



# Harlow and Gilston Garden Town LCWIP

## Final Report

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## I Introduction





## I.1 Introduction to Harlow and HGGT

- 1.1.1 The Harlow and Gilston Garden Town (HGGT) authority partnership has commissioned PJA to undertake an LCWIP in Harlow on behalf of a consortium of local authorities: Harlow and Gilston Garden Town (lead client), Epping Forest District Council, Essex County Council, Harlow District Council, Hertfordshire County Council, and East Hertfordshire District Council.
- 1.1.2 The Harlow and Gilston Garden Town (HGGT) was designated as a Garden Town in 2017, with East Herts, Epping Forest and Harlow District Councils, and Essex and Hertfordshire County Councils working together to deliver new and support existing communities in and around Harlow. Growth in the Garden Town is being planned to deliver at least 23,000 new homes following Garden City principles. At least 16,500 homes will be built in new communities to the north (Gilston Area), south (Latton Priory), east (East of Harlow) and west (Water Lane) of Harlow (collectively referred to as the new Garden Communities). Employment clusters and job growth will be dispersed throughout the Garden Town, including in the town centre, Enterprise Zone sites and employment areas as well as in the new communities.



Figure 1-2: Examples of Harlow's existing walking and cycling routes: Traffic-free route (Harlow Fields), Grade separated walking and cycling route (First/Fifth Avenue), Bi-directional cycle track (First Avenue), Shared use track (Southern Way)

- 1.1.3 The multi-partite nature of the project's commissioning group reflects Harlow's position in Essex: close to the boundary with Hertfordshire, and with significant housing growth allocated in the neighbouring districts of Epping Forest and East Hertfordshire together with growth in Harlow forming the Harlow and Gilston Garden Town. This includes four new Garden Communities



comprising the Gilston Area in East Herts, Latton Priory and Water Lane in Epping Forest District and East of Harlow extending between the districts of Harlow and Epping Forest.

- 1.1.4 Sustainable transport policy has been set out in three Local Plans and the two county Local Transport Plans. A key policy within the local policy framework is the need for development to consider a modal hierarchy which prioritises walking and cycling, public transport, over private motor vehicles. This policy is reiterated within the HGGT Transport Strategy which also outlines ambitious targets for sustainable mode share across the Garden Town (50%) and within the new Garden Town communities (60%). The below excerpt from the HGGT Transport Strategy provides additional information of existing commuting travel behaviours.

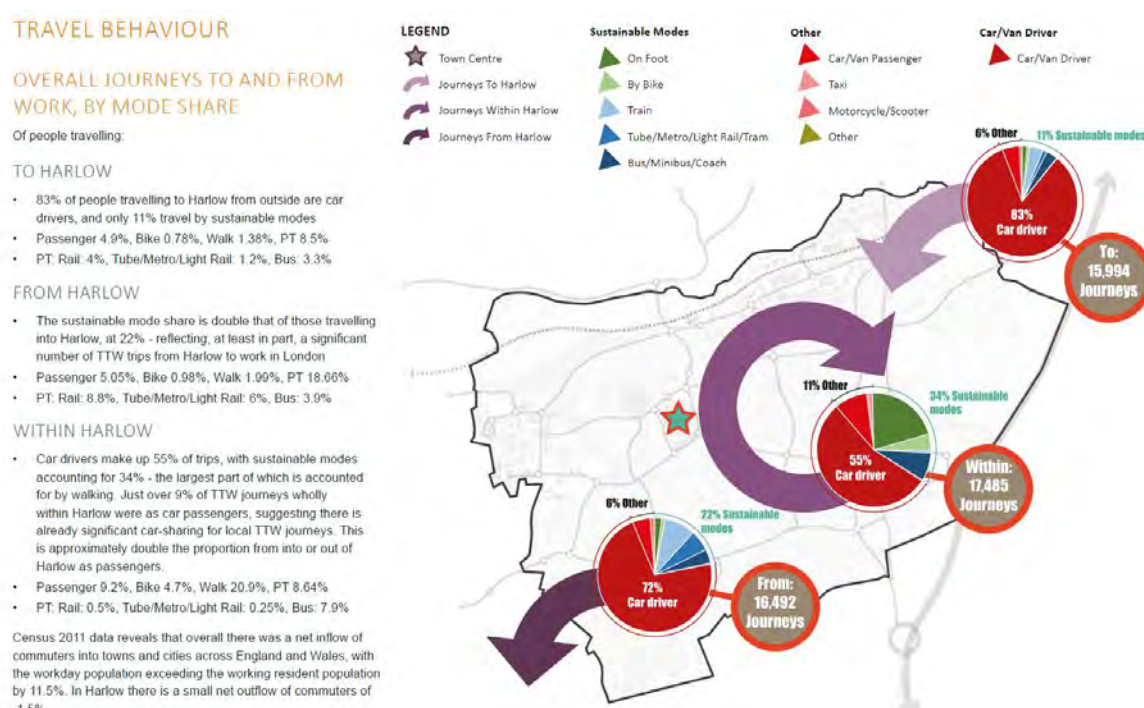


Figure 1-3: Excerpt from HGGT's 2019 Transport Strategy

- 1.1.5 The HGGT LCWIP builds upon the existing Harlow Cycling Action Plan by including analysis and recommendations for pedestrian infrastructure alongside a more focused and strategic network of cycling routes that account for – and interface with – future development sites in the Garden Town. The HGGT LCWIP has allowed much of the existing cycle network development to be validated and continued, rather than repeating any efforts.
- 1.1.6 The HGGT LCWIP will sit under the overarching HGGT Transport Strategy providing an evidence base for the development of other work such as the Infrastructure Delivery Plan, Harlow town centre regeneration and Sustainable Transport Corridors. The below plan provides an overview of the HGGT Transport Strategy Evidence Base and the supporting documents.

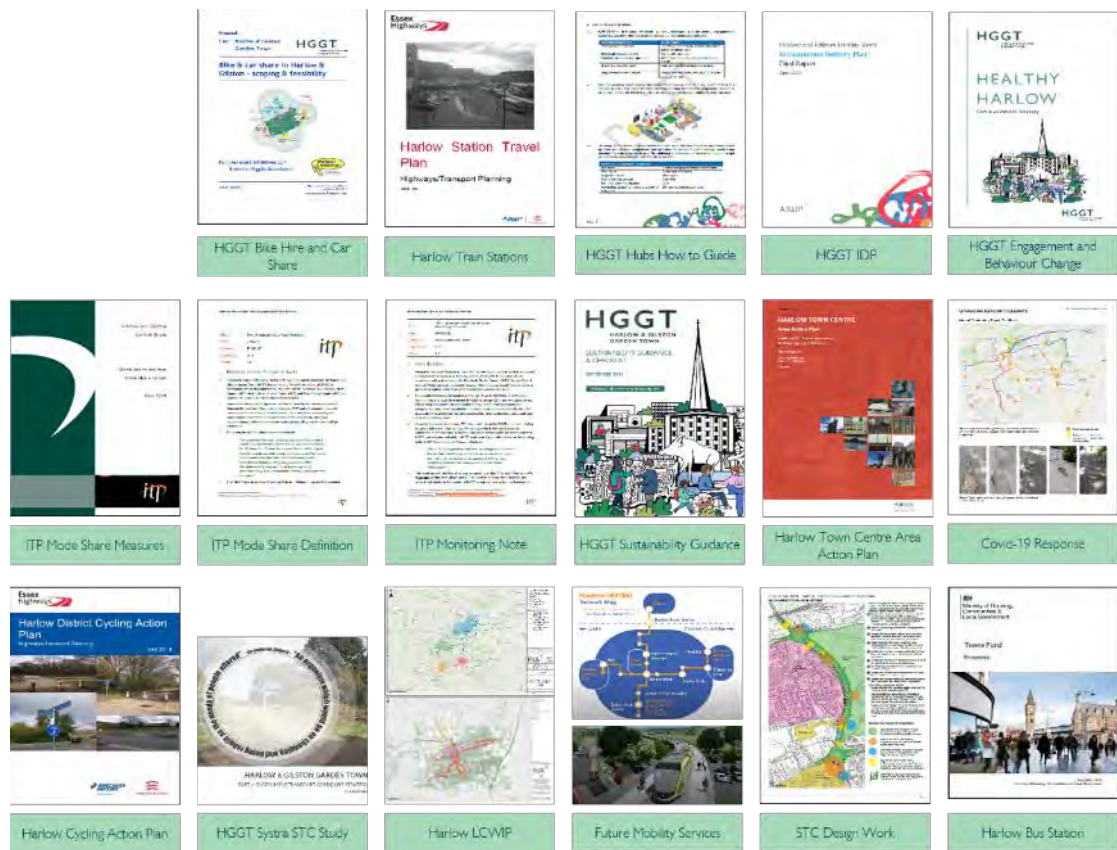
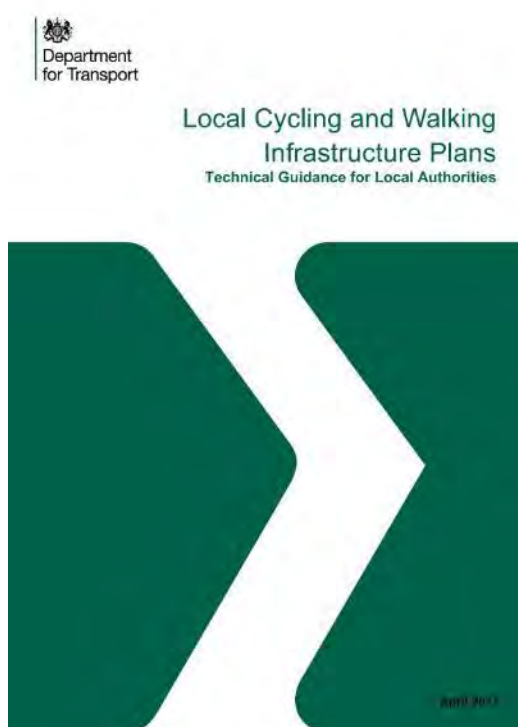


Figure 1-4: Overview of HGGT Transport Strategy Evidence Base



## 1.2 Introduction to LCWIPs

- 1.2.1 An LCWIP is a Local Cycling and Walking Infrastructure Plan that identifies priority investment in new infrastructure to support greater number of people making journeys on foot or on cycle. LCWIPs should identify infrastructure interventions over a short, medium, and long-term horizon that meet the transport objectives of the HGGT Transport Strategy, as well as existing and new residents, visitors and commuters.



- 1.2.2 The process for undertaking an LCWIP is set out in the Department for Transport's (DfT) process guidance, issued in 2017 as part of the Cycling & Walking Investment Strategy (CWIS). A fundamental aim of an LCWIP should be to help meet the government's aspiration of doubling the number of journeys undertaken by walking or cycling, and as such planning infrastructure around existing or forecast travel patterns is a core principle of an LCWIP. A key consideration in the development of an LCWIP is understanding existing conditions for active travel, and how these facilities can be incorporated into the LCWIP networks. The below images illustrate how Harlow already has some high quality walking and cycling infrastructure.
- 1.2.3 Harlow's LCWIP has therefore considered both the existing urban area and the new Garden Communities. It has also taken into account the emerging proposals for the town centre, which is likely to see a step change in the quality of the street environment in the town centre. These proposals will shift the town centre from its current retail focus towards a more diverse land use strategy to include a better mix of housing and more leisure and cultural activities. This is consistent



with many other town centres across the country that have responded to a change in shopping habits with the rise of the internet, and a renewed desire among many people to live in the heart of a town or city, close to amenities and public transport links.

1.2.4 The key outputs of an LCWIP are as follows:

- A network plan for walking and cycling which identifies preferred routes and core zones for further development (Appendix A combines all GIS mapping completed for the LCWIP)
- A prioritised programme of infrastructure improvements for future investment
- A report which sets out the underlying analysis completed to support the LCWIP's development and recommended LCWIP network

1.2.5 LCWIPs are produced with a ten year timeframe for delivery, however the DfT's intention is that the documents are flexible and therefore should be considered as 'live' documents. This provides local authorities with the flexibility to update their network plans to reflect local changes, including new development sites, funding opportunities and additional routes. On this basis, whilst the plan has recommended initial sites in the town, future work streams should consider expanding and evolving these initial proposals to ensure that a consistent high quality of walking and cycling infrastructure is provided across Harlow.

1.2.6 This LCWIP has identified an initial nine priority LCWIP cycling corridors and four Core Walking Zones in Harlow. Design interventions have been identified for each of the corridors and zones in order to improve conditions for walking and cycling. A programme of investment has been costed and prioritised in order to determine packages over short, medium and long-term funding horizons, consistent with Essex's Advanced Scheme Design (ASD) multi-criteria analysis. The recommended design measures for the LCWIP routes are based on the below principles which have been derived from the DfT's Local Transport Note 1/20:

- **Coherent:** Develop routes which help overcome severance, such as main roads and railway lines, to improve the integration and coherence of the town's existing walking and cycling facilities
- **Direct:** Provide direct and intuitive routes which minimise deviation from natural desire lines, ideally provide routes which are shorter than the equivalent vehicle trip to further increase the convenience of walking and cycling
- **Safe:** Promote walking and cycling facilities that minimise interaction with vehicular traffic: providing protected facilities on routes with higher volumes of vehicular traffic, and developing low-traffic environments in local and residential settings
- **Comfortable:** Provide high quality and well maintained walking and cycling facilities which provide comfortable width for the anticipated number of trips. Avoid the need for creating shared facilities which compromise the level of service for both walking and cycling



- **Attractive:** Develop a network which encourages more people to walk and cycle in attractive and safe environments

1.2.7 Figure 1-5 summarises the geographic extents of the LCWIP's recommended core walking zones and cycling corridors. The LCWIP is a document that will assist highway and planning authorities in obtaining monies from funding partners such as government, local enterprise partnerships and property developers. It is worth noting that the DfT considers LCWIPs to be live documents and therefore modifications/additions to the routes identified in this LCWIP should be included if they help to enhance the initial LCWIP network.

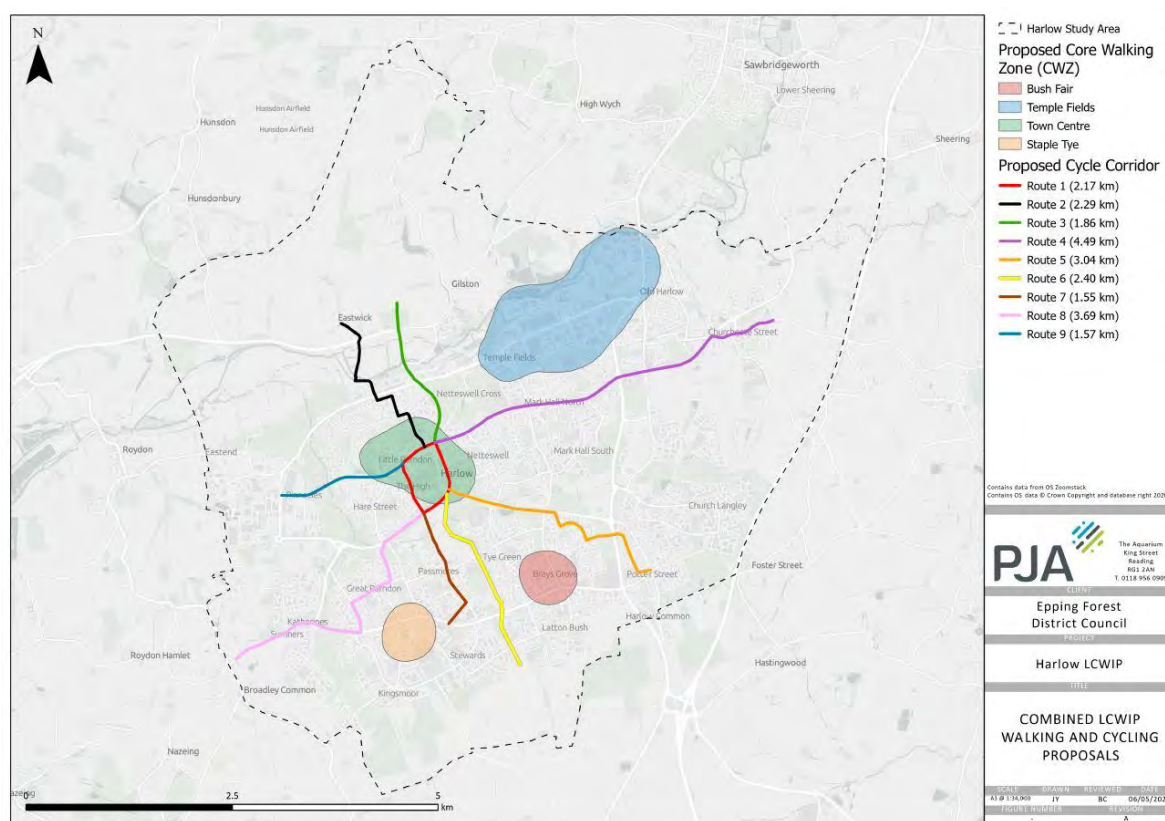


Figure 1-5: Combined LCWIP Walking Zones and Cycling Corridors



## 2 LCWIP process overview





## 2.1 Introduction

2.1.1 This chapter provides an overview of the LCWIP process and how it has been applied in Harlow. The DfT technical guidance for authorities developing an LCWIP sets out a methodical approach to the planning and delivery of cycling and walking infrastructure and the process is based on the six stages listed below.

| LCWIP stage | Name                         | Description   |
|-------------|------------------------------|---|
| 1           | Determining Scope            | Establish the geographical extent of the LCWIP, and arrangements for governing and preparing the plan.  |
| 2           | Gathering Information        | 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. |
| 3           | Network Planning for Cycling | Identify origin and destination points and cycle flows. Convert flows into a network of routes and determine the type of improvements required.   |
| 4           | Network Planning for Walking | Identify key trip generators, core walking zones and routes, audit existing provision and determine the type of improvements required.  |
| 5           | Prioritising Improvements    | Prioritise improvements to develop a phased programme for future investment.  |
| 6           | Integration and Application  | Integrate outputs into local planning and transport policies, strategies and delivery plans.  |

Table 2-1: LCWIP stages from DfT technical process guidance

2.1.2 LCWIPs should be evidence-led, and comprehensive. An LCWIP should identify a pipeline of investment, ideally over a ten year period, so that a complete cycling network is delivered at an appropriate geography (see LCWIP Stages 1 and 2) and that walking and cycling improvements are delivered coherently, in particular within core walking zones (see Stage 4 – Planning for Walking). The goal of an LCWIP should be to increase the use of cycling and walking, which means looking at routes and areas where more people could choose these modes in preference to other means of travel. Therefore, an LCWIP should consider travel demand regardless of mode, rather than looking just at existing walking and cycling trips.

2.1.3 The geographic scope for the cycling element and walking elements need not be the same, but there can be efficiencies where cycling infrastructure also considers walking and vice-versa, and planning them together can avoid one mode compromising the other. There are several instances within the HGGT LCWIP where proposed walking and cycling schemes overlap.

2.1.4 The development of the HGGT LCWIP has been guided by input from HGGT project officers and the wider Partner Authorities. Virtual engagement sessions were also hosted with Members, Developers and local walking and cycling groups during the development of the LCWIP.



### 3 Local Context





## 3.1 Introduction

The purpose of this chapter is to provide a short overview of the history of Harlow and the context for the development of the LCWIP.

## 3.2 1947 New Town Masterplan

- 3.2.1 Harlow is a new town, built in the years after World War Two to support renewal of and overspill from London. As a planned town, it has a loose grid of primary circulation roads with local distributor roads feeding off them (see Figure 3-2). These link to clusters of discrete neighbourhoods, served by three major neighbourhood centres in addition to the main town centre and smaller shopping parades. Employment land uses are clearly zoned although there are small pockets of employment uses in the local centres and town centres in addition to the retail and services provided there. Harlow New Town subsumed the villages of Old Harlow and Potter Street, which retain many shops and local services.

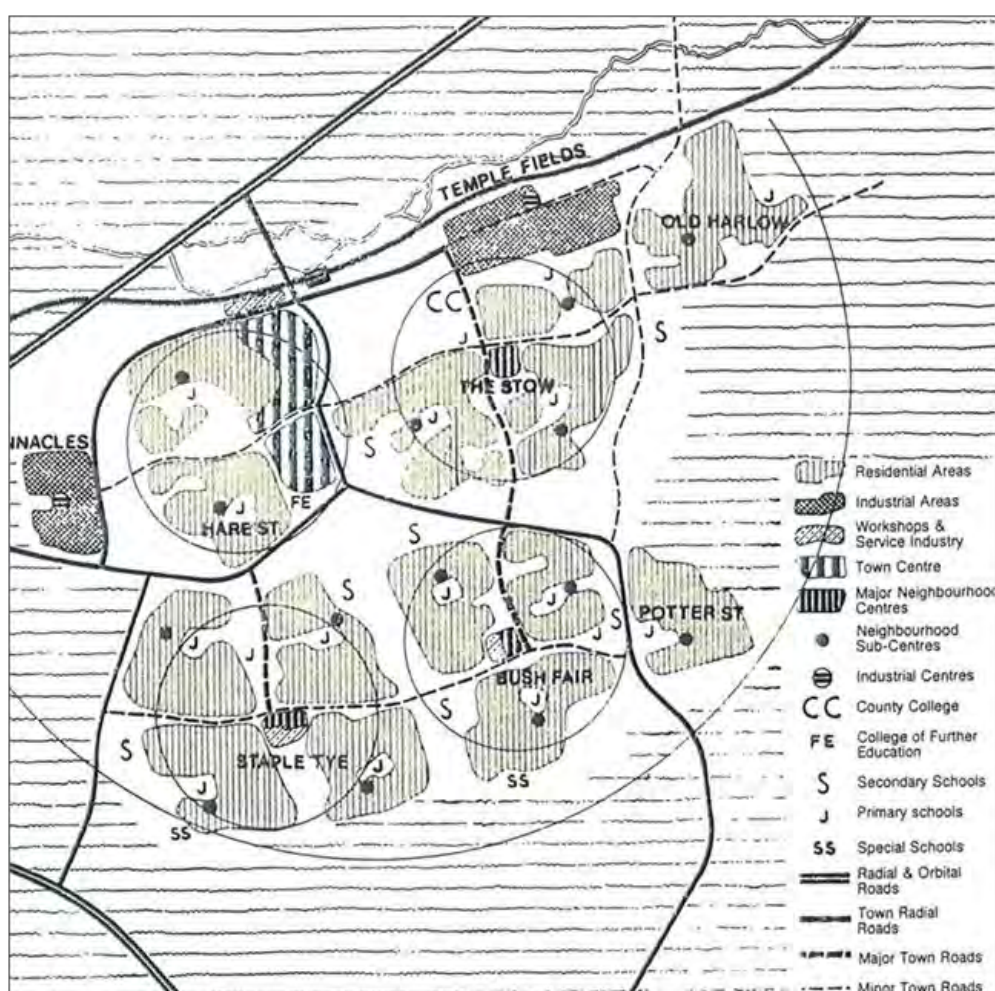


Figure 3-2: Harlow Masterplan (from 'The Design of Harlow', (F Gibberd, 1980)

- 3.2.2 Before the planned development of Harlow New Town, the area was largely fields with dispersed farmsteads and manors. The commercial centre grew around Old Harlow's medieval market square and the more informal Churchgate Street to the south-east. The population grew from 1,514 people in 1801 to 3,471 in 1931, which is small in comparison to the 60,000 people for whom the new town was planned (later this increased further to 90,000). Frederick Gibberd's vision and masterplan for Harlow New Town reflected the New Town ethos of the 1940s, drawing inspiration from the earlier Garden City movement and the drive to provide high quality and spacious homes with access to clean air and open space.



Figure 3-3: Example of a grade-separated junction underneath Fifth Avenue

- 3.2.3 The 1952 masterplan was based on three fundamental principles - an essentially human environment (that the design should be based on the pedestrian); an urban atmosphere; and the principle of evolution. According to Gibberd, "the third predicted a flexible approach. The first two were basic to the concept of new towns". Based around these principles, a comprehensive cycling and walking network was therefore planned and built with the new town. This generally consists of dedicated cycleways, separated both from pedestrians and motor vehicles, exhibiting the earliest use of this type of segregation that was later copied by Dutch planners and engineers retro-fitting their cities and building new towns from the 1970s onwards. The examples illustrate the typical walking and cycling infrastructure that was installed in Harlow during this period.

*'An organism which would go on changing and being rebuilt as the needs of the people altered'*

(Sir Frederick Gibberd)

- 3.2.4 Where available, these routes can offer seamless and direct walking and cycling connections through the town with minimal interaction with vehicular traffic. The cycling and walking network makes extensive use of grade separation where cycle routes and footpaths are routed under main roads through underpasses which reduces interactions with vehicular traffic. Harlow's cycling and walking network also follows what is called a "displaced grid" approach, meaning they do not always share the same route as the equivalent corridor for vehicular traffic, making use of paths in the town's many green wedges, or old roads that were superseded by the New Town, e.g. Netteswell Road (now part of National Cycling Route 1).



Figure 3-4: Protected cycle track and footway alongside Second Avenue

- 3.2.5 Such isolated routes in green space or in subways are not attractive to all potential users due to fears of social safety and lack of passive surveillance especially at night or if lightly used. These routes are also hard to follow, as tree cover and earthworks remove people's ability to orientate themselves within the landscape and built environment. Furthermore, new users who may be accustomed to following vehicular routes would not necessarily be aware of the availability of convenient cycling and walking routes if they are hidden from view. Finally, the quality of the Harlow's original cycling network has not been maintained as the town has expanded or new development built, leading to the feeling of a disjointed and incomplete network.
- 3.2.6 Nevertheless, the core of the historic network gives Harlow an advantage compared to more historic settlements as there is an established network of infrastructure to build upon. Furthermore, Gibberd's flexible approach with generous highway verges in places means there is scope to update existing highway geometries considerably to accommodate improved walking and cycling facilities. The below figure summarises the distribution of the town's existing off-road cycle network.



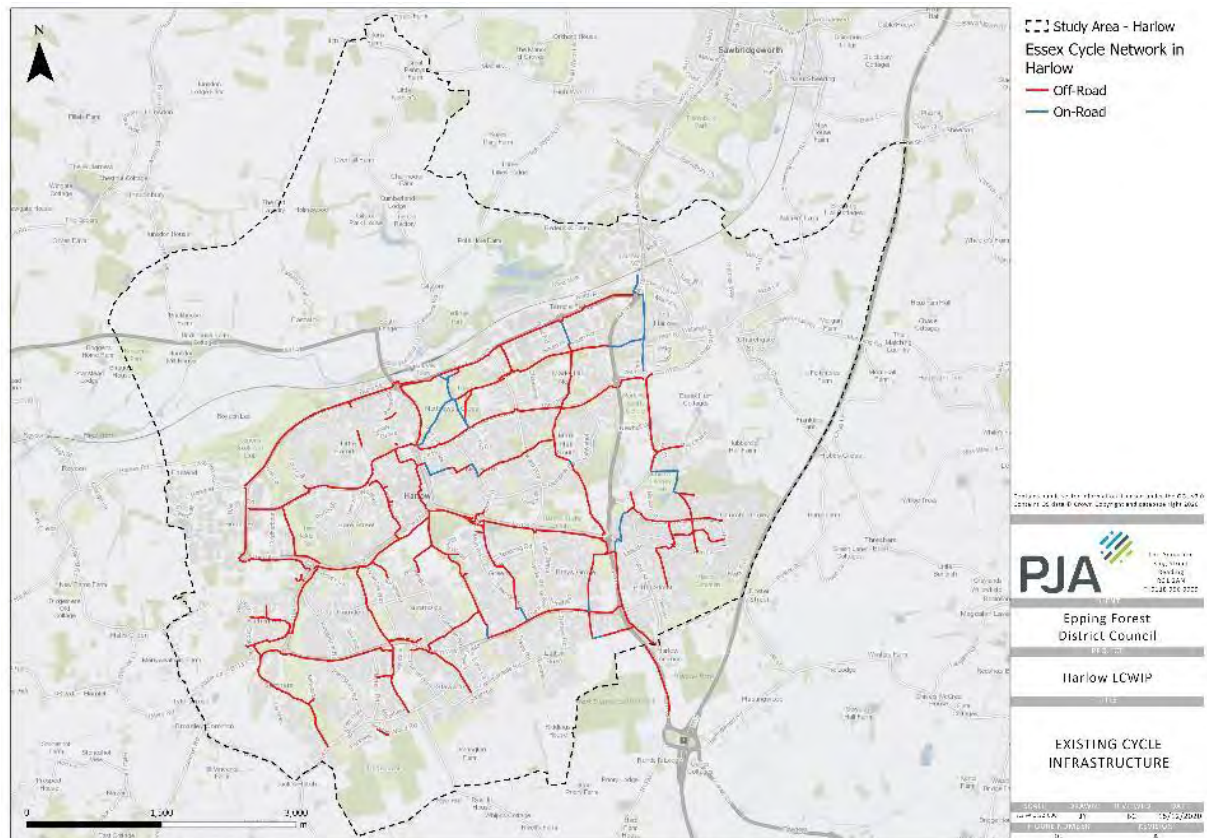


Figure 3-5: Existing Cycle Network

3.2.7 Furthermore, Harlow benefits from being a relatively compact town and the below figure illustrates how a majority of the existing town is within a 20 minute cycle of the town centre. The isochrones are developed using the existing highways network and it is reasonable to assume therefore that the isochrones would have a wider coverage if they considered off-road cycle routes in the town.

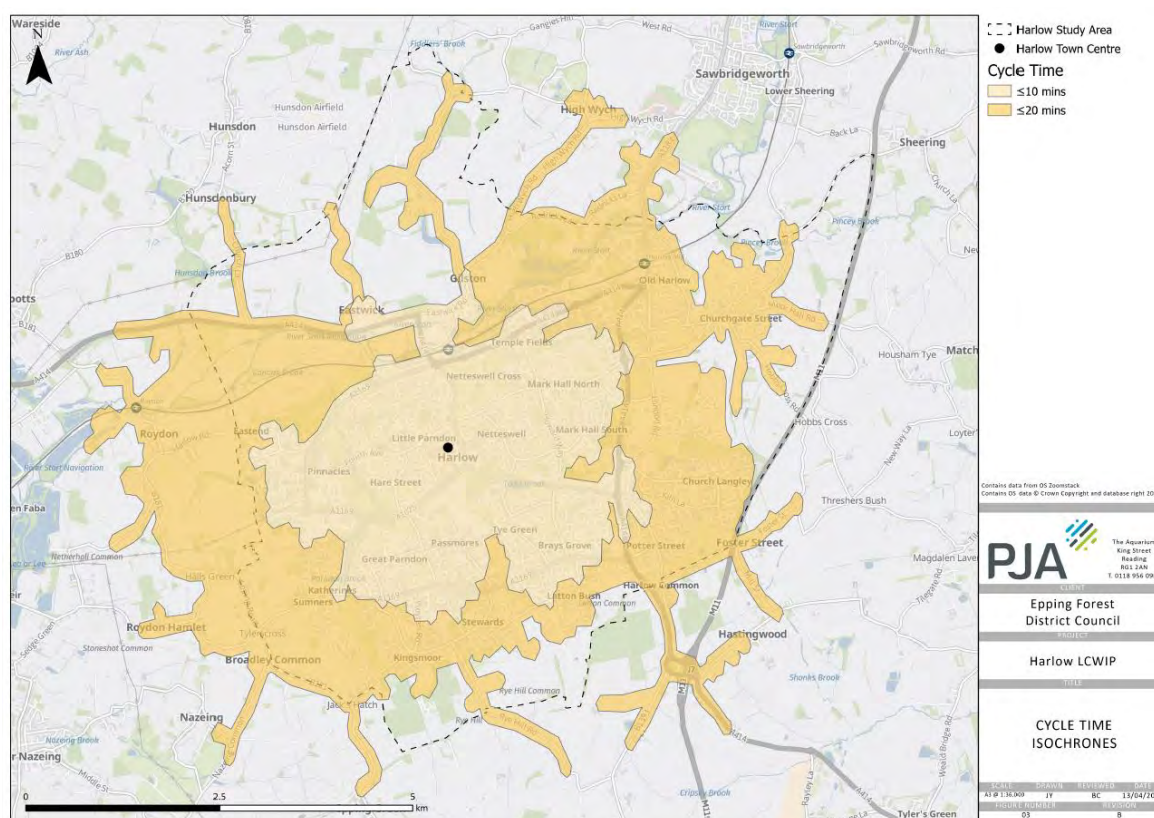


Figure 3-6: Cycling isochrone from Harlow Town Centre

- 3.2.8 Harlow does not have any meaningful outer orbital route for through traffic, so vehicles making longer journeys such as Hertford to the M11 or Chelmsford will pass through the town on the A414. However, this will be mitigated to an extent through the development of a new junction (J7A) on the M11.
- 3.2.9 While Harlow has traditionally had a good bus service, this is focused heavily on the town centre. The major employment area of Templefields is poorly served (highlighted below) with the nearest bus stops in current service lying on First Avenue to the south or Station Road to the east.

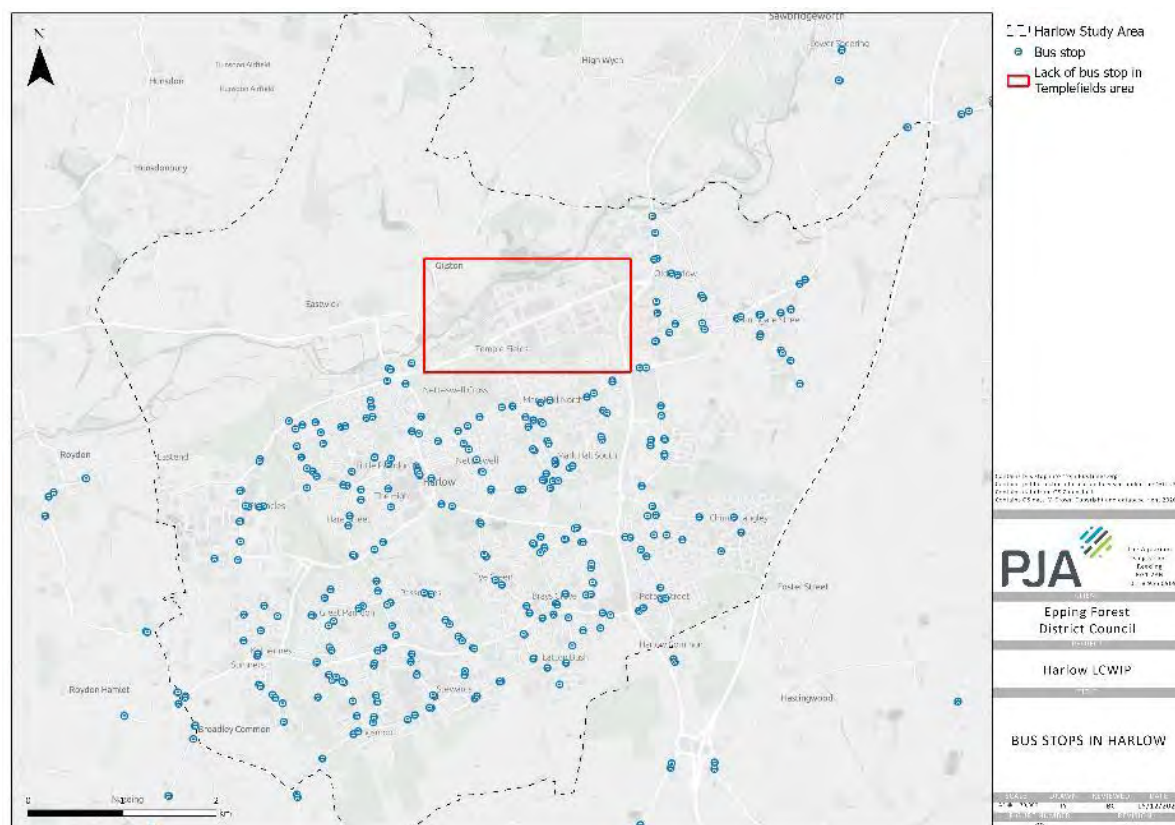


Figure 3-7: Extract of bustimes.org bus stop maps with Templefields area (highlighted in red) highlighting lack of bus stop facilities

- 3.2.10 Planning for largely road-based mobility means Harlow was not built around its railway access, and consequently the town's train stations lie at the northern edge of the town. However, Harlow sits at the centre of the London-Stansted-Cambridge "growth corridor" with good rail links to London Liverpool Street, Stratford, Tottenham Hale, the Lea Valley, Bishops Stortford, Stansted and Cambridge.



### 3.3 Policy Context

It is important to understand the local policy context as there are a series of guidance documents and major projects which will directly interface with and influence the outcome of the LCWIP.

#### 3.3.1 National Policy Context



The national policy context for active travel has changed significantly in 2020 with the DfT's publication of 'Gear Change' and the revised Local Transport Note 1/20 'Cycle Infrastructure Design'. These two policies outline significant changes for the future of transport planning and design in the UK and the prioritisation of measures that encourage increased levels of walking and cycling.

*'We want – and need – to see a step change in cycling and walking in the coming years. The challenge is huge, but the ambition is clear. We have a unique opportunity to transform the role cycling and walking can play in our transport system, and get England moving differently'*

(Gear Change, 2020)

These new documents both fully endorse the Local Cycling and Walking Infrastructure Plan (LCWIP) and Low Traffic Neighbourhood (LTN) approaches as means to help improve conditions for walking and cycling.

### 3.3.2 Harlow and Gilston Garden Town

3.3.3 Harlow and Gilston was designated as a Garden Town by the Ministry for Homes, Communities and Local Government in January 2017 and will comprise new and existing communities in and around Harlow. Set in attractive countryside, with transformative investment in transport and community infrastructure, new neighbourhoods to the east, west and south and new villages to the north will be established. Garden towns are defined as:

- a purpose built new settlement, or large extension to an existing town
- a community with a clear identity and attractive environment
- it provides a mix of homes, including affordable and self-build
- planned by local authorities or private sector in consultation with the local community

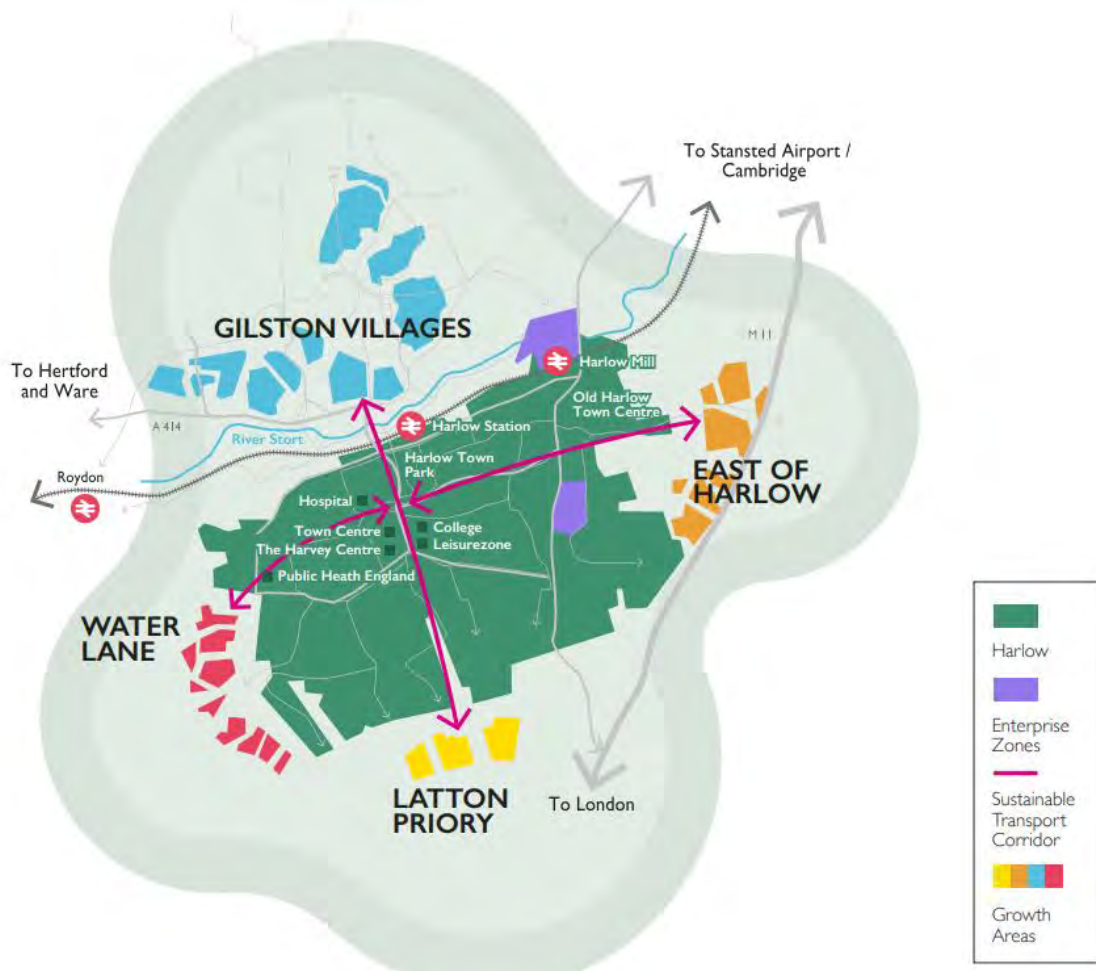


Figure 3-8: Overview of new garden communities providing forming part of the garden town



3.3.4 The Garden Town Vision includes a key principle for integrated sustainable transport, in which walking, cycling and public transport are the most attractive options. The Vision is for a Garden Town with local centres accessible by walking and attractive routes that encourage people to move actively and are inclusive to all abilities. As well as building new homes, the communities develop:

- Employment opportunities
- attractive green space and public realm areas
- transport infrastructure, including roads, buses and cycle routes
- community infrastructure, schools, community and health centres
- a plan for long-term stewardship of community assets

3.3.5 The quantum of new housing development expected to be delivered by HGGT is as follows:

- Approximately 9,000 within Harlow
- Approximately 3,350 new homes at East of Harlow
- Approximately 1,050 new homes at Latton Priory
- Approximately 2,100 new homes at Water Lane
- Approximately 10,000 new homes at Gilston

3.3.6 To accommodate this growth, a Memorandum of Understanding (MoU) of Highways & Transportation Infrastructure for the West Essex / East Hertfordshire Housing Market Area has been produced that identifies a number of required schemes including:

- Upgrade M11 Junction 7 and construct new Junction 7a
- A414 corridor through Harlow (sections not currently either being upgraded or programmed for upgrading)
- The provision of a second River Stort crossing to relieve the Harlow network and also help provide capacity for the provision of a north/south Sustainable Transport Corridor
- Potential relocation of Princess Alexandra Hospital (site to be confirmed) or redevelopment of existing site
- Multi-modal sustainable corridors, north-south and east-west through Harlow town

### 3.3.7 **Harlow Town Centre Masterplan**

3.3.8 The HGGT LCWIP supports the policies of adopted and emerging development plans of Harlow (Adopted, December 2020), Epping Forest (submission version 2017) and East Herts (Adopted, October 2018) District Councils. These Local Plans include key Garden Town policies on growth



levels, the new communities, infrastructure and transport, supporting the ambition for the HGGT to achieve transformational growth through modal shift.

- 3.3.9 Harlow Town Centre regeneration masterplanning and guidance is being prepared to guide the development and regeneration of Harlow town centre. The proposals will take into account the key role the town centre plays in the Harlow area, and the need to consolidate and diversify its retail provision as a result of housing growth. The aim is to create conditions for a resilient, successful centre. The masterplan approach will seek a selection of desired outcomes, including *“an inclusive and accessible destination with excellent transport links capitalising on Harlow’s strategic location”*. Improving intra-town trips in the garden town by active and sustainable modes will be a key objective and the LCWIP will help to support the realisation of this vision.
- 3.3.10 Similar to many town and city centres across the UK, shifting economic trends have had, and continue to have, a profound impact on the performance and prosperity of Harlow Town Centre. The Town Centre has experienced a decline in its national retail ranking from 168<sup>th</sup> in 2012 to 185<sup>th</sup> in 2017 (Harlow Town Centre Market Analysis Final Report, May 2017). Although policies already exist which establish the primacy of the Town Centre and seek to protect and enhance its performance, the planning process has the potential to play a more proactive role in strengthening the vitality and viability of the Town Centre and enabling regeneration. The preparation of a more specific set of planning policies presents an opportunity to create the conditions for a resilient, successful centre.
- 3.3.11 The preparation of a masterplan and specific guidance presents an opportunity to create the conditions for a resilient, successful centre. The Town Centre masterplan, in combination with the Harlow Local Development Plan (and other guidance) will enable Harlow Council alongside wider stakeholder, landowner and developer partners to plan positively for managed change and a sustainable, coordinated approach to growth, including improved transport provision.
- 3.3.12 The preparation of a town centre masterplan and specific guidance will sit alongside the Harlow Local Development Plan. This and other guidance will provide a spatial planning framework to guide development and secure the regeneration of the town centre for the period up to 2033. This will take into account the key role the Town Centre performs across the wider Harlow area, reinforced by the need to accommodate additional retail provision, arising from increased housing growth being brought forward. National policies state that the purpose of the planning system is to contribute to the achievement of sustainable development, which has three roles:
- An economic role by contributing to a strong, responsive and competitive economy.
  - A social role by supporting strong, vibrant and healthy communities.
  - An environmental role by contributing to the protection and enhancement of the environment

### 3.3.13 Sustainable Travel Corridors

3.3.14 A key ingredient of the vision for HGGT is a network of Sustainable Transport Corridors (STCs) connecting the four growth areas to the rest of Harlow, converging at the town centre. The STC alignments were incorporated into the LCWIP network development as it is likely that alignments will be combined at some locations in the town. The HGGT Sustainable Transport Corridor Strategy outlines the six key project objectives:

- An average of 50% of all journeys are made by active and sustainable modes across the town with 60% in the new garden communities.
- High quality, rapid, and high frequency public transport that competes with single occupier car journeys.
- Harlow and Gilston has a strong walking and cycling culture and most people can identify somewhere they love to walk or cycle to.
- Easy to access, convenient and inclusive active and sustainable travel is available to all, and seen as the first choice.
- The walk and cycle network and associated public spaces are used by all communities and they bring communities together.
- The transport network is resilient and can accommodate and respond to changing technologies and associated opportunities

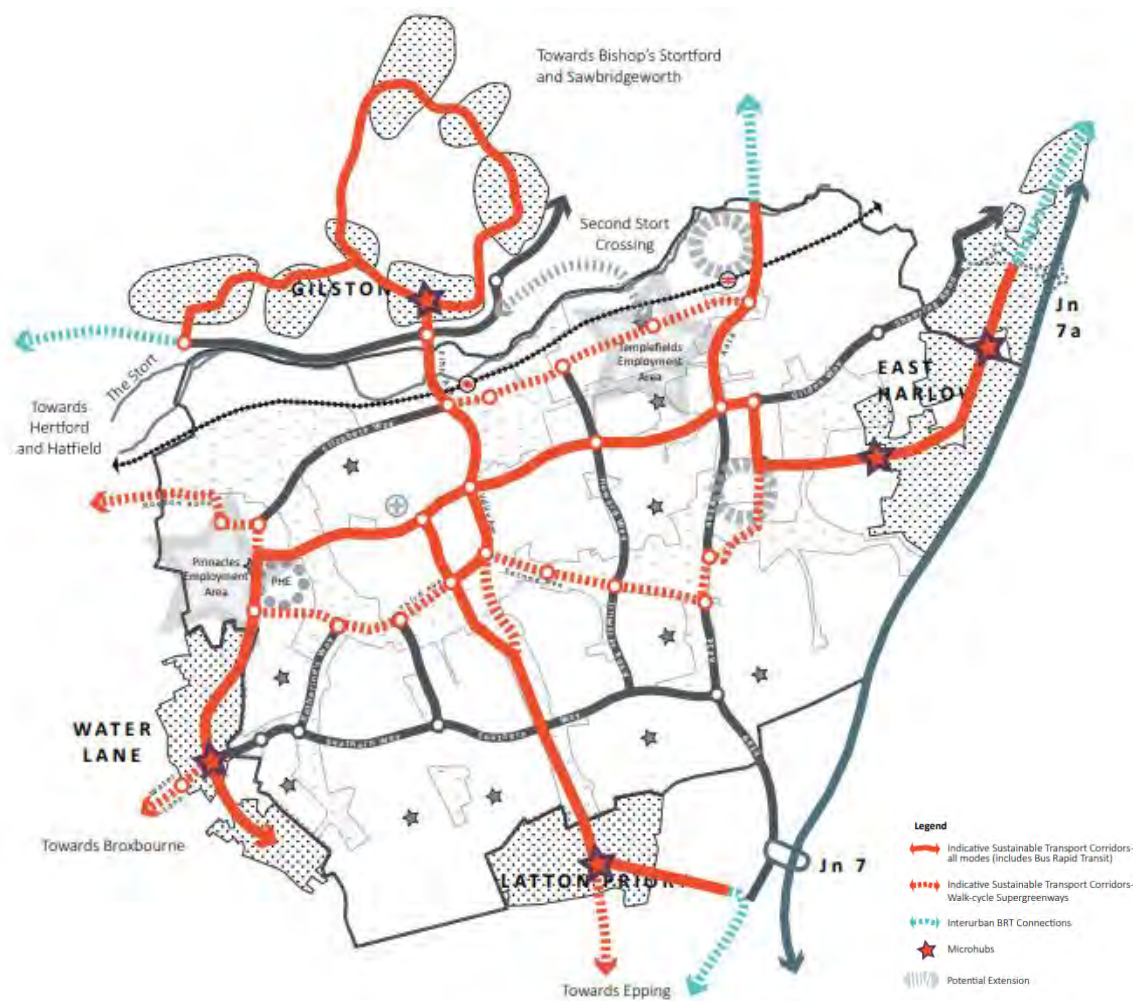


Figure 3-9: Indicative Sustainable Transport Corridors and Inter-Urban BRT connections

3.3.15 The STCS recommends the delivery of a Bus Rapid Transit (BRT) system running along the Sustainable Transport Corridors within the town. The BRT could potentially serve destinations outside the urban area, such as Broxbourne, Epping and Stansted Airport. A core BRT network also presents the opportunity to re-think the conventional bus network, which would provide a different service offer, including:

- New cross-town services (presently the vast majority of routes terminate at Harlow Bus Station)
- Integrated timetables to facilitate interchange
- Re-serving the London Road EZ
- Reacting to the potential relocation of the hospital away from the town centre.

3.3.16 While traditional private operator led public transport networks have dominated the service offer since de-regulation in the 1980s, new powers under the Bus Services Act 2017 could help

authorities shape bus services in a more integrated way. The shock to the system of Coronavirus and the necessary social distancing also presents a revenue opportunity to operators to work with potential franchising local authorities, whereas previously the bus industry has been somewhat sceptical to franchising.

- 3.3.17 The STCS also acknowledges the opportunity to deliver a core network of very high-quality walk-cycle “Super-greenways”, and the need to change hearts and minds. The alignment of the potential corridors has been incorporated into the LCWIP network development and design workshops were hosted at the project outset between representatives of the STC design team and LCWIP project team.





## 4 Stage I: Determining Scope



- 4.1.1 The focus of the LCWIP is on the existing Harlow town and includes the emerging Garden Town communities at Gilston, Latton Priory, Water Lane, and East of Harlow. Because of the different trip distances associated with each mode, walking and cycling have been analysed separately, but using a common set of data and methodology.

## 4.2 Cycling

- 4.2.1 The geographic scope for cycling element of the LCWIP was identified by using a 5km radius (20mins bike ride) from the existing town centre as shown in Figure 4-2 and includes the new Garden Communities. This approach for defining the geographic scope is consistent with the method used in Essex's previous LCWIPs and the DfT guidance.

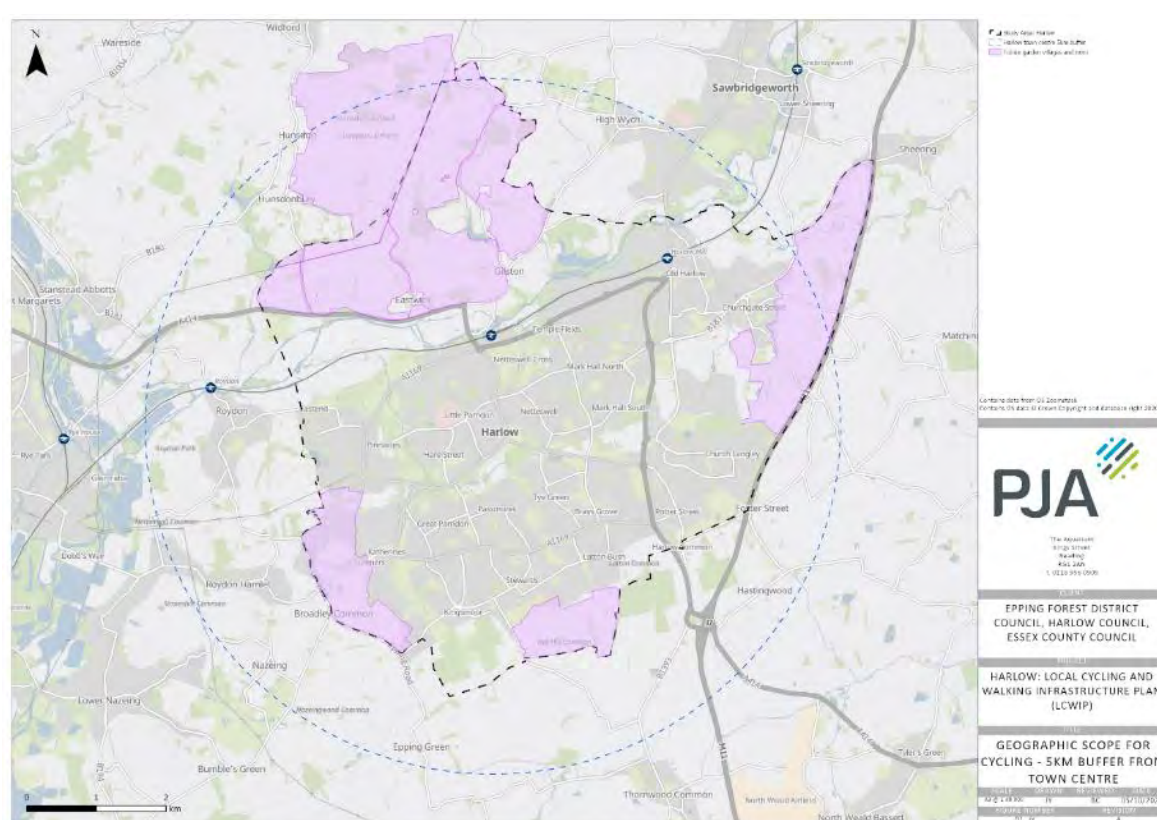


Figure 4-2: 5km radius from town centre including four garden town sites

## 4.3 Walking

- 4.3.1 The scope of the walking followed the same study boundary as above; however the geographic scope was further refined in Stage 4 through the identification of Core Walking Zones in the town. This process was through a process of destination clustering, which identified a long-list of seven areas where there was a cluster of desire lines - this is explained further in Section 7.1.





## 5 Stage 2: Data Gathering







- 5.1.1 DfT guidance recommends that a broad range of information should be gathered to inform the preparation of the LCWIP. It is recommended that information covering the following themes is provided:
- Transport network;
  - Travel patterns;
  - Location of significant trip generators; and
  - Existing barriers to cycling and walking.
- 5.1.2 PJA's analysis of the existing transport network and travel behaviour are included in Appendix A and Appendix B respectively.
- 5.1.3 Existing barriers to cycling have been identified in advance of the LCWIP in ECC's Harlow Cycling Action Plan (HCAP), a gap analysis of the existing network, setting out a road map to a future aspirational network. During the LCWIP, a walking stakeholder workshop with walking groups captured high-level issues and opportunities in respect of the walking network and cycling improvements.
- 5.1.4 These two elements are set alongside the travel demand evidence base. Further appraisal of the walking and cycling network has been undertaken in the next two stages of the process.

## **5.2 Origin + Destination data**

- 5.2.1 Understanding the relationship between Origins and Destinations is essential in developing LCWIP networks that respond to the local context. Both the walking and cycling networks were developed around desire lines which were generated by pairing all origin and destinations points within the existing town and also to future developments. This approach enables the LCWIP to provide for both existing and future anticipated demand for increased levels of walking and cycling. ECC have used O-D analysis extensively in the development of the county's previous LCWIPs and the Harlow approach therefore was developed to be consistent with Essex's previous LCWIPs.
- 5.2.2 To develop the spatial relationship between origins and destinations, the study area was divided into a grid of interlocking hexagons with each hexagon is 0.25km<sup>2</sup> in size (Figure 5-2). In previous LCWIPs, ECC used the below criteria to identify the Origin Hexagons (shown with black dots overleaf):
- Hexagons having more than 50 percent of its area within a housing growth, or
  - Containing the population weighted centroid of a Lower Level Super Output Area (census reporting district of 1,000-3,000 population) AND where the hexagon centroid is less than 30m from the road network

5.2.3 The criteria were applied to Harlow however this approach excluded many areas within the town, including the Garden Town communities, as they did not satisfy ECC's criteria. It was confirmed with the Core Project Group to revise the criteria for Harlow to ensure that the future Garden Town settlements were included as well as existing areas that were located further than 30m from a Hexagon Centroid were included. On this basis, future Garden Town settlements were manually included (represented as purple dots in the below figure) and existing residential areas that were located further than 30m from the hexagon centroid were included (orange dots).

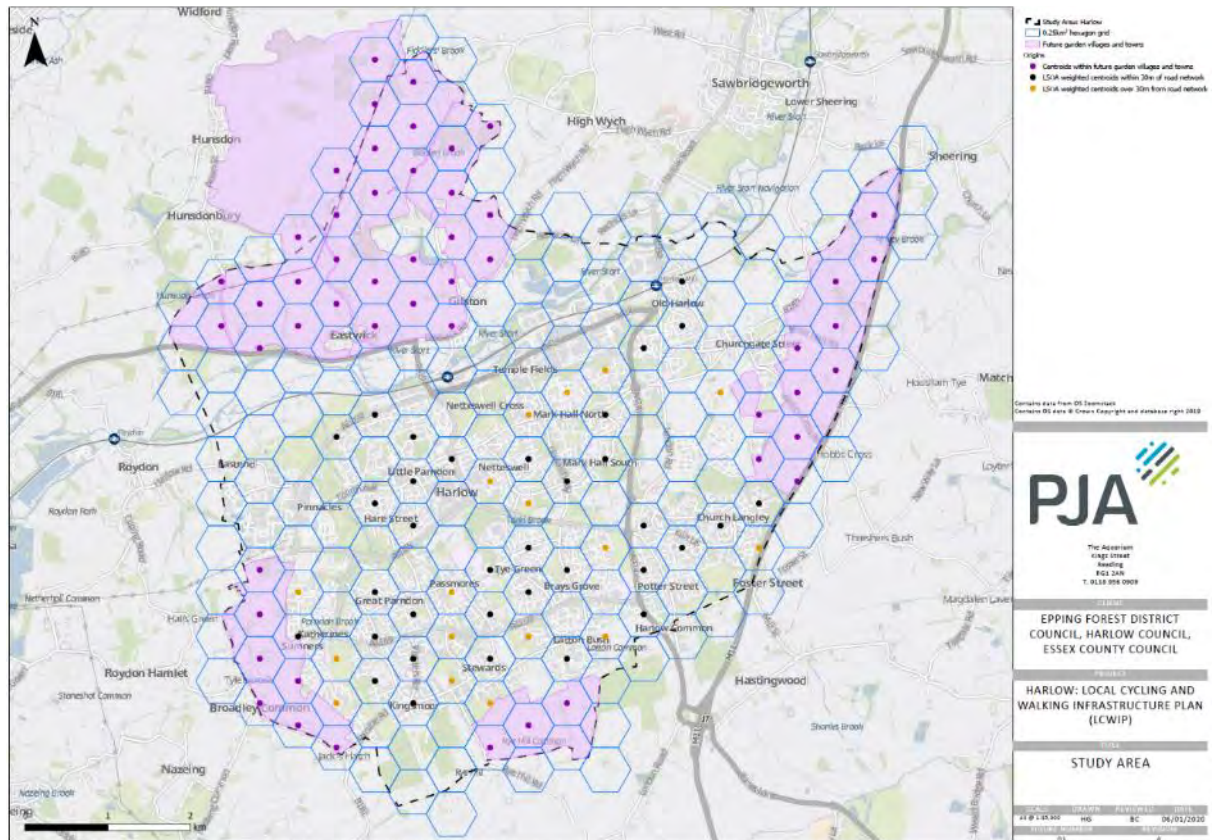


Figure 5-2: Origin cluster hexagons

5.2.4 Having identified the Origins, Destinations were identified based on data provided by HGGT and ECC (Figure 5-3). All destinations were categorised using the below classifications. The classifications have been established in previous ECC LCWIPs and reflect the relative importance of the destinations as trip generators.

- Class 1: Town, Village and Local Centres; Key Employment Sites.
- Class 2: Bus Stops, Existing and Proposed Schools, Railway Stations, Hospitals, Supermarkets, Leisure Centres and Libraries.

5.2.5 The combined Origin and Destination datasets were used to develop the walking and cycling networks in Stages 3 and 4. This analysis provided an important non-commuting dataset which was compared against the Propensity to Cycle Tool (PCT) outputs to provide a comprehensive review of desire lines within Harlow and also to the proposed Garden communities. It was assumed in the analysis that Class 1 destinations would generate a higher number of cycling trips and that they are also likely to have a larger catchment area of cyclists from across Harlow, compared to Class 2 destinations which would generate more locally based trips.

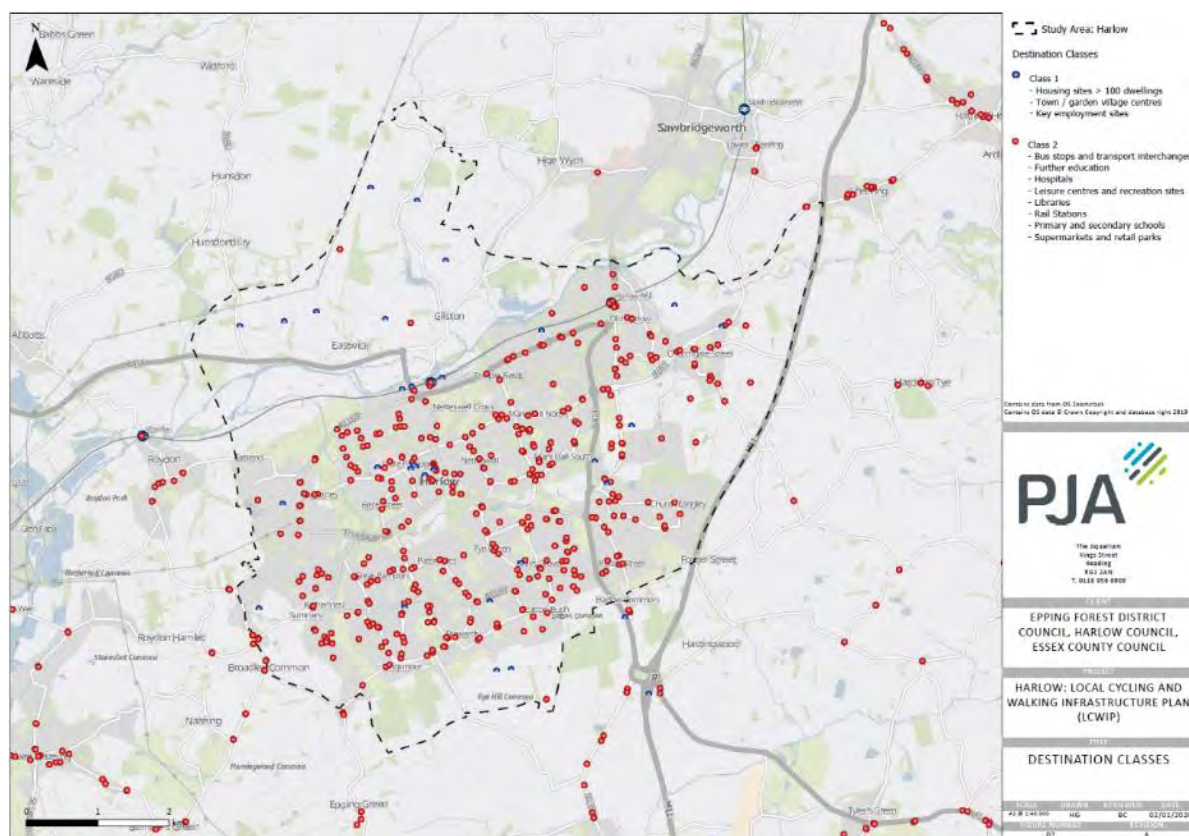


Figure 5-3: Distribution of Destinations





### 5.3 Harlow Cycling Action Plan (2018)

- 5.3.1 Prior to the LCWIP, Essex County Council completed the Cycling Action Plan (CAP) for the Harlow District as part of the county's wider commitment to create cycling action plans for all major settlements in the county. <https://www.essexhighways.org/getting-around/cycling/cycle-programme.aspx>. The CAP consisted of an opportunities-focused gap analysis of the cycling network, aiming to identify future sites and routes for future development. Similarly to an LCWIP, the plan used data collection and the Propensity to Cycle Tool (PCT) to help identify the network.
- 5.3.2 Figure 5-4 summarises the CAP's key outputs with the recommended cycle routes identified in light-blue. The outputs from the CAP were used during Stage 3 and the development of the LCWIP Cycling Network in consultation with ECC.

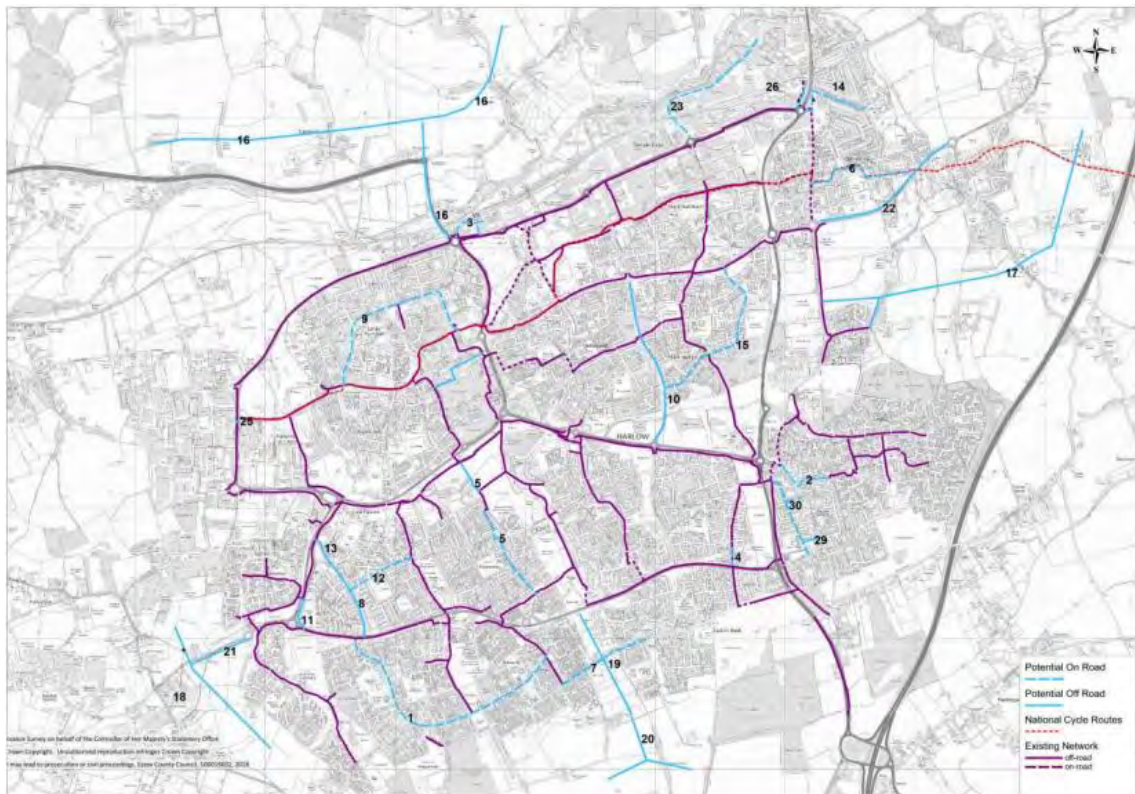


Figure 5-4: Harlow Cycling Action Plan recommendations

- 5.3.3 The LCWIP has incorporated the recommendations from the Harlow CAP and has developed design recommendations for several of the CAP routes. Throughout the project, ECC has worked closely with the LCWIP project team to review and optimise the relationship between the strategies.



## 5.4 Propensity to Cycle Tool (PCT)

- 5.4.1 The Propensity to Cycle Tool ([www.pct.bike](http://www.pct.bike)) is a nationwide model that identifies where increases in the rates of cycling can be expected through the provision of better infrastructure. It uses census travel to work data and school travel data, and looks at trip distances to see where there may be scope for more short journeys to be undertaken by cycling. The PCT provides seven scenarios for forecasting future levels of cycling which range in ambition from the 'Government Target' (assumes 6% of commuting trips by bicycle) up to the 'E-Bike' scenario (assumes 22% of commuting trips by bicycle and improved access to e-bikes).
- 5.4.2 The PCT provides two sets of mapping outputs:
- Straight-Line Networks – these plans show direct paths between LSOA Origin-Destination points which gives an overview of the key desire lines for cycling flows
  - Applied Networks – applies the straight desire line to the existing road network to provide a more detailed summary of where increased cycle flows would take place on the local network
- 5.4.3 PJA provided the outputs in Figure 5-5 to illustrate the parts of Harlow's network where greatest latent demand for cycling for commuting and education lies. This was based on the "Go Dutch" scenario, which models the same mode share for cycling as in the Netherlands, adjusting for trip distance and topography. Using the 'Go Dutch' scenario provides a more ambitious and longer-term outlook for cycling flows which is advantageous in network planning as it ensures that the LCWIP cycle network will provide for assumed future advances in the town's cycle network.



5.4.4 The Straight-Line network below summarises the distribution of the ‘Top 30’ origin-destination cycle routes in Harlow based on the ‘Go Dutch’ scenario. The ‘Top 30’ routes were identified by comparing the number of cycle trips expected on each individual desire line and then identifying the Top 30 – it is possible in the PCT to view up to the top 200 desire lines. Figure 5-5 provides the basis for understanding the key desire lines in the town and where cycle flows would be concentrated based on the town’s existing layout. The key desire lines are identified predominantly in the town centre and the north east of Harlow with some desire lines extending south towards Latton Bush and east towards Old Harlow and Church Langley.

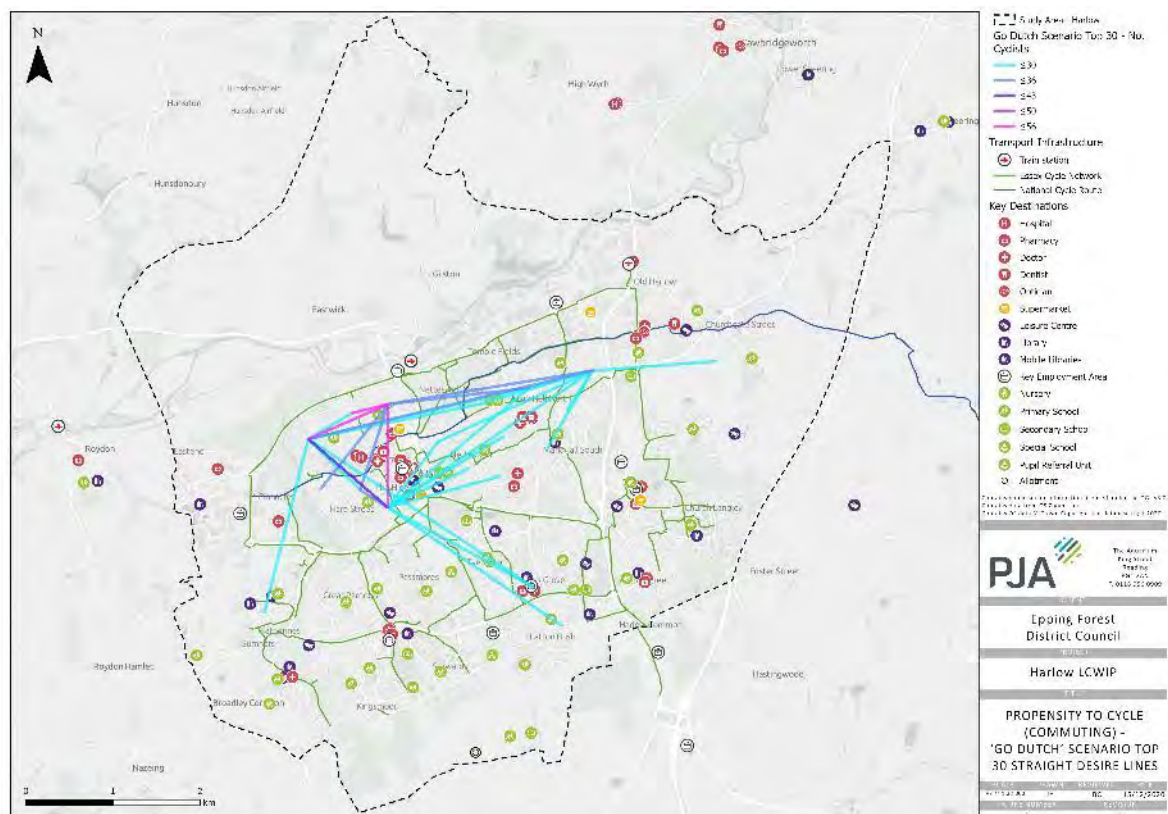


Figure 5-5: Top 30 'Go Dutch' straight Desire Lines

- 5.4.5 Figure 5-6 applies the Straight-Line outputs onto the existing road network to provide an indication of where the desire lines would be expected to follow on the road network. The outputs provide a basis for understanding the distribution of demand for increased cycle flows and how the LCWIP cycle network could develop.

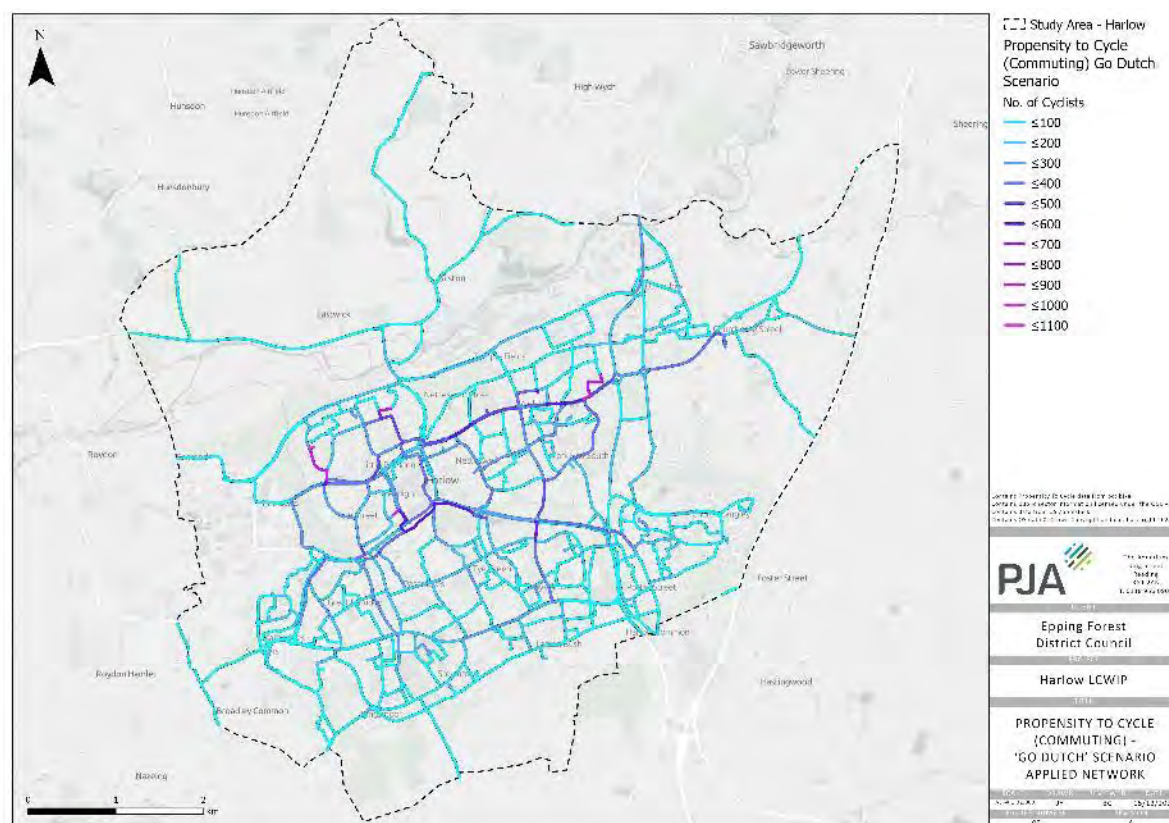


Figure 5-6: PCT “Go Dutch” for commuting journeys

- 5.4.6 The PCT results suggest that latent demand for commuter cycling generally radiates to the town centre, perhaps unsurprisingly, while school travel is distributed more in the suburban neighbourhoods (Figure 5-7). It should be noted that the PCT model snaps destinations to populated areas to reflect census boundaries meaning that trips to zoned employment sites such as Pinnacles and Templefields do not appear to be strongly represented. However this is not the case- the pink hotspots in Figure 5-6 to the west and east of the town centre are in fact Pinnacles and Templefields respectively. Indeed, the town centre itself is mapped closer to Burnt Mill in the PCT model.



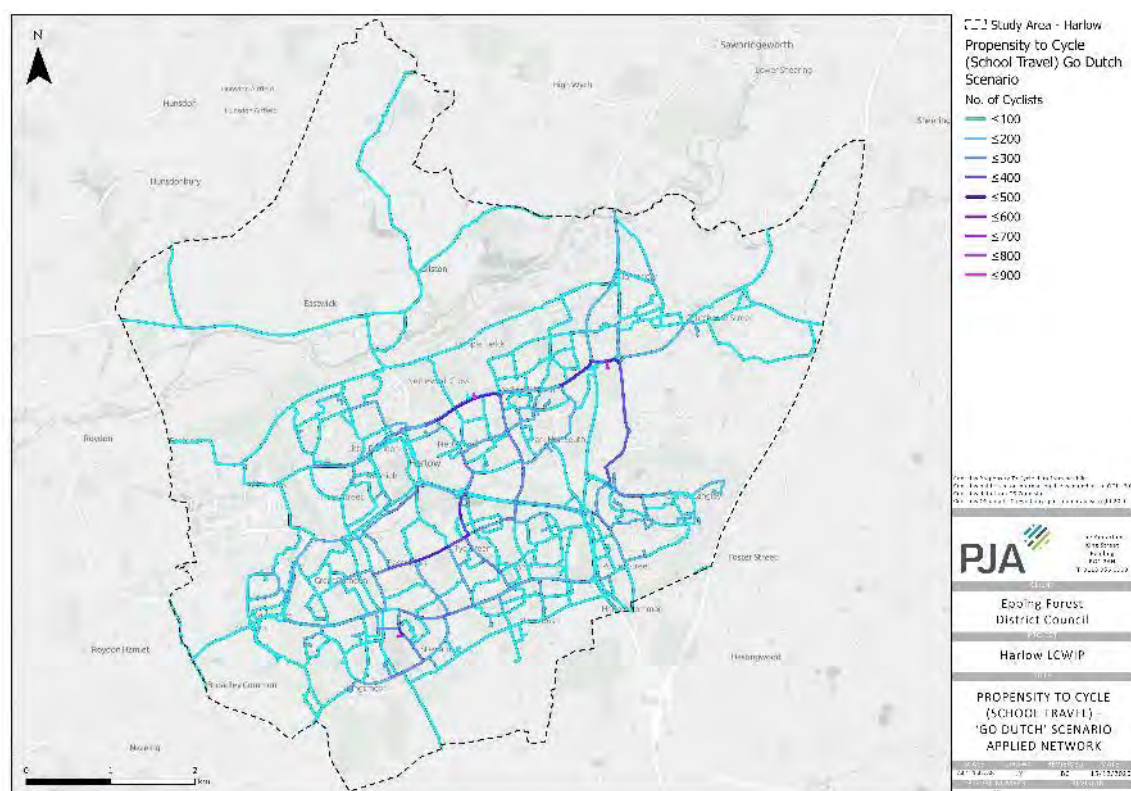
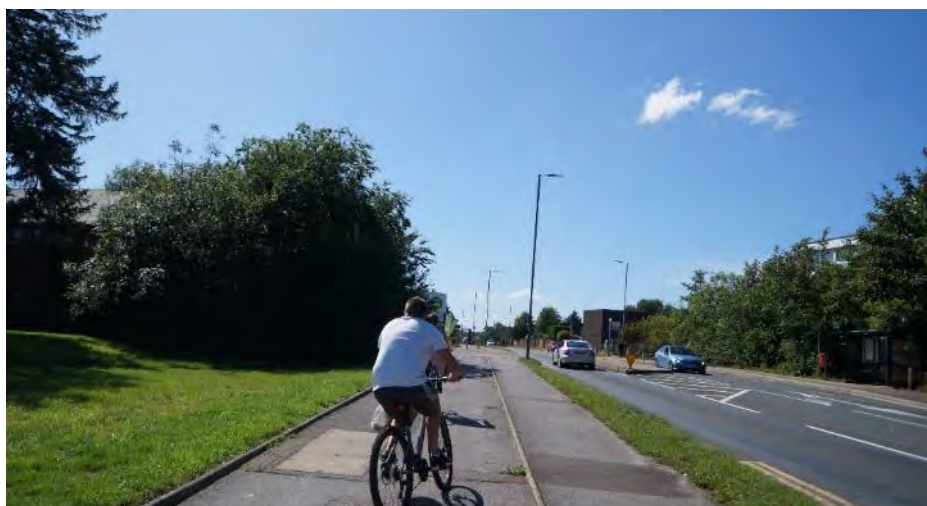


Figure 5-7: PCT “Go Dutch” for education journeys

- 5.4.7 A limitation of the PCT is its focus on commuting and school trips which tends to produce outputs focussed around key employment and education sites. The PCT results were used alongside an analysis of non-commuting/school trips in Section 6.2 to enable the development of a cycle network that also includes leisure and recreation trips.



## 6 Stage 3: Planning for Cycling





## 6.1 Overview of Process

- 6.1.1 Stage 3 is focussed on the development of a 'Cycling Network Map' supported by a 'Programme of Cycle Infrastructure Improvements'. The outputs from Stage 2 have been used to identify the key locations of demand for future cycling flows which have been used to inform the preferred network. This process was completed in collaboration with colleagues at ECC to ensure that the outputs were consistent with the County's previous LCWIPs in Braintree, Chelmsford and Colchester.
- 6.1.2 The LCWIP guidance recommends that 'if an authority has already developed a long-term cycle network plan, the tools and techniques outlined in Stage 3 could be used to validate or enhance a programme of investments'. Given that Harlow already has an extensive cycle network and ECC have recently completed the CAP, the LCWIP cycle network was developed to enhance existing facilities within the existing network as well as infilling gaps in the network where new infrastructure is required.
- 6.1.3 Given the level of anticipated development around Harlow through the Garden Town proposals, Stage 3 included specific analysis of future demand for cycle flows that would be generated by these areas. An additional layer of GIS analysis was undertaken to complement the Propensity to Cycle Tool (PCT) to ensure the anticipated future desire lines were captured.
- 6.1.4 The LCWIP planning for cycling process involved the following steps:
- Clustering of origin-destination desire lines
  - Triangulation of origin-destination analysis against Harlow's Cycling Action Plan (CAP) and Propensity to Cycle Tool (PCT) outputs
  - Route audits and recommendations.
- 6.1.5 A summary of each of these steps is provided in this chapter with more information provided in Appendix B.

## 6.2 Desire line clustering

- 6.2.1 The PCT outputs from Stage 2 provided indicative cycling networks based on commuting and schools trips. The purpose of the Desire Line Clustering was to provide an additional layer of analysis that focussed on 'everyday' cycling trips which would include: leisure and recreation, trips to local centres, and amenity trips. Combining the 'Everyday' trips and PCT outputs provided a comprehensive demand model for developing the LCWIP cycle network. It should be noted that desire lines that were longer than 5km were removed from the analysis for consistency with the LCWIP approach. This should not preclude the development of longer distance cycling routes in the wider area which could connect into Harlow. Indeed, future development of 'inter-urban' cycling routes will be an important step in enhancing cycle network coverage.

Figure 6-2: Summary of all Origin-Destination Pairs in Harlow





6.2.3 Having identified all available desire lines, a “K-means” clustering analysis was used to cluster the desire lines from Figure 6-2 into a more refined plan (Figure 6-3) which shows the top 20 routes. The K-means methodology identifies individual desire lines which are within close proximity to each other and combines these into grouped desire lines. The line widths in the below plan are proportionated to the number of desire lines that have been incorporated i.e. thicker desire lines combine more individual desire lines. The distribution of the K-means outputs has a clear emphasis on a north-south axis through the town centre with direct links out to the proposed Garden Town settlements. The combined sets of ‘top’ desire lines for Commuting and Everyday cycle trips provided a comprehensive baseline for understanding desire lines to inform the LCWIP cycle network development.

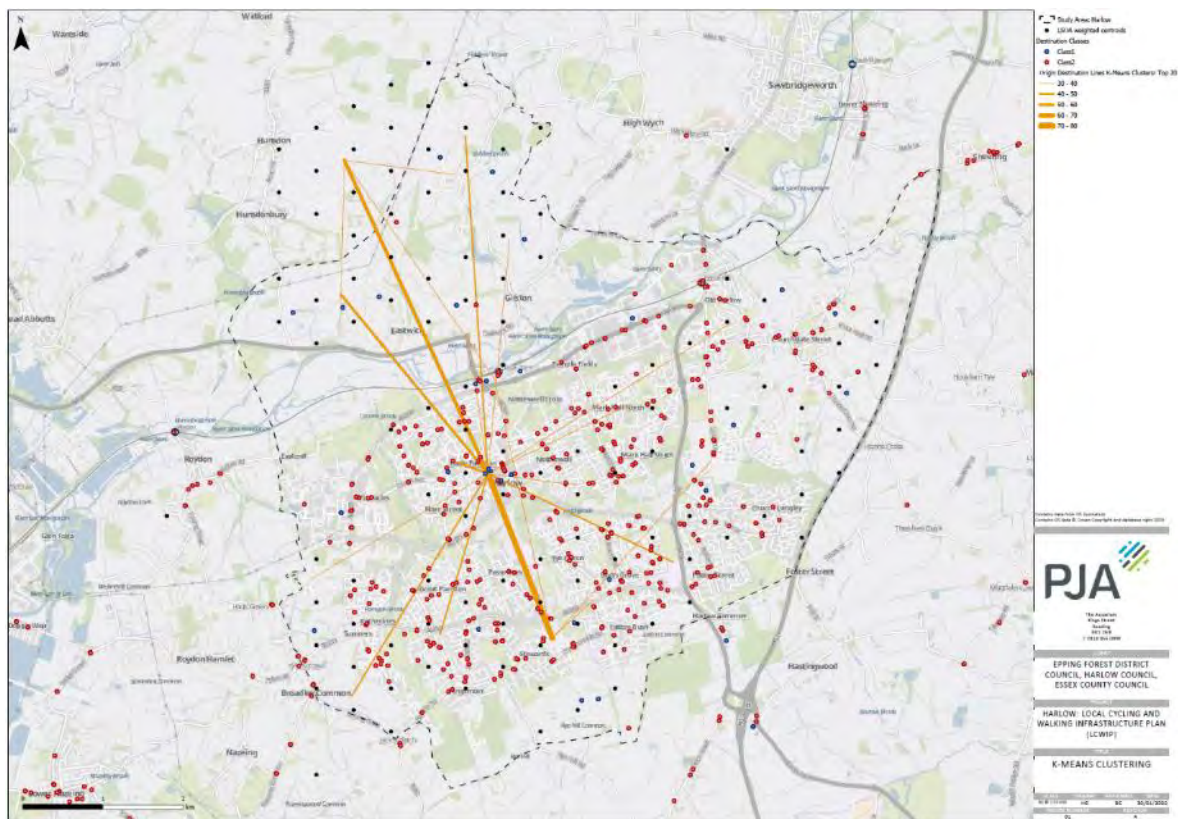


Figure 6-3: Top 20 clustered ‘Everyday’ desire lines



**Study Area Near Harker Government College (near work)** Top 20

Go Dutch Top 20

Origin-Destination Line Clusters Top 20

Legend:

- 10 - 12
- 12 - 14
- 14 - 15
- 15 - 18
- 18 - 21
- 24 - 30
- 30 - 35
- 35 - 42
- 42 - 54
- 54 - 63
- 63 - 73
- 73 - 83
- 83 - 93
- 93 - 103
- 103 - 113
- 113 - 123
- 123 - 133
- 133 - 143
- 143 - 153
- 153 - 163
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- 663 - 673
- 673 - 683
- 683 - 693
- 693 - 703
- 703 - 713
- 713 - 723
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- 853 - 863
- 863 - 873
- 873 - 883
- 883 - 893
- 893 - 903
- 903 - 913
- 913 - 923
- 923 - 933
- 933 - 943
- 943 - 953
- 953 - 963
- 963 - 973
- 973 - 983
- 983 - 993
- 993 - 1003

Figure 6-4: Combined PCT and 'Everyday' Desire Lines



## 6.3 Triangulation against CAP and PCT

6.3.1 Having combined the PCT and Everyday Trip outputs, these were then triangulated against the proposed Harlow CAP recommended cycle network. The below plan overlays the Top 20 'Everyday' desire lines and Top 20 "Go Dutch" PCT desire lines onto the recommendations of the CAP. The purpose of this exercise was to better understand how the different networks compared and to identify the opportunities for further enhancing the CAP's outputs through the LCWIP.

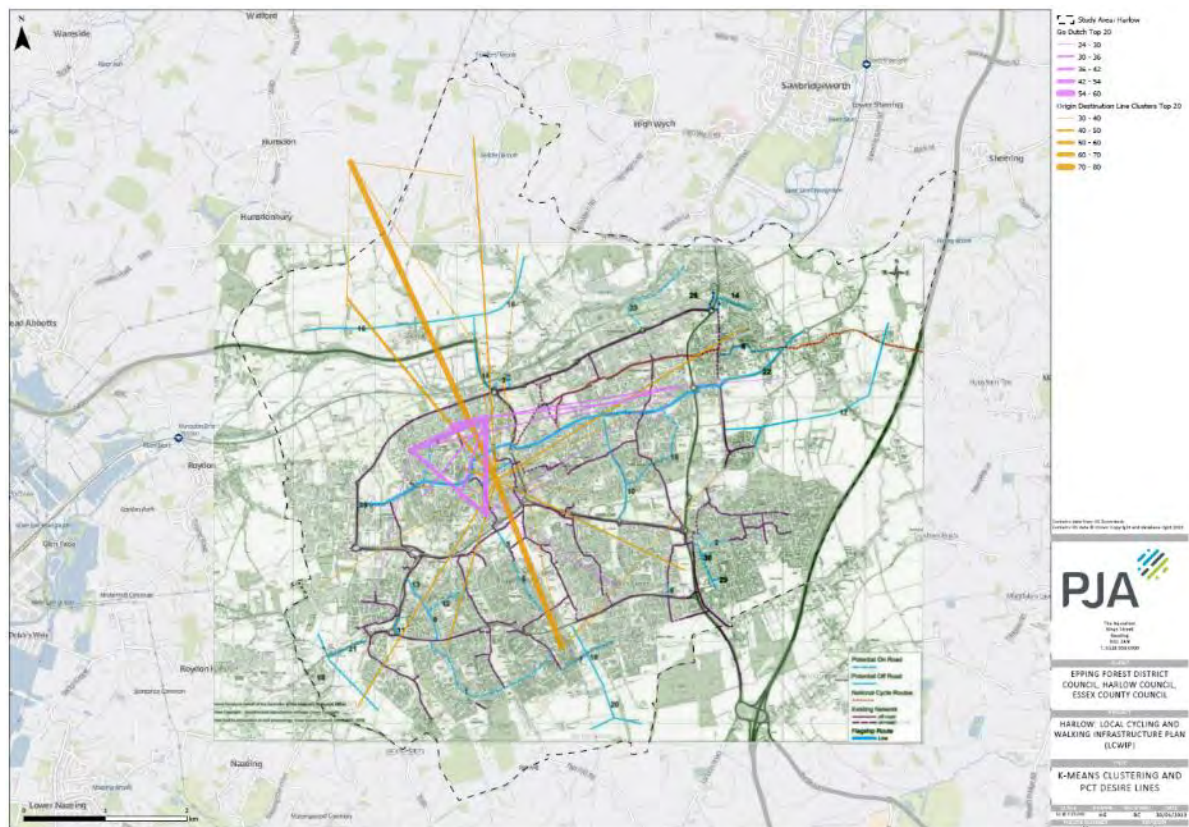


Figure 6-5: Triangulation analysis between desire lines, propensity to cycle tool, and Harlow Cycling Action Plan



## 6.4 Route audits and recommendations

6.4.1 A workshop was held with ECC officers to discuss the relationship between the CAP and LCWIP outputs and to identify the LCWIP cycle routes. A network of nine corridors was identified to be developed further in the cycling element of the LCWIP. A mixture of route types was selected (Figure 6-6), ranging from existing routes that require minor upgrades and maintenance, through to new routes that currently have no cycle infrastructure. This approach would provide ECC with a pipeline of schemes that could be delivered over the LCWIP's ten year project span.

- Route 1: Town Centre orbital
- Route 2: Gilston (west) – Parndon Mill – Town Centre
- Route 3: Gilston (central) – Burnt Mill – Town Centre
- Route 4: Town Centre – First Avenue – Churchgate Street – East of Harlow
- Route 5: Town Centre – Brays Grove – Potter Street
- Route 6: Town Centre – Tye Green – Latton Bush – Latton Priory
- Route 7: Town Centre – Passmores – Staple Tye
- Route 8: Town Centre – Great Parndon – Water Lane
- Route 9: Town Centre – Fourth Avenue - Pinnacles

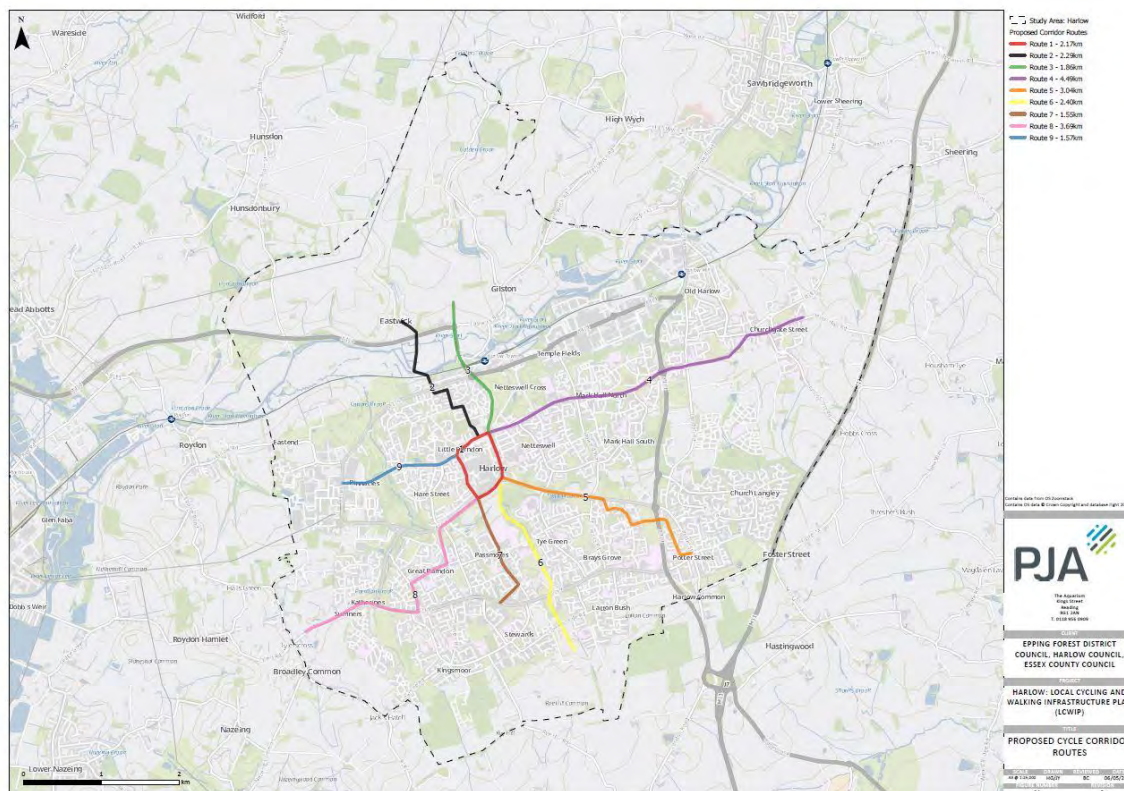


Figure 6-6: Map of recommended LCWIP cycle route network



6.4.2 Each route was audited on-site using the “Route Selection Tool” as set out in the LCWIP guidance. The Route Selection Tool (RST) is an appraisal methodology that allows practitioners to determine the best route to fulfil a particular straight line corridor, referencing against existing conditions and the shortest available route. It considers the six important criteria that determine the quality of a cycling route which are described below. The RST divides routes into shorter sections which should reflect changes in the character and layout of the alignment.

- (1) Directness: Compares the length of cycle route against the equivalent vehicle route with cycle routes that are shorter than the vehicle are scored positively for Directness. Higher scores can be achieved through the introduction of modal filters or routing cyclists through parks/open spaces to provide a more direct connection
- (2) Gradient: Identifies the steepest section of route within the proposed alignment with gradients that exceed either 5% in gradient and/or 50m in length scoring lower
- (3) Safety: Considers vehicle flows and speeds to better understand the exposure of cyclists to vehicular traffic. Routes with either protected cycle facilities or low traffic environments score highest
- (4) Connectivity: Records the number of individual cycle connections into a section of route – routes should aim to have >4 connections per km.
- (5) Comfort: Assesses the space available for cycling and the quality of surfacing with a preference for protected cycle facilities of >3m (bi-directional) or >2m (uniflow).
- (6) Critical Junctions: Provides a number of critical junction design issues including: vehicle flows, protection from vehicular traffic, wide junction splays, and junction geometries.

6.4.3 The RST audit then informs recommendations for improvements along each corridor, with the exception of Route 1, which is to be delivered as part of the Town Centre masterplan. Route 1 is an orbital route around the town centre, recognising the sensitivity to cycling within the pedestrianised town centre streets, and thus the need to provide alternative access to people making cross-town journeys. It should also be noted that LCWIP routes 1, 3, 4, 6 and 9 closely follow the proposed STC corridor alignments which are currently being developed separately. It is assumed that the LCWIP design proposals will be reflected in the final STC design layouts.





6.4.4 The LCWIP's design recommendations for cycling generally follow the below overarching design principles:

- 1 **Junctions** – A majority of major junctions in Harlow use grade-separation which provides subway access for cyclists and pedestrians underneath the main junction. The LCWIP recommends reviewing some of these junctions and exploring opportunities for providing at-grade crossing facilities that would improve the directness of the cycle facilities. These proposals are consistent with those contained in the Town Centre Masterplan which proposes to convert existing major junctions around the town centre to at-grade. The LCWIP also recommends improving the quality of junction design on minor road junctions and in residential areas where the current level of service is generally poor. The recommendation is to use measures which promote pedestrian priority including raised tables and continuous footway treatments which will provide continuous and comfortable crossing facilities. This issue is particularly pertinent around local centres and residential streets within the town – many of the junctions did not provide basic facilities such as dropped kerbs and/or tactile paving. The report also recommends introducing more informal crossings, such as parallel walking and cycling crossings, to connect existing off-road paths in the town. The below examples provide illustrate of high quality crossing points which have incorporated cycle access and public realm improvements.



Figure 6-7: Parallel Pedestrian + Cycle Crossing, Lea Bridge Road (left), and dedicated cycle signalised crossing (Cycleway 6, Kings Cross)

- 2 **Low Traffic Neighbourhoods (LTNs)**: The LCWIP includes recommendations for the installation of several LTNs in the town to further reduce flows of through-vehicular traffic in predominantly residential areas. The key objectives of installing the LTNs is to improve conditions for walking and cycling by reducing interaction of vehicular traffic. The proposed LTNs would be created through the installation of modal filters which would remove vehicular traffic but maintain through access for bicycles, local buses and emergency service vehicles. The LTN approach is an increasingly familiar tool in active travel strategies and is particularly complementary to the LCWIP approach as both adopt an area-wide focus in improving conditions for active travel. Local Authorities are increasingly developing Low Traffic Neighbourhood strategies as complementary

documents to their LCWIPs which provides those authorities with a much more comprehensive approach to promoting active travel. LTN strategies typically prioritise the delivery of LTNs based on multi-criteria assessments of individual neighbourhoods. The structure of the strategies varies depending on the local authority's requirements, for example deliverability has been the key motivation for some authorities which have focussed on the design feasibility on LTNs, whilst other authorities have focussed on the health and environment impacts of LTNs and based their prioritisation around these factors. LTNs have been installed by many authorities in their 2020 Emergency Active Travel Fund responses, including Birmingham, LB Lambeth and LB Waltham Forest. The below images provide different exemplar layouts for introducing modal filters as part of wider public realm improvements.



Figure 6-8: Combined informal crossing and modal filter (Downs Road, Hackney), and Modal Filter installed with cycle access (Grove Road, LB Waltham Forest)

- 3 **Avoid Shared Use** – where practicable, the LCWIP recommends removal of existing shared use paths and introduction of improve separated facilities. There are many examples in the town of shared use facilities which do not provide sufficient width to be comfortable for either pedestrians and cyclists. Shared Use paths are increasingly recommended against as a design approach and the recently released LTN 1/20 Cycle Infrastructure has further reinforced this message *'In urban areas the conversion of a footway to shared use should be regarded as a last resort. Shared use facilities are generally not favoured by either pedestrians or cyclists, particularly when flows are high'* (LTN 1/20, Cycle Infrastructure Design, p.67). The LCWIP makes recommendations for widening existing facilities where feasible to provide the required width for comfortable facilities on several routes. The below examples illustrate the importance of provide clear and continuous cycle tracks, but also shows how these can be co-ordinated with pedestrian footways if space is limited.



Figure 6-9: Blackhorse Lane (left) has installed narrow cycle tracks alongside the existing footway with a small kerb upstand, and Cycleway 6 (right) has used light segregation to provide cycle tracks in narrower sections of the route

- 4 **Maintenance and De-Cluttering** – this was raised as a key issue during stakeholder engagement sessions and was also observed by the project team. This is a particular issue on older sections of cycle path where the surface quality had started deteriorating. The LCWIP also recommends the removal of street clutter such as pedestrian guardrailing and bollards which reduces the effective width of cycle facilities and also reduce access for mobility impaired users of the facilities. The examples below highlight the importance of designing legible and clearly designed cycle facilities.



Figure 6-10: Bi-Directional cycle track (Blackfriars Bridge), and Leyton Road crossover treatment at side-entry junction (right)

6.4.5 The cycling design recommendations are presented in the appendices.





## 7 Stage 4: Planning for Walking





## 7.1 Overview of process

7.1.1 Similarly to Stage 3, the purpose of Stage 4 is to develop a Network Plan of walking measures accompanied by a series of infrastructure improvements. The main focus of the design outputs is to improve and extend the quality and coverage of the existing walking network. Figure 7-2 illustrates how the development of the LCWIP walking network is based upon the identification of 'Core Walking Zones' (CWZ) which represent areas that are expected to contain key walking trip generators and therefore likely to create higher levels of footfall. As well as reviewing walking conditions within the CWZ itself, the site audits review conditions on the key walking routes into the CWZ. This ensures that the wider connectivity and permeability of the CWZs is considered during the network development.

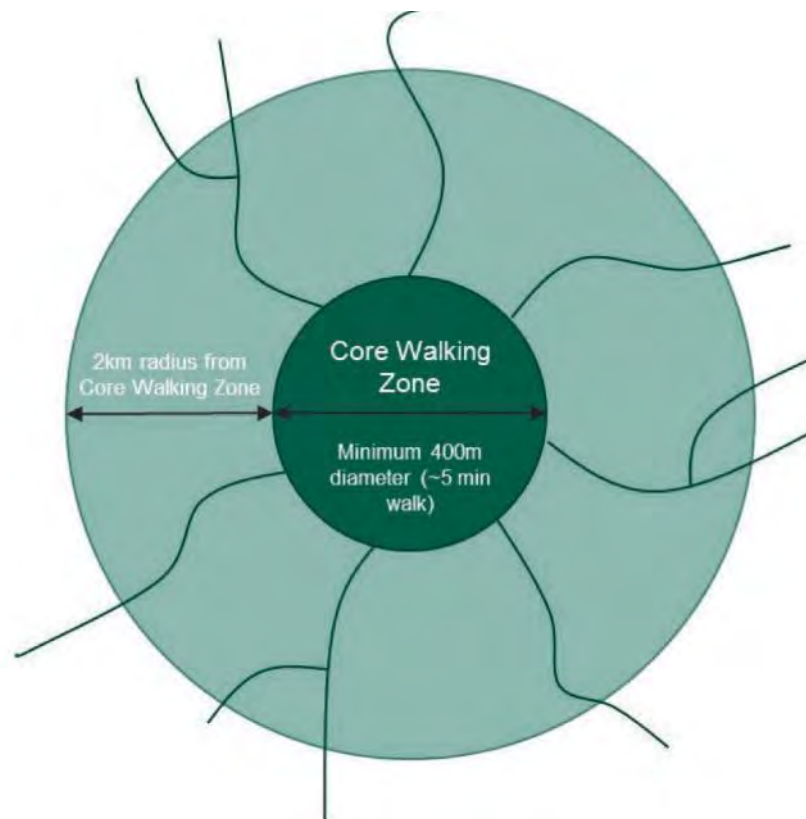


Figure 7-2: Illustration of Core Walking Zones and key walking routes

7.1.2 The process for planning for walking involved the following steps:

- Origin-Destination Clustering
- Core Walking Zone selection
- Stakeholder workshop; and
- Stakeholder audits and recommendations.



## 7.2 Core Walking Zone selection

7.2.1 The destinations identified in Stages 2 and 3 were used to determine the location of the LCWIP Core Walking Zones (Core Walking Zones) as shown in Figure 7-3. Key Employment Zones (e.g. Templefields) were split into component destinations to provide greater granularity within the analysis at the request of the core project team. The proximity and density of destinations were analysed using a Geographic Information System (GIS) software process called the Kernel Density Method. This method reviews the distribution of the Destinations relative to each other and identifies clusters around the areas with the highest concentration of destinations. This approach is consistent with the LCWIP methodology that recommends identifying key clusters of walking destinations in order to develop walking zones.

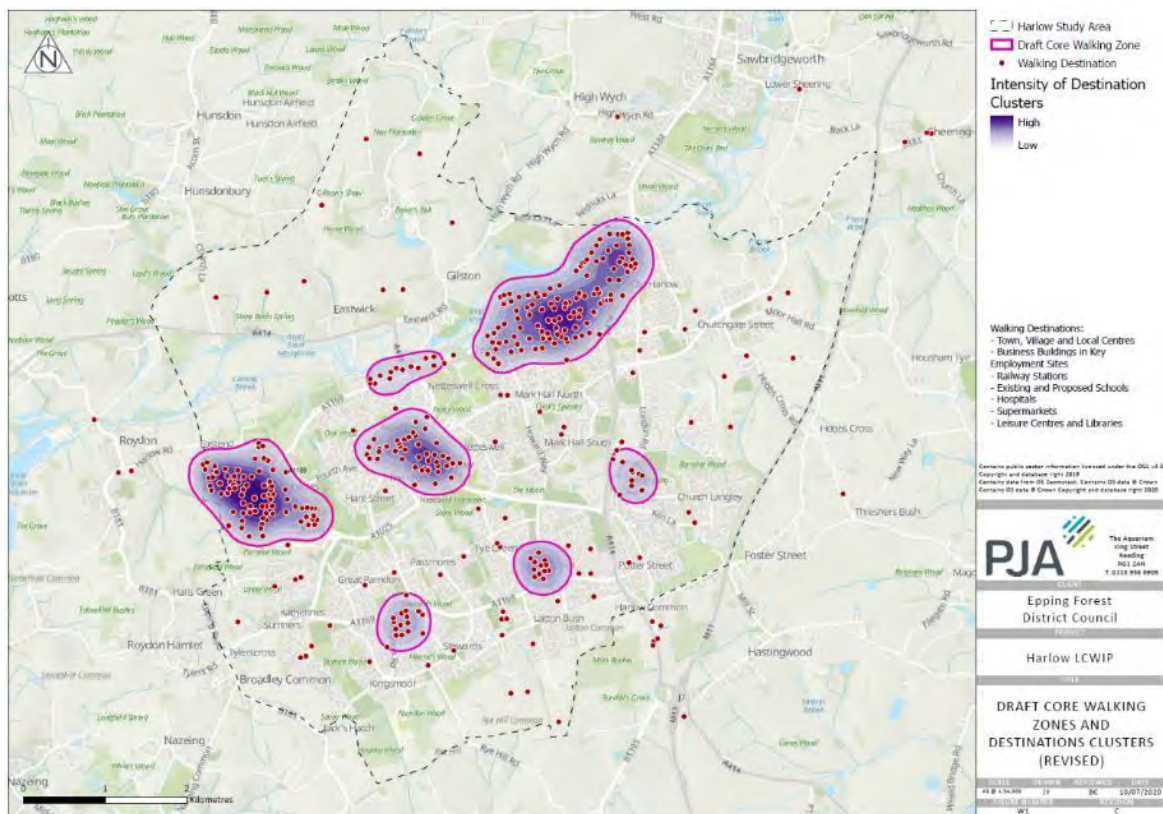


Figure 7-3: Destination clustering analysis to identify draft Core Walking Zones

7.2.2 The Kernel Density exercise identified an initial long list of CWZs which were presented to the core project team:

- Pinnacles
- Town Centre
- Temple Fields
- Burnt Mill



- Church Langley
- Bush Fair
- Staple Tye

7.2.3 The Core Project team acknowledged that the number of Core Walking Zones for further study would need to be reduced to three zones in order for the LCWIP to produce manageable outputs. The DfT process guidance expects that LCWIPs are living documents, and therefore this long list of zones would be retained for consideration at later phases of LCWIP-making (or more locally-targeted LCWIPs). A prioritisation exercise was therefore performed to identify the preferred walking zones for site auditing which was based upon scoring against four core indicators which were agreed with the Project's Core Working Group. A 400m catchment area was applied around the boundary of each of the walking zones for the prioritisation.

- Walkability Potential – records how many people live and/or work in the catchment and therefore considers how many residents would benefit from walking improvements in an area. Walkability Potential was given a higher weighting compared to Destination Potential as home addresses are a more stable and consistent data source. The ongoing impacts of COVID-19 also increase the likelihood of prolonged home working which further justifies the need for increased weighting of this category.
- Destination Potential – how many different types of destination there are in the catchment area which provides an indication of the number of walking trips that could be generated by each zone. This weighting against employment also reflects the journey purpose split of walking in the National Travel Survey, where commuting and business is a very small proportion of overall journey purpose for walking, while there is a much bigger focus on purposes that are more likely to be supported by a resident population. i.e. leisure, education, education escort, and retail. The destination potential took the original destination points used in the clustering analysis, and segmented them to look at three different destination types:
  - Employment
  - Education
  - Retail and Leisure
- Health Inequality – assesses the extent of health deprivation that exists in each catchment and therefore how improved walking facilities could help reduce health inequality through increased exercise and active travel. The health inequality score was the only element that diverges from the data set used over the course of the LCWIP. This scoring mechanism used the specific health inequality deprivation domain from the MHCLG dataset, and combined the scores over each LSOA within the CWZ based on the proportion of each LSOA within the CWZ.
- Policy Fit – reviews how closely aligned each zone is against three key areas of policy focus: development, strategic allocations, and sustainable transport corridors. The policy fit score took



a combined score based on the amount of overlap between each CWZ catchment and a 400m buffer around the development site allocations (more than 10 units), strategic allocations, and sustainable transport corridors. This included the town centre AAP boundary as strategic allocation to reflect its importance to the town as a whole.

7.2.4 Table 7-1 summarise the performance of each Core Walking Zone against the Prioritisation Factors. The town centre scored highest on three of the four scores, coming second to Bush Fair on health inequality. Bush Fair and Staple Tye ranked in the top four on all indicators except Policy Fit, where they scored poorly.

| Draft CWZ Name | Walkability Potential (WP) | Destination Potential (DP) | Health Inequality (HI) | Policy Fit (PF) | Combined Score |
|----------------|----------------------------|----------------------------|------------------------|-----------------|----------------|
| Pinnacles      | 0.27                       | 0.24                       | 0.36                   | 0.46            | 1.33           |
| Town Centre    | 1                          | 1                          | 0.98                   | 1               | 3.98           |
| Temple Fields  | 0.56                       | 0.79                       | 0.37                   | 0.35            | 2.11           |
| Burnt Mill     | 0.13                       | 0.13                       | 0.68                   | 0.34            | 1.27           |
| Church Langley | 0.21                       | 0.25                       | 0.13                   | 0.13            | 0.72           |
| Bush Fair      | 0.45                       | 0.51                       | 1                      | 0.23            | 2.19           |
| Staple Tye     | 0.48                       | 0.35                       | 0.89                   | 0.21            | 1.93           |

Table 7-1: Core Walking Zone selection scoring by core indicators

7.2.5 Sensitivity testing was then undertaken to determine how much the scoring and rankings would be affected by different weightings applied to the core indicator score (Table 7-2). This sensitivity test considered 15 different weighting profiles, either weighting one, two or three factors, with an exhaustive permutation of weightings. In the overall score, the Town Centre still ranked highest in all 15 weightings and Bush Fair appeared in the top three in all cases as well. However, there were four weighting scenarios where Templefields was replaced by Staple Tye. These were in the scenarios where health inequality received a higher weighting, or where destination potential received a lower weighting in comparison to the other factors.

Table 7-2: Sensitivity test of CWZ selection by the variability of overall score ranking by varying score weightings

| Rank Counts    | 1  | 2 | 3 | 4  | 5 | 6 | 7  |
|----------------|----|---|---|----|---|---|----|
| Pinnacles      | 0  | 0 | 0 | 0  | 8 | 7 | 0  |
| Town Centre    | 15 | 0 | 0 | 0  | 0 | 0 | 0  |
| Temple Fields  | 0  | 7 | 4 | 4  | 0 | 0 | 0  |
| Burnt Mill     | 0  | 0 | 0 | 0  | 7 | 8 | 0  |
| Church Langley | 0  | 0 | 0 | 0  | 0 | 0 | 15 |
| Bush Fair      | 0  | 8 | 7 | 0  | 0 | 0 | 0  |
| Staple Tye     | 0  | 0 | 4 | 11 | 0 | 0 | 0  |

7.2.6 Having previously committed to three CWZs, it was clear that the closeness of scoring between Staple Tye and Bush Fair meant that the below four CWZs were selected for further study:

- Town Centre
- Templefields





- Bush Fair
- Staple Tye

7.2.7 These four areas provide a balanced approach for Harlow: the town centre being a mixed use environment, Templefields being an aggressively zoned employment cluster but with big box retail attached and links to residential hinterlands, and the last two being local centres serving a much more residential catchment. It's worth noting that all four priority working zones now align to the four original town and local centres of the 1952 masterplan.

### **7.3 Stakeholder workshop**

- 7.3.1 The selection of the proposed core walking zones was presented to the Harlow Regeneration Working Group in August 2020. The process of sifting was understood however the exclusion of The Stow and Old Harlow from the analysis was queried by the group. The exclusion of these areas was due to the lower number of destinations in the area, particularly in terms of diversity of destinations. It was explained to the group that the extents of the proposed core walking zones was flexible and that the proposed walking routes would extend where necessary beyond the zone's extents. On this basis, additional walking routes were included to connect into Old Harlow and The Stow.
- 7.3.2 The stakeholder group also raised the previous work undertaken on reviewing the pedestrian infrastructure throughout Harlow's smaller "Hatches", which are the local shopping parades in residential neighbourhoods.



## 7.4 Walking audits

7.4.1 Having confirmed the Core Walking Zones, individual walking routes were identified for each zone which were then audited on site using the Walking Route Audit Tool methodology set out in the DfT LCWIP process guidance. The walking routes for each zone radiate out from the centre and connect out into surrounding areas based on a 20mins walking distance. Key walking routes were identified ideally radiating in all directions from the Core Walking Zones to ensure that the walking network catered for desire lines in all directions surrounding the zones.



Figure 7-4: LCWIP Core Walking Zones and Key Walking Routes

7.4.2 Walking audits were undertaken by members of the Core Client Group with assistance and guidance provided by PJA and local residents. The Walking Route Audit Tool (WRAT) is divided into several categories for analysis and uses a Red Amber Green (RAG) scoring technique:

- (1) Attractiveness: Considers the impact of maintenance, traffic noise, pollution and fear of crime upon the attractiveness of a route
- (2) Comfort: Reviews the amount of space available for walking and the impact of obstructions upon walking such as footway parking, street clutter and staggered crossings



- (3) Directness: Assesses how closely pedestrian facilities are aligned with the natural desire line and accommodating the crossing facilities are for pedestrians to follow their preferred route
- (4) Safety: Focusses on the impact of vehicle volumes and speeds and interaction with pedestrians
- (5) Coherence: Focuses on the provision of dropped kerb and tactile information for pedestrians

## 7.5 Walking audit recommendations

- 7.5.1 The findings of the walking audits were translated into design measures for each of the four walking zones. The design measures were grouped by area and also by the below design themes which provides the option of delivering the design measures either by zone or by addressing a town-wide theme across Harlow. For example, the LCWIP identifies many sites across the town which lack tactile information and/or dropped kerb provision - it might be more logical for ECC to undertake a town-wide approach to this issue rather than zonal. Some elements may also be delivered separately with the wider area in which they sit if this provides efficiencies, i.e. where they align to Sustainable Transport Corridors or LCWIP Cycle Route packages.

**Junction Treatment:** Identified location which require new crossing facilities or an upgrade of the existing facilities with particular focus on existing roundabouts in the town. There were many locations in the town where crossings were not provided on desire lines and this issue was further compounded by roundabouts which encouraged free-flowing vehicle movements and therefore made crossing more difficult. The images below from Brighton and London exemplify good practice of providing crossings on desire lines through major junctions.



Figure 7-5: Seven Dials Brighton (right), and Victoria Street Diagonal Crossings (London)

**Missing Dropped Kerb/Tactile Information:** Locates crossings which are either missing or have substandard provision of dropped kerb and/or tactile information. This was a particular issue in residential areas where missing facilities combined with wide splayed junctions cumulatively undermined the cohesiveness and walkability of walking routes. The design minimum at these locations is to provide dropped kerbs and tactile information to enable safe crossing of the junctions, however a more transformative approach should be considered which upgrades the whole design of junctions to design continuous footways across junctions with much reduced corner radii. This will not only improve continuity and comfort, but will also prioritise pedestrian movements across these junctions.



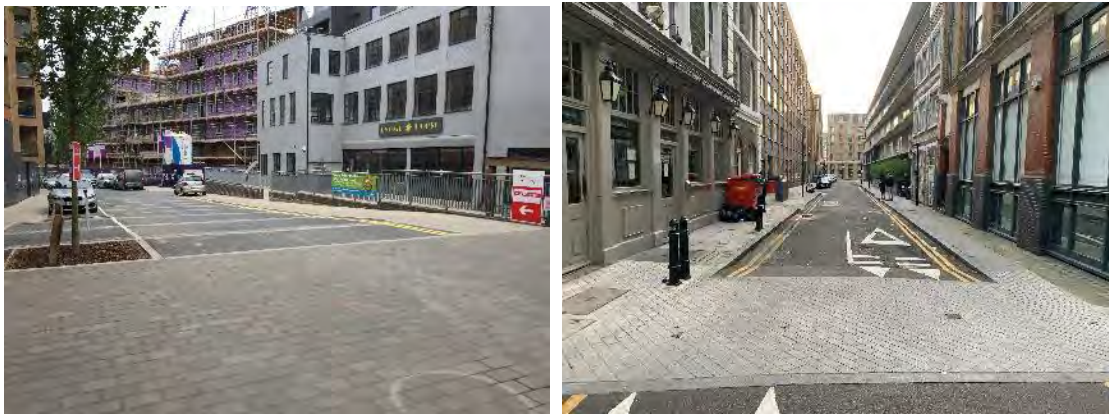


Figure 7-6: Junction crossover treatment (Blackhorse Lane), and Willow Street with recently installed continuous footway (right)

**Missing Footway:** Recommends sites where a new footway should be installed mainly in residential areas or open spaces. A basic requirement of the LCWIP and developing the walking networks is filling gaps in the existing provision of pedestrian footways – particularly where there is evidence of demand for using an alternative alignment. The two examples below are both examples where there is clear demand for facilities and also where the existing provision is particularly poor.



Figure 7-7: Pedestrian Desire Line towards Velizy Avenue (left), and sub-standard footway provision in Templefields

**De-Cluttering:** Focussed on sites where street clutter, such as pedestrian guardrailings or bollards, reduces the effective width of either pedestrian and/or cycle facilities. Clutter on the footways also increases crossing distances and moves pedestrians away from the desire lines – de-cluttering will enable more effective and intuitive routes for pedestrians to follow. The below examples illustrate clutter-free and attractive walking routes that have positively used the space to include vegetation and other street features in the space previously occupied by clutter.

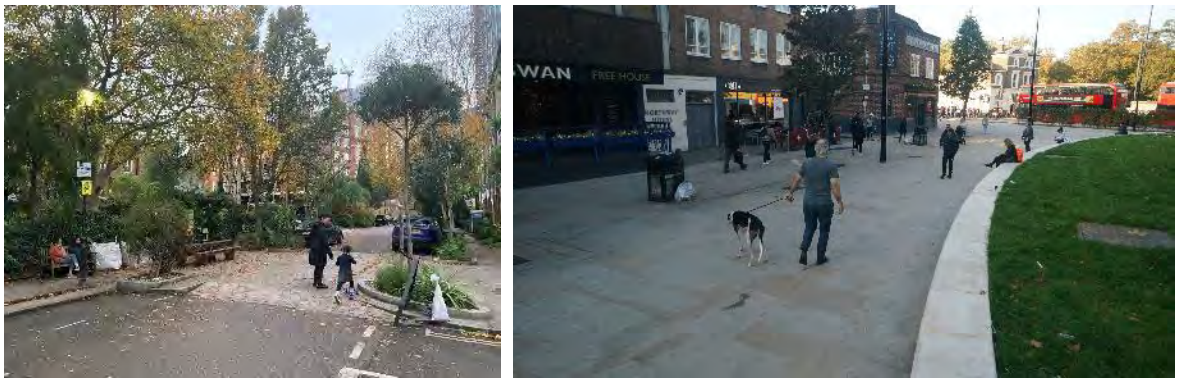


Figure 7-8: Bonnington Square (left) and Highbury Gyratory Removal (right)

**Maintenance:** Focussed on maintenance issues mainly around surface quality, lack of lighting, and vegetation overgrowth. This was a particular issue on sections of footway located away from carriageway where the existing path is unlit and not clearly defined. The ‘off-carriageway network’ is a key strength of Harlow’s new town layout and the recommendation is to enhance these routes by providing continuous lighting and wayfinding, as well as general maintenance, to increase the overall attractiveness of the routes.



Figure 7-9: Bespoke historic wayfinding (Dulwich Village) and sympathetic uplighting of pedestrian route (Eagle Place)

7.5.2 The walking zones and audit findings are presented in the appendices.



## 8 Stage 5: Prioritisation





## 8.1 Prioritisation

- 8.1.1 The purpose of the Prioritisation stage is to establish a prioritised programme for the delivery of the walking and cycling measures identified in Stages 3 and 4 of the LCWIP. The prioritised list of measures should aid future network development by outlining the top priority schemes for delivery. The results can also be used as a mechanism for funding applications or seeking developer contributions towards new walking and cycling infrastructure. As noted previously, LCWIPs are considered to be 'live' documents by the DfT and local authorities therefore should consider updating/revising the prioritisation table to reflect latest developments.
- 8.1.2 The format of the Prioritisation for the HGGT LCWIP was confirmed with ECC colleagues to ensure that the format was consistent with their previous LCWIPs. On this basis, the measures were prioritised as follows:
- (1) Cycling Prioritisation: ECC has developed an Advanced Scheme Design (ASD) multi-criteria analysis which has been used in their previous LCWIPs. The ASD assesses each LCWIP Cycle Route against a series of objectives to produce a prioritisation score which then enables ranking of the LCWIP cycle routes for delivery.
  - (2) Walking Prioritisation: The walking measures were prioritised based on the exercise completed in Stage 4 with the immediate focus on delivering the recommended measures in the four priority Walking Zones.

## 8.2 Cycling prioritisation

- 8.2.1 Prioritisation of cycling interventions followed the ASD multi-criteria analysis used by ECC in the previous Essex LCWIPs. 34 x routes are currently contained in ECC's ASD programme (inclusive of the nine Harlow routes). The ASD considers the likely cost of infrastructure and deliverability, including complementary funding streams, and assign these into tranches of short (0-4 years), medium (4-7 years) and long term (7+ years) implementation. The ASD is based upon the below themes:
- (1) ECC Organisation Objectives: Focussed on the achievement of ECC's objectives around Economic Growth, Quality of Life, and Effective Delivery.
  - (2) DfT LCWIP Objectives: Evaluates the extent to which proposals will increase levels of cycling and reduce the rate of collisions involving cyclists
  - (3) Effectiveness: Considers how many people would benefit from a new cycle route and the extent to which the route aligns with other work programmes





- (4) Deliverability: Assesses the likely cost and feasibility of delivering the proposed measures with consideration for political feasibility

8.2.2 Table 8-1 summarises the results for each route against the key ASD themes. The 'Overall ECC ADC Ranking' scores are not necessarily final and maybe subject to change.

| LCWIP Route                     | ECC Organisation Objectives (%) | DfT LCWIP Objectives (%) | Effectiveness (%) | Deliverability (%) | HGGT LCWIP Ranking (n) | Overall ECC ASD Ranking (out of 34) |
|---------------------------------|---------------------------------|--------------------------|-------------------|--------------------|------------------------|-------------------------------------|
| 1: Town Centre Orbital          | 95                              | 100                      | 95                | 73                 | 1                      | Joint 5 <sup>th</sup>               |
| 2: Eastwick to Town Centre      | 80                              | 50                       | 75                | 73                 | 9                      | 34                                  |
| 3: Gilston to Town Centre       | 75                              | 60                       | 80                | 93                 | 7                      | 23                                  |
| 4: East Harlow to Town Centre   | 95                              | 100                      | 90                | 73                 | 2                      | Joint 5 <sup>th</sup>               |
| 5: Potter Street to Town Centre | 75                              | 90                       | 70                | 93                 | 6                      | 22                                  |
| 6: Latton Priory to Town Centre | 90                              | 80                       | 85                | 87                 | 3                      | 11                                  |
| 7: Staple Tye to Town Centre    | 75                              | 70                       | 70                | 93                 | 8                      | 25                                  |
| 8: Water Lane to Town Centre    | 90                              | 80                       | 85                | 80                 | 4                      | 14                                  |
| 9: Pinnacles to Town Centre     | 80                              | 70                       | 80                | 100                | 5                      | 19                                  |

Table 8-1: Advanced Scheme Design: HGGT LCWIP Results

### 8.3 Walking prioritisation

- 8.3.1 The prioritisation of walking zones follows on from the Prioritisation exercise in Stage 4 with the recommendation that the four LCWIP Walking Zones prioritised for delivery before developing measures for the remaining Core Walking Zones that were identified in the long-list. It was confirmed with ECC colleagues that the Walking interventions would be prioritised to align with the cycling prioritisation tranches, i.e. following the Advance Scheme Design process.
- 8.3.2 As the initial CWZ process only identified walking zones for the purpose of identifying the highest priority interventions, it is recommended that future funding programmes concentrate on the remaining Core Walking Zones of Pinnacles, Burnt Mill, and Church Langley. This should also incorporate on areas (/Hatches) outside of the waking zones but still represent cluster of destinations where short trips should be optimised for walking and cycling. There are also synergies between the local Hatches and Low Traffic Neighbourhoods (LTN), some of which have been identified in the LCWIP Cycling measures. It is therefore recommended that a town-wide LTN study is undertaken to complement both the LCWIP walking and cycling proposals.



- 8.3.3 It is recommended that within each walking zone package, specific measures should be considered for concurrent delivery with the LCWIP cycling measures and also wider packages such as the Town Centre Masterplan and STCs.

| Walking Zone Package       | 0-4 Years                               | 4-7 Years      | 7+ Years       | Notes   |
|----------------------------|---|----------------|----------------|---|
| Pinnacles                  | Route Identification & Walking Audits   | Design & Build | -              | Early measures delivered by LCWIP Cycle Route 9   |
| Town Centre                | Design & Build                          | -              | -              | -   |
| Temple Fields              | Design & Build                          | -              | -              | -   |
| Burnt Mill                 | Route Identification & Walking Audits   | Design & Build | -              | Early measures delivered by STC workstream        |
| Church Langley             | Route Identification & Walking Audits   | Design & Build | -              | -   |
| Bush Fair                  | Design & Build                          | -              | -              | -   |
| Staple Tye                 | Design & Build                          | -              | -              | -   |
| Local Hatches              | Hatch-Oriented LCWIP study, with audits | Design & Build | Design & Build | Local Hatches aligned to LTNs for delivery        |
| Low Traffic Neighbourhoods | LTN study                               | Design & Build | Design & Build | Some LTNs delivered through LCWIP cycling schemes |

Table 8-2: Prioritisation of core walking zone delivery packages

## 8.4 Stage 6: Integration

- 8.4.1 The recommendations of the LCWIP are integrated with wider work packages by virtue of alignment to the Essex ASD template. However, it is recommended that the findings of this LCWIP are reviewed in detail, to determine synergies with other non-highways programmes, e.g. development, regeneration, and parks improvement.



## Appendix A      Combined LCWIP Mapping Outputs





- Harlow Study Area
- Proposed Core Walking Zone (CWZ)**
- Bush Fair
  - Temple Fields
  - Town Centre
  - Staple Tye
- Proposed Cycle Corridor**
- Route 1 (2.17 km)
  - Route 2 (2.20 km)
  - Route 3 (1.85 km)
  - Route 4 (4.41 km)
  - Route 5 (2.20 km)
  - Route 6 (2.48 km)
  - Route 7 (1.58 km)
  - Route 8 (3.56 km)
  - Route 9 (1.54 km)

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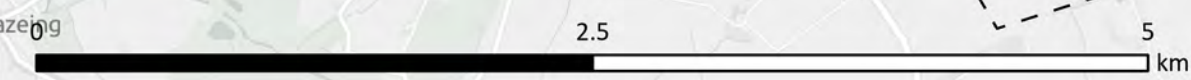
PROJECT

**Harlow LCWIP**

TITLE

**COMBINED LCWIP  
WALKING AND CYCLING  
PROPOSALS**

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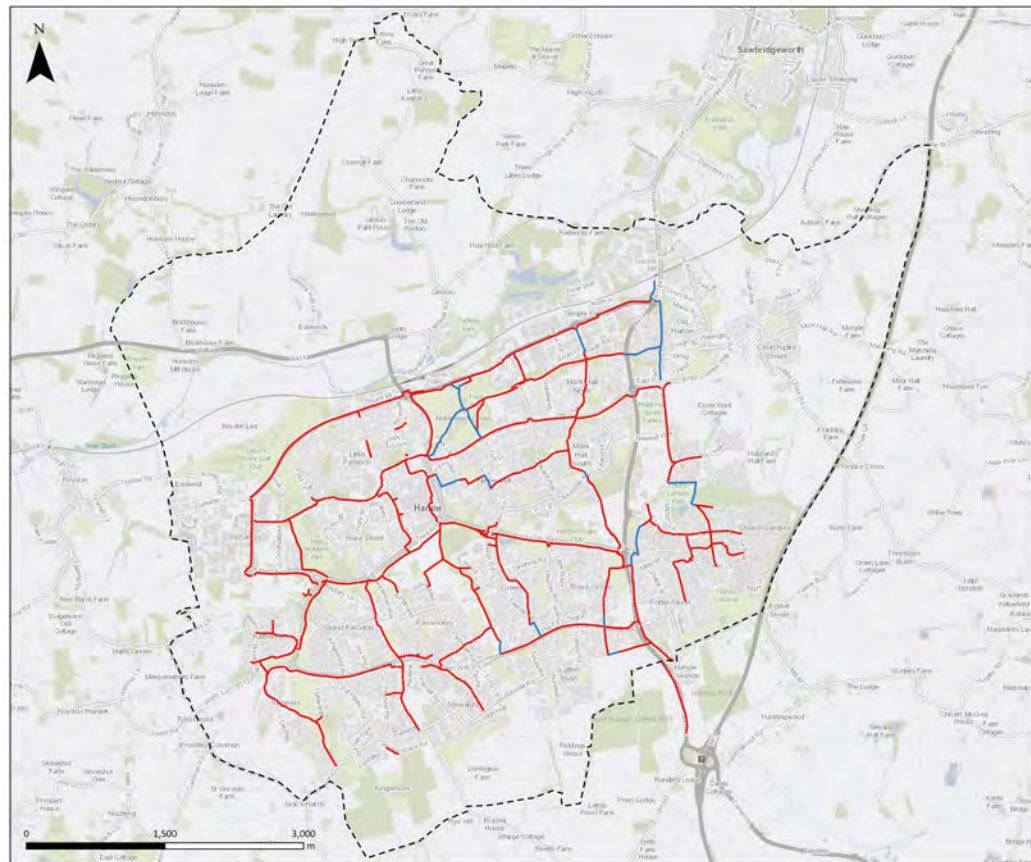






**Study Area - Harlow**  
**Essex Cycle Network in Harlow**

— Off-Road  
— On-Road



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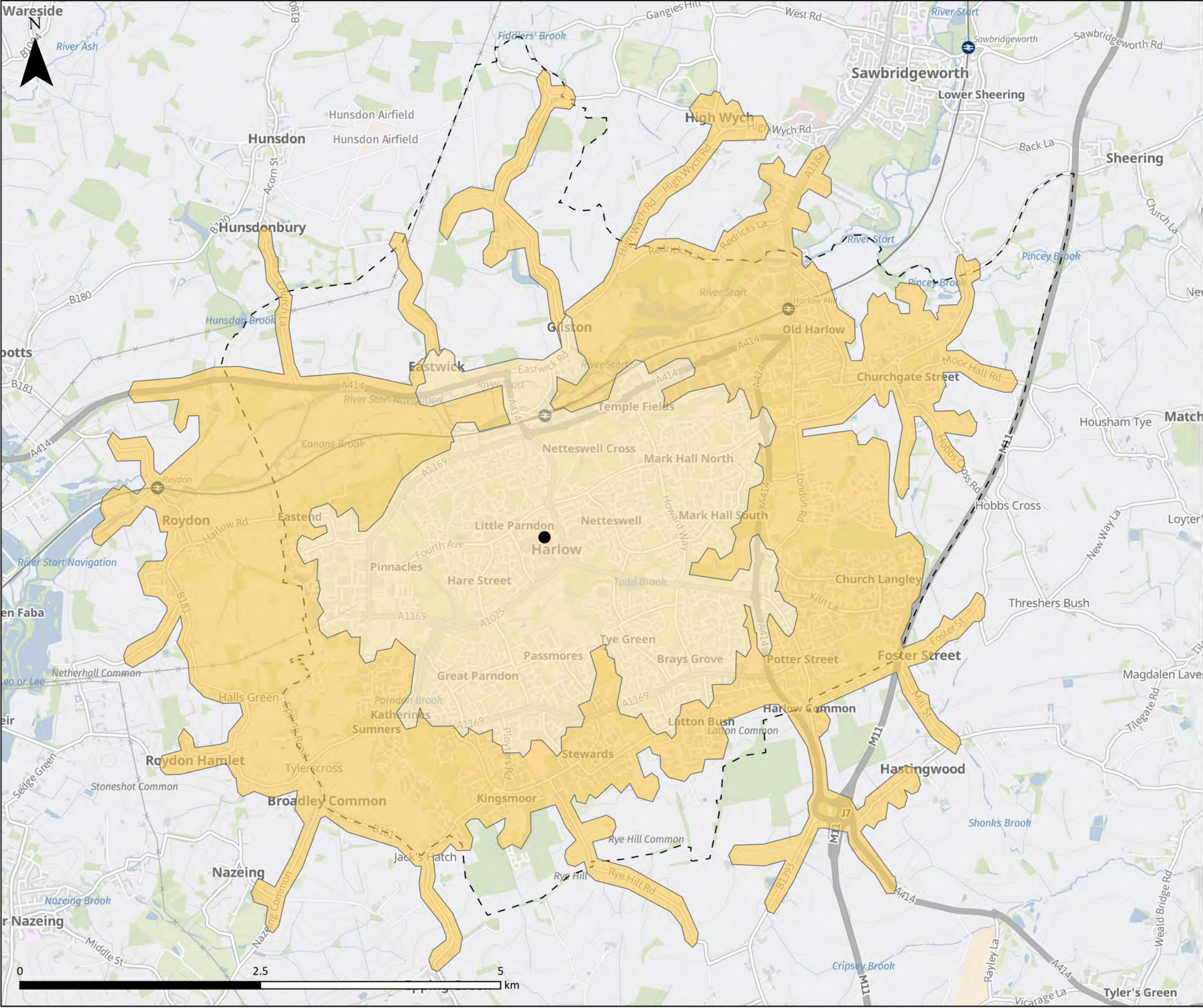
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**Harlow LCWIP**

**EXISTING CYCLE  
INFRASTRUCTURE**

| DATE           | DRAWN      | REVIEWED   | DATE       |
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| 14/12/2019     | JV         | SC         | 15/12/2020 |
| PROJECT NUMBER | 15/12/2020 | 15/12/2020 | 15/12/2020 |
| 01             | A          |            |            |





Harlow Study Area

Harlow Town Centre

Cycle Time

≤10 mins

≤20 mins

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ISOCHRONES

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0 1 2  
Nighting  
km

- Harlow Study Area
- Bus stop
- Lack of bus stop in Templefields area

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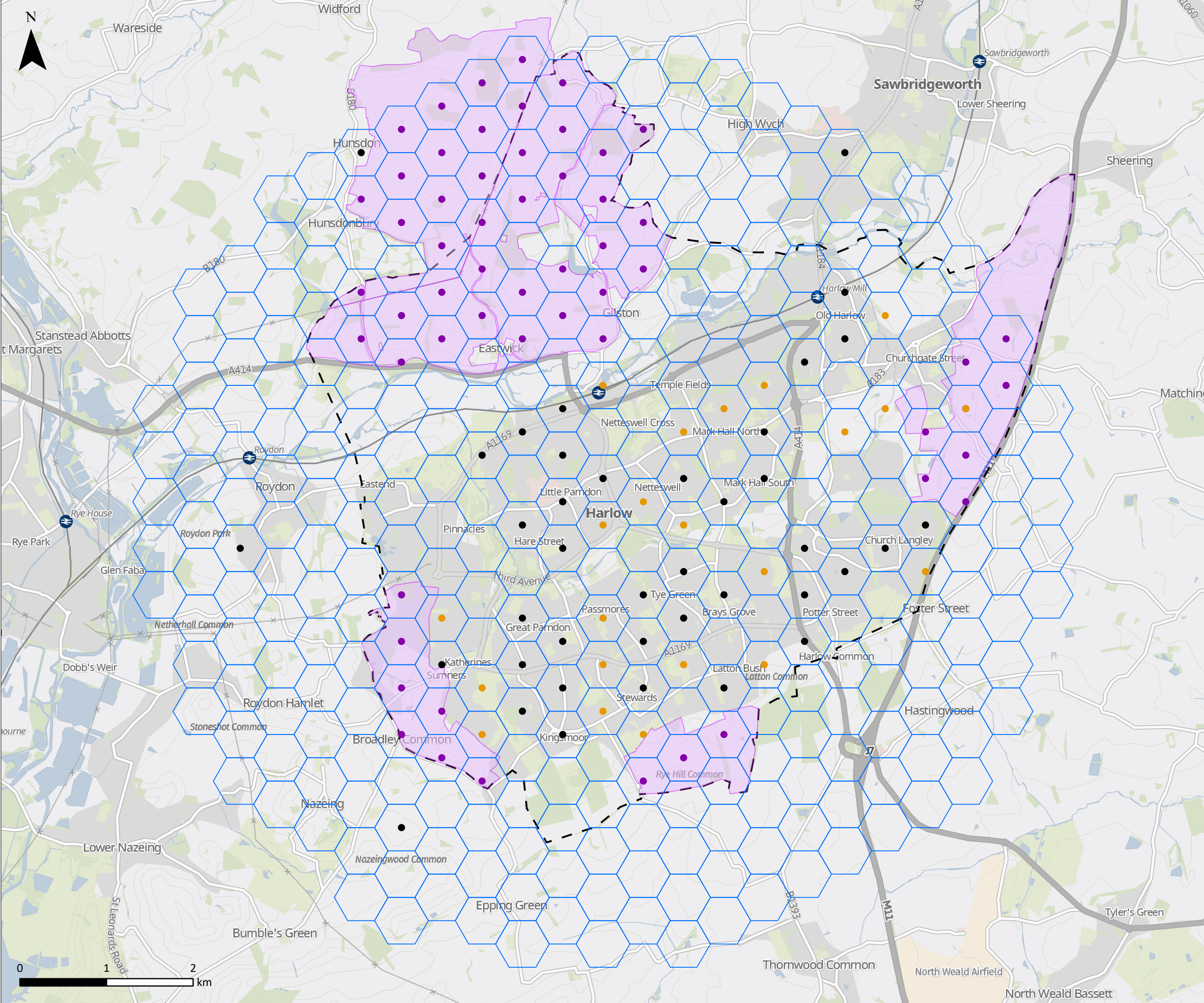
**BUS STOPS IN HARLOW**

SCALE: 1:10,000 DRAWN BY: JC REVIEWED BY: JC DATE: 15/12/2020  
FIGURES: 100% RESPONSE: 100%









- Study Area: Harlow
- 0.25km<sup>2</sup> hexagon grid
  - Future garden villages and town
- Origins
- Centroids within future garden villages and towns
  - LSOA weighted centroids <30m from road network and >100 dwellings
  - LSOA weighted centroids >30m from road network and >100 dwellings

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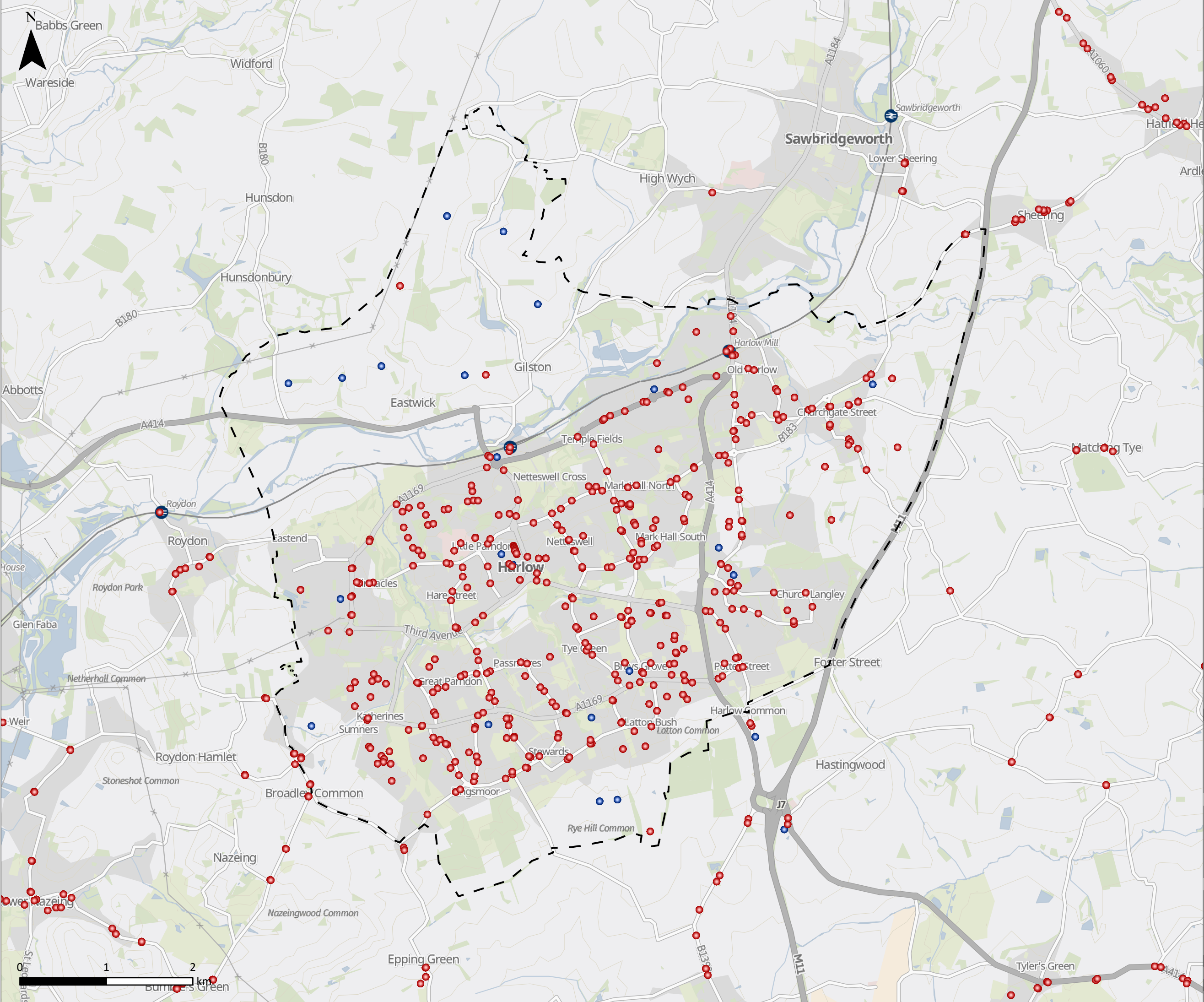
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WALKING INFRASTRUCTURE PLAN  
(LCWIP)

TITLE

STUDY AREA - 5KM BUFFER  
FROM TOWN CENTRE

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| 01            |       | A        |            |





Study Area: Harlow

Destination Classes

- Class 1
  - Town centres
  - Key employment sites
- Class 2
  - Bus stops and Transport interchanges
  - Further education
  - Hospitals
  - Leisure centres and recreation sites
  - Libraries
  - Rail Stations
  - Primary and secondary schools
  - Supermarkets and retail parks

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TITLE

DESTINATION CLASSES

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Study Area - Harlow

Go Dutch Scenario Top 30 - No. Cyclists

≤30

≤36

≤43

≤50

≤56

Transport Infrastructure

Train station

Essex Cycle Network

National Cycle Route

Key Destinations

Hospital

Pharmacy

Doctor

Dentist

Optician

Supermarket

Leisure Centre

Library

Mobile Libraries

Key Employment Area

Nursery

Primary School

Secondary School

Special School

Pupil Referral Unit

Allotment

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TITLE

PROPENSITY TO CYCLE  
(COMMUTING) -  
'GO DUTCH' SCENARIO TOP  
30 STRAIGHT DESIRE LINES

|               |          |          |            |
|---------------|----------|----------|------------|
| SCALE         | DRAWN    | REVIEWED | DATE       |
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- Study Area - Harlow
- Propensity to Cycle - School Travel
- Go Dutch Scenario - No. of Cyclists
- ≤100
  - ≤200
  - ≤300
  - ≤400
  - ≤500
  - ≤600
  - ≤700
  - ≤800
  - ≤900

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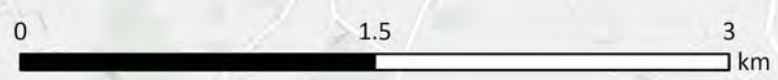
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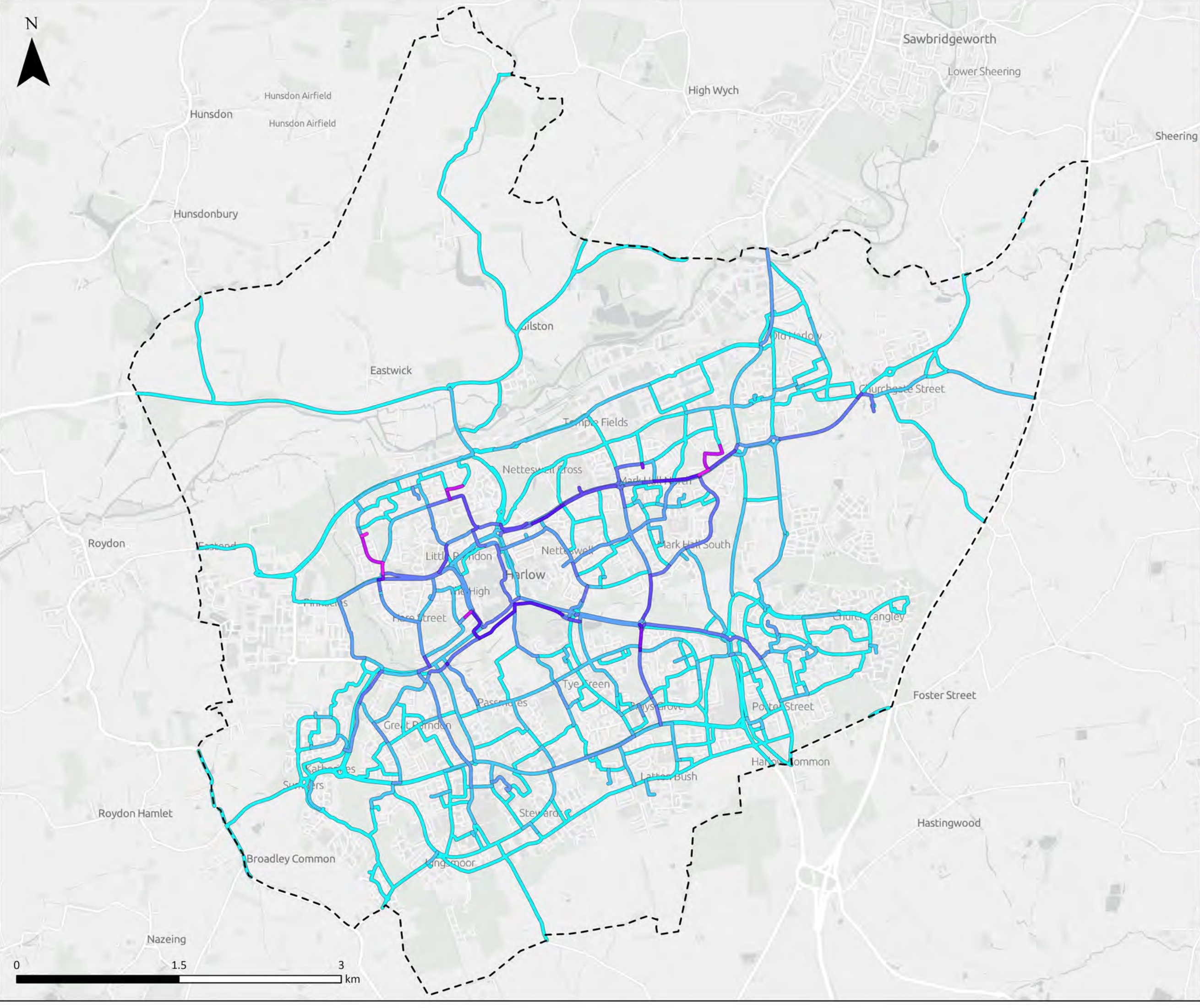
TITLE

PROPENSITY TO CYCLE  
(SCHOOL TRAVEL)  
GO DUTCH SCENARIO  
(APPLIED NETWORK)

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- Study Area - Harlow
- Propensity to Cycle - Commuting
- Go Dutch Scenario - No. of Cyclists
- ≤100
  - ≤200
  - ≤300
  - ≤400
  - ≤500
  - ≤600
  - ≤700
  - ≤800
  - ≤900
  - ≤1000
  - ≤1100

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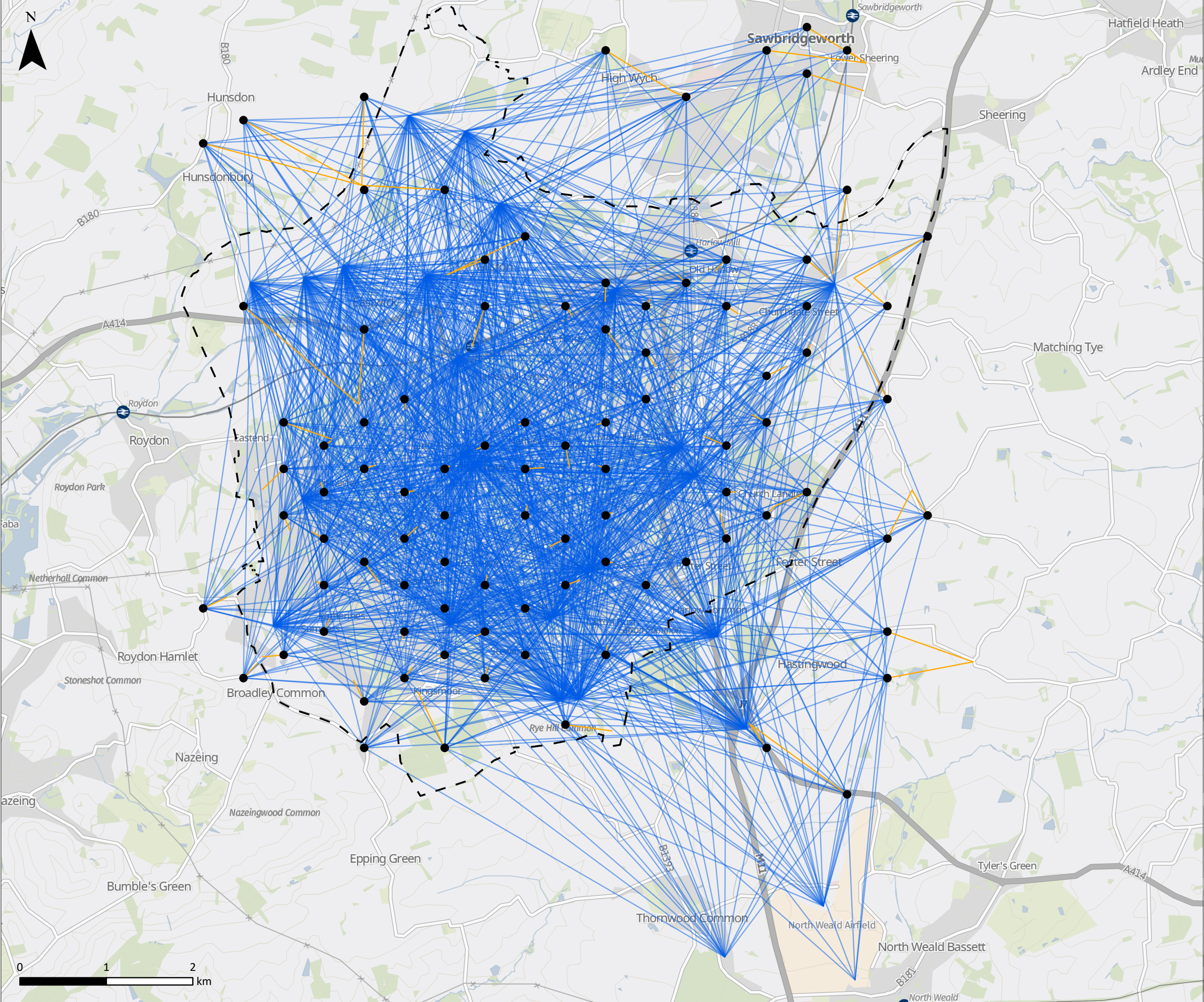
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TITLE

PROPENSITY TO CYCLE  
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GO DUTCH SCENARIO  
(APPLIED NETWORK)

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- Study Area: Harlow
- Hexagon centroid within 30m of road network
- Class 1: Origin-Destination lines
- Class 2: Origin-Destination lines

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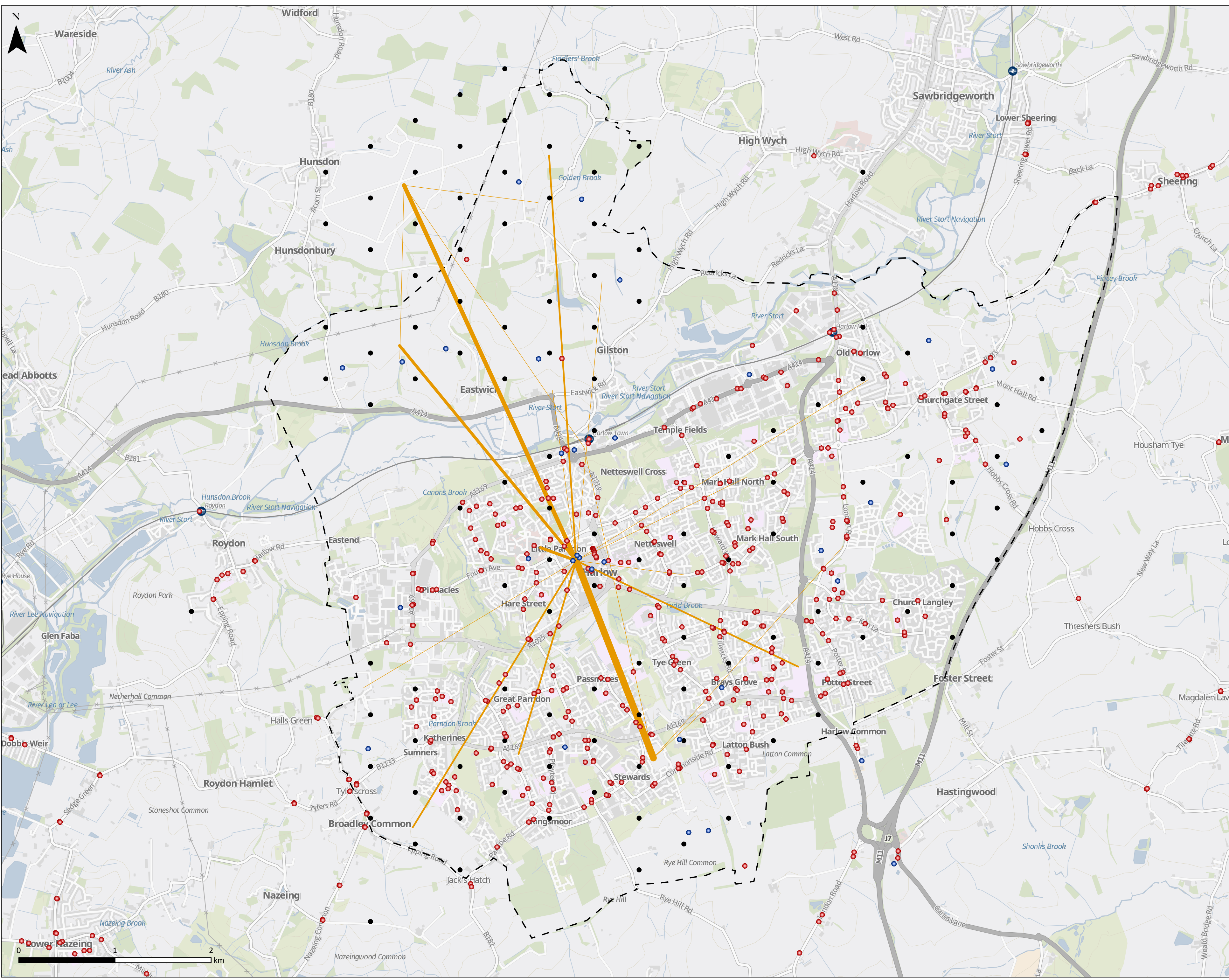
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(LCWIP)

TITLE

ORIGIN - DESTINATION LINES

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| 03            |       | A        |            |





Study Area: Harlow

LSOA weighted centroids

Destination Classes

- Class1
- Class2

Origin Destination Lines K-Means Clusters: Top 20

- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80

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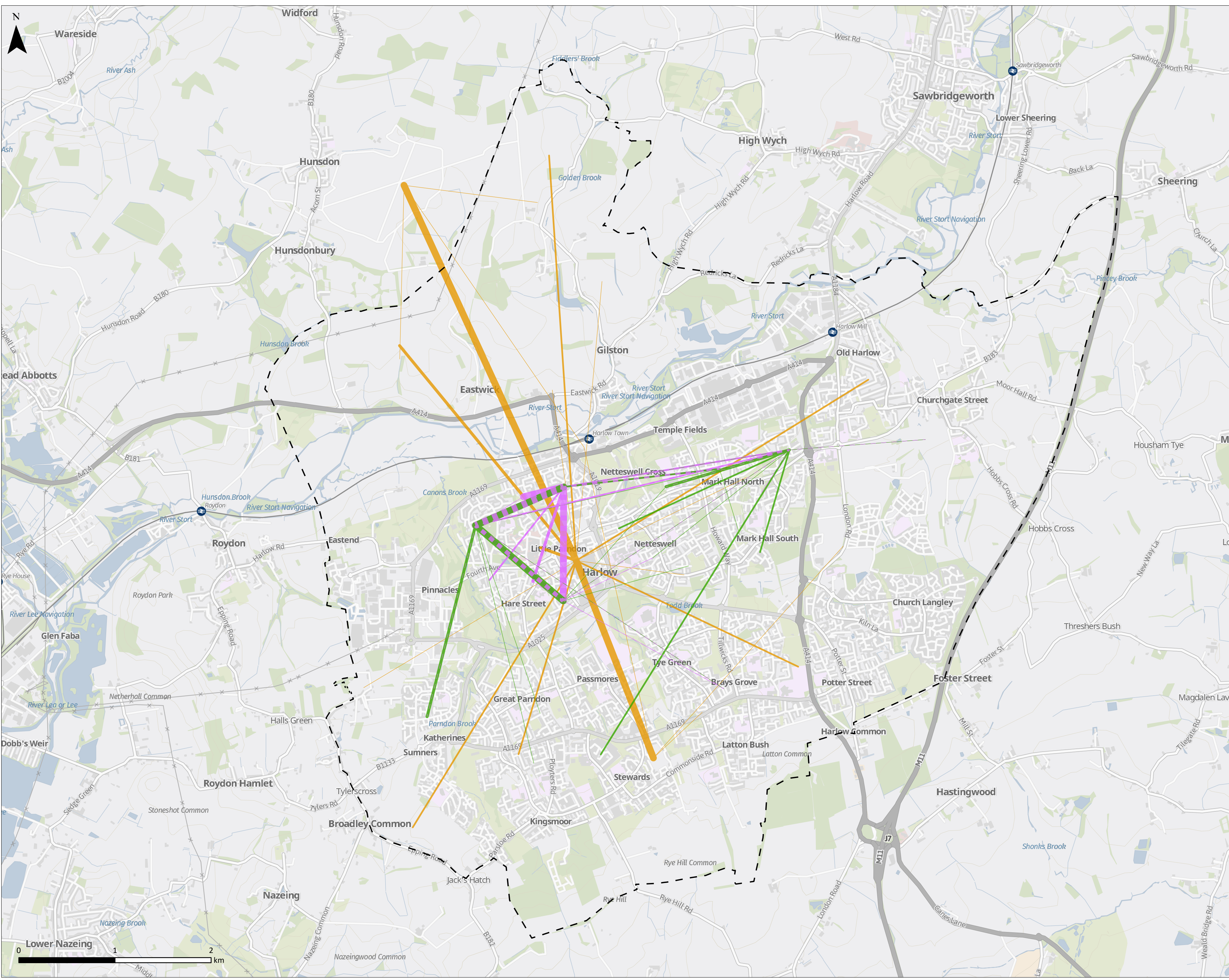
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TITLE

K-MEANS CLUSTERING

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| 01            | A        |          |            |





Study Area: Harlow

Government Target (near market) Top 20

10 - 12

12 - 14

14 - 16

16 - 18

18 - 20

Go Dutch Top 20

24 - 30

30 - 36

36 - 42

42 - 54

54 - 60

Origin Destination Line Clusters Top 20

30 - 40

40 - 50

50 - 60

60 - 70

70 - 80

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TITLE

K-MEANS CLUSTERING AND  
PCT DESIRE LINES

SCALE  
A3 @ 1:25,000

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HG

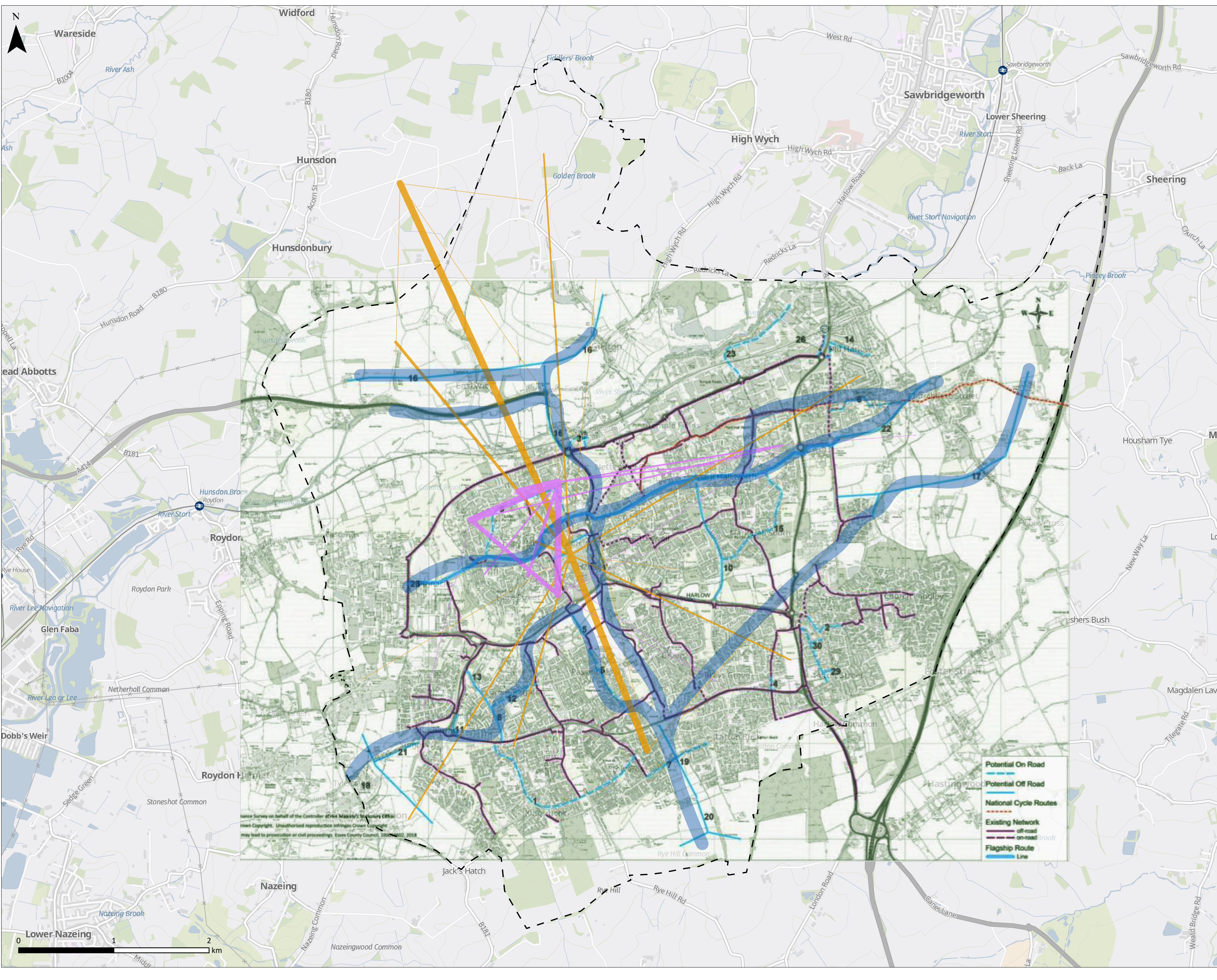
REVIEWED  
BC

DATE  
30/01/2020

FIGURE NUMBER  
02

REVISION  
A





Study Area: Harlow

PJA Proposed Routes

Go Dutch Top 20

24 - 30

30 - 36

36 - 42

42 - 54

54 - 60

Origin Destination Line Clusters Top 20

30 - 40

40 - 50

50 - 60

60 - 70

70 - 80

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COUNCIL, HARLOW COUNCIL,  
ESSEX COUNTY COUNCIL

PROJECT

HARLOW: LOCAL CYCLING AND  
WALKING INFRASTRUCTURE PLAN  
(LCWIP)

TITLE

PJA PROPOSED ROUTES

SCALE

A3 @ 1:25,000

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HG

REVIEWED

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DATE

30/01/2020

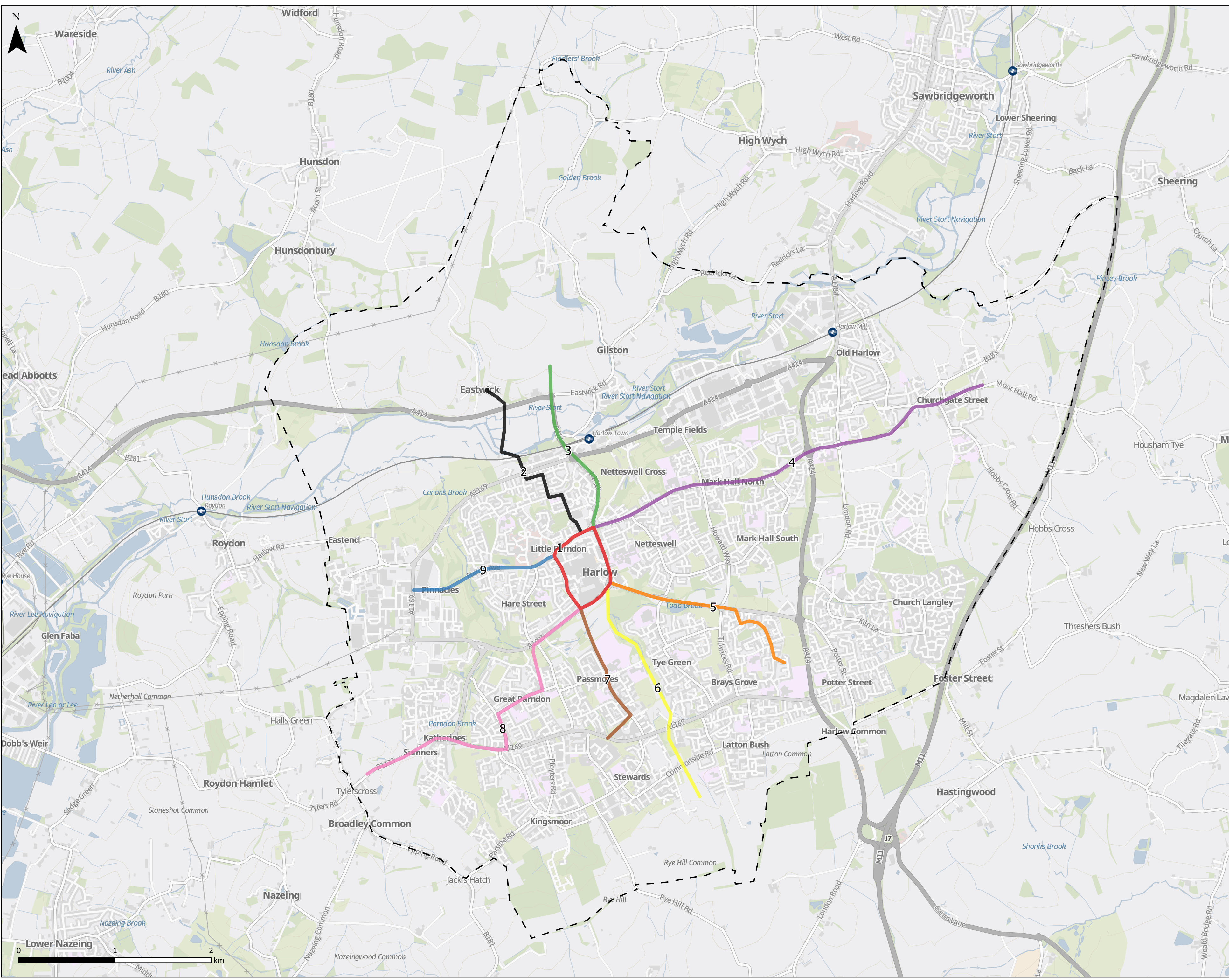
FIGURE NUMBER

04

REVISION

A





Study Area: Harlow

Proposed Corridor Routes

Route 1 - 2.17km

Route 2 - 2.20km

Route 3 - 1.85km

Route 4 - 4.41km

Route 5 - 2.20km

Route 6 - 2.48km

Route 7 - 1.58km

Route 8 - 3.56km

Route 9 - 1.54km

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PROJECT

HARLOW: LOCAL CYCLING AND WALKING INFRASTRUCTURE PLAN (LCWIP)

TITLE

PROPOSED CYCLE CORRIDOR ROUTES

SCALE

A3 @ 1:25,000

DRAWN

HG

REVIEWED

BC

DATE

13/02/2020

FIGURE NUMBER

04

REVISION

A



Harlow Study Area

Draft Core Walking Zone

Walking Destination

Intensity of Destination Clusters

High

Low

- Walking Destinations:
- Town, Village and Local Centres
  - Business Buildings in Key
- Employment Sites
- Railway Stations
  - Existing and Proposed Schools
  - Hospitals
  - Supermarkets
  - Leisure Centres and Libraries

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Harlow LCWIP

TITLE

DRAFT CORE WALKING ZONES AND DESTINATIONS CLUSTERS (REVISED)

SCALE

A3 @ 1:34,000

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REVIEWED

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DATE

10/07/2020

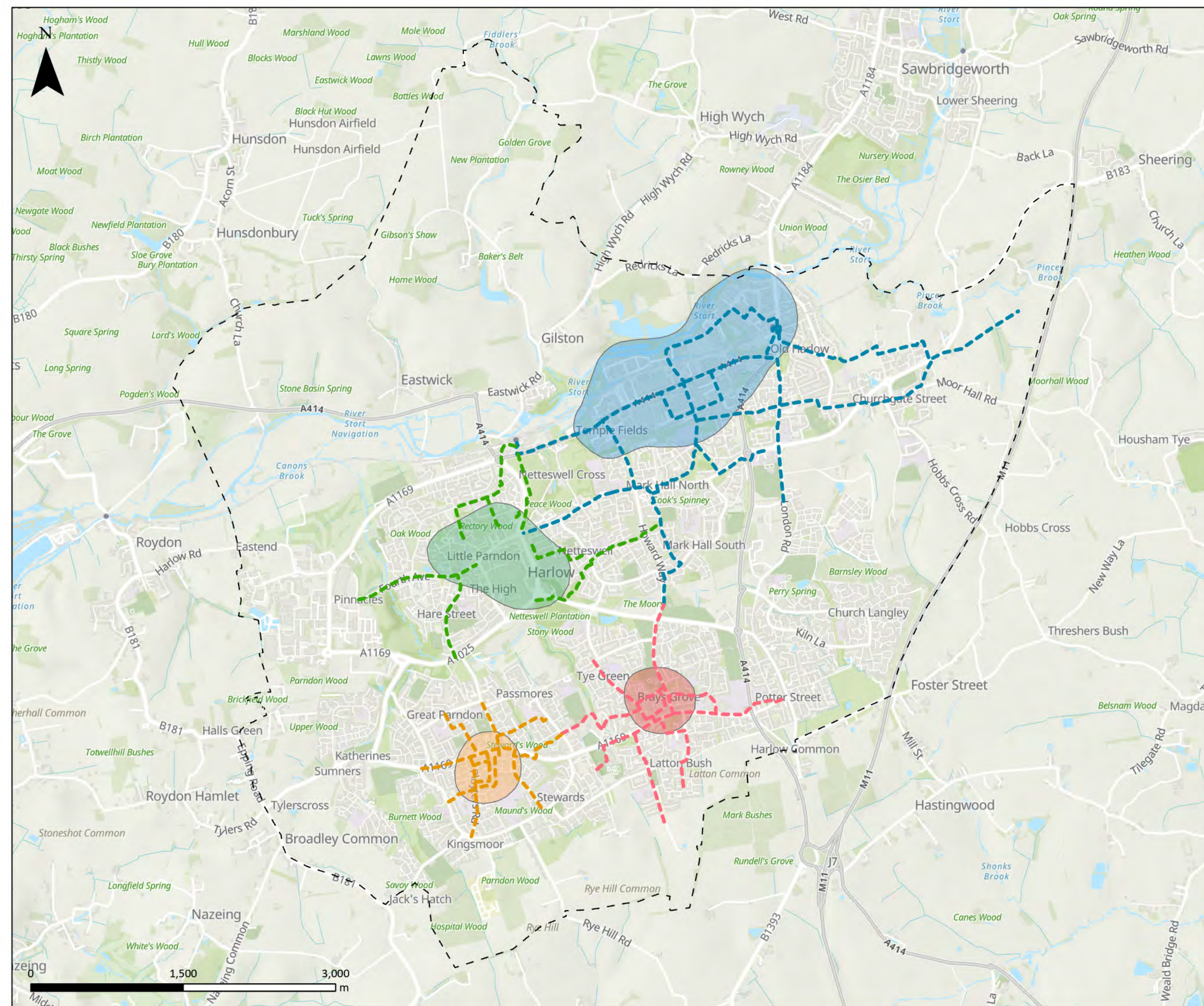
FIGURE NUMBER

W1

REVISION

C





## Harlow Study Area Core Walking Zone (CWZ)

- Bush Fair
- Temple Fields
- Town Centre
- Staple Tye

### Key Walking Routes

- Key Walking Routes (Bush Fair)
- Key Walking Routes (Temple Fields)
- Key Walking Routes (Town Centre)
- Key Walking Routes (Staple Tye)

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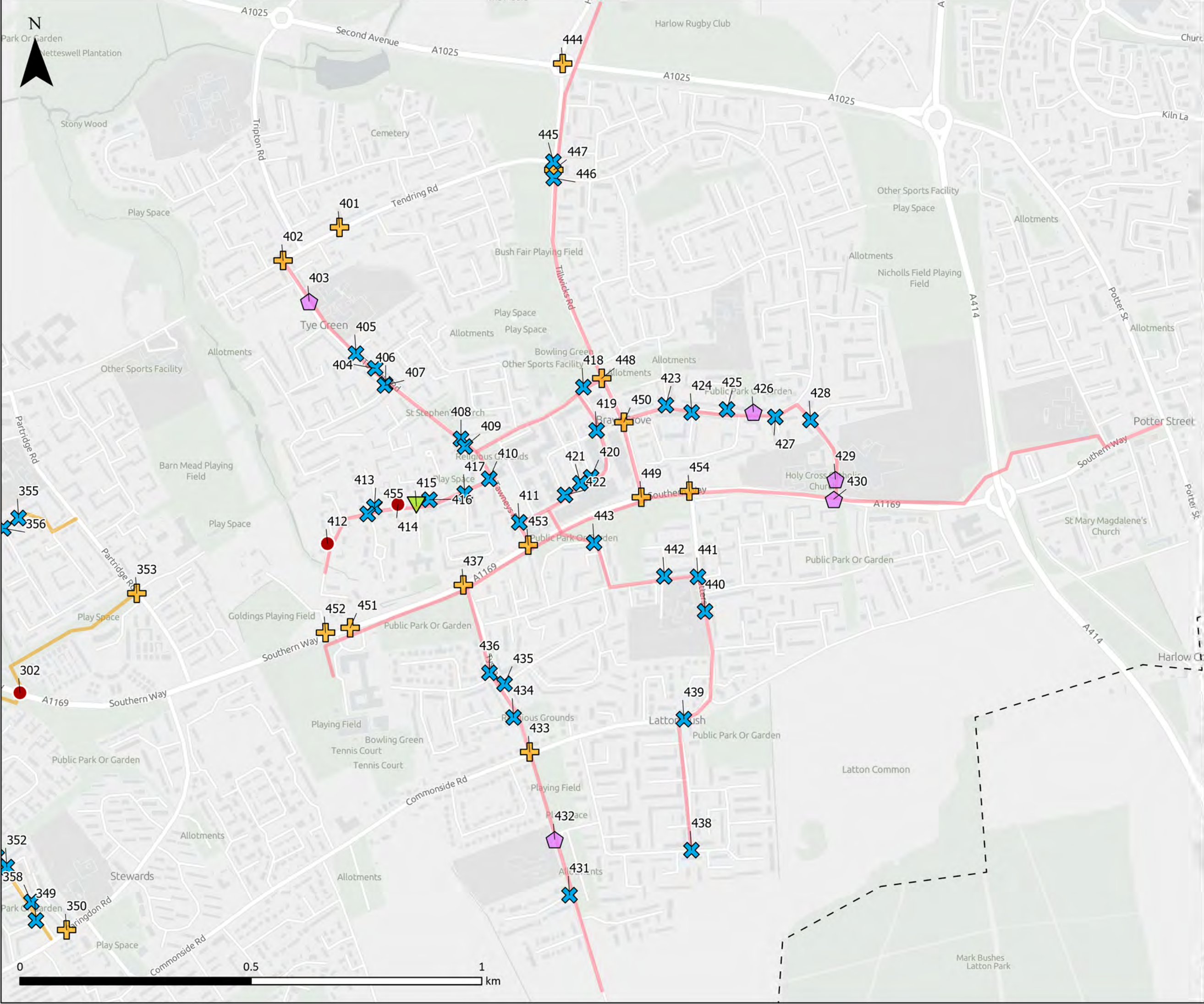
Harlow LCWIP

TITLE

## CORE WALKING ZONES WITH KEY WALKING ROUTES

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| A3 @ 1:34,000 | JY       | BC       | 16/09/2020 |
| FIGURE NUMBER | REVISION |          |            |
| W10           |          |          |            |





- Harlow Study Area
- Key Walking Routes (Bush Fair)
- Key Walking Routes (Staple Tye)
- ### WRAT Design Actions
- Type
- De-Cluttering
  - Junction Treatment
  - Maintenance
  - Missing Dropped Kerb/Tactile Information
  - Missing Footway

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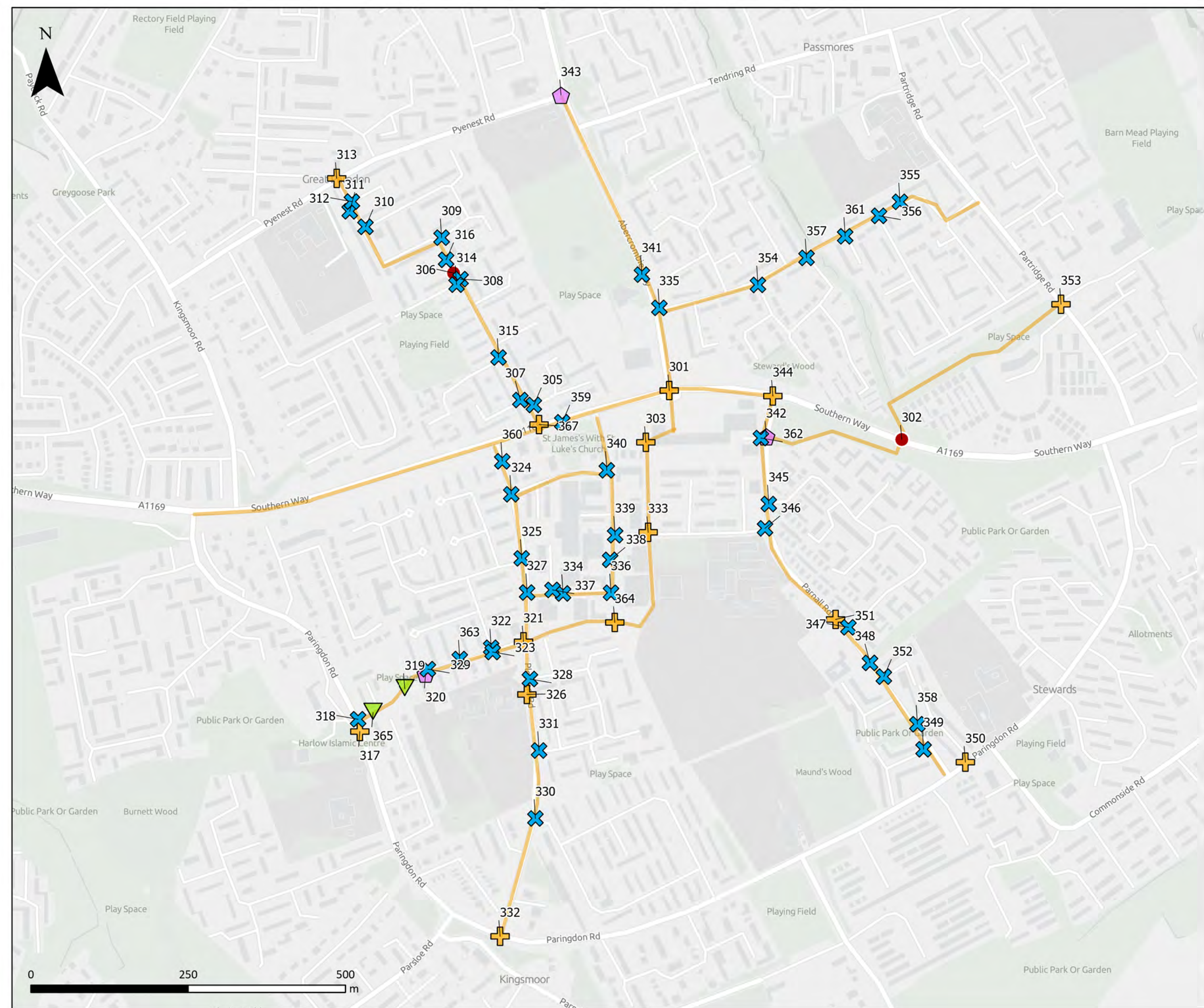
**Harlow LCWIP**

TITLE

**BUSH FAIR  
CWZ DRAFT DESIGN  
MEASURES  
(WITH FEATURE LABEL)**

| SCALE         | DRAWN    | REVIEWED | DATE       |
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| FIGURE NUMBER | REVISION |          |            |
| W11_BF_L      | A        |          |            |





- Harlow Study Area
- Key Walking Routes  
(Staple Tie)
- ### WRAT Design Actions
- Type
- De-Cluttering
  - Junction Treatment
  - Maintenance
  - Missing Dropped Kerb/  
Tactile Information
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STAPLE TYE  
CWZ DRAFT DESIGN  
MEASURES  
(WITH FEATURE LABEL)

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|---------------|----------|----------|------------|
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| FIGURE NUMBER | REVISION |          |            |
| W11_ST_L      | A        |          |            |





- Harlow Study Area
- Key Walking Routes (Town Centre)
- Key Walking Routes (Temple Fields)
- ### WRAT Design Actions
- Type
- De-Cluttering
  - Junction Treatment
  - Maintenance
  - Missing Dropped Kerb/ Tactile Information
  - Missing Footway

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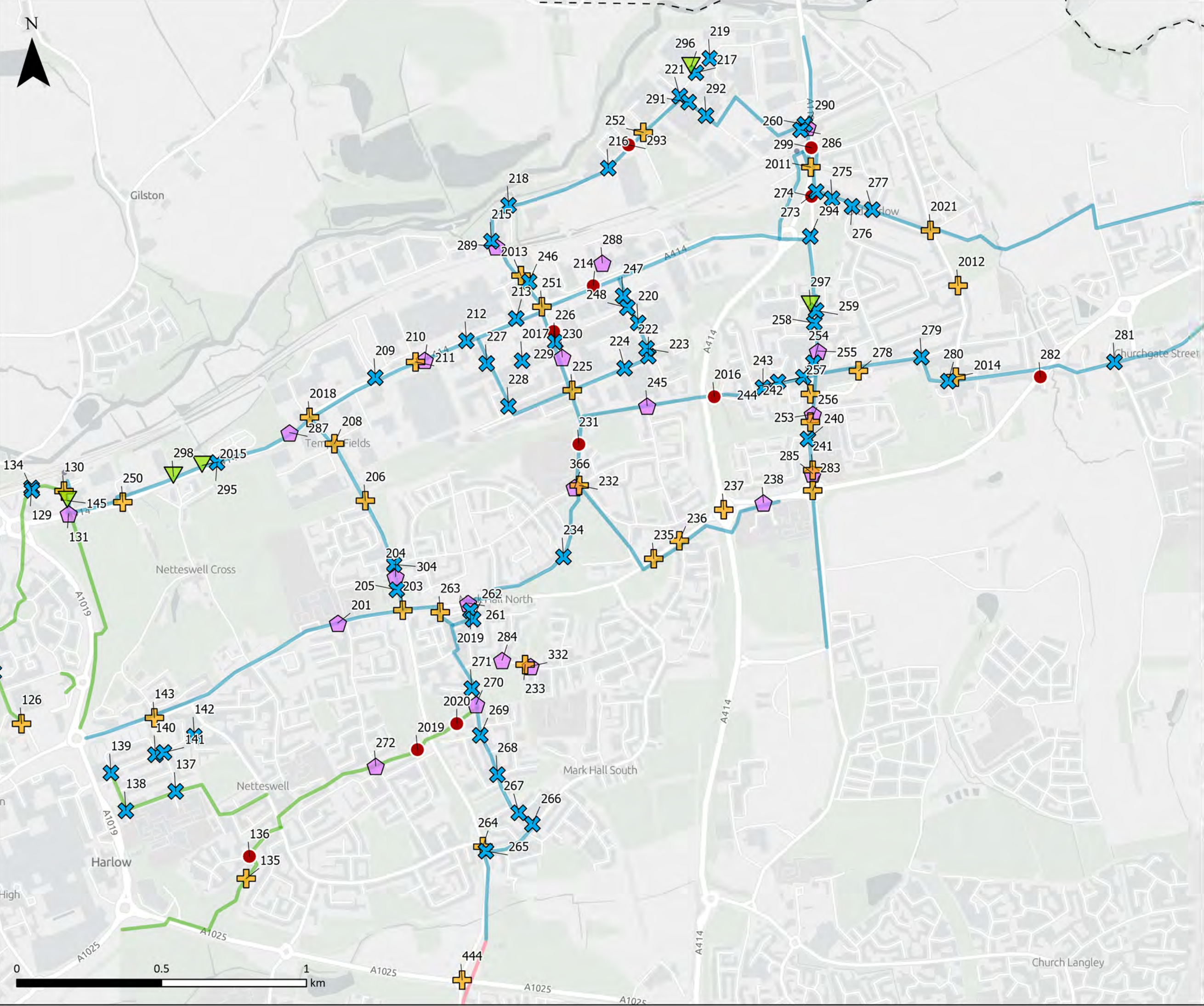
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District Council**

**Harlow LCWIP**

**TOWN CENTRE  
CWZ DRAFT DESIGN  
MEASURES  
(WITH FEATURE LABEL)**

| SCALE         | DRAWN | REVIEWED | DATE       |
|---------------|-------|----------|------------|
| A3 @ 1:8,000  | JY    | BC       | 13/04/2021 |
| FIGURE NUMBER |       | REVISION |            |
| W11_TC_L      |       | A        |            |





- Harlow Study Area
- Key Walking Routes (Town Centre)
- Key Walking Routes (Bush Fair)
- Key Walking Routes (Temple Fields)

WRAT Design Actions

- Type
- De-Cluttering
  - Junction Treatment
  - Maintenance
  - Missing Dropped Kerb/Tactile Information
  - Missing Footway

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PROJECT  
**Harlow LCWIP**

TITLE  
**TEMPLE FIELDS  
CWZ DRAFT DESIGN  
MEASURES  
(WITH FEATURE LABEL)**

| SCALE         | DRAWN | REVIEWED | DATE       |
|---------------|-------|----------|------------|
| A3 @ 1:12,000 | JY    | BC       | 13/04/2021 |
| FIGURE NUMBER |       | REVISION |            |
| W11_TF_L      |       | A        |            |





# Appendix B      Cycle Infrastructure Recommendations

# Harlow & Gilston Garden Town LCWIP

## Cycling Infrastructure Recommendations





| Version         | Date     | Main Contributors | Approved by |
|-----------------|----------|-------------------|-------------|
| Draft           | 10/09/20 | AS, JY, BC        | BC          |
| <b>Final</b>    | 12/03/21 | JY, MW + BC       | BC          |
| <b>Final V2</b> | 04/11/21 | BC                | BC          |

#### Prepared for

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# Summary

This booklet presents the infrastructure recommendations on the preferred LCWIP cycling corridors. The recommendations follow on from a baseline audit of existing conditions, undertaken using the LCWIP Cycle Route Selection Tool (RST). The recommendations are thus a specification for further design on each corridor or each sub-section of route as schemes come forward for further development. No recommendations are presented for Route 1, which is an orbital route wholly within the area covered by the Harlow Town Centre Masterplan. A set of town-wide recommendations are also made.

## RST Scoring Themes

The Route Selection Tool (RST) enables a review of conditions for cycling and enables a before and after comparison of cycling conditions, based around six key themes: Directness, Gradient, Safety, Connectivity, Comfort and Critical Junctions.

This chapter briefly provides a summary of how the existing cycle facilities in Harlow performed against the six scoring themes. This context is particularly useful in the context of Harlow given it has a well-established network of cycle facilities throughout the town however not all of these facilities achieved good scores in the RST assessments. For example, the shared use sections provide a protected route for cyclists away from vehicular traffic which scores highly against 'safety' however the 'comfort' score is poor because the facilities are too narrow and increase conflict with pedestrians.

**Directness** – Directness compares the length of cycle routes against the equivalent vehicle route. The two most influential factors on Directness scores in Harlow were filtered vehicle-free routes and grade separated junctions. Filtered vehicle-free routes, including routes through residential areas and open spaces, generated much higher

scores for Directness as cyclists were able to follow much shorter routes than vehicles. The Directness scores for routes with Grade-separated junctions were generally reduced as the design arrangement elongated the cycle alignment through the junction compared to the vehicle route. This was a particular issue at larger roundabout junctions such as Velizy Avenue/ Fourth Avenue and Second Avenue/Tripton Road.

**Safety** – This measure considers vehicle volumes and speeds along a link, and the exposure of cyclists to vehicles. A majority of the reviewed routes scored well on this category as cyclists were either using quiet residential streets with less than <2500 vehicles a day or were using segregated cycle facilities which separated cyclists from vehicles. Routes that scored poorly tended to be locally strategic routes where vehicle flows were higher without protection for cyclists, such as Kingsmoor Road and Sheering Road. Segregated routes in quieter areas also had scores reduced in this category because of lack of lighting and/or passive surveillance.

**Connectivity** – this reviews access to cycle routes and aims for at least 4 x connections per km of cycle route. All routes in Harlow scored strongly on this category with a mixture of vehicle access points and local walking/cycling routes in the network.

**Comfort** – Comfort assesses the width of cycle facilities, how much room space is allocated for cycling, interaction with pedestrians and surface quality. The guidance aims for a minimum 2.1m width for uni-flow cycle facilities and 3.5m for bi-directional facilities. On this basis, the scores across the nine routes varied considerably depending on the type of cycle infrastructure in place. The scores for shared use paths were particularly variable as the width of cycle facilities on shared use paths ranged from less than 1.5m up to 3m for two-way cycle flows.

**Critical Junctions** – this considers conditions for cyclists at signalised junctions and roundabouts based on a series of design factors, including vehicle flows, lane widths, turning risk, crossing provision and maintenance. Grade-separated junctions in Harlow scored well on this assessment as cyclists are fully protected from vehicle flows however not all junctions provided comprehensive access for cyclists and therefore scored lower. Existing junctions that scored poorly where those that did not include dedicated cycle crossing points, required cyclists to cross several lanes at once, or interaction with large vehicles.







# Recommendations

Recommendations for each corridor are presented route-by-route in the subsequent section. However, a common set of core recommendations apply network wide, and should be developed in addition to specific corridor- or area-based measures.

## Materials + Design

ECC should use the STC investment, S.106 and S.278 processes to develop a consistent treatment for cycle track in terms of materials. Existing black top being the same colour as pedestrian footways does not help with wayfinding or reminding users where they need to be. The use of Red aggregate with tinted binder in Waltham Forest and Leicester gives a consistent and strong visual consistency. It is also recommended that a “third” material type is used in shared use areas, to contrast with both conventional footways and cycletracks. For example, if there is a mixture of blacktop and ASP used in footways, use a buff coloured surface such as resin bound gravel on shared use routes. This can also be used on shared use routes in parks and open spaces to present a more visually pleasing material compared to blacktop, concrete or paving. We have included an example from Lea Bridge Road in Waltham Forest which illustrates a clearly delineated footway and cycle track, as well as a buffer strip providing additional protection for the cycle track from the carriageway.

## Network Branding

The town already has an extensive cycle network which is signposted, however a route branding and signage strategy should be adopted to further enhance the network’s legibility. Identifying key routes through the town which connect key destinations will help to highlight the availability of cross-town routes which will be particularly important for integrating new developments with the town and achieving the town’s ambitious mode shift targets.

There is already a comprehensive system of signage in place, however the destinations and need for locally numbered or branded routes should be investigated to provide a consistent and cohesive network. This approach has been adopted in other ‘New Towns’ with similar layouts including Bracknell Forest which has colour-coded its main cycle routes. It is suggested that route branding and numbering should reflect existing numbering systems in common use in the town, such as Route 5 corresponding to Fifth Avenue for example, and significant bus routes or A-roads elsewhere (e.g. route 414).

Care should also be taken to avoiding confusing numbering, such as Route 1 being used which would clash with NCN Route 1 which follows a similar route to First Avenue. The wayfinding system should take into account destinations lying off the line of the key cycle routes by taking a “whole network approach”. It is recommended that this network branding is also complementary to localised wayfinding recommendations identified in the Walking infrastructure recommendations of this LCWIP. The opposite example is from Bracknell Forest which has a comprehensive cycle network which (similarly to Harlow) includes many grade-separated designs









# Route 1: Town Centre Loop

## Route overview

Route 1 would follow the town centre loop of Velizy Avenue/ Fourth Avenue/ Haydens Road/ Third Avenue. Currently, there are only dedicated cycle facilities located on Haydens Road. The cycle routes on the other sides of the town centre follow parallel grade-separated alignments which are routed under the main road network.

The design recommendations for Route 1 reflect the latest design proposals from the emerging Town Centre Masterplan. The key features of those proposals include:

- High-quality protected cycle facilities on the each of the main roads surrounding the centre. The current designs propose bi-directional cycle tracks around the town centre ideally 4m wide with priority over side entry junctions and connections into improved junctions.
- Conversion of existing grade-separated junctions at Velizy Avenue/First Avenue and Haydens Road/Fourth Avenue to 'Dutch Style' roundabouts. These would significantly improve access to the town centre for walking and cycling by providing controlled at-grade crossing points on all arms.
- The conversion to at-grade facilities will require upgrades to the existing cycle network to ensure a seamless onward connection to surrounding areas.
- Installation of continuous footway layouts on all minor junctions around the town centre.



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## Route 2: Eastwick - Little Parndon - Town Centre

### Route overview

Route 2 uses predominantly low-traffic and/or access-only streets with limited vehicle interaction along the route. The RST assessment assumed that cyclists therefore would be cycling on-road except for when using the dedicated cycle-only sections of the route. Improvements to the route should focus on raising awareness and legibility of the cycle route at key decision points such as local residential junctions, crossing of Elizabeth Way and the A414, and transition points into adjoining footpaths and cycle routes.

The route alignment through Parndon Mill might be contentious as there have been historical issues with cyclists passing through the estate. A short alternative alignment could be followed along the canal which would use a different bridge crossing of the River Stort and therefore avoiding Parndon Mill. The route is largely secluded north of the Hornbeams. As such, even with lighting, some users may feel unsafe on this route at night. Therefore, a supplementary connection parallel to the A414 via the development to Route 3 should be provided as part of the development layout.

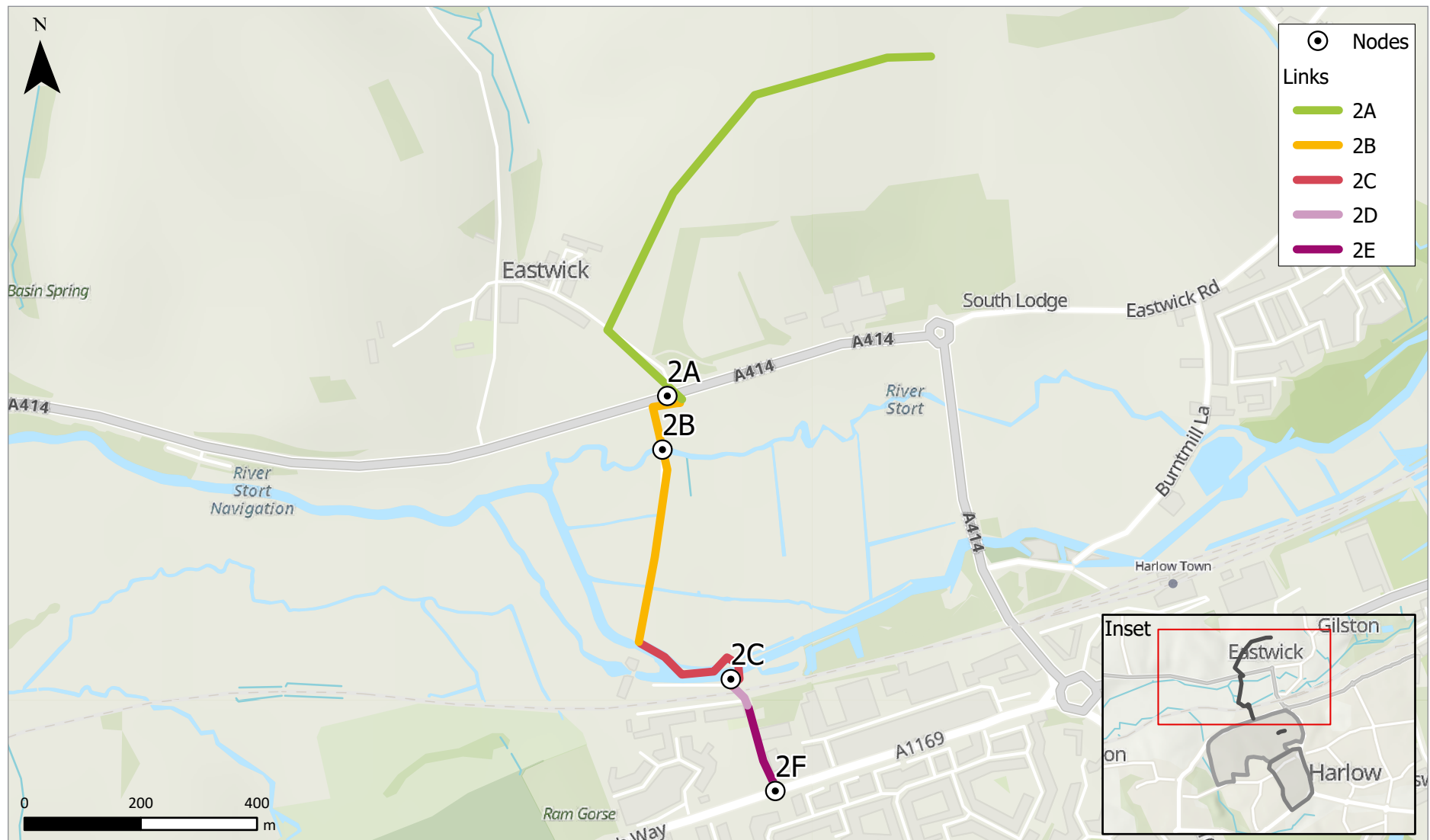


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## Route selection tool summary and recommendations

| RST section | Extents                        | Existing conditions  | Recommendations   |
|-------------|--------------------------------|--|---|
| n/a         | Development to A414            | -  | A. The Gilston Garden Town development should ensure a high-quality cycle connection is provided to the A414 at Eastwick to tie-in with LCWIP route 2, and a controlled crossing provided over the A414. This may require a modal filter on the eastern arm of Eastwick Road. Internal connections within the GGT should ensure there is a connection between LCWIP routes 2 and 3 within the site, as route 2 may be unsuitable at night.                          |
| 1           | A414 to Parndon Mill           | Unlit bridleway in open countryside, with limited use by motor vehicles (cul-de-sac section of general highway at northern end). | B. Improve surfacing. Re-build bridge adjacent to the ford over the river Stort. Provide lighting throughout. Some evidence of the bridleway being used for fly-tipping; consider stopping up or providing CCTV as part of new lighting scheme<br><br>C. A new bridge over the Navigation and/or a new path across Parndon Mead would bypass the existing constraint of the grounds of Parndon Mill being unsuitable for cycling ( <i>see diagrams on page 10</i> ) |
| 2           | Parndon Mill to Elizabeth Way  | Shared surface street, providing vehicular and pedestrian access to Parndon Mill. Unlit north of St Mary's church.               | D. Provide additional lighting, and improve surfacing and drainage.   |
| 3           | Elizabeth Way to The Hornbeams | Segregated pedestrian/cycle street. Lit but not overlooked.  | E. New controlled crossing needed over Elizabeth Way. Suitable transition to/from the crossing the sections of route each side.<br><br>F. Amend spacing and layout of bollards at the junction with the Hornbeams to ensure all types of design cycles in LTN 1/20 can be accommodated (see figure 5.2 in LTN 1/20). Transition between the cycle path and the carriageway may also benefit from a raised table on the latter.                                      |

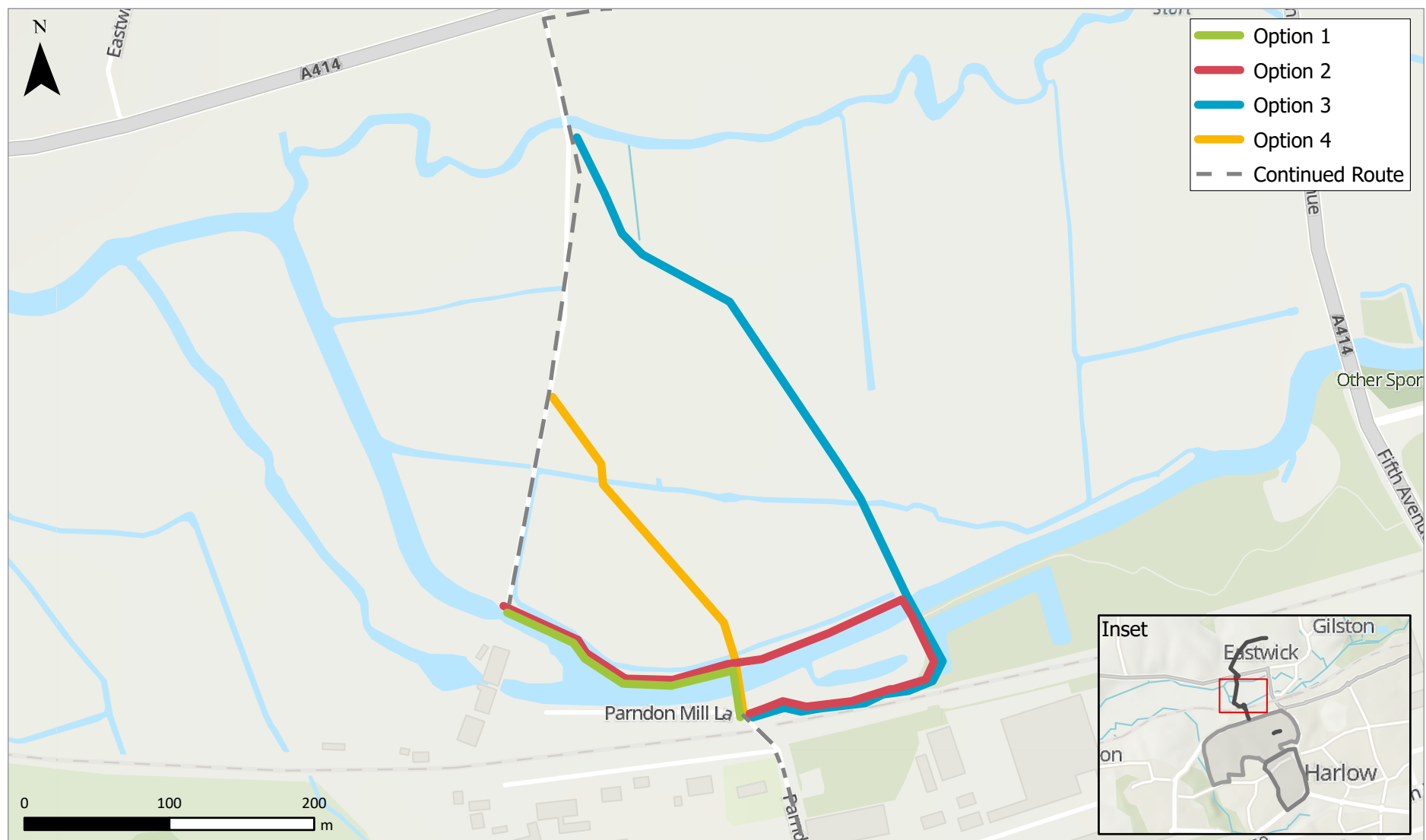


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## Route selection tool summary and recommendations

| Parndon Mill grounds by-pass options |  |
|--------------------------------------|--|
| Option 1                             | New bridge over Stort Navigation then use short section of existing navigation towpaths. Provide resurfacing, lighting and widening.   |
| Option 2                             | Use existing bridge and navigation towpath. Provide resurfacing, lighting and widening   |
| Option 3                             | Use existing bridge, then provide new sealed surface path across Parndon Mead with lighting (indicative alignment shown to tie-in to existing crossings over drainage ditches). Resurface, illuminate and widen existing paths.              |
| Option 4                             | New bridge over Stort Navigation, then provide new sealed surface path across Parndon Mead with lighting (indicative alignment shown to tie-in to existing crossings over drainage ditches). Resurface, illuminate and widen existing paths. |

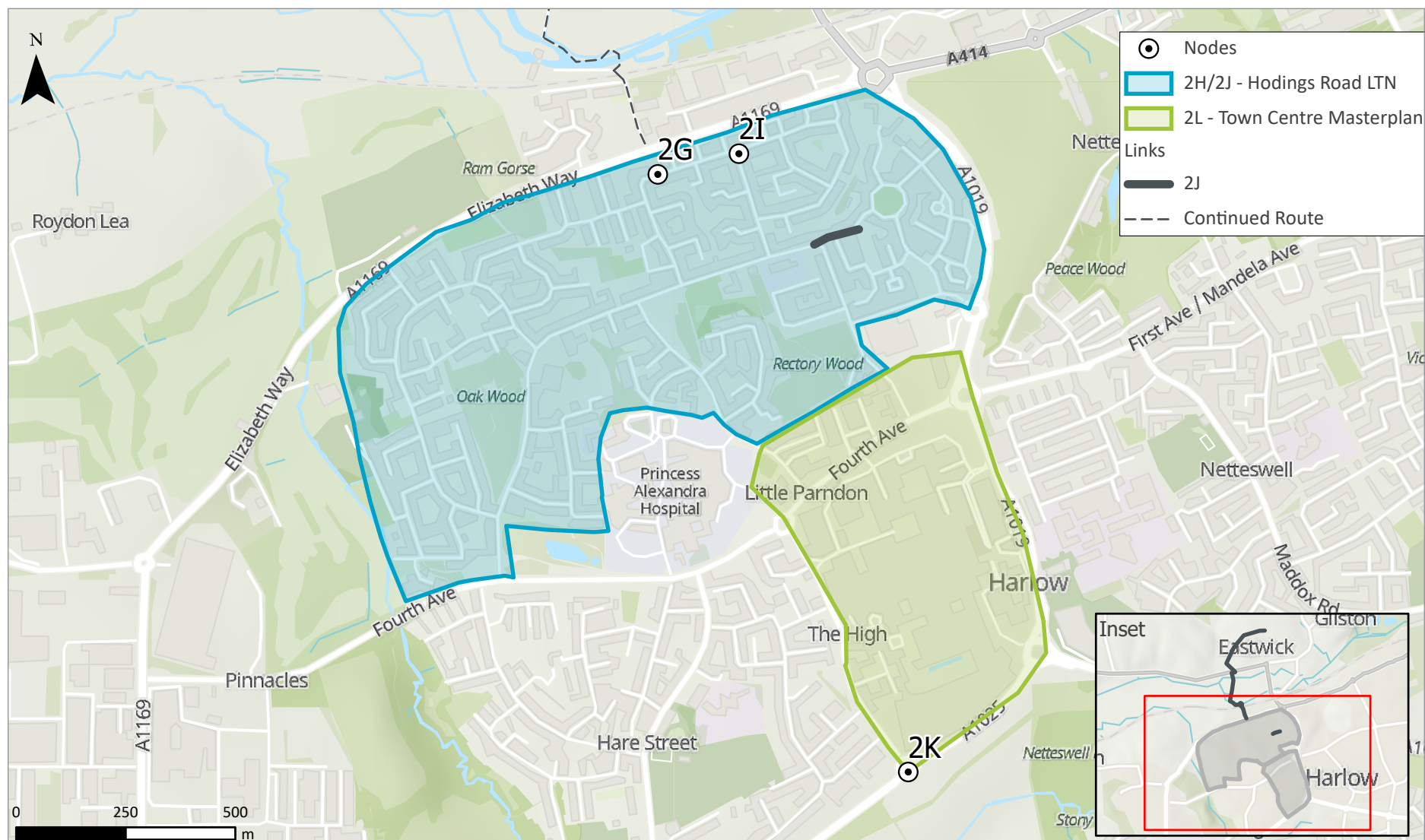


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## Route selection tool summary and recommendations

| RST section | Extents  | Existing conditions  | Recommendations  |
|-------------|--|--|--|
| 4           | The Hornbeams to Hodings Road Road (Rivermill)   | On-road cycle route, shared with motor vehicles on lightly-trafficked residential streets. Rivermill is subject to higher motor traffic flows during peak times, particularly drivers avoiding congestion on Elizabeth Way and Fifth Avenue. | <p>G. A low-traffic neighbourhood (LTN) scheme has already been suggested, and this is strongly recommended for the sections of Route 2 between Elizabeth Way and the town centre. The LTN could become a 20mph zone, which then obviates the need for hump warning signs, offering scope for de-cluttering and reducing the number of electric connections to be maintained. Failing that, traffic calming measures should be upgraded, replacing the speed cushions with sinusoidal humps: these are bus/motorcycle/cycle- friendly, but are more effective on smaller four-wheel vehicles than cushions.</p> <p>H. The prominence of the junction at Rivermill / Hornbeams could be improved by providing a raised table.</p> |
| 5           | Rivermill (Hodings Road Road) to Sainsbury's pedestrian/cycle access (Hodings Road Road) | On-road cycle route, shared with motor vehicles on a lightly-trafficked residential distributor road. However, motor traffic volumes are higher at peak times, particularly drivers avoiding congestion on Fifth Avenue and Elizabeth Way.   | <p>I. Include Hodings Road Road in any proposed Low Traffic Neighbourhood. Town centre redevelopment will also influence future function of Hodings Road.</p> <p>J. Create a new link from Hodings Road Road to Parish Way (by widening the existing footpath, and creating better transitions to/from the carriageway) to allow informal access between Route 2 and Route 3, thus improving the permeability and access of the overall network.</p>   |
| 6           | Hodings Road Road to Post Office Road  | Segregated pedestrian/cycle street. Lit but not overlooked.  | K. This section is within the area subject to the Town Centre Area Action Plan, and the subway is likely to be removed. Hence, this section is likely to be replaced with surface-level provision, integrated with the new land uses with much better passive surveillance. However, care should be taken to ensure that the new provision is suitably well-designed for both cycle and pedestrian traffic, with a clear and intuitive connection into the re-imagined cycle and walking networks within the town centre.  |



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P Cair park P  
↑ Tenniss Street  
Killeshay Way  
Harvey Centre



## Route 3: Gilston – Fifth Avenue - Town Centre

### Route overview

There are currently shared use cycle facilities between the Burnt Mill Roundabout and the Town Centre, however these are only provided on the eastern side of Fifth Avenue which reduces the connectivity of the route from surrounding areas. However, the major issues for cycling are on the northern sections of the route which is particularly uncomfortable for cycling including the Burnt Mill Roundabout. The design of Route 3 will need to be co-ordinated with the proposed STC north-south corridor which would connect the Gilston Garden Villages with Harlow centre.

The immediate main design focus should be on extending the existing protected cycle facilities up to Gilston to provide a continuous and safe route. The existing shared use facilities protect cyclists from vehicles however the shared use design could still be upgraded to fully segregated in order to increase pedestrian and cycle comfort. The Burnt Mill roundabout is major barrier to walking and cycling and the proposed STC upgrades to the junction (and corridor) should ensure the provision of improved pedestrian and cycle facilities through the junction, including routes via the junction for cyclists are as direct as the motor vehicle equivalent, for example by using a “hold the left turn” signalling arrangement that allows ahead cycle movements to run in parallel with the equivalent carriageway stage.

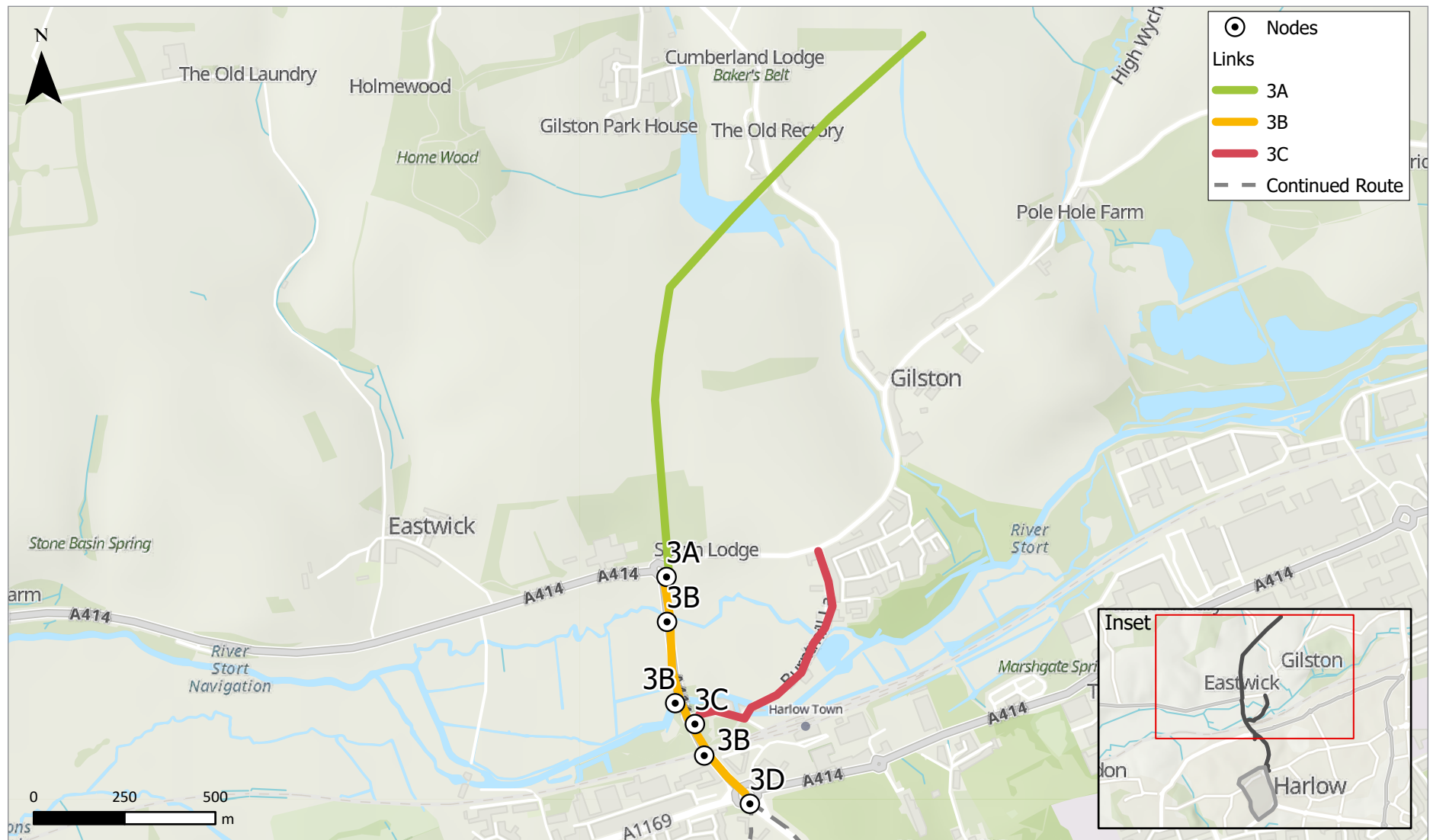


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## Route selection tool summary and recommendations

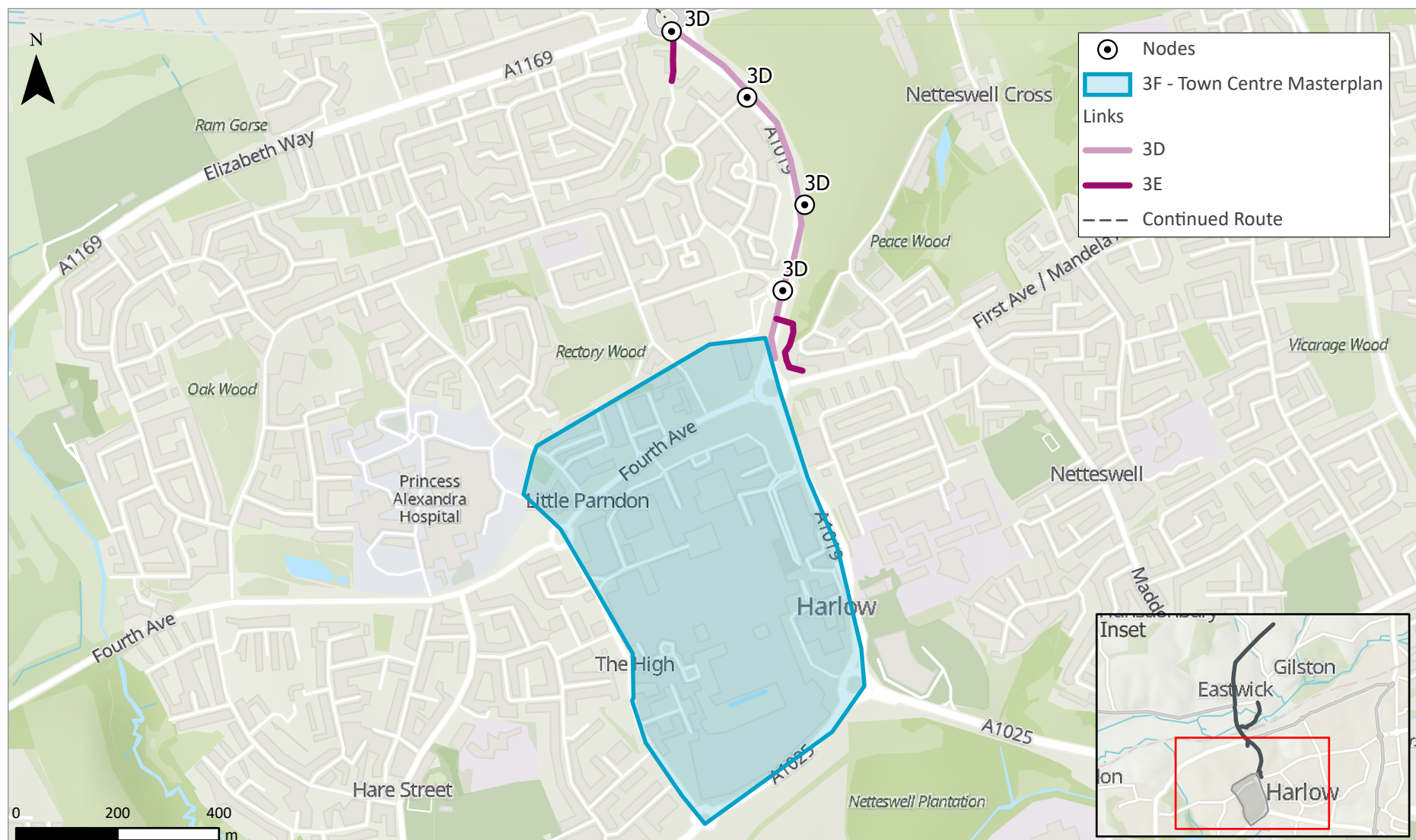
| RST section | Extents             | Existing conditions  | Recommendations  |
|-------------|---------------------|--|--|
| n/a         | Development to A414 | -  | A. The Gilston Garden Town development should ensure a high-quality cycle connection is provided to the A414 to tie-in with LCWIP route 3. Junctions should ensure that cycle traffic passes through with minimum additional delay compared to the equivalent motor vehicle routes. Staggered crossings shared with pedestrians should be avoided.   |
| 1           | A414 to Burnt Mill  | 40mph primary road with lighting, but no passive surveillance. Shared use footway provided south of Burnt Mill Lane. | <p>B. A high quality cycle route, separated from pedestrians and motor traffic is required, as this will be the primary link from the Garden Town to Harlow Town centre and the main railway station. Pedestrian footfall can expect to be high because of the proximity of the railway station and employment at Burnt Mill relative to the southern fringes of the Garden Town. This may necessitate new bridges over the river, navigation and railway.</p> <p>C. Pedestrian and cycle priority crossing to be provided over Burnt Mill Lane, by means of a cycle zebra set back into the side road. Development flows may well cause a significant increase in traffic volume on Burnt Mill Lane, against which mitigation in the form of a modal filter or one-way working should be investigated. Unchecked increases in traffic volumes on Burnt Mill Lane may make interaction with the cycle route difficult to manage.</p> |



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| RST section | Extents                   | Existing conditions   | Recommendations   |
|-------------|---------------------------|---|---|
| 2           | Burnt Mill to town centre | <p>Existing segregated shared use footway. The cycle facility is on the opposite side of the road to where people live. The new housing development at Newstead Way hasn't been well-connected into the existing cycle network, as crossings are staggered and thus delays are experienced by cycle traffic compared to the single stage movements for vehicles turning into or out of the development at Fifth Avenue.</p> <p>Unintuitive connection into the town centre via subway under Fifth Avenue.</p> | <p>D. This facility should be improved as part of work on the Sustainable Transport Corridor (STC), including kerb separation between pedestrians and cyclists, and priority over the minor arms at uncontrolled junctions. The STC should seek to double up the provision, so a route is also provided on the western side of Fifth Avenue. (This could provide a better aligned connection to the likely new bridge locations suggested in section 1). Junctions should provide routes for cyclists that are as direct as equivalent movements for motor traffic.</p> <p>E. Care should be taken to ensure all cycle connections are catered for, including taking into account where extant links to the existing cycle tracks are located, e.g. Netteswell Orchard, and new links created to service sources of demand, e.g. a better connection from Burnt Mill junction to the northern end of Newstead Way, which is currently just a narrow footpath, whereas elsewhere in Harlow (e.g. The Hornbeams to Elizabeth Way), cycle traffic would have its own dedicated path adjacent to pedestrians. An improved connection from Burnt Mill to Newstead Way facilitates transfer between Route 3 and Route 2, which provides a shorter route for people accessing the western part of the town centre from the north.</p> <p>F. The Town Centre Masterplan is proposing high quality surface crossings to replace the roundabouts and subways.</p> |



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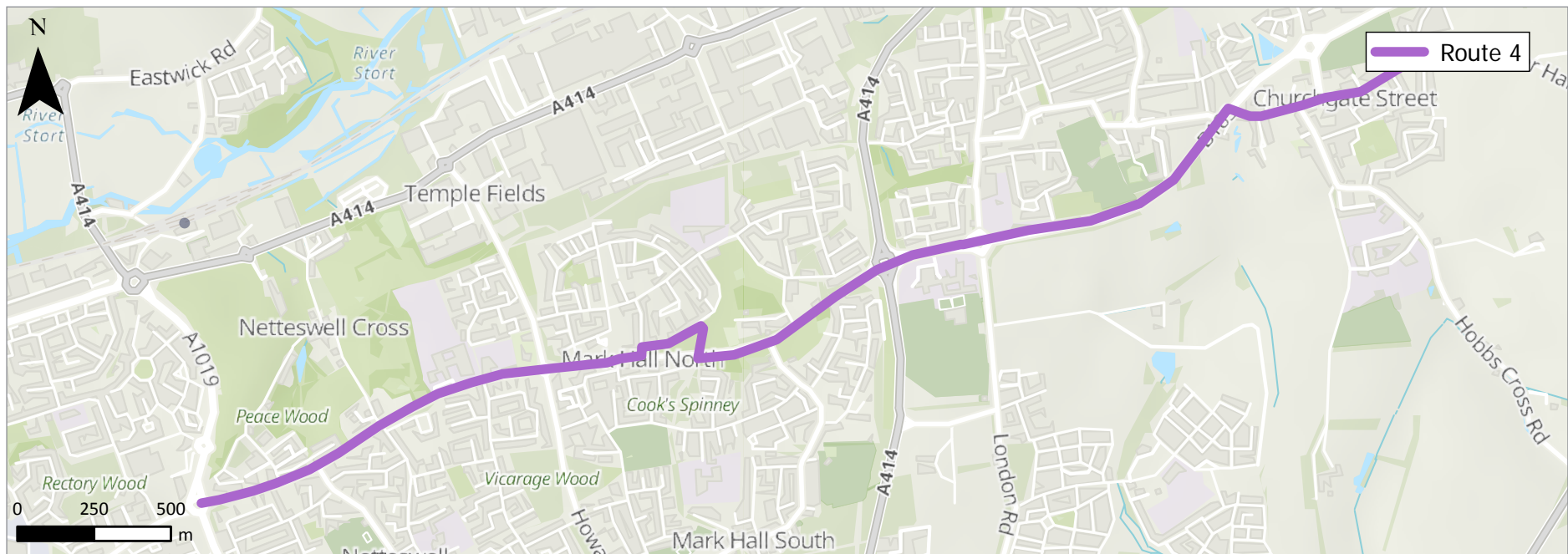
## Route 4: Old Harlow – Mark Hall North – Town Centre

### Route overview

Route 4 is the longest route in the LCWIP and would connect several local centres between Old Harlow and Harlow town centre, including Netteswell and Mark Hall North. There are currently cycle facilities along a majority of the route however the quality and continuity of these facilities varies considerably, ranging from kerb protected cycle facilities to narrow shared use paths. Consequently, the route feels disjointed to cycle on and is not always intuitive to follow.

A further design constraint, as with several existing routes in Harlow, is the design layout which only includes cycle facilities on one side of the road which limits the route's connectivity and integration particularly around grade separated junctions. The grade-separation design actually elongates the length of cycle routes compared to the equivalent vehicle route. It should be noted that a limitation of the LCWIP's RST assessment is that it does not fully reflect/consider the design of sub-standard shared use facilities which meant that narrow non-delineated shared use paths in Harlow still achieved a high score against 'safety' despite the cycling level of service being substandard.

The overarching design priority for the route will be to create a high-quality segregated and continuous cycle facility whilst also seeking to improve the overall streetscape and reduce the impact of vehicular traffic. Complimentary measures such as reducing the speed limit from 40mph and increasing the number of crossing points would help support this design. This arrangement is achievable, however feasibility varies along the route as the width and availability of highway changes, the design scope is particularly limited on Gilden Way (East of the London Road roundabout).

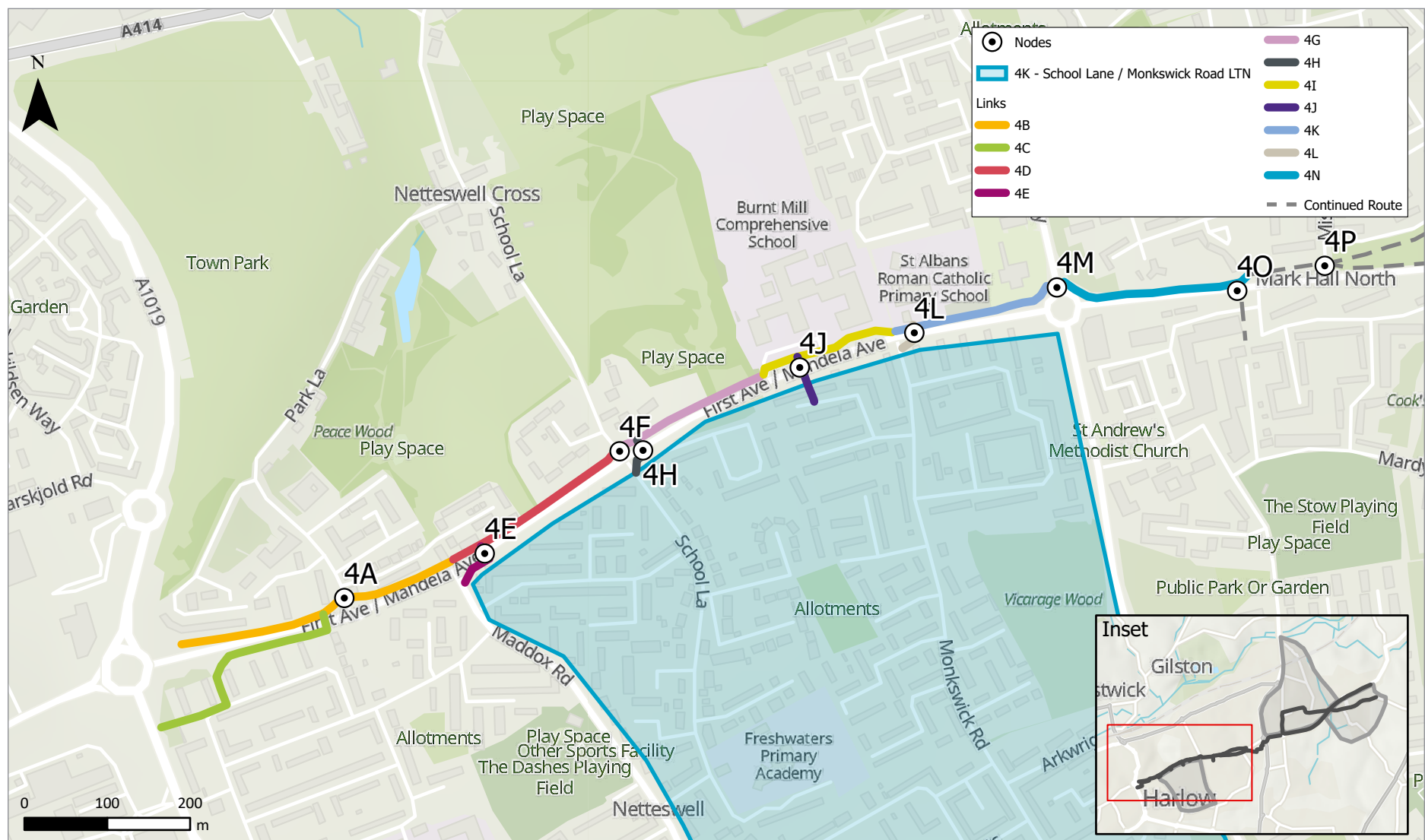


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## Route selection tool summary and recommendations

| RST section | Extents                       | Existing conditions   | Recommendations  |
|-------------|-------------------------------|---|--|
| 1           | Velizy Avenue to Maddox Road  | Facilities on northern side of the road only. Wide shared use footway connecting into ramp under Fifth Avenue; becomes segregated east of Park Lane. Segregation is counter-intuitive as it is on the building side of the footway, rather than on the road side, presenting conflict with pedestrian accesses to properties. | <p>A. Pedestrian/cycle zebra across Park Lane to give priority to pedestrians and cyclists.</p> <p>B. Swap current pedestrian and cycle provision over, introduce kerb separation, and provide cycle track zebra crossing points in line with pedestrian crossings and other accesses where suitable.</p> <p>C. Provide complementary facility on the southern side of the carriageway, including the link into the Hides, as far east as the controlled crossing point west of Park Lane (convert to Toucan).</p>   |
| 2           | Maddox Road to School Lane    | Cycle facilities on northern side of the road only. Segregated shared use footway. Segregation is counter-intuitive as it is on the building side of the footway, rather than on the road side, presenting conflict with pedestrian accesses to properties.   | <p>D. Swap current pedestrian and cycle provision over, and introduce kerb separation with cycle track zebras at bus stops. Widen into grass verge to create wider footway and cycleway.</p> <p>E. Provide controlled crossing east of Maddox Road to facilitate access to/from housing area to the south, with short link of cycleway to connect to Maddox Road.</p> <p>F. Provide mode filter at School Lane to provide cycleway priority over side road. Both sides would be desirable (as part of LTN), but northern side essential.</p>   |
| 3           | School Lane to Mistletoe Road | Cycle facilities on northern side of the road only. Shared use footway. The downgrading of provision here reflects that the main cycle route is NCN 1, which diverts off via Town Park and Netteswell Road.   | <p>G. Use grass verge to create wider shared use footway. However, segregation from pedestrians is desirable, so cross-sections should be developed that can accommodate this, e.g. reduce existing 10.5m width carriageway by 1m to 9.5m (3.5m bus lane + 2 x 3m general traffic lanes).</p> <p>H. Convert pedestrian crossing at Old House Croft to TOUCAN, and provide better cycle link to Old House Croft and School Lane (south).</p> <p>I. Engage with Burnt Mill Academy with a view to moving their boundary fence to create a large footway outside the school so that the cycleway is less likely to be used as overspill footway space during busy times. Provide pedestrian/cycle priority over traffic entering and exiting the school.</p> <p>J. Provide TOUCAN crossing over First Avenue between each access to Burnt Mill school to allow pedestrian/cycle access to the alleyway leading to Halling Hill, adjusting the baffle wall to allow a horseshoe area for movement, rather than a constrained kink.</p> <p>K. Further widening east of Burnt Mill School is contingent on a Low Traffic Neighbourhood in Monkswick Road area, which may allow the removal of closure of its junction with First Avenue, allowing the existing space taken up by the right turn pocket to be reallocated to the footways and cycleway. This could also be achieved by banning the right turn in, or making the side road exit-only. Also scope to move St Albans Academy fence line as per Burnt Mill School.</p> <p>L. Convert pedestrian crossing outside St Albans Academy to TOUCAN, and provide short section of cycleway connecting into Monkswick Road.</p> <p>M. Signalise existing Howard Way roundabout or replace with signalised junction.</p> <p>N. Limited scope to widen shared use footway between Howard Way and Orchard Croft as carriageway is already 9.5m and operating with three vehicle lanes.</p> |

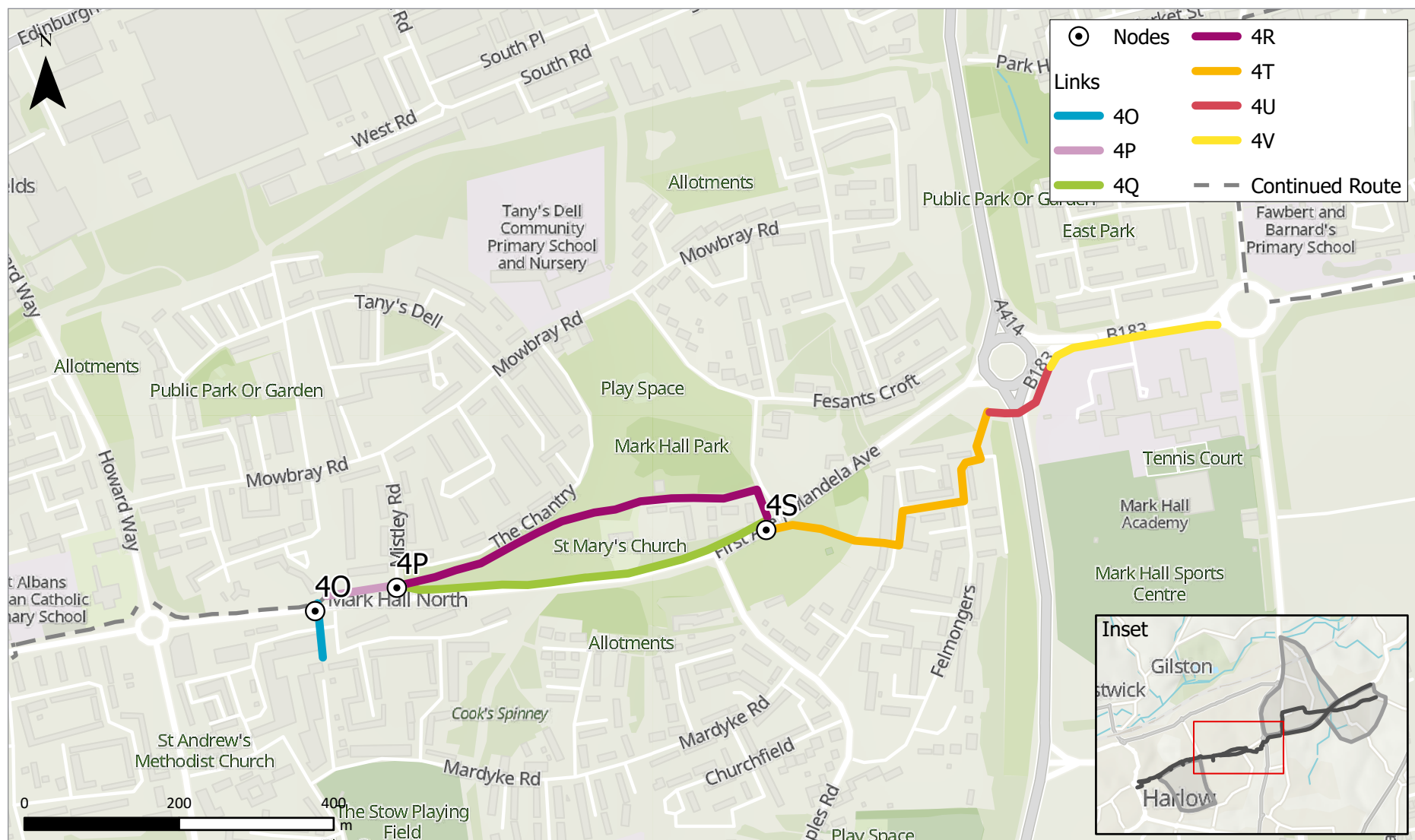


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## Route selection tool summary and recommendations

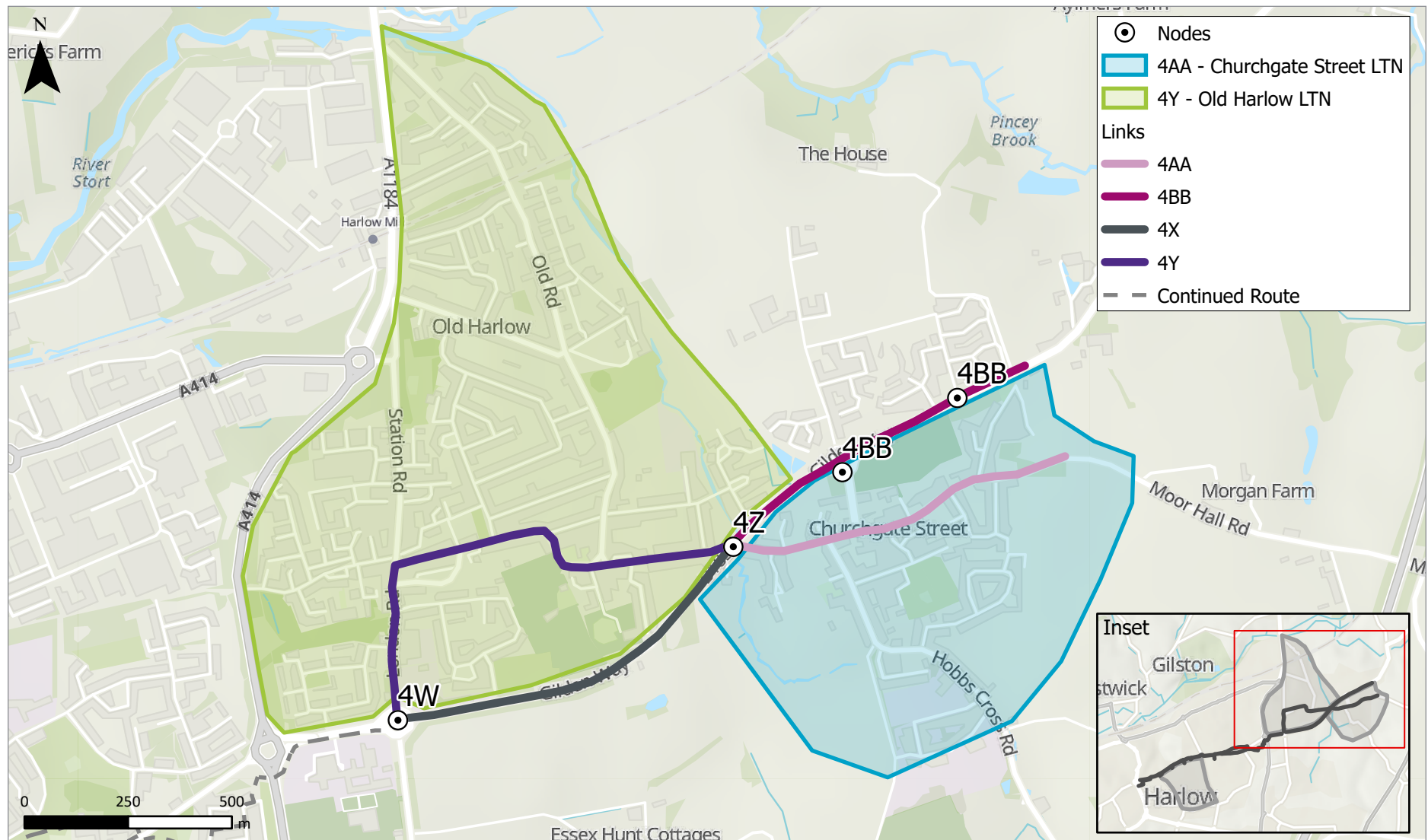
| RST section | Extents  | Existing conditions   | Recommendations  |
|-------------|--|---|--|
|             |  |   | <p>O. Convert Orchard Croft crossing to TOUCAN as link to/from the Stow local centre.</p> <p>P. East of Orchard Croft, use verge between First Avenue and Mistley Road service road to provide a cycleway and footway well set-back from traffic and avoiding the conflict, meeting Mistley Road with a set-back from the main road allowing a side road priority crossing to be provided using a cycle-zebra. Tighten up the junction geometry to reduce turning speeds.</p>  |
| 4           | Mistley Road to First Avenue (Cook's Spinnery underpass) | Cycles are signed via The Chantry to access cycleway that crosses beneath First Avenue to then get back on-line via ramp back up to southern side of First Avenue   | <p>Q. Online option – new cycleway in verge as far as Muskham Road, merging to shared use over bridge over Cook's Spinnery underpass. Provide ramp link to underpass.</p> <p>R. Offline option – new cycleway in verge connecting to The Gowers. Cycleway link from The Gowers to First Avenue parallel to Muskham Road.</p>   |
| 5           | First Avenue (Cook's Spinnery underpass) to London Road  | Shared use footway on south side of the road, including underpass beneath A414 at roundabout. Shared use footways are constrained by bus stops and no verge buffer. | <p>S. New TOUCAN crossing west of Muskham Road, or relocate existing signalised crossing further east: removal of eastern crossing allows extension of eastbound Bus Lane.</p> <p>T. New footway and cycleway links from First Avenue to Felmongers and from Felmongers to London Road underpass so that existing shared use footway is dedicated for pedestrian use only.</p> <p>U. Provide CCTV and public art lighting scheme in London Road subway</p> <p>V. Review street furniture locations and sign mounting methods to provide a less cluttered environment for pedestrians and cyclists. Provide kerb segregation between users, and cycle track zebras to bus stops. Engage with school to obtain land to widen footway/cycleway at pinch points.</p> |



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| RST section | Extents                                  | Existing conditions   | Recommendations  |
|-------------|--|---|--|
| 6           | London Road to Sheering Road             | No provision. Narrow footways with verges either side of 40mph purpose-build distributor road. B183 will soon become a link to the Motorway with the opening of M11 J7A.  | <p>W. Signalise roundabout to provide suitable and direct crossing routes for pedestrians and cyclists. Signalisation could include hamburger roundabout arrangement or conversion of existing roundabout to signalised cross roads (with straight-across crossings on all arms)</p> <p>X. Provision of dedicated cycleway in verge desirable to function as a strategic link, especially from Harlow East to Mark Hall college. A uni-directional track in each verge makes best use of limited space available.</p> <p>Y. However, Gilden Way is not overlooked by properties, and lacks any meaningful catchment of users. A low-traffic neighbourhood (LTN) solution in Old Harlow would allow the corridor to more usefully serve the residents of that area as well as bringing people to the destinations in the local centre. A bus/cycle gate on London Road and Mulberry Green at Gilden Way would create a large LTN between A414 and B183. An LTN may also complement Templefields Core Walking Zone. London Road bus gate could also function as a School Street outside Fawbert &amp; Barnard Primary. The online route fulfils the LCWIP/STC corridor pending the implementation of the more challenging LTN braid.</p> |
| 7           | Gilden Way to B183 via Churchgate Street | NCN route 1 signed on-road via the settlement. Existing on-road conditions may not be suitable at peak times, especially with increased flows associated with East of Harlow development and potential external traffic from places like Ongar and Matching Green using these routes to access M11 J7A. | <p>Z. Upgrade crossing to TOUCAN at Mulberry Green / Sheering Road</p> <p>AA. Internal movement network in East of Harlow development should deliver a connection from Hobbs Cross Road and Moor Hall Road to Gilden Way and/or London Road so that Churchgate Street can have through traffic removed (LTN), as per the same process that was followed in Old Harlow with Netteswell Road being downgraded to ped/cycle only when the original new town was built.</p> <p>BB. A parallel route in the verge along Gilden Way is also desirable to provide a more direct and consistent link to/from Gilden Park. Constrained nature of verges in Gilden Way suggests a uni-directional track (one on each side) may make best use of space. Crossing and short connecting link to be provided at Aspen Way to connect to Gilden Park. Suitable safe and direct crossing treatment required at Sheering Road / Gilden Way roundabout. The online route fulfils the LCWIP/STC corridor pending the implementation of the more challenging LTN braid.</p>  |



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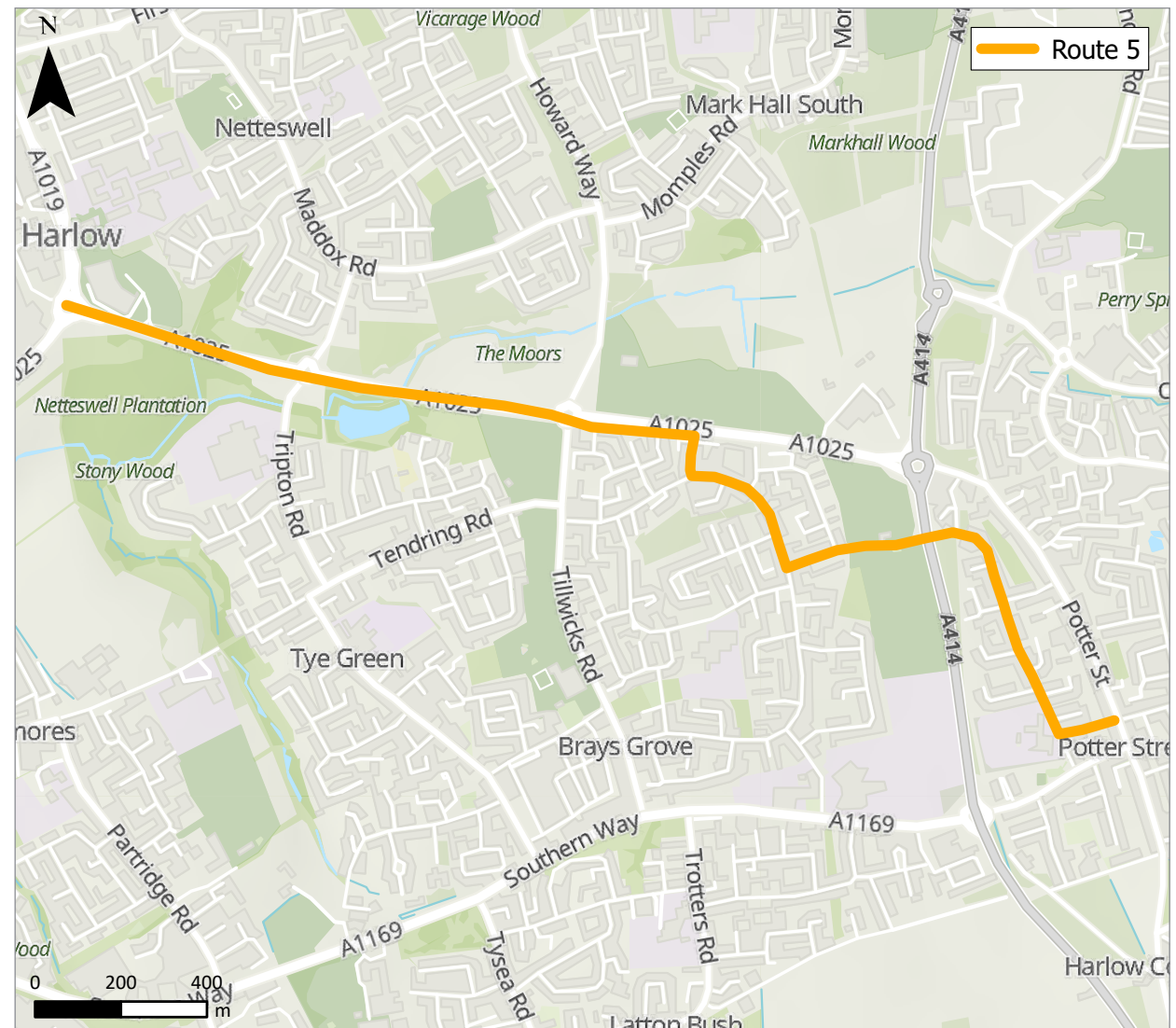
## Route 5: Brays Grove – Second Avenue – Town Centre

### Route overview

The route uses a combination of quiet residential streets and existing off-road shared use paths. On the shared use sections, cyclists are protected from vehicular traffic for a majority of the route however the existing shared use paths only provide narrow cycle facilities which should be widened particularly on the section between Tillwicks Road and Tripton Road. Access to the existing cycle facilities also needs to be improved at the Tillwicks Road and Tripton Road roundabouts as there are no cycle facilities throughout the whole junction.

The shared use path runs along the south side of Second Avenue from the town centre beyond the Brays Grove area. The path uses a subway to avoid the roundabout at the junction with Tripton Road, but crosses Tillwicks Road at the surface via a TOUCAN crossing. The use of the subway compromises the route's legibility as it takes users away from a recognisable corridor (if they are used to navigating using the surface level highway network), and the direct route of the subway, if followed from the town centre, actually diverts users off the main corridor and on to Manston Road. There is an inconsistency between the provision of a grade separated subway at a relatively quiet junction (Second Avenue / Tripton Road / Manston Road), whereas a surface crossing is provided at the busier Second Avenue / Howard Way / Tillwicks Road junction.

The residential streets are reasonably comfortable to cycle on but would benefit from traffic calming particularly at key turning junctions for the cycle route. We have extended the route further east at the request of HDC so that it goes beyond Nicholls Road to connect with existing cycle facilities on Pytt Field, and therefore serving the Potter Street area.

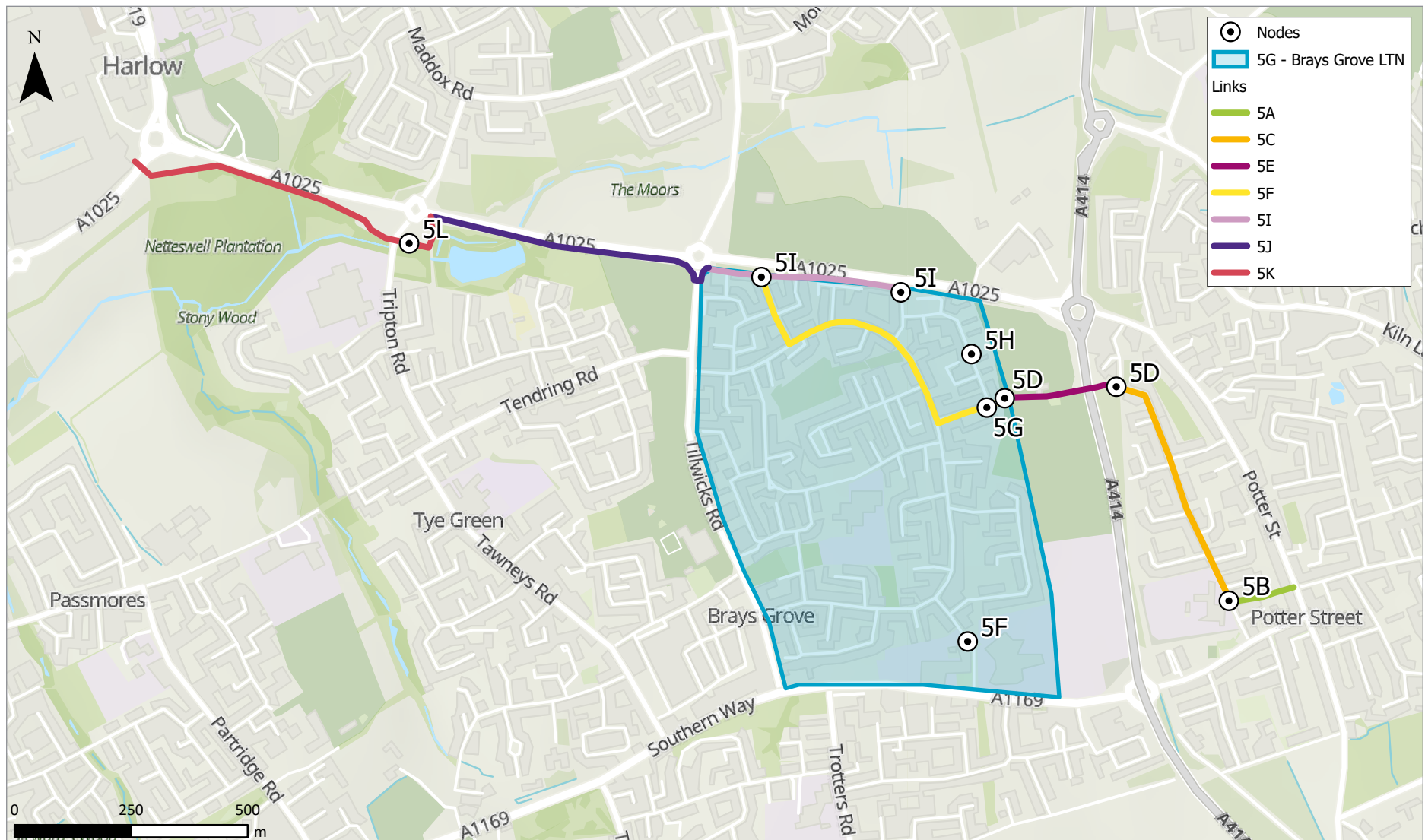


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## Route selection tool summary and recommendations

| RST section | Extents                                     | Existing conditions  | Recommendations   |
|-------------|---|--|---|
| 0           | Potter Street village centre to Pytt Field  | Short section of footpath from Red Lion to Carters Mead, then lightly-trafficked residential street Carters Mead as far as subway under A414 | <p>A. Cut back vegetation on footpath and widen to create more comfortable environment that can be shared between cycles and pedestrians.</p> <p>B. School Street mode filter outside Potter Street Academy to further reduce traffic volumes on Carters Mead</p> <p>C. Replace speed cushions with sinusoidal humps. Traffic calming may no longer be required if School Street mode filter is in place.</p>   |
| 1           | A414 to Nicholls Field                      | Shared path through subway and open space  | <p>D. Replace or re-position fire gates to ensure access by all types of Design Cycles set out in LTN 1/20.</p> <p>E. Provide lighting and public art through subway and park</p>   |
| 2           | Nicholls Field to North Grove / Great Brays | Residential streets, of which Tumbler Road is busier residential distributor road.   | <p>F. <i>Short-term</i>: improve traffic calming, especially at junctions where cycle route turns onto/off Tumbler Road. Replace speed cushions with cycle and ambulance-friendly sinusoidal humps. Resurface carriageway in places.</p> <p>G. <i>Longer-term</i>: engage with schools to introduce mode filter on Tracys Road to create school street and to reduce through traffic on Tumblers Road. This would create an LTN in the entire Brays Grove area.</p> <p>H. Provide cycle exemption to One Way / No Entry on Nicholls Field</p> |
| 3           | North Grove to Tillwicks Road               | Cycleway and footway in verge, separated by low wooden fence and bushes.   | <p>I. Punch through to Great Brays and North Grove. Great Brays punch-through is essential; North Grove desirable. Great Brays provides route with the greatest passive surveillance and integration within the local area. Compensatory hardstanding may be required where informal parking is lost to achieve punch-through.</p> <p>J. Widen cycleway by removing buffer to footpath. Engage carefully with local residents to identify replacement of lost vegetation.</p>   |
| 4           | Tillwicks Road to Tripton Road              | Cycleway and footway in verge, separated by paint strip.   | <p>K. Widen cycleway by taking space from grass verge, and replace paint strip with lozenge kerb. Resurface cycle track in contrasting red asphalt. Provide piggyback lighting from main carriageway lighting columns to provide better lighting of cycleway/footway.</p>   |
| 5           | Tripton Road to Town Centre                 |  | <p>L. Provide fillet or chamfer at changes of direction to make route easier to follow, in addition to town-wide network signage strategy update. Resurface cycleway in contrasting red asphalt. Provide piggyback lighting from main carriageway lighting columns to provide better lighting of cycleway/footway. Provide improved lighting and public art in subways. Widen shared use sections; desirably providing separate cycleway.</p>   |



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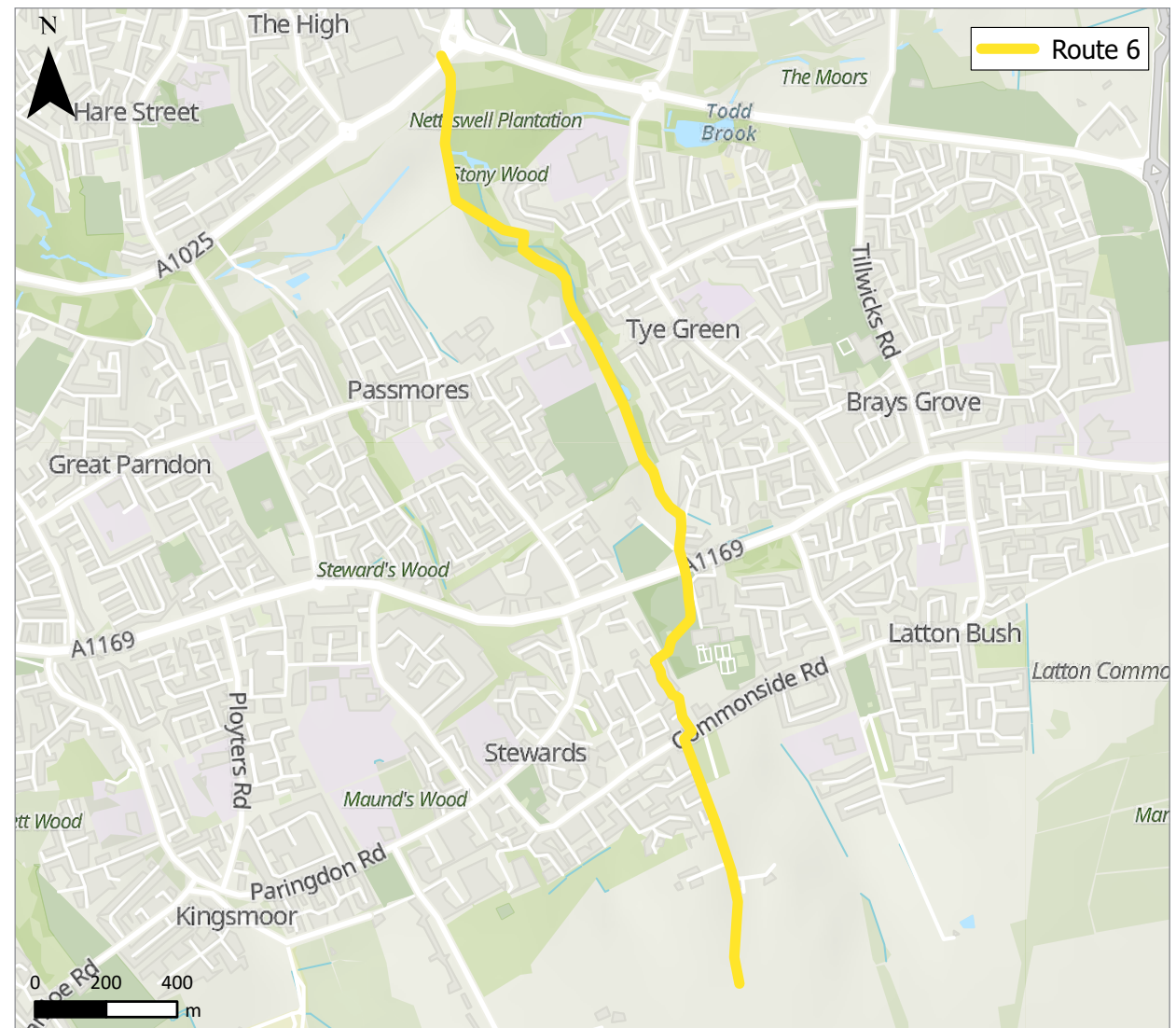
## Route 6: Brays Grove – Second Avenue – Town Centre

### Route overview

Route 6 is already a very comfortable and direct north-south cycle route between Latton Bush and the Town Centre. All of the route follows traffic-free or low-traffic routes, and cyclists are provided with a kerb protected cycle facility for a large majority of the route.

The main design recommendations are to widen a short section of shared use path between Goldsmiths and Tye Green Village as this section is particularly narrow and does not separate cyclists from vehicles. The maintenance of the existing path is also very poor and should be reviewed. There is also currently no crossing facility provided at the junction of Tye Green Village/Southern Way. Connections to adjoining cycle routes along the route should also be considered for improvement to enhance connectivity.

This route also follows the proposed alignment of the North-South Sustainable Transport Corridor, so improvements may be deliverable at part of the STC works, and indeed the delivery of the STC itself may require changes to the existing walking and cycling infrastructure. This process would see the route continue into the Latton Priority urban extension.

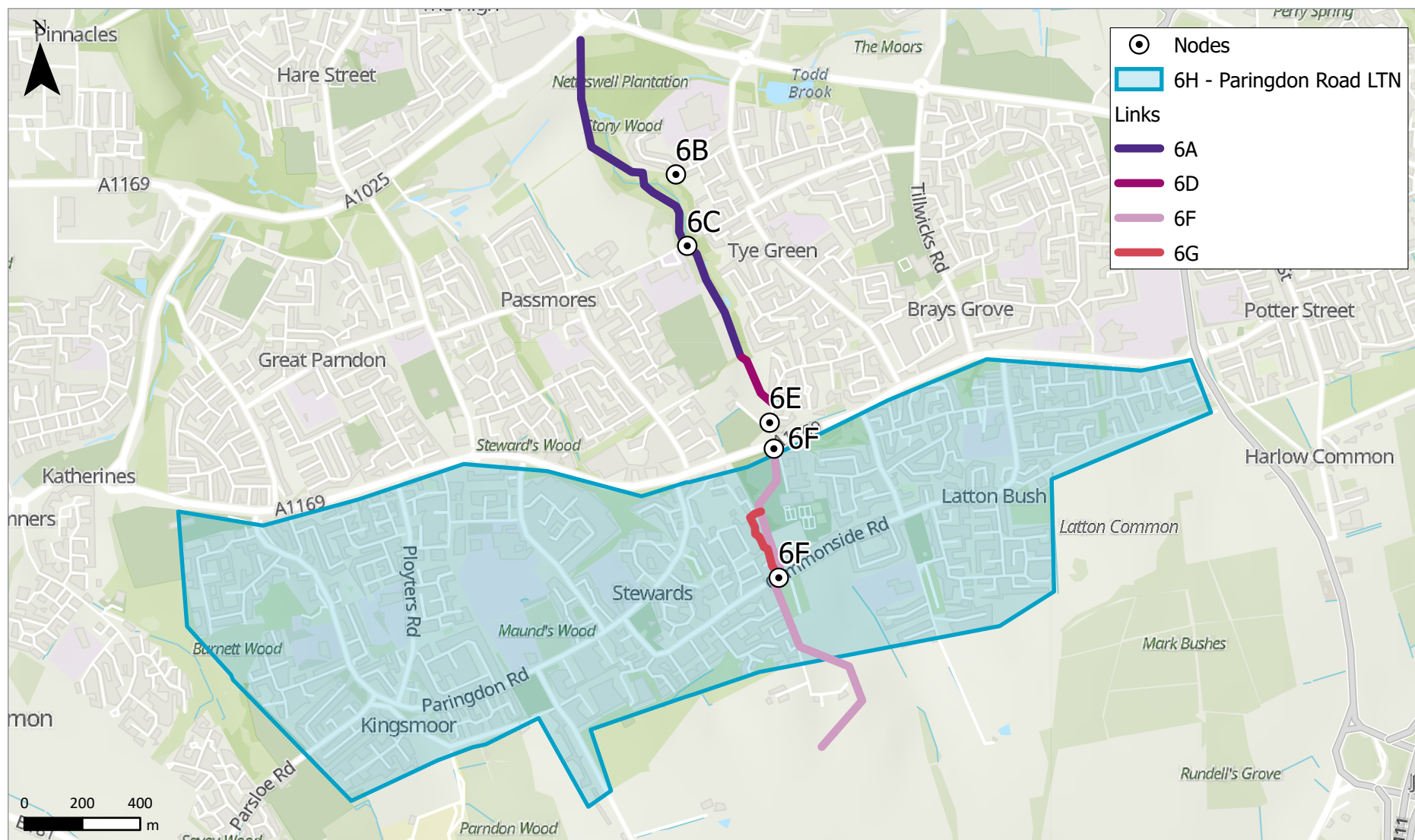


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## Route selection tool summary and recommendations

| RST section | Extents                           | Existing conditions   | Recommendations   |
|-------------|-----------------------------------|---|---|
| 1           | Town Centre to Goldsmiths         | Cycleway with adjacent footway in public open space. Lit, but poor surfacing. | <p>A. Resurface cycleway in contrasting red asphalt.</p> <p>B. Review location of fire gate, bollards and kerbs at connection to Westfield / Stony Wood to ensure access is available to all types of design cycle set out in LTN 1/20.</p> <p>C. Provide flush transition to/from carriageway at Tendring Road – e.g. remove edging kerb and replace with constructed raised table.</p>  |
| 2           | Goldsmiths to Tye Green Village   | Greenway in public open space   | <p>D. Create cycleway adjacent to path by using space in soft verge.</p>  |
| 3           | Tye Green Village to Southern Way | On-road with low traffic volumes (modal filter already in place)              | <p>E. Check accessibility of modal filter by all types of design cycle set out in LTN 1/20</p>  |
| -           | Southern Way to Latton Priory     | Public open space from Southern Way to Latton Priory                          | <p>F. Deliver dedicated cycleway as part of STC. High quality priority or signalised crossings provided at Southern Way and Commonsides Road.</p> <p>G. Short section of braided route via The Briars to provide cycle route with better passive surveillance and integration with local neighbourhood.</p> <p>H. Latton Priory Access Study recommended Low Traffic Neighbourhood in the Paringdon Road area to mitigate against traffic from Latton Priory using these residential streets in stead of the more appropriate access to the A414/B1393. This LTN approach is also beneficial to the LCWIP corridor as it provides low-traffic connections to the route. Exact extents of LTN to be determined. Indicative area shown.</p> |



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## Route 7: Tye Green – Harlow Fields – Town Centre

### Route overview

Route 7 follows a combination of low-traffic residential streets and off-road shared use facilities. A majority of the route is comfortable to cycle along as cycle interactions with vehicles and pedestrians are limited. The route is also well connected with other local cycle facilities on Southern Way, Tendring Road and Goldsmiths.

While the initial desire line clustering and HCAP analysis indicated a core route between Staple Tye and Harlow town centre, this assessment projects the route to start back from the Latton Priory development area. PJA's Latton Priory Access study has identified scope for a cycleway connection into the development along Rye Hill Road, to tie into the existing cycleway leading from Paringdon Road to Staple Tye local centre.

The immediate focus north of Staple Tye needs to be on creating a surfaced path between the existing shared use path spurring from Willowfield and the parallel cycle path to Third Avenue (currently this is a loosely surfaced and narrow footpath). Design improvements should also focus on maintenance on Partridge Road, Tendring Road and Willowfield, and improve conditions for cycling at the roundabout junction of Partridge Road and Tendring Road.



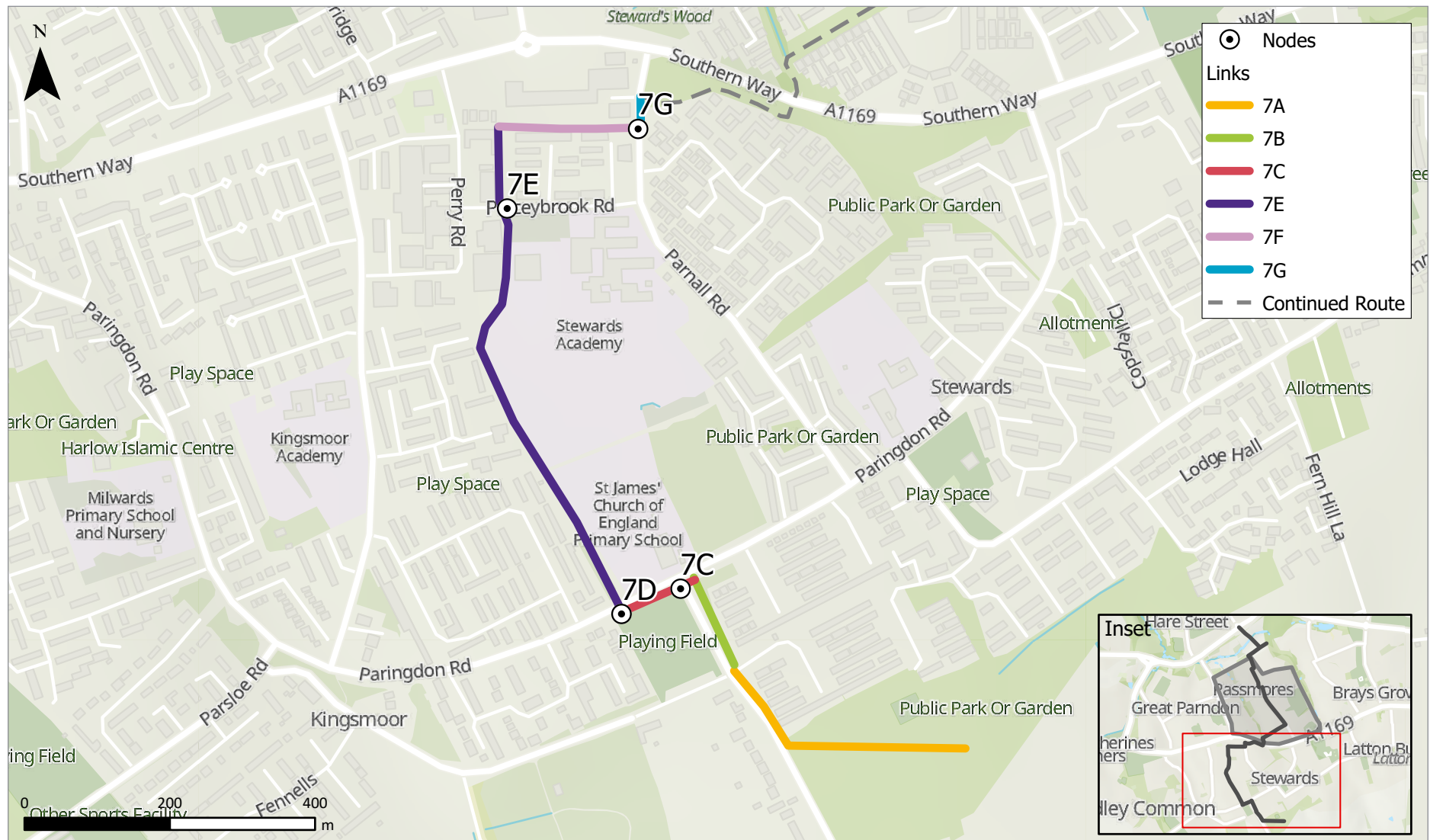
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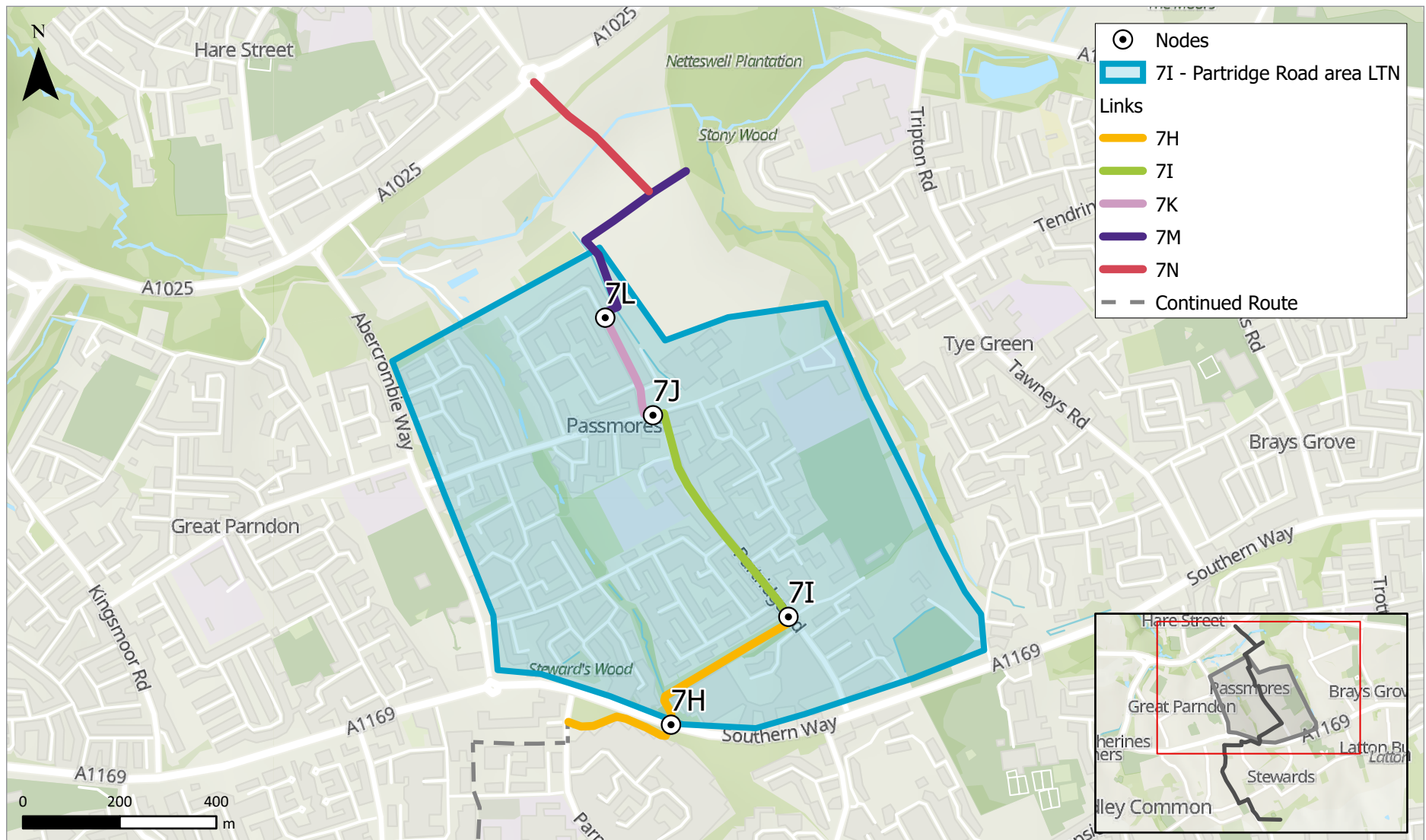
## Route selection tool summary and recommendations

| RST section | Extents                                     | Existing conditions   | Recommendations   |
|-------------|---|---|---|
| -           | Latton Priory site access to Paringdon Road | Rye Hill Road is a relatively busy unclassified road with footway on one side. Used to access B1393 (old A11) from Harlow. Traffic volumes likely to increase with new development. Some scope to create cycleway in verge, but less so south of Berecroft. | <p>A. Consider modal filter on Rye Hill Road to re-route through traffic away from this area (as noted in Latton Priory Access Study). Short length of shared use footway south of Berecroft preferable to on-road route via Berecroft, which is less direct and would still required short section of shared use.</p> <p>B. Use verge to provide new cycleway adjacent to footpath between Berecroft and Paringdon Road</p> <p>C. Use public open space to provide cycleway/footway parallel to Paringdon Road. However, potential for 3-way mode filter outside St Thomas School to create "School Street". Cycle Zebra across Rye Hill Road. Upgrade street lighting to provide piggyback lighting in POS section of cycleway / footway.</p> |
| -           | Paringdon Road to Great Parndon Library     | Existing cycle track adjacent to footpath to Staple Tye local centre, however short section north of Risdens housing estate.  | <p>D. Cycle Zebra across Paringdon Road to meet new path in POS. Amend post/gate arrangement to ensure accessibility by all cycle types in LTN 1.20</p> <p>E. Resurface cycle track in red aggregate and provide lighting. Cycle zebra or cycle priority across Pinceybrook Road.</p> <p>F. New link across POS to the north of Risdens housing estate. Separate cycle track.</p> <p>G. Fill in bus stop layby to create cycle track on E side of Parnall Road, with Cycle Zebra tying in to new link across N side of Risdens. Bus stop to be relocate north, closer to Zebra Crossing to local centre (situated in-flow)</p>  |
| 1           | Great Parndon Library to Partridge Road     | Mixture of off road cycleway adjacent to footway, and shared use greenway / footpath.   | H. Resurface existing cycleway, improve lighting and wayfinding, introduce public art lighting scheme in subway. Widen into verge to create new kerb-segregated cycleway where existing shared use / footpath.  |
| 2           | Goldsmiths to Tendring Road                 | Partridge Road – traffic calmed, but with guardrail outside school suggesting busy traffic at peak times.   | I. Introduce modal filter north of Goldsmiths to create Low-Traffic neighbourhood and opportunity for linear park. Removal centreline road markings and school railings.  |





| RST section | Extents                        | Existing conditions  | Recommendations  |
|-------------|--------------------------------|--|--|
| 3           | Partridge Road to Willowfields | Tending Road staggered t-junction. Existing mini-roundabout on one arm of the staggered junction. Junction layout assumes optimisation of W-S and S-W movements. | J. Modal filter on Partridge Road obviates need for mini-roundabout. Replace with conventional staggered junction, with priority for movement along the staggered movement of the cycle route. Raised table and placemaking to enclose junction;   |
| 4           | Tending Road to Cycle Gate     | Willowfields – quiet residential estate. Limited width for cycles to pass oncoming cars when adjacent to parked vehicles.  | K. Introduce 20mph limit and traffic calming as part of wider Low Traffic Neighbourhood. Determine suitable measures to ensure cycles and vehicles can pass safely – e.g. waiting restrictions, build outs or traffic calming at locations with poor inter-visibility and where traffic likely to be acceleration. |
| 5           | Cycle gate to Wooded area      | Cycleway adjacent to footpath in open space  | L. Improve prominence of access to cycle track at Willowfields, e.g. change junction priorities.<br><br>M. Resurface cycle track. Install CCTV.  |
| 6           | Wooded area to Third Avenue    | Footpath through wooded area. Limited width and poor surfacing. Hilly.   | N. Provide dedicated cycleway as part of STC connection from Haydens Road across open space to Tending Road.   |



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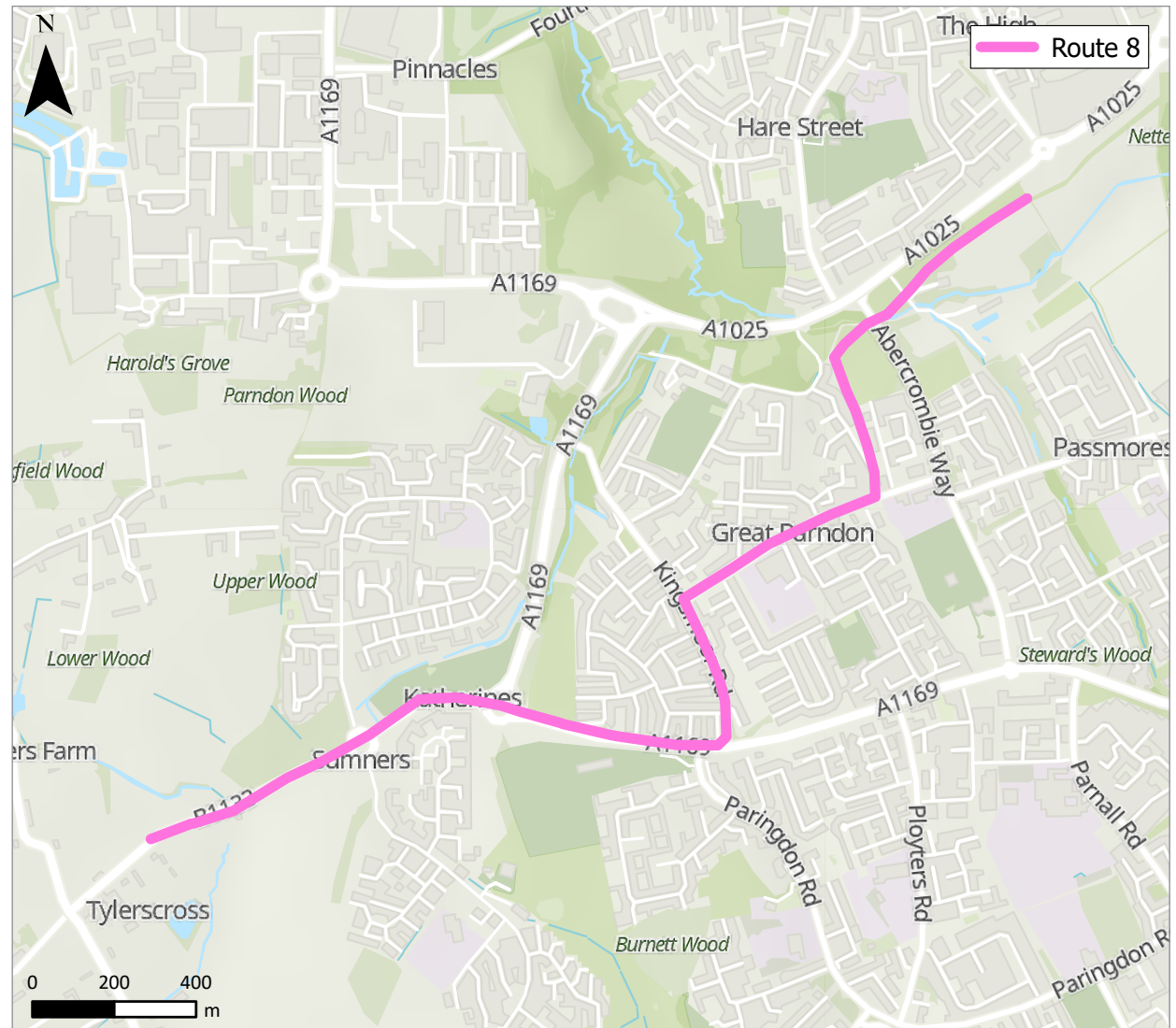


## Route 8: Sumners – Great Parndon - Town Centre

### Route overview

The existing protected sections of the route for cyclists are high-quality and provide a high level of service. Cyclists are able to use either kerb protected facilities or shared use paths (the RST western extent finished at the Broadley Road/ Brookside roundabout with Water Lane where the existing protected cycle facilities currently end in a westbound direction). The on-road sections of Route 8 between Southern Way and Woodward's are uncomfortable to cycle on because of vehicle volumes and speeds on the routes, and further compounded by lack of protection for cyclists from bus services. The transition from existing protected facilities to the on-road sections are also uncomfortable and should be reviewed.

The design focus of Route 8 should be on the proposed on-road sections and providing infrastructure to protect cyclists from vehicular traffic and buses. There is design scope on Kingsmoor Road to introduce protected cycle facilities however the highway is more constrained on Pyenest Road. Narrow uni-flow cycle tracks could be installed on Pyenest Road which would require the relocation of existing parking bays away from the street and widening of the existing footways into adjoining grass verges. Design proposals also need to upgrade the junctions of Pyenest Road/ Kingsmoor Road which has no cycle facilities. The double roundabout junction of Southern Way/ Kingsmoor Road/ Paringdon Road which has no cycle facilities and is an important junction for cycle routes in the area.

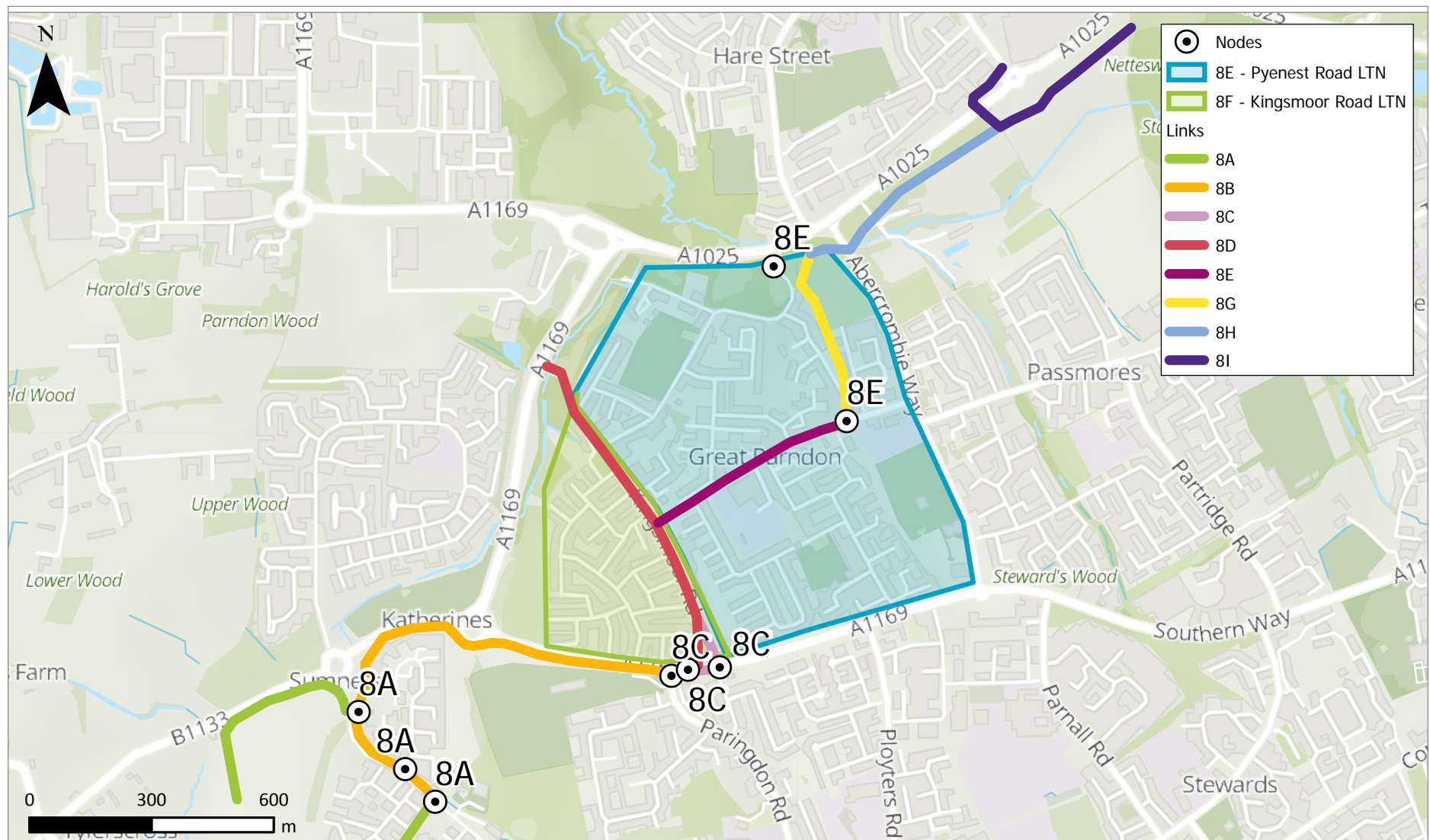


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## Route selection tool summary and recommendations

| RST section | Extents   | Existing conditions  | Recommendations   |
|-------------|---|--|---|
| -           | Water Lane housing allocation to Broadley Road                          |  | A. Suitable connection from Water Lane housing extension to existing cycle track along Broadley Road. Level differences along Broadley Road limit the scope of connection points to either A1169 Roundabout or paths to the rear of / adjacent to Water Lane primary school. Suitable controlled/ cycle priority crossing(s) over Broadley Road required. Urban design of Water Lane housing extension to maximise frontage on and permeability to new cycle/walk links created.  |
| 1           | Broadley Road to Kingsmoor Road   | Cycleway in verge separated footway by half-height kerb. Runs to rear of houses with poor passive safety and far from lighting columns on other side of the road   | B. Re-surface/surface-dress cycle track as part of network-wide re-branding. Introduce new lighting scheme on footway/cycleway side of the road, or relocate street lighting columns to other side of road where lighting is poor.<br>C. Junction improvement required at Southern Way / Paringdon Road / Kingsmoor Road to improve continue of main cycle path along Southern Way, and connection to/from Kingsmoor Road. Options include displaced zebra crossing lining up with Kingsmoor Road service road, and utilising verge space east of Paringdon Road to alter junction geometry to provide appropriate cycle priority crossing over Paringdon Road. |
| 2           | Southern Way to Pyenest Road  | (Kingsmoor Road). Sweeping residential distributor road, with significant length of no residential frontage. Slow markings and vehicle actuated warning signs hint at speeding issues. Likely a cut-through between Southern Way and Katherines Way. | D. Provide with-flow cycle tracks in grass verge, with priority over side roads. Floating parking where necessary. Requires some street furniture to be relocated to back of footway, e.g. Post Boxes, Lighting Columns, Cabinets. May require slight narrowing of carriageway. Potential to retain existing drainage gully locations by using drainage kerbs around gulleys at any kerblines realignment. Desirable for cycle track treatment to continue to and tie-in with Katherines Way cycle path to avoid disjointed network.  |
| 3           | Kingsmoor Road to Cycle Path  | (Pyenest Road) Residential distributor road with two schools, and bus route. Slow markings as per Kingsmoor Road suggest issues with speeding. Pedestrian guardrail and centreline markings reinforce a message of through traffic dominance.        | E. Space available in verge west of Jerounds (eastern arm). Development closes in east of Jerounds, and the road feels more intimate and residential. A mode filter west of Woodward's at junction with cycle path creates a Low Traffic Neighbourhood in Great Parndon area. Complementary mode filter would be required on Horseshoes Road to avoid traffic displacement.<br>F. A wider LTN cell would obviate need for cycle tracks on Kingsmoor Road.   |
| 4           | Pyenest Road to Third Avenue Parallel Cycleway                          | Existing footway / cycleway.   | G. Re-surface/surface-dress cycle track as part of network-wide re-branding. Introduce new lighting. Provide new/improved connections to adjacent residential streets, i.e. Tyne Croft and Woodward's.  |
| 5           | Third Avenue Parallel Cycleway to Third Avenue / Second Avenue Junction |  | H. Re-surface/surface-dress cycle track as part of network-wide re-branding. Introduce new lighting.<br>I. Ensure intuitive access into town centre and other LCWIP cycle routes, following principles of other similar sections, e.g. lighting, surfacing, bollard spacing.  |



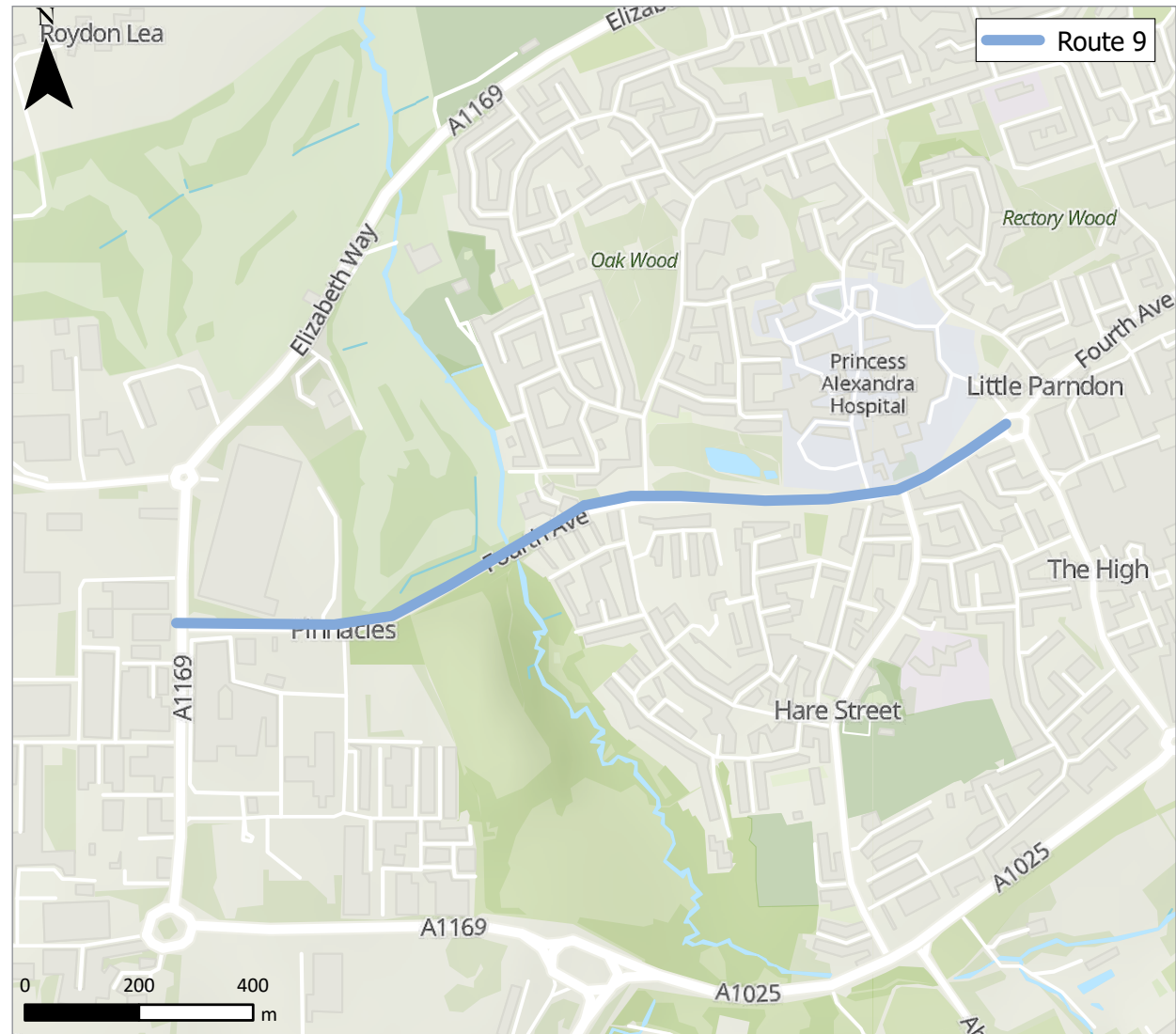




## Route 9: Pinnacles - Town Centre

### Route overview

Protected cycle facilities are provided throughout Route 9 except for a short-section of non-delineated shared use path between Hodings Road and the A+E entrance. The protected cycle facilities are 3m kerb protected cycle tracks which results in a high level of service. The main design focus for Route 9 should be on replace the existing shared use path with segregated cycle and pedestrian facilities. Design upgrades should also be considered for side-entry treatments as there are some wide access points adjoining the route which currently de-prioritise cyclists and pedestrians, in particular the access points to Poundland and access to the hospital car park.

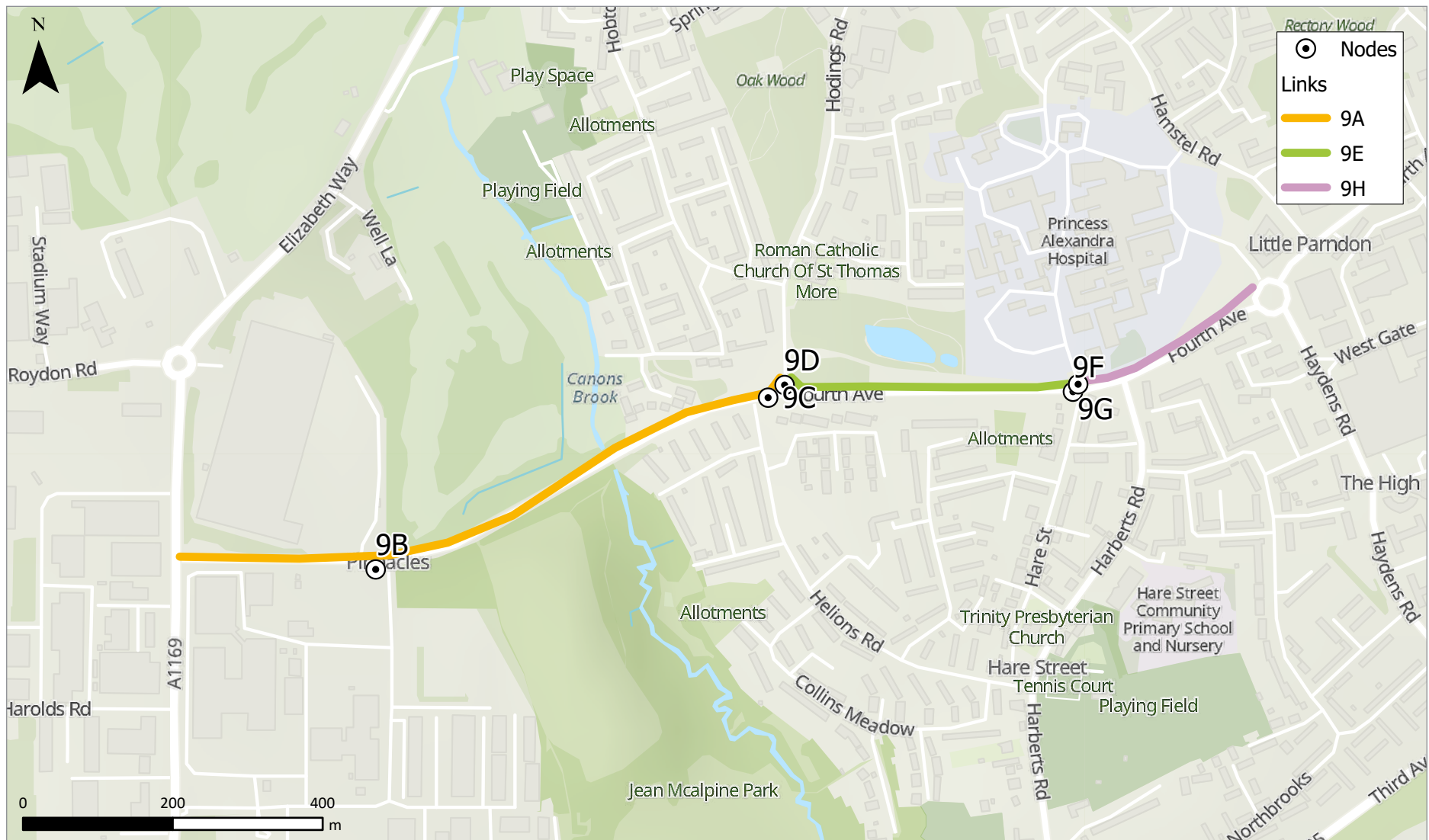


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## Route selection tool summary and recommendations

| RST section | Extents                                | Existing conditions   | Recommendations   |
|-------------|--|---|---|
| 1           | Elizabeth Way to Hodings Road (west)   | Cycle track segregated from pedestrians and motor vehicles. Lacks continuity or safe crossing point at side roads / accesses. | <p>A. Re-surface and wayfinding as part of consistent Harlow-wide cycle route branding strategy, to improve visibility of routes</p> <p>B. Provide cycleway/footway priority at Poundland RDC access subject to LTN 1/20 priority treatment, likely associated with measures to reduce traffic speed on main road to support this, which provides opportunity for better pedestrian connectivity to/from Coldharbour Road and bus stops.</p> <p>C. Provide controlled ped/cycle crossing or wide refuge to fulfil desire line to/from Helions Road</p> <p>D. Provide cycleway priority over side road at Hodings Road</p> |
| 2           | Hodings Road (west) to Hospital Access | Shared footway/cycleway separated from main road through earth mound and trees. Poorly overlooked.                            | <p>E. Provide new cycletrack alongside Fourth Avenue (in addition to path in open space), formed by taking space from verge and relocating lamp columns etc.</p> <p>F. Provide controlled ped/cycle crossing or wide refuge to fulfil desire line to/from Hare Street</p> <p>G. Provide cycleway/footway priority at Hospital access subject to LTN 1/20 priority treatment, likely associated with measures to reduce traffic speed on main road to support this. Longer term, deliver set back cycle priority crossing with zebra crossing as part of any hospital site redevelopment</p>                               |
| 3           | Hospital Access to Haydens Road        | Cycle track separate from pedestrians and motor vehicles, however strays from desire line mid-link.                           | <p>H. Provide new cycle track alongside Fourth Avenue to tie-in to town centre junction re-modelling. Resurface existing infrastructure to provide clear, consistent link treatment.</p>  |



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## **Appendix C      Walking Infrastructure Recommendations**



# Harlow & Gilston Garden Town LCWIP

## Walking Infrastructure Recommendations



| Version         | Date     | Main Contributors | Approved by |
|-----------------|----------|-------------------|-------------|
| Draft           | 10/01/21 | AS, JY, BC        | BC          |
| <b>Final</b>    | 30/03/21 | JY, MW + BC       | BC          |
| <b>Final V2</b> | 01/11/21 | JY, MW + BC       | BC          |

#### Prepared for

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| Recommendations                | 5  |
| Bush Fair Core Walking Zone    | 11 |
| Staple Tye Core Walking Zone   | 17 |
| Templefields Core Walking Zone | 25 |
| Town Centre Core Walking Zone  | 35 |

# Summary

This appendix provides a narrative of the LCWIP's four Core Walking Zones, and summarises the conditions encountered by the Walking Route Audit Tool (WRAT) of the Key Walking Routes within each zone. Audits were undertaken by officers from the core project team and PJA with support from volunteer members of the public who had previously been involved in a stakeholder workshop event.

Whilst the outputs are focused on the Core Walking Zones, many of the issues and opportunities identified will have resonance for the rest of Harlow and how to improve conditions for walking in the town.

## Core Walking Zones (CWZs)

The LCWIP process identified four Core Walking Zones for consideration within the current LCWIP. The zone identification was based on clustering of destinations, and a multi-criteria analysis to determine those areas where there would be greatest impact of delivering improvements to the walking environment and increase walking mode share.

Having identified the walking zones, key walking routes into each zone were identified to be audited on site using the WRAT. Improving conditions for walking on these routes will in turn improve walkability of the wider environment surrounding the Core Walking Zones. The process is explained further in the main report.

The four selected LCWIP areas are:

- Templefields, including Old Harlow and The Stow
- Bush Fair
- Staple Tye
- Town centre environs (not including the Town Centre masterplan study area)

## WRAT Scoring Themes

The walking audit tool considers a total of 20 assessment items which are grouped into five key criteria.

- Attractiveness considers the general ambience of the walking environment – its physical maintenance, user perception of crime, and the effect of traffic noise and pollution.
- Comfort looks at the condition and width of the pedestrian infrastructure, and disruptive factors such as staggered crossings, footway parking and gradient.
- Directness considers how well links and crossings cater for desire lines, including delays at crossings.
- Safety looks at the volume and speed of traffic, and how good the visibility is.
- Finally, coherence considers if dropped kerbs and tactile paving are provided along the route.

The findings from the site auditing were used to inform the recommended design measures for each walking route within the four Core Walking Zones. In addition to the recommended measures on the LCWIP walking routes, the next chapter includes general recommendations for improvement that could be considered for wider implementation across Harlow.



# Recommendations

While the audits looked at specific routes, it should be noted that walking is a micro-mobility activity that doesn't necessarily coalesce to busy corridors in the same way that other transport modes do (although funnel routes do exist where there limited route options between specific nodes). Therefore, many of the recommendations in each zone would apply town-wide, and as such it is recommended that a pan-Harlow programme of footway improvement is implemented, following the recommendations of these specific audits. The LCWIP's design recommendations have been presented both by location and also design type. This approach will enable the delivery of measures in the future to respond to geographically-based issues and/or specific design issues.

Based on the findings from the site auditing, the below key issues were identified for walking in the four CWZs:

- Footway parking
- Legibility + Wayfinding
- Dropped kerb provision
- Junction radius reduction / side road priority
- Low traffic neighbourhoods

Specific recommendations for each Core Walking Zone are summarised in the subsequent sections.

## Footway Parking

Footway parking was a particularly prevalent issue in more residential areas within the Core Walking Zones. Footway parking channels pedestrians into narrowed sections of footway which incurs delay and reduces pedestrian comfort levels. Footway parking also frequently caused damage to pavements which were not designed to accommodate the weight of parked/turning vehicles.

While the government is currently considering a ban or at least strengthening of local authorities' positions on footway parking enforcement, a formalised order to ban footway parking can still be introduced under current regulations. Restrictions on footway parking have recently been launched in Stevenage and Brighton and Hove (see below). The restrictions are reinforced with signage to make drivers aware that they are entering a prohibited zone.



## Wayfinding

The auditing process revealed that Harlow has a very permeable and well connected pedestrian network within each of its neighbourhoods. Footways are provided alongside a majority of vehicle routes and there is also an extensive 'off-highway' pedestrian and cycle network which is mainly routed through housing estates and open spaces. However, the legibility of the 'off-highway' network is limited with many of the routes not signposted and no information provided to explain how the routes connect with the wider area. Consequently, these routes rely on local knowledge to understand the routing and purpose of the individual routes. The lack of wayfinding undermined the walkability of the walking zones, this was further exacerbated in some instances where lack of social safety and passive surveillance creates unwelcoming environments.



# Recommendations

Developing a network of legibility for Harlow would help reinforce the compact nature of the local centres and also enhance inter-connectivity between the different neighbourhoods. Recognising that wayfinding has the potential of adding to street clutter, there is an opportunity for a wayfinding programme to be delivered as part of a wider de-cluttering exercise, where wayfinding can be bundled into other street furniture items, e.g. street name plates.

A branded or coloured system can be applied, with each neighbourhood being able to choose its own logo that has relevance to the local community. This process can be meshed with the town-wide route branding system for the cycle routes – i.e. destination signs would have coloured patches corresponding to the local neighbourhood branding. Special authorisation may be required for some signs, but is not necessary on Street Name Plates.

Examples of similar approaches from Waltham Forest and Bracknell have been provided below to illustrate the design of wayfinding materials. Waltham Forest has incorporated pedestrian wayfinding with destinations and walking distances into all new road name signs as part of their Mini-Holland programme. Similarly to Harlow, Bracknell Forest has an extensive network of off-road cycle routes which include grade-separated junctions. They have developed a colour based signage schedule for their key cross-town routes to improve legibility and comfort for cycling the routes.



## Dropped kerbs + Tactile Information

It is noted that there are many areas where dropped kerbs and/or tactile information was either missing or inconsistently designed. The inconsistently designed examples were often related to dropped kerb/tactile information which was not aligned across crossing points/junctions. This was also the case on the off-road cycleway-footpaths, where there is a kerb between cycleway and footpath, but often no means of accessing between the two without an upstand.

The cumulative impact of this issue is to undermine the cohesiveness and continuity of walking routes as it was not always possible to rely on the provision of dropped kerbs/tactile information – this is a particular issue for user groups who depend upon these design cues in the environment. The issue was often exacerbated in residential areas where wide corner radii further increased crossing distances for pedestrians.

A general neighbourhood environment improvement programme for each residential area should methodically review and implement dropped kerbs/tactile information where required.

Many of the issues associated with missing dropped kerbs/tactile information were often compounded by wide junction radii which further disrupted walking routes. It is recommended that a joint response is developed to address both of these issues in future design development.



### Junction radius reduction/ Side road priority

This opportunity is closely related to the previous point on dropped kerbs/tactile information and the two approaches should be considered in tandem to maximise the improvements for walking. Whilst predominantly a feature of the industrial areas, there are many residential junctions in Harlow where very generous turning radii are provided. These generally encourage and facilitate motor vehicle turning movements to be undertaken at higher speed than is desirable for pedestrian and cyclist safety and comfort. Wide radii also extend the crossing distance for pedestrians, increasing the length of time pedestrians are in conflict with vehicles.

With the potential change in the Highway Code to offer greater emphasis on pedestrian priority at side road crossings, it would be desirable for engineering changes to be adopted that are consistent with this. This would take the form of reducing the radius of busier junctions, and implementing side road continuous footway crossovers at quieter junctions. This is an increasingly common approach used to promote pedestrian desire lines across side-entry junctions and to reduce drivers' speeds on the approach to junctions.



# Recommendations

## Low Traffic Neighbourhoods (LTN)

Much of Harlow has been designed such that the main traffic flows are catered for on purpose-built distributor roads with a majority of residential areas developed around cul-de-sac arrangements. However, Harlow's residential road network still retains some vehicle permeability for through-access. Consequently, it is possible to use some local routes, for example Pyenest Road and Tumbler Road, to avoid the main road network which results in increased rat-running/through trips.

Attempts have clearly been made to mitigate the impacts of this by using traffic calming features such as give-take chicanes, but – as seen in the zebra crossings on Paringdon Road – these have unintended negative consequences. The auditors observed that drivers in such a situation do not give way to pedestrians at the pinch points as they instead focus on taking the gap in order to not have to give way to oncoming traffic, thus making pedestrian crossing difficult or unsafe. Other measures – such as traffic calming – lead to discomfort for some vehicle occupants, and potential difficulties for cyclists, motorcyclists and emergency services.

Low Traffic Neighbourhoods (LTN) aim to reduce the impact of through-vehicular traffic upon streets. Although coined as Low Traffic 'Neighbourhoods' which implies a residential focus, the approach can be applied to any area where through-traffic has an adverse effect on other users. The main output of LTNs is reduced through-traffic volumes, however the approach and its benefits are significantly wider ranging than traffic management.

This approach is promoted in the recent LTN 1/20 which encourages the creation of low-traffic environments to increase the attractiveness of walking and cycling:

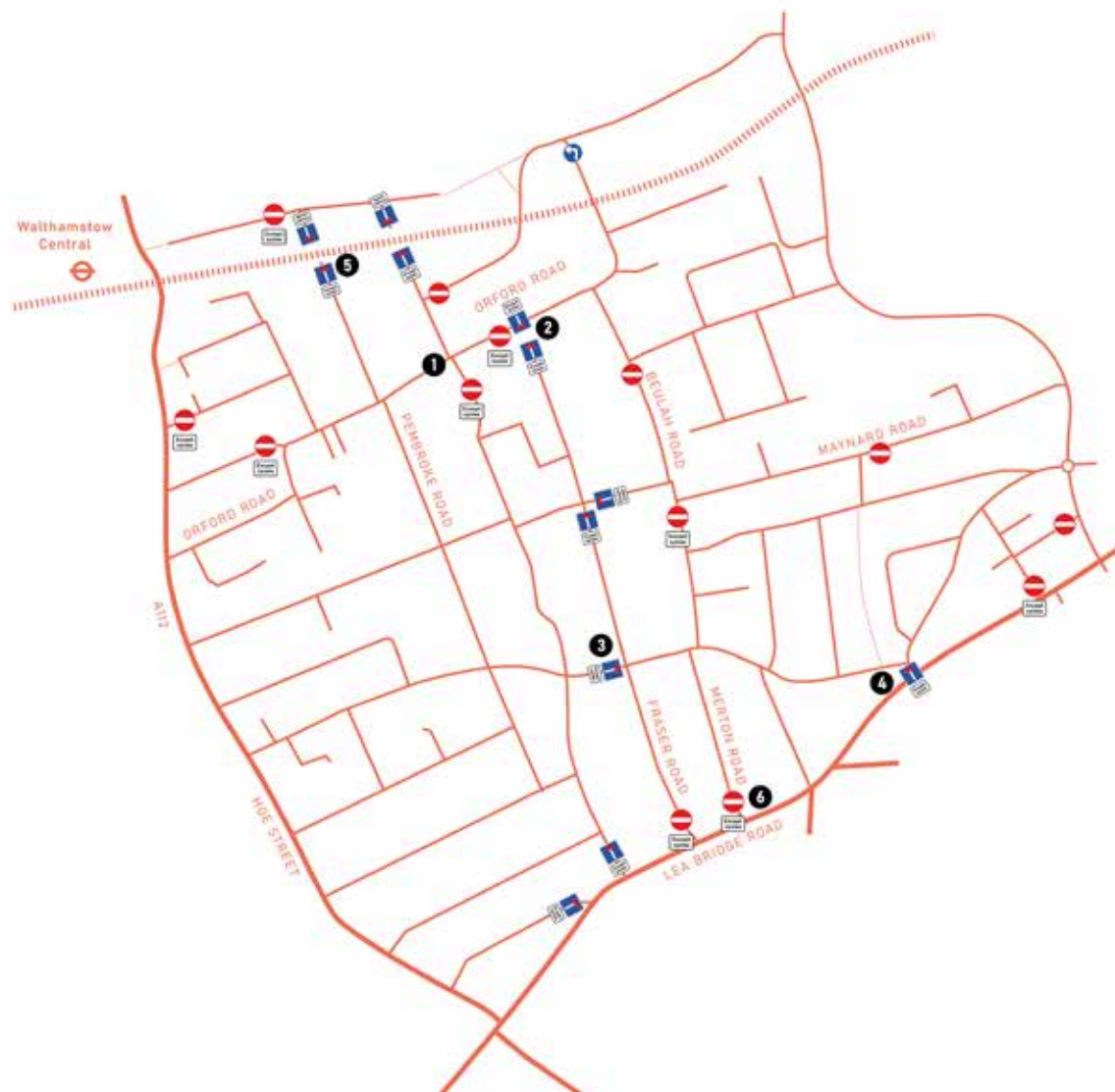
*'Encouraging through-traffic to use main roads can provide benefits for pedestrians and residents, particularly children and vulnerable adults, as well as enabling cycling. This can be achieved through implementing measures such as turning bans, one-way streets, and by modal filtering ... These measures also have the benefit of making short journeys quicker on foot or cycle compared to driving, providing a disincentive to using a car for short trips.'*

LTNs are normally enforced through the use of 'modal filters' which are physical barriers to prevent vehicle access whilst maintaining access for pedestrians and cyclists, and can also allow through access for buses and emergency services if required. The examples overleaf of existing LTNs in Walthamstow, Newham and Stockwell illustrate how public realm improvements have been developed to activate modal filters to provide wider benefits to local communities.

The feasibility of installing Low Traffic Neighbourhoods in Harlow would be reasonably high as the historical layout of Harlow's residential streets means that it would require relatively few closures to remove through-traffic. Any design proposals for LTN would need to be developed through local engagement and also engagement with key stakeholders including the local bus services who often use these residential through-routes. As well as benefitting local residents and conditions for walking, the approach is also complementary for improving on-street conditions for cycling and the LCWIP proposed several LTNs to help enhance cycling routes.













# Bush Fair Core Walking Zone

## Area Characteristics

Bush Fair is one of Harlow's four original main local centres identified in the 1952 masterplan: the others being the Town Centre, The Stow and Staple Tye. It has a pedestrianised high street, with light industrial employment uses located immediately adjacent to the south-east of the retail and services core. It is served by bus stops on Tawneys Road and A1169 Southern Way.

Parking is provided to the west of the shopping area, while parking also informally takes place to the rear of the retail units and in the industrial area.

The Bush Fair CWZ is centred on its 1950s shopping precinct which forms the heart of the community. The occupancy rate of the local businesses is high, it contains a mixture of local enterprises and national chains which acts as a local centre. The area is only 1.5 miles or around 30 minute walk to Harlow Town Centre and can be accessed by a frequent bus service. The shopping precinct is bounded by a number of roads around it which are home to several businesses and light industrial buildings. The roads act as a 'collar' separating nearby residential areas and in some locations acts as a barrier to pedestrians due to the fact that the roads are wide and there are few formally crossing points or islands.

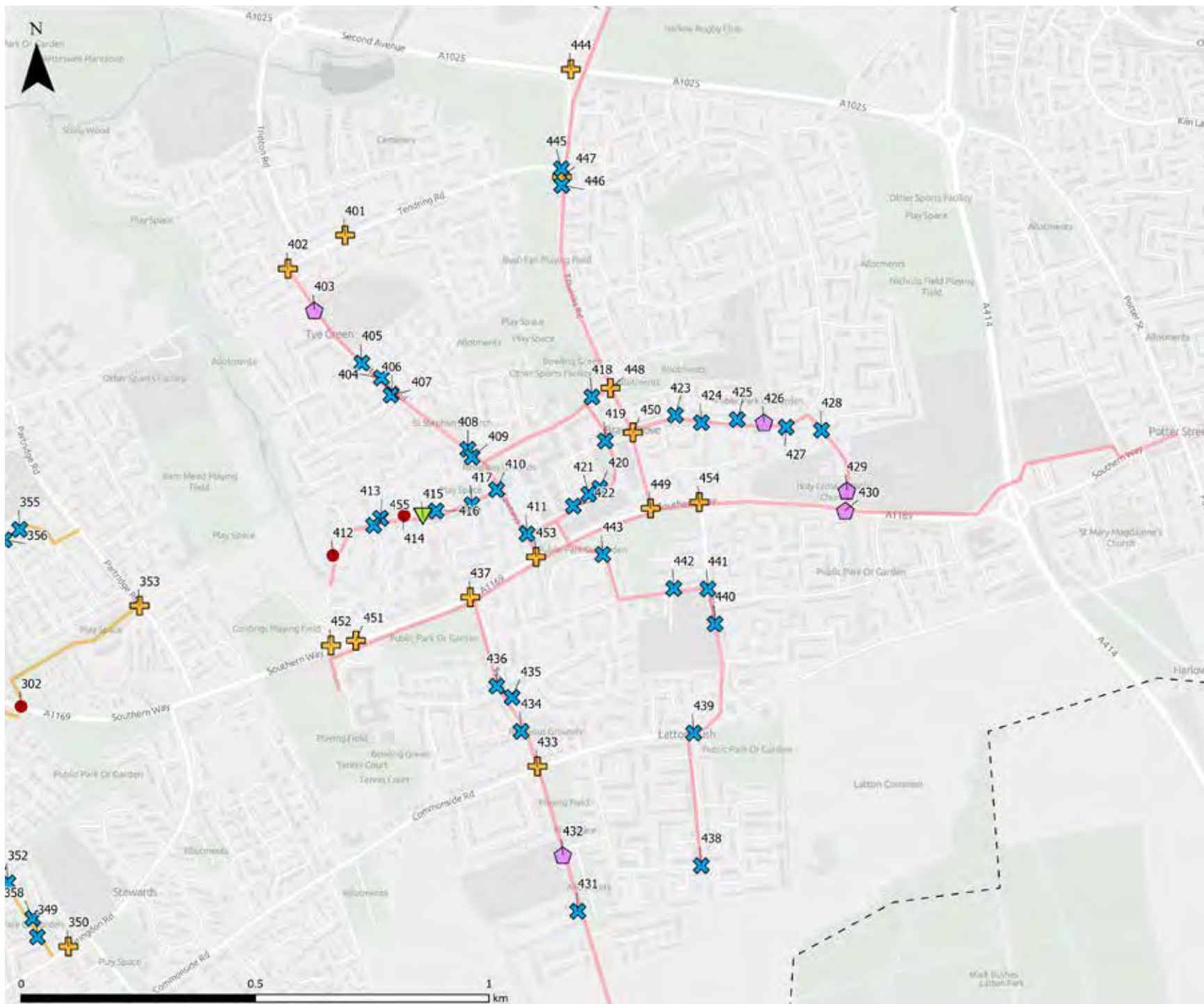
The quality of the public realm is variable, with issues around maintenance which is reflective of the fact that as is often the case in New Towns which are now approximately 70 years old, the assets are degrading at the same time. The shopping precinct is traffic free, albeit there is a large central car park at its edge. A number of walking routes radiate from Bush Fair to residential areas and other destinations, which can be reached in approximately 10 minutes from the shopping precinct. However, there are some issues with severance,

in particular the underpass crossing the A1169 which acts as a barrier to pedestrians due to flooding or as it is night considered desirable to use at night.

There are opportunities to improve the walking environment in Bush Fair with at grade crossings, as well as public realm works to the shopping precinct and improving connection to the surrounding walking route network. There are some maintenance issues which need to be addressed with localised flooding causing footway degradation, and there some locations which require the foliage to be maintained at more regular intervals.

However, one of the main barriers to walking is the issue of pavement parking, which acts as a barrier to mobility by funnelling pedestrians into narrow spaces and can make the walking environment less than comfortable.

Pavement parking should be phased out over time to free up pavements for people who are walking. Bush Fair has walking designed in to its environment in that there are several walking routes which radiate from a hub area, as well as providing links to other local destinations such as the Harlow Business Centre and the Rugby Club. This walking network would benefit from an upgrade to the existing assets, and some new walking infrastructure such as new crossings, seating and green infrastructure. This would have the effect of updating the walking environment so that it is fit for purpose for the 21st Century to enable the development of a 15 minute neighbourhood whereby residents can access many local services and businesses on foot.



- Harlow Study Area  
 Key Walking Routes (Bush Fair)  
 Key Walking Routes (Staple Tye)  
**WRAT Design Actions**  
 Type  
 De-Cluttering  
 Junction Treatment  
 Maintenance  
 Missing Dropped Kerb/  
 Tactile Information  
 Missing Footway

Relative point order information is used under the 2015 Joint  
 Transport Atlas from the Department  
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Epping Forest  
 District Council

Harlow LCWIP

BUSH FAIR  
 CWZ DRAFT DESIGN  
 MEASURES  
 (WITH FEATURE LABEL)

AX4 T/Ma JV WC 18/04/2021



## Bush Fair Design Recommendations

| Scheme ID | Location                        | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|---------------------------------|--|---|-------------------|
| 401       | Tendring Road                   | Junction                                 | Introduce parallel crossing                         | £27,750           |
| 402       | Tendring Road/Tawneys Road      | Missing Dropped Kerb/Tactile Information | Missing Dropped Kerb/Tactile Information            | £1,650            |
| 403       | Outside William Martin CoE      | De-Cluttering                            | Remove clutter + guardrailing from outside school   | £750              |
| 404       | The Fortunes                    | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                     | £1,650            |
| 405       | The Fortunes                    | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                     | £1,650            |
| 406       | The Fortunes                    | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                     | £1,650            |
| 407       | The Fortunes                    | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                     | £1,650            |
| 408       | The Fortunes                    | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                     | £1,650            |
| 409       | Tawneys Road - Park access      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 410       | Tawneys Road/ Tye Green Village | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                     | £1,650            |
| 411       | The Fairway/ Tawneys Road       | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 412       | Tye Green Village               | Maintenance                              | Overgrown vegetation significantly narrows footways | £1,500            |
| 413       | Upper Hook                      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 414       | Tye Green Village               | Maintenance                              | Overgrown vegetation significantly narrows footways | £750              |
| 415       | Yorkes/Tye Green Village        | Missing Footway                          | No footway at junction and no dropped kerb/tactiles | £1,080            |
| 416       | Fountain Farm/Tye Green Village | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 417       | Primrose Field                  | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 418       | Tilegate Road Car Park          | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 419       | The Fairway                     | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 420       | The Fairway                     | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |

## Bush Fair Design Recommendations

| Scheme ID | Location                           | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|------------------------------------|--|---|-------------------|
| 421       | The Fairway                        | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 422       | The Fairway                        | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 423       | Tumblers Road                      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 424       | Longfield                          | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 425       | Strile Croft                       | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 426       | Tumblers Road                      | De-Cluttering                            | Guardrail reduces footway width - remove                              | £750              |
| 427       | Tumblers Road/Spencers Croft       | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                                       | £1,650            |
| 428       | Spencers Croft                     | Missing Dropped Kerb/Tactile Information | Missing both on southern side   | £1,650            |
| 429       | Tracyes Road outside school        | De-Cluttering                            | Existing guardrail reduces footway width and permeability - remove    | £750              |
| 430       | Tracyes Road/Southern Way Junction | De-Cluttering                            | Existing guardrail reduces footway width and permeability - remove    | £750              |
| 431       | Hilly Field                        | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 432       | Riddings Lane                      | De-Cluttering                            | Guardrail reduces footway widths - consider removal                   | £750              |
| 433       | Commonside Road                    | Junction                                 | De-Clutter junction, raise table and provide crossing point into park | £35,400           |
| 434       | Tysea Close                        | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                                       | £1,650            |
| 435       | Wharley Hook/Tysea Road            | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 436       | The Readings/Tysea Road            | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 437       | Southern Way/Tysea Road            | Junction                                 | Introduce zebra crossings at junction                                 | £27,750           |
| 438       | Rundells                           | Missing Dropped Kerb/Tactile Information | Missing both  | £1,650            |
| 439       | Trotters Road                      | Missing Dropped Kerb/Tactile Information | Install crossing  | £1,650            |
| 440       | Trotters Road                      | Missing Dropped Kerb/Tactile Information | Existing tactiles/DK are not aligned                                  | £1,650            |



## Bush Fair Design Recommendations

| Scheme ID                            | Location                             | Measure Type                             | Action  | Cost Estimate (£) |
|--------------------------------------|--------------------------------------|--|---|-------------------|
| 441                                  | Trotters Road                        | Missing Dropped Kerb/Tactile Information | Existing tactiles missing/not aligned   | £1,650            |
| 442                                  | Pear Tree Mead                       | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | £1,650            |
| 443                                  | Little Pynchons                      | Missing Dropped Kerb/Tactile Information | Missing Both to access park   | £1,650            |
| 444                                  | Second Avenue/Howard Way Junction    | Junction                                 | Introduce controlled crossing points  | £240,000          |
| 445                                  | Tillwicks Road/Tendring Road         | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 446                                  | Tillwicks Road/Tumbler Road          | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 447                                  | Tillwicks Road                       | Junction                                 | Install controlled crossing of Tillwicks Roads  | £27,750           |
| 448                                  | Tilegate Road/Tillwicks Road         | Junction                                 | Introduce controlled crossing points on all arms + de-clutter                         | £240,000          |
| 449                                  | Tillwicks Road/Southern Way Junction | Junction                                 | Introduce at-grade crossing facilities on all arms of roundabout                      | £240,000          |
| 450                                  | Tillwicks Road/Tumblers Road         | Junction                                 | Install new parallel crossing facilities on Tillwicks Road                            | £27,750           |
| 451                                  | Southern Way                         | Junction                                 | Introduce new crossing between Tye Green Village + Latton Bush Centre                 | £27,750           |
| 452                                  | Southern Way/Tye Green Village       | Junction                                 | Introduce crossover treatment to improve cycle route continuity                       | £17,500           |
| 453                                  | Southern Way/ Tawneys Road           | Junction                                 | Convert existing roundabout to priority junction with controlled crossing of Southern | £37,500           |
| 454                                  | Southern Way/Trotters Road           | Junction                                 | Introduce controlled crossing facilities on all arms                                  | £112,500          |
| 455                                  | Tye Green Village                    | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| <b>Bush Fair Estimated Total (£)</b> |                                      |  |   | <b>£1,126,480</b> |





# Staple Tye Core Walking Zone

## Area Characteristics

Staple Tye is one of Harlow's four original main local centres; the others being the Town Centre, The Stow and Bush Fair.

The Staple Tye CWZ is focused around the local shopping centre and the adjoining residential streets. The shopping centre itself is dominated by the impact of the adjoining road network which isolates the centre from its surroundings and undermines walking and cycling permeability. The main links between the residential areas and the shopping centre are all through grade-separated underpasses with no at-grade crossing facilities on Southern Way. These underpass links feel convoluted, poorly maintained and lack passive surveillance.

Its retail and services core is much more modern than Bush Fair or The Stow, being set up more as a retail park than somewhere that looks like a traditional high street. Unlike The Stow and Bush Fair – where parking is located to the periphery – a large car park is provided directly outside the shops and units in the shopping centre. A pedestrian route is provided across the car park, but it doesn't marry up to a crossing point on Southern Way.

Beyond the shopping centre, a majority of the area comprises of either quiet residential streets or off-road shared use walking and cycling paths. A majority of residential streets and paths were comfortable to use, however there were localised issues of vehicles parked on footways and lack of drop kerb facilities. The off-road paths are comfortable to use but rely on local knowledge and understanding of how these routes connect with the wider network as no wayfinding/legibility features are provided. The disconnect between the centre and residential areas caused by the road network is the main barrier to creating a cohesive and legible walking zone.

Pedestrian routes to the subway under Southern Way and the Zebra Crossing on Parnall Road are narrow and hard to find.

While served by buses, bus stops are not convenient located – being some distance to the west on Southern Way, or round the corner in Parnall Way. This accentuates the perception that Staple Tye is a place that is convenient and optimised for car access.





## Staple Tye Design Recommendations

| Scheme ID | Location                               | Measure Type                             | Action   | Cost Estimate (£) |
|-----------|--|--|--|-------------------|
| 301       | Southern Way                           | Junction                                 | Introduce at-grade toucan crossings  | £64,000           |
| 302       | Southern Way Underpass                 | Maintenance                              | Improve lighting and address maintenance issues on underpass                       | £11,240           |
| 303       | Shopping Centre                        | Junction                                 | Upgrade existing ped/cycle junction to provide more attractive and clearer link to | £15,000           |
| 304       | Howard Way                             | Missing Dropped Kerb/Tactile Information | Missing Tactiles   | £1,650            |
| 305       | Shawbridge                             | Missing Dropped Kerb/Tactile Information | Missing Tactile  | £1,650            |
| 306       | Shawbridge - western footway by letter | Maintenance                              | Cracked paving caused by vehicle parking   | £1,500            |
| 307       | Shawbridge                             | Missing Dropped Kerb/Tactile Information | Missing Tactile  | £1,650            |
| 308       | Shawbridge                             | Missing Dropped Kerb/Tactile Information | Missing Both on northern side  | £1,650            |
| 309       | Holly Field                            | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 310       | Holly Field                            | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 311       | Holly Field                            | Missing Dropped Kerb/Tactile Information | Missing both   | £1,650            |
| 312       | Holly Field                            | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 313       | Pyenest Road                           | Junction                                 | Install controlled crossing on Pyenest Road  | £27,750           |
| 314       | Shawbridge                             | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 315       | Shawbridge/Southern Lodge              | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 316       | Shawbridge                             | Missing Dropped Kerb/Tactile Information | Missing both   | £1,650            |
| 317       | Paringdon Road                         | Junction                                 | Install controlled ped/cycle crossing to improve east-west access                  | £27,750           |
| 318       | Wissants/Paringdon Road                | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 319       | Wissants Playground                    | Missing Footway                          | No DDA compliant route available through park and missing section of path          | £540              |
| 320       | Brockles Mead Alleyway                 | De-Cluttering                            | Existing guardrail creates impassable chicane - remove guardrail                   | £750              |

## Staple Tye Design Recommendations

| Scheme ID | Location                           | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|------------------------------------|--|---|-------------------|
| 321       | Ployters Road                      | Junction                                 | Install new parallel crossing facility across Ployters Road at Brockles Mead Jct  | £27,750           |
| 322       | Brockles Mead                      | Missing Dropped Kerb/Tactile Information | Missing both  | £1,650            |
| 323       | Brockles Mead                      | Missing Dropped Kerb/Tactile Information | Missing tactile   | £1,650            |
| 324       | Pegram's Road Jct.                 | Missing Dropped Kerb/Tactile Information | Missing both  | £1,650            |
| 325       | Brockles Mead/Ployters Road Jct.   | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 326       | Ployters Road                      | Junction                                 | Upgrade existing traffic calming to include dedicated crossing + access to school | £27,750           |
| 327       | Perry Road                         | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | £1,650            |
| 328       | Joyner's Field                     | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | £1,650            |
| 329       | Brockles Mead                      | Missing Dropped Kerb/Tactile Information | Missing tactile on all dropped kerbs at junction                                  | £1,650            |
| 330       | Moorfields                         | Missing Dropped Kerb/Tactile Information | Missing tactile   | £1,650            |
| 331       | Joyner's Field                     | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | £1,650            |
| 332       | Ployters Roads/Paringdon Road Jct. | Junction                                 | Install controlled crossing facilities at roundabout junction with Paringdon Road | £240,000          |
| 332       | Mowbray Road                       | De-Cluttering                            | Remove existing, crumpled guardrail   | £750              |
| 333       | Pinceybrook Road                   | Junction                                 | Introduce controlled pedestrian/cycle crossing to connect adjoining paths         | £27,750           |
| 334       | Perry Road                         | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 335       | Penlow Road                        | Missing Dropped Kerb/Tactile Information | Missing Tactile/Dropped Kerb needs widening                                       | £1,650            |
| 336       | Perry Road                         | Missing Dropped Kerb/Tactile Information | Missing both  | £1,650            |
| 337       | Perry Road                         | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 338       | Perry Road                         | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 339       | Pinceybrook Road                   | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 340       | Pegram's Road                      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |



## Staple Tye Design Recommendations

| Scheme ID | Location                              | Measure Type                             | Action   | Cost Estimate (£) |
|-----------|---------------------------------------|--|--|-------------------|
| 341       | Abercrombie Way/Car Park Access       | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 342       | Parnall Road                          | De-Cluttering                            | Remove existing pedestrian guardrailing around existing crossing           | £750              |
| 343       | Pyenest Road/Abercrombie Way Junction | De-Cluttering                            | Guardrail surrounding junction should be removed                           | £750              |
| 344       | Southern Way/Parnall Road             | Junction                                 | Install controlled pedestrian/cycle crossings at roundabout                | £240,000          |
| 345       | Parnall Road/Long Banks               | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 346       | Pinceybrook Road                      | Missing Dropped Kerb/Tactile Information | Missing Tactile  | £1,650            |
| 347       | Parnall Road/Long Banks               | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 348       | Parnall Road                          | Missing Dropped Kerb/Tactile Information | Missing both and needs de-cluttering                                       | £1,650            |
| 349       | Peters Wood                           | Missing Dropped Kerb/Tactile Information | Current facilities not aligned   | £1,650            |
| 350       | Paringdon Road                        | Junction                                 | Remove alternate working arrangement in advance of existing zebra crossing | £27,750           |
| 351       | Parnall Road                          | Junction                                 | Replace existing alternate working w/crossing facility                     | £27,750           |
| 352       | Peterswood                            | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 353       | Partridge Road                        | Junction                                 | Introduce new crossing to connect adjoining paths                          | £27,750           |
| 354       | Penlow Road/Finchmoor                 | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 355       | Penlow Road                           | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 356       | Penlow Road                           | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | £1,650            |
| 357       | Penlow Road                           | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 358       | Peterswood                            | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 359       | Southern Way/ Petrol Station          | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 360       | Ployters Road/Garage Exit             | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | £1,650            |

## Staple Tye Design Recommendations

| Scheme ID                             | Location                    | Measure Type                             | Action   | Cost Estimate (£) |
|---------------------------------------|-----------------------------|--|--|-------------------|
| 361                                   | Penlow Road                 | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                                | £1,650            |
| 362                                   | Parnall Road/Loading Access | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 363                                   | Brockles Mead               | Missing Dropped Kerb/Tactile Information | Missing tactile on all dropped kerbs at junction               | £1,650            |
| 364                                   | Perry Road/Footpath         | Junction                                 | Improve legibility of ped crossing between path and Perry Road | £10,500           |
| 365                                   | Wissants                    | Missing Footway                          | Need to introduce new footway between Paringdon Road and park  | £1,080            |
| 366                                   | Mowbray Road                | De-Cluttering                            | Remove existing, crumpled guardrail                            | £750              |
| 367                                   | Southern Way/Shawbridge     | Junction                                 | Introduce at-grade parallel walking/cycling crossing           | £27,750           |
| <b>Staple Tye Estimated Total (£)</b> |                             |  |  | <b>£911,610</b>   |











# Templefields Core Walking Zone

## Area Characteristics

The Templefields CWZ is dominated by a number of large industrial estates, retail areas, and business parks. It comprises the earliest employment development of Harlow New Town, and is bounded by the Stort Valley to the North and the residential areas of the Stow, Nettleswell, Mark Hall and Old Harlow to the South and East. It is a complex landscape with a multiplicity of landowners and decaying built infrastructure, but also strong occupancy rates and employment provision.

Edinburgh Way dominates as the east-west vehicular connection, with Harlow Town station at one end and Harlow Mill station at the other, while the Nettleswell path provides a parallel off-road path for walking and cycling. However, both stations are underwhelming as gateways to the town, and lack the appropriate access and egress for good onwards connections into Templefields. This whole area would benefit hugely from wayfinding and public realm improvements, particularly in an effort to soften and enliven the industrial feel of much of the CWZ.

Templefields' warehouse and non-residential building typologies means there are long stretches of limited surveillance both on key vehicular routes and off-road routes. Safety is a concern due to compromised sight lines, lack of active frontages or night-time economy, and inconsistent lighting. Safety in terms of interaction with HGVs is also concerning, with the whole road network prioritising large vehicles and uncompromised vehicular movement, particularly notable in the lack of signalised or direct pedestrian crossings and generous junction splays and corner radii. The condition of the walking and cycling network is a potential quick win across the CWZ, although greater thought needs to be given to pedestrian prioritisation in order to address the intimidating

environment posed by the speed and volume of traffic that dominates Templefields.

The scale of the CWZ is striking, and due to its vehicular dominance, distances feel daunting and unwalkable, and are potentially more suited to bus services supplemented with fine-grained links into the surrounding key trip attractors. However, despite the large number of people employed in Templefields, there are presently no regular bus services along Edinburgh Way (the spine road through Templefields). The nearest bus stops are those at Harlow Mill and Harlow Town railway stations, and along First Avenue. Walking will play an important role in delivering the future modal shift targets in Harlow.

The walking zone captures Old Harlow and The Stow because of a certain degree of symbiosis: Old Harlow and The Stow represent significant gateways for walking routes to Templefields, and local residential areas are to some extent served by all three for different retail, service and employment offers.

## The Stow

The Stow is one of Harlow's four original local centres – the others being Bush Fair, Staple Tye and the Town Centre. However, it is the smallest of the four. It has a small pedestrianised high street with a new Aldi supermarket located adjacent to the centre.

A small car park for blue badge holders is provided at the north-eastern end of the pedestrianised precinct at the Stow, and parking takes place informally to the rear of the shops. Aldi has its own parking.

Bus stops serving the Stow are situated on First Avenue, and less conveniently on Howard Way.

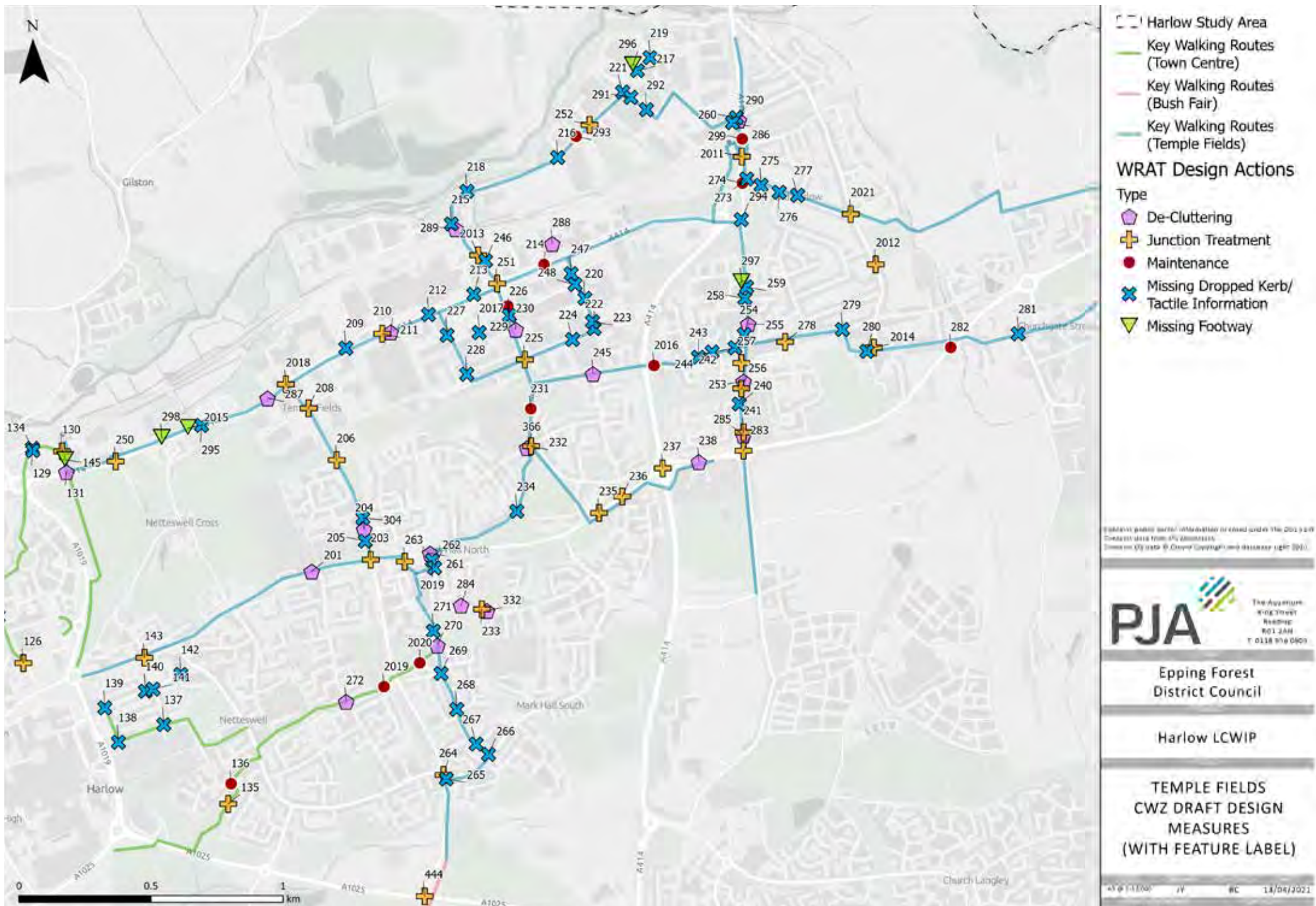
## Old Harlow

Old Harlow is the original village of Harlow on the London to Newmarket stagecoach route, where it met the old Hertford to Chelmsford coaching route. It retains a distinct character, and the construction of the New Town saw the creation of a by-pass route for through traffic on the then A11 (before the construction later of the M11) – what is now the A414.

Old Harlow is also by-passed to the south by Gilden Way, which will soon be connected to the M11 at the new Junciton 7a. However, Old Harlow is still permeable to through traffic: the construction of the new M11 junction and the Second Stort Crossing raises the possibility that some drivers might use Station Road instead of the A414 to reach Gilden Way from the north (and vice versa). The majority of retail units in Old Harlow are located on the pedestrianised Fore Street.

Buses stop on Station Road in Old Harlow, as well as Wayre Street / High Street.

Formal car parking in Old Harlow is provided off Wayre Street and off Garden Terrace Road, and informally parking occurs to the rear of shops and in local streets.





## Templefields Design Recommendations

| Scheme ID | Location                       | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|--------------------------------|--|---|-------------------|
| 201       | First Avenue                   | De-Cluttering                            | Remove guardrailing   | £750              |
| 203       | First Avenue/Howard Way        | Junction                                 | Introduce controlled crossing facilities at junction                | £27,750           |
| 204       | Howard Way                     | De-Cluttering                            | Existing guardrail creates impassable chicane - remove guardrail    | £750              |
| 205       | Howard Way outside church      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 206       | Howard Way                     | Junction                                 | Introduce new parallel crossing to connect adjoining cycle path     | £27,750           |
| 208       | Howard Way                     | Junction                                 | Introduce crossings on all arms of roundabout                       | £240,000          |
| 209       | Edinburgh Way/Queens Gate Exit | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 210       | Edinburgh Way                  | De-Cluttering                            | Remove guardrailing   | £750              |
| 211       | Edinburgh Way                  | Junction                                 | Introduce pedestrian crossing on Edinburgh Way at existing junction | £27,750           |
| 212       | Edinburgh Way/ OI Harlow Plant | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 213       | Edinburgh Way/ BP Garage       | Missing Dropped Kerb/Tactile Information | Missing Both + Decluttering required too                            | £1,650            |
| 214       | Edinburgh Way                  | Maintenance                              | Cracked paving/kerbs need replacing                                 | £750              |
| 215       | River Way                      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 215       | Edinburgh Way                  | Missing Footway                          | Introduce path to connect Edinburgh Way with park path              | £1,080            |
| 216       | East Road                      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 217       | River Way                      | Missing Dropped Kerb/Tactile Information | No facilities at roundabout junction                                | £1,650            |
| 218       | East Road/ The Range           | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 219       | River Way                      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 220       | East Road/Tesco                | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |

## Templefields Design Recommendations

| Scheme ID | Location                | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|-------------------------|--|---|-------------------|
| 221       | River Way               | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 222       | South Road              | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 223       | South Road              | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 224       | South Road              | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 225       | Central Road/South Road | Junction                                 | Introduce raised table to connect cycle track and raise awareness of junction   | £35,400           |
| 226       | Central Road            | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 227       | West Road               | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 228       | West Road               | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 229       | Central Road            | Maintenance                              | Cracked paving  | £750              |
| 230       | Central Road            | De-Cluttering                            | Remove bollards which obstruct footway  | £750              |
| 231       | Playing Fields Path     | Maintenance                              | Potholes in existing path to be fixed   | £750              |
| 232       | Mowbray Road            | Junction                                 | Upgrade existing zebra to parallel crossing with cycle facilities               | £27,750           |
| 233       | Mardyke Road            | Junction                                 | Upgrade existing zebra to parallel crossing with cycle facilities               | £27,750           |
| 234       | The Chantry             | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | £1,650            |
| 235       | First Avenue            | Junction                                 | Consider relocation of existing crossing closer to Muskham Road and desire line | £27,750           |
| 236       | First Avenue            | Junction                                 | Introduce ramped access parallel to existing stepped access                     | £2,500            |
| 237       | First Avenue            | Junction                                 | Introduce at-grade crossing facilities on all arms of junction                  | £240,000          |
| 238       | First Avenue            | De-Cluttering                            | Remove existing guardrail   | £750              |
| 240       | Market Street           | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |



## Templefields Design Recommendations

| Scheme ID | Location                 | Measure Type                             | Action   | Cost Estimate (£) |
|-----------|--------------------------|--|--|-------------------|
| 241       | Station Road             | Junction                                 | Improve connection between Market Street and High Street           | £10,500           |
| 242       | Market Street            | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 243       | Market Street/Park Hill  | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 244       | Market Street            | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 245       | Mark Hall Moors          | De-Cluttering                            | Modify existing gated access to improve ped/cycle access onto path | £1,500            |
| 246       | River Way                | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 247       | River Way                | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 248       | River Way                | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 249       | River Way                | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 250       | Edinburgh Way            | Junction                                 | Introduce controlled crossings at junction                         | £1,650            |
| 251       | Howard Way               | Junction                                 | Introduce crossings on all arms of roundabout                      | £240,000          |
| 252       | River Way                | Junction                                 | Improve pedestrian access into Roman Temple Site                   | £10,500           |
| 253       | Station Road             | De-Cluttering                            | Remove guardrail   | £750              |
| 254       | Station Road             | Missing Dropped Kerb/Tactile Information | East Park  | £1,650            |
| 255       | Chippingfield            | De-Cluttering                            | Remove guardrail   | £750              |
| 256       | London Road              | Junction                                 | Re-locate existing zebra crossing onto desire line                 | £27,750           |
| 257       | London Road/Wayre Street | Junction                                 | Install crossings at roundabout                                    | £240,000          |
| 258       | Station Road/Jocelyns    | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 259       | Swallows                 | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 260       | Sarbir Industrial Park   | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |

## Templefields Design Recommendations

| Scheme ID | Location                            | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|-------------------------------------|--|---|-------------------|
| 261       | First Avenue/The Stow               | De-Cluttering                            | Remove existing guardrailing  | £750              |
| 262       | Orchard Croft                       | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 263       | Path between First Avenue/The Stow  | Junction                                 | Provide ramped access next to existing steps  | £2,000            |
| 264       | Howard Way                          | Junction                                 | Upgrade island to provide controlled crossing                                       | £1,650            |
| 265       | Momples Road                        | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 266       | Minchen Road                        | Missing Dropped Kerb/Tactile Information | Missing tactiles  | £1,650            |
| 267       | Harefield/Minchen Road              | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | £1,650            |
| 268       | Blackbush Spring                    | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 269       | Vicarage Wood                       | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | £1,650            |
| 270       | Minchen Road                        | De-Cluttering                            | Remove existing guardrailing on western footway                                     | £750              |
| 271       | Sewell Harris Close                 | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | £1,650            |
| 272       | Monkswick Road                      | De-Cluttering                            | Upgrade existing gated access to improve ped/cycle access                           | £750              |
| 273       | Priory Avenue                       | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 274       | Priory Avenue                       | Maintenance                              | Cracked paving caused by parking on footway   | £750              |
| 275       | Roman Vale                          | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 276       | Manor Road                          | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 277       | The Hoo                             | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 278       | High Street/ Wayre Street           | Junction                                 | Introduce crossing to improve ped access to High Street supported with raised table | £37,500           |
| 279       | High Street/ New Road               | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 280       | Mulberry Green/Elderfield/ Old Road | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |



## Templefields Design Recommendations

| Scheme ID | Location                          | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|-----------------------------------|--|---|-------------------|
| 281       | Churchgate Street                 | Missing Dropped Kerb/Tactile Information | Missing both  | £1,650            |
| 282       | Gilden Way/Mulberry Green         | Maintenance                              | Address maintenance issues on existing crossing point           | £750              |
| 283       | Gilden Way/London Road Roundabout | Junction                                 | Introduce controlled at-grade crossings on all arms of junction | £240,000          |
| 284       | Mardyke Road                      | De-Cluttering                            | Remove guardrail  | £750              |
| 285       | London Road                       | De-Cluttering                            | Remove guardrail  | £750              |
| 286       | Sarbir Industrial Park            | Missing Dropped Kerb/Tactile Information | Missing DKs   | £1,650            |
| 287       | Edinburgh Way                     | De-Cluttering                            | Bus Stop  | £750              |
| 288       | Edinburgh Way                     | De-Cluttering                            | Remove guardrail  | £385              |
| 289       | River Way                         | De-Cluttering                            | Remove bollards on footway and address maintenance issues       | £750              |
| 290       | Cambridge Road                    | De-Cluttering                            | Remove guardrailing   | £750              |
| 291       | Temple Bank                       | Missing Dropped Kerb/Tactile Information | DKs missing   | £1,650            |
| 292       | Temple Bank                       | Missing Dropped Kerb/Tactile Information | DKs missing   | £1,650            |
| 293       | River Way                         | Maintenance                              | Footway parking causing footway issues                          | £1,500            |
| 294       | Priory Avenue                     | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 295       | Edinburgh Way                     | Missing Dropped Kerb/Tactile Information | Missing DKs   | £1,650            |
| 296       | River Way                         | Missing Footway                          | Widen existing footways   | £1,080            |
| 297       | Jocelyns                          | Missing Footway                          | Connect path to Station Road                                    | £810              |
| 298       | Edinburgh Way                     | Missing Footway                          | Install new path to connect to existing path                    | £1,080            |
| 299       | Path under Cambridge Road bridge  | Maintenance                              | Improve lighting + wayfinding of path                           | £750              |

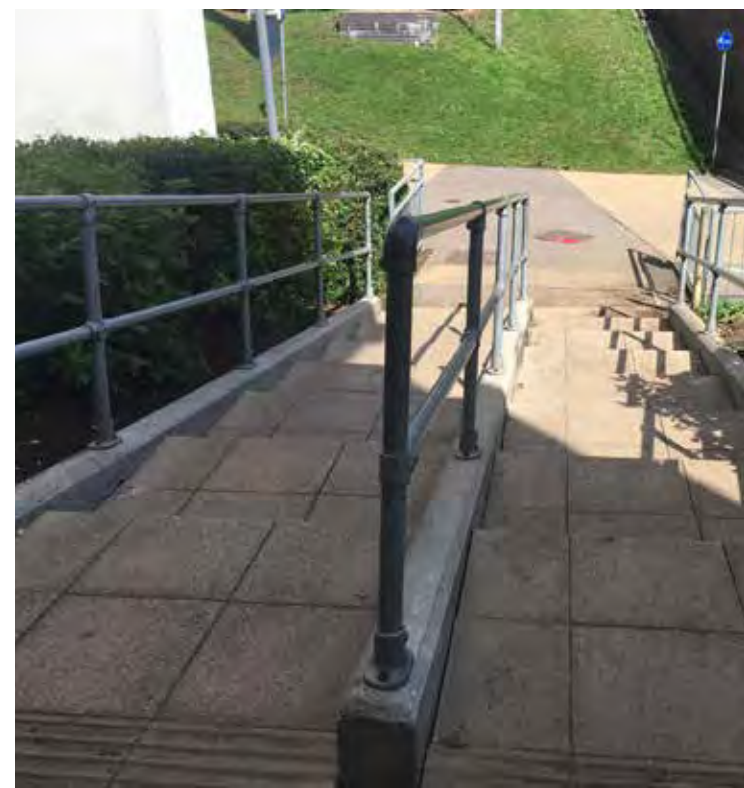
## Templefields Design Recommendations

| Scheme ID                               | Location  | Measure Type                             | Action  | Cost Estimate (£) |
|---|---|--|---|-------------------|
| 2011                                    | Cambridge Road                                  | Junction                                 | Introduce tocan crossing of Cambridge Road + upgrade footway approaches to junction         | £37,500           |
| 2012                                    | Old Road  | Junction                                 | Introduce refuge crossing point across Old Road to park                                     | £10,950           |
| 2013                                    | Edinburgh Place                                 | Junction                                 | Narrow carriageway and formalise crossing point   | £10,950           |
| 2014                                    | Mulberry Green/Old Road Junction                | Junction                                 | Public realm opportunity to improve Mulberry Green to inc. new crossing points              | £100,000          |
| 2016                                    | Park Hill Road                                  | Maintenance                              | Narrow and poorly maintained footway - consider widening                                    | £1,080            |
| 2017                                    | Central Road/South Road                         | Missing Dropped Kerb/Tactile Information | Missing DKs + Tactile on ALL junctions in Central/South Road Trading Estate                 | £1,650            |
| 2018                                    | Howard Way                                      | Junction                                 | Introduce crossings on all arms of roundabout   | £240,000          |
| 2019                                    | The Stow  | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 2019                                    | Off-Road path between Monkswick Road-Howard Way | Maintenance                              | Surfacing in poor condition and overgrown vegetation  | £750              |
| 2020                                    | Off-Road path between Monkswick Road-Howard Way | Maintenance                              | Surfacing in poor condition and overgrown vegetation  | £750              |
| 2021                                    | Priory Avenue/Old Road                          | Junction                                 | Introduce controlled crossing points and replace existing roundabout with priority junction | £37,500           |
| <b>Templefields Estimated Total (£)</b> |   |  |   | <b>£2,042,765</b> |











# Town Centre Core Walking Zone

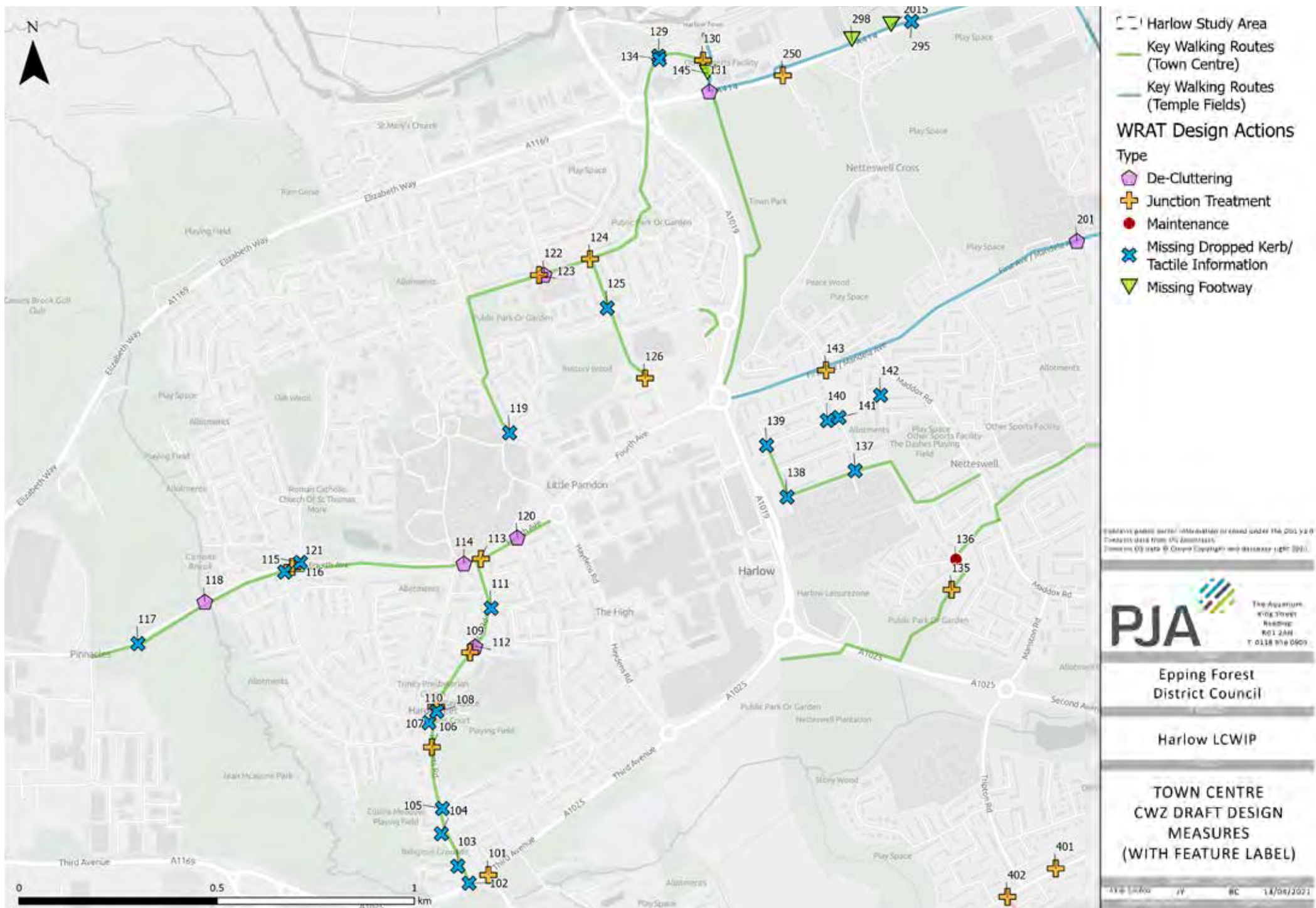
## Area Characteristics

The Town Centre Core Walking Zone is focussed on key routes into the town centre from the surrounding neighbourhoods. The areas surrounding the town centre comprise mainly of residential streets and local services.

It was agreed with the LCWIP working group that the ongoing Town Centre Masterplan was already focused on improving the public realm and streetscapes in the town centre, and therefore the LCWIP should concentrate instead on the routes from surrounding areas. A key consideration in the Masterplan process has been how to improve the streetscapes on the main roads which encircle the town centre, namely: Haydens Road, Fourth Avenue, Velizy Avenue and Third Avenue. The grade-separated layout of the surrounding road network forms both a major physical and visual severance feature. All links to the town centre from the surrounding neighbourhoods are via grade-separated subways which are routed under the road network. Whilst these routes are well integrated into local walking and cycling network, the design and layout of these links is hostile and unattractive, particularly at nighttime. Focussing the Core Walking Zone on links into the town centre therefore provides an opportunity for the combined Town Centre Masterplan and LCWIP to significantly improve the local network.

Each of the selected LCWIP walking routes are within a 20 minute walking catchment area of the town centre. Routes were identified on the basis that they could provide connections between local destinations and the town centre. For example, Harberts Road includes provides access to local bus routes, Northbrooks Sports Ground, The Meadows Children's Centre, and Princess Alexandra Hospital. The images on the opposite page illustrate how the design and layout of the walking

routes was typical of many residential streets in Harlow with the main issues related to footway clutter, footway parking and inconsistent treatments at side-entry junctions. The LCWIP's design recommendations focussed predominantly on the links to the town centre on the assumption that the Masterplan will be redesigning the layouts of the grade-separated junctions on the main road network.



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**Epping Forest  
 District Council**

**Harlow LCWIP**

**TOWN CENTRE  
 CWZ DRAFT DESIGN  
 MEASURES  
 (WITH FEATURE LABEL)**

AY 13/06/21 JV BC 14/06/2021



## Town Centre Design Recommendations

| Scheme ID | Location                       | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|--------------------------------|--|---|-------------------|
| 101       | Third Avenue/Abercrombie Way   | Junction                                 | Upgrade existing junction to provide controlled crossings on all arms | £240,000          |
| 102       | Harberts Road/Third Avenue     | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 103       | Harberts Road/Miles Close      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 104       | Harberts Road/Toddbrook        | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 105       | Harberts Road/Northbrooks      | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                                       | £1,650            |
| 106       | Harberts Road                  | Junction                                 | New crossing + improved access into open space                        | £10,950           |
| 107       | Harberts Road                  | Junction                                 | Simplify existing alternate working and provide crossing point        | £27,750           |
| 108       | Harberts Road                  | Missing Dropped Kerb/Tactile Information | Missing both  | £1,650            |
| 109       | Harberts Road o/s School       | Junction                                 | Simplify existing alternate working and provide crossing point        | £27,750           |
| 110       | Helions Road                   | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 111       | Sharpcroft                     | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 112       | Harberts Road o/s school       | De-Cluttering                            | Remove existing guardrailings   | £750              |
| 113       | Fourth Avenue                  | Junction                                 | Introduce toucan crossing   | £27,750           |
| 114       | Fourth Avenue                  | De-Cluttering                            | Remove existing guardrailing  | £750              |
| 115       | Hodlings Road                  | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 116       | Helions Road                   | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 117       | Fourth Avenue                  | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 118       | Fourth Avenue                  | De-Cluttering                            | Remove guardrailing   | £750              |
| 119       | Hamstel Road/Hospital Entrance | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 120       | Fourth Avenue                  | De-Cluttering                            | Remove existing guardrailing  | £750              |

## Town Centre Design Recommendations

| Scheme ID | Location                  | Measure Type                             | Action  | Cost Estimate (£) |
|-----------|---------------------------|--|---|-------------------|
| 121       | Fourth Avenue             | Junction                                 | Install new toucan crossing of Fourth Avenue  | £64,000           |
| 122       | Holdings Road             | De-Cluttering                            | Remove guardrailing   | £750              |
| 123       | Holdings Road             | Junction                                 | Install new raised table crossing for school  | £10,950           |
| 124       | Holdings Road             | Junction                                 | Install pedestrian crossing to connect up LCWIP routes  | £27,750           |
| 125       | Holdings Road             | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 126       | Hodlings Road             | Junction                                 | Introduce parallel pedestrian/cycle crossing to connect existing routes   | £27,750           |
| 129       | Station Car Park          | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 130       | Station Forecourt         | Junction                                 | Introduce clearer, controlled crossing point to station. Could be considered as a wider public realm enhancement of station forecourt | £27,750           |
| 131       | Edinburgh Way             | De-Cluttering                            | Remove pedestrian guardrailing  | £750              |
| 133       | Town Park                 | Maintenance                              | Install lighting across Town Park on paths (exact number of columns to be confirmed)  | £56,200           |
| 134       | Field House Car Park      | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 135       | Greenhills/ Park Entrance | Junction                                 | Provide more attractive and comfortable access into park inc. new lighting columns and maintenance of verge                           | £20,000           |
| 136       | Greenhills path           | Maintenance                              | Improve maintenance of path and entrance onto Greenhills  | £1,500            |
| 137       | The Hides                 | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 138       | The Hides                 | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 139       | The Hides                 | Missing Dropped Kerb/Tactile Information | Missing Both  | £1,650            |
| 140       | The Dashes                | Missing Dropped Kerb/Tactile Information | Missing Tactile   | £1,650            |



## Town Centre Design Recommendations

| Scheme ID                              | Location                         | Measure Type                             | Action   | Cost Estimate (£) |
|--|----------------------------------|--|--|-------------------|
| 141                                    | The Dashes                       | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned                                | £1,650            |
| 142                                    | The Dashes                       | Missing Dropped Kerb/Tactile Information | Missing Both   | £1,650            |
| 143                                    | Park Lane/ First Avenue Junction | Junction                                 | Improve headway treatment on Park Lane approach for cyclists   | £17,500           |
| 144                                    | River Way                        | De-Cluttering                            | Existing concrete bollards obstruct footway - consider removal | £770              |
| <b>Town Centre Estimated Total (£)</b> |                                  |  |  | <b>£626,600</b>   |

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| ID  | Location                | Type                                     | Action  | CWZ          | Length | Quantity | Unit Cost | £ Estimate | Comment   |
|-----|-------------------------|--|---|--------------|--------|----------|-----------|------------|---|
| 101 | Third Avenue/Abercrom   | Junction                                 | Upgrade existing junction to provide controlled crossings on all arms                             | Town Centre  |        | 1        | £ 240,000 | £ 240,000  |   |
| 102 | Harberts Road/Third Av  | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 103 | Harberts Road/Miles Cl  | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 104 | Harberts Road/Toddbr    | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 105 | Harberts Road/Northbr   | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 106 | Harberts Road           | Junction                                 | New crossing + improved access into open space  | Town Centre  |        | 1        | £ 10,950  | £ 10,950   |   |
| 107 | Harberts Road           | Junction                                 | Simplify existing alternate working and provide crossing point                                    | Town Centre  |        | 1        | £ 27,750  | £ 27,750   |   |
| 108 | Harberts Road           | Missing Dropped Kerb/Tactile Information | Missing both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 109 | Harberts Road o/s Sch   | Junction                                 | Simplify existing alternate working and provide crossing point                                    | Town Centre  |        | 1        | £ 27,750  | £ 27,750   |   |
| 110 | Helions Road            | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 111 | Sharpcroft              | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 112 | Harberts Road o/s scho  | De-Cluttering                            | Remove existing guardrailings   | Town Centre  |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 113 | Fourth Avenue           | Junction                                 | Introduce toucan crossing   | Town Centre  |        | 1        | £ 27,750  | £ 27,750   |   |
| 114 | Fourth Avenue           | De-Cluttering                            | Remove existing guardrailing  | Town Centre  |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 115 | Hodlings Road           | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 116 | Helions Road            | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 117 | Fourth Avenue           | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 118 | Fourth Avenue           | De-Cluttering                            | Remove guardrailing   | Town Centre  |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 119 | Hamstel Road/Hospital   | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 120 | Fourth Avenue           | De-Cluttering                            | Remove existing guardrailing  | Town Centre  |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 121 | Fourth Avenue           | Junction                                 | Install new toucan crossing of Fourth Avenue  | Town Centre  |        | 1        | £ 64,000  | £ 64,000   |   |
| 122 | Holdings Road           | De-Cluttering                            | Remove guardrailing   | Town Centre  |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 123 | Holdings Road           | Junction                                 | Install new raised table crossing for school  | Town Centre  |        | 1        | £ 10,950  | £ 10,950   |   |
| 124 | Holdings Road           | Junction                                 | Install pedestrian crossing to connect up LCWIP routes  | Town Centre  |        | 1        | £ 27,750  | £ 27,750   |   |
| 125 | Holdings Road           | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 126 | Hodlings Road           | Junction                                 | Introduce parallel pedestrian/cycle crossing to connect existing routes                           | Town Centre  |        | 1        | £ 27,750  | £ 27,750   |   |
| 129 | Station Car Park        | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 130 | Station Forecourt       | Junction                                 | Introduce clearer, controlled crossing point to station. Could be considered as a wider public re | Town Centre  |        | 1        | £ 27,750  | £ 27,750   |   |
| 131 | Edinburgh Way           | De-Cluttering                            | Remove pedestrian guardrailing  | Town Centre  |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 133 | Town Park               | Maintenance                              | Install lighting across Town Park on paths (exact number of columns to be confirmed)              | Town Centre  |        | 20       | £ 2,810   | £ 56,200   |   |
| 134 | Field House Car Park    | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 135 | Greenhills/ Park Entr   | Junction                                 | Provide more attractive and comfortable access into park inc. new lighting columns and mainte     | Town Centre  |        | 1        | £ 20,000  | £ 20,000   |   |
| 136 | Greenhills path         | Maintenance                              | Improve maintenance of path and entrance onto Greenhills  | Town Centre  |        | 1        | £ 770     | £ 770      | *Estimate of ECC daily rates for maintenance tasks used |
| 137 | The Hides               | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 138 | The Hides               | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 139 | The Hides               | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 140 | The Dashes              | Missing Dropped Kerb/Tactile Information | Missing Tactile   | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 141 | The Dashes              | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 142 | The Dashes              | Missing Dropped Kerb/Tactile Information | Missing Both  | Town Centre  |        | 1        | £ 1,650   | £ 1,650    |   |
| 143 | Park Lane/ First Avenue | Junction                                 | Improve headway treatment on Park Lane approach for cyclists                                      | Town Centre  |        | 1        | £ 17,500  | £ 17,500   |   |
| 144 | River Way               | De-Cluttering                            | Existing concrete bollards obstruct footway - consider removal                                    | Town Centre  |        | 1        | £ 770     | £ 770      | *Estimate of ECC daily rates for maintenance tasks used |
| 201 | First Avenue            | De-Cluttering                            | Remove guardrailing   | Templefields |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 203 | First Avenue/Howard W   | Junction                                 | Introduce controlled crossing facilities at junction  | Templefields |        | 1        | £ 27,750  | £ 27,750   |   |
| 204 | Howard Way              | De-Cluttering                            | Existing guardrail creates impassable chicance - remove guardrail                                 | Templefields |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 205 | Howard Way outside ch   | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 206 | Howard Way              | Junction                                 | Introduce new parallel crossing to connect adjoining cycle path                                   | Templefields |        | 1        | £ 27,750  | £ 27,750   |   |
| 208 | Howard Way              | Junction                                 | Introduce crossings on all arms of roundabout   | Templefields |        | 1        | £ 240,000 | £ 240,000  |   |
| 209 | Edinburgh Way/Queens    | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 210 | Edinburgh Way           | De-Cluttering                            | Remove guardrailing   | Templefields |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 211 | Edinburgh Way           | Junction                                 | Introduce pedestrian crossing on Edinburgh Way at existing junction                               | Templefields |        | 1        | £ 27,750  | £ 27,750   |   |
| 212 | Edinburgh Way/ Ol Harl  | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 213 | Edinburgh Way/ BP Gar   | Missing Dropped Kerb/Tactile Information | Missing Both + Decluttering required too  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 214 | Edinburgh Way           | Maintenance                              | Cracked paving/kerbs need replacing   | Templefields |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 215 | River Way               | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 215 | Edinburgh Way           | Missing Footway                          | Introduce path to connect Edinburgh Way with park path  | Templefields |        |          | £ 1,080   | £ -        |   |
| 216 | East Road               | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 217 | River Way               | Missing Dropped Kerb/Tactile Information | No facilities at roundabout junction  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 218 | East Road/ The Range    | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 219 | River Way               | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 220 | East Road/Tesco         | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 221 | River Way               | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 222 | South Road              | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 223 | South Road              | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 224 | South Road              | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 225 | Central Road/South Ro   | Junction                                 | Introduce raised table to connect cycle track and raise awareness of junction                     | Templefields |        | 1        | £ 35,400  | £ 35,400   |   |
| 226 | Central Road            | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 227 | West Road               | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 228 | West Road               | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 229 | Central Road            | Maintenance                              | Cracked paving  | Templefields |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 230 | Central Road            | De-Cluttering                            | Remove bollards which obstruct footway  | Templefields |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 231 | Playing Fields Path     | Maintenance                              | Potholes in existing path to be fixed   | Templefields |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 232 | Mowbray Road            | Junction                                 | Upgrade existing zebra to parallel crossing with cycle facilities                                 | Templefields |        | 1        | £ 27,750  | £ 27,750   |   |
| 233 | Mardyke Road            | Junction                                 | Upgrade existing zebra to parallel crossing with cycle facilities                                 | Templefields |        | 1        | £ 27,750  | £ 27,750   |   |
| 234 | The Chantry             | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned   | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 235 | First Avenue            | Junction                                 | Consider relocation of existing crossing closer to Muskham Road and desire line                   | Templefields |        | 1        | £ 27,750  | £ 27,750   |   |
| 236 | First Avenue            | Junction                                 | Introduce ramped access parallel to existing stepped access                                       | Templefields |        | 1        | £ 2,500   | £ 2,500    |   |
| 237 | First Avenue            | Junction                                 | Introduce at-grade crossing facilities on all arms of junction                                    | Templefields |        | 1        | £ 240,000 | £ 240,000  |   |
| 238 | First Avenue            | De-Cluttering                            | Remove existing guardrail   | Templefields |        | 0.5      | £ 770     | £ 385      | *Estimate of ECC daily rates for maintenance tasks used |
| 240 | Market Street           | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 241 | Station Road            | Junction                                 | Improve connection between Market Street and High Street  | Templefields |        | 1        | £ 10,500  | £ 10,500   |   |
| 242 | Market Street           | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 243 | Market Street/Park Hill | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 244 | Market Street           | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |
| 245 | Mark Hall Moors         | De-Cluttering                            | Modify existing gated access to improve ped/cycle access onto path                                | Templefields |        | 1        | £ 770     | £ 770      | *Estimate of ECC daily rates for maintenance tasks used |
| 246 | River Way               | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields |        | 1        | £ 1,650   | £ 1,650    |   |

|     |                              |  |  |              |     |   |         |   |         |   |
|-----|------------------------------|--|--|--------------|-----|---|---------|---|---------|---|
| 247 | River Way                    | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 248 | River Way                    | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 249 | River Way                    | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 250 | Edinburgh Way                | Junction                                 | Introduce controlled crossings at junction   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 251 | Howard Way                   | Junction                                 | Introduce crossings on all arms of roundabout  | Templefields | 1   | £ | 240,000 | £ | 240,000 |   |
| 252 | River Way                    | Junction                                 | Improve pedestrian access into Roman Temple Site   | Templefields | 1   | £ | 10,500  | £ | 10,500  |   |
| 253 | Station Road                 | De-Cluttering                            | Remove guardrail   | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 254 | Station Road                 | Missing Dropped Kerb/Tactile Information | East Park  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 255 | Chippingfield                | De-Cluttering                            | Remove guardrail   | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 256 | London Road                  | Junction                                 | Re-locate existing zebra crossing onto desire line   | Templefields | 1   | £ | 27,750  | £ | 27,750  |   |
| 257 | London Road/Wayre Str        | Junction                                 | Install crossings at roundabout  | Templefields | 1   | £ | 240,000 | £ | 240,000 |   |
| 258 | Station Road/Jocelyns        | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 259 | Swallows                     | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 260 | Sarbir Industrial Park       | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 261 | First Avenue/The Stow        | De-Cluttering                            | Remove existing guardrailing   | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 262 | Orchard Croft                | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 263 | Path between First Ave       | Junction                                 | Provide ramped access next to existing steps   | Templefields | 1   | £ | 2,000   | £ | 2,000   |   |
| 264 | Howard Way                   | Junction                                 | Upgrade island to provide controlled crossing  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 265 | Momples Road                 | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 266 | Minchen Road                 | Missing Dropped Kerb/Tactile Information | Missing tactiles   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 267 | Harefield/Minchen Road       | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 268 | Blackbush Spring             | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 269 | Vicarage Wood                | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 270 | Minchen Road                 | De-Cluttering                            | Remove existing guardrailing on western footway  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 271 | Sewell Harris Close          | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 272 | Monkswick Road               | De-Cluttering                            | Upgrade existing gated access to improve ped/cycle access  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 273 | Priory Avenue                | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 274 | Priory Avenue                | Maintenance                              | Cracked paving caused by parking on footway  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 275 | Roman Vale                   | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 276 | Manor Road                   | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 277 | The Hoo                      | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 278 | High Street/ Wayre Str       | Junction                                 | Introduce crossing to improve ped access to High Street supported with raised table and junction   | Templefields | 1   | £ | 37,500  | £ | 37,500  |   |
| 279 | High Street/ New Road        | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 280 | Mulberry Green/Elderfield    | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 281 | Churchgate Street            | Missing Dropped Kerb/Tactile Information | Missing both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 282 | Gilden Way/Mulberry Gr       | Maintenance                              | Address maintenance issues on existing crossing point  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 283 | Gilden Way/London Road       | Junction                                 | Introduce controlled at-grade crossings on all arms of junction                                    | Templefields | 1   | £ | 240,000 | £ | 240,000 |   |
| 284 | Mardyke Road                 | De-Cluttering                            | Remove guardrail   | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 285 | London Road                  | De-Cluttering                            | Remove guardrail   | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 286 | Sarbir Industrial Park       | Missing Dropped Kerb/Tactile Information | Missing DKs  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 287 | Edinburgh Way                | De-Cluttering                            | Bus Stop   | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 288 | Edinburgh Way                | De-Cluttering                            | Remove guardrail   | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 289 | River Way                    | De-Cluttering                            | Remove bollards on footway and address maintenance issues  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 290 | Cambridge Road               | De-Cluttering                            | Remove guardrailing  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 291 | Temple Bank                  | Missing Dropped Kerb/Tactile Information | DKs missing  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 292 | Temple Bank                  | Missing Dropped Kerb/Tactile Information | DKs missing  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 293 | River Way                    | Maintenance                              | Footway parking causing footway issues   | Templefields | 1   | £ | 770     | £ | 770     | *Estimate of ECC daily rates for maintenance tasks used |
| 294 | Priory Avenue                | Missing Dropped Kerb/Tactile Information | Missing Both   | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 295 | Edinburgh Way                | Missing Dropped Kerb/Tactile Information | Missing DKs  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 296 | River Way                    | Missing Footway                          | Widen existing footways  | Templefields | £   |   | 1,080   | £ | -       |   |
| 297 | Jocelyns                     | Missing Footway                          | Connect path to Station Road   | Templefields | £   |   | 1,080   | £ | -       |   |
| 298 | Edinburgh Way                | Missing Footway                          | Install new path to connect to existing path   | Templefields | £   |   | 1,080   | £ | -       |   |
| 299 | Path under Cambridge Rd      | Maintenance                              | Improve lighting + wayfinding of path  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 301 | Southern Way                 | Junction                                 | Introduce at-grade toucan crossings  | Staple Tye   | 1   | £ | 64,000  | £ | 64,000  |   |
| 302 | Southern Way Underpass       | Maintenance                              | Improve lighting and address maintenance issues on underpass                                       | Staple Tye   | 4   | £ | 2,810   | £ | 11,240  |   |
| 303 | Shopping Centre              | Junction                                 | Upgrade existing ped/cycle junction to provide more attractive and clearer link to shopping centre | Staple Tye   | 1   | £ | 15,000  | £ | 15,000  |   |
| 304 | Howard Way                   | Missing Dropped Kerb/Tactile Information | Missing Tactiles   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 305 | Shawbridge                   | Missing Dropped Kerb/Tactile Information | Missing Tactile  | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 306 | Shawbridge - western footway | Maintenance                              | Cracked paving caused by vehicle parking   | Staple Tye   | 1   | £ | 770     | £ | 770     | *Estimate of ECC daily rates for maintenance tasks used |
| 307 | Shawbridge                   | Missing Dropped Kerb/Tactile Information | Missing Tactile  | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 308 | Shawbridge                   | Missing Dropped Kerb/Tactile Information | Missing Both on northern side  | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 309 | Holly Field                  | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 310 | Holly Field                  | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 311 | Holly Field                  | Missing Dropped Kerb/Tactile Information | Missing both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 312 | Holly Field                  | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 313 | Pyenest Road                 | Junction                                 | Install controlled crossing on Pyenest Road  | Staple Tye   | 1   | £ | 27,750  | £ | 27,750  |   |
| 314 | Shawbridge                   | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 315 | Shawbridge/Southern Way      | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 316 | Shawbridge                   | Missing Dropped Kerb/Tactile Information | Missing both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 317 | Paringdon Road               | Junction                                 | Install controlled ped/cycle crossing to improve east-west access                                  | Staple Tye   | 1   | £ | 27,750  | £ | 27,750  |   |
| 318 | Wissants/Paringdon Road      | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 319 | Wissants Playground          | Missing Footway                          | No DDA compliant route available through park and missing section of path                          | Staple Tye   | 0.5 | £ | 1,080   | £ | 540     |   |
| 320 | Brockles Mead Alleyway       | De-Cluttering                            | Existing guardrail creates impassable chicance - remove guardrail                                  | Staple Tye   | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 321 | Ployters Road                | Junction                                 | Install new parallel crossing facility across Ployters Road at Brockles Mead Jct                   | Staple Tye   | 1   | £ | 27,750  | £ | 27,750  |   |
| 322 | Brockles Mead                | Missing Dropped Kerb/Tactile Information | Missing both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 323 | Brockles Mead                | Missing Dropped Kerb/Tactile Information | Missing tactile  | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 324 | Pegram's Road Jct.           | Missing Dropped Kerb/Tactile Information | Missing both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 325 | Brockles Mead/Ployters Road  | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 326 | Ployters Road                | Junction                                 | Upgrade existing traffic calming to include dedicated crossing + access to school                  | Staple Tye   | 1   | £ | 27,750  | £ | 27,750  |   |
| 327 | Perry Road                   | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 328 | Joyners Field                | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 329 | Brockles Mead                | Missing Dropped Kerb/Tactile Information | Missing tactile on all dropped kerbs at junction   | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 330 | Moorfields                   | Missing Dropped Kerb/Tactile Information | Missing tactile  | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 331 | Joyners Field                | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Staple Tye   | 1   | £ | 1,650   | £ | 1,650   |   |
| 332 | Ployters Road/Paringdon Road | Junction                                 | Install controlled crossing facilities at roundabout junction with Paringdon Road                  | Staple Tye   | 1   | £ | 240,000 | £ | 240,000 |   |
| 332 | Mowbray Road                 | De-Cluttering                            | Remove existing, crumpled guardrailing   | Staple Tye   | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |



|     |                         |  |  |             |     |   |         |   |         |   |
|-----|-------------------------|--|--|-------------|-----|---|---------|---|---------|---|
| 333 | Pinceybrook Road        | Junction                                 | Introduce controlled pedestrian/cycle crossing to connect adjoining paths  | Staple Tye  | 1   | £ | 27,750  | £ | 27,750  |   |
| 334 | Perry Road              | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 335 | Penlow Road             | Missing Dropped Kerb/Tactile Information | Missing Tactile/Dropped Kerb needs widening                                | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 336 | Perry Road              | Missing Dropped Kerb/Tactile Information | Missing both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 337 | Perry Road              | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 338 | Perry Road              | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 339 | Pinceybrook Road        | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 340 | Pegram's Road           | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 341 | Abercrombie Way/Car F   | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 342 | Parnall Road            | De-Cluttering                            | Remove existing pedestrian guardrailling around existing crossing          | Staple Tye  | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 343 | Pyenest Road/Abercron   | De-Cluttering                            | Guardrail surrounding junction should be removed                           | Staple Tye  | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 344 | Southern Way/Parnall F  | Junction                                 | Install controlled pedestrian/cycle crossings at roundabout                | Staple Tye  | 1   | £ | 240,000 | £ | 240,000 |   |
| 345 | Parnall Road/Long Banl  | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 346 | Pinceybrook Road        | Missing Dropped Kerb/Tactile Information | Missing Tactile  | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 347 | Parnall Road/Long Banl  | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 348 | Parnall Road            | Missing Dropped Kerb/Tactile Information | Missing both and needs de-cluttering                                       | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 349 | Peters Wood             | Missing Dropped Kerb/Tactile Information | Current facilities not aligned   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 350 | Paringdon Road          | Junction                                 | Remove alternate working arrangement in advance of existing zebra crossing | Staple Tye  | 1   | £ | 27,750  | £ | 27,750  |   |
| 351 | Parnall Road            | Junction                                 | Replace existing alternate working w/crossing facility                     | Staple Tye  | 1   | £ | 27,750  | £ | 27,750  |   |
| 352 | Peterswood              | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 353 | Partridge Road          | Junction                                 | Introduce new crossing to connect adjoining paths                          | Staple Tye  | 1   | £ | 27,750  | £ | 27,750  |   |
| 354 | Penlow Road/Finchmoor   | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 355 | Penlow Road             | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 356 | Penlow Road             | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 357 | Penlow Road             | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 358 | Peterswood              | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 359 | Southern Way/ Petrol S  | Missing Dropped Kerb/Tactile Information | Missing Both   | Town Centre | 1   | £ | 1,650   | £ | 1,650   |   |
| 360 | Ployters Road/Garage E  | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Town Centre | 1   | £ | 1,650   | £ | 1,650   |   |
| 361 | Penlow Road             | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 362 | Parnall Road/Loading A  | Missing Dropped Kerb/Tactile Information | Missing Both   | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 363 | Brockles Mead           | Missing Dropped Kerb/Tactile Information | Missing tactile on all dropped kerbs at junction                           | Staple Tye  | 1   | £ | 1,650   | £ | 1,650   |   |
| 364 | Perry Road/Footpath     | Junction                                 | Improve legibility of ped crossing between path and Perry Road             | Staple Tye  | 1   | £ | 10,500  | £ | 10,500  |   |
| 365 | Wissants                | Missing Footway                          | Need to introduce new footway between Paringdon Road and park              | Staple Tye  | 1   | £ | 1,080   | £ | 1,080   |   |
| 366 | Mowbray Road            | De-Cluttering                            | Remove existing, crumpled guardrailling                                    | Staple Tye  | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 367 | Southern Way/Shawbri    | Junction                                 | Introduce at-grade parallel walking/cycling crossing                       | Staple Tye  | 1   | £ | 27,750  | £ | 27,750  |   |
| 401 | Tendring Road           | Junction                                 | Introduce parallel crossing  | Bush Fair   | 1   | £ | 27,750  | £ | 27,750  |   |
| 402 | Tendring Road/Tawneys   | Missing Dropped Kerb/Tactile Information | Missing Dropped Kerb/Tactile Information                                   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 403 | Outside William Martin  | De-Cluttering                            | Remove clutter + guardrailling from outside school                         | Bush Fair   | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 404 | The Fortunes            | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 405 | The Fortunes            | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 406 | The Fortunes            | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 407 | The Fortunes            | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 408 | The Fortunes            | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 409 | Tawneys Road - Park a   | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 410 | Tawneys Road/Tye Gre    | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 411 | The Fairway/ Tawneys F  | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 412 | Tye Green Village       | Maintenance                              | Overgrown vegetation significantly narrows footways                        | Bush Fair   | 1   | £ | 770     | £ | 770     | *Estimate of ECC daily rates for maintenance tasks used |
| 413 | Upper Hook              | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 414 | Tye Green Village       | Maintenance                              | Overgrown vegetation significantly narrows footways                        | Bush Fair   | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 415 | Yorkes/Tye Green Villag | Missing Footway                          | No footway at junction and no dropped kerb/tactiles                        | Bush Fair   | 1   | £ | 1,080   | £ | 1,080   |   |
| 416 | Fountain Farm/Tye Gre   | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 417 | Primrose Field          | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 418 | Tilegate Road Car Park  | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 419 | The Fairway             | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 420 | The Fairway             | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 421 | The Fairway             | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 422 | The Fairway             | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 423 | Tumblers Road           | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 424 | Longfield               | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 425 | Strile Croft            | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 426 | Tumblers Road           | De-Cluttering                            | Guardrail reduces footway width - remove                                   | Bush Fair   | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 427 | Tumblers Road/Spence    | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 428 | Spencers Croft          | Missing Dropped Kerb/Tactile Information | Missing both on southern side  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 429 | Tracyes Road outside s  | De-Cluttering                            | Existing guardrail reduces footway width and permeability - remove         | Bush Fair   | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 430 | Tracyes Road/Southern   | De-Cluttering                            | Existing guardrail reduces footway width and permeability - remove         | Bush Fair   | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 431 | Hilly Field             | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 432 | Riddings Lane           | De-Cluttering                            | Guardrail reduces footway widths - consider removal                        | Bush Fair   | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 433 | Commonside Road         | Junction                                 | De-Clutter junction, raise table and provide crossing point into park      | Bush Fair   | 1   | £ | 35,400  | £ | 35,400  |   |
| 434 | Tysea Close             | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 435 | Wharley Hook/Tysea Rc   | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 436 | The Readings/Tysea Rc   | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 437 | Southern Way/Tysea Rc   | Junction                                 | Introduce zebra crossings at junction                                      | Bush Fair   | 1   | £ | 27,750  | £ | 27,750  |   |
| 438 | Rundells                | Missing Dropped Kerb/Tactile Information | Missing both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 439 | Trotters Road           | Missing Dropped Kerb/Tactile Information | Install crossing   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 440 | Trotters Road           | Missing Dropped Kerb/Tactile Information | Existing tactiles/DK are not aligned                                       | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 441 | Trotters Road           | Missing Dropped Kerb/Tactile Information | Existing tactiles missing/not aligned                                      | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 442 | Pear Tree Mead          | Missing Dropped Kerb/Tactile Information | Existing facilities not aligned  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 443 | Little Pynchons         | Missing Dropped Kerb/Tactile Information | Missing Both to access park  | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 444 | Second Avenue/Howarc    | Junction                                 | Introduce controlled crossing points                                       | Bush Fair   | 1   | £ | 240,000 | £ | 240,000 |   |
| 445 | Tillwicks Road/Tendring | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 446 | Tillwicks Road/Tumbler  | Missing Dropped Kerb/Tactile Information | Missing Both   | Bush Fair   | 1   | £ | 1,650   | £ | 1,650   |   |
| 447 | Tillwicks Road          | Junction                                 | Install controlled crossing of Tillwicks Roads                             | Bush Fair   | 1   | £ | 27,750  | £ | 27,750  |   |
| 448 | Tilegate Road/Tillwicks | Junction                                 | Introduce controlled crossing points on all arms + de-clutter              | Bush Fair   | 1   | £ | 240,000 | £ | 240,000 |   |
| 449 | Tillwicks Road/Southern | Junction                                 | Introduce at-grade crossing facilities on all arms of roundabout           | Bush Fair   | 1   | £ | 240,000 | £ | 240,000 |   |
| 450 | Tillwicks Road/Tumblers | Junction                                 | Install new parallel crossing facilities on Tillwicks Road                 | Bush Fair   | 1   | £ | 27,750  | £ | 27,750  |   |
| 451 | Southern Way            | Junction                                 | Introduce new crossing between Tye Green Village + Latton Bush Centre      | Bush Fair   | 1   | £ | 27,750  | £ | 27,750  |   |

|                                      |  |   |              |     |   |         |   |         |   |
|--------------------------------------|--|---|--------------|-----|---|---------|---|---------|---|
| 452 Southern Way/Tye Gree Junction   |  | Introduce crossover treatment to improve cycle route continuity                                     | Bush Fair    | 1   | £ | 17,500  | £ | 17,500  |   |
| 453 Southern Way/ Tawneys Junction   |  | Convert existing roundabout to priority junction with controlled crossing of Southern Way introduce | Bush Fair    | 1   | £ | 37,500  | £ | 37,500  |   |
| 454 Southern Way/Trotters f Junction |  | Introduce controlled crossing facilities on all arms  | Bush Fair    | 3   | £ | 37,500  | £ | 112,500 |   |
| 455 Tye Green Village                | Missing Dropped Kerb/Tactile Information | Missing Both  | Bush Fair    | 1   | £ | 1,650   | £ | 1,650   |   |
| 2011 Cambridge Road                  | Junction                                 | Introduce tocan crossing of Cambridge Road + upgrade footway approaches to junction                 | Templefields | 1   | £ | 37,500  | £ | 37,500  |   |
| 2012 Old Road                        | Junction                                 | Introduce refuge crossing point across Old Road to park   | Templefields | 1   | £ | 10,950  | £ | 10,950  |   |
| 2013 Edinburgh Place                 | Junction                                 | Narrow carriageway and formalise crossing point   | Templefields | 1   | £ | 10,950  | £ | 10,950  |   |
| 2014 Mulberry Green/Old Ro           | Junction                                 | Public realm opportunity to improve Mulberry Green to inc. new crossing points                      | Templefields | 1   | £ | 100,000 | £ | 100,000 |   |
| 2016 Park Hill Road                  | Maintenance                              | Narrow and poorly maintained footway - consider widening  | Templefields | 1   | £ | 1,080   | £ | 1,080   |   |
| 2017 Central Road/South Ro           | Missing Dropped Kerb/Tactile Information | Missing DKs + Tactile on ALL junctions in Central/South Road Trading Estate                         | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 2018 Howard Way                      | Junction                                 | Introduce crossings on all arms of roundabout   | Templefields | 1   | £ | 240,000 | £ | 240,000 |   |
| 2019 The Stow                        | Missing Dropped Kerb/Tactile Information | Missing Both  | Templefields | 1   | £ | 1,650   | £ | 1,650   |   |
| 2019 Off-Road path between           | Maintenance                              | Surfacing in poor condition and overgrown vegetation  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 2020 Off-Road path between           | Maintenance                              | Surfacing in poor condition and overgrown vegetation  | Templefields | 0.5 | £ | 770     | £ | 385     | *Estimate of ECC daily rates for maintenance tasks used |
| 2021 Priory Avenue/Old Roac Junction |  | Introduce controlled crossing points and replace existing roundabout with priority junction         | Templefields | 1   | £ | 37,500  | £ | 37,500  |   |

£ 4,684,425

Sub Totals

|                    |   |           |
|--------------------|---|-----------|
| De-Cluttering      | £ | 13,860    |
| Missing Footway    | £ | 2,700     |
| Junction           | £ | 4,343,650 |
| Maintenance        | £ | 75,065    |
| Missing DK/Tactile | £ | 249,150   |
| TOTAL              | £ | 4,684,425 |

CWZ Totals

|              |   |           |
|--------------|---|-----------|
| Town Centre  | £ | 626,250   |
| Bush Fair    | £ | 1,123,560 |
| Templefields | £ | 2,028,860 |
| Staple Tye   | £ | 905,755   |
| TOTAL        | £ | 4,684,425 |