London Borough of Barnet; London Borough of Harrow; London Borough of Enfield
Business Groups	Hertfordshire Chamber of Commerce
Large Developers & Employers	Housing Associations
Sports Associations	Hertfordshire Sports Partnership; British Horse Society; Bushey Grove Leisure Centre; Furzefield Centre; The Venue, Borehamwood

Stakeholder Group	Organisations
Primary Schools	Ashfield Junior School; Bournehall Primary School; Bushey Heath Primary School; Bushey Manor Junior School; Clore Shalom School; Cowley Hill School; Cranborne Primary School; Fair Field Junior School; Hartsbourne Primary School; Hertsmere Jewish Primary School; Highwood Primary School; Kenilworth Primary School; Ladbroke Junior Mixed and Infant School; Little Reddings Primary School; Meadow Wood School; Merry Hill Infant School and Nursery; Meryfield Primary School; Monksmead School; Newberries Primary School; Oakmere Primary School; Parkside Community Primary School; Pope Paul Catholic Primary School; Sacred Heart Catholic Primary School and Nursery; Saffron Green Primary School; Shenley Primary School; St Giles' CofE Primary School; St John's Church of England Infant and Nursery School; St Nicholas Elstree Church of England VA Primary School; St Teresa Catholic Primary School; Summerswood Primary School; The Wroxham School; Woodlands Primary School; Yavneh Primary School
Secondary Schools	Bushey Meads School; Dame Alice Owen's School; Elstree Screen Arts Academy; Falconer School; Hertswood Academy; Mount Grace School; Queens' School; The Grange Academy; Yavneh College
Community Associations	Potters Bar Society; Elm Court Youth & Community Centre; Bushey & Oxhey Ladies Circle; Borehamwood Young People's Centre; Bushey and District Footpaths Association; U3A Borehamwood & Elstree; Hertsmere Scouts Groups
Independent Schools	St John's Church of England Infant and Nursery School; St Nicholas Elstree Church of England VA Primary School; St Teresa Catholic Primary School
Further & Higher Education	Elstree Screen Arts Academy
Transport Interest Groups	TfL Strategic Cycling; TfL Harrow Routes; TfL Barnet Planning; Active Travel England

Stakeholder Group	Organisations
Rail Groups	Govia Thameslink Railway
Speed Management and Police	Hertfordshire Constabulary; HCC Safety Partnership; Close Pass Campaign (police); Tri-Force
Cycle Shops & Groups	Tri-Force; SPOKES – South West Herts Cycle Group; Cycling UK / Ramblers Association; Cycling UK; Harrow Cyclists; Harrow Cycle Hub; Barnet Cycling Campaign; Watford Cycle Hub; Herts Cycling Walking and Wheeling; EVOLVE Cycling; Hertfordshire Wheelers; Breeze Rides Hertfordshire; Hub and Spoke Harlow; South Herts Cycling Touring Club; Herts CTC
Environmental & Conservation Groups	CPRE Hertfordshire; Herts & Middlesex Wildlife Trust
Support & Advocacy Groups	Age UK Hertfordshire; Carers in Hertfordshire; Community Development Action Hertfordshire (CDA Herts); Herts Ability; Hertfordshire Community Foundation; Hertfordshire Learning Disability Partnership Board; Hertfordshire Parent Carer Involvement Network; Herts Equality Council; Herts Interfaith Forum; Herts Vision Loss; Integration Support Services (ISS) Herts & Essex; YC Hertfordshire; Royal National Institute of Blind People
Local Walking Groups	Ramblers – Watford & Three Rivers; Ramblers – North London & South Herts; Living Streets; Bushey and District Footpaths Association
Youth & Development	Princes Trust; Speak Up Hertsmere Youth Council; Services for Young People – Hertsmere
Tourism & Leisure	Visit Herts; British Driving Society (carriage driving)

Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX B – Policy Context



Appendix B – LCWIP Policy Context

1.1. National Strategic Context

- 1.1.1. This section presents the existing policy documents that are relevant to this LCWIP on a national level.

Gear Change: A Bold Vision for Cycling and Walking (Department of Transport, 2020)

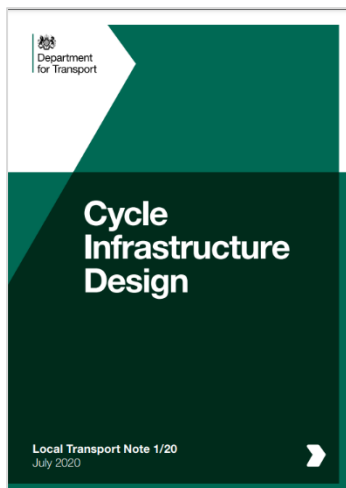
- 1.1.2. The Gear Change document represents the government's vision for walking and cycling, with a substantial and lasting change in the levels of walking and cycling undertaken, and a commitment for £2 billion on supporting this change.



- 1.1.3. Though it is divided into four themes, the principle focus of the strategy is removing barriers to cycling caused by poor infrastructure – the document was published the same day as LTN 1/20 – and creating a comprehensive and effective network of cycling infrastructure suitable for various ages and skill levels, so that people may choose to undertake their journeys by active modes and feel safe and supported all the while.
- 1.1.4. The strategy is ambitious, and proposes the creation of 'hundreds, then thousands, of miles of main road cycle tracks' with a clear focus on physically separated spaces for cycling away from both vehicles and pedestrians alongside other surrounding connections such as quiet, calmed residential roads and low traffic neighbourhoods to create a more inclusive and widespread transport network. Gear Change strongly encourages consistent and coherent networks, avoiding areas with poor infrastructure and advising against mitigations that would be disadvantageous to those using the routes or walking next to it.

- 1.1.5. Softer measures also promoted through Gear Change, including additional cycle training and changes to the Highway Code to better reflect the impact of vulnerable road users, will support all measures involving walking and cycling by providing a national impetus.
- 1.1.6. Finally, Gear Change announced the creation of Active Travel England, an inspectorate and funding body which began its operations in 2022 with its mandate of reviewing all funding requests and ensuring they comply with national standards; alongside a statutory consultee role in planning applications, scheme auditing, and a repository for expert advice and guidance should authorities require assistance in the design or delivery of schemes.

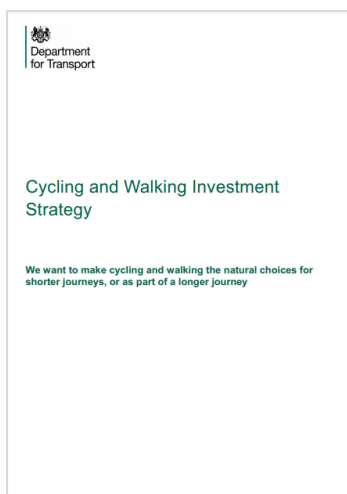
Local Transport Note 1/20: Cycle Infrastructure Design (Department for Transport, 2020)



- 1.1.7. Superseding previous guidance issued under LTN 2/08: Cycle Infrastructure Design and LTN 1/12: Shared Use Routes for Pedestrians and Cyclists, LTN 1/20 provides a suite of design principles and guidance to facilitate the creation of high-quality, safe, and effective infrastructure.
- 1.1.8. LTN 1/20 provides for five core design principles which should be a requirement of all schemes, those being that networks and routes should be:
 - Coherent,
 - Direct,
 - Safe
 - Comfortable, and
 - Attractiveness

- 1.1.9. Alongside this, and more technical design guidance on particular infrastructure including cycle lanes; junctions; crossings; and signage, the document heavily promotes the creation of LCWIPs as a means of developing appropriate network strategies and schemes to ensure there is a network of infrastructure, rather than isolated pockets that do not facilitate journeys. This extends to the need for appropriate wayfinding for routes and cycle parking facilities close to destinations, that are suitable for all types of cycle rather than simply a normal bicycle.
- 1.1.10. Though not legally binding, it has become evident that future funding will be reserved for schemes that comply with this technical guidance and as such all promoted schemes should ensure compliance as much as possible. It is recognised that there are some locations where it will not be feasible to fully comply with regulations; or where the local community may not support the compromises needed for the appropriate infrastructure. These should be considered on a case-by-case basis, and schemes proposed as part of the LCWIP should display clear compliance with the principles and directions of LTN 1/20.

Cycling and Walking Investment Strategy (Department for Transport, 2017)



- 1.1.11. The Cycling and Walking Investment Strategy provides the national ambition for England – for walking and cycling to become the de facto choice for shorter journeys or stages of longer journeys, with ambitious targets of doubling cycling trips to 1.6 billion by 2025. The strategy outlines the considerable benefits to such changes, from health and environment improvements through to reduction in overall congestion and increase in road space availability for alternative modes and cites research and evidence from schemes in London and internationally in support of this.

- 1.1.12. The funding announced as part of the strategy has since been diversified, and the strategy itself advised a slower pace than what has been seen in the four years since publication, however the overarching aims and goals remain aligned with that of both authorities and will still be positively impacted by the development and delivery of the LCWIP.
- 1.1.13. A revised strategy was recently announced and is expected in the near future, the contents of which are likely to reflect changes following the publication of Gear Change, the Transport Decarbonisation Plan, and the impact of the Coronavirus pandemic.

[Cycling and Walking Investment Strategy 2 \(Department for Transport, 2022\)](#)

- 1.1.14. The Second Cycling and Walking Investment Strategy (CWIS2) follows on from the initial Cycling and Walking Investment Strategy (2017) and provides the objectives and financial resources for the period of April 2021 through to March 2025 as required by the Infrastructure Act 2015. The document principally unifies existing objectives and funding sources rather than provide any new requirements or funding, but it does serve to codify expectations and reaffirm targets and commitments authorities will be expected to meet. CWIS2 provides the following four objectives to 2025:
- Increase the percentage of short journeys in towns and cities that are walked or cycled from 41% in 2018 to 2019 to 46% in 2025
 - Increase walking activity, where walking activity is measured as the total number of walking stages per person per year, to 365 stages per person per year in 2025
 - Double cycling, where cycling activity is measured as the estimated total number of cycling stages made each year, from 0.8 billion stages in 2013 to 1.6 billion stages in 2025
 - Increase the percentage of children aged 5 to 10 who usually walk to school from 49% in 2014 to 55% in 2025
- 1.1.15. A key ask of the strategy is for new investment in walking and cycling to be integrated into wider transport plans, with LCWIPs listed as a guiding principle. To this end, the Hertsmere LCWIP may be seen as vital to achieving the objectives set by CWIS2 and a key enabler for funding outlined in the strategy.

Future of Mobility: Urban Strategy (Department for Transport, 2019)



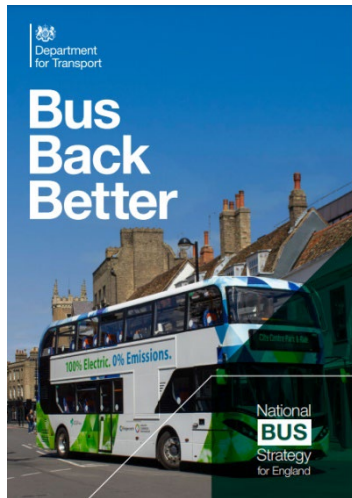
- 1.1.16. This strategy primarily outlines the national approach to be taken with future transport developments, recognising that there is a considerable amount of development in the field in the near future, driven in part by advances in other disciplines including artificial intelligence, machine learning, and data science. Core to this approach is the establishment of eight principles that, ‘as far as possible’ will underpin any facilitation in urban mobility. These principles are designed to ensure fairness, equal access, safety, and continue to support if not lead the movement towards net zero.
- 1.1.17. That said, there remains the clear demand within the strategy for ‘Walking, cycling and active travel [to] remain the best options for short urban journeys’ and as such promotes several initiatives that may support this, ranging from bike sharing schemes to wider e-bike uptake to further remove barriers to travel and increase possible distances by active modes. Additionally, risks to active travel from convenience-based services such as demand transport are recognised and forecast to be a result of poor planning and identification rather than potential reasons to avoid or stifle development in that direction.
- 1.1.18. The area of study for the Hertsmere LCWIP is principally urban, and as such the provision of more active travel-enabling infrastructure will support the overall aims of this strategy.

Clean Air Strategy (Department for Environment, Food & Rural Affairs, 2019)



- 1.1.19. The Clean Air Strategy represents the cross-discipline approach the government is taking to tackle air pollution from all sources with the aim being to make the air healthier to breathe whilst simultaneously protecting the environment and boosting the economy. As essentially a precursor to the Transport Decarbonisation Plan (though with a wider focus on local pollutants rather than the catchall of carbon dioxide), the strategy promotes modal shift across all forms of travel (with freight being moved principally to heavy rail solutions) though provides a clear endorsement for active travel uptake as a replacement for short journeys otherwise made by the motor vehicle.
- 1.1.20. The strategy recognises the health implications caused by pollution, including those that are not exhaust-derived such as tyre- or brake-wear, and that road transport is the single biggest source of roadside NO_x and how encouraging more active travel will have a net benefit both in local air quality but in general health, both due to increased exercise and a reduction in said emissions.
- 1.1.21. The strategy recognises investments and commitments made to the point of publication, including grants and funding for cycle-train connections and the Cycling and Walking Investment Strategy, though it should be recognised that as this predates several key publications some parts of the strategy have been further clarified in subsequent documents.
- 1.1.22. Nevertheless, as all partners involved in the LCWIP have declared a climate emergency, therefore supporting the Clean Air Strategy and reducing local and roadside emissions are aspects that should be recognised within the LCWIP and any future monitoring regimes.

Bus Back Better, National Bus Strategy (Department for Transport, 2021)



- 1.1.23. The national bus strategy provides a long-term vision for the evolution of bus services outside of London, leveraging the impacts of the Coronavirus pandemic to reform how services are planned and delivered, whilst also placing several key challenges and obligations on local authorities in both the provision of said services and in how infrastructure can be designed and deployed to better support these journeys, notably in the creation of Bus Service Improvement Plans.

- 1.1.24. Hertfordshire does have a considerable advantage in this area due to an Enhanced Partnership under the Intalink umbrella having been established (this is referenced in the national strategy as being the first in England), which has already gone some way to establishing key areas for reliability and service-timing improvements and promoting the necessary types of infrastructure and change to support the ambitions of the strategy. However, there is scope for the LCWIP to account for these principles and facilitate the installation of infrastructure that supports walking and cycling without unduly affecting passenger transport users; whilst also providing more logical and cohesive networks to connect transport hubs and interchanges whether they be local estate bus stops or larger town-centre stations.
- 1.1.25. There is a recognised risk involved in implementing bus service improvements along constrained corridors, that risk being that space better served for walking or cycling improvements would instead be reserved by other modes of travel. It is very likely that movement corridors for both buses and cycles will overlap considerably, though in general walking provision is less likely to impact bus infrastructure outside of junction or crossing points where time-separation may have a minor impact on journey times. The LCWIP will account for these measures during development to ensure knowledge is shared and conflicts are resolved prior to schemes being taken forward.

Inclusive Mobility (Department for Transport, 2021)



- 1.1.26. This guidance provides best practices for designing accessible pedestrian and transport infrastructure, ensuring barrier-free environments for disabled individuals and enhancing overall public transport accessibility. A key element of the guidance is the recognition that the public realm needs to be made more suitable for all user types, and that existing infrastructure is in places poor and otherwise absent.
- 1.1.27. As noted previously, high quality infrastructure is accessible infrastructure, and all schemes identified via the LCWIP should therefore identify targeted infrastructure improvements that provide for all user types and mobility aids, in particular around junctions and crossing points where issues of severance and kerb height can disproportionately effect those with mobility or visual impairments.

Future of Freight: A Long-Term Plan (Department for Transport, 2022)

- 1.1.28. Though not the principal aim of the document – which is focused on all freight journeys including rail and maritime – there is specific reference to last mile delivery solutions within the Future of Freight strategy, including e-cargo bikes which it notes have become ‘an increasingly common sight’ within dense urban centres.
- 1.1.29. An appropriate, safe cycling network, as will be identified by the LCWIP, would provide a network for such solutions to become viable within the district and lend itself to the identification of suitable sites for freight consolidation and transport hubs that can further remove road freight from congested city and town networks.

Net Zero Strategy: Build Back Green (Department of Business, Energy & Industrial Strategy, 2021)

- 1.1.30. The Net Zero Strategy provides a comprehensive policy document of the government's aims to transition the United Kingdom to a net zero economy by 2050, providing key milestones, data, and objectives. Documents such as the Transport Decarbonisation Plan provide greater detail within their specific fields, but the strategy does serve to provide an important context.
- 1.1.31. For the purpose of this document, the transport section of the Net Zero Strategy summarises both Gear Change and the Transport Decarbonisation Plan in promoting an increase in journeys by alternative modes, including walking and cycling, and specifically states a commitment to build 'hundreds, then thousands' of segregated cycle lanes alongside an increase in low traffic neighbourhoods. As noted previously, the LCWIP can provide the strategic framework to ensure that Hertsmere receives an appropriate investment and is in line to receive this promised infrastructure.

National Disability Strategy (Department for Workplace and Pensions, 2021)

- 1.1.32. The National Disability Strategy outlines the government's commitment to removing barriers disabled people experience across everyday life, and 'reflects the experiences of disabled people across the UK'. The strategy principally outlines areas where the government can issue new guidance, undertake research, legislate, or otherwise compel changes to remove or mitigate these barriers as much as possible.
- 1.1.33. The strategy, when discussing transport, recognises that routine, everyday journeys can be more difficult for disabled people and there is a disparity in provision, infrastructure, and support across the nation and across modes and further supports the Inclusive Transport Strategy (see below) by committing to upgrading, redesigning, and otherwise improving the ability for disabled people to access and make use of these services without additional disruption.
- 1.1.34. Good infrastructure is inclusive infrastructure, and as such the LCWIP can support this strategy by providing needed interventions on routes to and from key transport interchanges, removing barriers for crossing and access. Simultaneously, the support of active travel and a reduction in vehicle journeys clears carriageway space for those that need to travel and can have a beneficial impact on congestion and overall journey times, especially for road-using passenger transport modes such as bus, taxis, or community transport schemes.

National Planning Policy Framework (Ministry of Housing, Communities & Local Government, 2021)

- 1.1.35. The National Planning Policy Framework outlines planning policies for England and how these should be applied, providing the required details and framework for local development plans to be produced. The purpose of the planning system, as given in the framework, is 'to contribute to the achievement of sustainable development' which is provided a high level summary thusly: 'meeting the needs of the present without compromising the ability of future generations to meet their own needs'
- 1.1.36. The NPPF maintains the sustainability commitment with transport, obliging local authorities to promote and endorse walking, cycling, or public transport options both at planning level and when considering individual sites, specifically noting that these can be derived from LCWIPs and allow for the provision of well-designed walking and cycling networks facilitated by development sites in key locations.

Decarbonising Transport: A Better, Greener Britain (Department for Transport, 2021)



- 1.1.37. The transport decarbonisation plan provides a series of government commitments and strategies to reduce the overall carbon footprint of transport by all modes as the nation moves towards net zero by 2050.
- 1.1.38. The plan, given its wide scope, outlines ambitious approaches across many sectors to both reduce overall demand for polluting transport and increase options for low or zero carbon alternatives to allow for the steady transition.
- 1.1.39. The plan recognises the disproportionate volume of carbon emissions generated by cars and taxis, representing 55.4% of emissions across all other modes and provides a number of options. Principally, and notably linked to the first two commitment recorded in the document, is an increase in the number of journeys undertaken by active modes and deliver a 'world class' cycling and walking network in England by 2040. As noted in other areas of policy, a considerable number (43%) of urban journeys are low distance, under two miles, and there is a substantial opportunity for modal shift.

Local Cycling and Walking Infrastructure Plans: Technical Guidance for Local Authorities (Department for Transport, 2017)

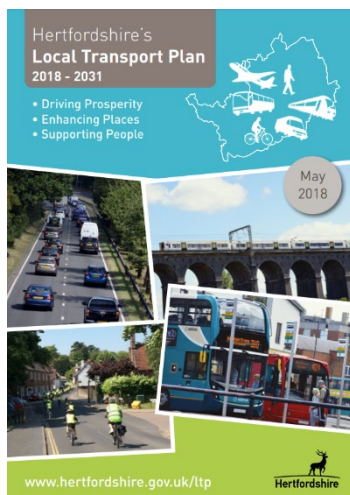
- 1.1.40. The LCWIP technical guidance provides the framework for undertaking strategic walking and cycling network developments, including the six stage process this LCWIP follows and the type and nature of data collected and used as part of the process.

- 1.1.41. As noted above, the majority of this guidance was condensed to form the network planning chapter of LTN 1/20, and it is recognised that the wider approach to designing and delivering a network is a much more efficient and effective means of promoting new infrastructure rather than piecemeal schemes.
- 1.1.42. The LCWIP guidance strongly endorses the final document be reviewed and updated frequently, partly to reflect progress on delivered schemes but additionally to reflect changes in the local environment – or new policies/plans/strategies - that may impact the LCWIP.

1.2. County Strategies, Policies and Plans

- 1.2.1. This section will present the existing policy documents that are relevant to this LCWIP on a county level. All of these have been produced by Hertfordshire County Council.

Local Transport Plan 4 (2018-2031)



- 1.2.2. Hertfordshire's fourth Local Transport Plan, LTP4 provides the vision for future transport across Hertfordshire, covering a period of substantial expected growth and development across the county and the necessary mitigations to facilitate these developments within the existing network.
- 1.2.3. The plan advocates a strong transition from car-centric journeys and capacity/journey time improvements towards more substantial modal shift to sustainable modes, with walking and cycling becoming the preferred means of travel for journeys across the county. LTP4 recognises much of the benefits such a shift could bring both to the population and environment of Hertfordshire and the overall functioning of the transport network.

- 1.2.4. LTP4 provides 23 policies incorporating varied forms of transport and supporting measures, covering various aspects of transport from road safety to air quality and environmental impacts. Of prime importance is policy 1, the transport user hierarchy, which promotes walking and cycling journeys over all other modes of travel.
- 1.2.5. Additionally, there are two specific policies – 7 and 8 – which apply to active travel modes, shown below in Table 1.

Table 1 - LTP Policies 7 and 8

Policy 7 – Active Travel Walking	Policy 8 – Active Travel Cycling
Encourage and promote walking by: Implementing measures to increase the priority of pedestrians relative to road vehicles Delivering infrastructure to provide safer access to key services Identifying and promoting networks of pedestrian priority routes Promoting walking as a mode of travel Supporting the implementation of the Rights of Way improvement plan	Deliver a step change in cycling through: Infrastructure improvements, especially within major urban areas Implementing measures to increase the priority of cyclists Improved safety for user including delivery of formal and informal training schemes Supporting promotion campaigns to inform, educate, reassure and encourage cycling Facilitating provision of secure cycle parking

- 1.2.6. The LTP4 also sets out various objectives to help encourage walking and cycling, which are detailed below.

Walking

- 1.2.7. LTP4 recognises that there is a high walking mode share for trips of up to 1 mile across the county, with 76.5% of such trips being undertaken on foot (County Travel Survey, 2015).

Cycling

- 1.2.8. LTP4 recognises that compared with walking, cycling has a much lower mode share across Hertfordshire, only making up 1.7% of trips under 1 mile, 4.8% of trips between 1-3 miles and 3.1% of trips between 3-5 miles. LTP4 highlights that there is significant potential in the county to increase cycling activity.
- 1.2.9. Given the Government CWIS targets and the significant potential to increase cycling activity in Hertfordshire, the LTP4 shows that the council is seeking to achieve a large increase in cycling and walking over the next 10 years. This will require an increase in investment in active travel to create routes and networks which can attract a broader demographic to walk and cycle. This is exactly what an LCWIP helps to plan and so the LCWIP is very well-aligned with the LTP4.

Hertsmere Core Strategy (adopted 2013) and emerging Local Plan

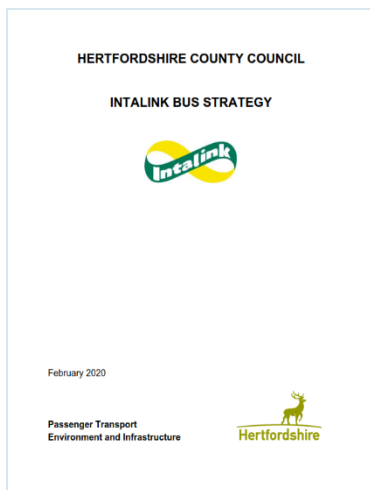
- 1.2.10. The Hertsmere Core Strategy (adopted 2013) forms part of the Hertsmere Local Plan and sets out the Borough's long-term spatial vision and strategic objectives for sustainable development. It establishes how growth should be managed up to 2027, including the delivery of new homes, employment opportunities and supporting infrastructure such as education, health and community facilities. The Core Strategy places strong emphasis on protecting the Green Belt, focusing development within existing urban areas, and making effective use of previously developed (brownfield) land. It promotes high-quality, sustainable development that supports community wellbeing while safeguarding Hertsmere's environmental assets.
- 1.2.11. The Core Strategy supports sustainable patterns of movement by seeking to reduce reliance on the private car and encouraging walking, cycling and public transport as part of everyday journeys. In this context, it provides a supportive policy framework for the delivery of the Local Cycling and Walking Infrastructure Plan (LCWIP). The LCWIP builds on these strategic objectives by identifying priority routes and interventions for walking, cycling and wheelchair use, helping to improve safety, accessibility and connectivity across the Borough. Together, the Core Strategy and LCWIP support wider objectives relating to climate change mitigation, air quality, public health and economic vitality, while ensuring that transport improvements respond to local needs and contribute to sustainable, inclusive growth in Hertsmere.

- 1.2.12. Hertsmere BC is currently working on its emerging Local Plan and it seeks to submit to the Secretary of State to meet the transitional arrangement at the end of 2026. This review includes a full evidence base update and will replace all existing Local Plan documents once adopted. The Council intends to consult through Regulation 18 in April 2026 and then carry out a Regulation 19 consultation towards the second-half of the year.

South Central Hertfordshire Growth and Transport Plan (2022)

- 1.2.13. Growth and Transport Plans (GTP) are localised, spatial strategies used to support projected growth and development in an area via key infrastructure and accompanying projects.
- 1.2.14. The South Central GTP focuses on the districts of Hertsmere, St Albans and Welwyn Hatfield, while the Southwest GTP includes part of Hertsmere (Bushey) as well. The infrastructure promoted under both GTPs remains high level but continues to support Hertfordshire's transport priorities in delivering opportunities for people to make sustainable, active journeys rather than the first choice being the motor vehicle.

Intalink Hertfordshire Bus Strategy (February 2020)



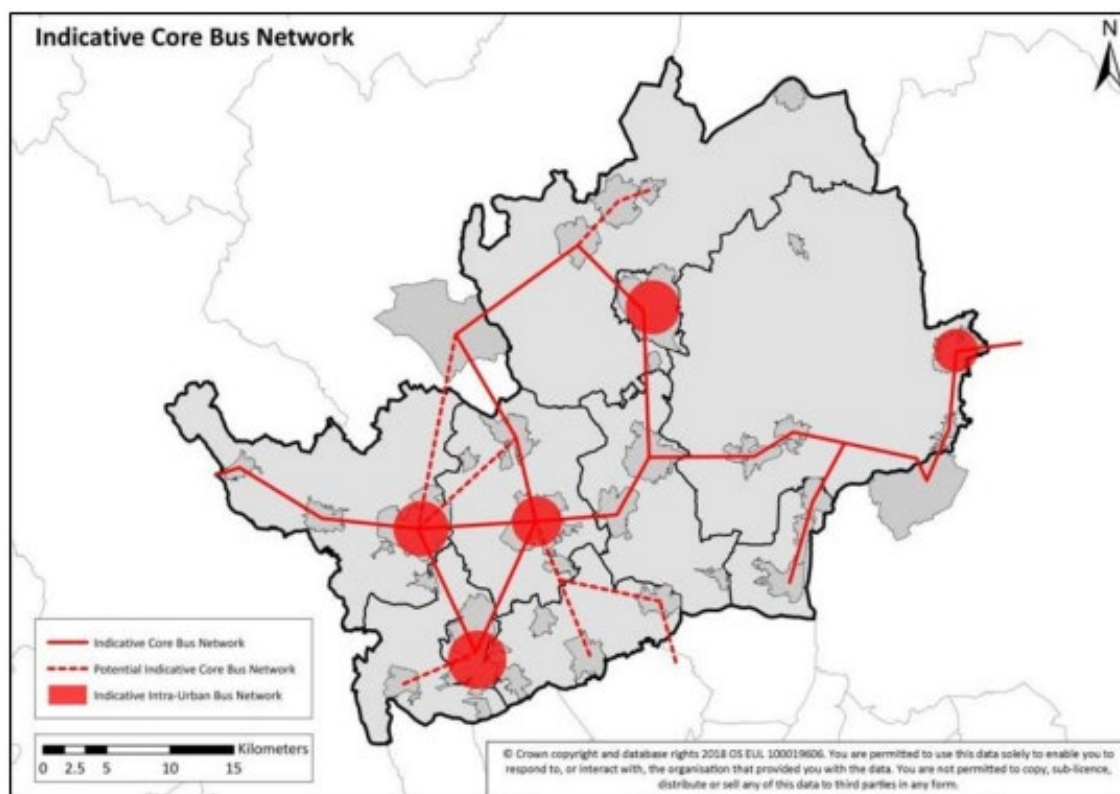
- 1.2.15. The Intalink Hertfordshire Bus Strategy sets out plans to grow the local bus network to support the shift towards more sustainable transport within Hertfordshire (as shown in LTP4).
- 1.2.16. Though predating both the establishment of the Enhanced Partnership (April 2020) and the severe impact on passenger transport numbers seen as part of the coronavirus pandemic, the Intalink Hertfordshire Bus Strategy remains a valid document with a clear focus and ambition to increase bus patronage across the network.

- 1.2.17. The strategy recognises the importance of connection with other modes, both as a policy under LTP4 but additionally due to the importance of a well-connected network where sustainable modes can suitably interface and share available network capacity. Transport interchanges are recognised in the LCWIP guidance as being common destination points to be considered, and as such the LCWIP has a role to play in supporting the connectivity of bus infrastructure to facilitate end to end journeys and providing high quality facilities for users of all modes.
- 1.2.18. Interface and impacts of these schemes on the LCWIP, and the impact of LCWIP schemes in reverse, will be considered in the stages following the LCWIP's adoption to ensure there is a combined approach moving forward.
- 1.2.19. The strategy's plans include giving greater priority to bus services in traffic, making sure bus information is easy to access and raising standards of operation across the county.

[Walking & Cycling](#)

- 1.2.20. The Intalink Bus Strategy recognises that infrastructure improvements should also be targeted to enhance access to the bus network by walking and cycling. The location, nature and design of interchanges is evolving, and these should consider current and future growth requirements and capacity.
- 1.2.21. The Strategy focuses on the prioritised improvements presented within LTP4, stating that the prioritised corridors and towns should be well-served in terms of frequency and investment will support patronage growth on routes serving them.
- 1.2.22. Figure 6 shows the indicative core infrastructure corridors identified in LTP4.

Figure 1 - Indicative Core Infrastructure Corridors from the Strategy



- 1.2.23. Short and long-term packages for improving bus services and facilities across Hertfordshire have been identified as part of the Bus Service Improvement Plan. The interventions proposed as part of this LCWIP aim to improve pedestrian and cyclist accessibility in Borehamwood & Potters Bar, which provide an opportunity to enable more walking and cycling as the first or last stages in multi-modal journeys.

Sustainable Modes of Travel Strategy (2020)

- 1.2.24. This strategy provides the councils vision to increase opportunities for children and young people to travel to, from, and between schools and colleges by sustainable modes in line with the Education and Inspections Act 2006, which places a requirement upon on local authorities to promote these sustainable travel methods.
- 1.2.25. A key objective to facilitate this is to improve walking and cycling routes between establishments – and, for cycling, to provide appropriate facilities at the destination – which is an area the LCWIP can support directly via the provision of new infrastructure along these routes and corridors.
- 1.2.26. The strategy additionally endorses the creation of School Travel Plans; indeed these are referred to as the backbone of the strategy, which involve a collective effort and review of local stakeholders to identify barriers to and opportunities for sustainable

travel, which are then collated into a plan of improvement that may include external infrastructure alongside behaviour change initiatives. The LCWIP can feed into this process both by collating information from known travel plans within an area and additionally providing a suitable base level of information that may then be used for future travel plans.

Hertfordshire Place and Movement Planning and Design Guide (2023)

- 1.2.27. The Place and Movement approach is a technical approach intended to recognise the needs of different road users in Hertfordshire and manage the interfaces between them. It provides a way of looking at the appropriate function of any section of highway and therefore a basis for deciding which activities should be prioritised. In doing so, it aims to provide a means to translate LTP4 policies into practice.
- 1.2.28. As part of this work, each street on Hertfordshire's highway network has been categorised into 9 different street types based on each street's place and vehicle movement function as designed by the guide. The nine street types are based on the Healthy Streets approach. The LCWIP project team has been given a GIS layer which maps the Hertsmer highway network onto these street types. Wherever possible, we have sought to match the proposals in this LCWIP with the functionality of the street type. However, due to physical constraints on some streets, it is sometimes only possible to provide the infrastructure needed to enable mode shift to walking and cycling by reallocating roadspace away from motor vehicles or adding crossings which may slow down traffic. Where this is the case, further work and consultation may be needed to decide the best way forward as schemes are progressed.
- 1.2.29. The Place and Movement Planning & Design Guide (PMPDG) seeks to integrate Place and Movement (P&M), accessibility, safety, health, security, local character, speed management, routes to school, parking, soft and hard landscaping with the aim of avoiding conflicting advice for potentially competing needs, whilst reinforcing the priorities for sustainable travel above other modes and promoting good asset management.
- 1.2.30. This design guide supports a mode shift towards walking and cycling and is therefore aligned with this LCWIP. The document emphasises that routes should be carefully positioned and easily accessed by all, with particular consideration given to those routes connecting communities to local centres, healthcare facilities and schools.

Sustainable Hertfordshire Strategy (2022)



- 1.2.31. The Sustainable Hertfordshire Strategy (SHS) was first developed following the Council's climate emergency declaration of 2019 and provides the initial policies and strategies to promote sustainability across all council operations and services, drawing together previously distinct strategies across the piece into one unified document. The SHS was further updated in 2022.
- 1.2.32. The strategy principally recognises that the council has three levels of influence – to lead, to enable, and to inspire. The provision of active travel infrastructure and other surrounding mechanisms to support mode shift is seen to operate at all levels and is noted numerous times within the strategy as being key to introducing and supporting a low (and, eventually, zero) carbon transport network.
- 1.2.33. The SHS is ambitious, but there are three particular targets of relevance to the LCWIP:
 - A net zero greenhouse gas county before 2050,
 - Ready for Future Climates, and
 - Clean air for all by 2030
- 1.2.34. The provision of high quality, efficient and resilient infrastructure to support active travel uptake will contribute to achieving these goals both locally to the study area but additionally by creating good and best practice to be used across the wider county network.

Speed Management Strategy (2020)



- 1.2.35. The Hertfordshire Speed Management Strategy (SMS) provides the framework and guidance for setting speeds across the county and is built upon the place and movement approach to attribute certain roads and environments to particular speed limits based on their relative usage and expected travel classes. These principles apply to all roads that HCC manage as the highway authority via a comprehensive framework applicable to all speeds and environments.
- 1.2.36. The SMS recognises the link between lower vehicle speeds and the uptake of active travel modes (which is now expressed in LTN 1/20), recognising that 20mph speed limits in key locations such as residential roads, high streets, and town centres can reduce the perception of car dominance and further support journeys made by other modes where dedicated infrastructure may be difficult or impossible to install.
- 1.2.37. Suggestions or recommendations for reduced or amended speed limits that come out of the LCWIP will comply with principles of the SMS and be ratified through the process outlined therein so as to avoid contradictions or conflicts.
- 1.2.38. In order to support this the council has also adopted a place and movement approach which takes account of the varying functions and uses of its roads and categorises them based on whether they are places people want to visit or whether they are primarily focussed on vehicle movement. This helps identify locations which may be suitable for the application of lower speed limits.
- 1.2.39. To enable the SMS to both deliver LTP4 policies and to provide a consistent approach to setting speed limits across the county, the following core principles have been developed:
 - To encourage speed limit changes that support active travel;

- Lower speed limits, where appropriate;
- To change the design of roads in order to change behaviour, where appropriate; and
- Where it has been established that speed limits are too low for the environment, speed limits may be raised.

1.2.40. Given the first and third core principles, it is assumed that the proposals in the LCWIP will be supported by the SMS. This is especially important when considering inter-urban cycling trips. Speed limits on roads between settlements often increase to over 30mph. On many of these roads there is limited road space for fully kerbed cycle tracks (the only LTN 1/20 compliant infrastructure solution) and there are few or no alternative routes available for cyclists. As such, speed limits (and design speeds) on these roads would need lowering where feasible in order to enable on road cycling in a safe manner in accordance with LTN 1/20 guidelines. The LCWIP has proposed this in places, despite the fact that this may be at odds with other strategic transport priorities around the speed and flow of motor traffic and would need to be assessed in line with the SMS guidelines.

[Air Quality Strategy \(2019\)](#)

1.2.41. The Air Quality Strategy provides the county position on air quality, including both the strategic vision and the aims and objectives that will contribute to delivering this vision. It is heavily aligned with the sustainability strategy but provides an additional layer of policy support for both air quality monitoring and air quality improvements across the network.

[Maintenance for Active Travel Strategy \(2019\)](#)

1.2.42. The Maintenance for Active Travel Strategy (MATS) outlines how routine or ad hoc highway maintenance programmes may contribute to the uptake of active travel, by ensuring that existing infrastructure is kept to the appropriate standards and new infrastructure suitably maintained to ensure a long, efficient lifecycle.

1.2.43. Whilst principally this strategy would apply after the LCWIP projects have been completed, maintenance of the existing network is a key part of maintaining a cohesive route and provides additional opportunities for enhancement using an endorsed one-and-done approach. Additionally, future maintenance requirements or asks can now be considered at intervention stage and shared with the maintenance team, ensuring that designs do not create future maintenance burdens and facilitating all aspects of the strategy.

Active Travel Strategy (2023)

1.2.44. HCC's Active Travel Strategy identifies key challenges that people living and working in Hertfordshire face when making decisions to replace car journeys, or generate new trips, through more walking and cycling. It also set out how the County Council and its partners would identify, deliver, and promote interventions to increase the numbers of people walking and cycling in Hertfordshire.

1.2.45. With regards to the LCWIP, HCC's active travel strategy mentions several initiatives and goals relevant to Hertsmere:

1. Infrastructure Improvements:

- Enhance and expand walking and cycling routes to ensure they are safe, direct, and accessible.
- Develop new cycleways and pedestrian paths, particularly in urban areas like Borehamwood.

2. Connectivity:

- Improve connections between residential areas, schools, workplaces, and key services to encourage more walking and cycling.
- Focus on linking new developments with existing active travel networks.

3. Safety Enhancements:

- Implement measures to increase the safety of pedestrians and cyclists, such as better lighting, signage, and crossing points.
- Address specific safety concerns in busy areas and near schools.

4. Promotion and Awareness:

- Increase awareness and promote the benefits of walking and cycling through campaigns and community initiatives.
- Engage with local communities to support active travel choices.

Accessibility Strategy (2019)

1.2.46. The Accessibility Strategy promotes the county council's vision: "To have a reasonable standard of access for all by appropriate transport to the key services of health, learning, work, food shopping and leisure"

1.2.47. As a supporting strategy for LTP4, there are strong links with existing policy requirements around sustainable transport modes and though the document has a self-recognised focus on bus and rail journeys (due primarily to the urban/rural mix of the county and journey time statistical analysis published by the DfT).

1.2.48. Principally, the document serves as a strategic analysis of existing accessibility within Hertfordshire, based around distance to services using the TRACC software to isolate distance and access via travel modes. The methodology is extensively documented within the strategy, but the key recognition is that fourteen of the sixteen recognised services are accessible to 95% of the population within the upper journey time thresholds (Table 4). As noted, this is skewed towards bus and rail journeys rather than active travel means, however as part of the analysis a considerable amount of data has been generated which, again, can be leveraged to provide base analysis for the LCWIP in terms of both transport demand and availability of alternative route options.

Table 2 - Accessibility Strategy - Lower and Upper Thresholds to Services

Service	Lower Threshold (mins)	Upper Threshold (mins)
Primary Schools	15	30
Secondary Schools	20	40
Further Education (All)	30	60
Further Education Colleges*	30	60
YC Hertfordshire Centres*	20	40
Hospitals (All)	30	60
Hospitals A&E*	30	60
Doctor's Surgeries (GPs)	15	30
Pharmacies*	15	30
Dentist*	15	30
Employment (500+ jobs)	20	40
Job Centres*	20	40
Town Centres	15	30
Libraries*	20	40
Bus Stations*	20	40
Train Stations*	20	40

*assumed thresholds based on DfT information

Rural Transport Strategy (2019)

- 1.2.49. The Rural Transport Strategy is to assist in the delivery of LTP4 policies within the context of rural transport, recognising that for rural residents (roughly 12% of the Hertfordshire population) there are often transport-related barriers to accessing services which mean the motor car remains the dominant transport choice.
- 1.2.50. Primarily, the document serves to translate what may otherwise appear more urban-centric strategies and policies included within other documents – such as the LTP4 ambitions for active travel – into the rural context, recognising the unique barriers and opportunities presented to rural communities and additionally the distances involved in travelling to access core services.
- 1.2.51. Whilst the LCWIP is likely to focus on urban areas, in line with both government guidelines and a need to maximise potential users, the strategy does recognise that even ostensibly urban centric strategies provide a positive impact on rural transport; either by reducing the volume of vehicles on the carriageway and thereby congestion or by providing an acceptable last stage of the journey that makes other modes (such as bus or rail) a more attractive option.
- 1.2.52. Connections to and from rural communities will be included as trip generators and origin/destination points as part of the LCWIP process and will likely influence corridor if not route selection depending on the nature and volume of trips undertaken.

Rights of Way Improvement Plan (2018)

- 1.2.53. The Rights of Way Improvement Plan (RoWIP) provides the framework for the changes, enhancements, and improvements to Hertfordshire's extensive Right of Way network, aiming to provide better provision for walkers, cyclists, and equestrians regardless of ability level or familiarity with the network.
- 1.2.54. The plan recognises that the majority of users of the Hertfordshire Right of Way network are walkers, cyclists, and horse riders; the reasons for usage ranging from leisure and exercise through to desiring off-road routes and a network more suitable for the usage case than mingling with higher speed vehicles or busier traffic. Barriers identified include poor surface conditions, obstructions caused by structures or vegetation, and a lack of promotion of the network that may hinder or prevent usage by those that would otherwise benefit from access to the network.

The strategy provides an assessment of needs and demands which the improvement plan aims to target and deliver upon in the short- and medium-term future, this is summarised below. The LCWIP has the opportunity to support this process considerably, identifying means of connecting to the existing Right of Way network, or in some cases making use of existing urban Ways that may become part of an internally cohesive network.

Extract from Section 4 Assessment of Needs and Demands

4 Summary of needs and demands

Issues for all users:

- i. Minimum number of obstructions and structures easy to use
- ii. More circular routes
- iii. Better information both about the network and how to access it

Walkers want:

- i. Network free from obstruction
- ii. Short circular routes starting and finishing at accessible points, eg car parks, bus stops or train stations
- iii. Long routes, not necessarily circular, in more remote interesting places

Parents with children want:

- i. Better information about where to go and how to get there
- ii. Dog mess, litter and vandalism to be addressed as a priority
- iii. To be able to access the countryside with a pushchair

People with limited mobility (and their carers) want:

- i. Acknowledgement that their needs are variable and depend on an individual's physical limitation
- ii. Paths with shallow gradients

1.2.55. Detailed information about what to expect on routes.

Dog walkers want:

- i. Walks up to an hour
- ii. Sites or Rights of Way accessible from home/kennels
- iii. Natural surfaces

Runners want:

- i. Runs up to 2 hours
- ii. Routes that have a suitable natural surface
- iii. Routes that can take groups

Cyclists want:

- i. Access to a greater proportion of the network to enjoy circular routes and use linear commuting routes
- ii. Surfacing enabling all weather access, not necessarily tarmac
- iii. Routes free from barriers

Horse riders want:

- i. Long circular routes accessible from stables, avoiding roads
- ii. Routes for cantering, with a natural surface separate from improved surfaces
- iii. Structures manageable from horseback

Carriage drivers want:

- i. More off-road routes linked to byways and Quiet Lanes
- ii. Structures kept to a minimum, recognising the need for restrictions of motorised vehicles

1.2.56. It should be remembered that Rights of Way are not governed under identical legal principles to highway, and that there will be a need for careful management and discussion should improvements be identified on or adjacent to a Right of Way to ensure schemes are legally compliant. This will, again, be reflected within the LCWIP.

[A414 Corridor Strategy \(2019\)](#)

1.2.57. This strategy document builds on the principles of the LTP and outlines public and active transport opportunities along the county's strategic east-west transport corridor. The strategy relates to Hertsmere and Bushey by fostering joined-up

decision-making among authorities along the corridor, clarifying the role and hierarchy of key transport links, identifying infrastructure requirements, coordinating funding mechanisms, and supporting sustainable travel options like Mass Rapid Transport (MRT) and public transport improvements. This strategy enhances transport connectivity, supports sustainable growth, and improves infrastructure in Hertsmere and Bushey, contributing to a more integrated and efficient transport system.

1.3. Other

England's Economic Heartland Active Travel Strategy - Phase 2 (EEH & Atkins, 2023)

- 1.3.1. This document outlines an active travel strategy for the region stretching over Hertfordshire and to further surrounding counties. The strategy includes sustainable mode share targets for specific areas within the region and identifies priority cross boundary links including Bushy to Watford, Borehamwood to St Albans, Potters Bar to Hatfield and Radlett to Harpenden.

1.4. Relevant Plans in Neighbouring Authorities

- 1.4.1. St Albans, Watford and Three Rivers are neighbouring authorities which have also developed LCWIP's. The Hertsmere network has been aligned with these plans to provide walking and cycling connections between nearby towns. Aligning neighbouring LCWIP's walking and cycling networks will provide sustainable connections from Bushey to Watford, Borehamwood to South Oxhey, Radlett to London Colney.

Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX C – PCT Outputs



Figure C-1 – Commuting Trips go Dutch

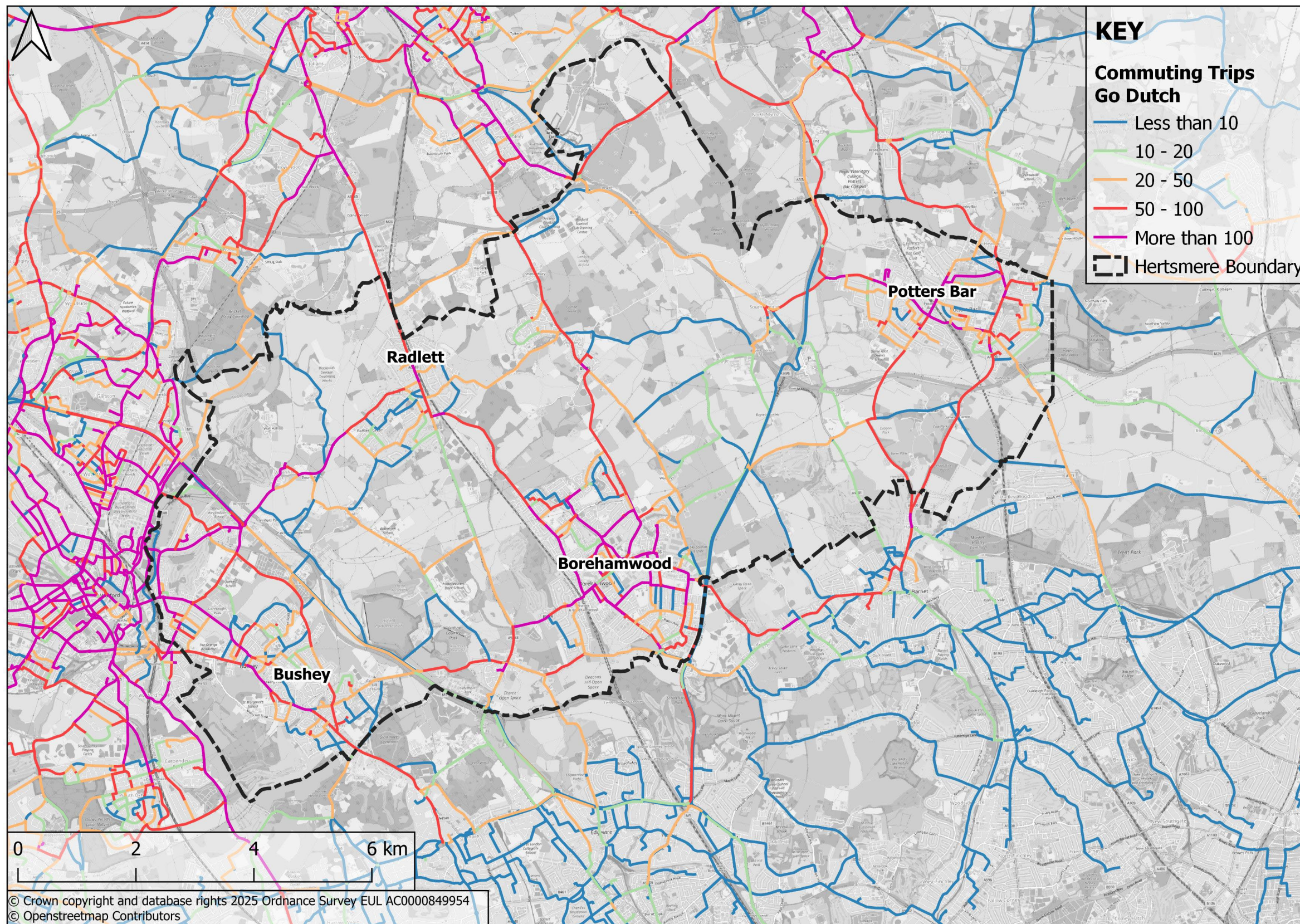
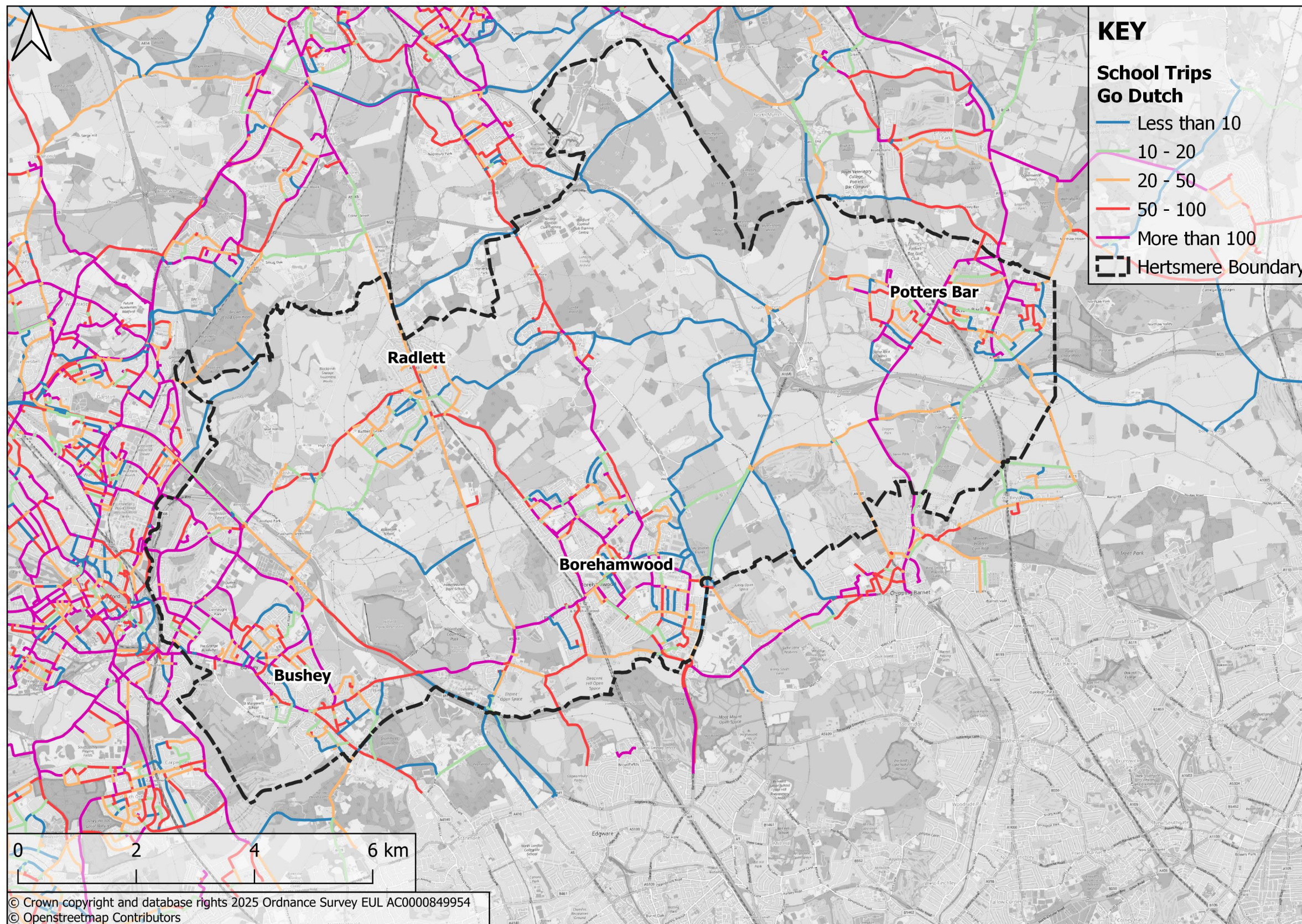


Figure C-2 – School Trips go Dutch



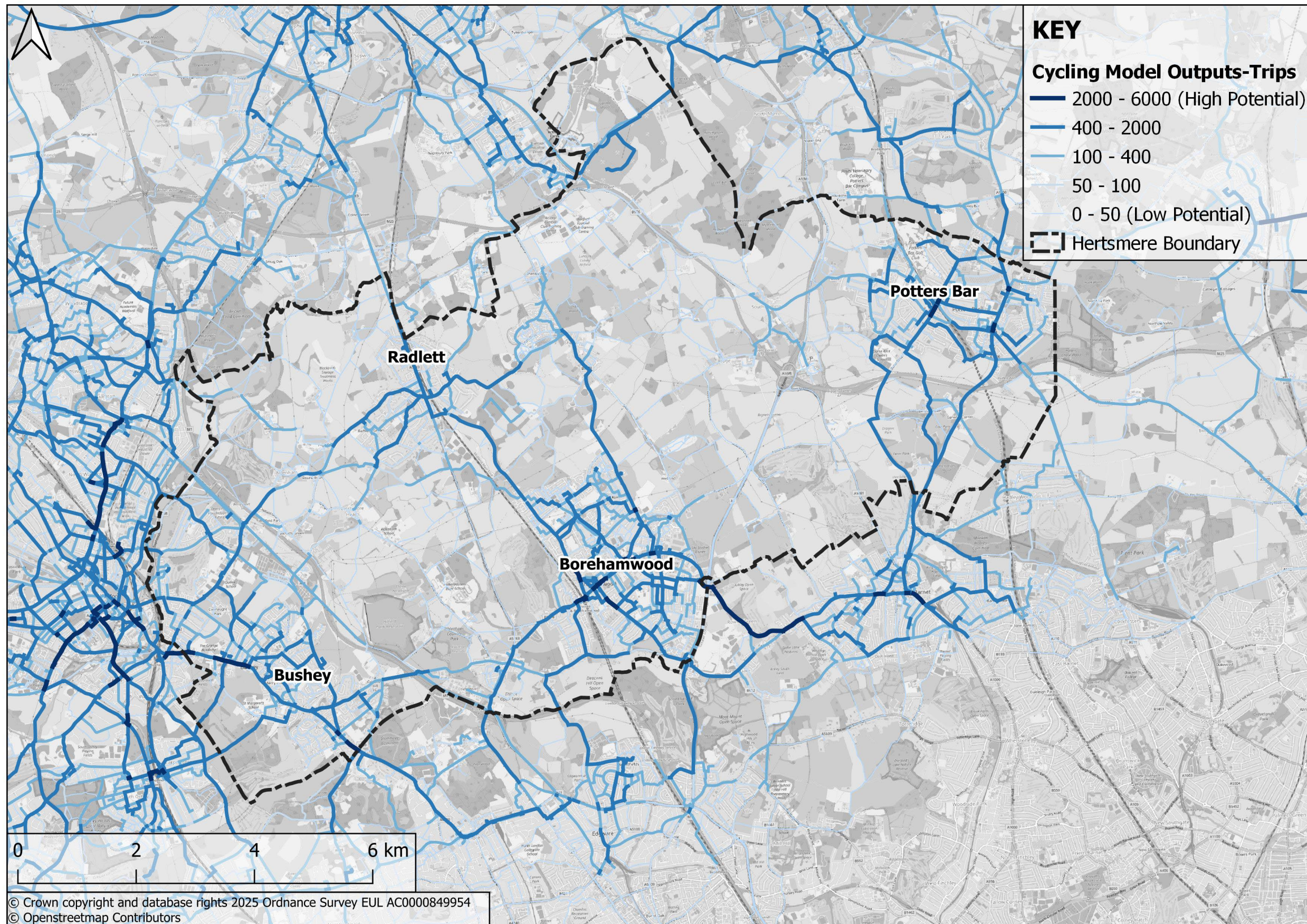


Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX D – Cycling Model Outputs



Figure D-1 – Cycling Model Outputs - Trips



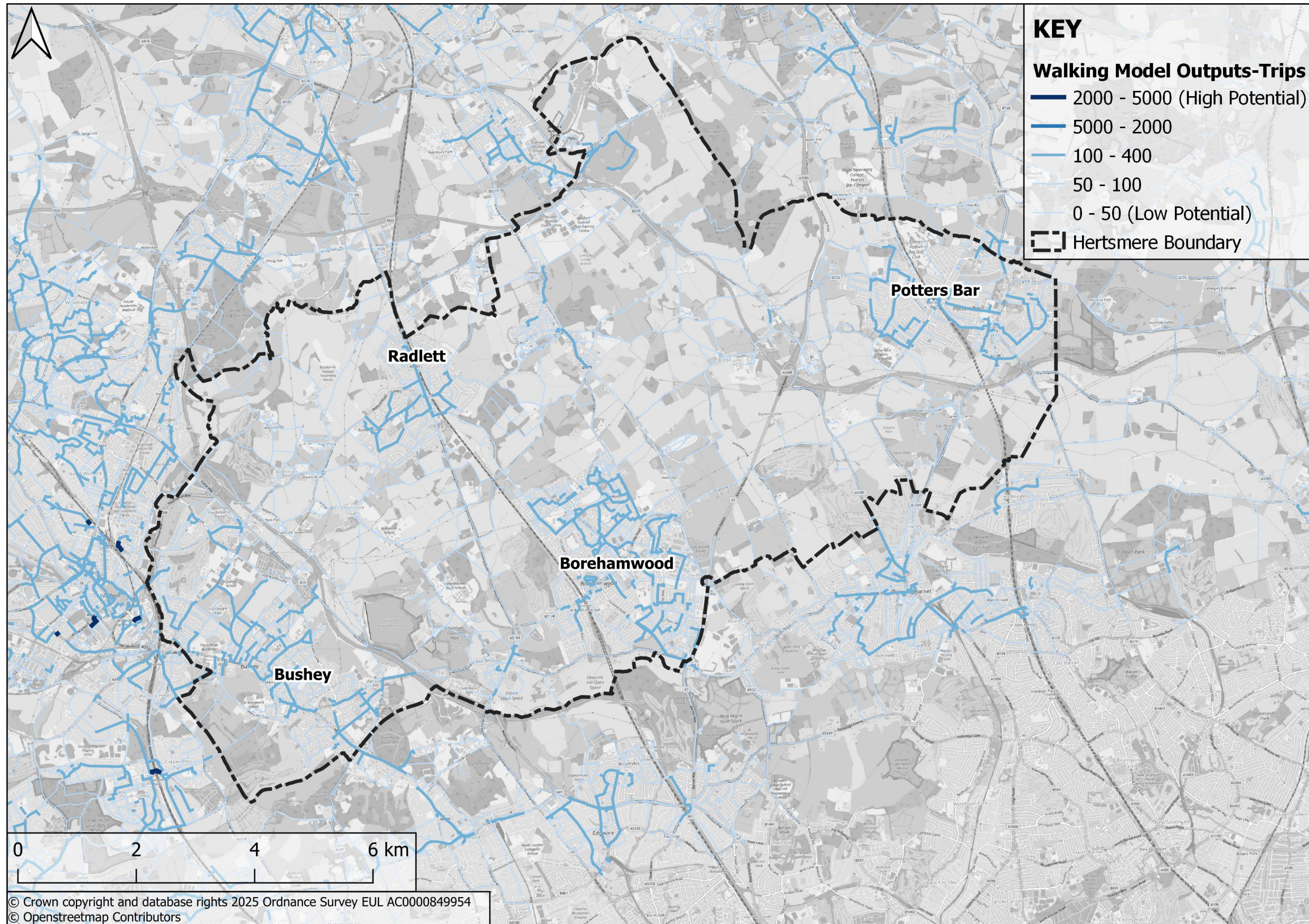


Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX E – Walking Model Outputs



Figure E-1 – Walking Model Outputs - Trips



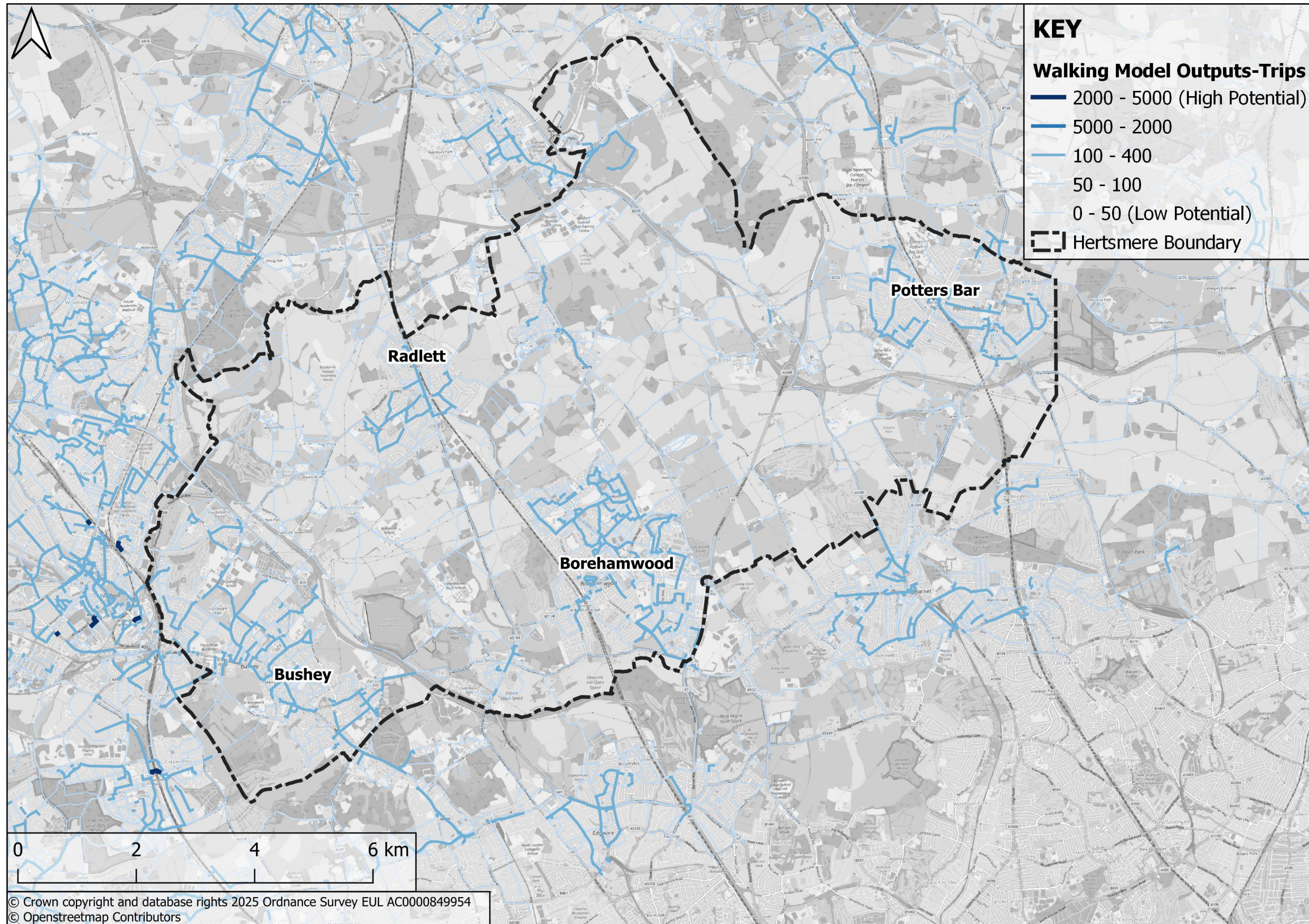


Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX E – Walking Model Outputs



Figure E-1 – Walking Model Outputs - Trips





Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX F – Network Plans for Walking and Cycling



Figure F-1 – Hertsmere Network Plans for Walking

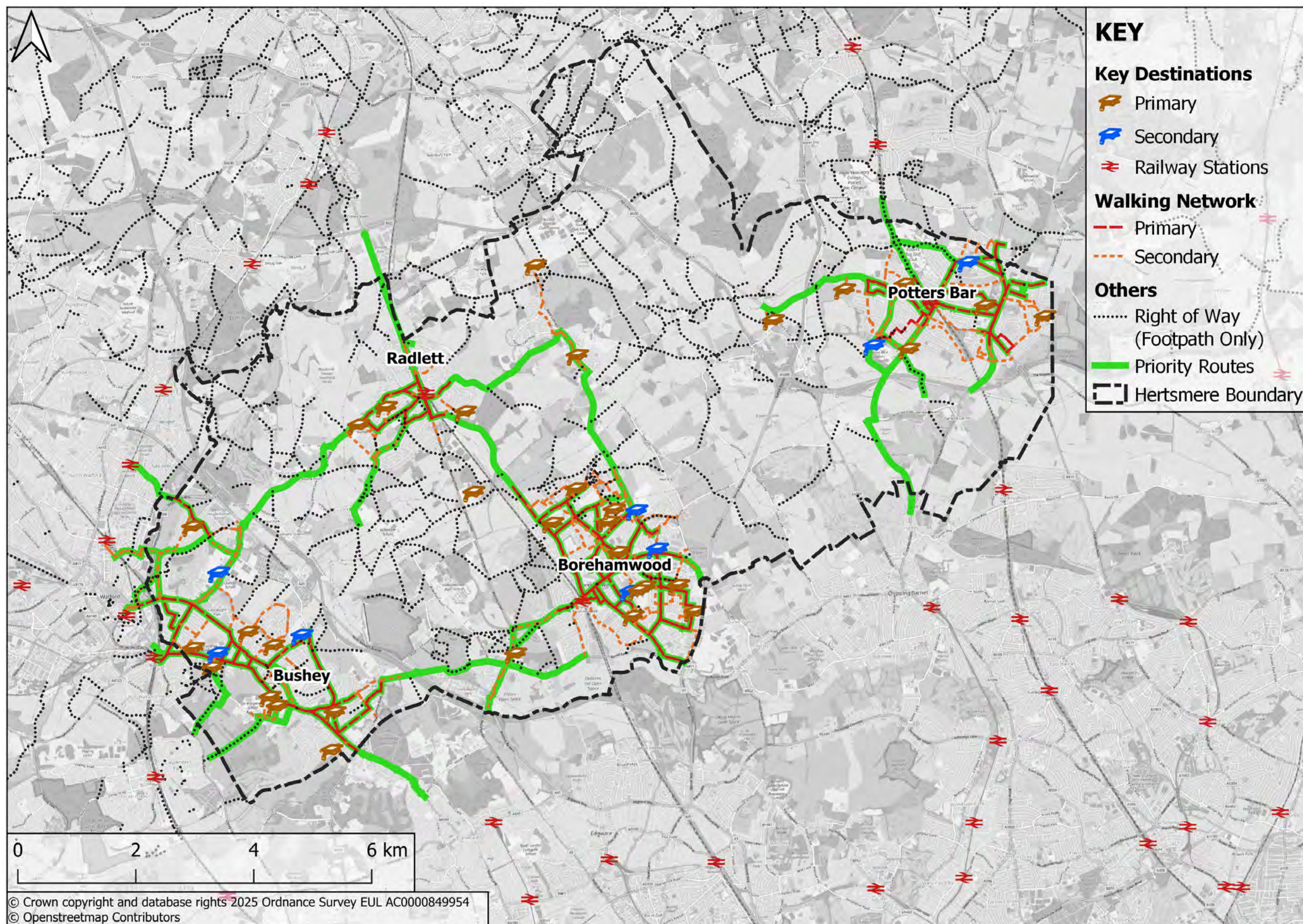


Figure F-2 – Borehamwood Network Plans for Walking

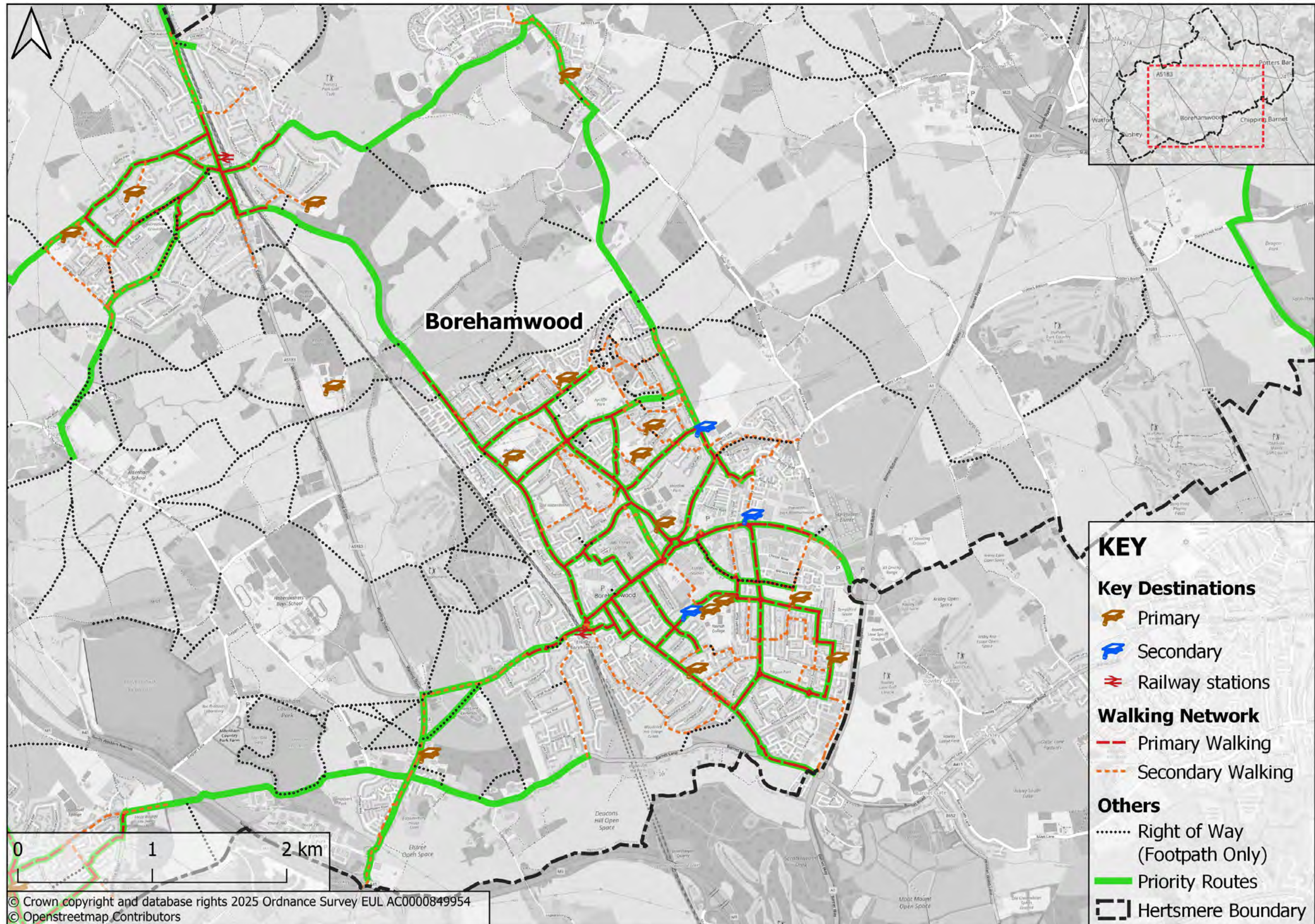


Figure F-3 – Bushey Network Plans for Walking

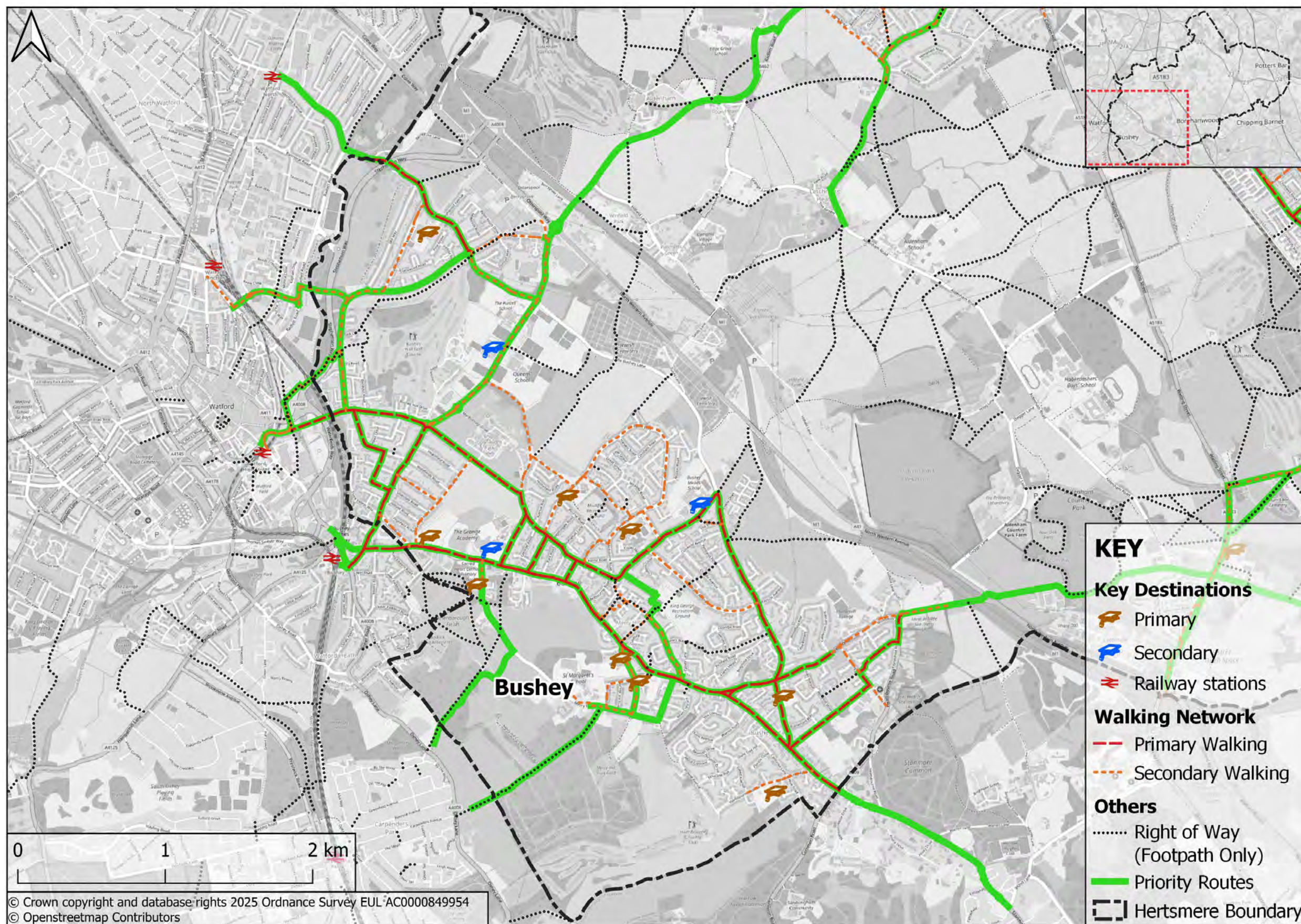


Figure F-4 – Potters Bar Network Plans for Walking

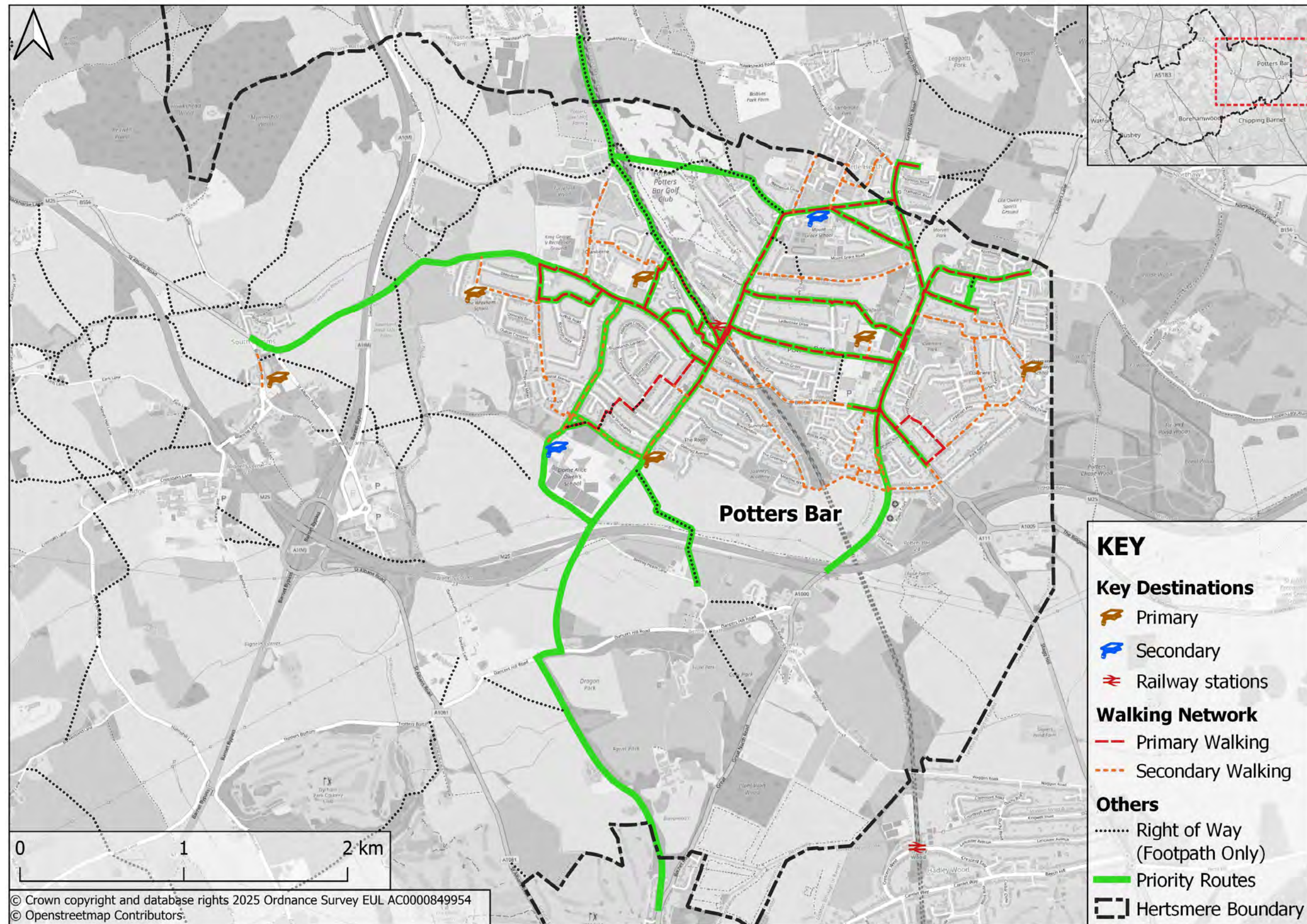


Figure F-5 – Radlett Network Plans for Walking

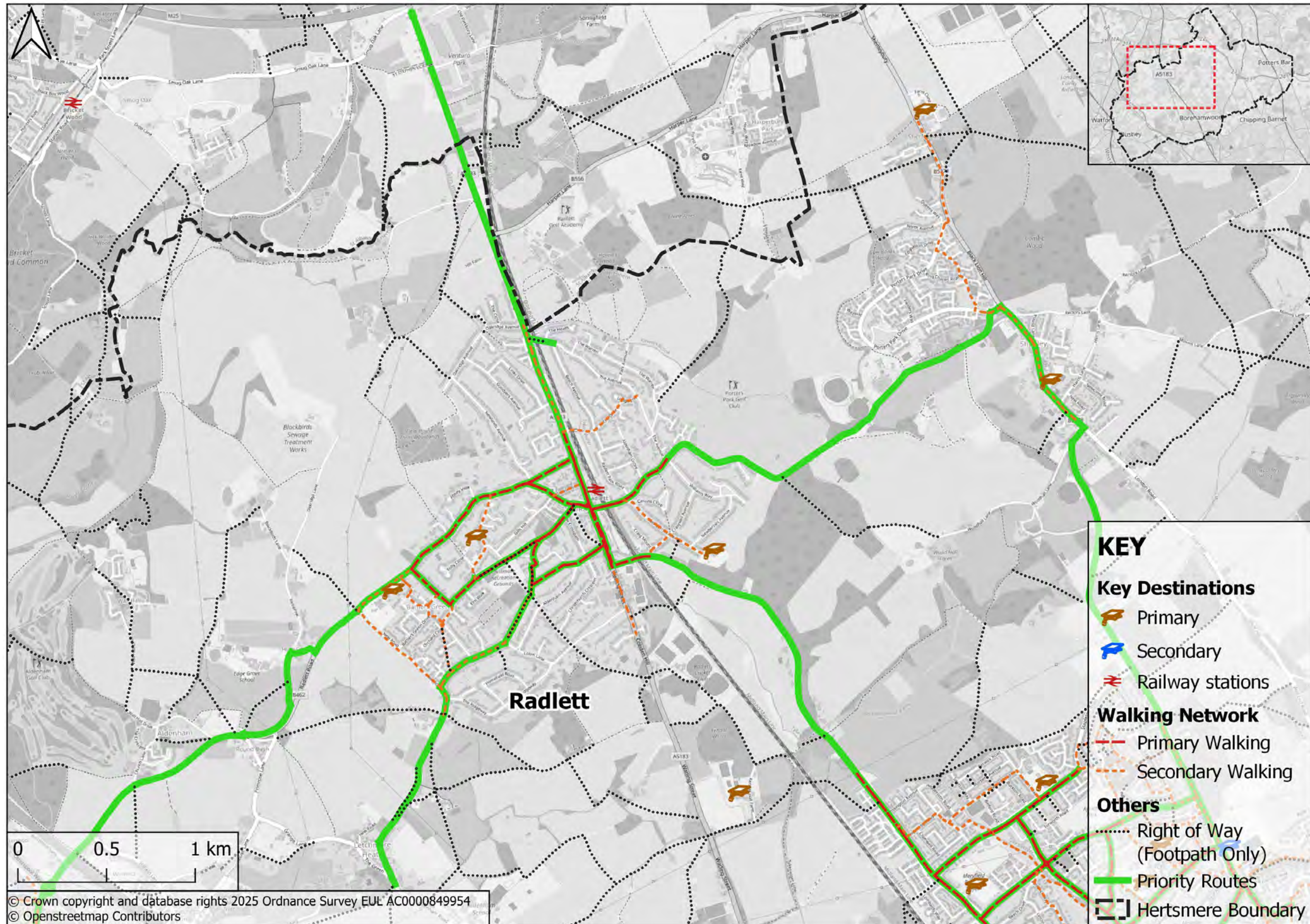


Figure F-6 – Hertsmere Network Plans for Cycling

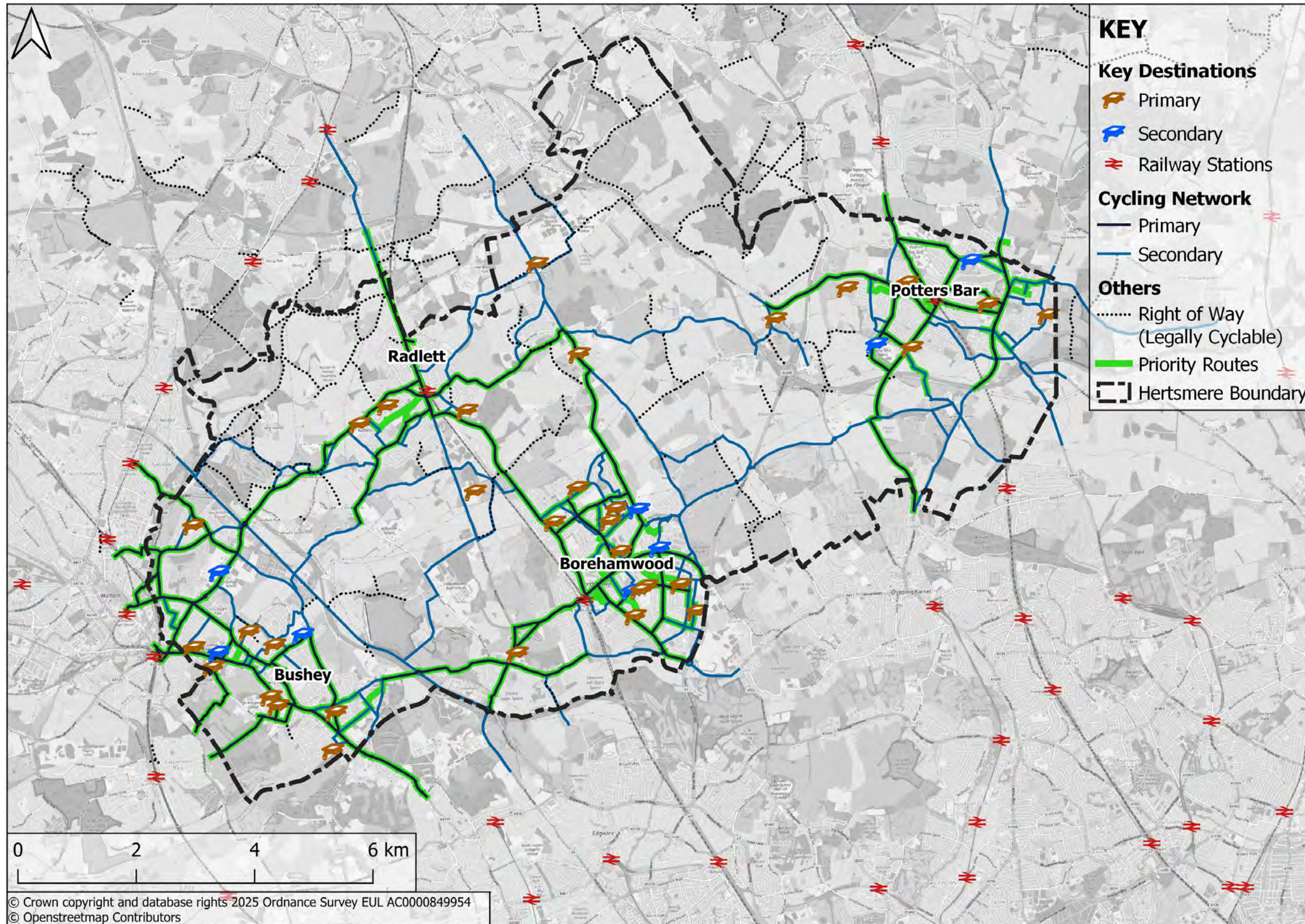


Figure F-7 – Borehamwood Network Plans for Cycling

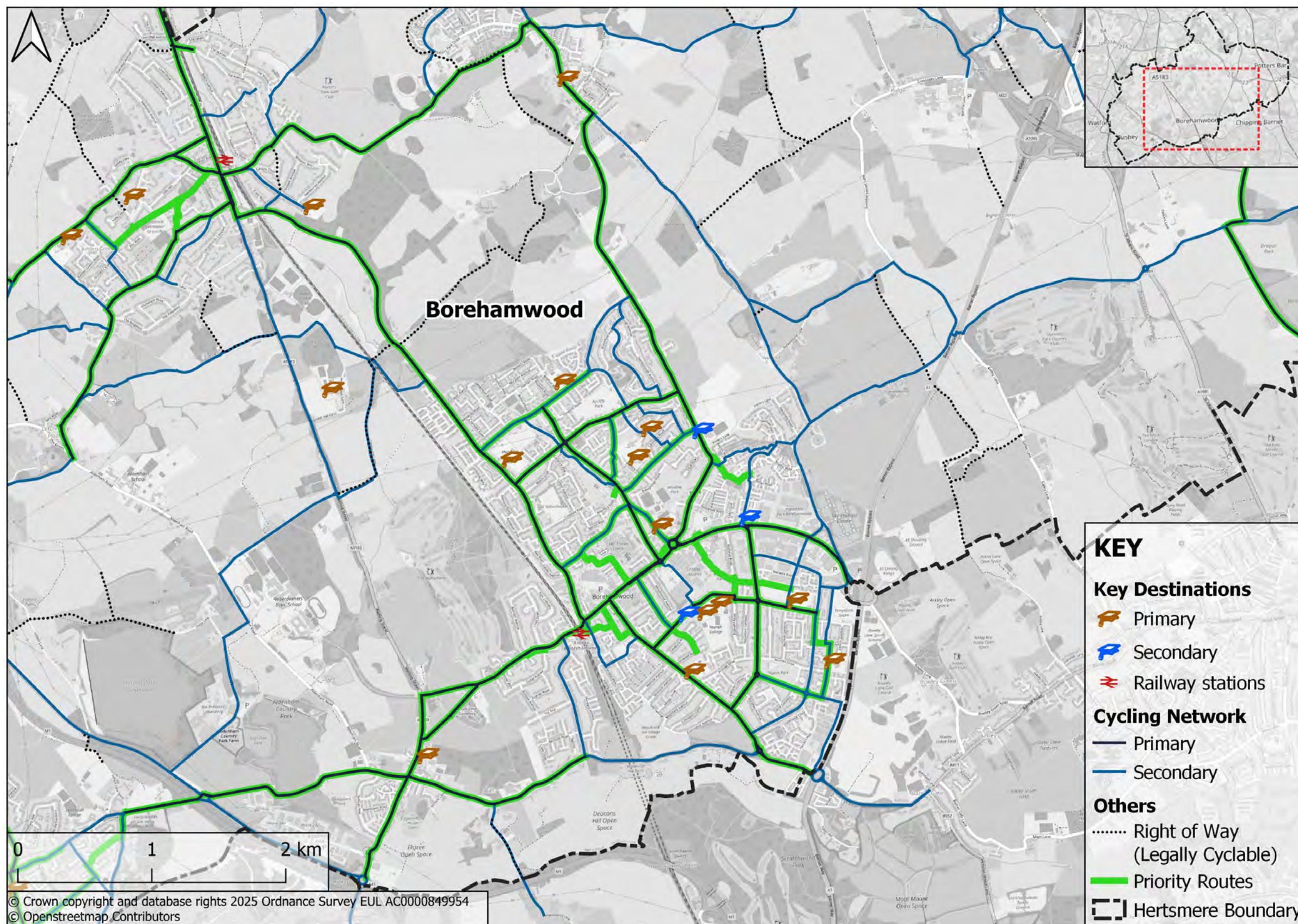


Figure F-8 – Bushey Network Plans for Cycling

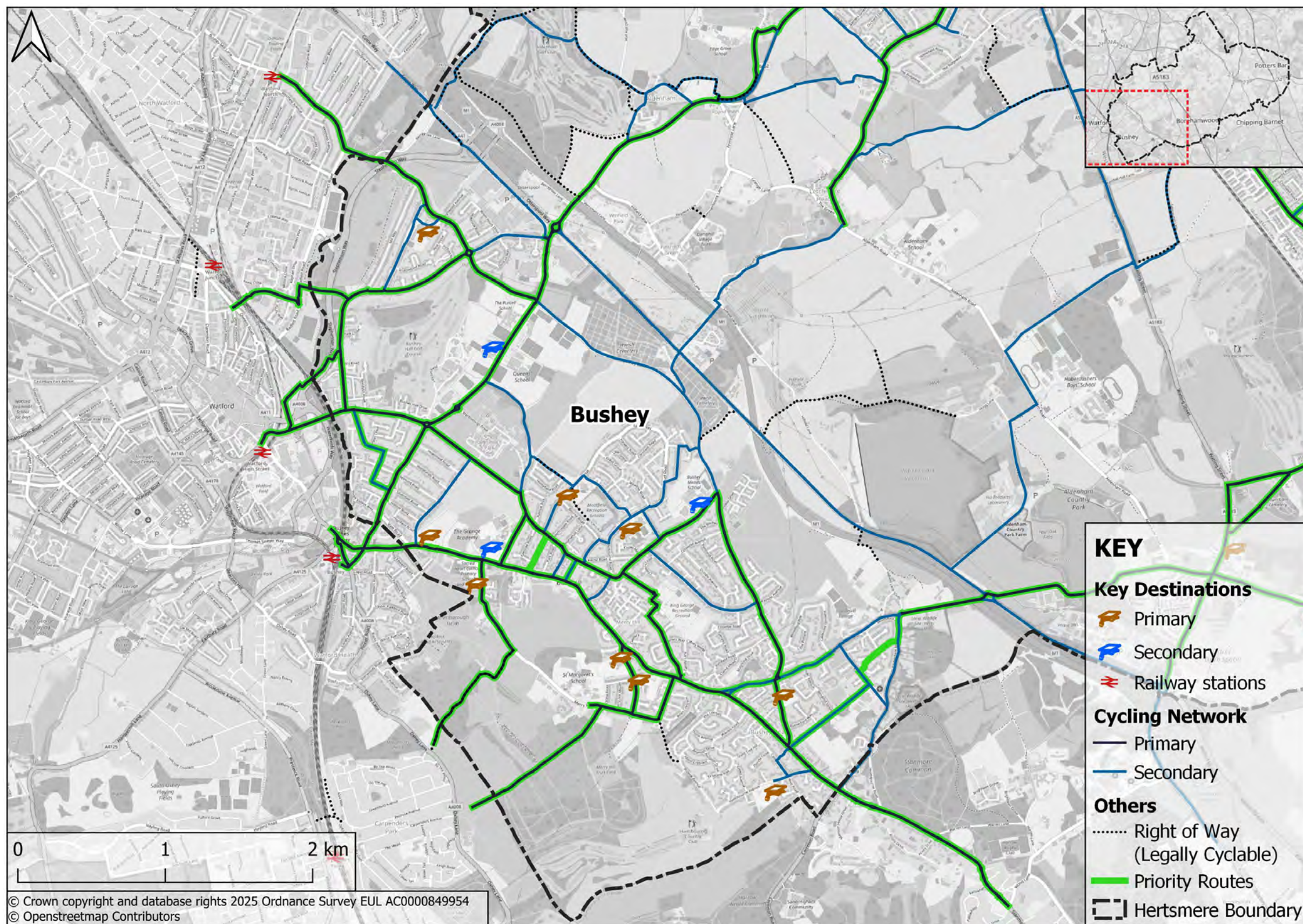


Figure F-9 – Potters Bar Network Plans for Cycling

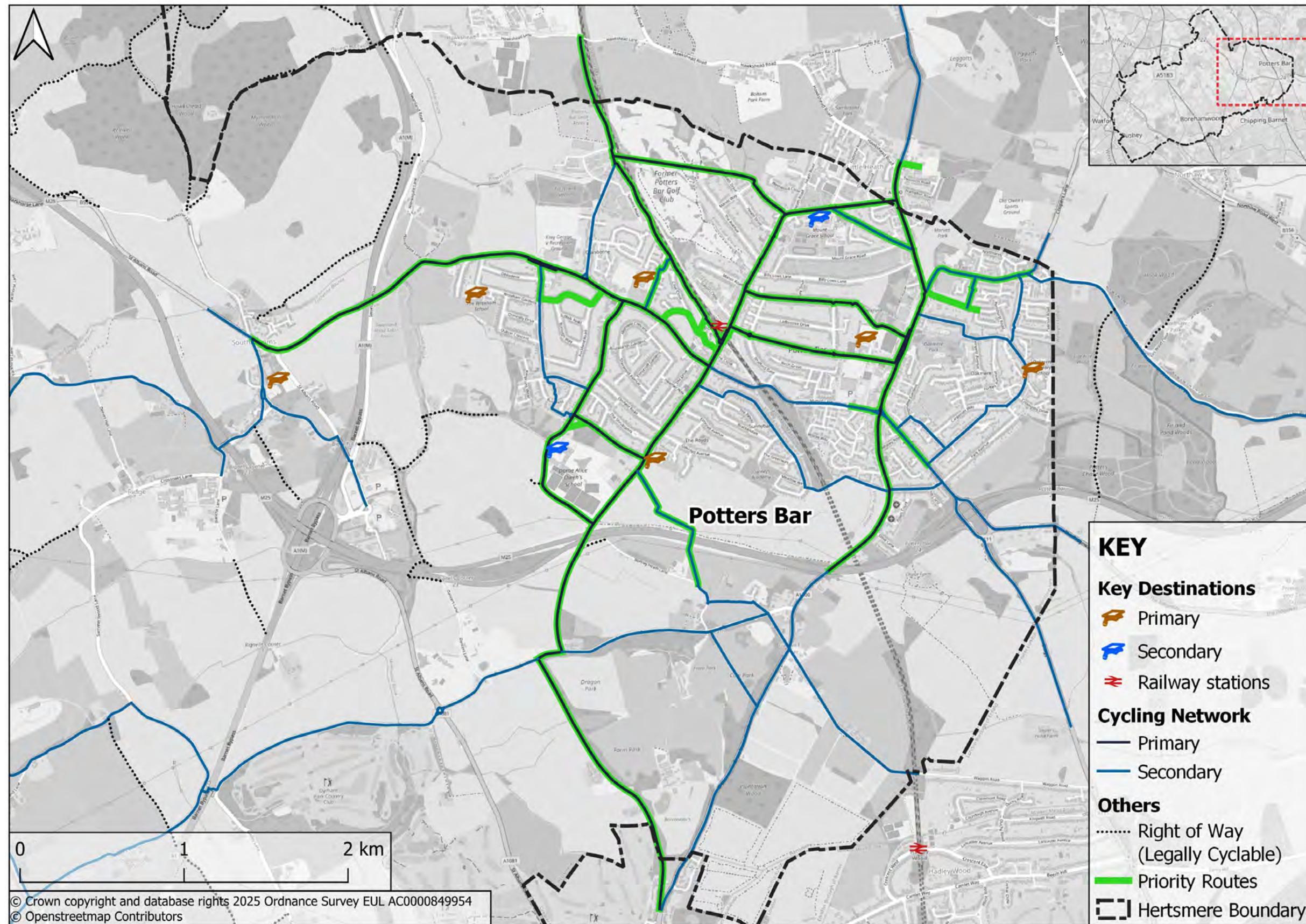


Figure F-10 – Radlett Network Plans for Cycling





Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX G – Infrastructure Plans



Figure G-1 – Hertsmere Proposed Active Travel Improvements - Infrastructure Plans

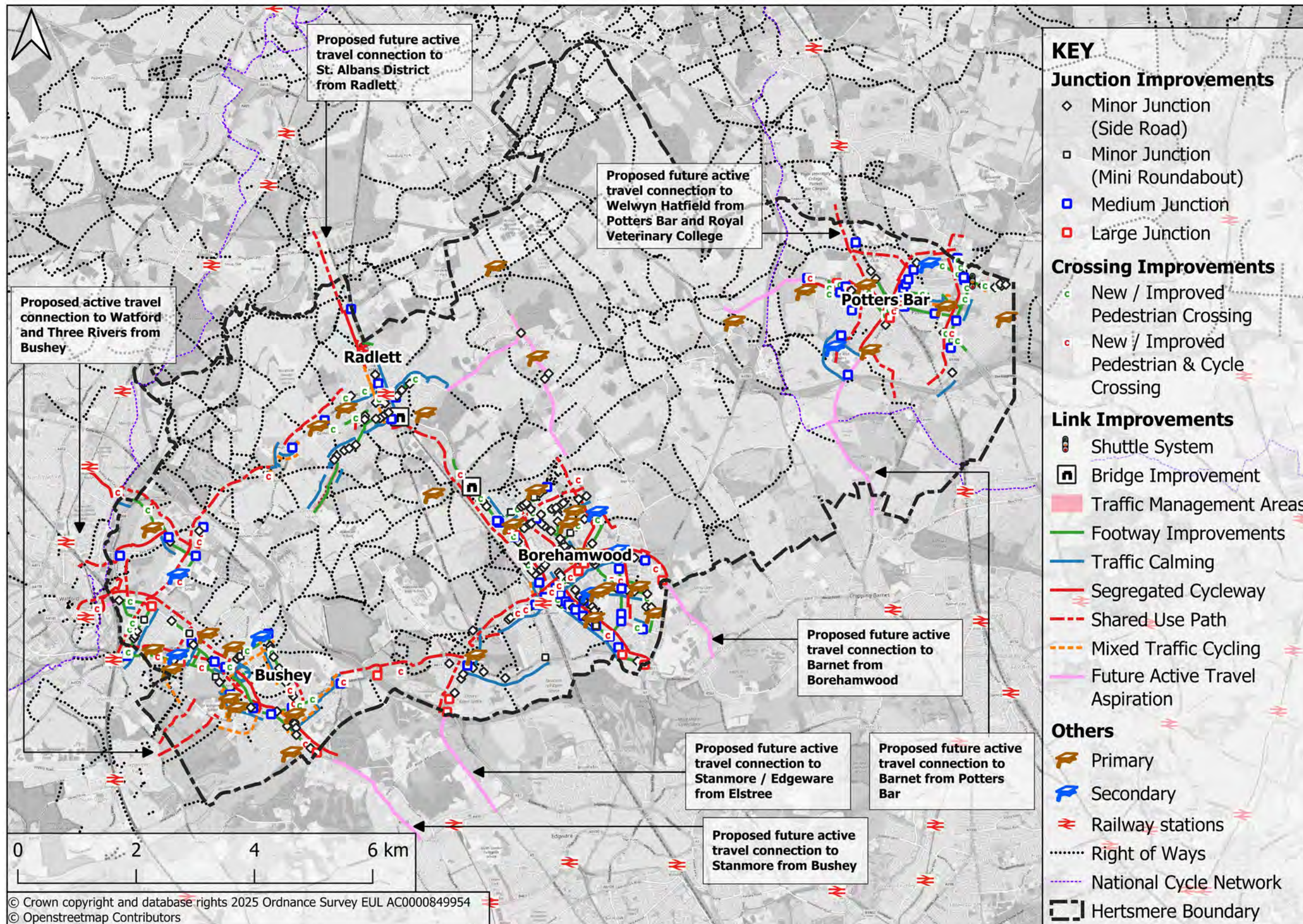


Figure G-2 – Borehamwood Proposed Active Travel Improvements – Infrastructure Plans

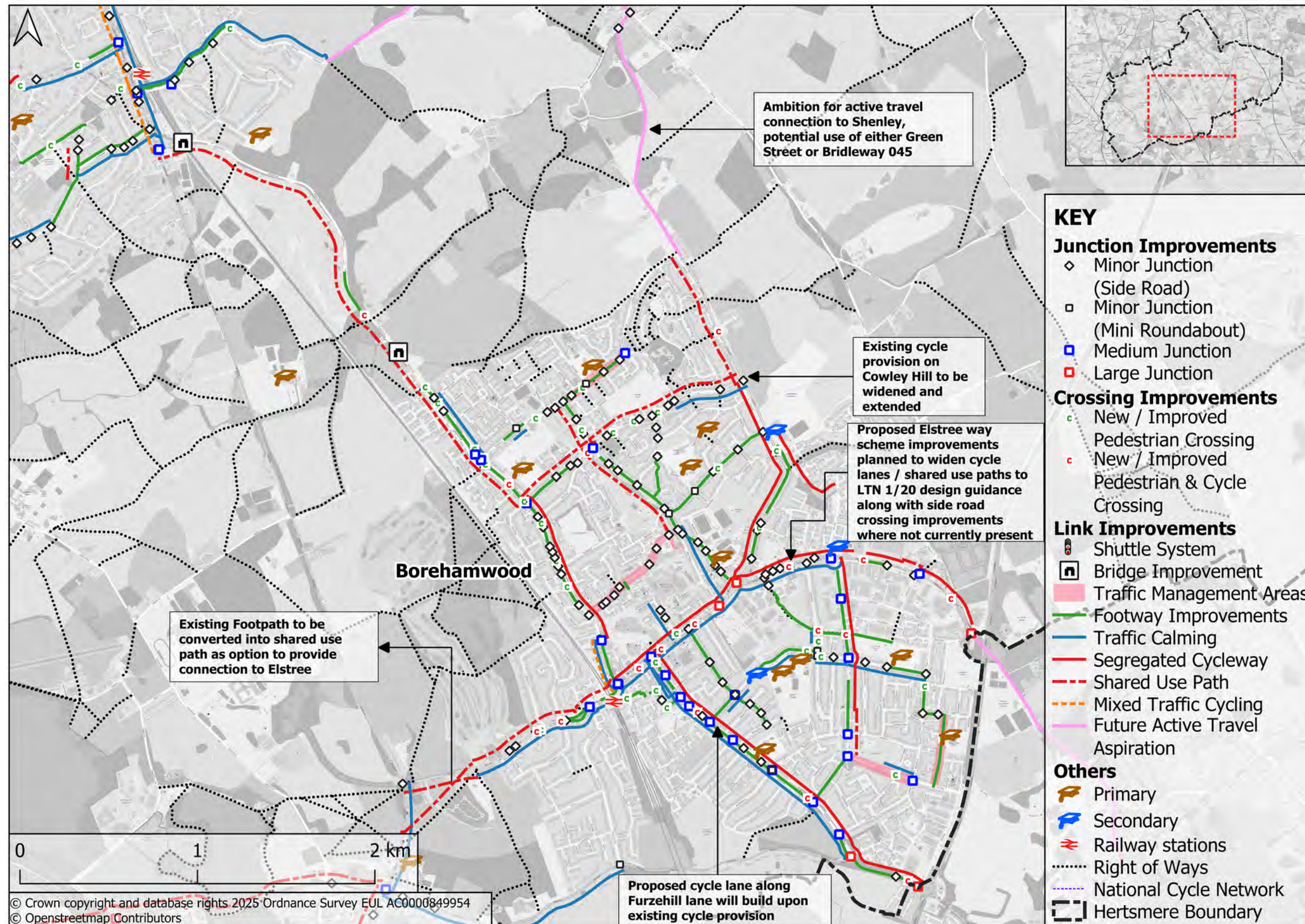


Figure G-3 – Bushey Proposed Active Travel Improvements

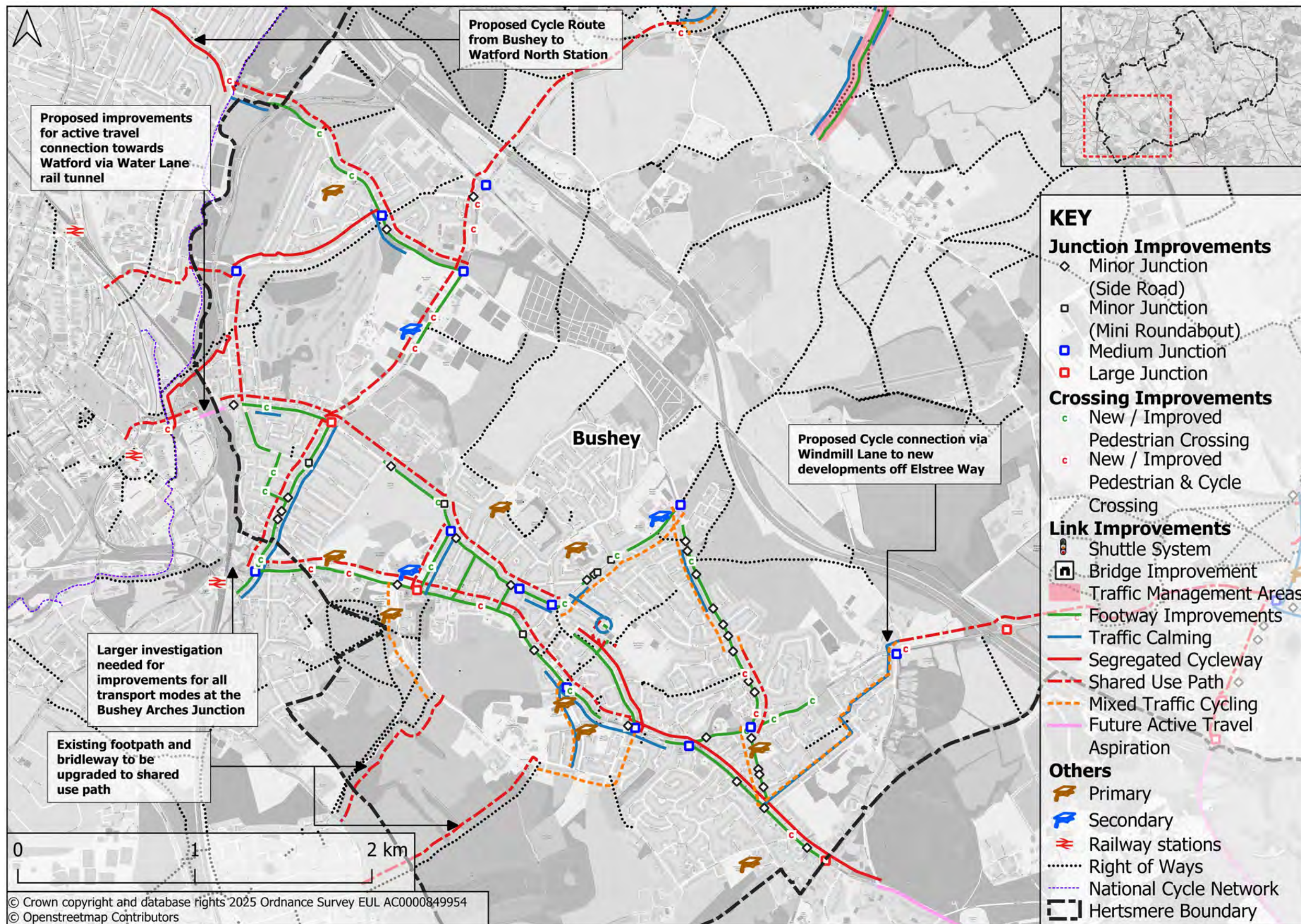


Figure G-4 – Potters Bar Proposed Active Travel Improvements

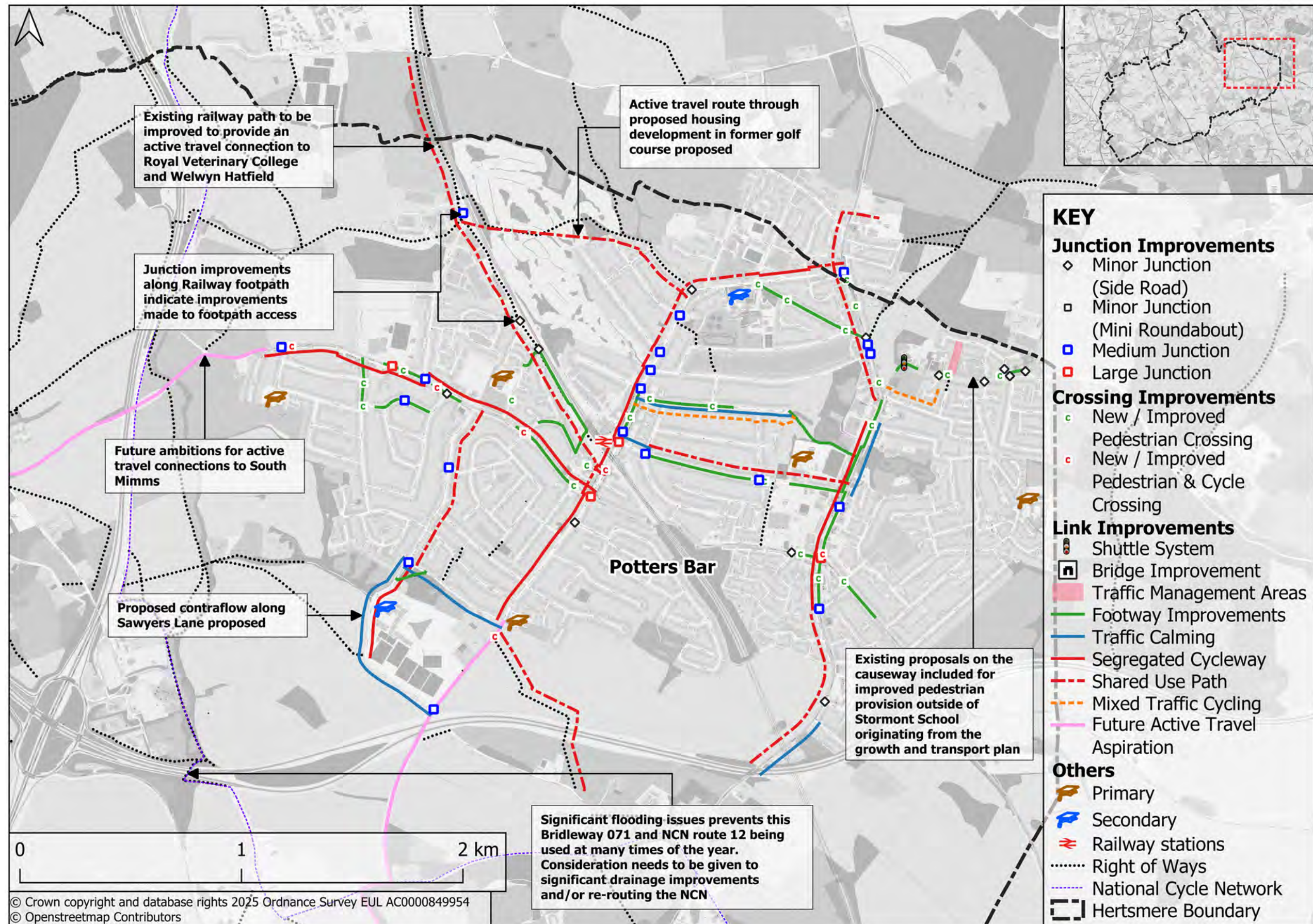
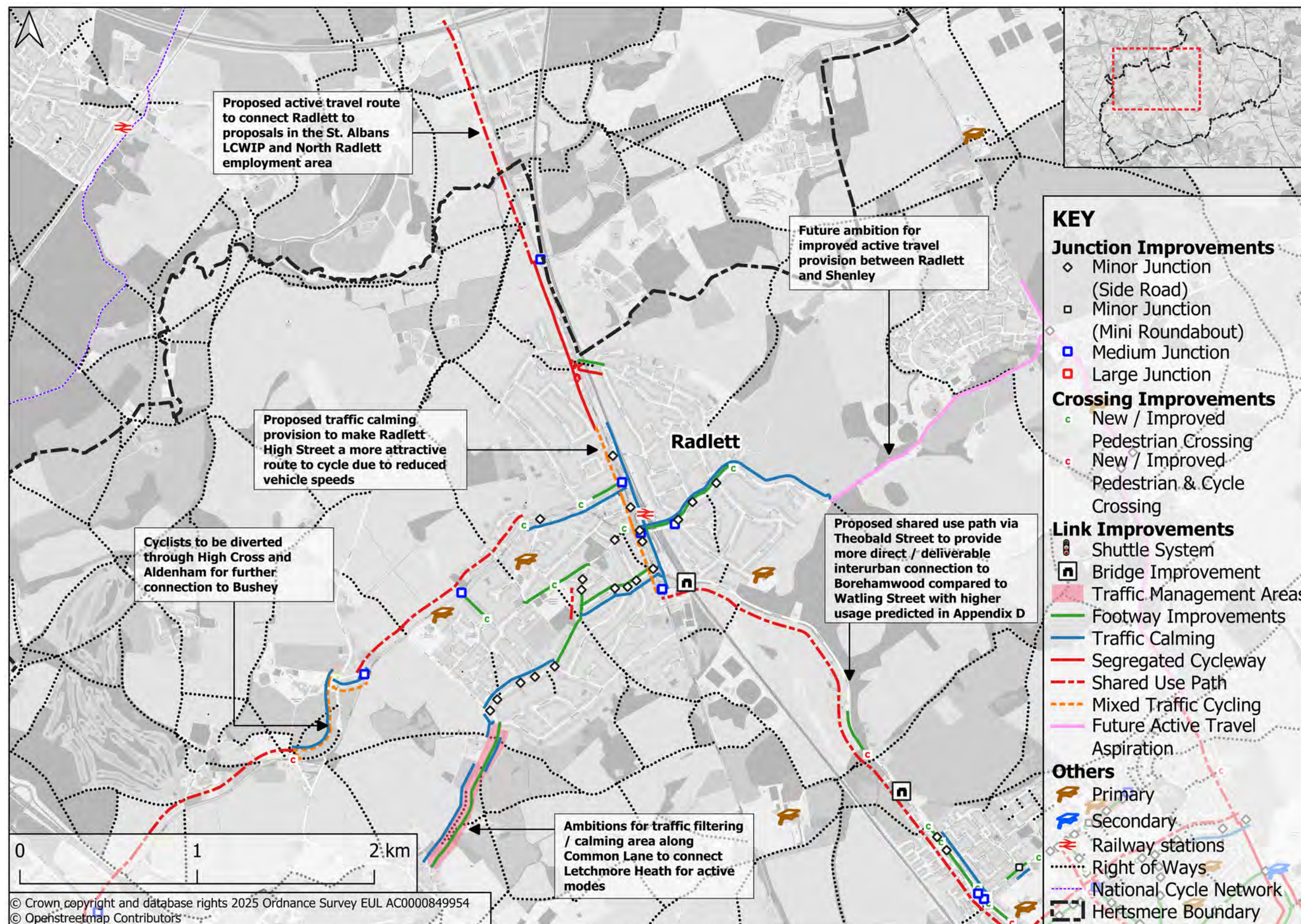


Figure G-5 – Radlett Proposed Active Travel Improvements





Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX H – Detailed Infrastructure Plans



Figure H-1 – Borehamwood East Proposed Active Travel Improvements

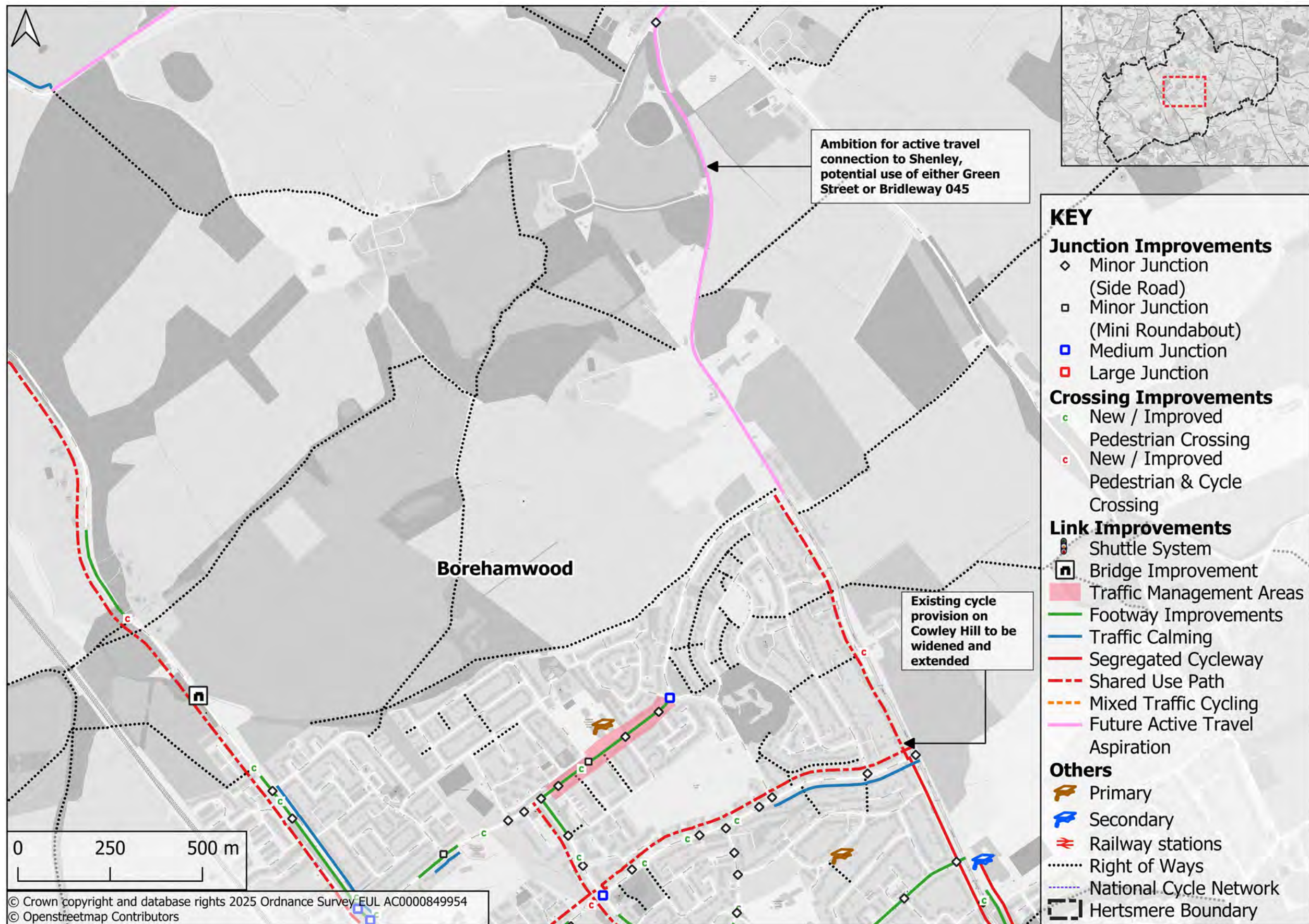


Figure H-2 – Borehamwood North Proposed Active Travel Improvements

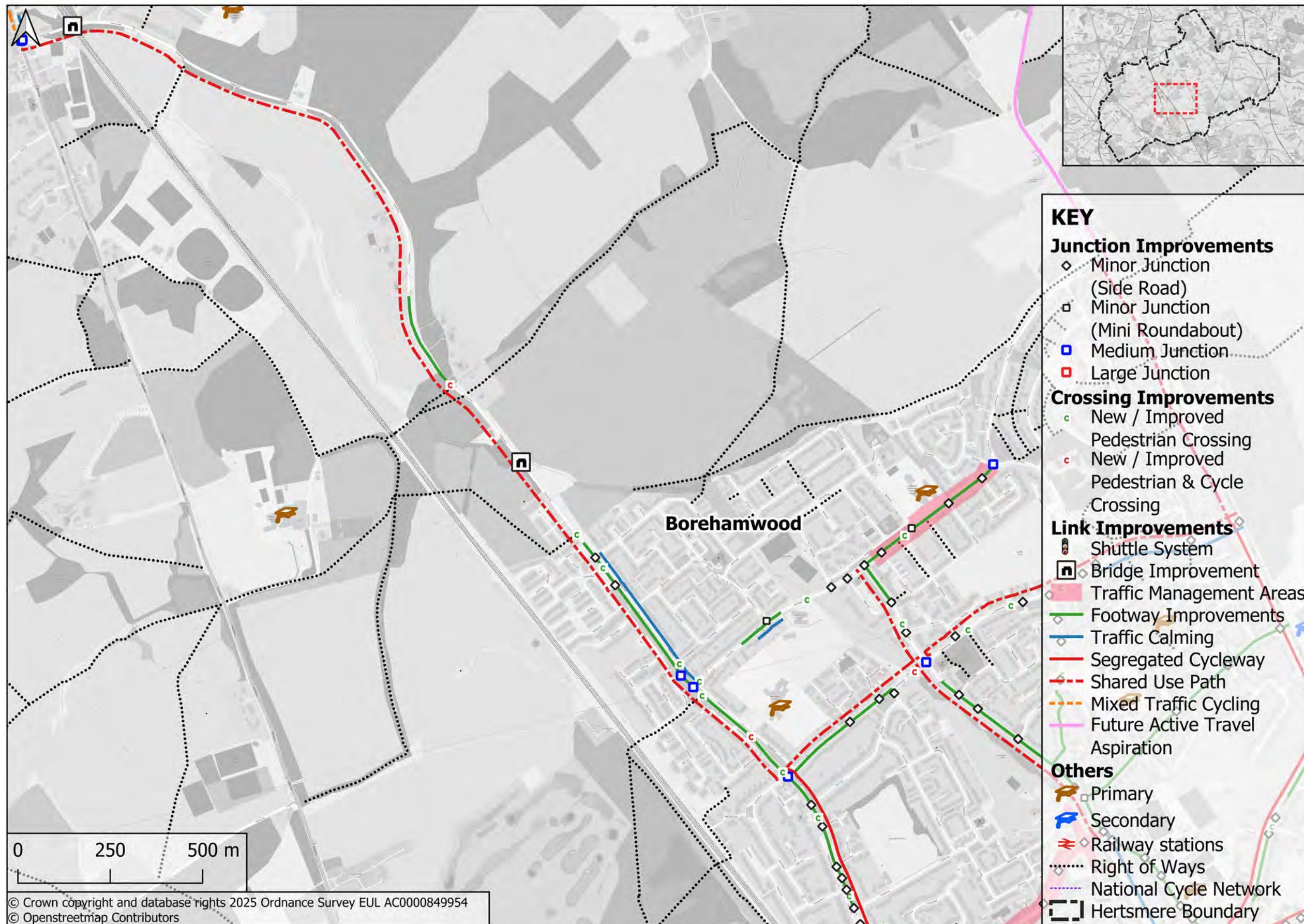


Figure H-3 – Borehamwood South Proposed Active Travel Improvements

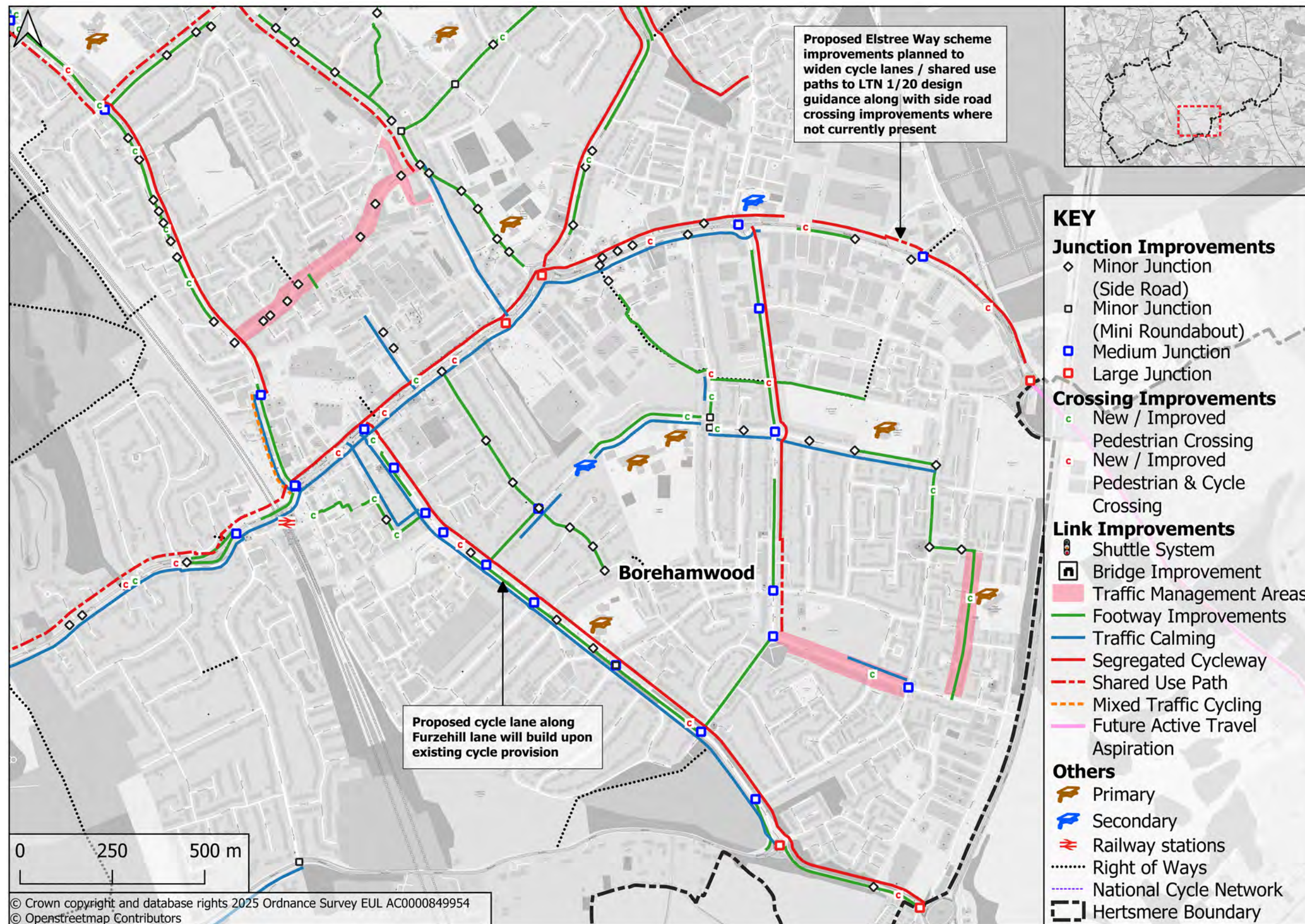


Figure H-4 – Borehamwood West Proposed Active Travel Improvements

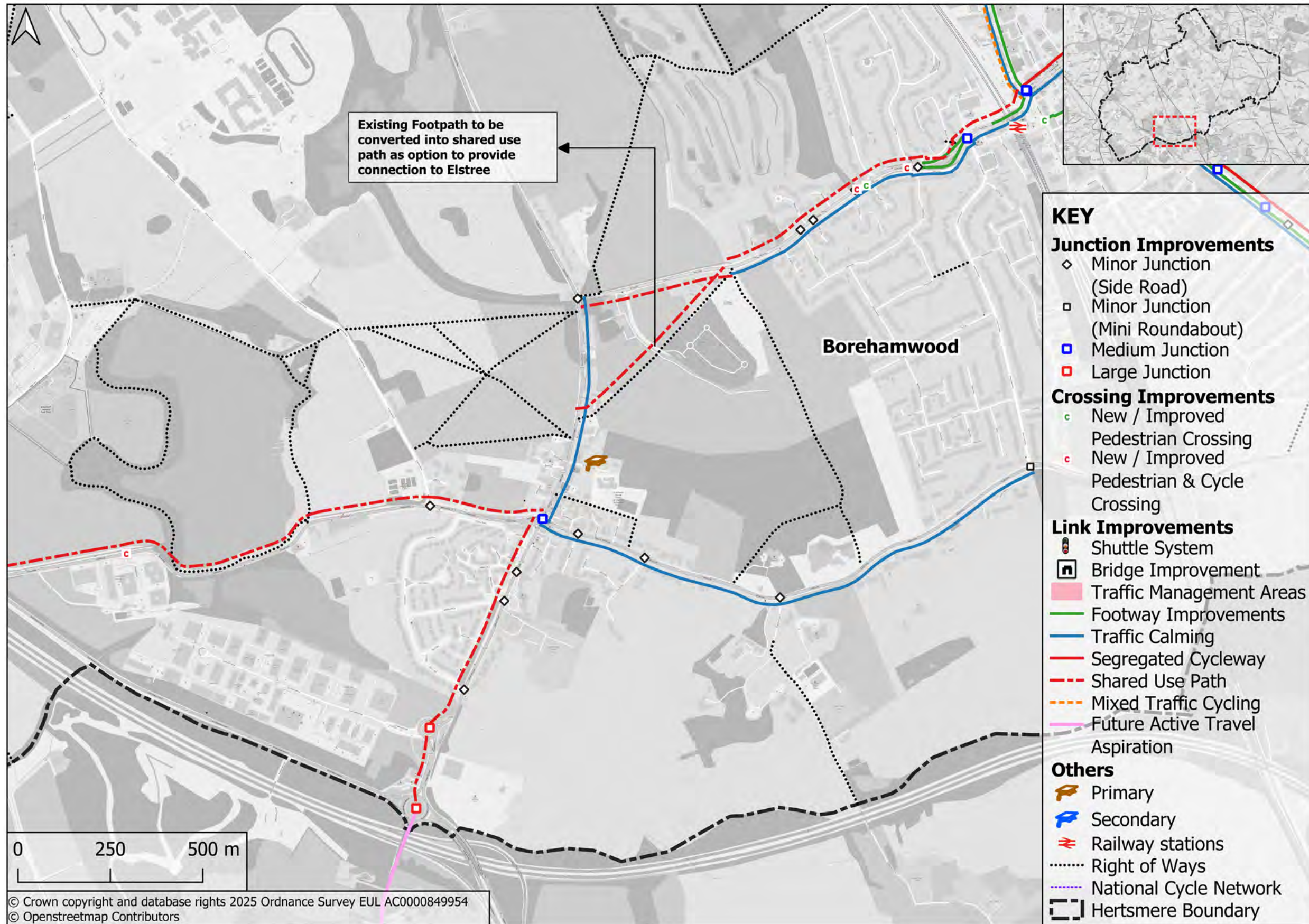


Figure H-5 – Bushey East Proposed Active Travel Improvements

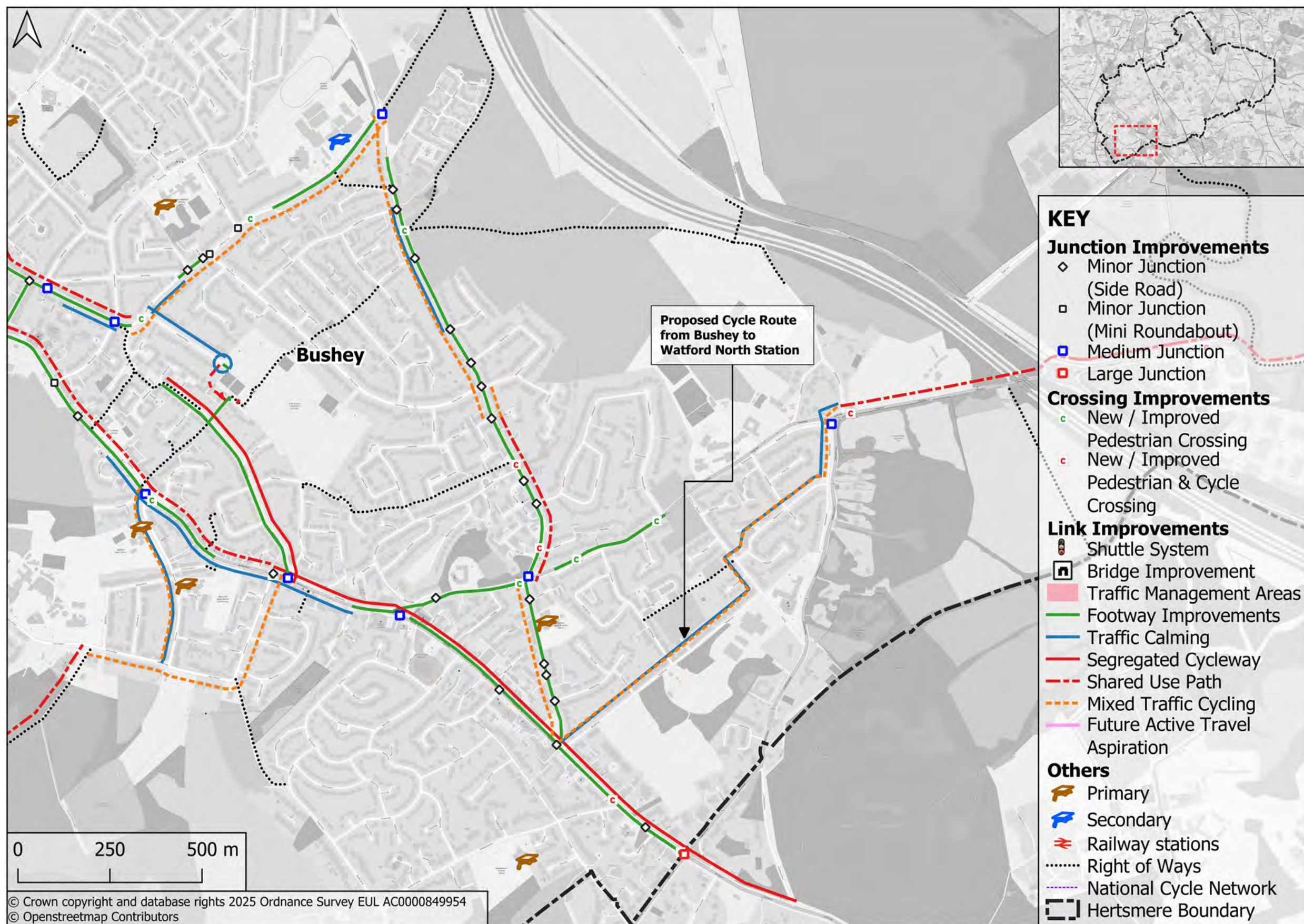


Figure H-6 – Bushey North Proposed Active Travel Improvements

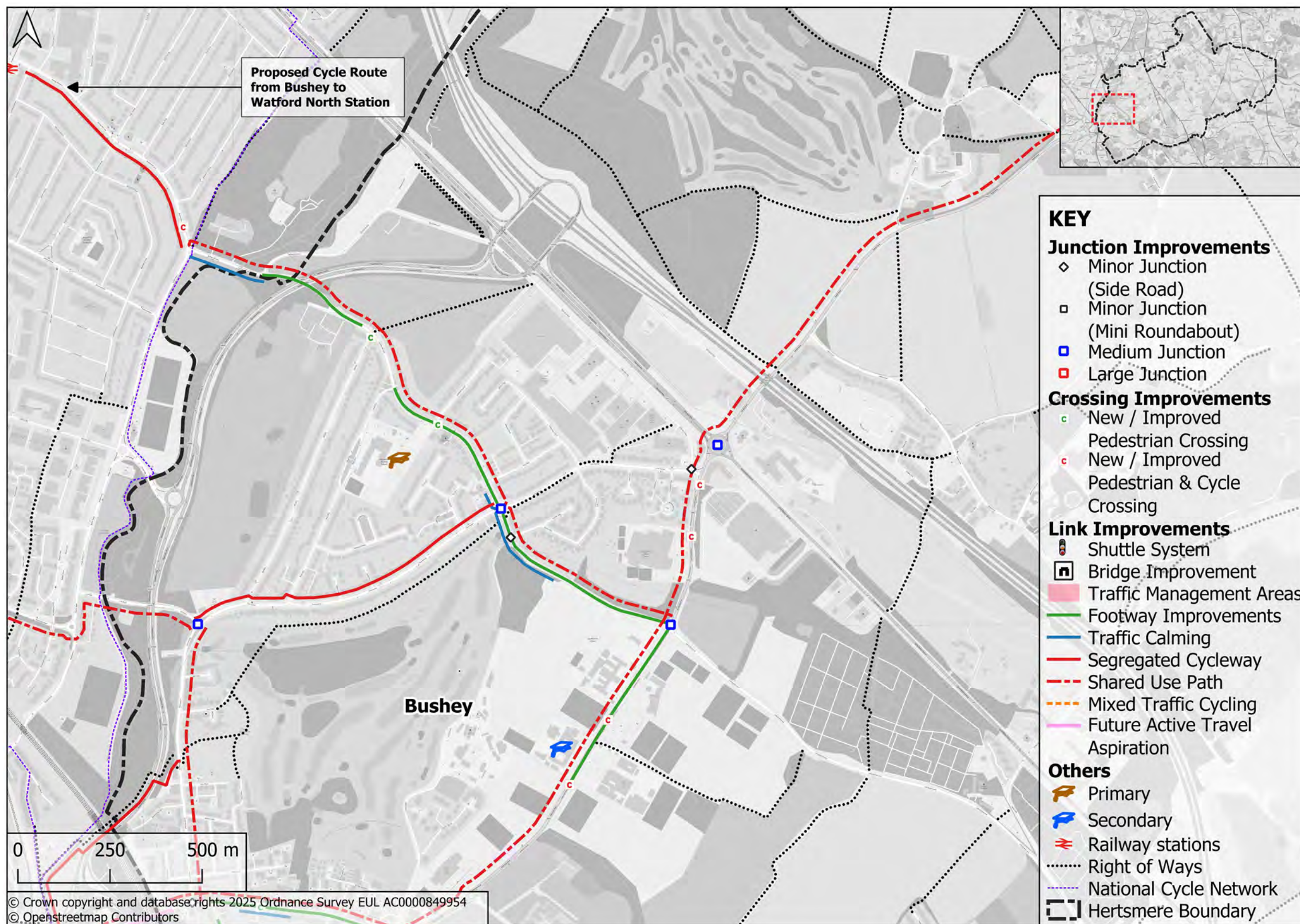


Figure H-7 – Bushey South Proposed Active Travel Improvements

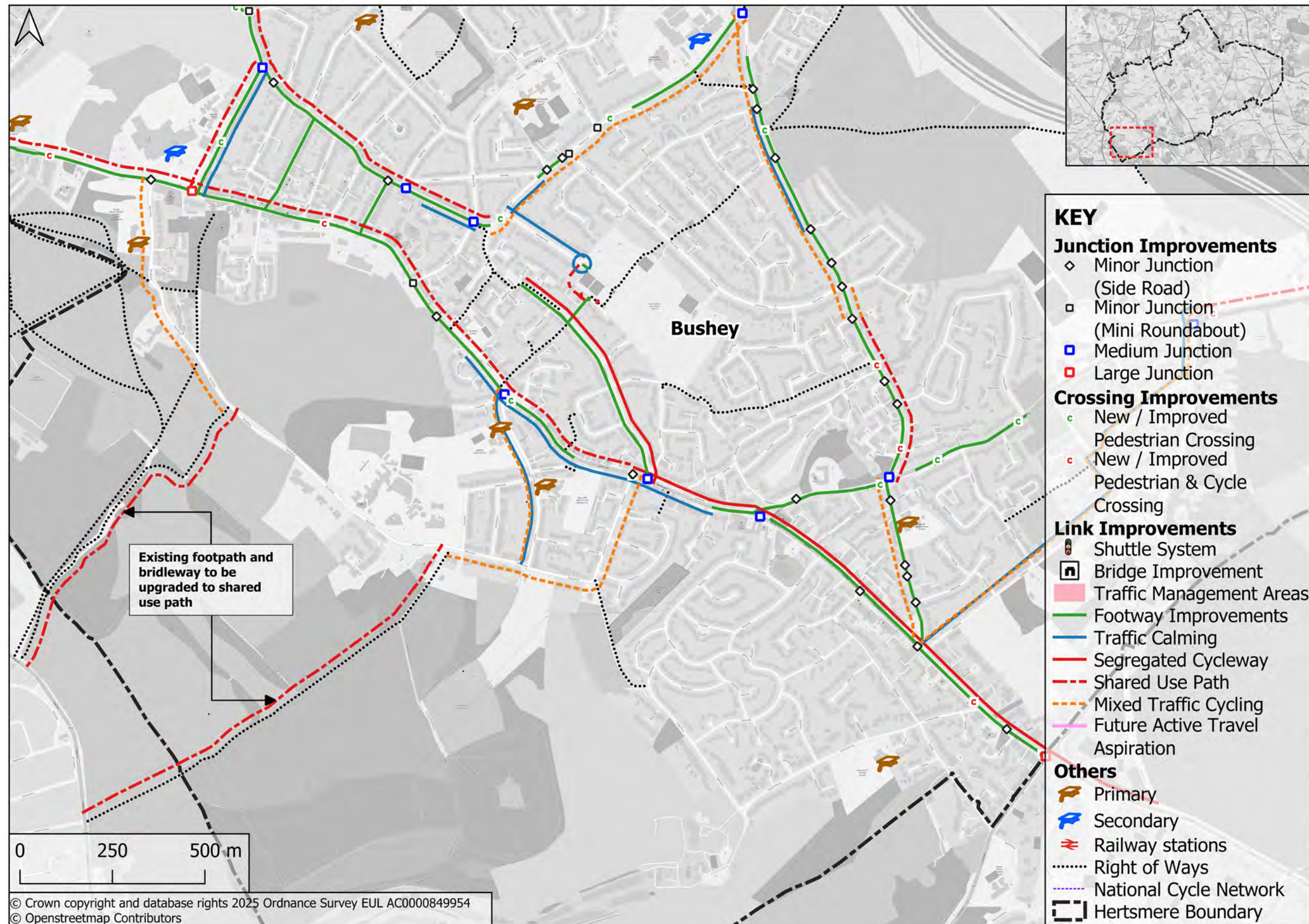


Figure H-8 – Bushey West Proposed Active Travel Improvements

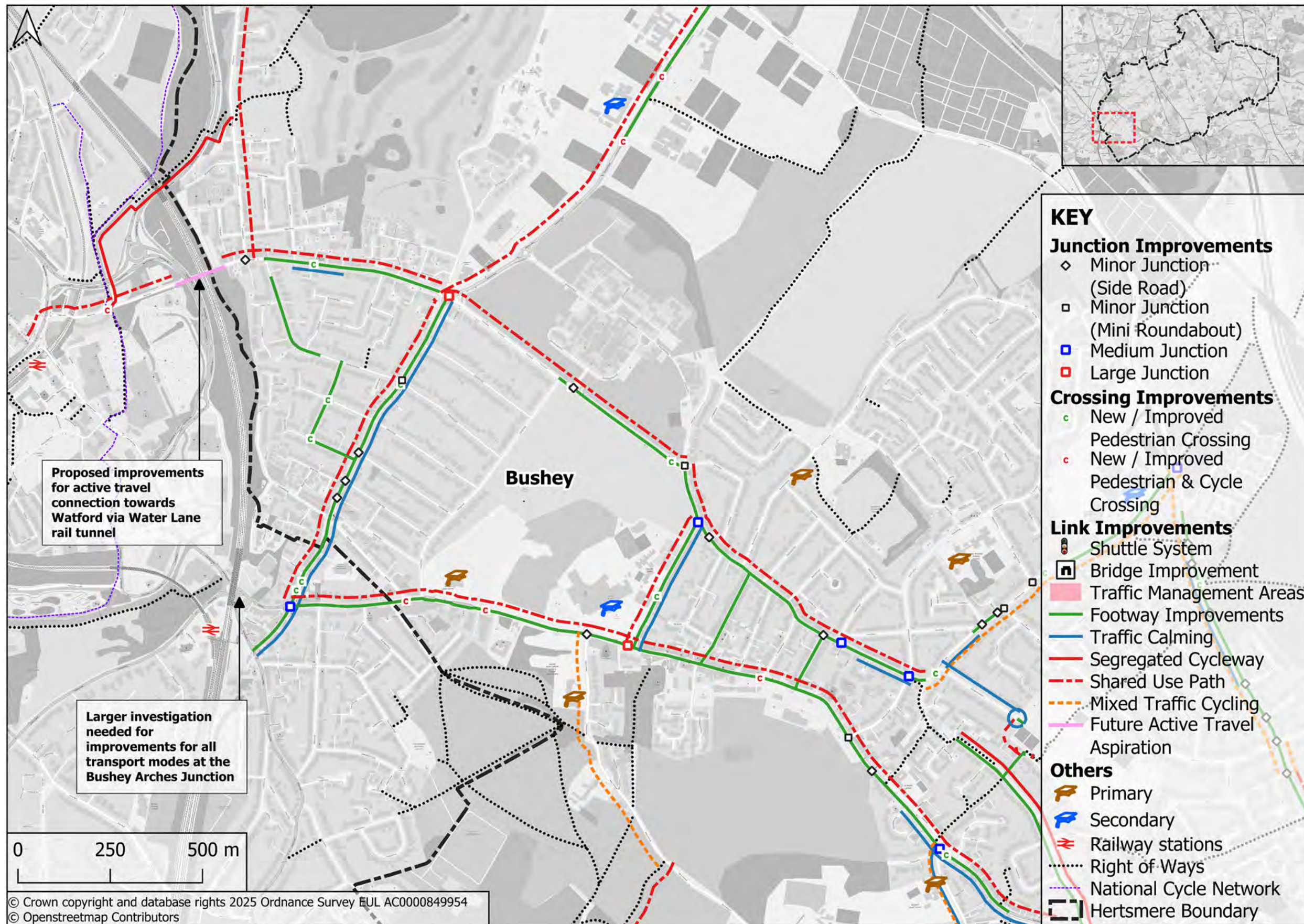


Figure H-9 – Potters Bar East Proposed Active Travel Improvements

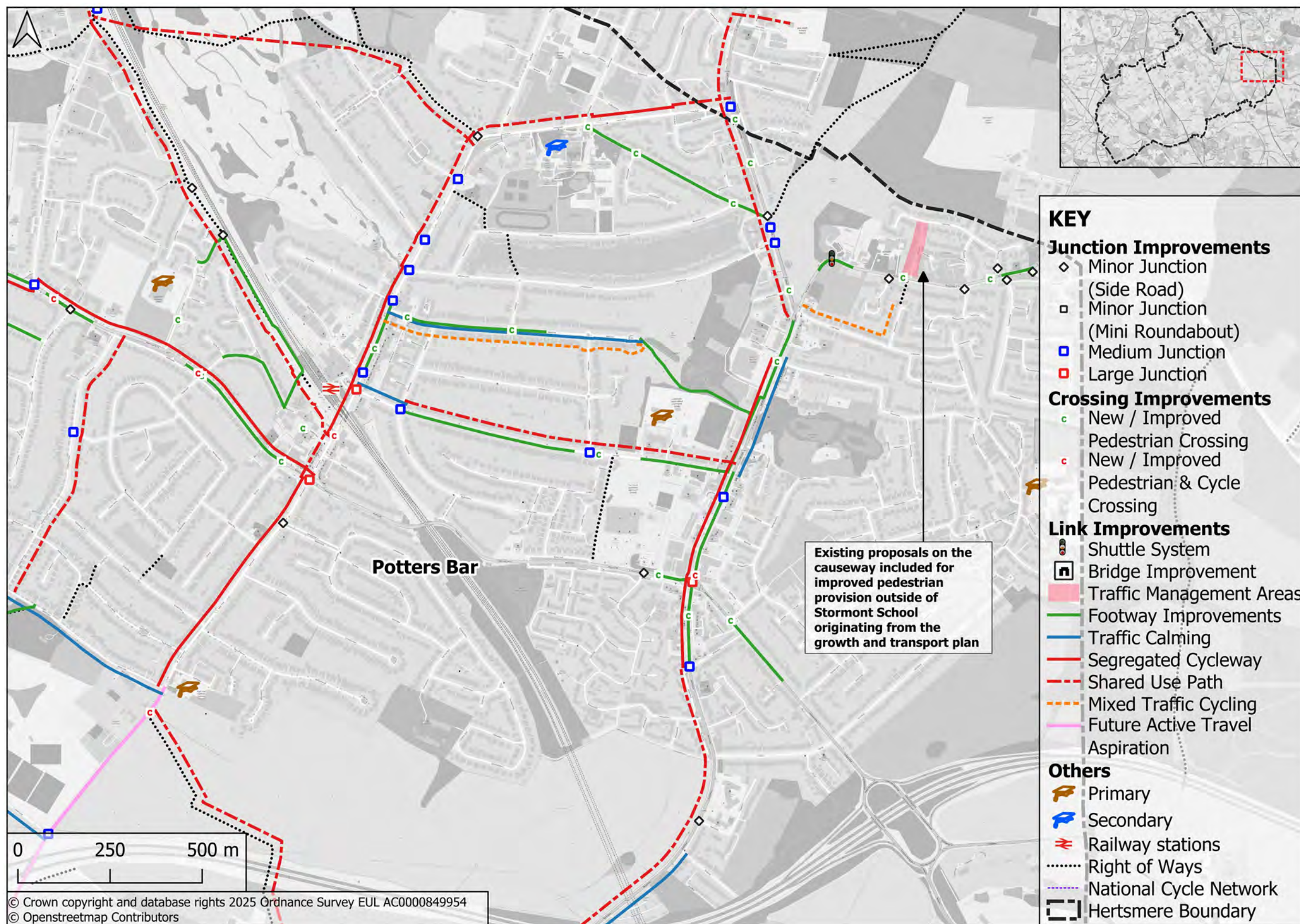


Figure H-10 – Potters Bar North Proposed Active Travel Improvements

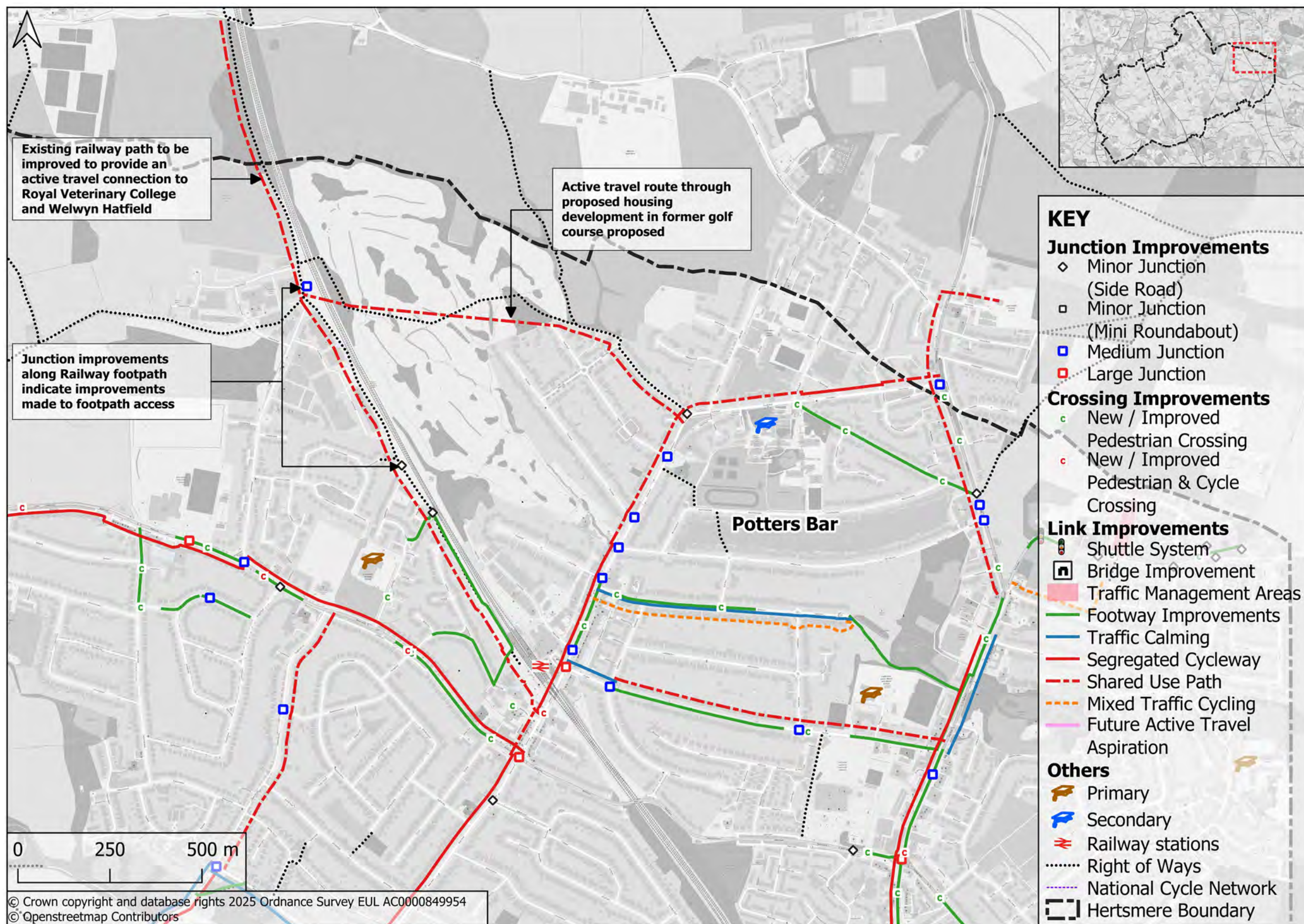


Figure H-11 – Potters Bar South Proposed Active Travel Improvements

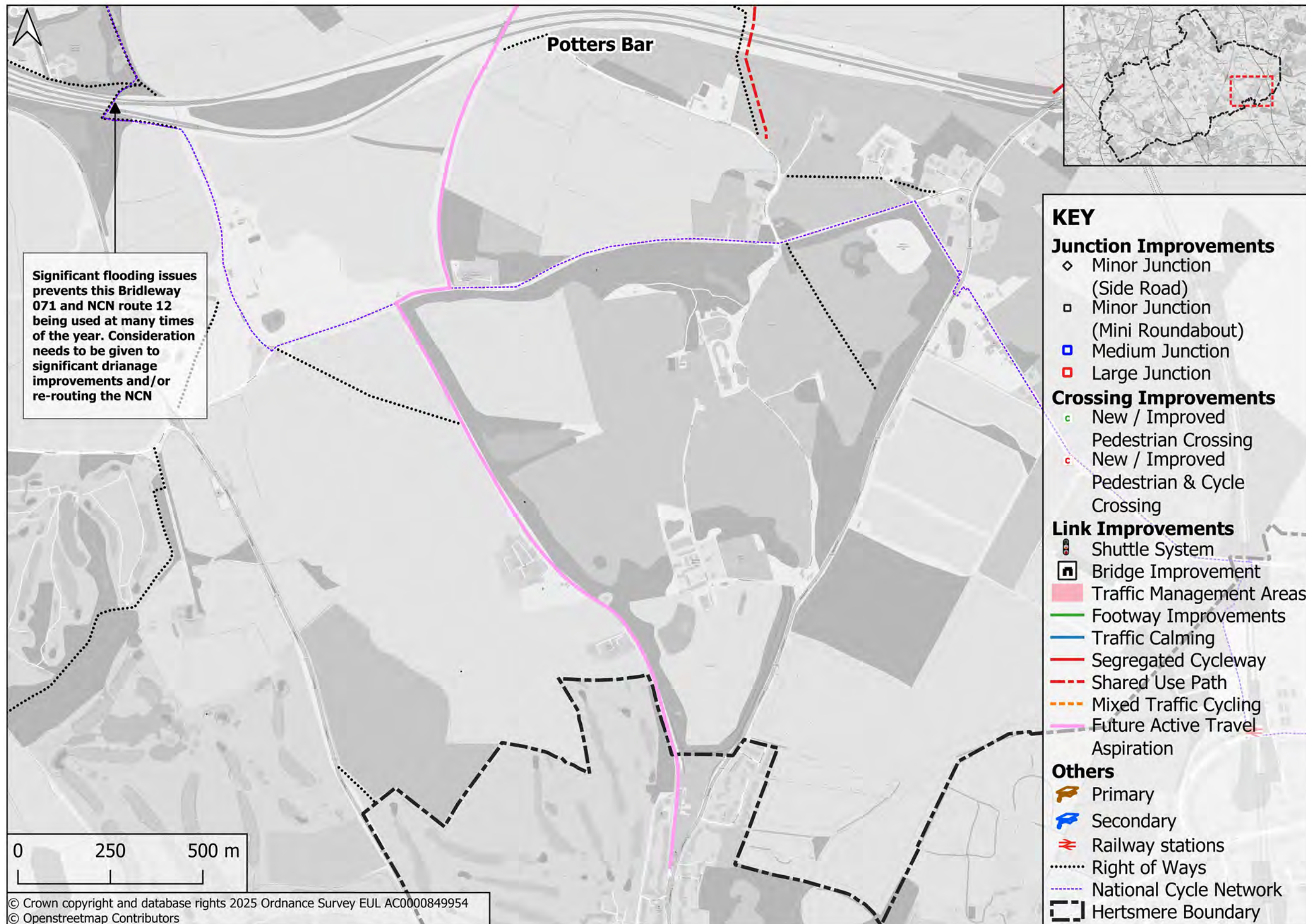


Figure H-12 – Potters Bar West Proposed Active Travel Improvements

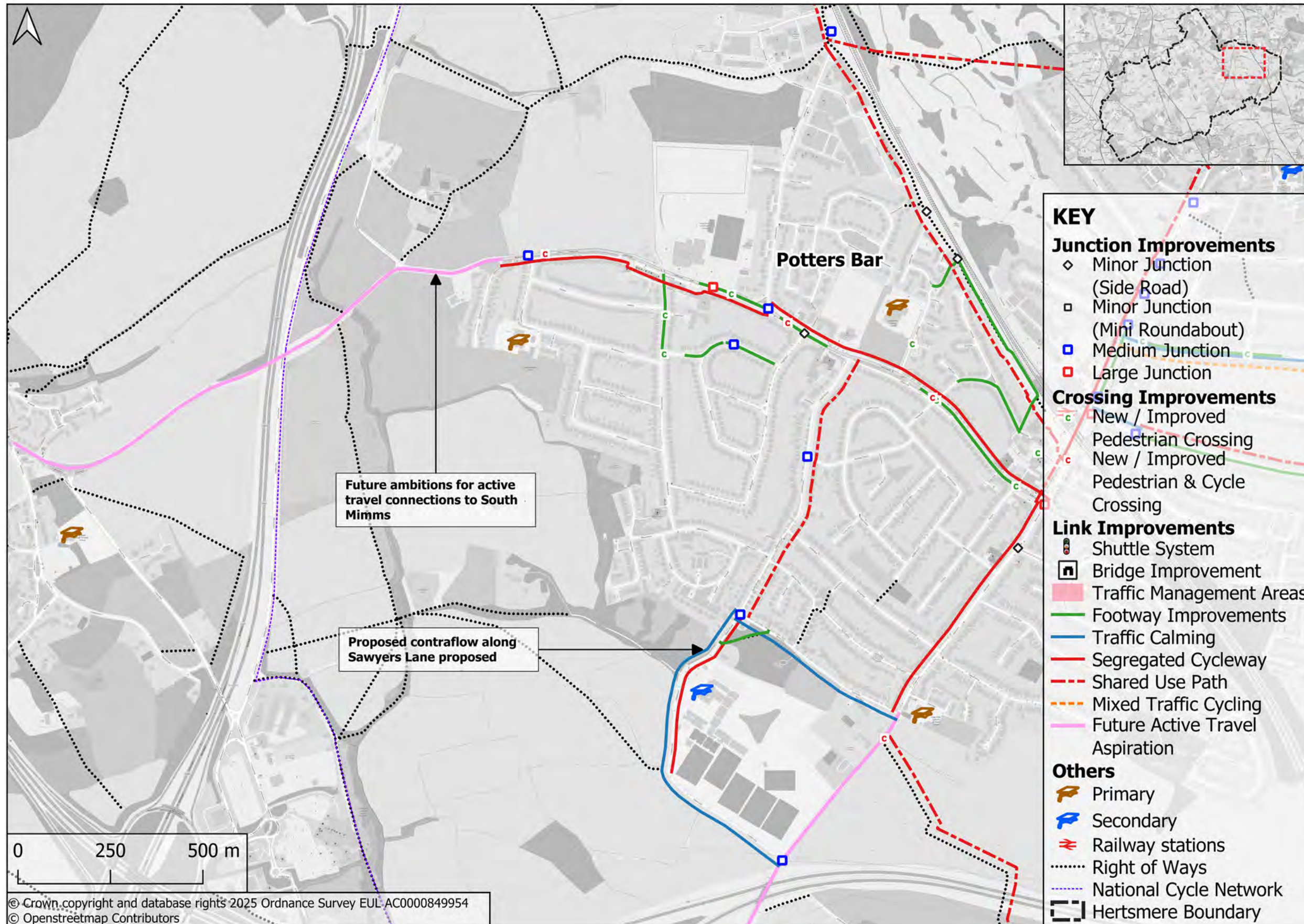


Figure H-13 – Radlett East Proposed Active Travel Improvements

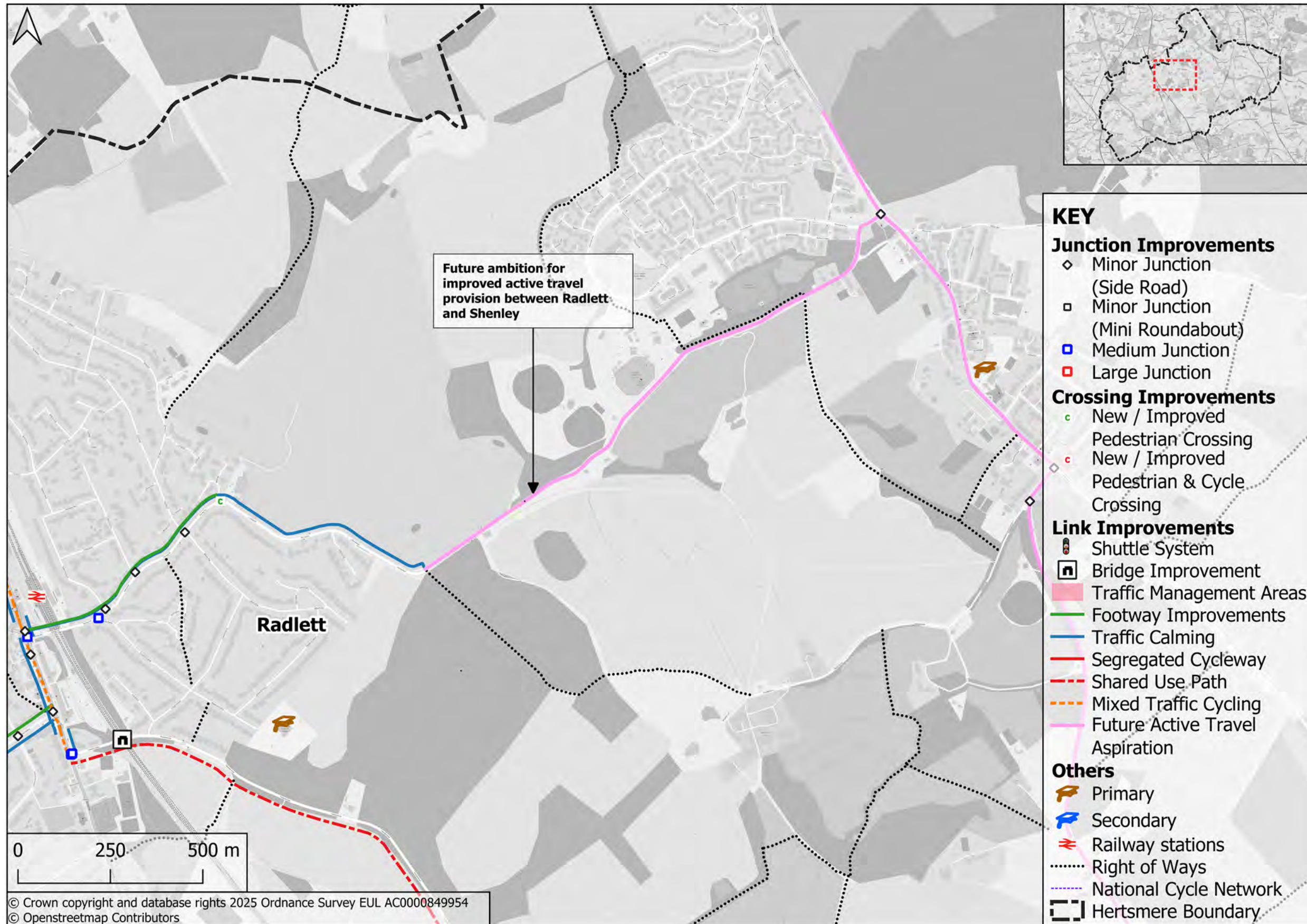


Figure H-14 – Radlett North Proposed Active Travel Improvements

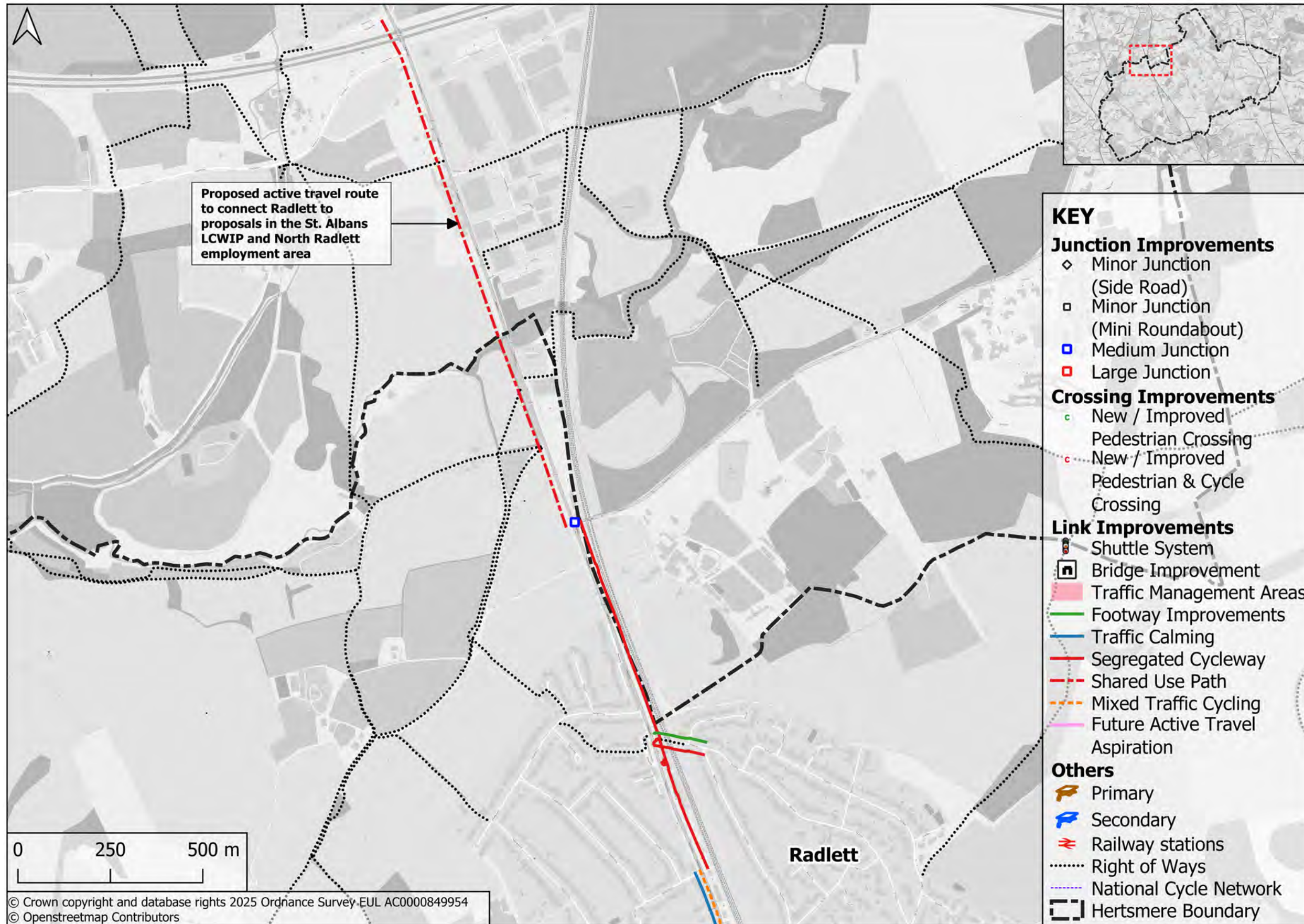


Figure H-15 – Radlett South Proposed Active Travel Improvements

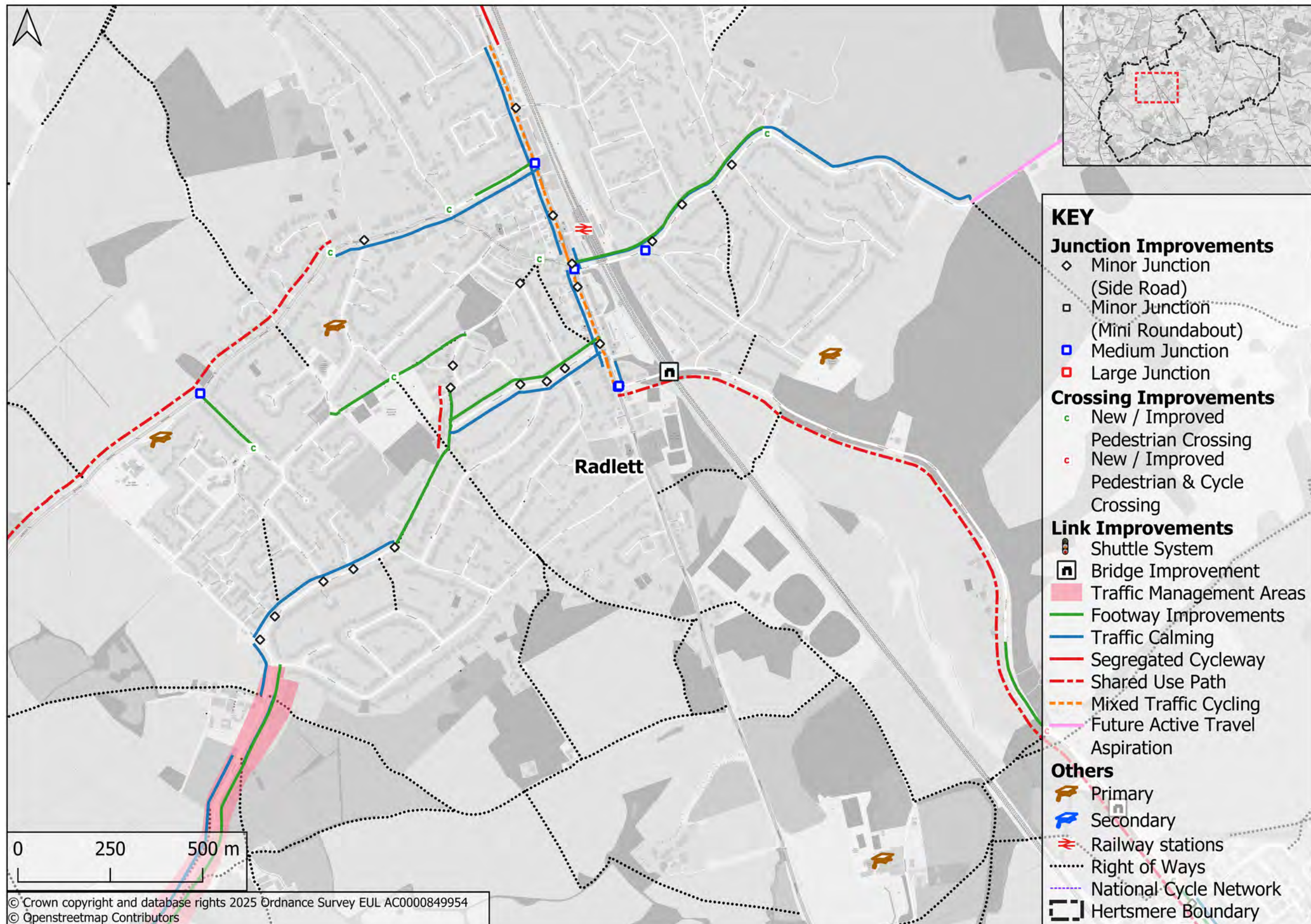
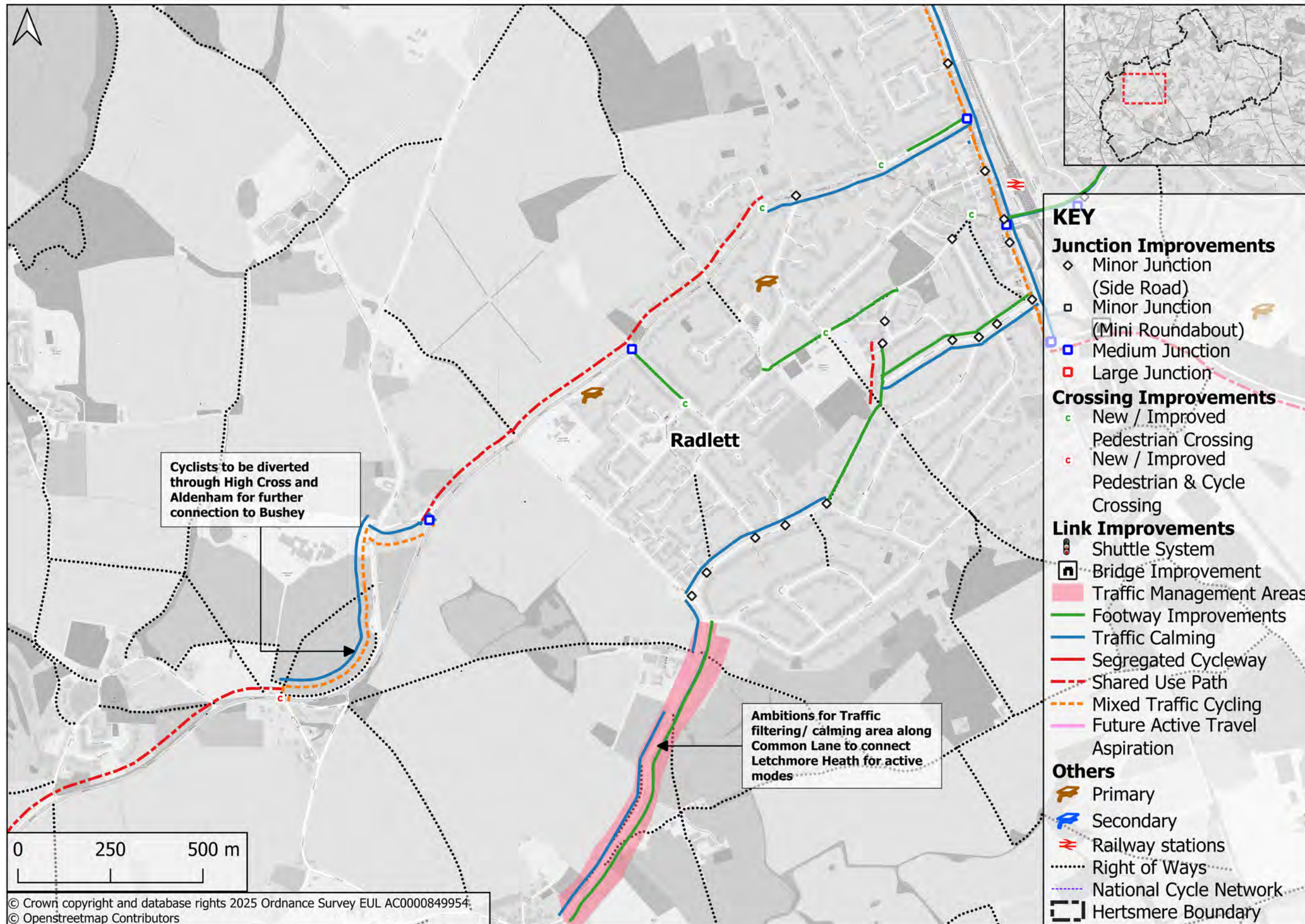


Figure H-16 – Radlett West Proposed Active Travel Improvements



Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX I – Prioritised Costed List of Infrastructure Improvements





Table I-1 : Prioritised Costed List of Infrastructure Improvements (All Settlements)

Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	2	2	3	1	1	10	5	15	Not applicable
Route / Infrastructure Group	Route Description	Walking / Cycling / Both	Estimated Total Cost*	Route Length (M)	Increase in walking & cycling trips based on GIS model	Infrastructure impact on active travel	Strategic Fit	Support for new housing	Access to jobs	LTN 1/20 compliance	Technical feasibility	Dependency	Desired outcomes	Technical deliverability	TOTAL	District Ranking
Bushey 15	Coldharbour Lane between King George Avenue and Little Bushey Lane	Cycling	£ 394,891	910	1	3	0	TBC	1	3	1	1	10	5	15	1
Potters Bar 8	Byng Drive between Darkes Lane and A1000 High Street (including path through Parkfield)	Walking	£ 748,753	1,056	1	3	1	TBC	2	2	1	1	11	4	15	1
Bushey 10	School Lane and Merry Hill Road (from Sparrows Herne to St. Margarets School)	Cycling	£ 235,609	1,264	1	1	1	TBC	1	3	1	1	9	5	14	3
Borehamwood 18	Leeming Road, Brook Road and Eldon Avenue	Cycling	£ 3,616,612	1,884	2	3	1	TBC	2	3	1	1	8	5	13	4
Potters Bar 6	A1000 Hatfield Road between School Road and B196 (The Causeway)	Walking	£ 2,330,450	931	2	2	1	TBC	1	3	0	0	9	3	12	5
Bushey 12	Water Lane and Bushey Hall Road (includes the Water Lane rail tunnel)	Both	£ 3,097,541	1,165	2	3	1	TBC	2	2	-1	1	10	2	12	5
Bushey 1	Aldenham Road between Bushey rail station and Bushey hall road along with route through Vernon Road and Bushey Grove Road	Both	£ 2,226,842	1,859	1	2	1	TBC	2	2	0	1	9	3	12	5
Borehamwood 1	Borehamwood High Street	Both	£ 2,066,363	1,440	2	3	1	TBC	2	3	0	1	8	4	12	5
Borehamwood 9	Elstree Way	Both	£ 7,523,989	898	2	3	1	TBC	2	3	0	1	8	4	12	5
Borehamwood 11	Path through Maxwell Park and King George playing field (including Bullhead Road)	Walking	£ 468,652	988	2	2	1	TBC	2	3	1	1	7	5	12	5
Borehamwood 14	Cardinal Avenue	Walking	£ 852,836	724	2	2	1	TBC	2	3	1	1	7	5	12	5



Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	2	2	3	1	1	10	5	15	Not applicable
Borehamwood 15	Stratfield Road along with pathway through Malden Road and Audley Close	Walking	£ 473,571	1,239	2	2	1	TBC	2	3	1	1	7	5	12	5
Borehamwood 20	Gateshead Road	Both	£ 3,487,953	1,428	2	3	1	TBC	1	3	1	1	7	5	12	5
Potters Bar 5	A1000 between The Causeway and M25 tunnel	Both	£ 5,751,705	2,527	2	3	1	TBC	2	3	0	1	8	4	12	5
Radlett 5	The Pathway and Loom Lane along with Letchmore Road	Both	£ 1,503,747	1,540	2	3	1	TBC	2	2	0	1	8	3	11	15
Potters Bar 7	Church Road and Quakers Lane	Both	£ 2,032,178	1,235	2	3	1	TBC	1	3	0	1	7	4	11	15
Borehamwood 16	Shenley Road and Cowley Hill along with Studio Way Woodland	Both	£ 3,587,276	2,426	2	3	1	TBC	1	3	0	1	7	4	11	15
Borehamwood 2	Theobald Street between Borehamwood and Radlett	Both	£ 11,955,347	4,293	1	3	1	TBC	2	3	0	1	7	4	11	15
Borehamwood 8	Furzehill Road and Barnet Road (along with rail station links)	Both	£ 11,810,780	2,744	2	3	1	TBC	2	2	0	1	8	3	11	15
Borehamwood 12	Hillside Avenue	Walking	£ 1,054,655	959	2	2	1	TBC	1	3	1	1	6	5	11	15
Borehamwood 19	Aycliffe Road	Walking	£ 1,625,728	1,006	2	2	1	TBC	1	3	1	1	6	5	11	15
Bushey 4	A411 between Central Bushey and Bushey rail station (including the Bushey rail viaduct)	Both	£ 5,983,875	2,005	2	3	1	TBC	2	2	0	1	8	3	11	15
Bushey 6	A4140 between Stanmore and central Bushey	Both	£ 4,641,439	2,645	2	3	1	TBC	1	3	0	1	7	4	11	15
Bushey 20	Colne Valley Cycle Route	Both	£ 909,517	745	2	2	1	TBC	2	3	0	1	7	4	11	15
Bushey 21	Bushey Mill Lane between Watford North station and Mill Way	Both	£ 1,909,792	1,251	1	3	1	TBC	2	3	0	1	7	4	11	15
Radlett 8	Watling Street between North Radlett and St. Albans	Both	£ 3,655,800	2,436	1	3	1	TBC	2	3	0	1	7	4	11	15
Potters Bar 2	Darkes Lane between Church Road and Potters Bar rail station car park	Walking	£ 4,889,891	881	2	3	1	TBC	2	3	0	0	8	3	11	15
Potters Bar 13	Dugdale Hill Lane	Both	£ 1,980,747	772	1	3	1	TBC	1	3	1	1	6	5	11	15



Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	2	2	3	1	1	10	5	15	Not applicable
Potters Bar 14	The Causeway, Oakmere Close and Cotton Road	Both	£ 1,067,198	1,055	1	2	1	TBC	1	1	1	1	8	3	11	15
Borehamwood 4	Allum Lane and Footpath 006	Both	£ 3,629,657	1,984	1	3	1	TBC	2	3	0	1	7	4	11	15
Radlett 2	Shenley Hill and Shenley Road (from Radlett High Street to footpath 55)	Both	£ 767,889	1,283	2	3	1	TBC	2	1	1	0	8	2	10	31
Borehamwood 5	Elstree Hill South and Elstree High Street	Cycling	£ 4,497,027	1,446	1	2	1	TBC	1	3	1	1	5	5	10	31
Borehamwood 10	Manor Way	Both	£ 3,042,801	1,429	1	2	1	TBC	2	3	0	1	6	4	10	31
Borehamwood 13	Route through Ripon Way, Nicoll Way, Balmoral Drive and Kenilworth Drive	Walking	£ 2,759,675	1,688	1	3	1	TBC	0	3	1	1	5	5	10	31
Bushey 2	Aldenham Road between Bushey Hall Road and Bushey Mill Lane	Both	£ 1,724,293	1,171	1	2	1	TBC	1	3	1	1	5	5	10	31
Bushey 16	The Rutts and Little Bushey Lane	Cycling	£ 2,324,135	1,833	1	3	0	TBC	0	2	0	1	7	3	10	31
Borehamwood 3	Hartforde Road	Walking	£ 530,085	1,210	1	2	1	TBC	1	3	1	1	5	5	10	31
Bushey 19	Greatham Road and Park Avenue, Along with Link Road and Orphanage Road to Watford	Both	£ 3,629,216	2,579	2	2	1	TBC	1	3	0	1	6	4	10	31
Bushey 22	Bushey Mill Lane between Mill Way and Little Bushey Lane	Both	£ 2,713,913	1,206	1	3	1	TBC	1	2	1	1	6	4	10	31
Radlett 1	Watling Street between Goodyers Avenue and Theobald Street	Walking	£ 435,285	985	2	2	1	TBC	2	1	1	1	7	3	10	31
Potters Bar 3	Darkes Lane and Baker Street	Both	£ 2,211,469	2,230	2	3	1	TBC	2	3	0	-1	8	2	10	31
Potters Bar 10	Mutton Lane and Cambridge Drive	Both	£ 7,492,548	2,614	1	3	1	TBC	1	3	0	1	6	4	10	31
Potters Bar 9	The Walk	Both	£ 2,836,077	1,051	1	2	1	TBC	2	3	-1	1	6	3	9	43
Bushey 3	Radlett Road between Bushey and Aldenham	Both	£ 3,036,772	1,964	1	2	1	TBC	1	3	0	1	5	4	9	43
Radlett 7	Watford Road along with High Cross through Aldenham	Both	£ 3,302,949	2,587	0	3	1	TBC	1	3	0	1	5	4	9	43
Bushey 5	A411 between Central Bushey and Sparrows Way	Walking	£ 2,213,835	1,109	2	2	1	TBC	1	2	0	1	6	3	9	43



Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	2	2	3	1	1	10	5	15	Not applicable
Bushey 8	Merry Hill Road between A411 and Merry Hill Greenway	Both	£ 30,000	675	1	1	1	TBC	1	3	1	1	4	5	9	43
Bushey 9	Merry Hill Greenway	Both	£ 1,176,694	977	1	1	1	TBC	0	2	1	0	6	3	9	43
Bushey 11	Footpath 025	Both	£ 1,494,847	1,246	1	1	1	TBC	0	2	1	0	6	3	9	43
Bushey 13	Herkomer Road and The Avenue	Both	£ 4,234,020	1,680	2	3	1	TBC	0	2	0	1	6	3	9	43
Bushey 18	Elstree Road between Bushey High street and Heathbourne Road	Walking	£ 887,838	1,318	2	2	1	TBC	1	1	1	1	6	3	9	43
Radlett 4	Scrubitts Park Road, Gills Hill Lane and Willow Way	Walking	£ 412,031	1,592	2	2	1	TBC	2	0	1	1	7	2	9	43
Potters Bar 12	SanTERS Lane and Sawyers Lane	Both	£ 1,853,043	1,373	1	2	1	TBC	1	3	0	1	5	4	9	43
Borehamwood 6	Watford Road and Elstree Road (from Elstree to the A41 Roundabout)	Cycling	£ 3,520,525	1,536	1	2	1	TBC	1	3	1	-1	5	3	8	54
Bushey 7	Connections between Herkoner Road and Bushey High Street (Falconer Road, Rudolph Road and Koh-I-Noor Avenue)	Walking	£ 819,621	828	1	1	1	TBC	1	2	1	1	4	4	8	54
Bushey 14	Ashfield Avenue, Perry Mead and King George Avenue	Cycling	£ 2,435,836	1,112	1	3	0	TBC	0	3	0	1	4	4	8	54
Potters Bar 1	Footpath 008, 009 and 080 along with Laurel Avenue and Laurel Fields	Both	£ 2,881,303	813	2	3	1	TBC	2	2	-1	-1	8	0	8	54
Borehamwood 7	Barnet Lane between Elstree and Deacons Hill Road	Cycling	£ 1,129,377	1,452	1	1	0	TBC	0	3	1	1	2	5	7	58
Bushey 17	Windmill Lane, Magnaville Road and Elstree Road up to the A41 roundabout	Walking	£ 1,849,907	1,986	1	2	1	TBC	0	2	0	1	4	3	7	58
Radlett 6	Common Lane between Letchmore Heath and Loom Lane	Cycling	£ 574,032	1,229	2	3	1	TBC	0	0	1	0	6	1	7	58
Borehamwood 17	B5378 between Borehamwood and Shenley	Cycling	£ 90,000	2,340	1	1	0	TBC	1	0	1	1	3	2	5	61
Potters Bar 15	Proposed route through former Potters Bar Golf Club	Cycling	£ 1,924,434	1,172	1	1	1	TBC	1	2	0	-1	4	1	5	61



Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	2	2	3	1	1	10	5	15	Not applicable
Radlett 3	Shenley Lane between Shenley and Footpath 055	Cycling	£ -	1,612	1	3	0	TBC	0	0	1	-1	4	0	4	63
Potters Bar 4	Baker Street and Kitts End Road connection towards Barnet	Cycling	£ -	2,739	2	3	1	TBC	0	0	0	-1	5	-1	4	63
Potters Bar 11	Cecil Road between Potters Bar and South Mimms	Cycling	£ -	1,222	0	0	1	TBC	1	0	0	1	3	1	4	63

*Total costs are high level approximations based on typical infrastructure unit rates - Doesn't include additional costs relating to inflation, STATS and uplifts



Table I-2 : Prioritised Costed List of Infrastructure Improvements (Borehamwood)

Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	Not applicable	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	Not applicable	2	3	1	1	10	5	15	Not applicable
Route / Infrastructure Group	Route Description	Walking / Cycling / Both	Estimated Total Cost*	Route Length (M)	Increase in walking & cycling trips based on GIS model	Infrastructure impact on active travel	Strategic Fit	Support for new housing	Access to jobs	LTN 1/20 compliance	Technical feasibility	Dependency	Desired outcomes	Technical deliverability	TOTAL	District Ranking
Borehamwood 18	Leeming Road, Brook Road and Eldon Avenue	Cycling	£ 3,616,612	1,884	2	3	1	TBC	2	3	1	1	8	5	13	4
Borehamwood 1	Borehamwood High Street	Both	£ 2,066,363	1,440	2	3	1	TBC	2	3	0	1	8	4	12	5
Borehamwood 9	Elstree Way	Both	£ 7,523,989	898	2	3	1	TBC	2	3	0	1	8	4	12	5
Borehamwood 11	Path through Maxwell Park and King George playing field (including Bullhead Road)	Walking	£ 468,652	988	2	2	1	TBC	2	3	1	1	7	5	12	5
Borehamwood 14	Cardinal Avenue	Walking	£ 852,836	724	2	2	1	TBC	2	3	1	1	7	5	12	5
Borehamwood 15	Stratfield Road along with pathway through Malden Road and Audley Close	Walking	£ 473,571	1,239	2	2	1	TBC	2	3	1	1	7	5	12	5
Borehamwood 20	Gateshead Road	Both	£ 3,487,953	1,428	2	3	1	TBC	1	3	1	1	7	5	12	5
Borehamwood 16	Shenley Road and Cowley Hill along with Studio Way Woodland	Both	£ 3,587,276	2,426	2	3	1	TBC	1	3	0	1	7	4	11	15
Borehamwood 2	Theobald Street between Borehamwood and Radlett	Both	£ 11,955,347	4,293	1	3	1	TBC	2	3	0	1	7	4	11	15
Borehamwood 8	Furzehill Road and Barnet Road (along with rail station links)	Both	£ 11,810,780	2,744	2	3	1	TBC	2	2	0	1	8	3	11	15
Borehamwood 12	Hillside Avenue	Walking	£ 1,054,655	959	2	2	1	TBC	1	3	1	1	6	5	11	15
Borehamwood 19	Aycliffe Road	Walking	£ 1,625,728	1,006	2	2	1	TBC	1	3	1	1	6	5	11	15
Borehamwood 4	Allum Lane and Footpath 006	Both	£ 3,629,657	1,984	1	3	1	TBC	2	3	0	1	7	4	11	15
Borehamwood 5	Elstree Hill South and Elstree High Street	Cycling	£ 4,497,027	1,446	1	2	1	TBC	1	3	1	1	5	5	10	31
Borehamwood 10	Manor Way	Both	£ 3,042,801	1,429	1	2	1	TBC	2	3	0	1	6	4	10	31



Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	Not applicable	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	Not applicable	2	3	1	1	10	5	15	Not applicable
Borehamwood 13	Route through Ripon Way, Nicoll Way, Balmoral Drive and Kenilworth Drive	Walking	£ 2,759,675	1,688	1	3	1	TBC	0	3	1	1	5	5	10	31
Borehamwood 3	Hartforde Road	Walking	£ 530,085	1,210	1	2	1	TBC	1	3	1	1	5	5	10	31
Borehamwood 6	Watford Road and Elstree Road (from Elstree to the A41 Roundabout)	Cycling	£ 3,520,525	1,536	1	2	1	TBC	1	3	1	-1	5	3	8	54
Borehamwood 7	Barnet Lane between Elstree and Deacons Hill Road	Cycling	£ 1,129,377	1,452	1	1	0	TBC	0	3	1	1	2	5	7	58
Borehamwood 17	B5378 between Borehamwood and Shenley	Cycling	£ 90,000	2,340	1	1	0	TBC	1	0	1	1	3	2	5	61

*Total costs are high level approximations based on typical infrastructure unit rates - Doesn't include additional costs relating to inflation, STATS and uplifts



Table I-3 : Prioritised Costed List of Infrastructure Improvements (Bushey)

Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	Not applicable	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	Not applicable	2	3	1	1	10	5	15	Not applicable
Route / Infrastructure Group	Route Description	Walking / Cycling / Both	Estimated Total Cost*	Route Length (M)	Increase in walking & cycling trips based on GIS model	Infrastructure impact on active travel	Strategic Fit	Support for new housing	Access to jobs	LTN 1/20 compliance	Technical feasibility	Dependency	Desired outcomes	Technical deliverability	TOTAL	District Ranking
Bushey 15	Coldharbour Lane between King George Avenue and Little Bushey Lane	Cycling	£ 394,891	910	1	3	0	TBC	1	3	1	1	10	5	15	1
Bushey 10	School Lane and Merry Hill Road (from Sparrows Herne to St. Margarets School)	Cycling	£ 235,609	1,264	1	1	1	TBC	1	3	1	1	9	5	14	3
Bushey 12	Water Lane and Bushey Hall Road (includes the Water Lane rail tunnel)	Both	£ 3,097,541	1,165	2	3	1	TBC	2	2	-1	1	10	2	12	5
Bushey 1	Aldenham Road between Bushey rail station and Bushey hall road along with route through Vernon Road and Bushey Grove Road	Both	£ 2,226,842	1,859	1	2	1	TBC	2	2	0	1	9	3	12	5
Bushey 4	A411 between Central Bushey and Bushey rail station (including the Bushey rail viaduct)	Both	£ 5,983,875	2,005	2	3	1	TBC	2	2	0	1	8	3	11	15
Bushey 6	A4140 between Stanmore and central Bushey	Both	£ 4,641,439	2,645	2	3	1	TBC	1	3	0	1	7	4	11	15
Bushey 20	Colne Valley Cycle Route	Both	£ 909,517	745	2	2	1	TBC	2	3	0	1	7	4	11	15
Bushey 21	Bushey Mill Lane between Watford North station and Mill Way	Both	£ 1,909,792	1,251	1	3	1	TBC	2	3	0	1	7	4	11	15
Bushey 2	Aldenham Road between Bushey Hall Road and Bushey Mill Lane	Both	£ 1,724,293	1,171	1	2	1	TBC	1	3	1	1	5	5	10	31
Bushey 16	The Rutts and Little Bushey Lane	Cycling	£ 2,324,135	1,833	1	3	0	TBC	0	2	0	1	7	3	10	31
Bushey 19	Greatham Road and Park Avenue, Along with Link Road and Orphanage Road to Watford	Both	£ 3,629,216	2,579	2	2	1	TBC	1	3	0	1	6	4	10	31
Bushey 22	Bushey Mill Lane between Mill Way and Little Bushey Lane	Both	£ 2,713,913	1,206	1	3	1	TBC	1	2	1	1	6	4	10	31
Bushey 3	Radlett Road between Bushey and Aldenham	Both	£ 3,036,772	1,964	1	2	1	TBC	1	3	0	1	5	4	9	43



Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	Not applicable	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	Not applicable	2	3	1	1	10	5	15	Not applicable
Bushey 5	A411 between Central Bushey and Sparrows Way	Walking	£ 2,213,835	1,109	2	2	1	TBC	1	2	0	1	6	3	9	43
Bushey 8	Merry Hill Road between A411 and Merry Hill Greenway	Both	£ 30,000	675	1	1	1	TBC	1	3	1	1	4	5	9	43
Bushey 9	Merry Hill Greenway	Both	£ 1,176,694	977	1	1	1	TBC	0	2	1	0	6	3	9	43
Bushey 11	Footpath 025	Both	£ 1,494,847	1,246	1	1	1	TBC	0	2	1	0	6	3	9	43
Bushey 13	Herkomer Road and The Avenue	Both	£ 4,234,020	1,680	2	3	1	TBC	0	2	0	1	6	3	9	43
Bushey 18	Elstree Road between Bushey High street and Heathbourne Road	Walking	£ 887,838	1,318	2	2	1	TBC	1	1	1	1	6	3	9	43
Bushey 7	Connections between Herkoner Road and Bushey High Street (Falconer Road, Rudolph Road and Koh-I-Noor Avenue)	Walking	£ 819,621	828	1	1	1	TBC	1	2	1	1	4	4	8	54
Bushey 14	Ashfield Avenue, Perry Mead and King George Avenue	Cycling	£ 2,435,836	1,112	1	3	0	TBC	0	3	0	1	4	4	8	54
Bushey 17	Windmill Lane, Magnaville Road and Elstree Road up to the A41 roundabout	Walking	£ 1,849,907	1,986	1	2	1	TBC	0	2	0	1	4	3	7	58

*Total costs are high level approximations based on typical infrastructure unit rates - Doesn't include additional costs relating to inflation, STATS and uplifts



Table I-4 : Prioritised Costed List of Infrastructure Improvements Potters Bar)

Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	2	2	3	1	1	10	5	15	Not applicable
Route / Infrastructure Group	Route Description	Walking / Cycling / Both	Estimated Total Cost*	Route Length (M)	Increase in walking & cycling trips based on GIS model	Infrastructure impact on active travel	Strategic Fit	Support for new housing	Access to jobs	LTN 1/20 compliance	Technical feasibility	Dependency	Desired outcomes	Technical deliverability	TOTAL	District Ranking
Potters Bar 8	Byng Drive between Darkes Lane and A1000 High Street (including path through Parkfield)	Walking	£ 748,753	1,056	1	3	1	TBC	2	2	1	1	11	4	15	1
Potters Bar 6	A1000 Hatfield Road between School Road and B196 (The Causeway)	Walking	£ 2,330,450	931	2	2	1	TBC	1	3	0	0	9	3	12	5
Potters Bar 5	A1000 between The Causeway and M25 tunnel	Both	£ 5,751,705	2,527	2	3	1	TBC	2	3	0	1	8	4	12	5
Potters Bar 7	Church Road and Quakers Lane	Both	£ 2,032,178	1,235	2	3	1	TBC	1	3	0	1	7	4	11	15
Potters Bar 2	Darkes Lane between Church Road and Potters Bar rail station car park	Walking	£ 4,889,891	881	2	3	1	TBC	2	3	0	0	8	3	11	15
Potters Bar 13	Dugdale Hill Lane	Both	£ 1,980,747	772	1	3	1	TBC	1	3	1	1	6	5	11	15
Potters Bar 14	The Causeway, Oakmere Close and Cotton Road	Both	£ 1,067,198	1,055	1	2	1	TBC	1	1	1	1	8	3	11	15
Potters Bar 3	Darkes Lane and Baker Street	Both	£ 2,211,469	2,230	2	3	1	TBC	2	3	0	-1	8	2	10	31
Potters Bar 10	Mutton Lane and Cambridge Drive	Both	£ 7,492,548	2,614	1	3	1	TBC	1	3	0	1	6	4	10	31
Potters Bar 9	The Walk	Both	£ 2,836,077	1,051	1	2	1	TBC	2	3	-1	1	6	3	9	43
Potters Bar 12	SanTERS Lane and Sawyers Lane	Both	£ 1,853,043	1,373	1	2	1	TBC	1	3	0	1	5	4	9	43
Potters Bar 1	Footpath 008, 009 and 080 along with Laurel Avenue and Laurel Fields	Both	£ 2,881,303	813	2	3	1	TBC	2	2	-1	-1	8	0	8	54
Potters Bar 15	Proposed route through former Potters Bar Golf Club	Cycling	£ 1,924,434	1,172	1	1	1	TBC	1	2	0	-1	4	1	5	61
Potters Bar 4	Baker Street and Kitts End Road connection towards Barnet	Cycling	£ -	2,739	2	3	1	TBC	0	0	0	-1	5	-1	4	63



Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	2	2	3	1	1	10	5	15	Not applicable
Potters Bar 11	Cecil Road between Potters Bar and South Mimms	Cycling	£ -	1,222	0	0	1	TBC	1	0	0	1	3	1	4	63

*Total costs are high level approximations based on typical infrastructure unit rates - Doesn't include additional costs relating to inflation, STATS and uplifts

Table I-5: Prioritised Costed List of Infrastructure Improvements (Radlett)

Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Desired outcomes	Technical deliverability	Technical deliverability	Technical deliverability	Summary scores	Summary scores	Summary scores	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6	Not applicable
Not applicable	Not applicable	Not applicable	Not applicable	Maximum Score:	2	3	1	2	2	3	1	1	10	5	15	Not applicable
Route / Infrastructure Group	Route Description	Walking / Cycling / Both	Estimated Total Cost*	Route Length (M)	Increase in walking & cycling trips based on GIS model	Infrastructure impact on active travel	Strategic Fit	Support for new housing	Access to jobs	LTN 1/20 compliance	Technical feasibility	Dependency	Desired outcomes	Technical deliverability	TOTAL	District Ranking
Radlett 5	The Pathway and Loom Lane along with Letchmore Road	Both	£ 1,503,747	1,540	2	3	1	TBC	2	2	0	1	8	3	11	15
Radlett 8	Watling Street between North Radlett and St. Albans	Both	£ 3,655,800	2,436	1	3	1	TBC	2	3	0	1	7	4	11	15
Radlett 2	Shenley Hill and Shenley Road (from Radlett High Street to footpath 55)	Both	£ 767,889	1,283	2	3	1	TBC	2	1	1	0	8	2	10	31
Radlett 1	Watling Street between Goodyers Avenue and Theobald Street	Walking	£ 435,285	985	2	2	1	TBC	2	1	1	1	7	3	10	31
Radlett 7	Watford Road along with High Cross through Aldenham	Both	£ 3,302,949	2,587	0	3	1	TBC	1	3	0	1	5	4	9	43
Radlett 4	Scrubitts Park Road, Gills Hill Lane and Willow Way	Walking	£ 412,031	1,592	2	2	1	TBC	2	0	1	1	7	2	9	43
Radlett 6	Common Lane between Letchmore Heath and Loom Lane	Cycling	£ 574,032	1,229	2	3	1	TBC	0	0	1	0	6	1	7	58
Radlett 3	Shenley Lane between Shenley and Footpath 055	Cycling	£ -	1,612	1	3	0	TBC	0	0	1	-1	4	0	4	63

*Total costs are high level approximations based on typical infrastructure unit rates - Doesn't include additional costs relating to inflation, STATS and uplifts

Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX J – Key of Prioritised Route Plans



Figure J-1 – Hertsmere Priority Route Overview Map

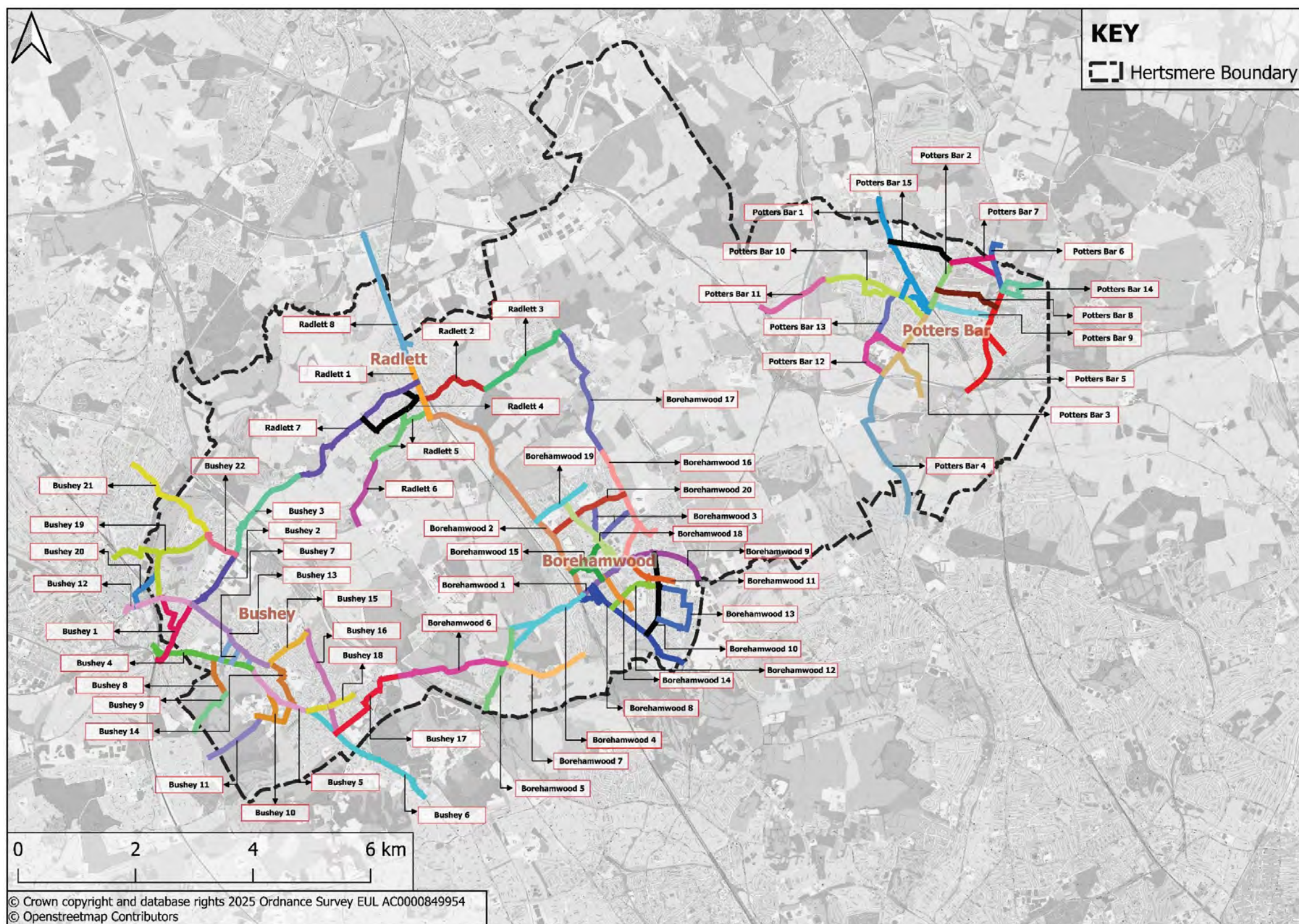


Figure J-2 – Borehamwood Priority Route Overview Map

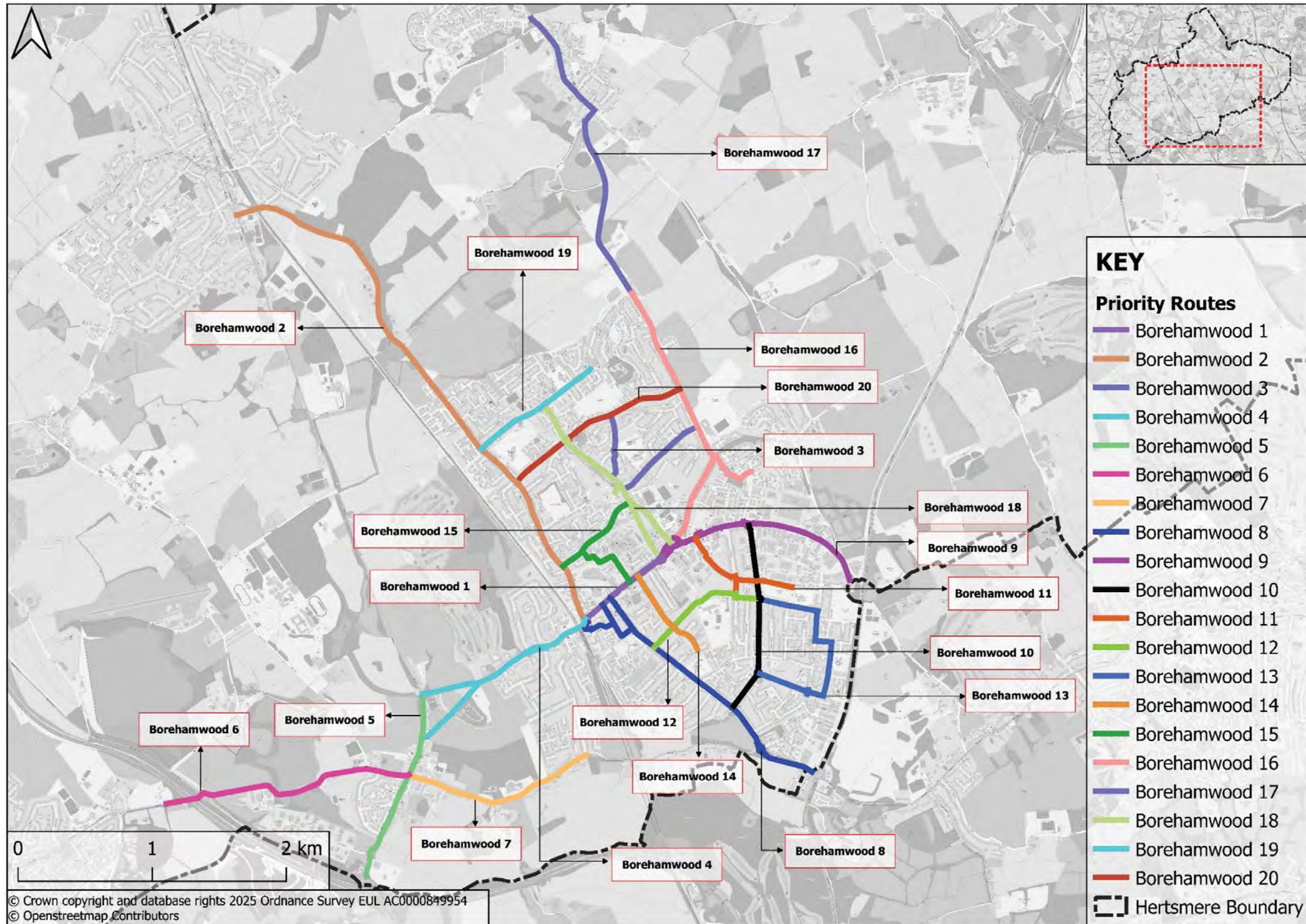


Figure J-3 – Bushey Priority Route Overview Map

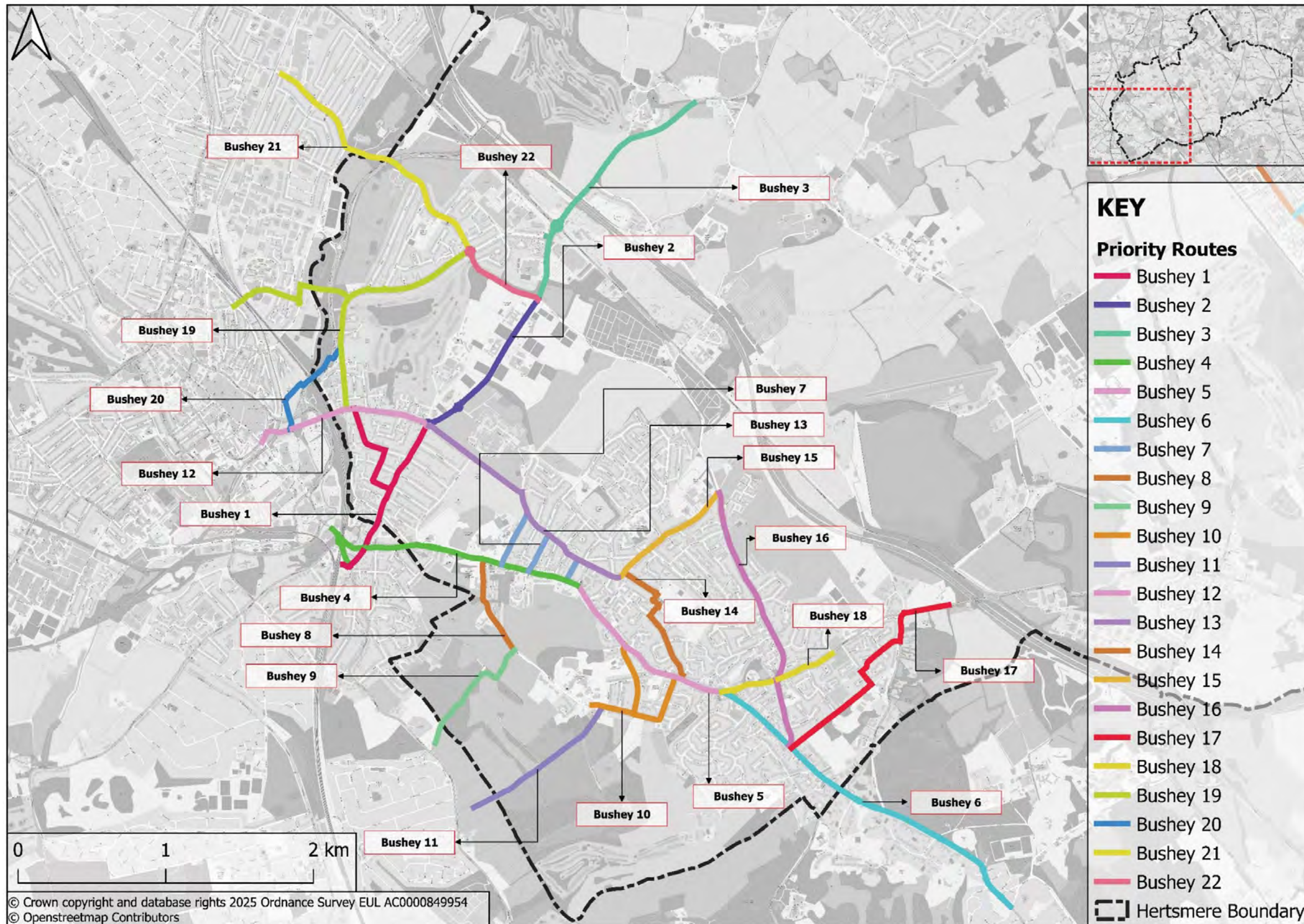


Figure J-4 – Potters Bar Priority Route Overview Map

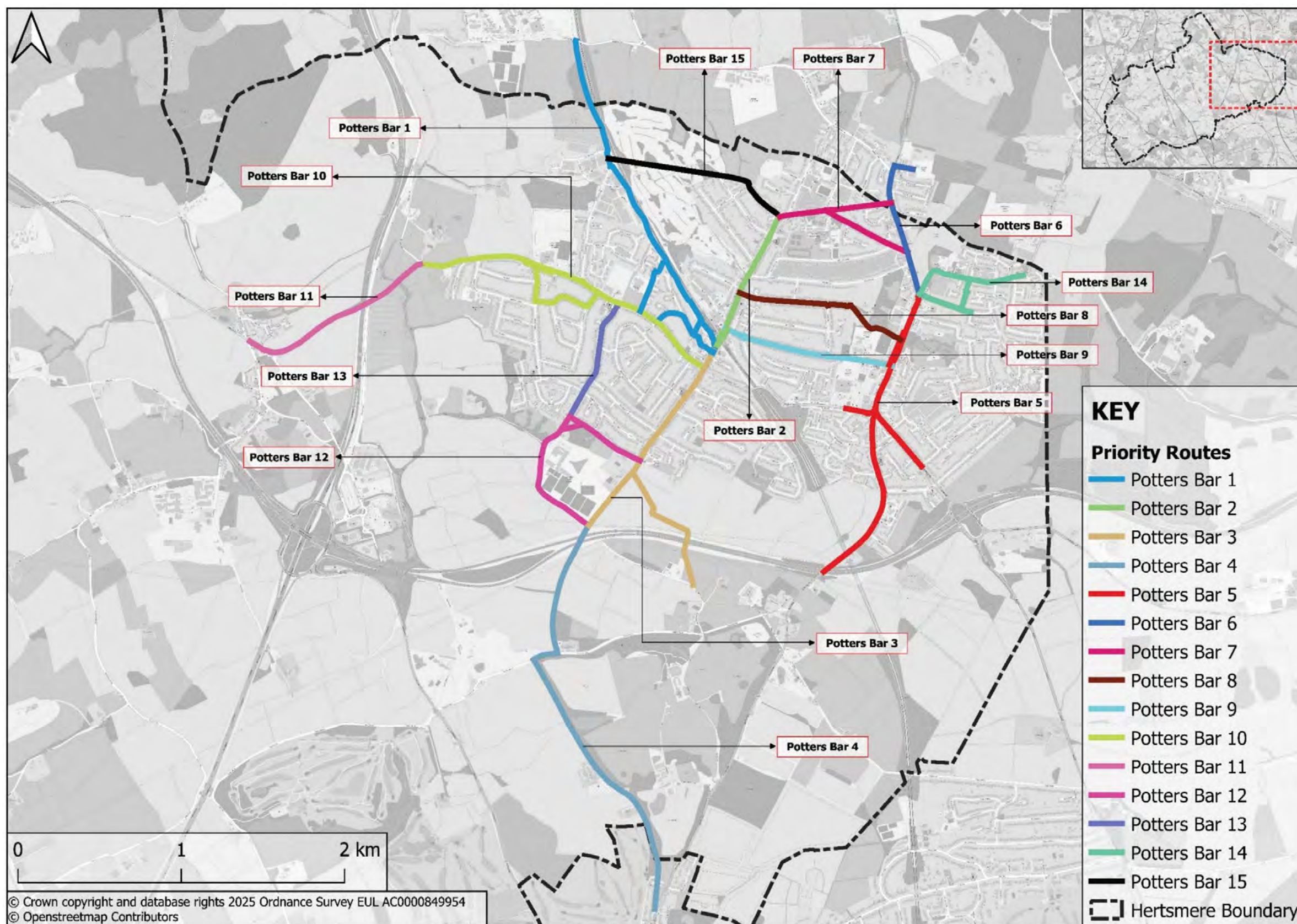
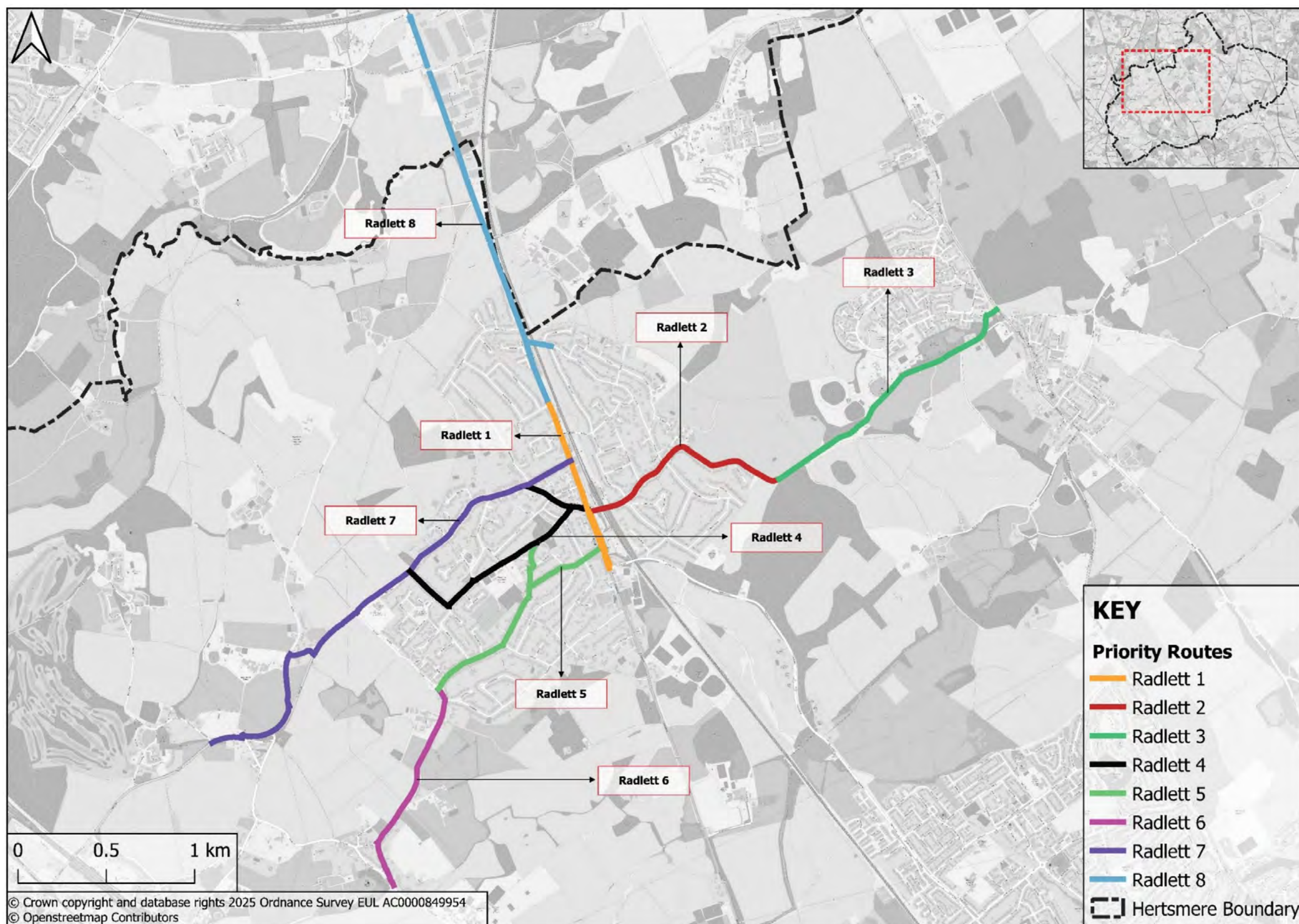


Figure J-5 – Radlett Priority Route Overview Map





Hertsmere Local Cycling and Walking Infrastructure Plan

APPENDIX K – Glossary of Acronyms



Appendix K – Glossary of Acronyms

This table lists the acronyms in alphabetical order used throughout the LCWIP and provides their full definitions

Table 1: Glossary of Acronyms

Acronym	Definition
BOAT	Byway Open to All Traffic
CWIS2	Cycling and Walking Investment Strategy Two
CWZ	Core Walking Zone
ECML	East Coast Main Line (Railway)
HBC	Hertsmere Borough Council
DfT	Department for Transport
GHG	Greenhouse Gas
GIS	Geographic Information System
HCC	Hertfordshire County Council
IDP	(Draft) Infrastructure Delivery Plan (published by WHBC)
IMD	Indices of Multiple Deprivation
LCWIP	Local Cycling and Walking Infrastructure Plan
LTN 1/20	Local Transport Note 1/20 (Cycle Infrastructure Design)
LTP4	Local Transport Plan 4 (published by HCC)
MCAT	Multi-Criteria Appraisal Tool
MML	Midlands Main Line (Railway)
NCN	National Cycle Network
PCT	Propensity to Cycle Tool
PROW	Public Rights of Way
ROW	Rights of Way
RST	Route Selection Tool (a DfT tool developed for LCWIP audits)
SCGTP	South Central Growth and Transport Plan (published by HCC)
SWGTP	South West Growth and Transport Plan (published by HCC)
WRAT	Walking Route Audit Tool (a DfT tool developed for LCWIP audits)
WSP	WSP UK (engineering consultancy firm)