

St Albans District

LCWIP – RURAL CONNECTIVITY

HCC / SADC

APPENDIX (PUBLIC)

PROJECT 70080342

JULY 2023

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1.1 INTRODUCTION

- 1.1.1 Due to its emphasis on the areas with the greatest potential demand and potential to encourage new walking and cycling trips, the LCWIP focuses mostly on infrastructure and routes found in dense urban areas. However, we recognise that rural connectivity is also important to the district, and that investment in rural transport will also be essential to creating a greener, cleaner, healthier Hertfordshire.
- 1.1.2 Rural connectivity is of particular importance in St Albans, where towns are often surrounded by many smaller settlements less than five miles away, meaning distances between facilities and services are often a cyclable distance for many – especially with the rising popularity of e-bikes.
- 1.1.3 Many rural connectivity routes were not prioritised in this first iteration of the LCWIP and were therefore not audited and so are not shown in the infrastructure improvement plans. However, this Rural Connectivity Appendix seeks to rebalance this approach by capturing aspirations for these rural connections that might not have the greatest potential increase in trips overall but where we nevertheless recognise the need to improve walking and cycling provision and are already undertaking work outside the main LCWIP process.
- 1.1.4 The Appendix therefore details the additional, ongoing work undertaken by HCC and partners to identify improvements to rural connectivity for the purposes of active travel, and supplements the routes set out in the infrastructure improvement plans.
- 1.1.5 Given the multi-use nature of many of these routes – especially Rights of Way – a range of issues will need to be considered in the design of these routes. For example, where appropriate and where there is evidence of use and demand, we will incorporate equestrian use into scheme design. The majority of schemes in the LCWIP infrastructure improvement plans are located in more urban areas, and are not suitable for equestrian use.
- 1.1.6 Rural routes are also important for leisure activities, and hold significant potential benefits for walking, wheeling, cycling and equestrian journeys taken for sport, exercise, or health.
- 1.1.7 Further potential improvements to rural connectivity are contained in the Rights of Way Improvement Plan (ROWIP) and Suggestions List. The St Albans LCWIP and ROWIP documents have different but complementary roles: while the LCWIP aims to enable a shift from motorised to active travel for utility journeys, and may use both highway land and Rights of Way to identify a prioritised programme of improvements, the Rights of Way Improvement Plan identifies improvements only to the local Rights of Way network for people walking, cycling and horse-riding (including carriage drivers) and for people with disabilities, but has a broader scope for including recreational journeys as well as utility journeys. Where an LCWIP route requires changes to a Right of Way, or the ROWIP identifies potential improvements to the active travel network for utility journeys, we will work closely with stakeholders to identify the most appropriate solution to meet a range of needs.

1.2 KEY ROUTES FOR RURAL CONNECTIVITY

A5183 Redbourn-St Albans

- 1.2.1 A project has been commissioned in response to ongoing community concerns and a number of serious accidents along the A5183 between Redbourn and St Albans. The feasibility study has reviewed options for both road safety improvements and improvements to walking and cycling.
- 1.2.2 Opportunities for improved walking and cycling provision along this route have been identified and include:
- A shared use facility to provide a segregated cycling path alongside the footway
 - Footway resurfacing
 - Tightening of side road junctions and active travel priority at junctions
 - Improvements to pedestrian crossings linked to bus stop access
 - Improvements to roundabouts at either end of the corridor
- 1.2.3 Currently, no funding mechanism for these improvements has been identified but we will continue to seek opportunities to bring these improvements forward. This could be through existing work programmes, external funding bids and where appropriate developer funding to allow for delivery of the most appropriate measures to take place.
- 1.2.4 Onward west-bound connections towards settlements such as Markyate and onwards to Luton will be considered as part of the Dacorum LCWIP.

Harpenden-Wheathampstead (NCN 57 / Lea Valley Line)

- 1.2.5 The Lea Valley Line extends from the outskirts of Harpenden along the former Hatfield, Luton and Dunstable railway line. Sections of the route are owned by St Albans City & District Council (SADC) and managed in partnership with HCC's Countryside Management Service. The Harpenden section of the Lea Valley Line is an important part of the transport network, and forms part of the National Cycle Network (NCN) Route 57 as well as linking to several other routes on the Public Rights of Way network. The route is popular with people walking and cycling, with some sections of the route also suited to equestrian use; the eastern end of the Line is designated Bridleway 97 as far as Leasey Bridge Lane. However, there is no continuous off-road route for people cycling or horse-riding between Leasey Bridge Lane and Wheathampstead village centre, something which is often referred to as a 'gap' in the NCN 57 route.
- 1.2.6 Connections between Harpenden and Wheathampstead, bridging a missing section of National Cycle Network (NCN) route 57, are an identified scheme in the South Central Growth and Transport Plan and remain a popular request by the local community. To date, initial route scoping and investigation work has identified several potential options for a route between Leasey Bridge Lane and Wheathampstead, such as following the former railway line or upgrades to Footpath 16.
- 1.2.7 All of these options are reliant on third party land in multiple ownership. We are currently identifying how to work with landowners to seek access rights over this land.

Redbourn-Harpenden (B487)

- 1.2.8 The B487 between Redbourn and Harpenden provides an alternative link between the two villages, connecting Redbourn to the southern end of Harpenden. This has been identified as a primary unaudited route in the Network Plan for Cycling, and links to both the A1081 at Harpenden and the Nickey Line as well as several off-road rights of way.
- 1.2.9 During the stakeholder engagement sessions, concerns were raised with regards to safety due to vehicle speeds and a lack of segregated space for walking and cycling on this route. Cycling provision along the B487 is also dependent on safety at the junction with the A5183, which is already being considered as part of a study on the A5183 and improvements to the Nickey Line.
- 1.2.10 These suggestions have been noted as part of the LCWIP stakeholder engagement process and will be considered in future programmes of work. The further development of proposals for this route will also be in scope for a future iteration of the LCWIP.

Luton-Harpenden (Lea Valley Walk)

- 1.2.11 The Lee Valley Line (NCN6) provides an existing off road walking and cycleway between southern Luton and the north eastern part of Harpenden.
- 1.2.12 Improvements to the Harpenden section of the Lea Valley route (approximately between Riverford Close and Piggottshill Lane) are identified in the [Greenspace Action Plan](#), produced by the Countryside Management Service on behalf of St Albans City & District Council. Active travel aspirations for the Lea Valley Walk include:
- To improve user experience, awareness and understanding of the route through appropriate signage and information
 - To provide and maintain clear and safe public access onto and along the multi-user route, through improved links to local destinations and managing the route's surface as well as through restricting unwanted vehicular access as much as possible

Harpenden-Wheathampstead (Harpenden / Wheathampstead Rd)

- 1.2.13 An alternative route between the southern part of Wheathampstead and Harpenden is along Harpenden Road then Wheathampstead Road and Piggottshill Lane. This is on the LCWIP secondary network.
- 1.2.14 Outside Harpenden, this is a national speed limit country road with narrow carriageway and high hedges on either side. Any segregated cycling provision here would be dependent on third-party land, and is therefore likely to be complex to deliver.
- 1.2.15 There is strong community support for improvements on this route: the Safe Cycle Routes for Wheathampstead project (a sub-committee of the Wheathampstead Community Group) identified a number of potential infrastructure improvements on this

route, including vegetation cutback, white lines, signage, surfacing, and changes to the rights of way.

- 1.2.16 While these community-led proposals have not yet been assessed for alignment with LTN 1/20 standards or technical deliverability by HCC, these suggestions have been noted as part of the LCWIP stakeholder engagement process and will be considered in future programmes of work.

Wheathampstead-St Albans (B651)

- 1.2.17 There is potential demand for safe cycle connections between Wheathampstead and St Albans given the relatively close distance involved and the demographics of both settlements. This is identified as a Primary Cycle Route in Wheathampstead's Neighbourhood Plan, and the southern section has also already been identified as part of the St Albans LCWIP Infrastructure Improvement Plan.
- 1.2.18 Investigation works around particular junctions and locations on the route have been undertaken and led to a number of suggestions that have been logged as part of the wider LCWIP programme, as well as being investigated as potential options using HCC Highways Locality Budget.
- 1.2.19 The Safe Cycle Routes for Wheathampstead project (a sub-committee of the Wheathampstead Community Group) identified a number of further potential infrastructure improvements on this route, including dropped kerbs, resurfacing, signage, road markings, new path creation, ditch filling, improved drainage, and vegetation cutback.
- 1.2.20 Suggestions put forward by the Safe Cycle Routes for Wheathampstead project (led by the Wheathampstead Community Group) are shown in **Figure 1**.
- 1.2.21 It should also be noted that a shared cycleway/footway has now been installed on one section of the route between Sandridge and the Wheathampstead Cricket Club.
- 1.2.22 While these suggestions have not yet been examined in detail for alignment with appropriate standards and/or deliverability by HCC, they have been noted through the LCWIP stakeholder engagement process and we will investigate opportunities to introduce improvements to this route through existing highway programmes.

FIG 1.1 – ‘SAFE CYCLE ROUTES FOR WHEATHAMPSTEAD’ REPORT EXTRACT



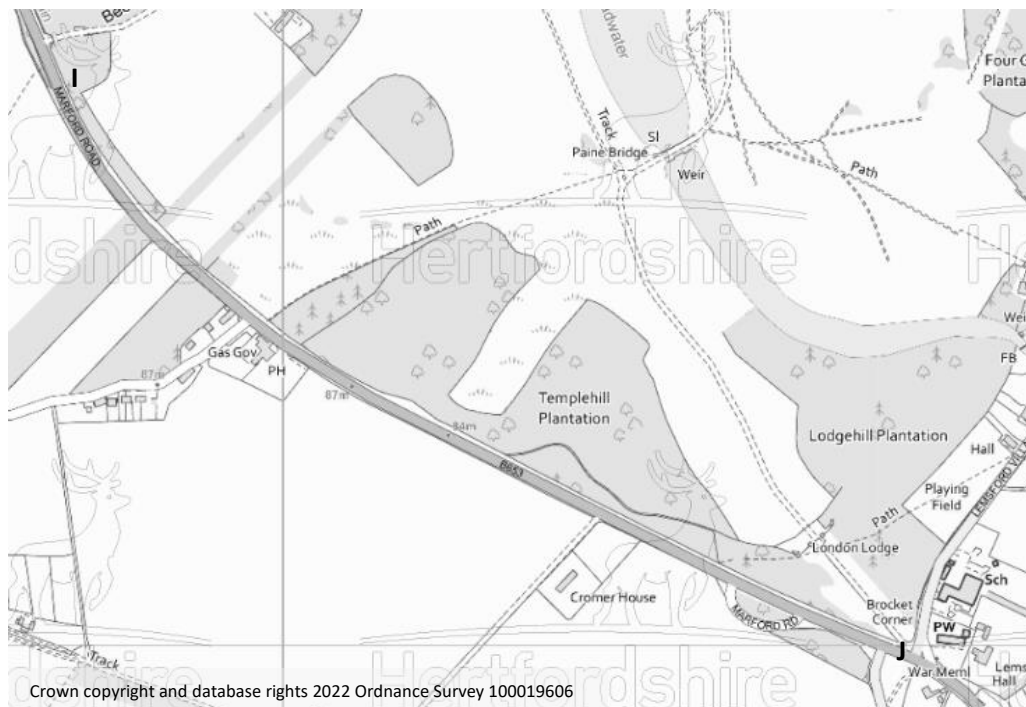
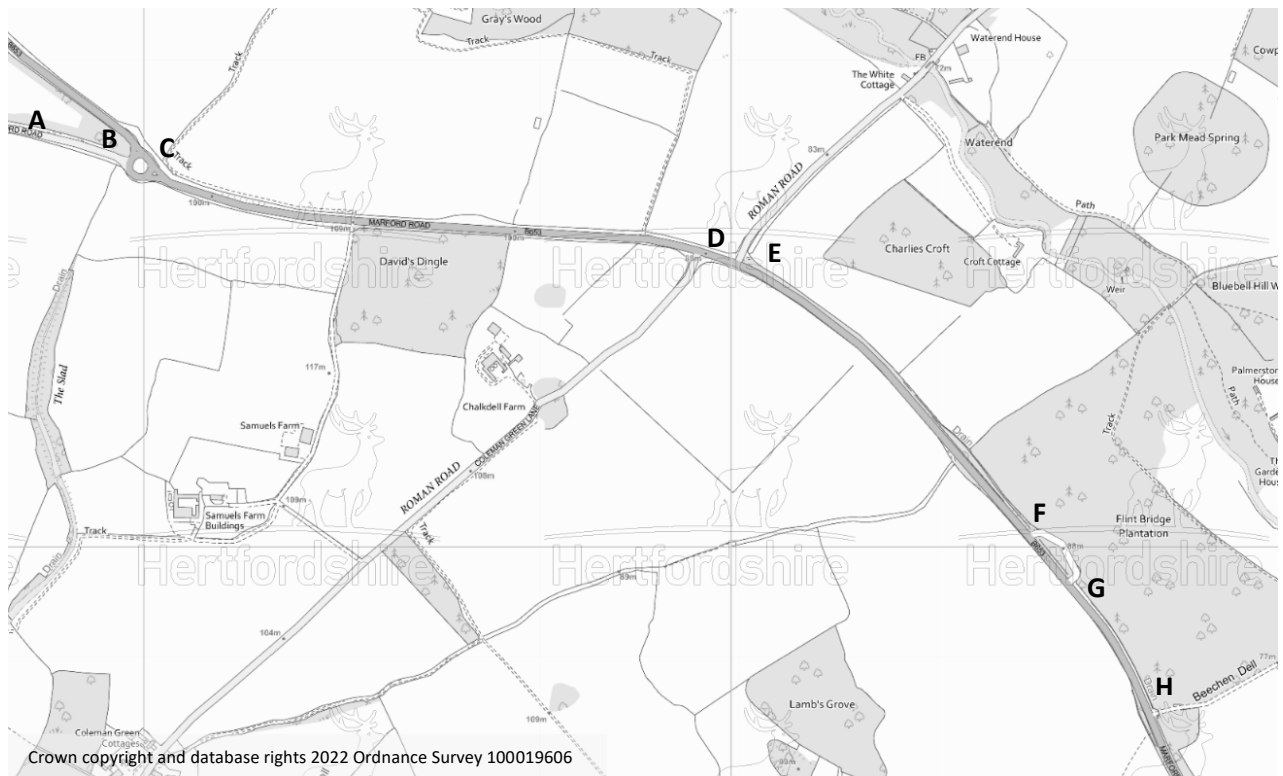
Section	Suggested requirements
A	Dropped kerb near bus stop at top of The Hill
A to B	Resurface and widen tarmac path remove some trees/bushes to create lightwells Change use of RoW to shared cycling/walking Install shared use signs ("Share with care")
B	Install warning signs ("Cyclists give way")
B to C	Two alternative options around Silverlands New path through field Install passing spaces Remove some trees/bushes to create additional space
C	Replace and extend metal fence Widen exit from path onto cricket club driveway
C to D	White line & cycle markings for crossing over cricket club entrance Warning signs for cars exiting cricket club Warning signs on B651 for cars entering cricket club
D	Widen and level entrance to Nomansland
D to E	Dig out and lay new MOT type 1/type 2 path parallel to B651 (651m)
E	Fill in ditch to Ferrers Lane
E to F	White line and cycle markings
F	Fill in ditch to Ferrers Lane
F to G	Dig out and lay new MOT Type ½ path parallel to B651 (300m)
G	Ensure adequate drainage Create separation for horses & cyclists on steep slope
H	Entrance to Heartwood Forest – join existing bridleway
Heartwood	Improve cycle path at Heartwood for access to Sandridgebury Lane

Wheathampstead-Welwyn Garden City (B653)

- 1.2.23 Links between the two towns are of a suitable cycling distance, and may provide an alternative option for rail connections as well as links to the University of Hertfordshire and Hatfield Business Park.
- 1.2.24 Off-road links between Wheathampstead and Welwyn Garden City for people walking and cycling are currently limited to the National Cycling Network route along the Ayot Greenway, which also includes some sections of bridleways and can accommodate horse-riding. Although this route has had recent surfacing improvements, it is a rural unlit route and not suitable for utility journeys in all seasons for all people.
- 1.2.25 The most direct on-road route is along the B653 Marford Road. However, this is a heavily trafficked B-road with unrestricted speed (60mph) so is unsuitable for on road cycling. The Safe Cycle Routes for Wheathampstead project (a sub-committee of the Wheathampstead Community Group) has identified a number of potential infrastructure improvements on this route, including dropped kerbs, vegetation cutback, surfacing, signage, white lines, and changes to Rights of Way.

- 1.2.26 The route is one of local interest, and suggestions put forward by the Safe Cycle Routes for Wheathampstead project (led by the Wheathampstead Community Group) are shown in **Figure 2**.
- 1.2.27 Whilst some quick wins have been identified including vegetation cutback and new footpath surfacing, the provision of a safe cycle route which adheres to current LTN1/20 design standards would require full segregation from the road carriageway and significant investment. The suggestions have been noted through the LCWIP stakeholder engagement process but would need to be investigated in further detail and assessed against new design standards.

FIG-2 EXTRACT FROM 'SAFE CYCLE ROUTES FOR WHEATHAMPSTEAD' REPORT



Section	Suggested improvements
A	Dropped kerb at top of Sheepcote Lane
A to B	Clear hedgerow along verge Lay new tarmac path Route tarmac round lay-by
B	Dropped kerb to return to main carriageway White lining to show cycle track entering roundabout Warning signs for cars on Marford Rd and on Cory-Wright Way
B to C	White lining to show cycle track around outside of roundabout
C	Dropped kerb for exit from/entry to roundabout
C to D	Clear hedgerow along verge Lay new tarmac path (500m) Route tarmac round lay-by
D	Dropped kerb Warning signs for cars on Marford Rd and on Waterend Lane
D to E	White line and cycle markings for crossing over Waterend Lane
E	Dropped kerb
E to F	Lay new tarmac following existing footpath (2,500m) Change use of RoW to shared cycling/walking
F	If Bricket lay-by is reopened then need warning signs for cars and cyclists
F to G	Use Bricket lay-by
G	Dropped kerb to join existing tarmac path
G to H	Cut back trees from existing tarmac path Change use of RoW to shared walking/cycling
H to I	White lines and cycle markings for crossing over Bocket Hall GC entrance
I to J	Cut back trees from existing tarmac path
J	Dropped kerb to join carriageway before Green Lanes Dropped kerb to join carriageway before Lemsford Village

St Albans-Welwyn Garden City (Coopers Green Lane)

- 1.2.28 In order to improve connectivity between Welwyn Garden City/Hatfield and St Albans, there are long-term local aspirations for a new off-road cycleway and footway along Sandpit Lane and Coopers Green Lane, including links to Hatfield Business Park. This would be subject to land take and so is linked to potential development coming forward in the area.
- 1.2.29 This scheme is published in the adopted South Central Growth & Transport Plan and has been added to the LCWIP Infrastructure Plans accordingly.

1.3 CYCLING CONNECTIVITY PROJECT

- 1.3.1 A separate HCC project is underway to identify key gaps in the interurban cycle network and link what would otherwise be separate routes into a cohesive network. Two of the first shortlisted routes identified through the project are within the St Albans district area and are already featured within the infrastructure plans.
- 1.3.2 A summary in this Appendix has been provided to give further context to this ongoing work, as they are important routes for inter-settlement travel.

Watford-St Albans via Chiswell Green

- 1.3.3 The connection between Watford and St Albans via Chiswell Green and Bricket Wood has been identified as a key cycling connection.
- 1.3.4 We are investigating options to provide a safe segregated cycleway along this route along with improvements for pedestrians. Initial concept designs are being developed and funding opportunities to take this forward into more detailed design and implementation are being investigated.

Nickey Line (Redbourn-Harpenden)

- 1.3.5 The Nickey Line is an important route for both walking and cycling between Hemel Hempstead and Harpenden, and has potential use for both leisure and utility journeys.
- 1.3.6 In order to facilitate year-round use and enjoyment of the Nickey Line, there is a recognised ambition for resurfacing of the Nickey Line with environmentally sensitive materials compatible with the rural nature of the location. Similarly, additional lighting along the more urban sections of the route to improve perceptions of safety and enable use in evenings and at darker periods of the year would help to enable a shift towards walking and cycling for these journeys. Any lighting would need to be environmentally-sensitive and could be combined with additional education interventions to further increase safety.
- 1.3.7 Potential opportunities to improve access to the route and provide safer crossings where it interacts with the highway network have been identified as part of the HCC Connectivity Study.
- 1.3.8 Improvements to the crossings of the A5183 and B487, as well as improved links between the Nickey Line and the High Street, are included in the Redbourn Neighbourhood Plan, therefore further supporting the objectives of the ongoing Connectivity Study.
- 1.3.9 The HCC Rights of Way team have also developed a Greenspace Action Plan for the Nickey Line (as described in Appendix B) and Sustrans (the national cycling charity) are also looking at potential for improvements to the route. Further discussions will be held with all three parties to identify how the suggested improvements can be delivered.

1.4 NEIGHBOURHOOD PLANS

- 1.4.1 As part of consideration given to rural connectivity across the districts, we have identified key routes of local importance as set out in Neighbourhood Plans.
- 1.4.2 At the time of writing, three parishes in the district have adopted neighbourhood plans: Harpenden, St Stephen, and Sandridge.
- 1.4.3 Neighbourhood Plans have also been submitted either for consultation or examination in Wheathampstead and Redbourn.

- 1.4.4 A plan is also being developed in London Colney and Colney Heath.
- 1.4.5 Ambitions and policies set out in Neighbourhood Plans have been taken into account during the LCWIP process and will be considered further when developing walking and cycling schemes in these geographical areas, or where funding is made available for such improvements.

Harpenden ('Made')

- 1.4.6 The [Harpenden Neighbourhood Plan](#) contains the following relevant policies and objectives:
- Policy ESD11 specifies that major developments outside the built-up area should create new public rights of way and cycle paths, and supports proposals for new definite rights of way to improve opportunities for sustainable transport.
 - The Transport & Movement Objectives set out aims to promote sustainable transport, integration of different modes, to reduce pollution and ensure new development deliver or improve sustainable transport infrastructure.
 - Policy T9 specifically supports new and improved walking and cycling routes and associated facilities. It also makes specific reference to need to improve cycling provisions on the route between Harpenden and St Albans via Beesonend Lane past West Common.

St Stephen Neighbourhood Plan ('Made')

- 1.4.7 While there are no specific walking/cycling routes identified within the [St Stephen Neighbourhood Plan](#), there are some relevant policies and objectives:
- Objective 8 is "to improve transport and movement, in particular through further development of public transport provision and other non-car travel modes, whilst ensuring a safe environment for pedestrians, cyclists and horse-riders as well as motorists."
 - Policy S5 requires developments to provide pedestrian and cycle connections to community facilities, local services and transport modes as well as to the countryside.
 - Policy S14 requires new developments to incorporate safe and accessible walking and cycling access to existing footways and cycleways and supports the delivery of improvements to rights of way.
 - Policy S15 seeks to improve or enable connectivity between villages and the wider countryside along bridleways.
 - In Section 11 'Non-Land Use Actions and Spending Priorities', the Plan identifies aspirations for traffic calming and reduced speed limits in Chiswell Green, Park Street, Bricket Wood. The Plan also supports the introduction of new parking restrictions at some locations, as well as the enforcement of existing restrictions.

Sandridge ('Made')

1.4.8 The [Sandridge Parish Neighbourhood Plan](#) sets out a number of aspirations and policies that are relevant to the LCWIP:

- Policy T1 (Traffic Congestion and Road Safety) seeks to minimise the impact of traffic congestion on residential roads, and to improve road safety and the roadside environment.
- Policy T3 (Walking, Cycling and Recreational Travel) seeks to ensure safe, attractive and accessible pedestrian and cycle routes to key destinations. The policy requires proposals for new development to take opportunities to increase, extend or upgrade multi-user off-road rights of way in line with the HCC Rights of Way Improvement Plan as well as the 'Database of Suggestions for Sandridge Parish' in figures 4 and 5 of the Plan.

Wheathampstead 'Made'

1.4.9 The Wheathampstead Neighbourhood Plan ('Made') sets out the following relevant policies:

- Policy W12 (Improving walking and cycling in the parish) supports development which would secure sustainable movement within the parish.
 - A series of "Primary Local Access Routes" have been identified that enable access on foot, and where possible bicycle, to these key areas. These are shown in Figures 7.1, 7.2 and 7 of the [Neighbourhood Plan](#).
 - For any development that does come forward, the policy requires safe footpath access to be provided to link in with these primary local access routes.
 - The policy sets out a priority for Primary Local Access Routes to be improved and for access to them from any new housing developments to be provided, in order to encourage more intra-parish, local trips to be taken using non-car, sustainable methods.
 - Section 106 and/or CIL funding will be sought to improve off-road cycle routes linking up with the existing Hertfordshire network.

Redbourn ('Made')

1.4.10 The [Redbourn Neighbourhood Plan](#) includes several policies and objectives relevant to the LCWIP:

- Objective 5 of the Plan is to "Increase walking and cycling movements through improved footpath and cycle path provision".
- Chapter 8 recognises the interest of community members in shifting to modes of travel other than the private car, and an increased interest in cycling, and Policy 9 set out requirements for new development to deliver or improve walking and cycling routes.
- Project E identifies a number of key locations or routes, such as between Redbourn and St Albans, Harpenden, Hemel Hempstead, and links to the Nickey Line.

London Colney (In development)

- 1.4.11 Several technical reports (including design code, housing needs, area analysis and policy review reports) have been produced for the [London Colney Neighbourhood Plan](#) and an initial document with vision and objectives has been produced.
- The May 2021 '[Vision, Objectives, Policy and Project Ideas](#)' document sets out a number of draft policy areas, including a policy to ensure all new developments incorporate adequate active travel infrastructure.
 - Parish council stakeholders have also expressed interest in improvements or extensions to a number of rights of way, including safe crossing points and rerouting of some footpaths, which may be included in future full drafts of the Neighbourhood Plan.
- 1.4.12 An extract from the London Colney travel Active Travel project document, which was sent to the LCWIP project team during the stakeholder engagement phase, is shown in **Figure 3**.

FIG-3 EXTRACT FROM LONDON COLNEY NEIGHBOURHOOD PLAN DRAFT ACTIVE TRAVEL PROJECTS DOCUMENT

Project	Route
1	Bridleway to St Albans City from Napsbury
2	Safe crossing of A414 for footpath 53 HCC
3	London Road at London Colney Roundabout
4	Morriss Playing Fields to Highfield Lane
5	Bell Roundabout to bridleway 43
6	Access to Blind Lane from Colney Fields
7	Circular Route around Sainsbury's field
8	Former Pastoral Centre
9	Shenley Lane to Harperbury Park
9a	Spur to Napsbury Park to create Harperbury Park to Napsbury Park
10	Napsbury to Frogmore
11	Napsbury to Colney Street
12	Cycle to School: London Colney
13	Broad Colney Lakes

Colney Heath (In development)

- 1.4.13 The process to develop a [Neighbourhood Plan in Colney Heath](#) has started. There is no information currently publicly available about potential priorities for walking and cycling routes in the parish that will be included in the Plan.
- 1.4.14 Priorities for Colney Heath Parish Council (as of January 2022) are:
- Footpath/cycleway links from the Alban Way to Colney Heath longabout across Smallford pits
 - Oaklands Lane footpath, with access to Coopers Green Lane
 - Colney heath to London Colney (Coursers Road)
 - Tollgate Road
 - Smallford/Ellenbrook area
 - Improvements to existing provisions on the Alban Way and A414

1.5 STAKEHOLDER FEEDBACK

- 1.5.1 During the three rounds of LCWIP stakeholder engagement, a number of valuable comments were made by a range of parish, district and county Councillors, as well as representatives from walking/cycling groups, with regards to infrastructure improvements in areas not included in the infrastructure plans, including Wheathampstead, Redbourn, Colney Heath and other smaller settlements.
- 1.5.2 Comments were varied in nature, and included the following themes:
- a. Maintenance issues, such as paths that become very wet and muddy
 - b. Routes where infrastructure does not meet demand, such as walking routes with no footway
 - c. Routes where it is difficult or unsafe to cross
 - d. Routes where people feel unsafe due to vehicle behaviour
 - e. Alternative 'quiet routes' with lower traffic volumes or speeds
 - f. Inaccessible or discriminatory barriers
 - g. Opportunities to improve existing provision, such as widening footways or improving junctions
- 1.5.3 These comments will be passed on to the appropriate teams within HCC (e.g. for maintenance issues) to be actioned, or stored for incorporation in the next iteration of the LCWIP.
- 1.5.4 Stakeholder comments have also been used to support the creation of a list of general principles for walking/cycling improvements on rural routes, as shown in **Table 4**.

Table 4: Potential interventions for St Albans villages

Approach	Example interventions
Reduce vehicle speeds	20mph zones Traffic calming engineering measures (vertical or horizontal) Reduce carriageway widths Centre line removal
Reduce vehicle traffic volumes	Modal filters Review on-street parking
Improve safety for people walking	New or improved footways Junction treatments New crossings
Improve safety for people cycling	New or improved shared use paths Segregated cycleways Junction treatments Consider appropriate surfacing on rights of way Parallel crossings
Make walking and cycling more pleasant	Planting for shade, shelter and aesthetic enjoyment Urban realm improvements Provide benches Heritage wayfinding and signage Maintenance and appropriate surfacing

Improve accessibility	Tactile paving Dropped kerbs Footway resurfacing Steps, ramps and gradient improvements Remove discriminatory access barriers Install benches New crossings
Make walking and cycling easier	Review on-street parking Install cycle parking in key locations Wayfinding and signage Removal of cycle bans or restrictions



St Albans District Council

LCWIP - Policy Context

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1.1 National Strategic Context

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

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

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



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

- 1.1.6. Finally, Gear Change announced the creation of Active Travel England, an inspectorate and funding body which began its operations in 2022 with its mandate of reviewing all funding requests and ensuring they comply with national standards; alongside a statutory consultee role in planning applications, scheme auditing, and a repository for expert advice and guidance should authorities require assistance in the design or delivery of schemes.



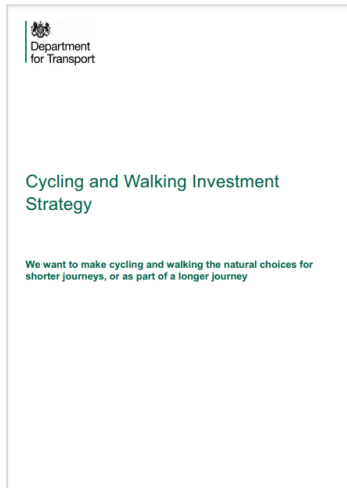
Local Transport Note 1/20: Cycle Infrastructure Design (Department for Transport, 2020)

- 1.1.7. Superseding previous guidance issued under *LTN 2/08: Cycle Infrastructure Design* and *LTN 1/12: Shared Use Routes for Pedestrians and Cyclists*, LTN 1/20 provides a suite of design principles and guidance to facilitate the creation of high-quality, safe, and effective infrastructure.
- 1.1.8. LTN 1/20 provides for five core design principles which should be a requirement of all schemes, those being that networks and routes should be:
- Coherent,
 - Direct,
 - Safe
 - Comfortable, and
 - Attractive
- 1.1.9. Alongside this, and more technical design guidance on particular infrastructure including cycle lanes; junctions; crossings; and signage, the document heavily promotes the creation of LCWIPs as a means of developing appropriate network strategies and schemes to ensure there is a network of infrastructure, rather than isolated pockets that do not facilitate journeys. This extends to the need for appropriate wayfinding for routes and cycle parking

facilities close to destinations, that are suitable for all types of cycle rather than simply a normal bicycle.

- 1.1.10. Though not legally binding, it has become evident that future funding will be reserved for schemes that comply with this technical guidance and as such all promoted schemes should ensure compliance as much as possible. It is recognised that there are some locations, such as may be found within some of the narrow, historical streets of St Albans, where it will not be feasible to fully comply with regulations; or where the local community may not support the compromises needed for the appropriate infrastructure. These should be considered on a case-by-case basis, and schemes proposed as part of the LCWIP should display clear compliance with the principles and directions of LTN 1/20.

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



- 1.1.11. The Cycling and Walking Investment Strategy provides the national ambition for England – for walking and cycling to become the de facto choice for shorter journeys or stages of longer journeys, with ambitious targets of doubling cycling trips to 1.6 billion by 2025. The strategy outlines the considerable benefits to such changes, from health and environment improvements through to reduction in overall congestion and increase in road space availability for alternative modes and cites research and evidence from schemes in London and internationally in support of this.
- 1.1.12. The funding announced as part of the strategy has since been diversified, and the strategy itself advised a slower pace than what has been seen in the four years since publication, however the overarching aims and goals remain aligned with that of both authorities and will still be positively impacted by the development and delivery of the LCWIP
- 1.1.13. A revised strategy was recently announced and is expected in the near future, the contents of which are likely to reflect changes following the publication of Gear Change, the Transport Decarbonisation Plan, and the impact of the Coronavirus pandemic.

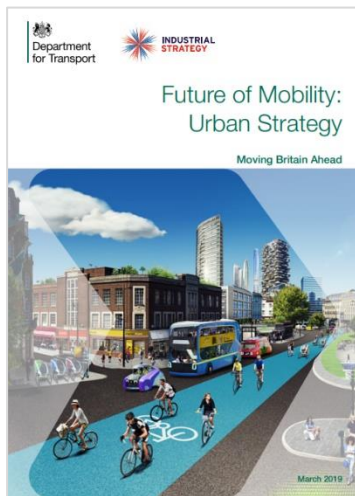
Cycling and walking investment strategy 2 (Department for Transport, 2022)

- 1.1.14. The Second Cycling and Walking Investment Strategy (CWIS2) follows on from the initial Cycling and Walking Investment Strategy (2017) and provides the objectives and financial resources for the period of April 2021 through to March 2025 as required by the Infrastructure Act 2015. The document principally unifies existing objectives and funding sources rather than provide any new requirements or funding, but it does serve to codify expectations and reaffirm targets and commitments authorities will be expected to meet. CWIS2 provides the following four objectives to 2025:
- Increase the percentage of short journeys in towns and cities that are walked or cycled from 41% in 2018 to 2019 to 46% in 2025
 - Increase walking activity, where walking activity is measured as the total number of walking stages per person per year, to 365 stages per person per year in 2025
 - Double cycling, where cycling activity is measured as the estimated total number of cycling stages made each year, from 0.8 billion stages in 2013 to 1.6 billion stages in 2025

- Increase the percentage of children aged 5 to 10 who usually walk to school from 49% in 2014 to 55% in 2025

1.1.15. A key ask of the strategy is for new investment in walking and cycling to be integrated into wider transport plans, with LCWIPs listed as a guiding principle. To this end, the St Albans City and District LCWIP may be seen as vital to achieving the objectives set by CWIS2 and a key enabler for funding outlined in the strategy.

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



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

1.1.18. The area of study for the St Albans LCWIP is principally urban, and as such the provision of more active travel-enabling infrastructure will support the overall aims of this strategy

1.1.19. As of the time of writing, the rural partner to this strategy was subject to a call for evidence ending on the 16 February 2021 and is yet to be published.



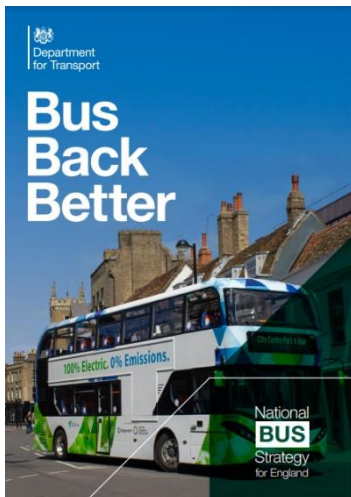
Clean Air Strategy (Department for Environment, Food & Rural Affairs, 2019)

1.1.20. The Clean Air Strategy represents the cross-discipline approach the government is taking to tackle air pollution from all sources with the aim being to make the air healthier to breathe whilst simultaneously protecting the environment and boosting the economy. As essentially a precursor to the Transport Decarbonisation Plan (though with a wider focus on local pollutants rather than the catchall of carbon dioxide), the strategy promotes modal shift across all forms of travel (with freight being moved principally to heavy rail solutions) though provides a clear endorsement for active travel uptake as a replacement for short journeys otherwise made by the motor vehicle.

1.1.21. The strategy recognises the health implications caused by pollution, including those that are not exhaust-derived such as tyre- or brake-wear, and that road transport is the single biggest source of roadside NO_x and how encouraging more active travel will have a net benefit both in local air quality but in general health, both due to increased exercise and a reduction in said emissions.

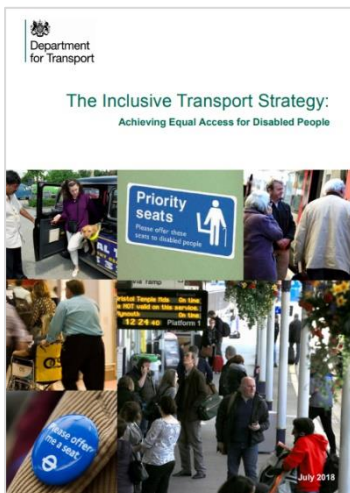
- 1.1.22. The strategy recognises investments and commitments made to the point of publication, including grants and funding for cycle-train connections and the Cycling and Walking Investment Strategy, though it should be recognised that as this predates several key publications some parts of the strategy have been further clarified in subsequent documents.
- 1.1.23. Nevertheless, as all partners involved in the LCWIP have declared a climate emergency, therefore supporting the Clean Air Strategy and reducing local and roadside emissions are aspects that should be recognised within the LCWIP and any future monitoring regimes.

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



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

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



The Inclusive Transport Strategy (Department for Transport, 2018)

- 1.1.27. The Inclusive Transport Strategy sets out government's plans to increase the accessibility of the transport system, principally in the promotion of appropriate infrastructure, additional training and guidance for staff, and the provision of more accessible vehicles to cater to a wider range of user types.
- 1.1.28. A key part of the strategy is recognition that the public realm needs to be made more suitable for all user types, and that existing infrastructure is in places poor and otherwise absent. The document additionally refers to what at the time was the recently withdrawn shared space guidance, which was found to unduly impact the visually impaired and created a number of potential conflict points with user classes.
- 1.1.29. As noted previously, high quality infrastructure is accessible infrastructure, and all schemes identified via the LCWIP should therefore identify targeted infrastructure improvements that provide for all user types and mobility aids, in particular around junctions and crossing points where issues of severance and kerb height can disproportionately effect those with mobility or visual impairments. There is also the opportunity, again, to improve the accessible routes to and from key origins and destinations such as commercial cores and transport stations, further supporting the ambitions of this strategy and offering public transport alternatives to what would otherwise be a vehicle journey.

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

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

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

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

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

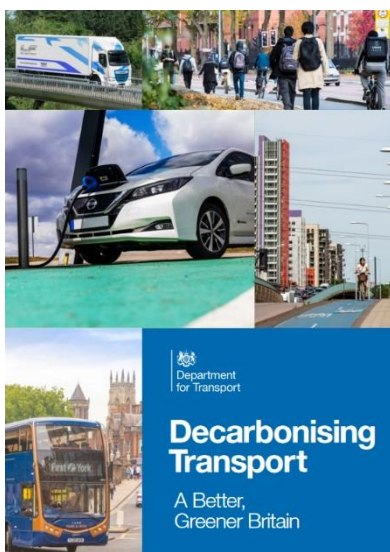
- 1.1.34. The National Disability Strategy outlines the government's commitment to removing barriers disabled people experience across everyday life, and 'reflects the experiences of disabled people across the UK'. The strategy principally outlines areas where the government can issue new guidance, undertake research, legislate, or otherwise compel changes to remove or mitigate these barriers as much as possible.
- 1.1.35. The strategy, when discussing transport, recognises that routine, everyday journeys can be more difficult for disabled people and there is a disparity in provision, infrastructure, and support across the nation and across modes and further supports the Inclusive Transport Strategy (see below) by committing to upgrading, redesigning, and otherwise improving the ability for disabled people to access and make use of these services without additional disruption.

- 1.1.36. Good infrastructure is inclusive infrastructure, and as such the LCWIP can support this strategy by providing needed interventions on routes to and from key transport interchanges, removing barriers for crossing and access. Simultaneously, the support of active travel and a reduction in vehicle journeys clears carriageway space for those that need to travel and can have a beneficial impact on congestion and overall journey times, especially for road-using passenger transport modes such as bus, taxi's, or community transport schemes.

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

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

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



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

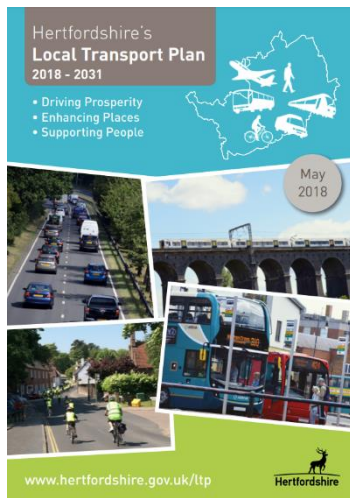
Local Cycling and Walking Infrastructure Plans: Technical Guidance for Local Authorities (Department for Transport, 2017)

- 1.1.42. The LCWIP technical guidance provides the framework for undertaking strategic walking and cycling network developments, including the six stage process this LCWIP follows and the type and nature of data collected and used as part of the process.
- 1.1.43. As noted above, the majority of this guidance was condensed to form the network planning chapter of LTN 1/20, and it is recognised that the wider approach to designing and delivering a network is a much more efficient and effective means of promoting new infrastructure rather than piecemeal schemes.
- 1.1.44. The LCWIP guidance strongly endorses the final document be reviewed and updated frequently, partly to reflect progress on delivered schemes but additionally to reflect changes in the local environment – or new policies/plans/strategies - that may impact the LCWIP.

1.2 County Strategies, Policies and Plans

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

Local Transport Plan 4 (2018-2031)



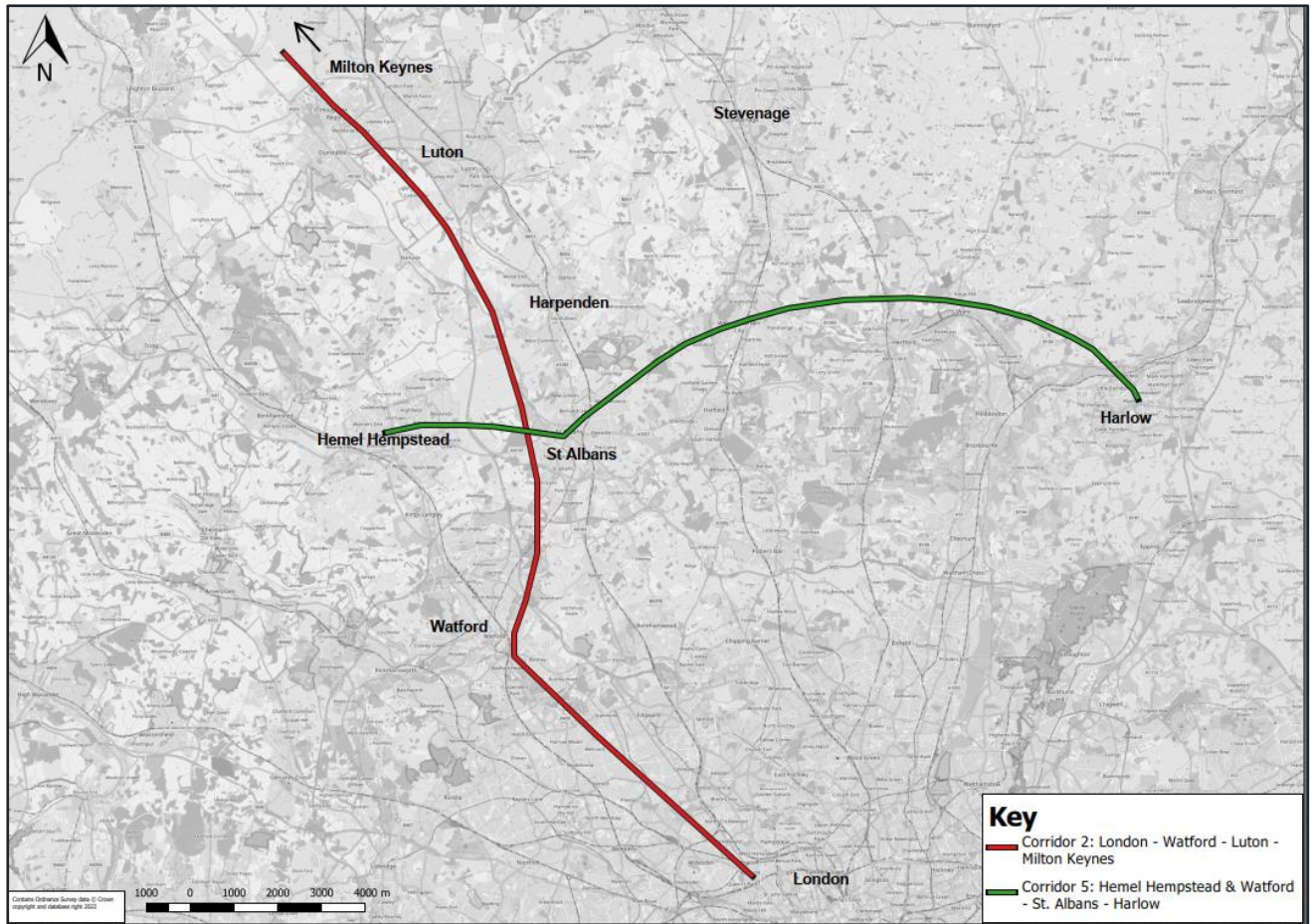
- 1.2.2. Hertfordshire's fourth Local Transport Plan, LTP4 provides the vision for future transport across Hertfordshire, covering a period of substantial expected growth and development across the county and the necessary mitigations to facilitate these developments within the existing network.
- 1.2.3. The plan advocates a strong transition from car-centric journeys and capacity/journey time improvements towards more substantial modal shift to sustainable modes, with walking and cycling becoming the preferred means of travel for journeys across the county. LTP4 recognises much of the benefits such a shift could bring both to the population and environment of Hertfordshire and the overall functioning of the transport network.
- 1.2.4. LTP4 provides 23 policies incorporating varied forms of transport and supporting measures, covering various aspects of transport from road safety to air quality and environmental impacts. Of prime importance is policy 1, the transport user hierarchy, which promotes walking and cycling journeys over all other modes of travel.
- 1.2.5. Additionally, there are two specific policies – 7 and 8 – which apply to active travel modes, shown below in Table 1.

Table 1 - LTP Policies 7 and 8

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

- 1.2.6. LTP4 highlights strategic corridors in which sustainable transport is a priority. Both corridor 2 (London-Watford-Luton-Milton Keynes) and corridor 5 (Hemel Hempstead & Watford – St Albans - Harlow) pass through the St Albans District. These corridors are highlighted in Figure 1.

Figure 1 - Priority Sustainable Transport Corridors Highlighted in LTP4



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

Walking

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

Cycling

- 1.2.9. LTP4 recognises that compared with walking, cycling has a much lower mode share across Hertfordshire, only making up 1.7% of trips under 1 mile, 4.8% of trips between 1-3 miles and 3.1% of trips between 3-5 miles. LTP4 highlights that there is significant potential in the county to increase cycling activity.

- 1.2.10. Given the Government CWIS targets and the significant potential to increase cycling activity in Hertfordshire, the LTP4 shows that the council is seeking to achieve a large increase in cycling and walking over the next 10 years. This will require an increase in investment in active travel to create routes and networks which can attract a broader demographic to walk and cycle. This is exactly what an LCWIP helps to plan and so the LCWIP is very well-aligned with the LTP4.

South Central Growth and Transport Plan (2020)



- 1.2.11. The South Central Growth and Transport Plan (SCGTP) is principally designed to support forecast high levels of growth with effective and mitigating infrastructure to ensure the transport network can continue to function. This plan covers the central Hertfordshire region, including the districts of Hertsmere, Welwyn and Hatfield, and St Albans. Aside from some additional schemes listed in the SWGTP for Harpenden, the SCGTP will serve as the primary spatial strategy for new infrastructure in St Albans.
- 1.2.12. The SCGTP includes specific mention of LCWIPs as being a driver for local change outside of the GTP paradigm, and it should be stressed that the schemes presented in the GTP are not exhaustive nor intended to represent the sole infrastructure requirement or identification of the county authority or any partners. Evidence and data collected in the development of the GTP on travel patterns and movements provides an effective base from which to continue to establish and refine the LCWIP and has been used as part of background information gathering.

1.2.13. There are currently forty schemes within the SCGTP related to cycling within the district, notably focused around St Albans. The proposals in the SCGTP are defined as interventions, which are grouped into packages. The following packages relevant to the LCWIP study area are shown in **Table 2** and, where corridors are mentioned, these are shown indicatively in **Figure 2**. There are opportunities to support these objectives through proposals for routes and infrastructure in this LCWIP. A challenge may be accommodating both public transport and cycle infrastructure on certain corridors, although this is a challenge that should be easy to overcome through careful design.

Figure 2 - Corridors from SCGTP relevant to the St Albans LCWIP

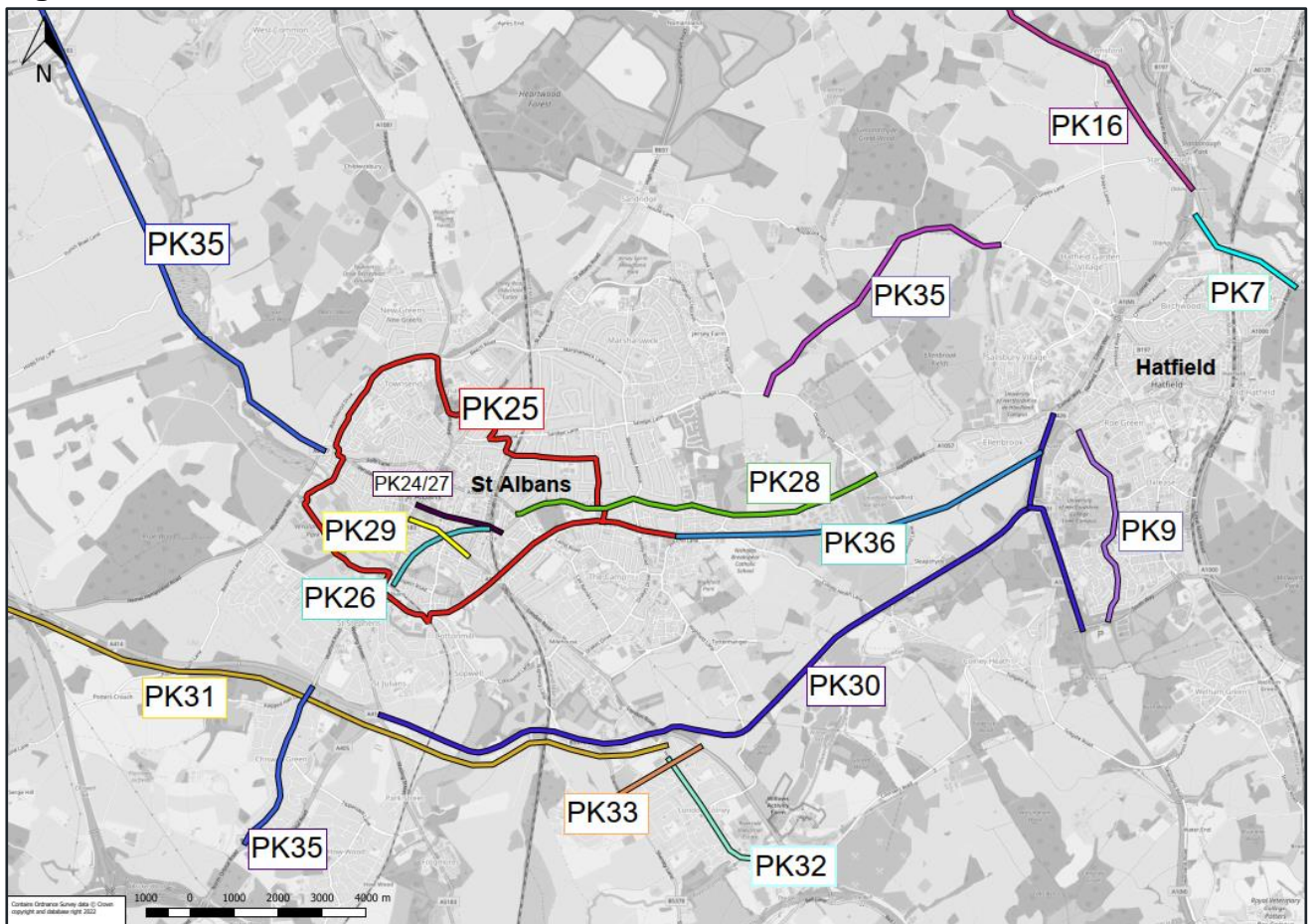


Table 2 - SCGTP Intervention Packages Relevant to the St Albans LCWIP

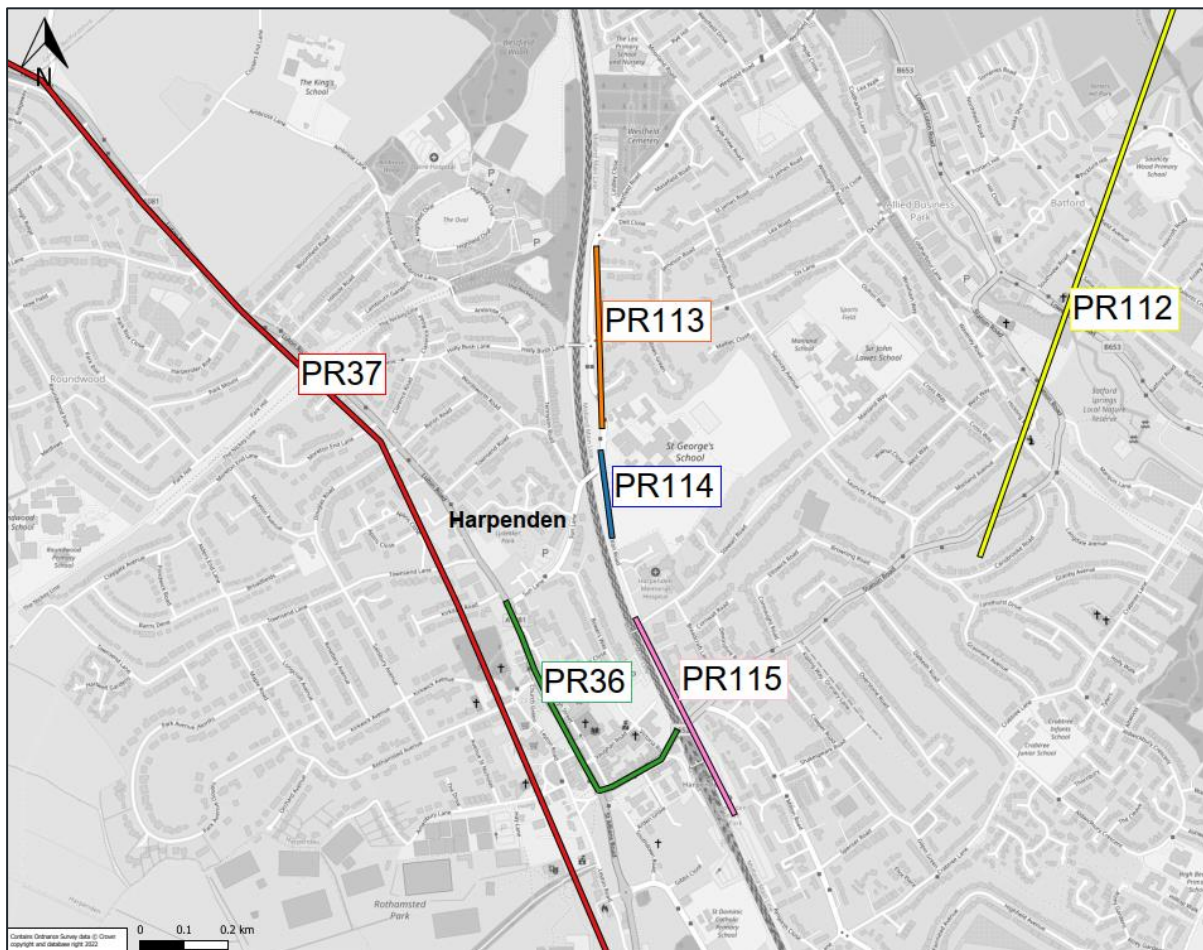
Area	Package	Name	Objective
St Albans – Inter-Urban Connectivity	PK9	St Albans – Welwyn Garden City Connectivity	To form a sustainable transport corridor between St Albans and Welwyn Garden City, facilitating attractive and convenient journeys on foot and by bike between the towns with links to the northwest Hatfield development, as well as Hatfield Business Park.
St Albans – Inter-Urban Connectivity	PK16	Luton – Wheathampstead – Hatfield and Welwyn Garden City Corridor	To facilitate new and existing public transport connections between Luton, Hatfield and Welwyn Garden City, alongside improvements to interurban cycling infrastructure and selective highway upgrades in order to improve reliability on the corridor.
St Albans	PK24	St Albans City Centre Improvements	To make St Albans city centre a safe, attractive, and convenient place to walk and cycle, through improvements to active travel infrastructure and the urban realm.
St Albans	PK25	St Albans Green Ring and Alban Way Improvements	To unlock the potential of the St Albans Green Ring and Alban Way infrastructure and maximise its benefits
St Albans	PK26	St Albans Abbey Station Accessibility	To improve accessibility by active modes to St Albans Abbey station

Area	Package	Name	Objective
St Albans	PK27	St Albans City Station Accessibility	To improve accessibility by active modes to St Albans City station, particularly through enhanced connectivity between the station and the city centre.
St Albans	PK28	Hatfield Road Corridor - St Albans	To transform Hatfield Road in St Albans into an attractive and inviting high street and enhance its function as an efficient public transport corridor.
St Albans	PK29	London Road Corridor - St Albans	To make London Road a more attractive place for pedestrians and cyclists and improve reliability of journeys along the corridor.
St Albans District	PK30	A414 Highway Improvements (South of St Albans)	To enhance the function of the A414 as a strategic east-west route in south central Hertfordshire through capacity and reliability upgrades
St Albans District	PK31	London Colney Inter-Urban Connectivity	To integrate London Colney into broader east west connections within south central Hertfordshire.
St Albans District	PK32	London Colney Inter-Urban Local Connectivity	To improve connectivity by all modes of transport between London Colney and St Albans.
St Albans District	PK33	London Colney Internal Connectivity	To make London Colney a safe, attractive, and convenient place to walk and cycle through improvements to active travel infrastructure and urban realm in the town centre.

Area	Package	Name	Objective
St Albans District	PK34	St Albans – Hatfield Local Connectivity	To enhance local transport between St Albans and Hatfield and facilitate growth along the Sandpit Lane-Coopers Green Lane corridor.
St Albans District	PK35	Chiswell Green Corridor Active Travel Improvements	To improve connectivity between Chiswell Green, Park Street and St Albans and reduce through traffic on the Watford Road corridor.
St Albans District	PK36	Alban Way Improvements	To enhance the Alban Way and promote it as a safe, convenient and attractive option for trips between St Albans and Hatfield.

South West Growth and Transport Plan (2019)

- 1.2.14. The Southwest Hertfordshire Growth and Transport Plan (SWHGTP) is the first and – to date – only Growth and Transport Plan adopted in Hertfordshire. Growth and Transport Plans are localised, spatial strategies used to support projected growth and development in an area via key infrastructure and accompanying projects.
- 1.2.15. The SWHGTP area predominantly focuses on the district of Watford, Three Rivers, and Dacorum; though Harpenden and links from key destinations to St Albans (city) are included. The infrastructure promoted under the SWHGTP remains high level and, as noted, principally to mitigate the impacts of necessary new developments but continues to support Hertfordshire’s transport priorities in delivering opportunities for people to make sustainable, active journeys rather than the first choice being the motor vehicle. The SWGTP corridors that are relevant to the St Albans LCWIP are shown in Figure 3 and Figure 4.
- 1.2.16. **Figure 3 – Corridors for SWGTP relevant to St Albans LCWIP.**



- 1.2.17. Additionally, GTPs account for the movement of people, services, and goods in and around the study area, accounting for potential improvements to overall traffic flow that may allow for more efficient journeys to be made and promoting continued economic growth and development. As such, some junction schemes or capacity schemes may be promoted that seems to have a predominant vehicle focus. The LCWIP can, therefore, work in parallel to ensure that schemes that appear focused on the motor vehicle retain good connectivity with other measures so as to avoid isolated infrastructure.
- 1.2.18. GTPs promote infrastructure as packages centred around a particular location or corridor, with projects within that package then identified and given high level cost overviews and targets. The packages in **Table 3** are of particular relevance to the LCWIP, and should be considered if and when identifying schemes and areas for further study.

Figure 4 – Corridors from SWGTP relevant to the St Albans LCWIP

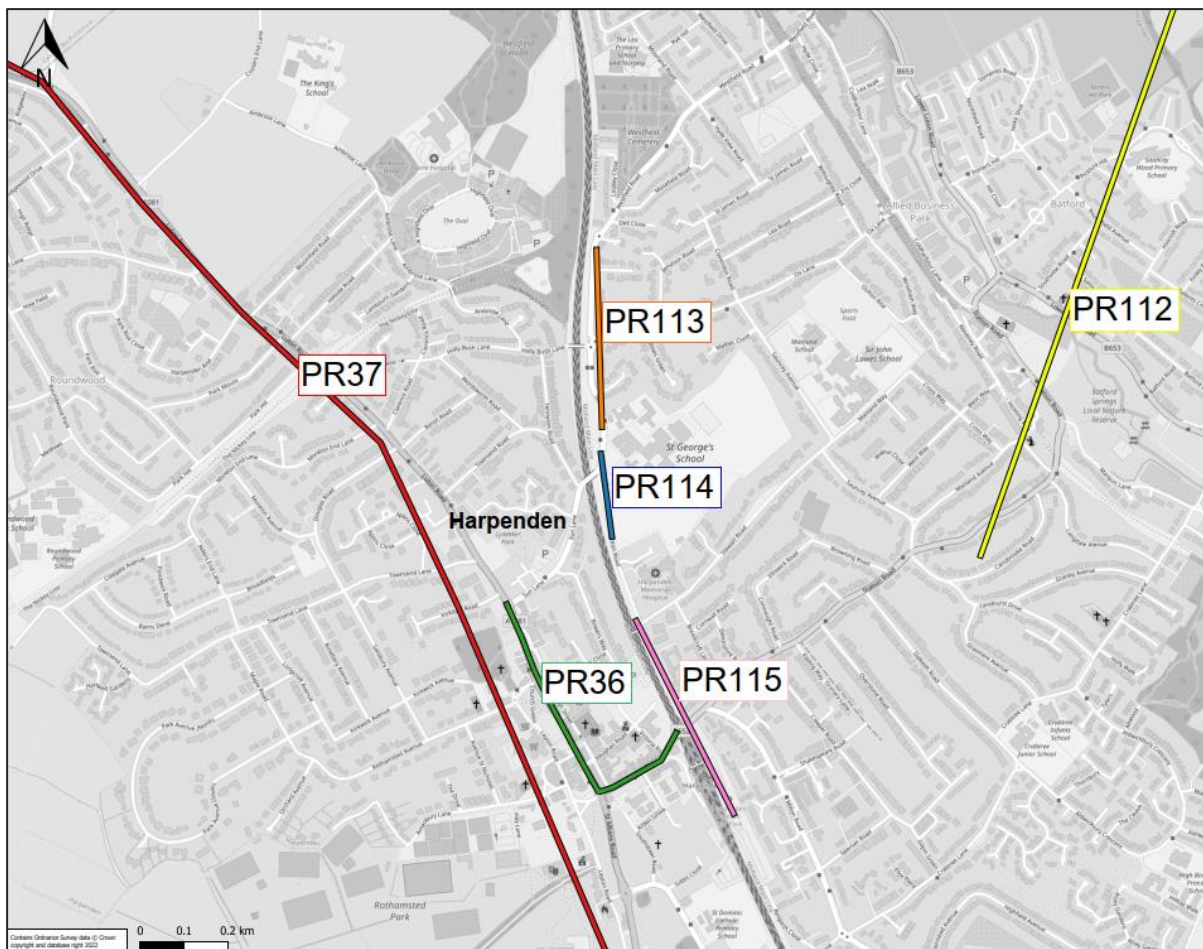


Figure 5 – Corridors from SWGTP relevant to St Albans LCWIP (Watford Road)

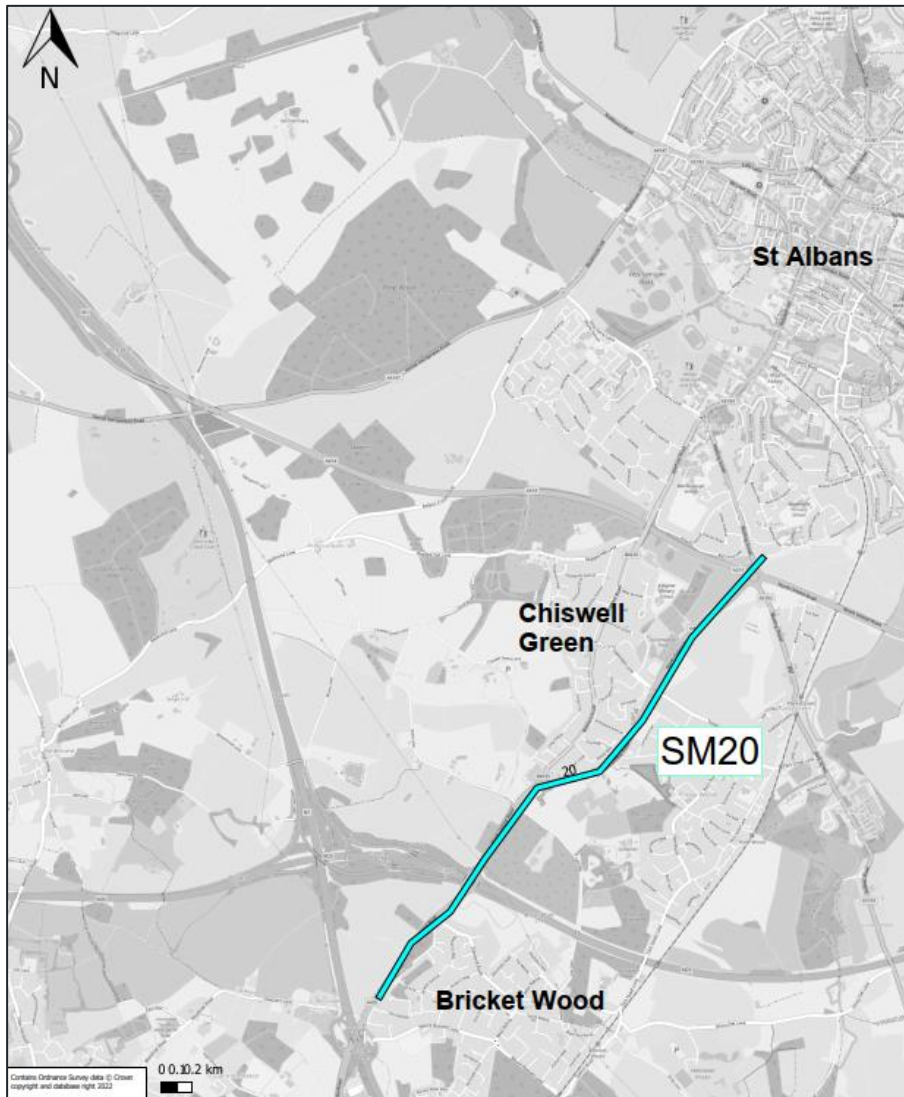


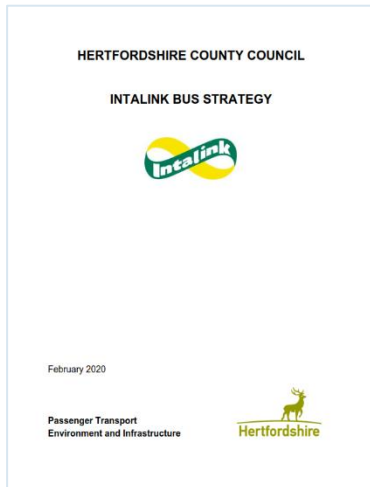
Table 3 - SWGTP Intervention Packages Relevant to the St Albans LCWIP

Area	Package	Name	Objective
Harpenden	PR36	A 1081 Harpenden town centre streetscape and walking/cycling improvements	Improve the streetscape and layout in Harpenden town centre and on Station Road for pedestrians and cyclists making journeys within the town (e.g. to/from the station), whilst providing a suitable environment for buses and seeking to enhance heritage assets. Could involve narrowing of the road, more crossings and speed tables. Should complement PR35 in terms of discouraging rat-running traffic avoiding congestion on the M1.
Harpenden	PR37	A1081 cycle corridor	New or improved off-road cycleway alongside the A1081 for cyclists travelling between Luton, Harpenden, and St Albans. Would connect into facilities built into the recently improved M1 J10a. Improved cycle provision along section within Kinsbourne Green (potentially off road) adjacent to possible new North of Harpenden development in addition to speed limit reduction from 40mph to 30mph within Kinsbourne Green area. Cooperation with Central Bedfordshire Council and Luton Borough Council required.

Area	Package	Name	Objective
Harpenden	PR112	B653 Lower Luton Road pedestrian and cycle crossing	A new signal-controlled crossing, associated with the NE Harpenden development and potentially integral to a new development vehicle access, enabling pedestrians and cyclists to safely cross the busy Lower Luton Road.
Harpenden	PR113	Ox Lane-Sun Lane-Hollybush Lane-Westfield Road Junction Review	To review the layout of the double mini roundabout to identify potential improvements to enable cyclists to route to/from Sun Lane.
Harpenden	PR114	Carlton Road-Sun Lane Junction Review	To review the layout of the priority T junction to identify potential improvements to enable cyclists to route to/from Carlton Road.
Harpenden	PR115	Station Road-Carlton Road-Station eastern access road Junction Review	To review the layout of the staggered priority crossroads to identify potential improvements to make cyclists entering/exiting the station more prominent.

Area	Package	Name	Objective
St Albans	SM20	A405 Cycleway	Provision of off-road cycleway broadly alongside the A405 running from Coningsby Bank (St Albans) and Bricket Wood (M1 J6) and connecting to existing route. Enhancing existing cycleway continuing to Garston (including the Leisure park) and Leavesden (including the business park)

Intalink Hertfordshire Bus Strategy (February 2020)



- 1.2.19. The Intalink Hertfordshire Bus Strategy sets out plans to grow the local bus network to support the shift towards more sustainable transport within Hertfordshire (as shown in LTP4).
- 1.2.20. Though predating both the establishment of the Enhanced Partnership (April 2020) and the severe impact on passenger transport numbers seen as part of the coronavirus pandemic, the Intalink Hertfordshire Bus Strategy remains a valid document with a clear focus and ambition to increase bus patronage across the network.
- 1.2.21. The strategy recognises the importance of connection with other modes, both as a policy under LTP4 but additionally due to the importance of a well-connected network where sustainable modes can suitably interface and share available network capacity. Transport interchanges are recognised in the LCWIP guidance as being common destination points to be considered, and as such the LCWIP has a role to play in supporting the connectivity of bus infrastructure to facilitate end to end journeys and providing high quality facilities for users of all modes.
- 1.2.22. St Albans (City) was one of the initial settlements selected for bus priority feasibility works, and a number of potential schemes and projects have emerged as a result of initial funding from the Intalink Partnership. Interface and impacts of these schemes on the LCWIP, and the impact of LCWIP schemes in reverse, will be considered in the stages following the LCWIP's adoption to ensure there is a combined approach moving forward.

1.2.23. The strategy's plans include giving greater priority to bus services in traffic, making sure bus information is easy to access and raising standards of operation across the county.

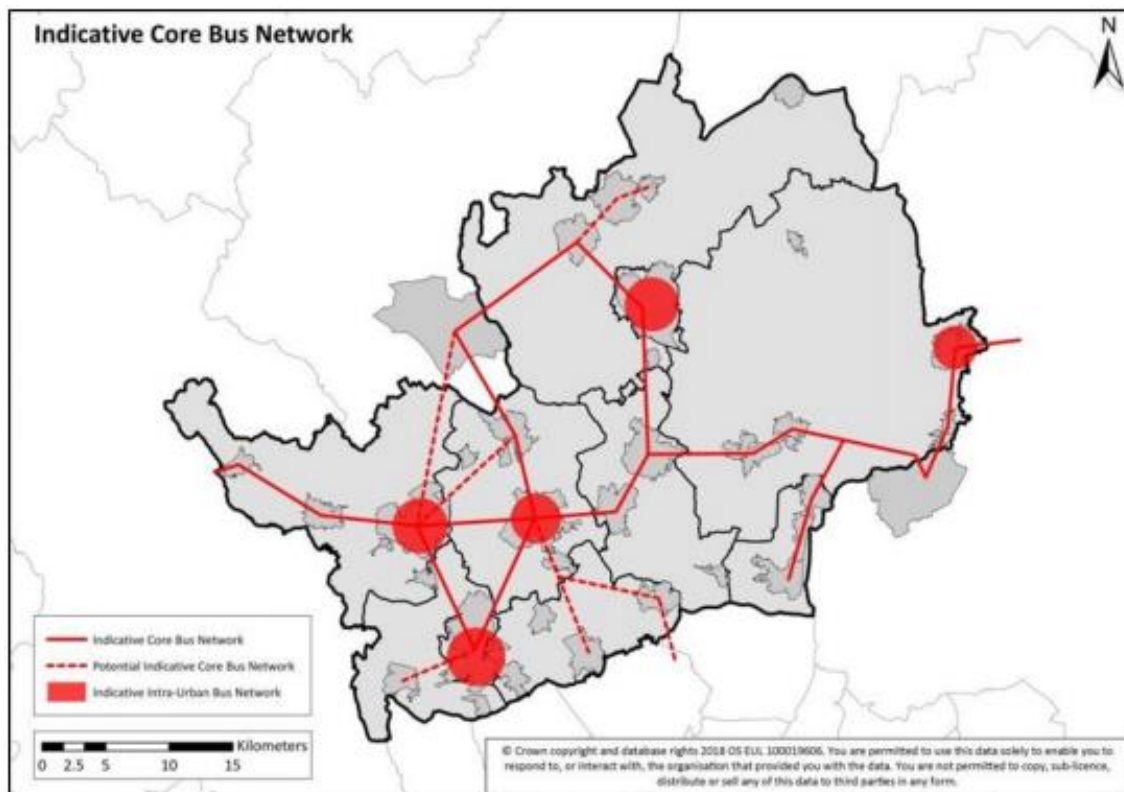
Walking & Cycling

1.2.24. The Intalink Bus Strategy recognises that infrastructure improvements should also be targeted to enhance access to the bus network by walking and cycling. The location, nature and design of interchanges is evolving, and these should consider current and future growth requirements and capacity.

1.2.25. The Strategy focuses on the prioritised improvements presented within LTP4, stating that the prioritised corridors and towns should be well-served in terms of frequency and investment will support patronage growth on routes serving them.

1.2.26. Figure 6 shows the indicative core infrastructure corridors identified in LTP4. Routes relevant to this LCWIP including an indicative core bus network connecting Stevenage with St Albans via Welwyn Garden City and Hatfield.

Figure 6 - Indicative Core Infrastructure Corridors from the Strategy



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

Sustainable Modes of Travel Strategy

- 1.2.28. This strategy provides the councils vision to increase opportunities for children and young people to travel to, from, and between schools and colleges by sustainable modes in line with the *Education and Inspections Act 2006*, which places a requirement upon on local authorities to promote these sustainable travel methods.
- 1.2.29. A key objective to facilitate this is to improve walking and cycling routes between establishments – and, for cycling, to provide appropriate facilities at the destination – which is an area the LCWIP can support directly via the provision of new infrastructure along these routes and corridors.
- 1.2.30. The strategy additionally endorses the creation of School Travel Plans; indeed these are referred to as the backbone of the strategy, which involve a collective effort and review of local stakeholders to identify barriers to and opportunities for sustainable travel, which are then collated into a plan of improvement that may include external infrastructure alongside behaviour change initiatives. The LCWIP can feed into this process both by collating information from known travel plans within an area and additionally providing a suitable base level of information that may then be used for future travel plans.

Place and Movement Planning and Design Guide (2022)

- 1.2.31. The Place and Movement approach is a technical approach intended to recognise the needs of different road users in Hertfordshire and manage the interfaces between them. It provides a way of looking at the appropriate function of any section of highway and therefore a basis for deciding which activities should be prioritised. In doing so, it aims to provide a means to translate LTP4 policies into practice.

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

Sustainable Hertfordshire Strategy (2022)



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

Speed Management Strategy (2020)



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

1.2.43. To enable the SMS to both deliver LTP4 policies and to provide a consistent approach to setting speed limits across the county, the following core principles have been developed:

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

1.2.44. Given the first and third core principles, it is assumed that the proposals in the LCWIP will be supported by the SMS. This is especially important when considering inter-urban cycling trips. Speed limits on roads between settlements (for example between St Albans and Redbourn on the A5183 Redbourn Road) often increase to over 30mph. On many of these roads there is limited road space for fully kerbed cycle tracks (the only LTN 1/20 compliant infrastructure solution) and there are few or no alternative routes available for cyclists. As such, speed limits (and design speeds) on these roads would need lowering where feasible in order to enable on road cycling in a safe manner in accordance with LTN 1/20 guidelines. The LCWIP has proposed this in places, despite the fact that this may be at odds with other strategic transport priorities around the speed and flow of motor traffic and would need to be assessed in line with the SMS guidelines.

Air Quality Strategy

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

Maintenance for Active Travel Strategy

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

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

Accessibility Strategy

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

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

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

Table 4 - Accessibility Strategy - Lower and Upper Thresholds to Services

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

*assumed thresholds based on DfT information

Rural Transport Strategy

- 1.2.51. The Rural Transport Strategy is to assist in the delivery of LTP4 policies within the context of rural transport, recognising that for rural residents (roughly 12% of the Hertfordshire population) there are often transport-related barriers to accessing services which mean the motor car remains the dominant transport choice.

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

Rights of Way Improvement Plan

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

1.2.57. The strategy provides an assessment of needs and demands which the improvement plan aims to target and deliver upon in the short- and medium-term future, this is summarised below in paragraph 1.2.58. The LCWIP has the opportunity to support this process considerably, identifying means of connecting to the existing Right of Way network, or in some cases making use of existing urban Ways that may become part of an internally cohesive network.

1.2.58. **Extract from Section 4 Assessment of Needs and Demands**

4 Summary of needs and demands

Issues for all users:

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

Walkers want:

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

Parents with children want:

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

People with limited mobility (and their carers) want:

- i. Acknowledgement that their needs are variable and depend on an individual's physical limitation
- ii. Paths with shallow gradients
- iii. Detailed information about what to expect on routes

Dog walkers want:

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

Runners want:

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

Cyclists want:

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

Horse riders want:

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

Carriage drivers want:

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

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

Network Management Strategy (2023)

- 1.2.60. The Network Management Strategy aims to balance the needs for Place, Movement and Asset Management in accordance with the priorities set by LTP4 and in compliance with the Traffic Management Act. It aligns the Place & Movement categories with the traditional highway network hierarchy and classifications and sets out how active network management can support placemaking through licensing, advertising, vehicles access management and events on the highway.
- 1.2.61. The Strategy sets out the relationship between the Place and Movement categories and traditional road hierarchies, as shown in the extract in Figure 7:

Figure 7: Place & Movement matrix and network hierarchy and classifications

Place and Movement Matrix:

P&M: P1/M3	P&M: P2/M3	P&M: P3/M3
Class: A - Primary Distributor A - Urban Main Distributor	Class: A - Rural Main Distributor B - Rural Secondary Distributor	Class: U - Access
Speed Limit: Rural: National Semi-Urban: 50mph Urban: 40mph	Speed Limit: 50mph	Speed Limit: 20 mph
P&M: P1/M2	P&M: P2/M2	P&M: P3/M2
Class: A - Main Distributor B - Secondary Distributor	Class: A - Main Distributor B - Secondary Distributor C / L1 Local Distributor U / L2 Local Access	Class: A - Main Distributor B - Secondary Distributor C / L1 Local Distributor U / L2 Local Access
Speed Limit: Rural: National Semi-Urban: 50mph	Speed Limit: A & B: 40 mph C / L1: 30 mph U / L2: 20 mph	Speed Limit: 20 mph
P&M: P1 / M1	P&M: P2/M1	P&M: P3/M1
Class: U - Rural Local Distributor	Class: U / L2 Local Access	Class: U / L2 Local Access
Speed Limit: National	Speed Limit: 20 mph	Speed Limit: 20 mph

- 1.2.62. The Strategy also sets out a number of initiatives for strategy development currently being considered for future development, such as further alignment of network hierarchies with resilience and maintenance interventions, and enforcement/permitting activities on active travel links to ensure they are protected from obstruction, encroachment or prolonged works occupation.

Active Travel Strategy (draft, June 2023)

- 1.2.63. The draft Active Travel Strategy (out for public consultation at the time of writing) sets out how Hertfordshire County Council will work with residents, partners, stakeholder to identify, enable, delivery, promote and support active travel, particularly for short journeys or as part of a longer journey that involves the use of public transport.

1.2.64. The Strategy is a supporting document of the Local Transport Plan and shares many of its objectives related to sustainability, climate, health, economic and growth ambitions.

1.2.65. The strategic objectives of the Strategy are:

- To increase rates of walking and cycling for short utility trips
- To deliver infrastructure that meets the needs of our communities
- To commit to collaboration with difference organisations, groups and departments on shared objectives
- To promote Citizen Focus by placing community voices and stakeholders at the heart of the strategy, so that they can influence how we deliver
- To be inclusive and ensure our streets and places are accessible, where everybody feels welcome
- To promote safety, ensuring roads are easy and safe to cross and by identifying opportunities to improve the walking environment
- To communicate and use a comprehensive range of programmes to support people to make the move towards active travel choices
- To experiment and innovate with new approaches and tools

Forthcoming Strategic Documents

1.2.66. At the time of writing there are a number of additional documents in development that may influence the LCWIP:

- Road Safety Strategy

1.2.67. Given alignment to national guidance and overall corporate policies, these strategies are not expected to conflict with the aims or outcomes of the LCWIP and are instead likely to support the measures identified and presented therein.

1.3 District Strategies, Policies and Plans

1.3.1. This section will present the existing policy documents that are relevant to this LCWIP on a District level.

Local Plan (St Albans District Council, 2020-2038)

- 1.3.2. The Current St Albans Local Plan was adopted in 1994 and is currently in the process of being replaced by a new Local Plan. A number of policies were ‘saved’ in 2007 and remain active until such a time as the new plan is formally adopted. The Local Plan is very much a product of its time, promoting car-focused accessibility for developments that are no longer within national or regional transport plans, but retains a number of accurate comments that continue to reflect local transport (for example, St Albans City Centre suffering from traffic congestion) and does promote active travel provision for pedestrians and cyclists to prevent the exacerbation of existing traffic issues recognised across the district.
- 1.3.3. Additionally, page 71 of the local plan references the importance of Traffic Management in mitigating traffic problems, rather than new road construction, and includes specific mention of cycling schemes and the creation of pedestrian areas. A number of projects are listed, of particular reference is Project 3 – Cycle Schemes in St Albans.
- 1.3.4. Of particular relevance to the LCWIP are the retained transportation policies, shown in **Table 5:**

Table 5 - Transportation Policies from SADC Local Plan

Policy Number	Policy Title
31	King Harry Junction Improvement St. Albans
33	Hemel Hempstead North-East Relief Road
34	Highways Considerations in Development Control
35	Highway Improvements in Association with Development
36	Roadside Services
36a	Location of New Development in Relation to Public Transport Network
37	Commercial Servicing
39	Parking Standards, General Requirements
40	Residential Development Parking Standards
42	Loss of Residential Off-Street Parking Areas and Garage Courts
43	Elderly Persons Dwellings and Residential Homes/hostels, Parking Standards
44	Business Use, Industrial, and Storage and Distribution Parking Standards
45	Motor Trade Uses Parking Standards
47	Food and Drink Establishments Parking Standards
48	Surgeries and Clinics Parking Standards
49	Hotels and Guest Houses Parking Standards
97	Existing footpaths, bridleways, and cycleways

Neighbourhood Plans (St Albans District Council)

- 1.3.5. SADC is very supporting of the neighbourhood planning process, including the creation of neighbourhood plans, and both authorities have contributed to the establishment and consultation of neighbourhood plans across the area.

- 1.3.6. Currently, there are five ‘made’ neighbourhood plans across the District: Harpenden, St Stephen, and Sandridge, Wheathampstead, and Redbourn, and development work in progress in London Colney and Colney Heath. As these plans must still comply with transport policy as directed at a national and county level, they are not expected to be challenged by the LCWIP. More detail about each of the Neighbourhood Plans can be viewed on the St Albans District Council website.

Harpenden Neighbourhood Plan

- 1.3.7. The Harpenden Neighbourhood Plan provides for seven specific transport and movement objectives that may be accounted for as part of the LCWIP process (shown in **Table 6**), alongside 12 policies of varying relevance to walking and cycling specifically. Development of the LCWIP, should projects for Harpenden come forward, will support the overall ambition of the creation of more sustainable and active travel options for navigation around the town and beyond.

Table 6 – Transport & Movement Objectives from the Harpenden Neighbourhood Plan

Objective Number	Objective
TM01	Create an environment that promotes walking, cycling and public transport as first choice modes for all residents and ensure that the services supporting these modes are in place, from high quality safe routes to reliable and sustainable transport services.
TM02	Integrate modes of transport, for example through strategically located cycle storage.
TM03	Create car free travel plans for getting to and from all Harpenden schools from all areas of Harpenden and surrounding villages.
TM04	Reduce road traffic pollution and improve air quality.
TM05	Ensure new developments include proportionate to scale transport infrastructure including sufficiently wide roads and pavements, cycle

Objective Number	Objective
	lanes, cycle parking, bus laybys, and other transport infrastructure with sufficient public transport and parking provision.
TM06	Ensure new developments increase the density of walking and cycling routes and provide new crossings where appropriate.
TM07	Ensure car and cycle parking within the town, and transport to the town supports the viability of the town centre.

St Stephen Neighbourhood Plan

- 1.3.8. The St Stephen Neighbourhood Plan contains one objective specifically relating to Transport and Movement, which also identified the need for improved active travel provision in the area, as set out in [Table 7](#):

Table 7: Relevant policies and objectives from the St Stephen Neighbourhood Plan

Objective / Policy Number	Summary
Objective 8	To improve transport and movement, in particular through further development of public transport provision and other non-car travel modes, whilst ensuring a safe environment for pedestrians, cyclists and horse-riders as well as motorists
Policy S5	Requires developments to provide pedestrian and cycle connections to community facilities, local services and transport modes as well as to the countryside.
Policy S14	Requires new developments to incorporate safe and accessible walking and cycling access to existing footways and cycleways and supports the delivery of improvements to rights of way
Policy S15	Seeks to improve or enable connectivity between villages and the wider countryside along bridleways.

Sandridge Neighbourhood Plan

- 1.3.9. The Sandridge Parish Neighbourhood Plan sets out a number of aspirations and policies that are relevant to the LCWIP, as set out in Table 8.

Table 8: Relevant policies and objectives from the Sandridge Neighbourhood Plan

Objective / Policy Number	Summary
Objective 5	To encourage sustainable means of transport and other solutions to address the problems of traffic congestion and parking
Policy T1	Policy T1 (Traffic Congestion and Road Safety) seeks to minimise the impact of traffic congestion on residential roads, and to improve road safety and the roadside environment.
Policy T3	Policy T3 (Walking, Cycling and Recreational Travel) seeks to ensure safe, attractive and accessible pedestrian and cycle routes to key destinations. The policy requires proposals for new development to take opportunities to increase, extend or upgrade multi-user off-road rights of way in line with the HCC Rights of Way Improvement Plan as well as the 'Database of Suggestions for Sandridge Parish' in figures 4 and 5 of the Plan.

Redbourn Neighbourhood Plan

- 1.3.10. The Redbourn Neighbourhood Plan lists 'giving people the choice of travelling by means other than the car' as one of the key challenges for the village, and this is supported by a number of relative objectives and policies set out in Table 9.
- 1.3.11. A number of non-policy actions are also identified with relation to improve active travel in and around the area: for example, desired improvements to walking and cycling facilities have been identified at locations along the Nickey Line, as well as towards St Albans and at specific Rights of Way and footpaths.

Table 9: Relevant policies and objectives from the Redbourn Neighbourhood Plan

Objective / Policy Number	Summary
Objective 5	To increase walking and cycling movements through improved footpath and cycle path provision.
Policy 8	Requires community facilities to be located in locations where there are opportunities to promote walking, cycling and use of public transport.
Policy 9	Requires all major residential and commercial developments to demonstrate how they support active travel through delivery or improvement of walking and cycling routes and related infrastructure, including secure cycle storage and changing facilities.

Wheathampstead Neighbourhood Plan

- 1.3.12. The Wheathampstead neighbourhood Plan lists “inadequate safe cycle routes” among one of the challenges for the village, and seeks to promote walking and cycling facilities in order to minimise carbon emissions and improve health. This is supported in a number of objectives and policies, as set out in Table 10.
- 1.3.13. The Plan seeks to encourage sustainable methods of transport where possible, and identifies a simple hierarchy of transport decisions, where walking and cycling are given higher priority over the use of private vehicles and especially larger cars. A number of specific potential improvements to walking and cycling routes are also identified in the Non-Policy Actions.

Table 10: Relevant policies and objectives from the Wheathampstead Neighbourhood Plan

Objective / Policy Number	Summary
Strategic Objective 7	To minimise our carbon footprint, improve personal health and encourage sustainable transport by providing local services, improved public transport, bridleways and cycleways to adjacent settlements both within and outside the parish.
Policy W12	Requires new developments to ensure safe pedestrian and cycle access to link up with adopted footways or public rights of way which serve primary local access routes, and to enhance existing routes for

Objective / Policy Number	Summary
	local trips. Sets out an objective for new footpaths and cycleways to be segregated from vehicle traffic where possible, and to implement improvements to Rights of Way.
Policy W13	Establishes support for extension and improvements to the cycle route network, to allow for longer distance cycling. This should be supported by facilities for cycle parking.

Sustainability and Climate Crisis Strategy (SADC, 2020)

- 1.3.14. This strategy sets out the actions that will be taken by SADC over a three-year period, 2020-2023, to reduce environmental impacts following a climate emergency declaration.
- 1.3.15. The overarching principles behind the document are strongly supported by HCC, and the broader remit of the LCWIP to promote walking and cycling within the district. A specific objective within the strategy is the creation of the LCWIP (action 3.12), alongside other measures to support an uptake of walking and cycling that would further reinforce the business case for delivery of projects and schemes at the implementation stage.

Alban Way Greenspace Action Plan (SADC, 2019)

- 1.3.16. The Alban Way Greenspace Action Plan identifies the key objectives and ambitions for the route, running between St Albans and Hatfield, covering the period 2019 through to 2024. Recognising the importance of the Alban Way and its history, the stated aim of the plan is:

To ensure the Alban Way maintains high standards of access, safety, user enjoyment and environmental quality, through upkeep of recent improvements and adoption of sustainable long-term management.

- 1.3.17. To support this, the plan identifies five key objective areas, each with a number of sub-objectives, along thematic lines such as conservation and habitat management, community involvement, and sustainable operations.

1.3.18. The Alban Way is recognised as a key corridor in later publications including the Growth and Transport Plan (GTP), and should any projects be identified within the LCWIP will be designed to support the objectives of the action plan rather than operate in isolation.

Nickey Line Greenspace Action Plan (SADC, 2016)

1.3.19. As with the Alban Way Green Space Action Plan, this plan provides the key ambitions and objectives for the Nickey Line, a former railway line that links Hemel Hempstead, Redbourn, and Harpenden for a total length of 11.5 kilometre. Principally, the same aims and objectives for the Alban Way apply to the Nickey Line, and are in line with the general Rights of Way Improvement Plan that HCC has adopted for similar routes across the district and county.

1.3.20. The five key objectives given within the action plan are:

- Develop a leisure route based around the history of the Nickey Line
- Enhance the Nickey Line as a green corridor
- Encourage a safe and sustainable transport route
- Ensure engagement and involvement of local communities along the route
- Adopt an appropriate and sustainable management regime

1.3.21. The Nickey Line was also identified as part of the SCGTP as a movement corridor of some importance for both Redbourn and Harpenden. It should be noted that the infrastructure supporting a leisure route is different to that of a utility link and the LCWIP may need to navigate conflicting priorities should the Nickey Line come forward for delivery of improvements.

St Albans Walking Strategy (2009)

1.3.22. The St Albans City & District Council (published in 2009) sets out the case for increasing the number of walking journeys in the district in order to support sustainability, health, recreational and social inclusion goals. The Strategy identified a wide range of barriers to walking, including poor quality provisions for people walking and wheeling, personal security fears and the impact of vehicular traffic.

1.3.23. While it has been more than a decade since the Plan was first published, many of the objectives and methods included in the Strategy – such as partnership working, school and business travel

planning, integration with public transport services, maintenance and enhancement of the Rights of Way network, road safety improvements and improvement of the walking environment for people with disabilities – remain incredibly relevant today, and are at least partly addressed through the development of this LCWIP for the District.

1.4 Relevant Plans in Neighbouring Authorities

- 1.4.1. North Herts District Council and Welwyn Hatfield Borough Council have recently developed an LCWIP with HCC and WSP. The key inter-urban routes from these areas which tie in with this LCWIP are discussed in the Rural Connectivity Appendix.
- 1.4.2. Dacorum Borough Council and East Herts District Council are also looking to develop LCWIPs with HCC and WSP in the foreseeable future.

1.5 Regional Strategies, Policies and Plans

EEH Active Travel Strategy (Phase One: The Ambition)

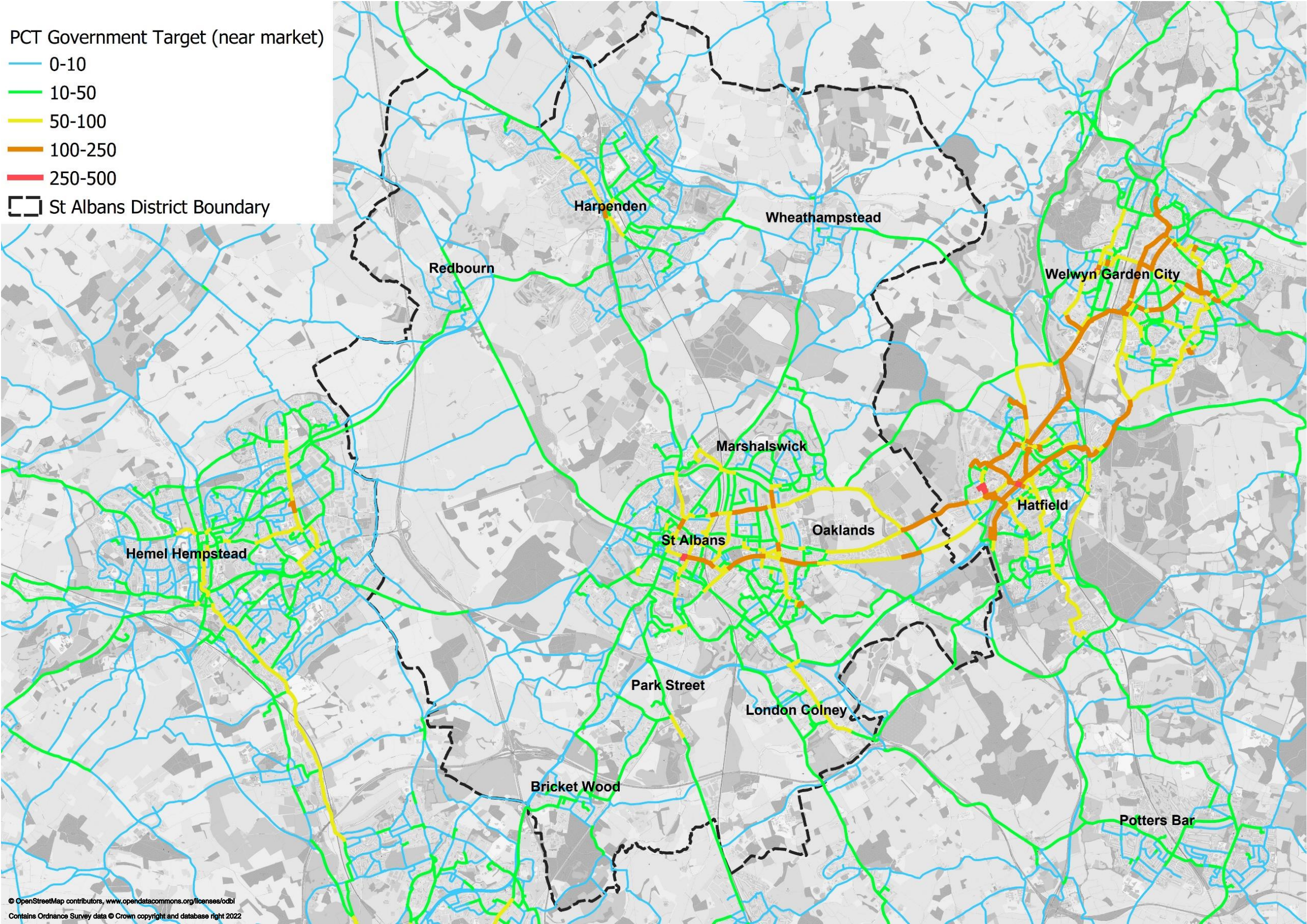
- 1.5.1. England's Economic Heartland is the sub-national transport body for the region between Swindon and Cambridgeshire, and from Northamptonshire to Hertfordshire. EEH produces the transport strategy for the region and advises central government on investment priorities.
- 1.5.2. EEH has produced Phase One of its new Active Travel Strategy for the region, which includes a literature review of local, regional and national policy, and assesses opportunities and challenges for active travel across the region in order to set out an overall vision. The Strategy focuses on achieving mode shift for shorter journeys as well as the first and last mile of longer journeys.

EEH Connectivity Studies

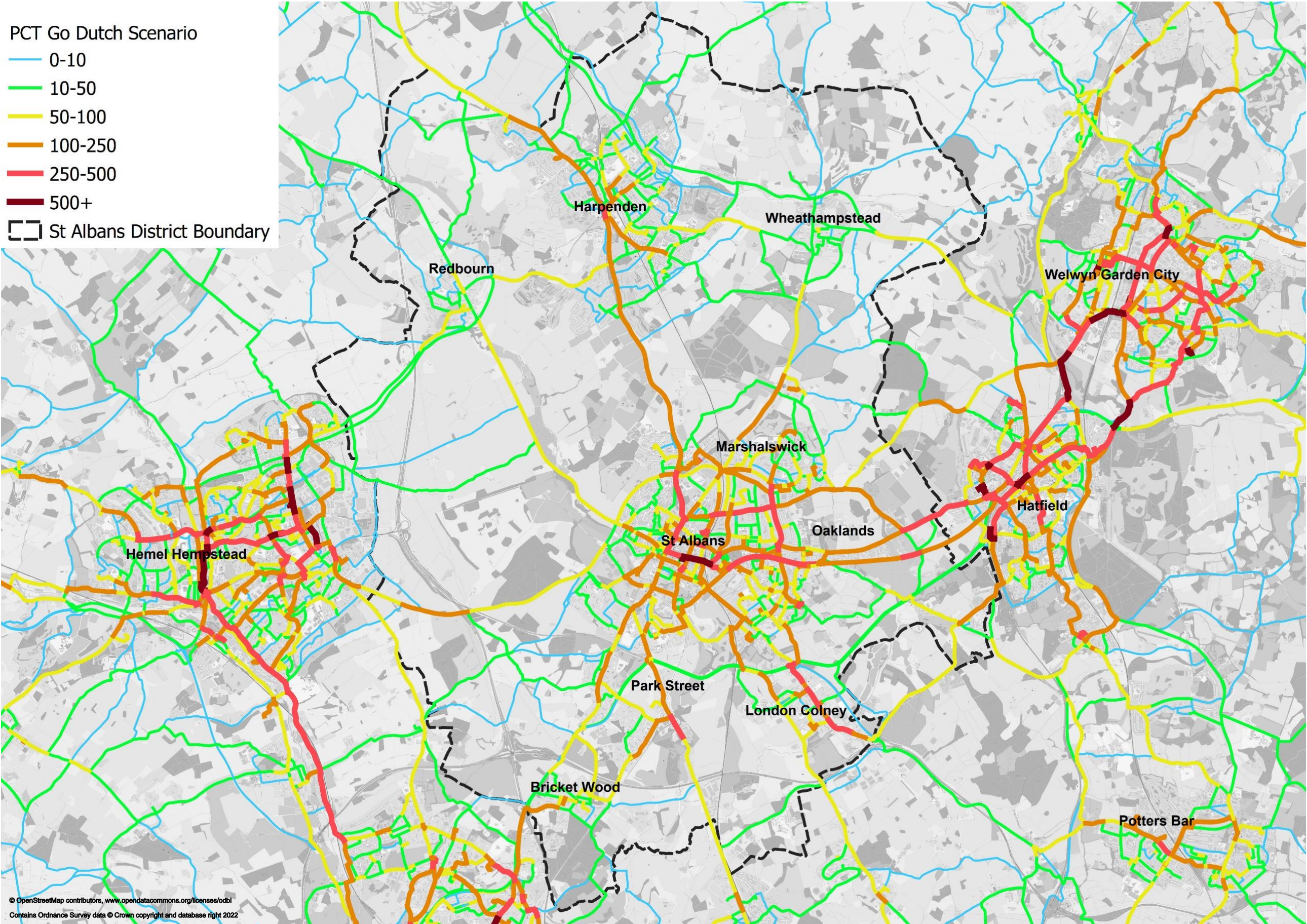
- 1.5.3. EEH is also currently undertaking a series of connectivity studies, through which strategic links and corridors across and between local authority areas will be identified. Much of the St Albans district is included in the Southern East-West Movements connectivity study scope, and it is anticipated that the outputs of the Study will include some proposals for improved active travel investment, for example between areas such as St Albans and Luton.

Appendix C – PCT outputs for the St Albans LCWIP report

A map showing the PCT Outputs "Government Target" scenario for the St. Albans District as a heat map with orange and red lines representing areas with the highest potential for commuter cycle trips. Routes within both St. Albans and Harpenden and are shown to have the highest potential for cycle trips, as well as connections between St. Albans and Hatfield.



A map showing the "Go Dutch" scenario for the St. Albans District as a heat map with orange and red lines representing areas with the highest potential for commuter cycle trips. This map shows more optimistic potential for cycle trips and has a lot more red lines within and between St. Albans and Harpenden as well as some routes to Hatfield and London Colney.



Appendix D – GIS Model Technical Note

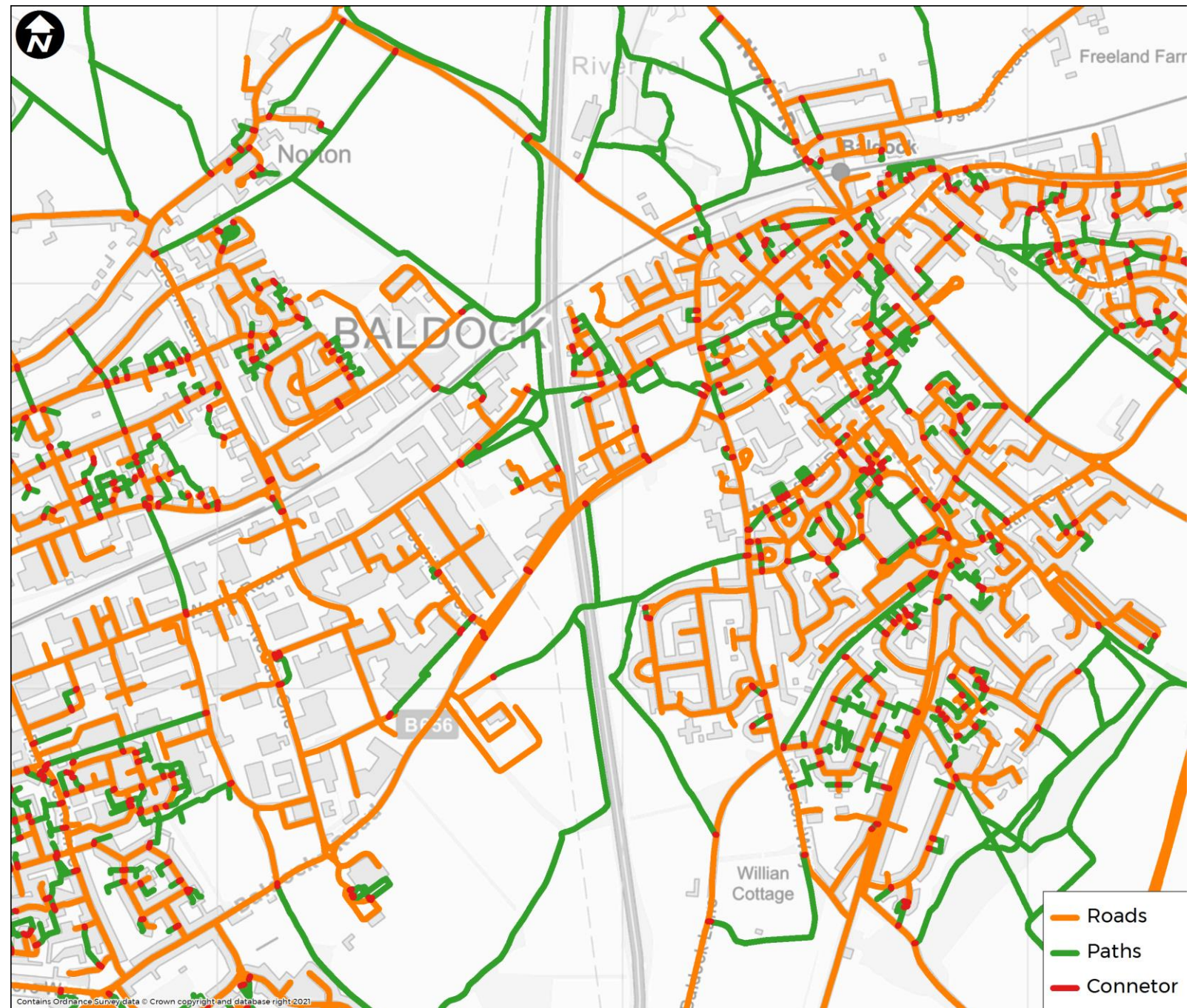
Introduction

- A suite of models has been developed to automate the creation of desire lines for walking and cycling.
- The models require the following inputs: a walk/cycle network, origins, destinations and associated parameters.
- The models create two types of output:
 1. 'As crow fly' lines with the number of trips calculate between respective origins and destinations
 2. Walk/cycle network based lines that aggregate the number of trips to the actual network

Inputs

Input 1: walk/cycle network

- A walk/cycle network has been built for the whole of Hertfordshire plus an 8km buffer.
- The datasets were downloaded from the vendor (Emapsite) on 4th May 2021.
- The data consist of two Ordnance Survey MasterMap datasets, one is the most detailed road network available and the second is the associated paths dataset. These two datasets have been merged together correctly before building the network.
- The walk/cycle network can be used for any of Hertfordshire County Council's LCWIPs projects.
- One-way streets have not been modelled.



Input 2: origin points

- The origin points dataset has been created from three sources:
 1. Current residential addresses (Source: AddressBase Plus data (for existing households))
 2. Recently completed and proposed employment sites (Source: St Albans COMET R6 Employment Completions L3)
 3. Proposed housing developments (Source: St Albans COMET R6 Perm Sites L3)
- There are a total of 300,264 origin points across St Albans District plus an 8km buffer
- Each origin point has a weight score, representative of the population at each point.

Input 3: destination points

- The destination points dataset has been created from 23 individual datasets supplied by Hertfordshire County Council.
- The geographical extent of destinations was St Albans District plus an 8km buffer
- A total of 25,445 unique destination points were considered as part of this process.
- Every destination point within each destination type is given a weighting, however, in the majority of cases, the weighting is a value of one, meaning that all destinations within that destination type, have the same attractiveness as one another. Some destination types have a specific weighting that represents the varying attractiveness of each point, such as number of jobs.
- Each destination type is assigned two pieces of information:
 1. Model Run Category – one of four options (All2All, Nearest1, ClosestX, ClosestY)
 2. Assignment Proportion – each destination type is given a value that represents the proportion of trips being generated by an origin that go to the corresponding destination type. E.g. 10% of all trips from an origin will go to a secondary school.
- The run category will determine how this proportion of trips generated at an origin point is distributed between the respective destinations within the destination type.

Destination parameters: run category types and values

Run category	Description	Example destination type
All2All	This run category will generate data between each origin and every one of the destination points within the corresponding destination type. Serious consideration should be given to using this run category as it can generate millions of data rows which will cause the models to fail (run out of memory).	TOWN CENTRES
Nearest1	This run category will generate data between each origin and the single nearest destination point within the corresponding destination type.	Train stations, secondary schools
ClosestX	When running the models, the user assigns a value for X, and this run category will generate data between each origin and the X closest destination point within the corresponding destination type.	Primary schools, bus stops
ClosestY	When running the models, the user assigns a value for Y, and this run category will generate data between each origin and the Y closest destination point within the corresponding destination type.	Business parks, retail centres

Run category	Value for St Albans District model runs
ClosestX	3
ClosestY	5

Walk destination parameters

Destination Type	Run Category	Proportion (Total = 100%)
Bus Stations	1%	Nearest1
Bus Stops	3%	ClosestX
Community Centres	1%	Nearest1
Dentists	1%	ClosestX
Events Spaces	1%	ClosestX
GP Surgeries	1%	Nearest1
Hospitals	2%	All2All
Key Employment Areas	10%	ClosestY
Libraries	1%	Nearest1
Local Centres	15%	Nearest1
Markets	1%	ClosestX
Nurseries	1%	ClosestX
Open Spaces	1%	Nearest1
Post Offices	1%	Nearest1
Primary Schools	11%	ClosestX
Rail Stations	11%	Nearest1
Retail Parks	1%	ClosestX
Secondary Schools	10%	ClosestX
Sports/Leisure Centres	1%	Nearest1
Supermarkets	5%	Nearest1
Tourist Attractions	3%	Nearest1
Town Centres	10%	Nearest1
Universities/Colleges	8%	All2All

Cycle destination parameters

Destination Type	Run Category	Proportion (Total = 100%)
Bus Stops	5%	ClosestY
Community Centres	1%	NearestI
Dentists	1%	ClosestX
Events Spaces	1%	ClosestX
GP Surgeries	1%	NearestI
Hospitals	1%	All2All
Key Employment Areas	20%	ClosestY
Libraries	1%	NearestI
Local Centres	5%	NearestI
Markets	1%	ClosestX
Nurseries	2%	ClosestX
Open Spaces	2%	ClosestX
Post Offices	1%	NearestI
Primary Schools	6%	ClosestX
Rail Stations	7%	NearestI
Retail Parks	5%	ClosestX
Secondary Schools	7%	ClosestX
Sports/Leisure Centres	1%	NearestI
Supermarkets	5%	NearestI
Tourist Attractions	5%	ClosestX
Town Centres	14%	ClosestX
Universities/Colleges	8%	All2All

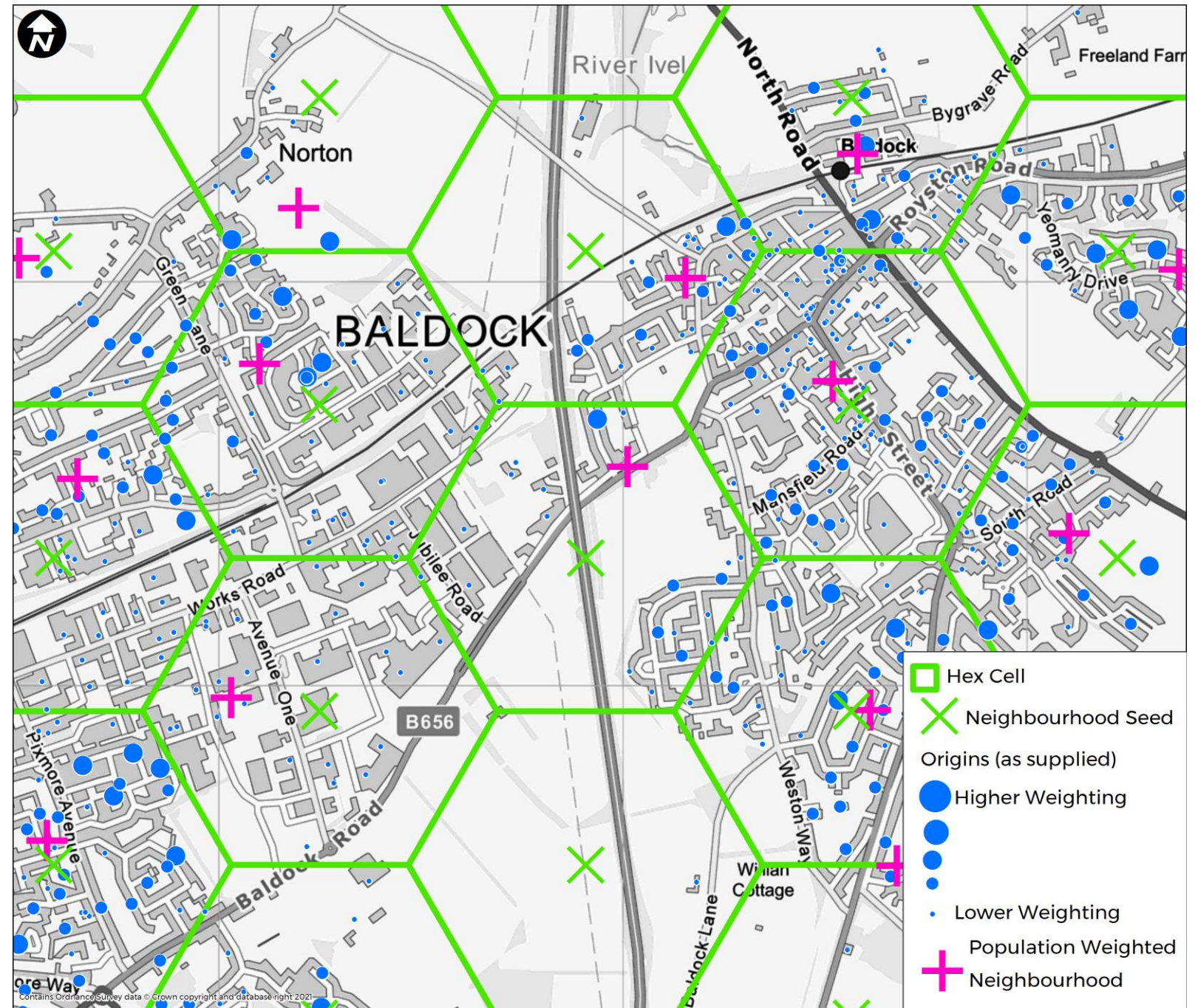
Methodology

Workflow

- A suite of models have been created that run through Esri ArcGIS Desktop.
- Running the models requires an ArcGIS Desktop Advanced license and Network Analyst license.
- The workflow for the models is as follows:
 1. The user manually pre-processes the origin and destination points to ensure both datasets have the required fields and attribute values.
 2. The user selects the required model inputs: walk/cycle network, origin points, destination points and hex cells
 3. The user manually inputs the values of X and Y for ClosestX and ClosestY run categories
 4. The origin and destination points are automatically aggregated to neighbourhood points so that less data is used by the model, however there is no loss to the weighting values associated with origins/destinations. This is essential as with 300,264 origins and 25,445 destinations, up to 7,640,217,480 trip lines could be generated and a normal computer would not be able to process this.
 5. The model creates an Origin-Destination Matrix (OD Matrix) from all origins to the appropriate destinations, respecting the Run Category parameters for the respective destination type. For example, trips are made from each origin to all hospitals (All2All) and trips are made from each origin to the closest three nurseries (ClosestX). The OD Matrix distances are based on network distances not straight line distances.
 6. The OD Matrix is used to generate the 'as crow flies' lines between origins and destinations. A series of table joins add the origin weight value and destination proportion value to the respective OD lines. A gravity model calculates the number of trips being assigned to each line. The gravity calculation assigns trips based on a formula that balances the distance between origin and destinations and the attractiveness of the destinations. The output dataset is then run through a python script (outside of ArcGIS) to create the clustered desire lines
 7. The OD Matrix is used to generate the walk/cycle network based lines between origins and destinations. A series of table joins add the origin weight value and destination proportion value to the respective OD lines. A gravity model calculates the number of trips being assigned to each line. The gravity calculation assigns trips based on a formula that balances the distance between origin and destinations and the attractiveness of the destinations. Additional processes then aggregate the network based lines to the underlying road network, summing the total number of trips along concomitant sections of road.

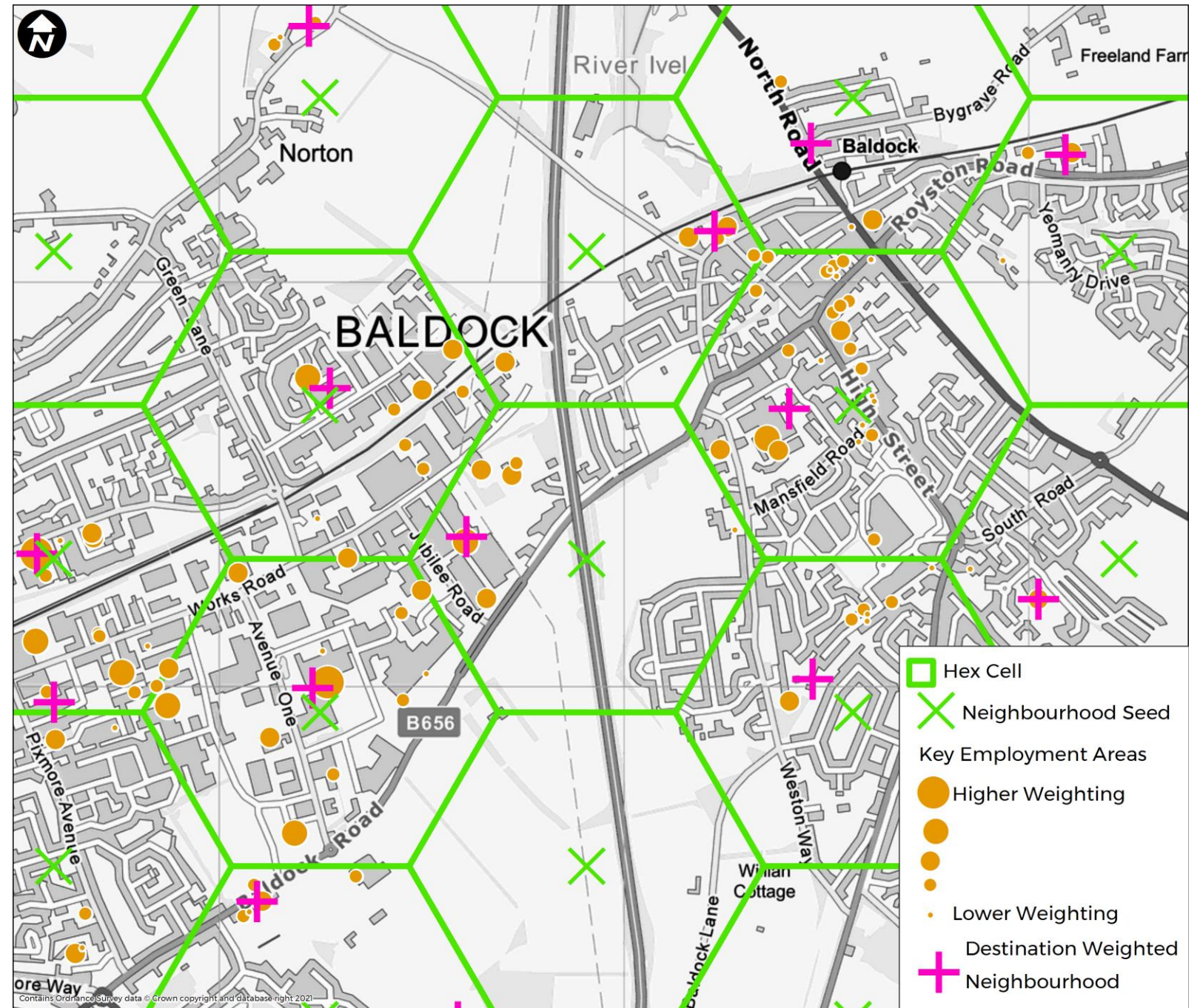
Aggregating origins

- A grid of hex cells is used as a proxy for neighbourhoods and the centroid of each hex cell used as a 'first step' neighbourhood seed.
- The supplied origins are assigned to the nearest neighbourhood seed using the road network and the total origin weight for each neighbourhood seed calculated (sum of all origin weights)
- A new location to best represent the respective origins is calculated creating a population weighted neighbourhood point
- The population weighted neighbourhood point is now a proxy for all origins deemed to be within a neighbourhood.
- Note that an origin can be physically located in one hex cell, but the closest neighbourhood seed when using the road network is actually in another hex cell. The origin is assigned to the other neighbourhood seed instead.



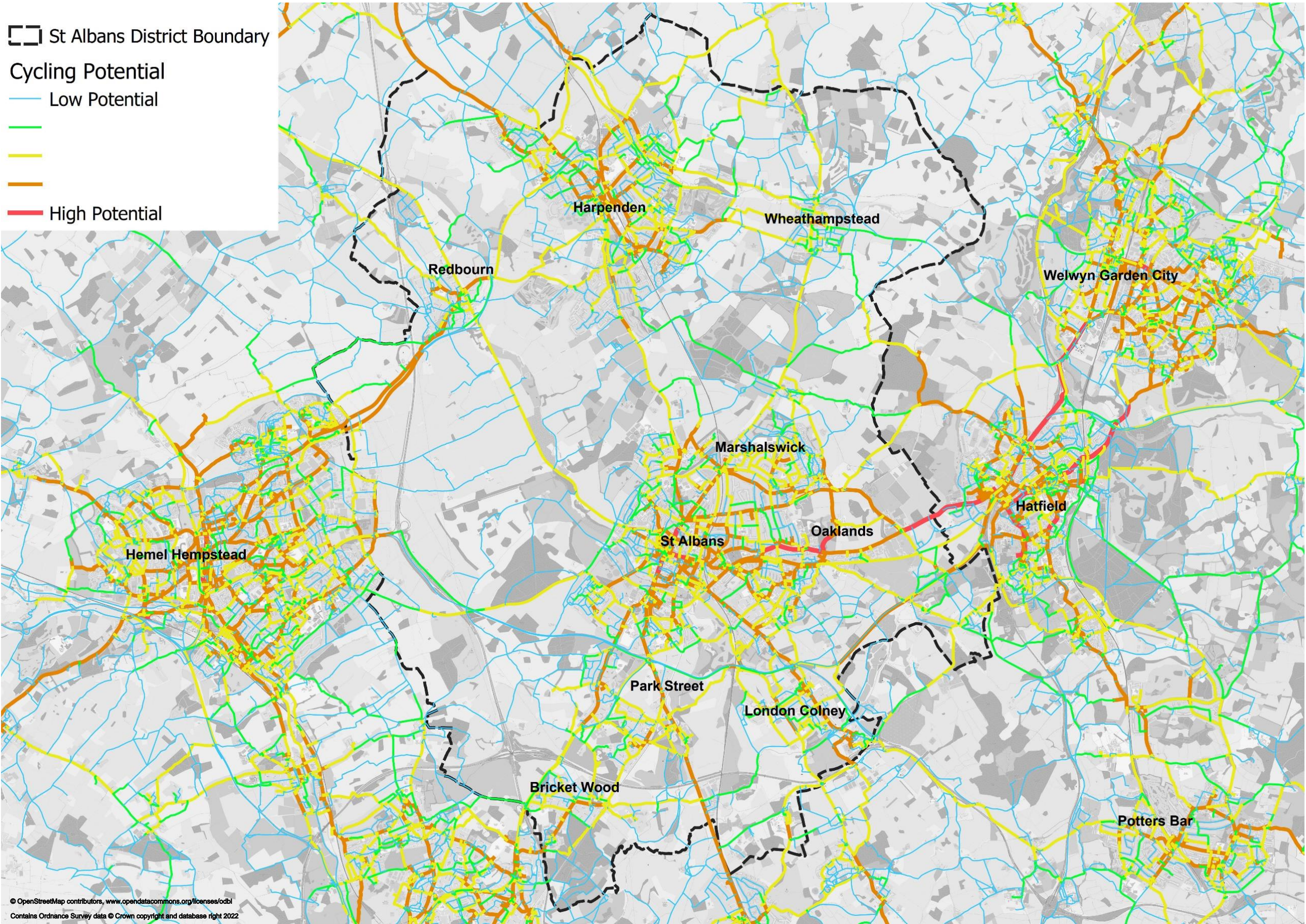
Aggregating destinations

- The same methodology was used as for aggregating origins to weighted neighbourhood points
- A specific set of destination weighted neighbourhood point was created for each of the destination types – the image illustrated the destination type of Key Employment Areas only.
- All sets of destination specific weighted neighbourhood points were merged into one final dataset used by the model.



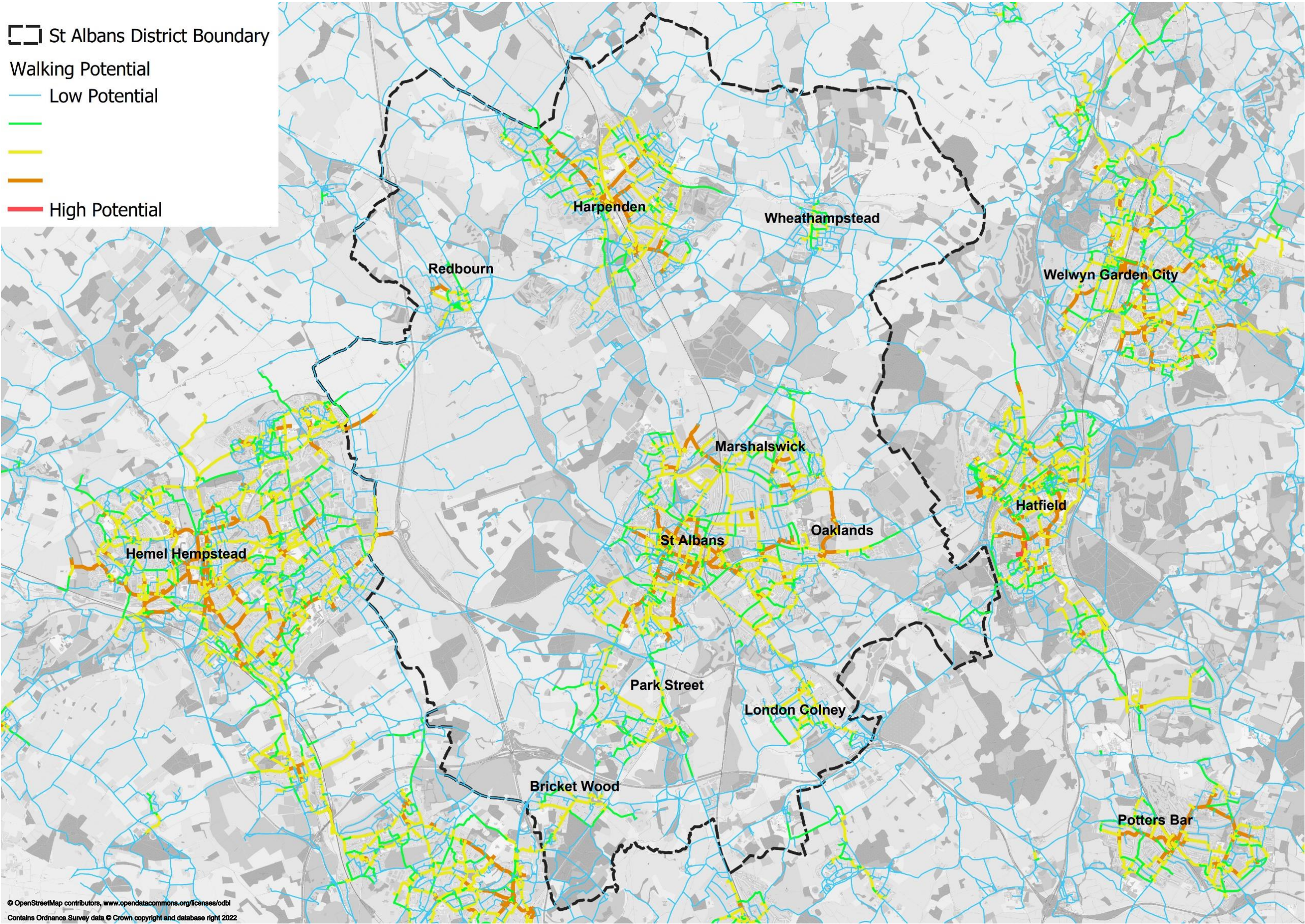
Appendix E – GIS Model Cycling Outputs for the St Albans LCWIP Report

A map showing the district wide cycling outputs from the GIS model run in a heat map form showing the cycling potential routes from low potential to high potential. It shows high cycling potential on inter-urban routes between the key towns and villages as well as within the towns themselves.



Appendix F – GIS Model Walking Outputs for the St Albans LCWIP Report

A map showing the district wide walking outputs from the GIS model run in a heat map form showing the walking potential routes from low potential to high potential. It shows that the high potential routes are concentrated within the towns and villages, with low walking potential shown on inter-urban routes.



Appendix G

NETWORK PLANS FOR WALKING AND CYCLING (Post Consultation)



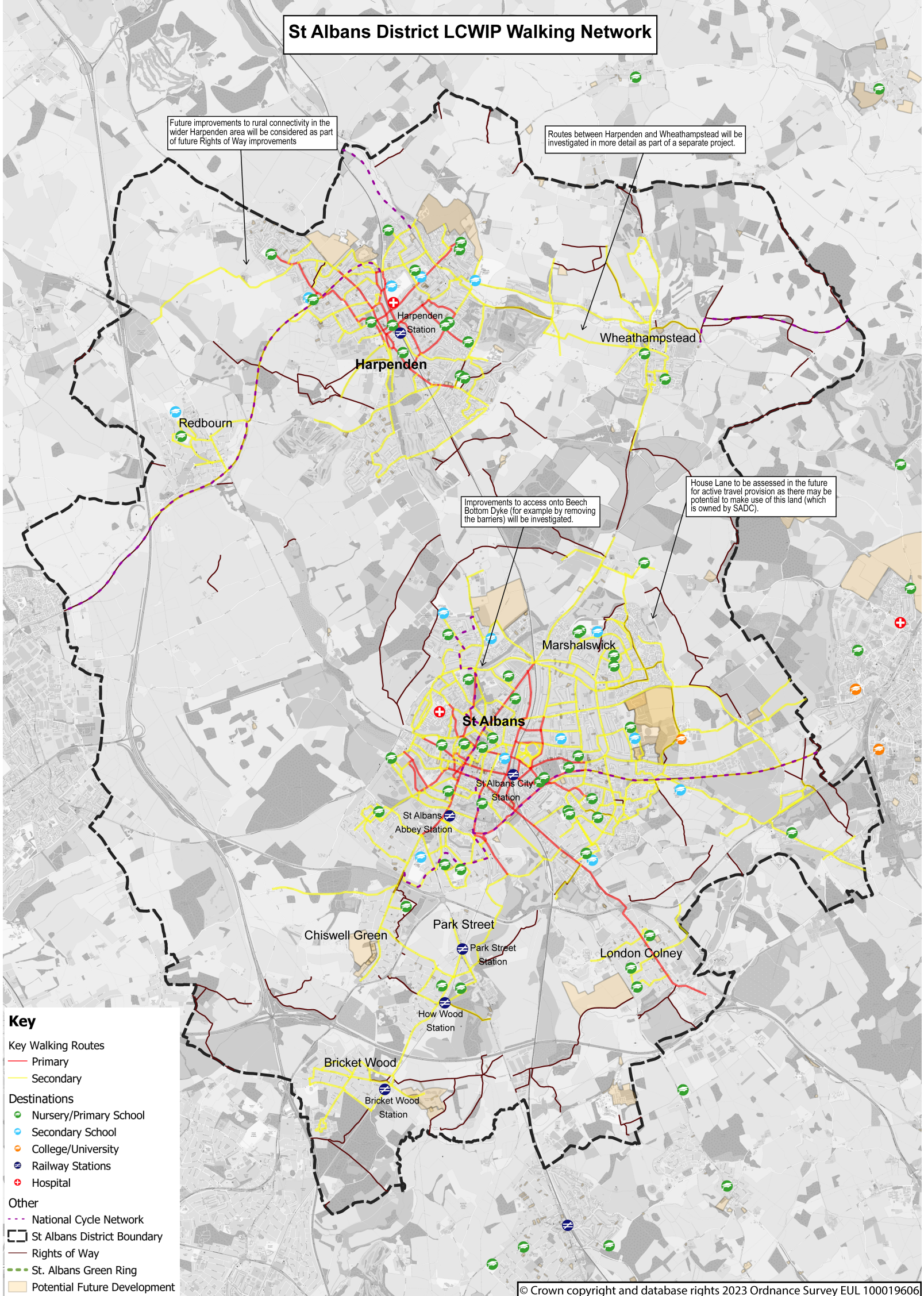
St Albans District LCWIP Walking Network

Future improvements to rural connectivity in the wider Harpenden area will be considered as part of future Rights of Way improvements

Routes between Harpenden and Wheathampstead will be investigated in more detail as part of a separate project.

House Lane to be assessed in the future for active travel provision as there may be potential to make use of this land (which is owned by SADC).

Improvements to access onto Beech Bottom Dyke (for example by removing the barriers) will be investigated.



Key

Key Walking Routes

- Primary
- Secondary

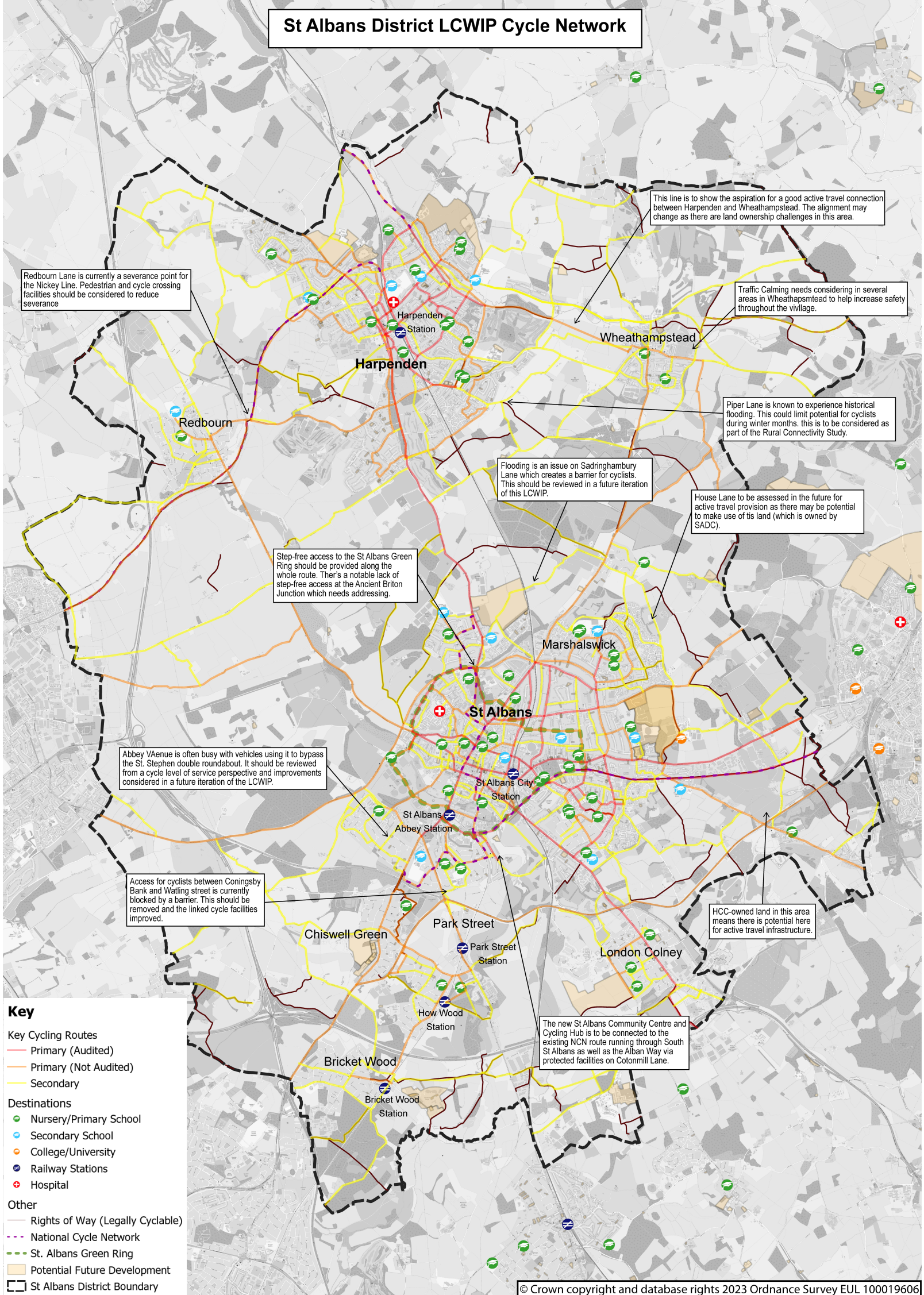
Destinations

- Nursery/Primary School
- Secondary School
- College/University
- Railway Stations
- Hospital

Other

- National Cycle Network
- St Albans District Boundary
- Rights of Way
- St. Albans Green Ring
- Potential Future Development

St Albans District LCWIP Cycle Network

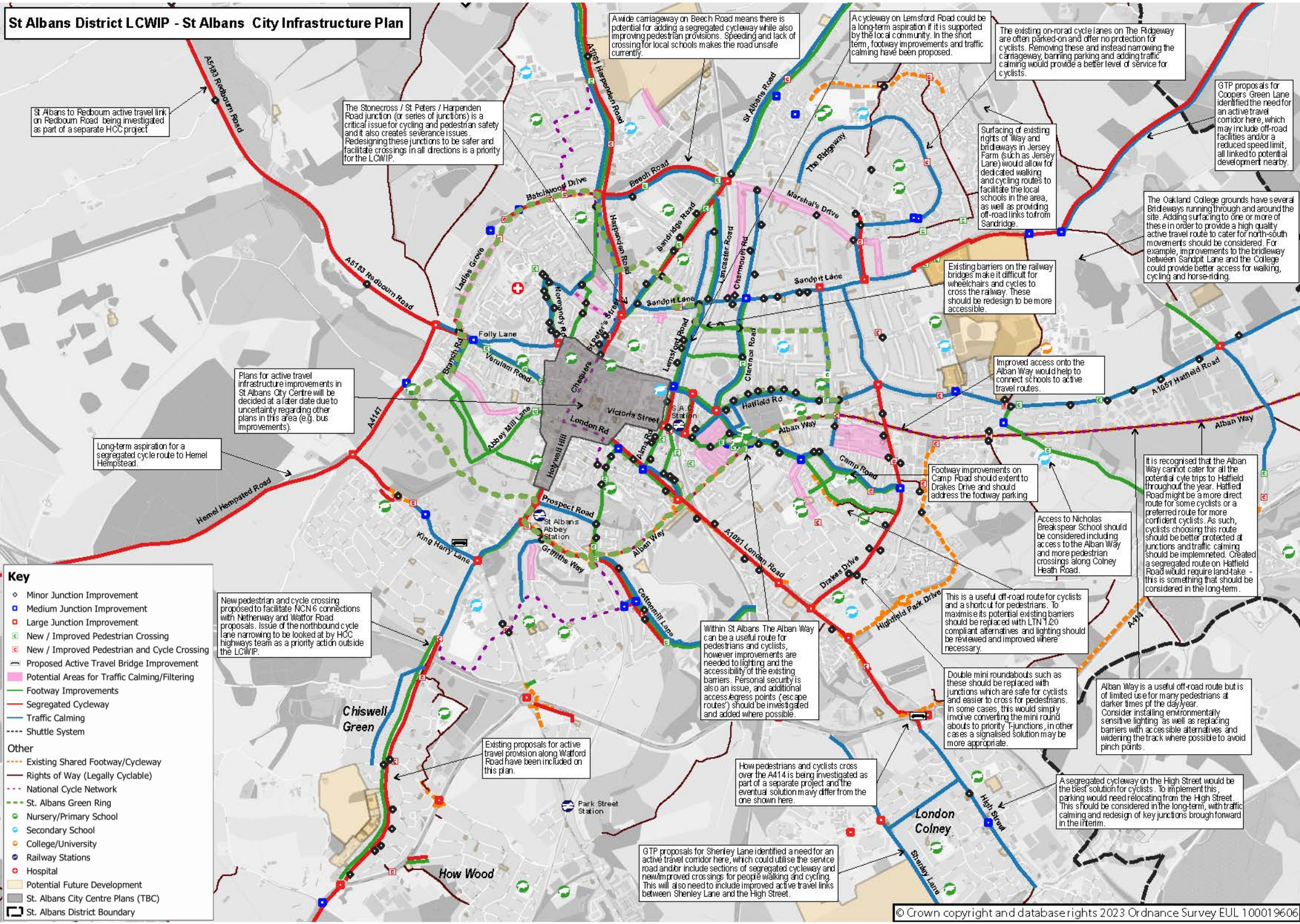


Appendix H

INFRASTRUCTURE PLANS FOR ST ALBANS AND HARPENDEN (Post Consultation)



St Albans District LCWIP - St Albans City Infrastructure Plan



St Albans District LCWIP - Harpenden Infrastructure Plan

In the medium term consider the potential for filtered areas in neighbourhoods throughout St Albans District, such as this part of northwestern Harpenden.

Accessibility to the Nickey Line from Hollybush Lane should be reviewed and the potential for step-free access for pedestrians and cyclists should be investigated as a separate piece of work.

As with the Nickey Line, surfacing and lighting some of the Luton Harpenden Greenway could help facilitate more cycle trips with Harpenden as well creating an excellent off-road connection to Luton. Accessibility improvements, such as making access points barrier-free and step-free would benefit pedestrians and cyclists.

The potential for step-free access onto the Greenway from Ox Lane should be investigated.

Improve Greenway transitions through these streets, ensuring they are wide and smooth enough to be used by non-standard cycles. Surfacing from Waveney Road should be considered.

The Nickey Line bridge creates a pinch point on the carriageway on the A1081. A shuttle system is one of several options that should be considered in order to facilitate a continuous route. The options will be looked at in more detail when route plans are further developed.

Consider surfacing at least some of the Nickey Line, for example in this section to help facilitate cycle journeys between Roundwood Park and Moreton End Lane. Currently the Nickey Line is only cycleable on specialist bikes. If the entire route was surfaced it could create an excellent off-road connection to Redbourn and Hemel Hempstead. If environmentally sensitive light was added then it would additionally be usable in evenings and at darker periods of the year.

Accessibility improvements, such as making access points barrier-free and step-free, would benefit pedestrians and cyclists and have been identified through a separate Cycling Connectivity study.

The provision of a safe cycleway through A1081 corridor in Harpenden will also consider potential active travel improvements on Leyton Rd and Bowers Parade.

Improve access to this Right of Way

Replace shared footway with segregated cycleway and separate footway. This to continue to St Albans City with protected facilities at all junctions on the route.

Simplify the layout of this junction by closing the unnecessary arm.

Allow pedestrian and cycle access to Harpenden Station via Aysgarth Close and the Station car park.

On Southdown Road, remove pinch points for cyclists and replace with cycle-friendly traffic calming.

Key

- ◆ Minor Junction Improvement
- Medium Junction Improvement
- Large Junction Improvement
- New / Improved Pedestrian Crossing
- New / Improved Pedestrian and Cycle Crossing
- Proposed Active Travel Bridge Improvement
- Potential Areas for Traffic Calming/Filtering
- Footway Improvements
- Segregated Cycleway
- Traffic Calming
- Shuttle System

Other

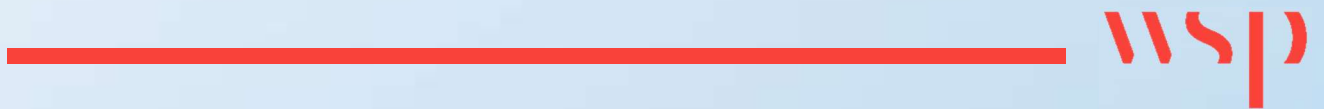
- Existing Shared Footway/Cycleway
- Rights of Way (Legally Cycleable)
- National Cycle Network
- Nursery/Primary School
- Secondary School
- College/University
- Railway Stations
- Hospital
- Potential Future Development
- St. Albans District Boundary

Route / Infrastructure Group	Total Cost	Area	Walking / Cycling / Both	Desired outcomes					Technical deliverability			Summary scores			District Ranking
				Minimum Score:	0	-1	-1	0	0	-1	-2	-1	-2	-4	-6
				Maximum Score:	2	3	1	2	2	3	1	1	10	5	15
				Increase in walking & cycling trips based on GIS model	Infrastructure impact on active travel	Strategic Fit	Support for new housing	Access to jobs	LTN 1/20 compliance	Technical feasibility	Dependency	Desired outcomes	Technical deliverability	TOTAL	
Bowers Way & Links	£ 680,800.00	Harpenden	Both	2	3	1	2	2	3	0	1	10	4	14	1
Griffiths Way & Doggets Lane	£ 1,001,250.00	St.Albans	Both	2	3	1	1	2	3	0	0	9	3	12	2
St. Albans Station Links	£ 5,030,350.00	St.Albans	Both	2	3	0	2	2	3	0	0	9	3	12	2
St. Albans - Harpenden Link (A1081)	£ 10,143,450.00	St. Albans - Harpenden Link (A1081)	Both	2	3	1	2	2	2	-1	1	10	2	12	2
Ambrose Lane	£ 431,000.00	Harpenden	Both	1	3	1	2	1	3	0	1	8	4	12	2
Luton Road (A1081)	£ 4,873,100.00	Harpenden	Both	2	3	1	2	2	3	-1	0	10	2	12	2
Redbourn Road (A5183)	£ 6,830,000.00	St.Albans	Cycling	1	1	1	2	1	3	-1	1	9	3	12	2
Watford Road	£ 8,181,750.00	St.Albans	Both	2	3	1	2	2	2	-1	0	10	1	11	8
Avenue Road	£ 20,000.00	St.Albans	Both	2	3	0	0	2	3	0	1	7	4	11	8
Cottonmill Lane	£ 3,450,900.00	St.Albans	Both	1	3	1	0	2	3	0	1	7	4	11	8
London Road (A1081)	£ 8,664,400.00	St.Albans	Both	2	3	0	1	2	3	-1	1	8	3	11	8
Harpenden High Street (A1081)	£ 1,033,000.00	Harpenden	Both	2	3	1	0	2	3	-1	1	8	3	11	8
Harpenden Rail Station Link	£ 786,800.00	Harpenden	Both	2	2	1	1	2	2	0	1	8	3	11	8
Verulamium Park	£ 536,400.00	St.Albans	Walking	2	1	1	0	1	3	1	1	5	5	10	14
Coldharbour Lane	£ 105,000.00	Harpenden	Both	1	2	0	1	2	3	0	1	6	4	10	14
Beech Road	£ 1,653,650.00	St.Albans	Both	1	3	1	0	1	3	0	1	6	4	10	14
Marshal's Drive	£ 80,000.00	St.Albans	Both	2	3	0	0	1	3	0	1	6	4	10	14
St. Albans - Hemel Hempstead Link (A4147)	£ 6,080,000.00	St.Albans	Cycling	1	3	1	0	2	3	-1	1	7	3	10	14
St. Peters Street (A1081)	£ 1,062,200.00	St.Albans	Both	2	3	1	0	2	3	-1	0	8	2	10	14
Manland Way	£ 770,000.00	Harpenden	Both	2	3	0	1	2	2	0	0	8	2	10	14
King Harry Lane	£ 1,402,550.00	St.Albans	Cycling	2	2	1	1	1	2	0	1	7	3	10	14
Sandpit Lane	£ 6,983,050.00	St.Albans	Both	2	2	0	2	2	1	0	1	8	2	10	14
Sandridge Road	£ 4,789,400.00	St.Albans	Both	2	3	0	0	2	3	-1	0	7	2	9	23
Sauncey Avenue & Lyndhurst Drive	£ 325,000.00	Harpenden	Both	1	2	0	0	1	3	1	1	4	5	9	23
Alban Way	N/A	St.Albans	Both	2	2	1	1	2	2	-1	0	8	1	9	23
Batchwood Drive	£ 3,204,000.00	St.Albans	Both	1	2	1	0	1	3	0	1	5	4	9	23
Charmouth Road	£ 377,000.00	St.Albans	Both	1	3	0	0	1	3	0	1	5	4	9	23
Cell Barnes Lane	£ 85,000.00	St.Albans	Both	2	3	0	0	0	3	0	1	5	4	9	23
Ladies Grove	£ 255,000.00	St.Albans	Both	1	2	1	0	1	3	0	1	5	4	9	23
Shenley Lane	£ 3,755,000.00	St.Albans	Both	2	1	0	2	2	1	0	1	7	2	9	23
Common Lane	£ 711,000.00	Harpenden	Walking	1	2	0	2	2	0	1	1	7	2	9	23
Nickey Line	N/A	Harpenden	Both	1	3	1	1	1	2	-1	1	7	2	9	23
Carlton Road Ped & Cycle Bridge	£ 2,000,000.00	Harpenden	Both	2	3	0	1	2	3	-2	0	8	1	9	23
Verulam Road & Links	£ 1,362,500.00	St.Albans	Both	2	3	0	0	2	2	0	0	7	2	9	23
Hatfield Road (West)	£ 7,342,850.00	St.Albans	Both	2	1	1	2	2	0	0	0	8	0	8	35
London Colney High Street	£ 2,875,450.00	St.Albans	Both	2	1	0	2	2	0	0	1	7	1	8	35
North Orbital Road - West (A405)	£ 6,537,600.00	St.Albans	Both	1	2	1	2	1	1	0	0	7	1	8	35
St. Albans Hospital Routes	£ 2,931,850.00	St.Albans	Both	1	2	0	0	2	2	0	1	5	3	8	35
The Ridgeway	£ 2,003,500.00	St.Albans	Both	1	2	0	1	2	0	1	1	6	2	8	35
Carlton Road	£ 522,350.00	Harpenden	Both	2	2	1	1	2	0	0	0	8	0	8	35
Sun Lane	£ 1,475,000.00	Harpenden	Both	2	2	1	1	2	1	-1	0	8	0	8	35
Bluehouse Hill	£ 1,640,000.00	St.Albans	Cycling	1	3	0	0	1	3	-1	0	5	2	7	42
Clarence Road & Links	£ 795,800.00	St.Albans	Both	2	1	1	0	1	0	1	1	5	2	7	42
Drakes Drive	£ 2,815,000.00	St.Albans	Both	2	2	0	0	1	3	-1	0	5	2	7	42
Hill End Lane	£ 160,000.00	St.Albans	Both	2	1	-1	1	2	0	1	1	5	2	7	42
North Orbital Road - East (A414)	£ 2,065,000.00	St.Albans	Both	2	2	1	0	1	1	0	0	6	1	7	42
Prospect Road	£ 161,000.00	St.Albans	Both	1	1	1	0	2	1	1	0	5	2	7	42
Sandringham Crescent	£ 595,000.00	St.Albans	Both	1	2	0	0	1	2	0	1	4	3	7	42
Aldwickbury Crescent	£ 837,600.00	Harpenden	Both	1	2	0	0	1	2	0	1	4	3	7	42
Westfield Road	£ 2,414,750.00	Harpenden	Both	2	1	1	2	1	0	0	0	7	0	7	42
Southdown Road	£ 2,162,950.00	Harpenden	Both	2	2	0	0	2	0	0	1	6	1	7	42
Coopers Green Lane	£ 448,000.00	St.Albans	Cycling	1	1	1	0	1	2	-1	0	5	1	6	52
Colney Heath Lane	£ 1,145,000.00	St.Albans	Walking	1	2	0	0	2	0	0	1	5	1	6	52
Lemsford Road	£ 476,750.00	St.Albans	Both	2	1	0	0	2	0	1	0	5	1	6	52
Marshalswick Lane & Beechwood Avenue	£ 967,000.00	St.Albans	Both	1	2	0	1	1	1	0	0	5	1	6	52
North Orbital Road - Centre (A414)	£ 3,484,200.00	St.Albans	Both	1	2	1	0	1	1	0	0	5	1	6	52
Crabtree Lane	£ 4,366,900.00	Harpenden	Both	2	1	0	1	2	0	0	0	6	0	6	52
Roundwood Park Links	£ 780,450.00	Harpenden	Walking	2	1	1	1	1	0	0	0	6	0	6	52
Lower Luton Road / Castle Rise Junction	£ 65,000.00	Harpenden	Both	1	1	0	1	0	3	0	0	3	3	6	52
Hatfield Road (East)	£ 2,848,000.00	St.Albans	Both	2	1	0	2	1	0	0	-1	6	-1	5	60
Station Road	£ 2,095,450.00	Harpenden	Both	2	0	1	2	2	-1	-1	0	7	-2	5	60
Camp Road	£ 1,429,250.00	St.Albans	Both	2	1	0	0	1	0	1	0	4	1	5	60
Sutton Road	£ 210,500.00	St.Albans	Both	2	1	0	0	2	0	0	0	5	0	5	60
Woodstock Road & Beaumont Avenue	£ 624,300.00	St.Albans	Both	1	1	0	0	0	0	1	0	3	1	4	64
Camp Footpath	£ 174,600.00	St.Albans	Both	1	2	0	0	1	0	0	0	4	0	4	64
Lancaster Road	£ 655,950.00	St.Albans	Both	1	1	0	0	1	0	1	0	3	1	4	64
Leyton Road & Rothamstead Avenue	£ 280,600.00	Harpenden	Walking	1	1	0	0	2	0	0	0	4	0	4	64
Milton Road	£ 274,200.00	Harpenden	Walking	2	1	0	0	1	0	0	0	4	0	4	64
Roundwood Lane & Wood End Road	£ 531,900.00	Harpenden	Walking	1	1	1	1	0	0	0	0	4	0	4	64
Salisbury Avenue	£ 170,000.00	Harpenden	Walking	2	1	0	0	1	0	0	0	4	0	4	64
House Lane	£ 283,650.00	St.Albans	Both	1	1	-1	1	1	0	0	0	3	0	3	71
Smallford Link	£ 600,300.00	St.Albans	Both	1	1	-1	0	1	0	0	1	2	1	3	71
Dalkeith Road	£ 90,000.00	Harpenden	Walking	1	1	0	0	0	0	1	0	2	1	3	71
Townsend Lane	£ 426,650.00	Harpenden	Both	1	0	0	0	1	0	0	0	2	0	2	74
St. Albans Road	£ 1,961,550.00	St.Albans	Both	1	1	0	0	1	0	-1	-1	3	-2	1	75
Pipers Lane	£ 511,000.00	Harpenden	Both	0	0	-1	0	0	0	1	0	-1	1	0	76

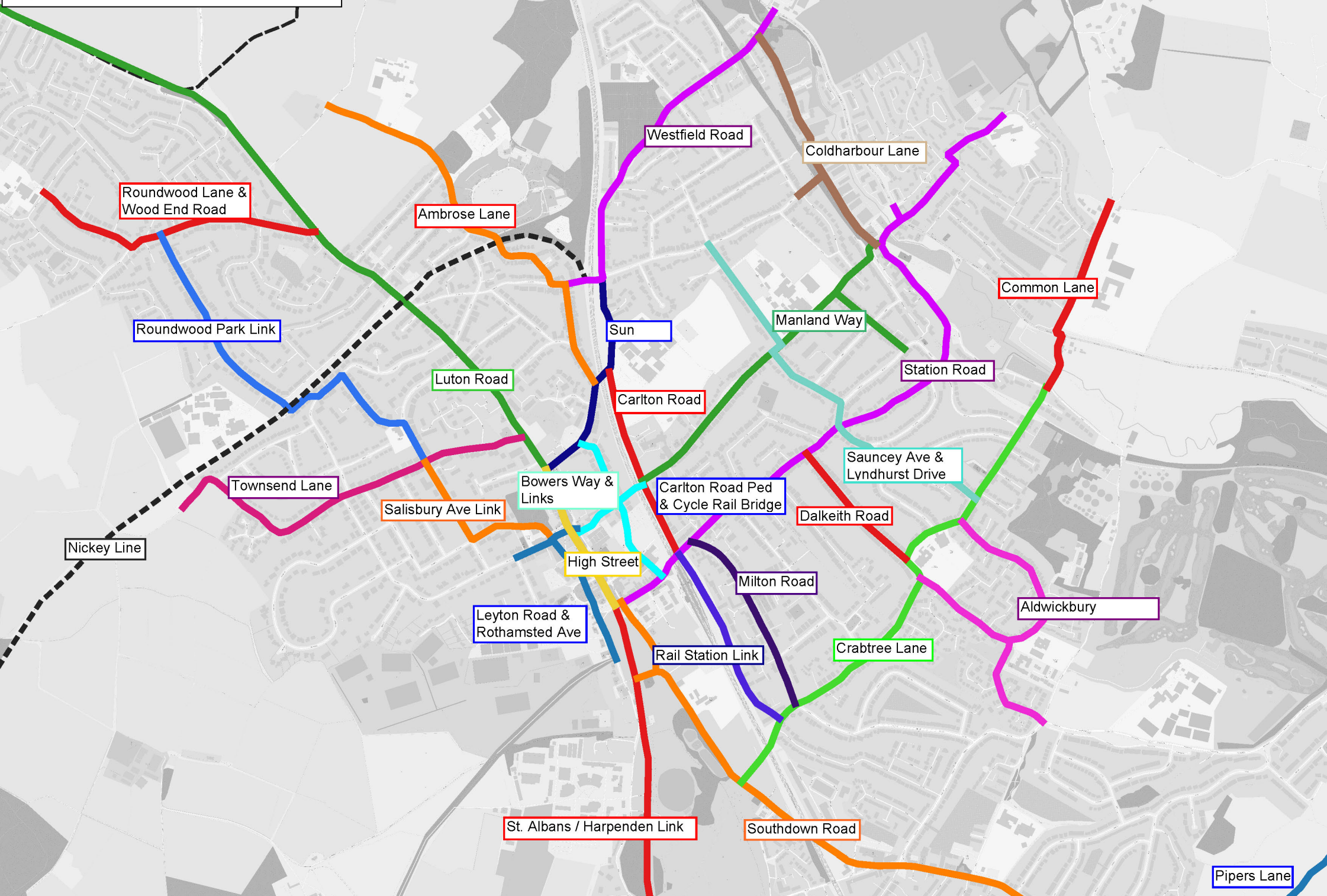
NOTE: Nickey Line and Alban Way have been excluded from costing as no Infrastructure decisions have been made and due to the distinct difference from other road based routes

Appendix J

KEY FOR PRIORITISED ROUTES (Post Consultation)



Harpenden - Locations of Prioritised Routes



Appendix K - Acronyms used in this report

(listed in alphabetical order)

CWIS2	Cycling and Walking Investment Strategy Two
CWZ	Core Walking Zone
DfT	Department for Transport
GIS	Geographic Information System
HCC	Hertfordshire County Council
IDP	(Draft) Infrastructure Delivery Plan (published by WHBC)
LCWIP	Local Cycling and Walking Infrastructure Plan
LTN 1/20	Local Transport Note 1/20 (Cycle Infrastructure Design)
LTP4	Local Transport Plan 4 (published by HCC)
NCN	National Cycle Network
PCT	Propensity to Cycle Tool
(P)ROW	(Public) Rights of Way
RST	Route Selection Tool (a DfT tool developed for LCWIP audits)
SADC	St Albans District Council
SCGTP	South Central Growth and Transport Plan (published by HCC)
SWGTP	South West Growth and Transport Plan (published by HCC)
WRAT	Walking Route Audit Tool (a DfT tool developed for LCWIP audits)
WSP	WSP UK (the engineering consultancy firm)