

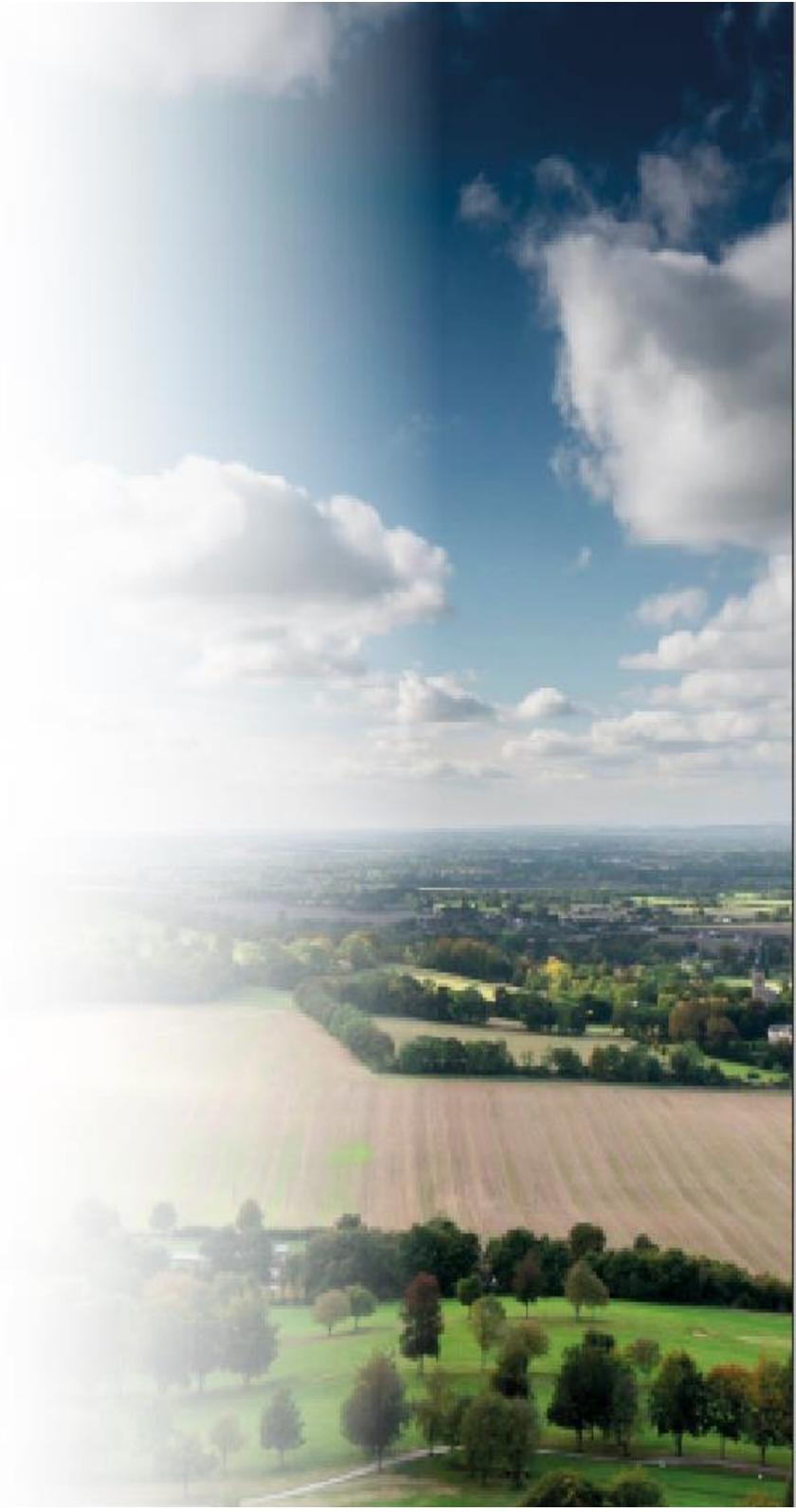


Local Cycling and Walking Infrastructure Plan

High Wycombe

Contents

Executive Summary	...	2
Chapter 1 Introduction	...	3
Chapter 2 Determining Scope	...	6
Chapter 3 Gathering Information & Data	...	15
Chapter 4 Network Planning Concepts	...	23
Chapter 5 Toolkit of Interventions	...	29
Chapter 6 LCWIP Network	...	31
Chapter 7 Prioritising Improvements	...	55
Chapter 8 Integration & Application	...	58
Appendix A Glossary of Terms	...	59
Appendix B Toolkit of Interventions	...	60



Executive Summary

The attractiveness of walking, cycling and wheeling in High Wycombe has been historically constrained by the town's hilly topography, particularly for north-south journeys. However, with appropriate infrastructure new technologies and supporting measures, it should be possible to achieve increases in walking, cycling and wheeling levels in the local area.

Informed by data analysis and stakeholder engagement, a Local Cycling and Walking Infrastructure Plan (LCWIP) has been developed for High Wycombe. LCWIPs are evidence-led, long-term plans that provide:

- network plans that identify infrastructure proposals for further development
- a prioritised programme of infrastructure improvements for future investment
- an explanation of the process followed and analysis undertaken.

The High Wycombe LCWIP is a supporting plan to the High Wycombe 2050 Transport Strategy and proposes ways to improve walking, cycling and wheeling infrastructure in and around High Wycombe, including links with surrounding settlements. This report explains how the LCWIP has been developed and proposes a future network, see **Figure 25**.

The LCWIP will support the Council in seeking funding for the delivery of the proposed network. All proposals in the LCWIP will be subject to further development and engagement, if and when they are taken forward, with their delivery subject to funding availability.

The LCWIP aims to provide opportunities for people to choose to walk, cycle or wheel for everyday local journeys in and around High Wycombe, and, in doing so, contribute towards tackling challenges such as congestion, climate change, housing growth, air pollution and health and physical inactivity. Whilst the LCWIP is infrastructure focused, the importance of complementary behaviour change initiatives is also emphasised.

1. Introduction

1.1 What is a LCWIP?

The development of Local Cycling and Walking Infrastructure Plans (LCWIPs) is recommended in national government policy (*Cycling and Walking Investment Strategy, 2017*), which outlines an overall ambition to “make cycling and walking the natural choices for shorter journeys, or as part of a longer journey”.

The government has published guidance on the development of LCWIPs. LCWIPs provide a strategic long-term approach to developing walking, cycling and wheeling networks, enabling improvements to local infrastructure and networks over a defined period.

The key outputs of a LCWIP include:

- A network plan for walking, cycling and wheeling which identifies potential routes and areas for further development
- A prioritised programme of walking, cycling and wheeling infrastructure improvements for investment in the short, medium and long-term
- A report which sets out the underlying analysis carried out and provides a narrative which supports the identified improvements and network

Local authorities are encouraged to develop LCWIPs in order to have an evidence base that can be used to inform and strengthen the case for future investment.

1.2 Why develop a LCWIP for High Wycombe?

Developing a LCWIP for High Wycombe enables Buckinghamshire Council to take a strategic, informed approach to improving the walking, cycling and wheeling networks in High Wycombe and its links to surrounding settlements over the short, medium and long-term.

Previous work has been undertaken in High Wycombe to identify existing, proposed and aspirational walking, cycling and wheeling links in the town and towards surrounding settlements. The High Wycombe LCWIP aims to consolidate and enhance this information into a comprehensive and cohesive future network plan, supported by a prioritised programme of infrastructure improvements.

The High Wycombe LCWIP will guide relevant future investment decisions and support funding for active travel projects in the town. These projects include upgrading key corridors, addressing gaps or severances in the existing network, and delivering ‘quick wins’. The LCWIP has, for example, recently supported the Council in securing government funding towards an improved connection between the Rye and the Daws Hill and Abbey Barn South development sites.

Inclusivity is a crucial aspect of the High Wycombe LCWIP, which intends to make walking, cycling and wheeling safe, accessible and attractive for users of all ages, backgrounds and abilities. In doing so, the LCWIP will play a key role in promoting activity, health and wellbeing and improving environment and amenity in High Wycombe.

The High Wycombe LCWIP forms a supporting plan to the High Wycombe 2050 Transport Strategy and a locally focused plan in the context of the Buckinghamshire LCWIP (currently in development).

1.3 Study area

High Wycombe is a historic market town situated in the south of the county of Buckinghamshire, west of London, in the south east of England – shown in Figure 1. The town centre of High Wycombe itself sits within a valley, where many of the key employment, retail, leisure and green open space land uses are located.

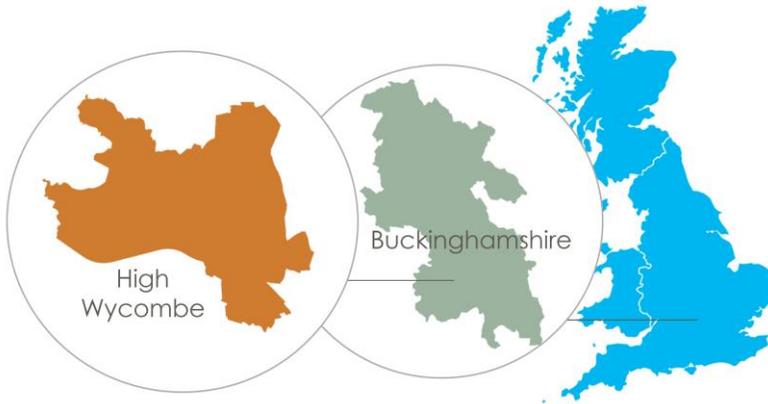


Figure 1: Location Map

The study area of the High Wycombe LCWIP is defined as a **20-minute walking catchment** and a **25-minute cycling catchment** surrounding High Wycombe town centre, as well as connections to surrounding settlements including Bourne End, Flackwell Heath, Hazlemere, Holmer Green, Hughenden, Loudwater, Penn, Sands, Saunderton, Stokenchurch, West Wycombe, Wooburn Green, Wycombe Marsh. This catchment area allows for changes in topography.

The High Wycombe LCWIP study area is shown in Figure 2.

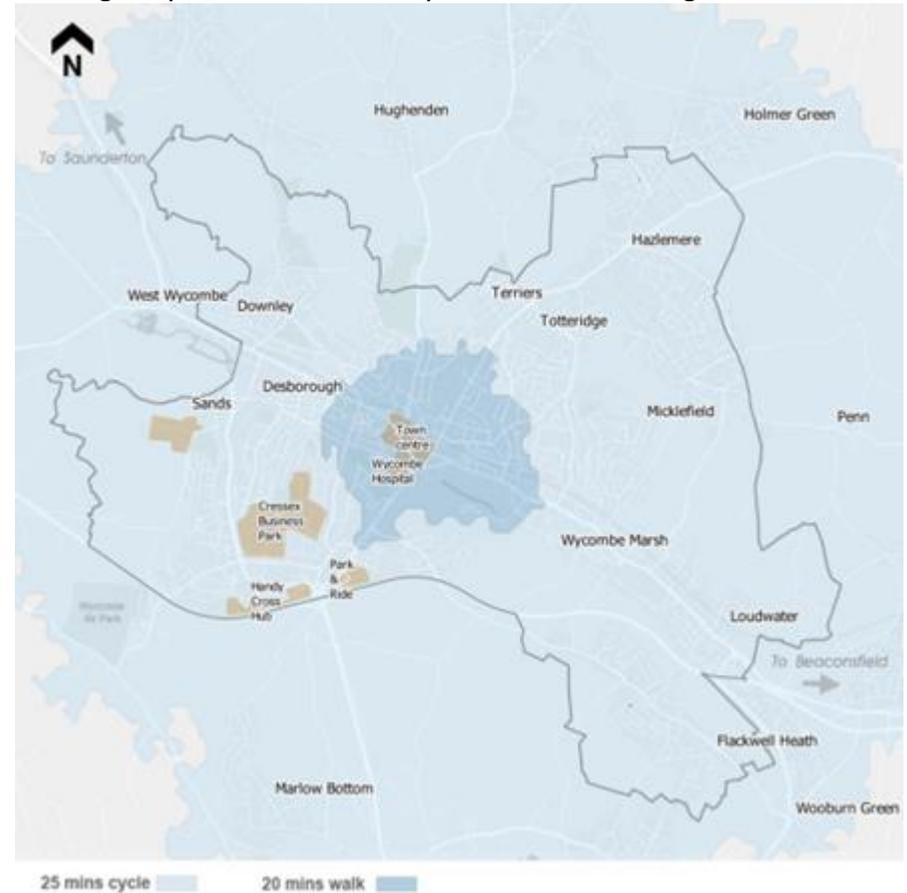
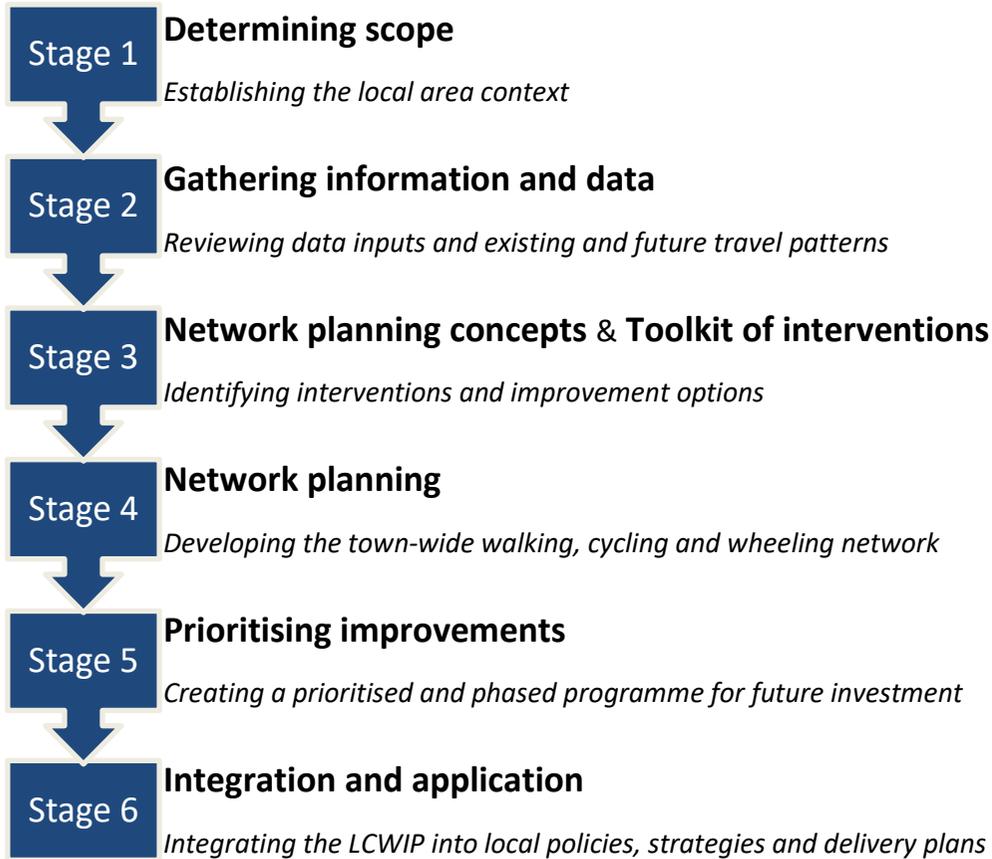


Figure 2: Study area – High Wycombe LCWIP

The High Wycombe LCWIP also considers potential links towards the surrounding settlements of Marlow Bottom and Beaconsfield, which are on the border or fall outside of the defined LCWIP study area.

1.4 How has the High Wycombe LCWIP been developed?

The High Wycombe LCWIP has been developed using the six-stage approach prescribed by the *Cycling and Walking Investment Strategy (CWIS)* and the *Cycling and Walking Infrastructure Plans: Technical Guidance for Local Authorities*. The LCWIP is structured as follows:



2. Determining Scope – High Wycombe context

2.1 Local area context – High Wycombe

Geography: Hilly topography presents a challenge for walking, cycling and wheeling throughout the town. There is a degree of north-south and east-west severance.

Demography: Population density is greater in the central, northern and western parts of the town. There are high levels of car ownership and car use in High Wycombe compared with the national average. Deprivation is generally low but with pockets of high deprivation around certain areas, typically of high population density.

Transport context: Historic development and changing movement patterns have shaped transport in High Wycombe. The High Wycombe LCWIP seeks to encourage and provide opportunities for people to walk, cycle and wheel.

Key attractors and generators: Areas of high population density are within acceptable walking, cycling and wheeling proximity to key services. There is an opportunity to further develop links by improving route quality and connectivity.

Air quality: Key arterial roads in High Wycombe exceed national limits of Nitrogen Dioxide (NO₂) concentrations. Encouraging the use of active travel modes can play a key role in the improvement of air quality.



Geography

High Wycombe is a large town in Buckinghamshire and is a key employment and growth hub offering good strategic transport links.

The town centre of High Wycombe itself sits within a valley, with hills extending to the north, west and south of the study area. This presents challenging topography for active travel modes, particularly when travelling north from the town along the A404 Amersham Hill or south from the town along the A404 Marlow Hill.

Many of the large secondary schools and the Cressex Business Park are located at the top of the Amersham and Marlow hills, whilst key employment, retail, leisure and green open space is located within the valley itself.

The town suffers from a degree of north-south severance due to the presence of the strategic A40 Oxford/London Road, the railway line and the River Wye to the west.

Figure 3 shows a heatmap of the topography of High Wycombe.

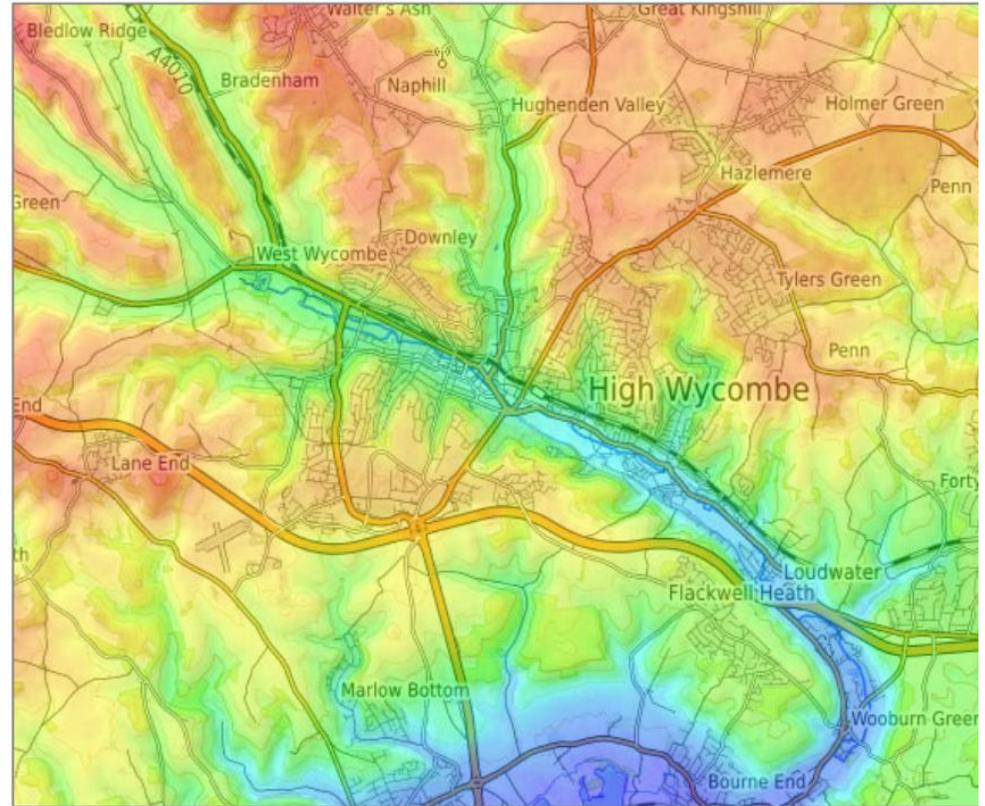


Figure 3: Heatmap of the local topography of High Wycombe (source: Open Street Map)

Demography

Population

The *Wycombe District Local Plan (2019)* notes the population of the urban area of High Wycombe as over 90,000. This is based on the geography as defined in Figure 4. The population density is greater in the central, northern (around Totteridge and Micklefield) and western (around Sands, Desborough and Downley) parts of the town.

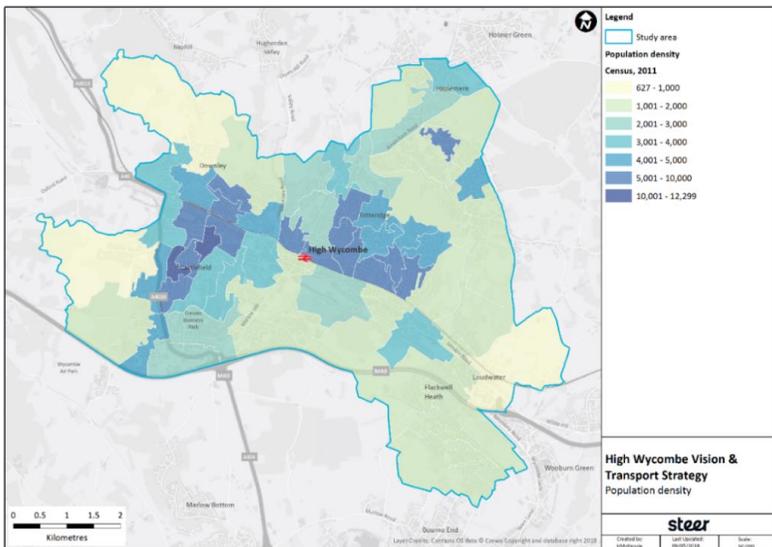


Figure 4: Population density (source: Census data, 2011)

Deprivation

The Index of Multiple Deprivation (IMD) measures relative levels of deprivation at a Lower Super Output Area (LSOA) level, based on factors such as income, employment, education and health. The *High Wycombe Community Board Public Health Dashboard* identifies the High Wycombe area as having a high IMD score of 15.7 (Buckinghamshire as whole has a IMD score of 10.1).

Levels of deprivation are variable across High Wycombe, with some areas in generally low deprivation and other pockets of higher deprivation. In particular, Castlefield is within the 20% most deprived areas in the country, and several other areas of the town are within the 40% most deprived. The most deprived areas are also typically some of the most densely populated areas within the town.

Figure 5 shows the IMD ranks within High Wycombe.

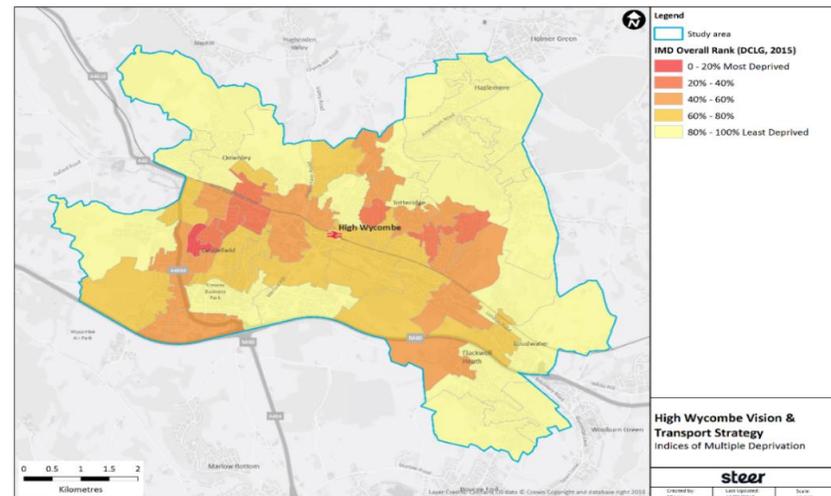


Figure 5: IMD overall rank (source: Census data, 2011)

High Wycombe LCWIP

Buckinghamshire Council's Levelling Up Framework, '*Opportunity Bucks – Succeeding for All*', aims to address disparities between Buckinghamshire communities. The programme identifies the following six wards in High Wycombe where parties will be brought together to tackle local priorities for improving standards of living, safety and pride of place, and health and wellbeing:

- Abbey;
- Booker, Cressex & Castlefield;
- Ryemead & Micklefield;
- Terriers & Amersham Hill;
- Totteridge & Bowerdean;
- West Wycombe

Public health

The High Wycombe Community Board Public Health Dashboard provides a high-level overview of health and wellbeing indicators. The High Wycombe area has:

- A younger age profile compared with Buckinghamshire overall

	High Wycombe	Buckinghamshire average
Population < 5 years old	7.6%	6.0%
Population > 65 years old	12.1%	18.7%

- The most ethnically diverse population in Buckinghamshire

	High Wycombe	Buckinghamshire average
Black, Asian and Minority Ethnic (BAME) population	36.3%	13.6%

- A higher proportion of physically inactive adults

	High Wycombe	Buckinghamshire average
Physically inactive adults	24.5%	16.5%

- The highest score on the national Index of Multiple Deprivation (IMD) measure in Buckinghamshire (higher score indicates a greater level of deprivation based on several aggregated indicators)
- A lower life expectancy for both men and women compared with the Buckinghamshire average (but slightly higher than the England average for both)

Transport Context

Trip attractors and generators

Key trip attractors in High Wycombe, and their relationship to population density, are shown in Figure 6.

Most local amenities are located around the town centre, railway station, along the A40/West Wycombe Road and near Handy Cross Hub. Whilst there are some areas which are under-served by local facilities, in areas where there are **higher population densities** these are within acceptable walking and cycling distances to the town centre (for example, Desborough, Totteridge and Micklefield).

Acceptable distances are typically considered to be 2km for walking, 7.5km for cycling, and 15km for E-bikes, with an allowance for changes in topography.

Therefore, there are opportunities to encourage greater movement by active modes by focusing on the quality and connectivity of the infrastructure between these areas and key services and destinations.

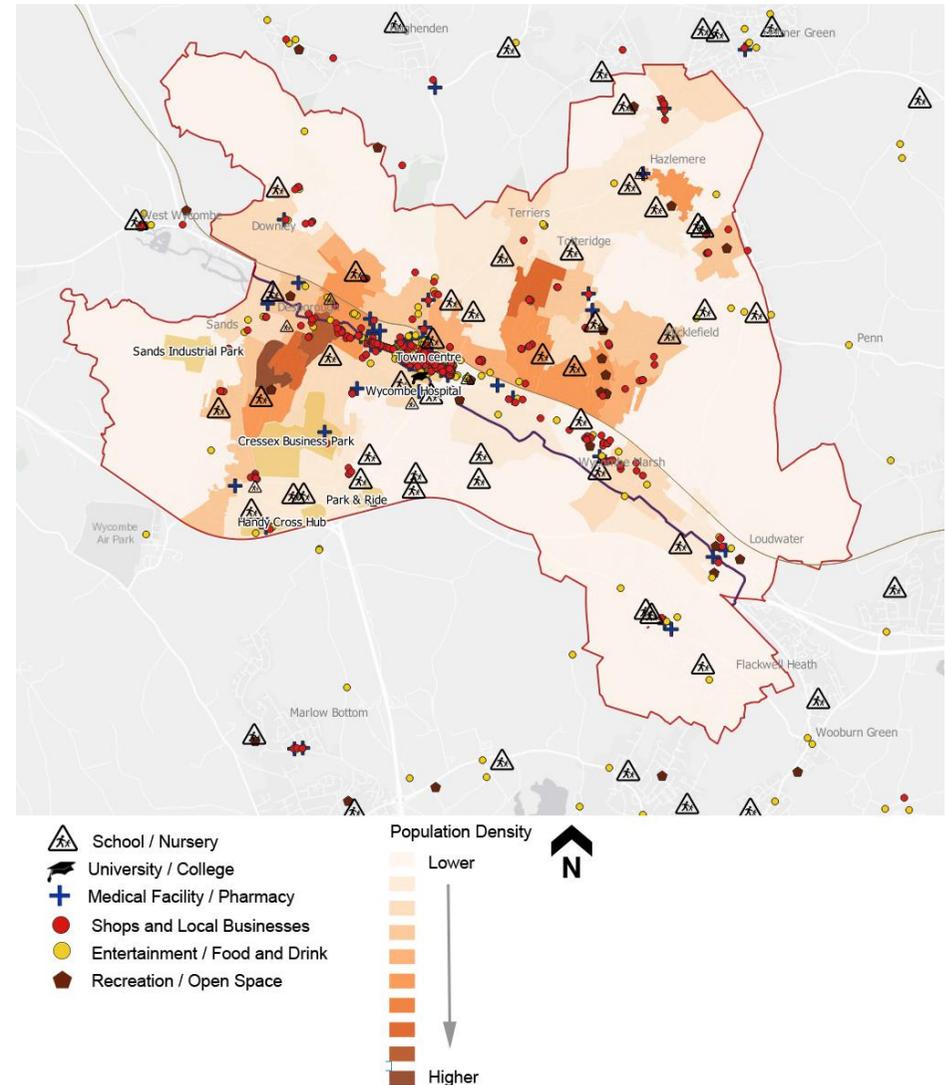


Figure 6: Distribution of local attractors relative to population density

High Wycombe LCWIP

Travel patterns

Figure 7 and Figure 8 show journeys to work originating and ending in High Wycombe (Census, 2011). 2011 Census data is used as 2021 Census data was not available at the time the LCWIP was developed.

These figures show that the majority of residents work locally, within High Wycombe itself or in a nearby town. For individuals commuting into High Wycombe, there is a strong pattern of local trips, with the majority of workers coming from High Wycombe or adjacent towns.

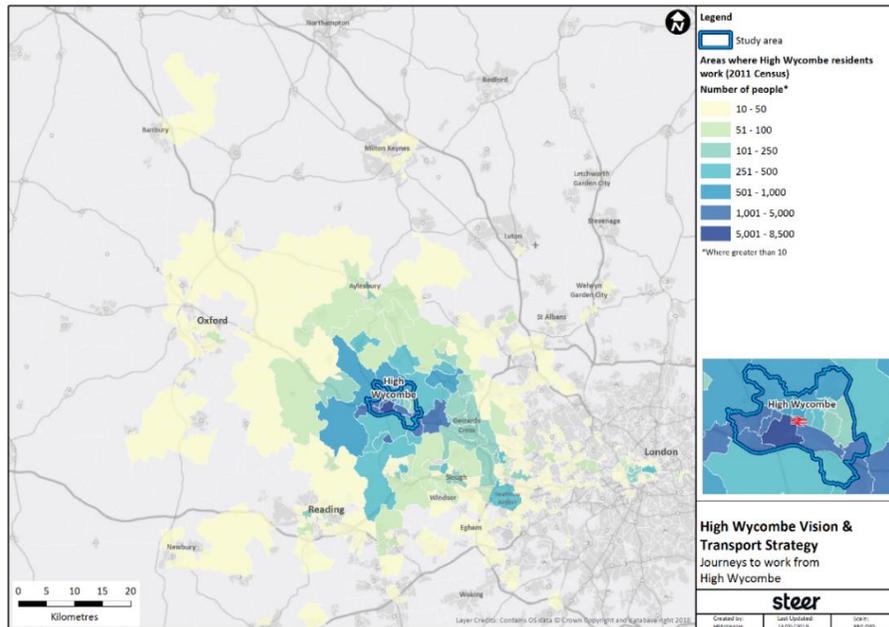


Figure 7: Journeys to work from High Wycombe (source: Census 2011)

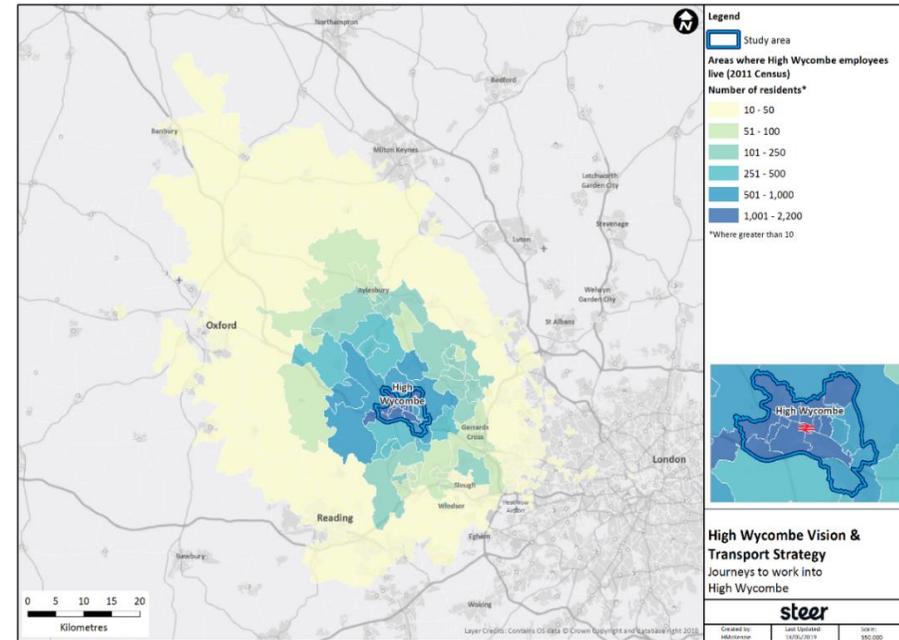


Figure 8: Journeys to work to High Wycombe (source: Census 2011)

The top destinations of journeys to work for High Wycombe residents are listed below. The data shows that over half of High Wycombe residents work within the town itself.

- Wider High Wycombe area (56%), including 43% within High Wycombe town centre
- Former Chiltern area (including Amersham and Chesham) (6%)
- Former South Bucks area (including Marlow and Bourne End) (5%).

High Wycombe LCWIP

The mode of transport for journeys to work varies significantly depending on destination. There is a high rail mode share (c. 80%) for residents commuting to central London, whereas for residents commuting within High Wycombe itself, there is a high car mode share (61%) and a moderate walking mode share (19%).

There is a very high car mode share for residents commuting to nearby towns, ranging between 80-90%. Bus mode share is less than 10% for all destinations. Cycle mode share is consistently very low across all commuting destinations, and typically varies between 0-1%, with cycling trips in High Wycombe having the highest mode share of 2%.

Figure 9 shows the mode split of the journey to work data for residents who also work in High Wycombe. Almost two-thirds of these journeys were undertaken by car (either as driver or passenger), and approximately one quarter were on foot.

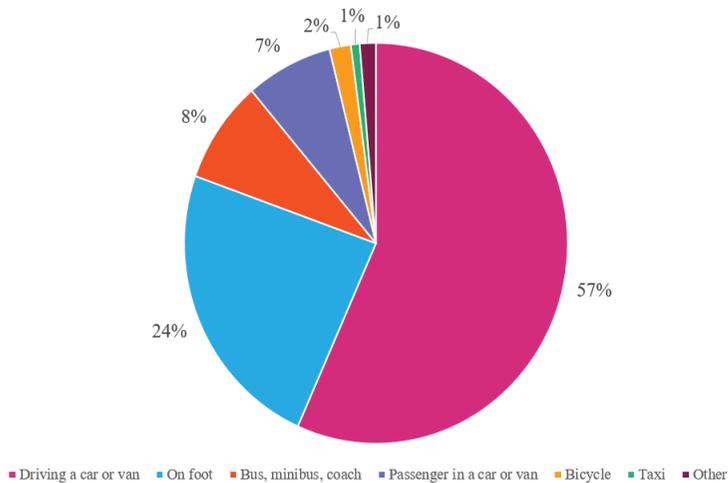


Figure 9: Mode of transport for journeys to work originating and ending in High Wycombe (source: 2011 Census)

Data from the 2021 Census shows that 85.0% of High Wycombe households have access to one or more cars, which is higher than the South East average (83.1%) and the national average (76.5%).

Air quality

In 2017 it was found that substantial areas adjacent to the town's main arterial roads, along with the length of the M40, exceeded national limits of Nitrogen Dioxide (NO₂) (annual mean). An Air Quality Management Area (AQMA) covering the town centre and main arterial roads was established, as shown in Figure 10.

The Wycombe District Air Quality Action Plan (2018) and Air Quality Supplementary Planning Document to the Local Plan (2020) detail a series of measures required to improve air quality and mitigate its impacts. Many of these measures relate to encouraging walking, cycling and wheeling.

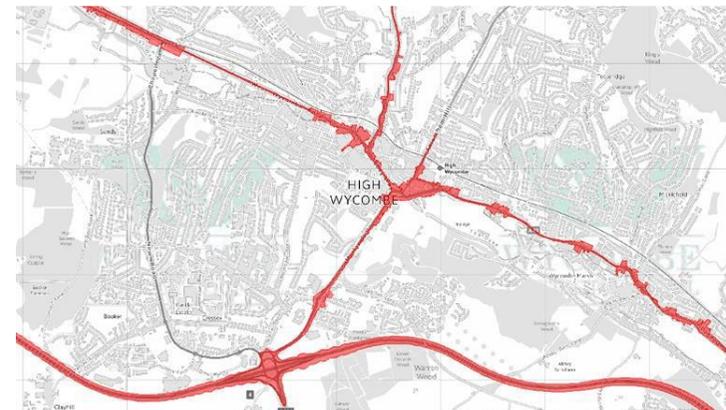


Figure 10: High Wycombe AQMA (declared on 22 December 2017)

2.2. Policy Context

Figure 11 provides a snapshot of key policies that have informed the High Wycombe LCWIP. The High Wycombe LCWIP supports the delivery of the themes and objectives of these policies, including accessibility, public health, climate change and air quality, mitigating development and place making.

National

In July 2020, DfT published '***Gear change: a bold vision for cycling and walking***', which outlines a vision for making England a great cycling and walking nation. Alongside this, DfT published updated cycle infrastructure design guidance '***Local Transport Note 1/20***'. The guidance states that local authorities should demonstrate that they have given due consideration to this guidance when designing new cycling infrastructure.

Strategic

Buckinghamshire's current ***Local Transport Plan 4 (LTP4)*** sets out the key policies and approach to transport in Buckinghamshire from 2016 – 2036, aligned with Council's Corporate Plan and vision. Policy 12 specifically states that the Council "*will look to develop the walking network and encourage walking, to help ensure it becomes one of the most convenient ways to make short journeys*", while Policy 13 "*looks to develop the cycling network through a combination of new infrastructure, maintenance and promotion*".

The *High Wycombe LCWIP* and ***High Wycombe 2050 Transport Strategy*** will form part of a suite of more detailed place- and modally-focused sub documents to Buckinghamshire's forthcoming Local Transport Plan 5, currently in development.

Local

As a supporting plan, the *High Wycombe LCWIP* has been developed in line with the 2050 Vision and Themes of the ***High Wycombe Transport Strategy***:

- Vision: "*By 2050, High Wycombe will be among the best connected and most innovative towns in the Thames Valley, where all journeys, from start to finish, are low emission, seamless, and safe for all residents, businesses and visitors*".
- Themes: *Connecting Locally; Connecting Regionally; Connecting Green Spaces*.

The *High Wycombe Transport Strategy* initiatives listed in Figure 12 have all been considered when developing the High Wycombe LCWIP. The LCWIP also acknowledges the importance of maximising opportunities for E-bike and cycle hire schemes in High Wycombe (initiatives *SMH5* and *SHM6*).

Other relevant local policies include the ***Wycombe District Local Plan*** and the ***Reserve Sites Framework***, which have been reviewed to consider current and planned development sites and proposed walking and cycling infrastructure. Additionally, the ***Regeneration Bucks framework and High Wycombe Regeneration Strategy*** outline an ambition for High Wycombe, underpinned by a principle 'to create a network of high quality, well planned road networks with attractive streets and spaces, and cycling routes that are safe to use, well connected and accessible'.

High Wycombe LCWIP



Figure 11: Policy context

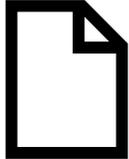
Reference	Description
BC1	High Wycombe modal shift schemes
WC1	Town centre wayfinding signage scheme
WC2	'Healthy Neighbourhood' schemes
WC3	Dedicated active travel infrastructure on arterial corridors and key routes as well as 'quiet way' style networks

Figure 12: High Wycombe 2050 Transport Strategy initiatives

3. Gathering Information and Data

3.1 Data sources

Numerous data and information sources have considered and assessed when developing the High Wycombe LCWIP, including:

	<p>General context data</p>	<ul style="list-style-type: none"> • Topography • Demography (e.g. population density, Index of Multiple Deprivation) • Locations and types of key attractors, trip generators and amenities 		<p>Policy, plans and guidance</p>	<ul style="list-style-type: none"> • As shown in Figure 11
	<p>Transport specific data</p>	<ul style="list-style-type: none"> • Travel to work data • Collision data • Cycle count data 		<p>Networks and projects</p>	<ul style="list-style-type: none"> • Existing transport infrastructure and networks • Known route and network aspirations • Other projects underway
	<p>Stakeholder engagement inputs</p>	<ul style="list-style-type: none"> • WidenMyPath • Travel perception survey • Comments received through workshops • Public consultation responses 		<p>Case Studies</p>	<p>With a specific focus on areas with hilly topography</p>

These data sources are explored further in the following chapters.

3.2 Existing network and infrastructure review

Figure 13 shows the ‘baseline’ transport network, including existing active travel and other key transport infrastructure, points of interest and reserve sites within the High Wycombe LCWIP study area.

This map provides a reference for this section of the LCWIP, which reviews the existing network and considers potential future demand.

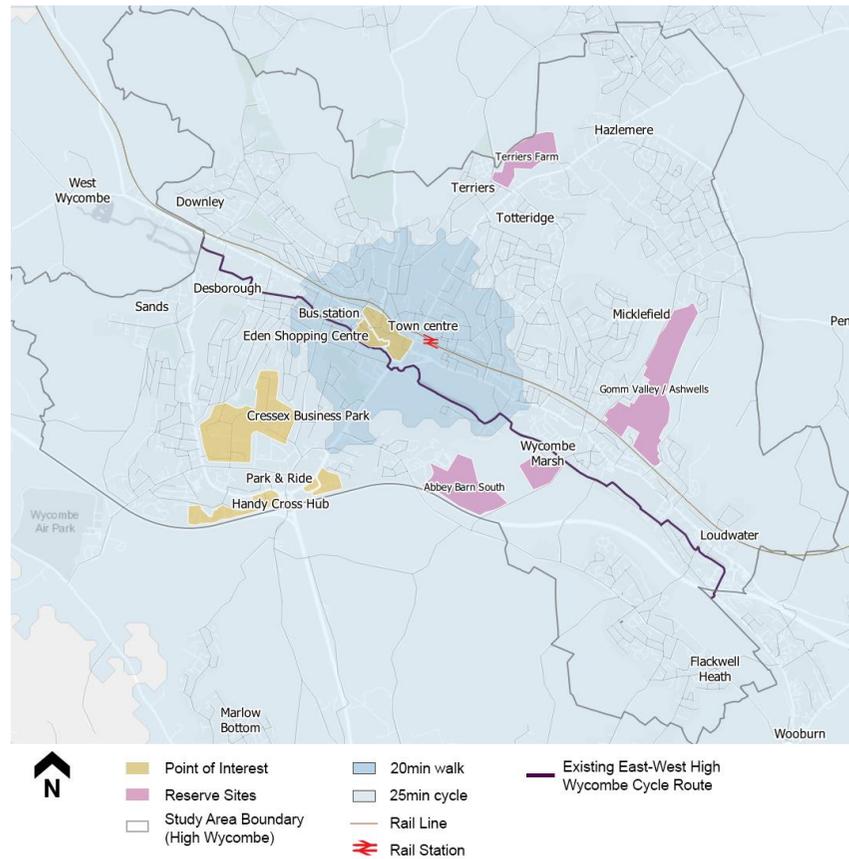


Figure 13: Baseline summary map - existing transport infrastructure

Transport infrastructure

The key road links are:

A40 Oxford Road	connecting to Downley, Desborough, West Wycombe and Sands Industrial Estate
A404 Amersham Hill	connecting to Totteridge, Terriers and Hazlemere
A40 London Road	connecting to Micklefield, Wycombe Marsh and Loudwater, and also to the Rye
A404 Marlow Hill	connecting to the Pine Trees development, the Handy Cross Hub and Cresssex Business Park

- The M40 lies to the south of High Wycombe and marks the southern boundary of the urban area. It provides connections to Oxford, Birmingham and Milton Keynes to the west and north, and to Heathrow airport, London to the east.
- The Chiltern Railways line passes through High Wycombe, providing connections to London, Oxford, Aylesbury, Warwick, Solihull, Birmingham and Kidderminster. The station is located just east of the town centre and provides 106 gas-assisted two-tier cycle racks.
- The bus and coach station is located on the western side of the town centre, on Bridge Street. It takes roughly 12 to 15 minutes to walk between the bus station and the train station, however the routing is not direct. Local bus services are quite comprehensive and frequent, especially during weekdays, however the evening and weekend frequency is lower. A 3-year trial demand-responsive bus service, ‘Pick Me Up’, currently operates in High Wycombe.
- The Park and Ride is located at Handy Cross Hub. There is a bus route serving Cresssex Business Park, Wycombe Hospital, the railway station and bus station, typically at a 20minute frequency.

Cycling and walking infrastructure

A review of the existing cycling and walking networks in the High Wycombe LCWIP study area identified that the current provision is highly variable.

The walking network is generally adequate, with footways typically provided on both sides of most roads. However, the quality and width of this infrastructure varies considerably. Whilst the town centre has several streets that are designated pedestrian zones (Paul's Row, White Hart Street, Church Street and High Street), footway provision varies in residential areas, with many streets having footways on one side of the road only.

The existing dedicated cycle infrastructure in High Wycombe is very limited. There are no National Cycle Network routes through the town, although the Chilterns Cycleway passes through West Wycombe. There is one cycle route that runs parallel to the A40 (the 'east-west' cycle route), between Desborough and Loudwater, offering a quieter but slightly less direct alternative to the A40 itself. This route has recently been upgraded with additional wayfinding signs, improved accessibility, refreshing of existing markings and installation of solar studs.

There is also a protected cycle lane southbound on the A40 flyover, adjacent to Eden Shopping Centre. However, it connects two large roundabouts with no dedicated cycling infrastructure at either end.

There are isolated signalised junctions around the town where advanced stop lines are provided, however they do not currently form part of a cohesive network.

Cycle parking is primarily concentrated around the town centre and the Handy Cross Hub. However, the lack of formal cycle parking around other key attractors hinders the ability of people to make cycle trips to other destinations and for more diverse purposes.

There are several Public Rights of Way (PRoW) in High Wycombe, with a higher concentration on the outskirts of town. There is often limited connectivity between PRoW routes, particularly near the town centre.

3.3 Future network and potential demand

Route and network aspirations

Various existing route feasibility studies have been considered in developing the High Wycombe LCWIP. Consideration has also been given to opportunities for enhancing High Wycombe's connectivity with surrounding settlements and with the emerging '*Buckinghamshire Greenway*' vision for an accessible walking and cycling route that will stretch from Silverstone and Brackley to Uxbridge and Heathrow.

The *Buckinghamshire Greenway* (see Figure 14: Buckinghamshire Greenway) will feature in the Council's forthcoming *Buckinghamshire LCWIP*, forming the key spine of a future countywide active travel network. The *Buckinghamshire LCWIP* will integrate 'town LCWIPs', whilst focusing on identifying opportunities for strategic connections between settlements and to key destinations, including employment, education, public transport hubs and networks, town and village facilities, countryside and visitor attractions and neighbouring authority areas.

High Wycombe LCWIP

Buckinghamshire Greenway

The Buckinghamshire Greenway is an accessible, high-quality active travel route that will connect people and communities running the full length of the county.

It will be the walking and cycling backbone for everyday trips in Buckinghamshire, connecting with both existing active travel routes and other new routes currently in development. The Greenway will also link up with rail and bus services.

The Greenway will:

- Open up new opportunities for the people of Buckinghamshire to access education and employment;
- Provide an attractive and safe active travel alternative to local car journeys;
- Be a local leisure and tourism asset for Buckinghamshire, running through the Chilterns AONB and to key tourist destinations.

The Greenway also supports the vision for a north-south National Cycleway connecting London and the West Midlands, and communities in between.

Buckinghamshire Council is working with communities and local organisations, Sustrans and the Department for Transport to bring the Buckinghamshire Greenway vision to life.



Buckinghamshire Council

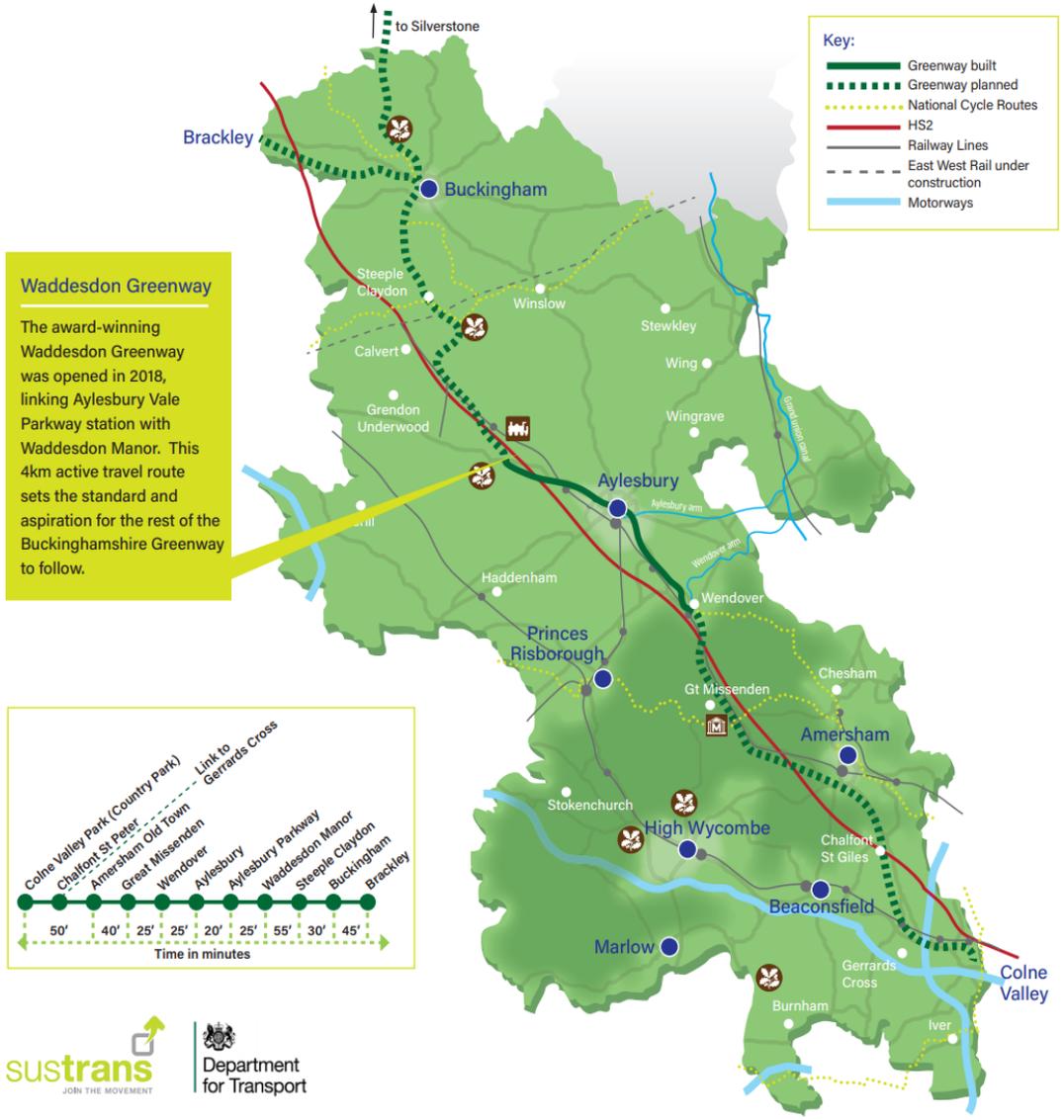


Figure 14: Buckinghamshire Greenway

Future demand

Propensity to Cycle Tool (PCT)

LCWIP guidance recommends the use of the DfT-funded *Propensity to Cycle Tool (PCT)*. The tool includes an interactive map showing the current and potential future distribution of commuter cycling trips under different potential future growth scenarios. It uses 2011 Census Journey to Work data (2021 data is not available) as inputs, and provides numerical and graphical outputs, including estimated numbers of cyclists in an area, along straight 'desire' lines and along routes. The tool has been used in the High Wycombe LCWIP to examine the potential for cycling locally and plan the cycle network, identifying potential demand for cycling across the study area, under different scenarios, and assisting with scheme prioritisation.

The following three scenarios have been considered, using the Lower Super Output Area (LSOA):

- 2011 Census – based on current levels of cycling as per the 2011 Census data for method of travel to work
- Government target of gender equality – a scenario in which women are as likely as men to cycle
- Go Dutch – a scenario that models the level of cycling that could be expected if people cycled as much as in the Netherlands, allowing for differences in the distribution of hilliness and trip distance.

A review of existing cycling demand highlighted very low demand across High Wycombe (typically 0-3% of all commuting journeys), however the PCT identified opportunities for improvement. In particular, the 'Go-Dutch' scenario shows potential for increases of 10% to 20% in commuter cycling in some areas of High Wycombe.

Route evaluation tools

This review also highlighted that there are various route evaluation tools that can be used during subsequent stages of the project. This included the Route Selection Tool (RST) and the Walking Route Audit Tool, as recommended in the LCWIP guidance, as well as the Healthy Streets Framework and the Sustrans Infrastructure Impact Tool.

These tools all provide assistance, in different ways, for planning the LCWIP walking, cycling and wheeling networks, identifying preferred routes, ensuring the proposed routes are fit-for-purpose and assisting with scheme prioritisation.

Strategic development sites

The LCWIP network has been developed with consideration given to identified future growth areas set out in the *Wycombe Local Plan*.

It will be expected that as part of any development brought forward across the plan period, contributions would be sought to mitigate the effects of the development on the transport network and to fund improvements to the walking and cycling network and to assist in the delivery of the LCWIP networks identified within this plan.

High Wycombe LCWIP

The *Wycombe District Council Core Strategy (2008)* identifies five strategic development sites in the High Wycombe area, known as Reserve Locations for Future Development (referred to herein as Reserve Sites). These sites aim to contribute towards meeting local housing needs. The main Reserve Sites required to provide new or improved infrastructure in the High Wycombe LCWIP study area are:

- Abbey Barn South
- Abbey Barn North
- Gomm Valley
- Ashwells
- Terriers Farm.

The reserve sites are shown in Figure 15.

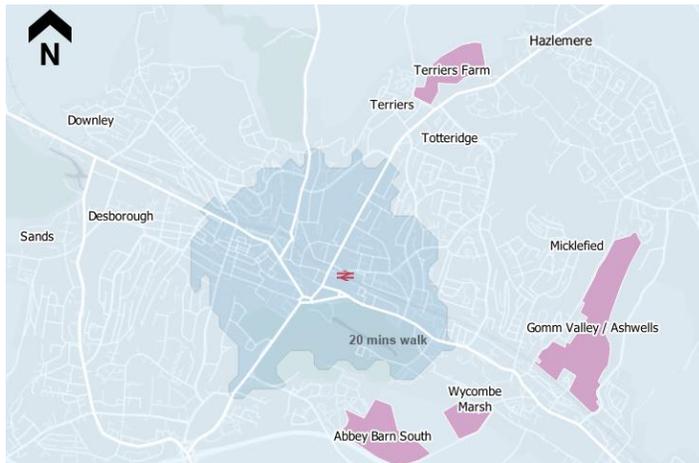


Figure 15: Reserve site locations

In addition to the Reserve Sites, the *Wycombe Local Plan (2019)* identifies numerous sites for development, including mixed use, housing and employment, as shown in Figure 16.

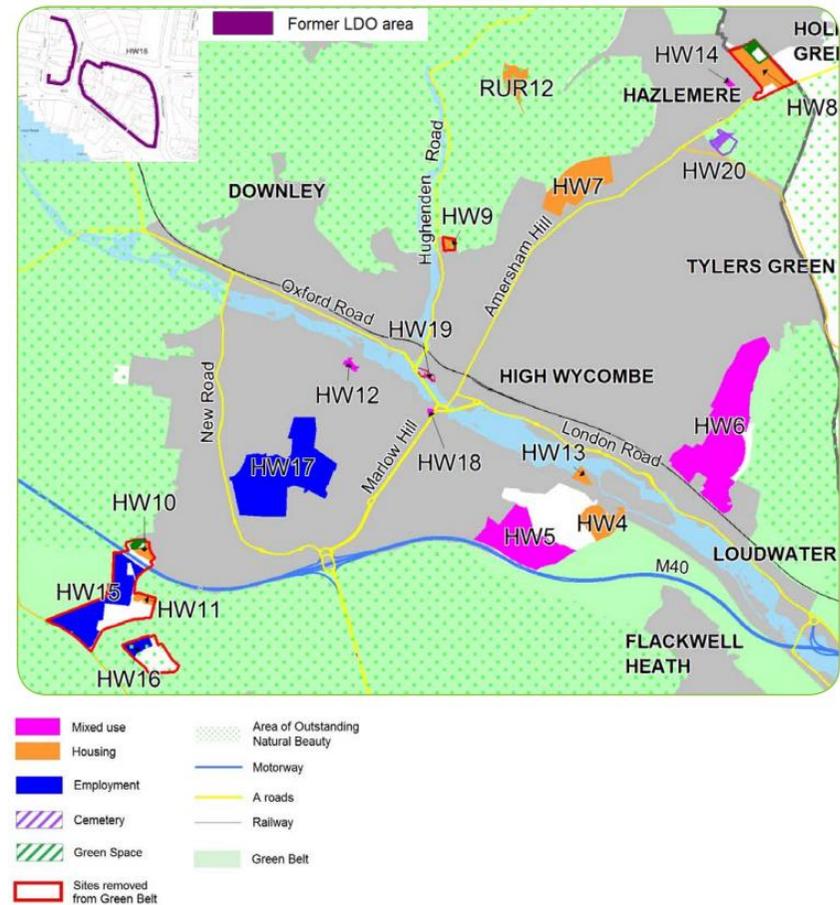


Figure 16: Main development proposals in High Wycombe (source: Wycombe Local Plan)

3.3 Stakeholder engagement

A three stage engagement-led approach has informed the High Wycombe LCWIP over the period 2020-2023. A wide range of stakeholders were engaged with from the outset of the project. This was to ensure that local knowledge informed the development of the LCWIP and proposed network.

The following engagement activities have been undertaken and the key findings and outcomes have all contributed to the overall LCWIP.

Stage 1: Setting the baseline and understanding local appetite

- Press release to publicise the project.
- Online travel perception survey to understand local residents' and visitors' travel behaviours, perceptions and aspirations.
 - **64%** of respondents stated they would like to **walk more**;
 - **44%** of respondents stated they would like to **cycle more**;
 - **41%** of respondents stated they would like **to travel less by private motorised vehicle**.
- WidenMyPath tool to collate over 300 local requests for infrastructure improvements during the COVID-19 pandemic.

Stage 2: Developing the LCWIP

- A series of in-depth workshops with Buckinghamshire Council local members and officers and local stakeholders to provide check-in points during the development of the High Wycombe LCWIP.
- Local stakeholders engaged include representatives from key employers, interest groups and partner organisations in High Wycombe.



Stage 3: Public consultation and finalising the LCWIP

- Public consultation on the draft High Wycombe LCWIP, with over 200 responses received. Consultation responses identified overall support for the proposed LCWIP network and network planning concepts:

To what extent do you agree or disagree that each of the following concepts would encourage walking and cycling?

- **Walkable Core: 82%** strongly agree or agree;
- **Healthy Neighbourhoods: 72%** strongly agree or agree;
- **Wider Network and Strategic Routes: 69%** strongly agree or agree;
- **A Cohesive and Connected Network: 69%** strongly agree or agree;
- **Main Radial Routes, Key Links and Hubs: 67%** strongly agree or agree.

- Consultation responses used to update and finalise the LCWIP.

3.4 Challenges and Opportunities

This section summarises key challenges and opportunities identified through Stage 3 (Gathering information and data) of the development of the High Wycombe LCWIP.

Challenges

The data gathering process identified a number of barriers to increased walking, cycling and wheeling in High Wycombe, including:

- Challenging, hilly topography and implications for accessibility
- Lack of dedicated infrastructure, particularly for cycling, and varying quality of existing infrastructure
- Lack of public transport provision driving high car dependency
- Heavy car-reliance of residents (there are high levels of car ownership in High Wycombe (85.3%), compared to the national average (74%)), and low baseline cycling levels, with associated challenges of behaviour change
- Significant severance through the town centre caused by the A40 and the railway line
- Areas of the town with constrained highway width
- Pressure on existing infrastructure from current and planned development, and from forecast traffic growth

Opportunities

Numerous opportunities have also been identified, including:

- To harness increased local and national support for walking, cycling and wheeling
- To strengthen the existing appetite for more trips to be undertaken by walking, cycling and wheeling, as identified by local residents in the travel perception survey and during workshop sessions
- To encourage more uptake in walking, cycling and wheeling for local trips and recreational purposes
- To encourage more trips to, from and within the town centre by walking, cycling and wheeling
- To encourage more commuters to travel to the railway station by walking, cycling and wheeling
- To introduce dedicated, high-quality infrastructure that is well connected and coherent, and that links to key population centres, land uses and trip generators and attractors
- To benefit from the rising e-bike awareness and ownership to overcome topographical challenges and facilitate more cycling trips among people of all abilities
- To support the forecast development growth whilst promoting healthy, sustainable and more connected communities

4. Network Planning Concepts

To achieve a comprehensive, cohesive walking, cycling and wheeling network for the High Wycombe LCWIP study area, five overarching concepts are used to identify required interventions at various spatial scales:

1. Walkable core
2. Main radial routes and key links
3. Healthy neighbourhoods
4. Wider network and strategic routes
5. A cohesive and connected network

These concepts are spatially represented in Figure 17 and each is explained in further detail below.

Each concept considers walking, cycling and wheeling and is broken down into 'sub-concepts' which help guide the network development process and prioritisation, detailed in Chapters 6 and 7.

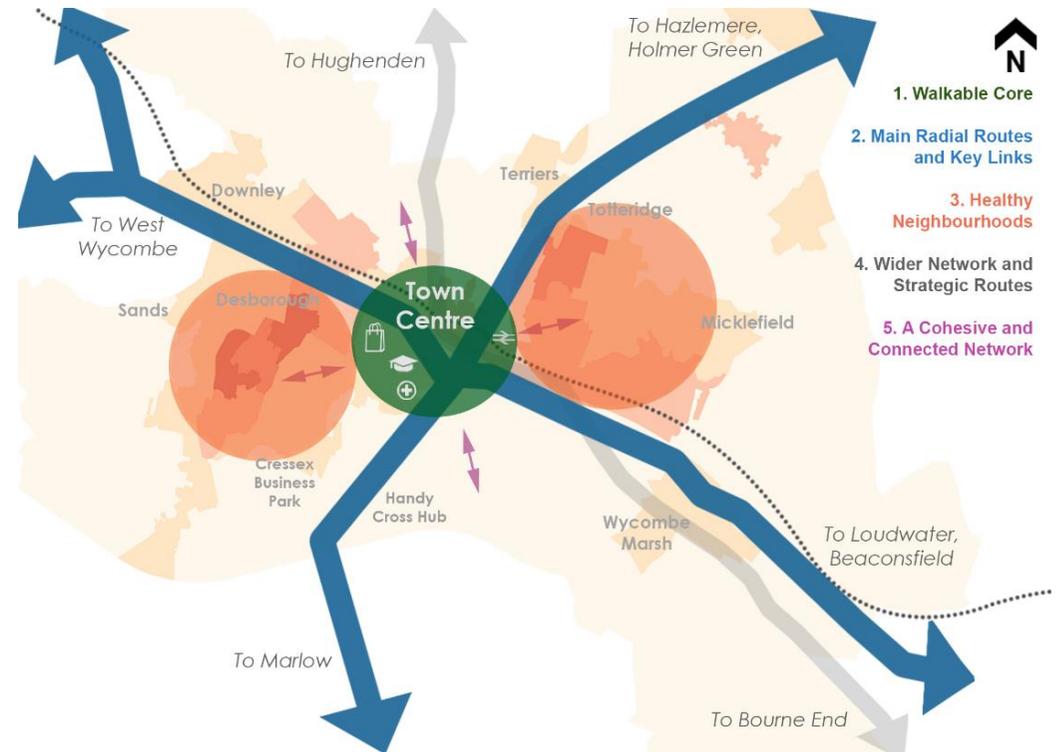


Figure 17: Network planning concepts

4.1 Walkable core – the heart of High Wycombe

Sub-concepts:

- 1a. Wayfinding and signage
- 1b. Placemaking and public realm improvements
- 1c. Infrastructure interventions

The walkable core considers how the town centre can become a more attractive and thriving place for walking, cycling and wheeling with an exemplar public realm, strengthening the local economy and improving connectivity. The concept supports *High Wycombe 2050 Transport Strategy (scheme reference WC1)* and the forthcoming *High Wycombe Regeneration Strategy*.

Key features and considerations:

- *Access and connectivity:* Reducing severance and improving connections with key destinations (such as transport and educational hubs) for all users.
- *Activity and liveability:* Supporting the use of active travel modes, improving environmental quality (green landscaping, air quality, lighting, seating and shade provision) and providing inclusive infrastructure to meet varied mobility requirements.
- *Improved wayfinding and signage:* Making the town centre easier to navigate for residents and visitors to the area.
- *Support economic regeneration:* Encouraging active travel journeys to/from and within the commercial areas of the town centre to support local businesses and future investment plans.
- *Cycle parking:* Providing a sufficient amount of safe, protected and high-quality cycle parking in key and easy to access locations to accommodate current and future demand and support interchange with other transport modes.



Figure 18: High Wycombe town centre

4.2 Main radial routes, key links and hubs

Sub-concepts:

- 2a. North-south strategic link
- 2b. East-west strategic link (existing)
- 2c. East-west strategic link (via A40)
- 2d. Daws Hill to Handy Cross Hub link
- 2e. Cressex Business Park
- 2f. Links to strategic development sites
- 2g. Public Rights of Way (PRoW) improvements

Whilst recognising their strategic importance and the need to retain their 'movement' function, this concept considers how the strategic road network and corridors in High Wycombe can provide infrastructure to support walking, cycling and wheeling to the north, east, south and west. It also considers ways to connect with routes and hubs that serve an important function. The concept supports *High Wycombe 2050 Transport Strategy (scheme reference WC3)*.

Key features and considerations:

- *Radial routes:* Based on its road network, High Wycombe can be split into four quadrants (i.e. north-south by the A404, and east-west by the A40). Each quadrant can be accessed either via these main roads and/or nearby quieter alternatives.
- *Key links and hubs:* There are various other existing and potential future links within High Wycombe, both to and between key residential areas, local centres, employment hubs and new development sites (e.g. Handy Cross Hub and Cressex Business Park).

For this concept, it is important to consider topography and ensure:

- *Inclusivity and access for all users:* This includes an appropriate allocation of space for people walking, cycling and wheeling, considering inclusive provision for families, wheelchair users and varied mobility requirements. This translates to dedicated infrastructure where appropriate and feasible, subject to further assessments.
- *Availability of resting points,* where possible and appropriate, ensuring their positioning does not compromise minimum footway width.
- *Availability of crossings,* outside key attractors and at key intersections, using appropriate crossing types and locations.
- *Wayfinding,* provided at key decision-making points such as intersections, showing the direction to key attractors.



Figure 19: North-south strategic link (existing)

4.3 Healthy neighbourhoods

Sub-concepts:

3a. Totteridge

3b. Desborough

This concept involves exploring ways that local neighbourhood streets can form a local network where walking, cycling and wheeling are encouraged. The concept is recommended in the *High Wycombe Transport 2050 Strategy (scheme reference WC2)*.

The Transport Strategy identifies five neighbourhoods where potential interventions could be explored: Desborough, Downley, Micklefield, Totteridge and Wycombe Marsh. The LCWIP focuses on Desborough and Totteridge as priorities for intervention due to the population density, indices of deprivation, highest activity need and the greatest opportunities for improvement.

It is recommended that similar principles could be developed for future schemes in Downley, Micklefield and Wycombe Marsh. Further information is included in sub-concept 5b.

Key features and considerations:

- *Community engagement*: To understand local issues and opportunities and inform interventions. Alongside this, behaviour change measures can be developed and delivered with local input.
- *Local services and destinations*: Improving connections to local services and key attractors in the vicinity, creating strategic, safe and enjoyable routes.
- *Street environment*: Creating environments where people feel encouraged and safe to walk, cycle and wheel, e.g. through traffic calming measures or 'softer' measures.

Appropriate interventions are to be determined through further local assessments, but could involve:

- *Crossing provision*: Provided through footway build outs, informal or priority crossings, ramps, etc.
- *Traffic calming measures*: Including speed humps, build outs and landscaping.
- *Ensuring quality of footways*: Aiming for a minimum 1.8m width (2m wherever possible), ensuring quality of pavement and continuity and inclusive crossings.
- *Landscaping* and other public realm interventions.
- *Speed reduction*: In conjunction with traffic calming measures, where appropriate and in line with Council policy.



Figure 20: Examples of interventions for healthy neighbourhoods

Development and delivery

Proposals are to be developed further through local community engagement and feasibility studies to identify precise interventions, locations and any phasing / delivery requirements.

4.4 Wider network and strategic routes

Sub-concepts:

- 4a. Hughenden to Abbey Barn Lane link
- 4b. High Wycombe to Bourne End link
- 4c. Links to other settlements

This concept looks at enhancing connectivity with the wider geographical area surrounding High Wycombe. This is an important aspect of linking local settlements and enabling journeys between these locations to be made by walking, cycling and wheeling.

The majority of these settlements are within an acceptable distance from High Wycombe. Table 1 shows distance groupings from the surrounding settlements to High Wycombe railway station. However, it should be noted that these distances are indicative, given that not all users will be travelling to/from High Wycombe town centre, with many likely to be travelling between settlements.

Table 1: Approximate distance from High Wycombe station to surrounding settlements

Distance*	Settlements
≤5km	Hazlemere, Hughenden Valley, Sands, West Wycombe, Wycombe Marsh, Abbey Barn Lane, Loudwater
>5km, ≤8km	Holmer Green, Flackwell Heath, Wooburn Green, Penn, Saunderton
>8km	Bourne End, Stokenchurch

*Distance is an approximate measurement from the centre of the settlement to High Wycombe railway station.

Based on the defined study area and Table 1, indicative potential links to the following settlements have been considered in the LCWIP:

Bourne End, Flackwell Heath, Hazlemere, Holmer Green, Hughenden Valley, Loudwater, Penn, Sands, Saunderton, Stokenchurch, West Wycombe, Wooburn Green, Wycombe Marsh

The High Wycombe LCWIP also identifies indicative potential links towards the surrounding settlements of Marlow Bottom and Beaconsfield, which are on the border or fall outside of the LCWIP study area.

For all potential links, feasibility work is required to investigate options.

Opportunities for wider inter-settlement connectivity are being considered in the Buckinghamshire LCWIP, currently in development.



Figure 21: Example of a local Greenway style route (Phoenix Trail, Princes Risborough-Thame) (source: Sustrans)

4.5 A cohesive and connected network

Sub-concepts:

- 5a. A40/A404 roundabout and A40 Abbey Way flyover
- 5b. Other links and point interventions
- 5c. Behaviour change measures

The previous four network planning concepts focus on specific locations or links. The final concept aims to bring these together to produce a singular, cohesive and connected network, and considers interventions across the study area, including:

- Recognition of future opportunities for the A40 Abbey Way flyover.
- Various other interventions, including quietways and new and improved junctions and crossings.
- Behaviour change measures. It is recognised that while infrastructure is crucial to enabling and encouraging more active travel journeys, this must be supported by supporting measures. Further information is provided in section 5.c.



Figure 22: Example of a quietway

5. Toolkit of Interventions

A range of potential improvement options have been identified which can be applied when delivering the proposed network across High Wycombe.

These potential improvement options are summarised in a Toolkit of Interventions in **Appendix B**.

The potential improvement options are grouped into the following 6 categories that collectively contribute to a comprehensive and inclusive walking, cycling and wheeling network. Each category is colour coded in the Toolkit:

- *Junctions and crossings*
- *Links*
- *Traffic management*
- *Parking and place*
- *Access and inclusion*
- *Hilly topography*

To support the potential improvement options for hilly topography, Section 5.1 includes further data and case studies.

Using the Toolkit of Interventions, Chapter 6 shows the overall proposed LCWIP network and explains its component parts ('sub-concepts').

	Junctions and crossings
	Links
	Traffic management
	Parking and place
	Access and inclusion
	Hilly topography

5.1. Hilly topography

Hilly topography is often cited as a significant barrier to enabling greater walking, cycling and wheeling levels due to increased physical exertion, longer travel time and potential discomforts, discouraging uptake, particularly those with limited mobility levels. These form potential challenges to promoting active travel in High Wycombe. This section summarises data and outlines case studies of hilly towns, to be considered alongside the measures recommended in the Toolkit of Interventions (Appendix B).

When designing infrastructure, providing space for all people to travel comfortably at different speeds as well as taking a break is beneficial to encourage walking, cycling and wheeling in places with hilly topography. Incorporating landscaping and greenery, street amenities and resting points can enhance the experience and make it more visually appealing and comfortable to travel and take breaks.

DfT Local Area Walking and Cycling Statistics: England for 2014/15

In 2016, The DfT published a Statistical Release with a variety of information about people walking and cycling within England in 2014/15. Of particular relevance to the High Wycombe LCWIP are the correlations between elevation change and walking and cycling trips (for recreational and utilitarian purposes), as shown in Table 2.

While hilly topography is often perceived as a significant barrier to active travel, the DfT statistics indicate that, in reality, the barrier can be much less significant, in that there is only a slightly negative correlation between utilitarian cycling trips and hills, and no relationship for recreational trips. In the case of recreational walking trips, the statistics show that hilly topography is correlated with a greater percentage of trips¹.

Oxford LCWIP (2020)

The Oxford LCWIP identified a significant propensity to increase cycling in Oxford city, however there were significant barriers to this, most notably the steep topography, which is reinforced in some areas by high levels of deprivation. To overcome these challenges, the LCWIP proposes a specific policy focused on e-bikes, designing for maximum e-bike speeds and designing cycle lanes/paths differently for uphill and downhill segments (to take into account the different requirements of each).

Table 2: Correlation between elevation change and walking and cycling recreational and utilitarian trips

Trip purpose	Walking	Cycling
Recreational	Positive correlation (an estimate 1.7% increase per 100m elevation change)	No relationship
Utilitarian	Negative correlation (an estimate 1.4% decrease per 100m elevation change)	Slightly negative correlation (an estimate 0.8% decrease per 100m elevation change)

E-bikes

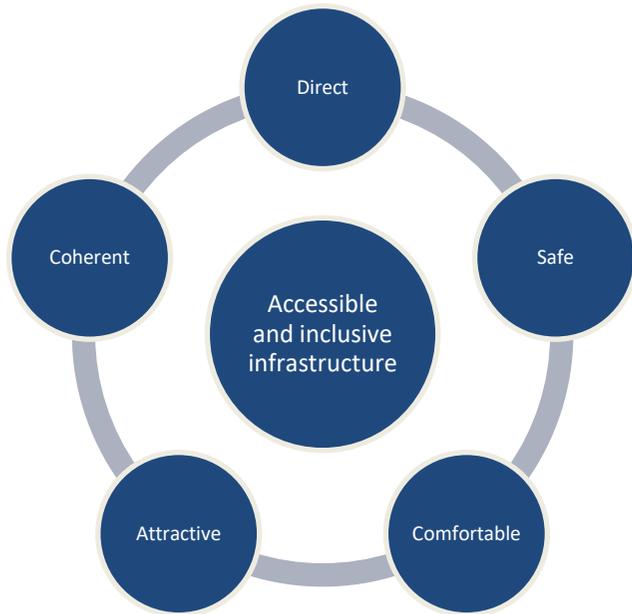
The availability of e-bikes can be beneficial in areas of hilly topography, giving the user assistance when needed to cycle up steep inclines. Further information is included in section 5.c (behaviour change initiatives).

6. LCWIP Network

6.1 Introduction

This chapter outlines the approach taken to develop the proposed LCWIP network for High Wycombe. The network planning process has considered walking, cycling and wheeling throughout.

When identifying and comparing potential routes and interventions for inclusion in the future network, the Department for *Transport's Route Selection Tool (RST)* has been used to assess how well a route meets the following core design outcomes:



6.2 Design guidance

Local Transport Note (LTN) 1/20 provides guidance for the design and delivery of high-quality inclusive infrastructure and is a requirement for accessing government funding. Buckinghamshire Council will seek to design and deliver infrastructure in accordance with these criteria and the principles set out in *Local Transport Note 1/20*. Where this is not possible, the council will endeavour to follow best practice.

The High Wycombe LCWIP has been developed based on the core design principles outlined in LTN 1/20, shown in Table 3.

Criteria	Description
Coherent	Routes and networks should be designed to allow people to easily travel from residential areas to destinations using routes that connect, are simple to navigate and are of a consistently high quality.
Direct	Pedestrians are moving under their own efforts and therefore they require routes and networks which are direct and follow natural desire lines. Cycle routes should be at least or more direct as vehicular routes.
Safe	Safety (both actual and perceived) is an essential user need, both in the form of preventing physical harm through collisions with vehicles, and minimising threats to personal safety. Cycle infrastructure must be safe and perceived to be safe.
Comfortable	Comfort is influenced by a range of factors including the basic design of the route – its width as related to the number of users and the gradient and quality of the surface – as well as elements such as tactile paving, street furniture, drainage, cleanliness and lighting.
Attractive	Attractive routes not only encourage more people to walk and cycle but can also contribute to the overall quality of an area and help to create an improved sense of place through the creation of more accessible public spaces where people want to spend time.

Table 3: Summary of LTN 1/20 Core Design Principles

6.3 Approach

The High Wycombe LCWIP has been developed using both a ‘top down’ and ‘bottom up’ approach.

Top-down: To develop a comprehensive understanding of the local context, an iterative layering process was followed, using all baseline data available in GIS, as illustrated Figure . This process identified where new or improved infrastructure would be best located. For the majority of locations, it was considered that this would be via the road network or the PROW network (with appropriate interventions).

Bottom-up: The first step in this process was to identify main barriers / severance in the existing network. The next stage was to focus on specific streets, junctions, and small geographical areas to identify potential improvements from a local level. For example, this included looking at local shops, schools and amenities and identifying the most suitable ways for residents to access these facilities (see Figure 24).

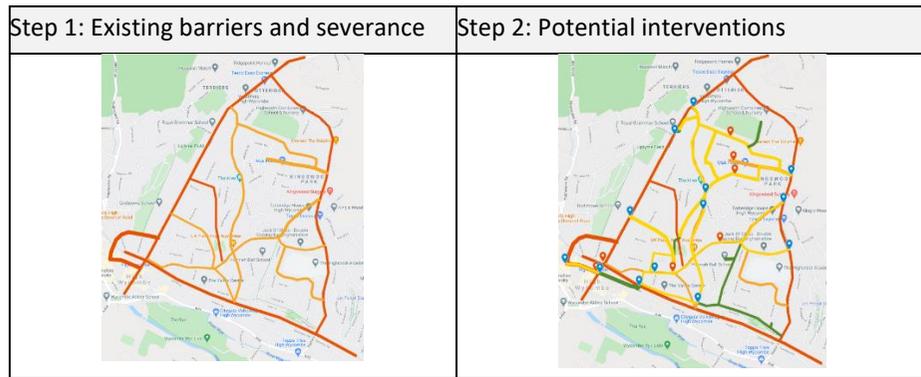


Figure 23: Bottom-up network development process

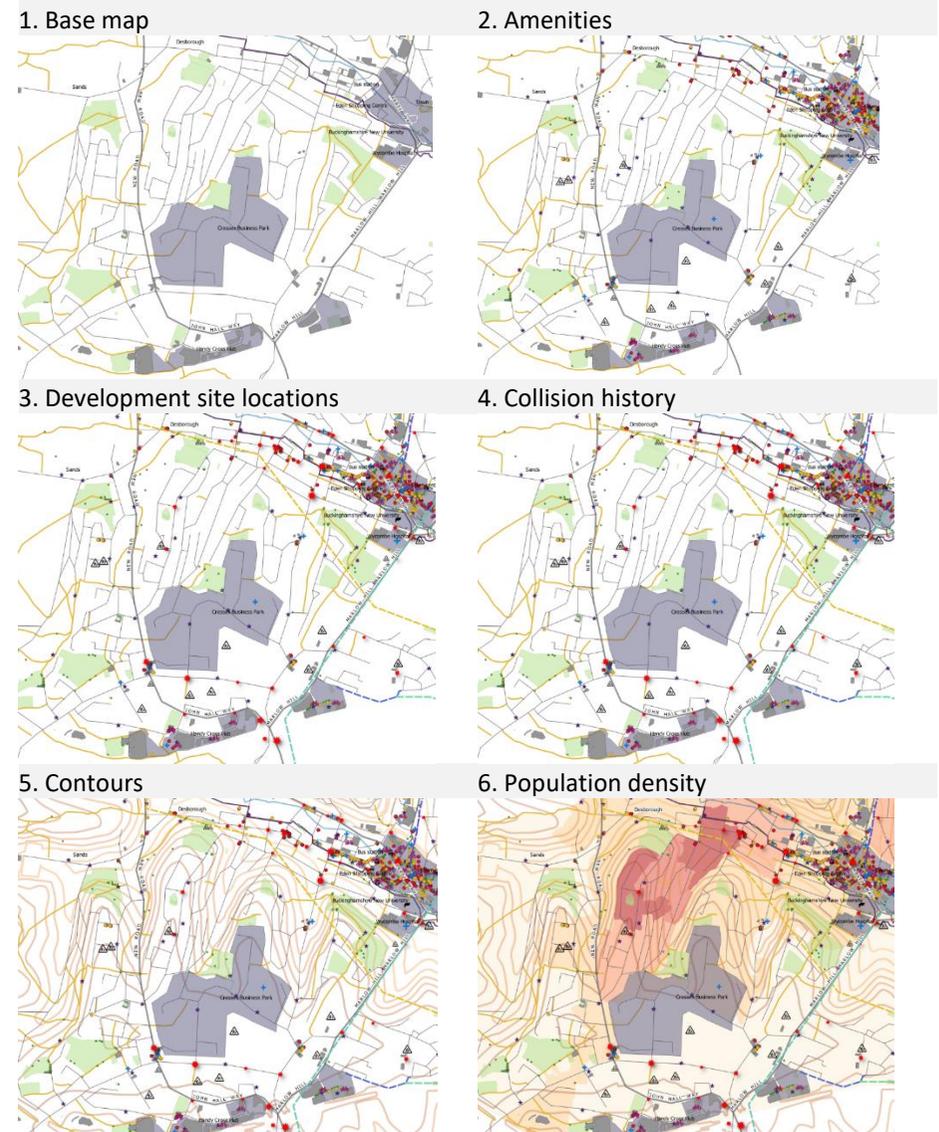


Figure 24: Top-down layering approach

6.4 LCWIP Network Map

Informed by Chapters 1-5, a comprehensive proposed walking, cycling and wheeling network has been developed and is shown in Figure 25.

The following sections of the LCWIP discuss the (sub-concepts) for each of the network concepts outlined in Chapter 4. Within the sub-concept descriptions, references are made to the Toolkit of Interventions (see Appendix B).

The proposed network has been assessed against the Propensity to Cycle visualisations, and there is a strong correlation between the two. All major employment sites, key attractors and generators and the majority of schools are served by the network. When looking at walking, much shorter distances (i.e. 2km or less) that people are willing to walk to access their destination have been considered.

In certain locations, new infrastructure is suggested, whilst in others improvements to existing routes and infrastructure are recommended. These are differentiated on the network through different line colours and types.

All proposals are indicative and at initial investigation stage, and as yet exact interventions have not been determined. All proposals are to be subject to further development, engagement (including with landowners where appropriate) and public consultation, if and when they are taken forward, with their delivery subject to funding availability.

High Wycombe LCWIP

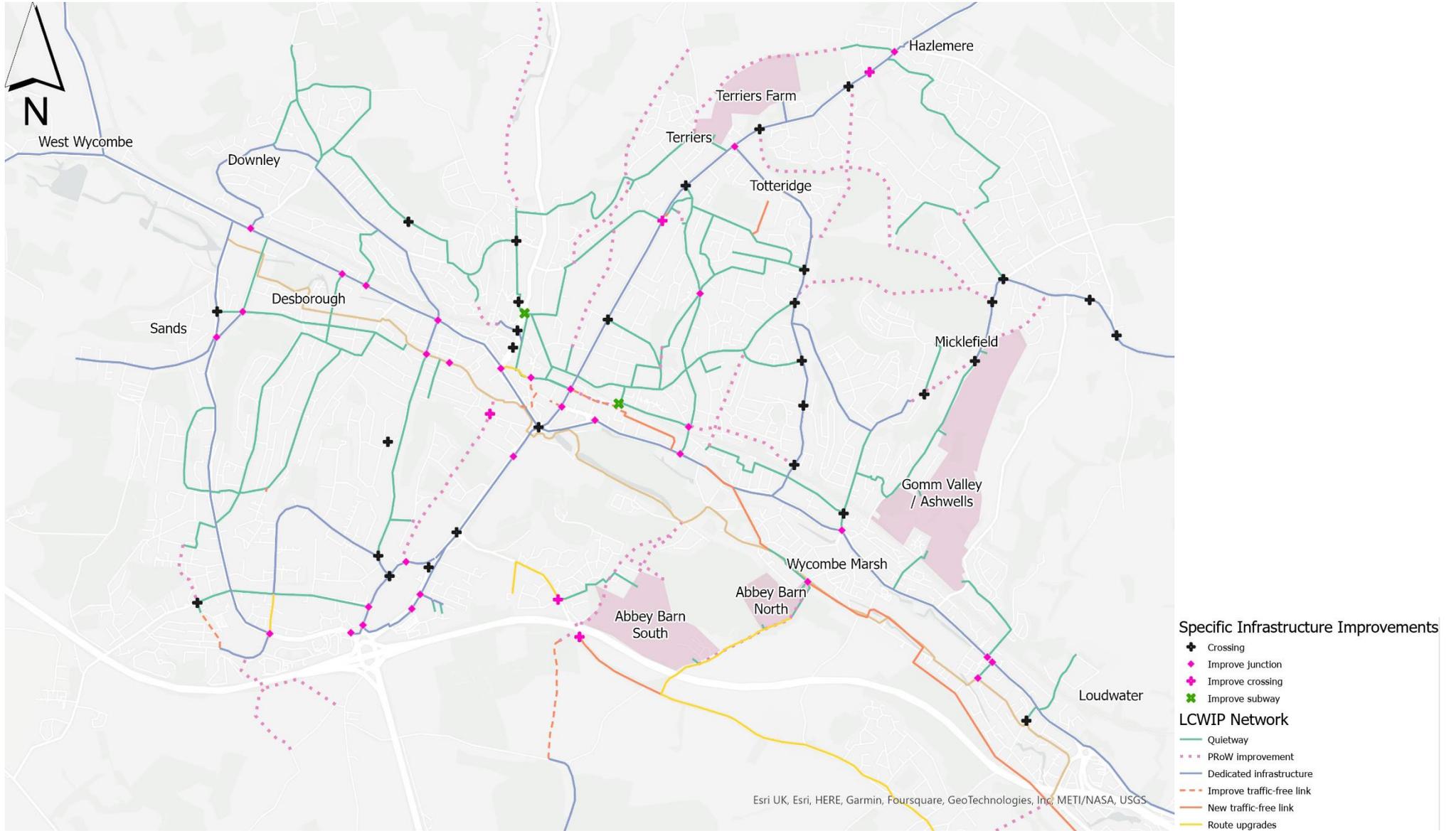


Figure 25: Proposed LCWIP Network for High Wycombe

6.5 Proposed interventions

Walkable core

Existing conditions

The Town Centre is the 'heart' of High Wycombe. Its historic core layout and the proximity to key services and attractors provides an environment that is human-friendly by nature. Its central location within High Wycombe also makes it highly accessible by walking and cycling. It is roughly bounded by the railway line to the north, the A40/Easton Street junction to the east and the A40/Eden Shopping Centre to the south/west.

However, there are some issues around severance, limited lighting, and insufficient cycle parking facilities at particular locations. Part of the Town Centre is currently designated as a pedestrian zone which prohibits all 'vehicles', including cycles, from this area.

Proposals for wayfinding, public realm and infrastructure improvements in the town centre and links with key attractors are to be developed further alongside proposals in the High Wycombe 2050 Transport Strategy and the forthcoming High Wycombe Regeneration Strategy.

Proposed interventions

1a. Wayfinding and signage

Seeking to deliver consistent and inclusive signage to make the town centre easier to navigate for all users. Directional signage and mapping should be provided on the main approaches to the town centre and at key points and junctions, including outside the train station, the bus station, Eden Shopping Centre and Buckinghamshire New University.

Wayfinding should be user-friendly and engaging, with distances and travel times, and can be complemented by distinctive paving, public art, play areas and other public realm interventions along key routes.



Figure 26: High Wycombe's Town Centre (existing)



Figure 27: Inclusive wayfinding examples

1b. Public realm and placemaking improvements

	Toolkit of interventions
Wayfinding and signage To/from key destinations and at decision making points. To be set with inclusivity and accessibility in mind, ensuring they can be easily visible and understood as well as catering for users with diverse needs. Signage that indicates pedestrian priority should also be implemented at shared spaces	
Benches and flexible spaces For people to rest, socialise, and eat	
Greenery Amenity greenery, trees for shadow/rain cover, and rain gardens to contribute towards sustainable drainage and maintaining more comfortable temperatures during the summer months	
Water fountains Accessible for people with different needs	
Cycle parking Regular and accessible (in design and location) cycle parking to be secured near key attractors (such as the High Street, outside Eden Shopping centre, and along key routes), and in covered and overlooked locations. A secure cycle hub in the Town Centre is also recommended, potentially by utilising an area of public realm which could act as an integrated mobility hub	

References to the toolkit of interventions: [Junctions and crossings](#), [Links](#), [Traffic management](#), [Parking and place](#), [Access and inclusion](#), [Hilly topography](#)

1c. Infrastructure improvements

	Toolkit of interventions
Parklets Measures to break-up the linearity of streets and encourage vehicles to slow down, whilst encouraging diverse activities in the street and improving the pedestrian / cyclist experience	
Footway improvements Widening of footways, particularly in the busiest pedestrian areas of town. Ensuring quality surfaces that are consistent and comfortable to all users	
Junction crossing improvements At key junctions which carry more significant vehicular traffic, X-crossings and increased pedestrian-timing should be explored. Cyclists should also be considered at key junctions through conditions which allow them to safely continue in all permitted directions. See the accessible crossing principles listed below	
New and/or improved crossings Securing accessible crossings either through dropped kerbs or raised tables. To be complemented by tactile paving. Potential to explore with more creative forms of crossings that improve the place experience and indicate pedestrian priority (e.g. road painting, build-outs, etc.)	

References to the toolkit of interventions: [Junctions and crossings](#), [Links](#), [Traffic management](#), [Parking and place](#), [Access and inclusion](#), [Hilly topography](#)

Main radial routes and key links

2a. North-south strategic link

Existing conditions

The A404 (Marlow Hill and Amersham Hill) is the key north-south connection within High Wycombe.

Due to the existing road layout, there are very limited alternative routes that offer comparable levels of directness and coherence. However, the current link suffers from significant severance and does not offer pleasant conditions for people walking, cycling and wheeling. Most of the link includes two vehicle lanes in each direction, carrying significant levels of traffic, with limited crossing opportunities, street infrastructure and amenities.

Located along this link is a key transport hub, High Wycombe train station. Adjacent to the station building is the recently redeveloped Brunel Shed, to be occupied by Buckinghamshire New University and host a public café, gallery space and workspace for entrepreneurs and start-up businesses.



Figure 28: Brunel Shed, High Wycombe

Proposed interventions

Exact interventions, and their impacts, will need to be investigated further in conjunction with proposals in *the High Wycombe Transport Strategy*, including the potential for a north-south bus priority corridor on Marlow Hill (*scheme reference PT6*).

	Toolkit of interventions			
Dedicated active travel infrastructure along the whole route	■	■	■	■
Providing enough space for all people to travel comfortably at different speeds and to take breaks if needed. Supported by other consistent design features and signage				
Advanced cycle stop lines at junctions	■	■	■	■
Providing priority and a safer start for cyclists at crossings and junctions				
Crossings at strategic and suitable locations	■	■	■	■
Facilitating more formal crossing opportunities for pedestrians and cyclists. Ensuring there is no need to rush to cross heavily-trafficked roads. This could improve alterations to existing crossing points.				
Accessible crossings	■	■	■	■
Securing accessible crossings along the route either through dropped kerbs or raised tables. To be complemented by tactile paving				
Footway surface improvements	■	■	■	■
Ensuring quality surfaces that are consistent and comfortable to all users				
Localised footway widening at pinch points	■	■	■	■
Securing enough space for more people to use the footways comfortably				
Footway buildouts	■	■	■	■
To incorporate landscaping and greenery, street amenities and resting points, allowing people to take breaks and enjoy street amenities				

References to the toolkit of interventions: [Junctions and crossings](#), [Links](#), [Traffic management](#), [Parking and place](#), [Access and inclusion](#), [Hilly topography](#)

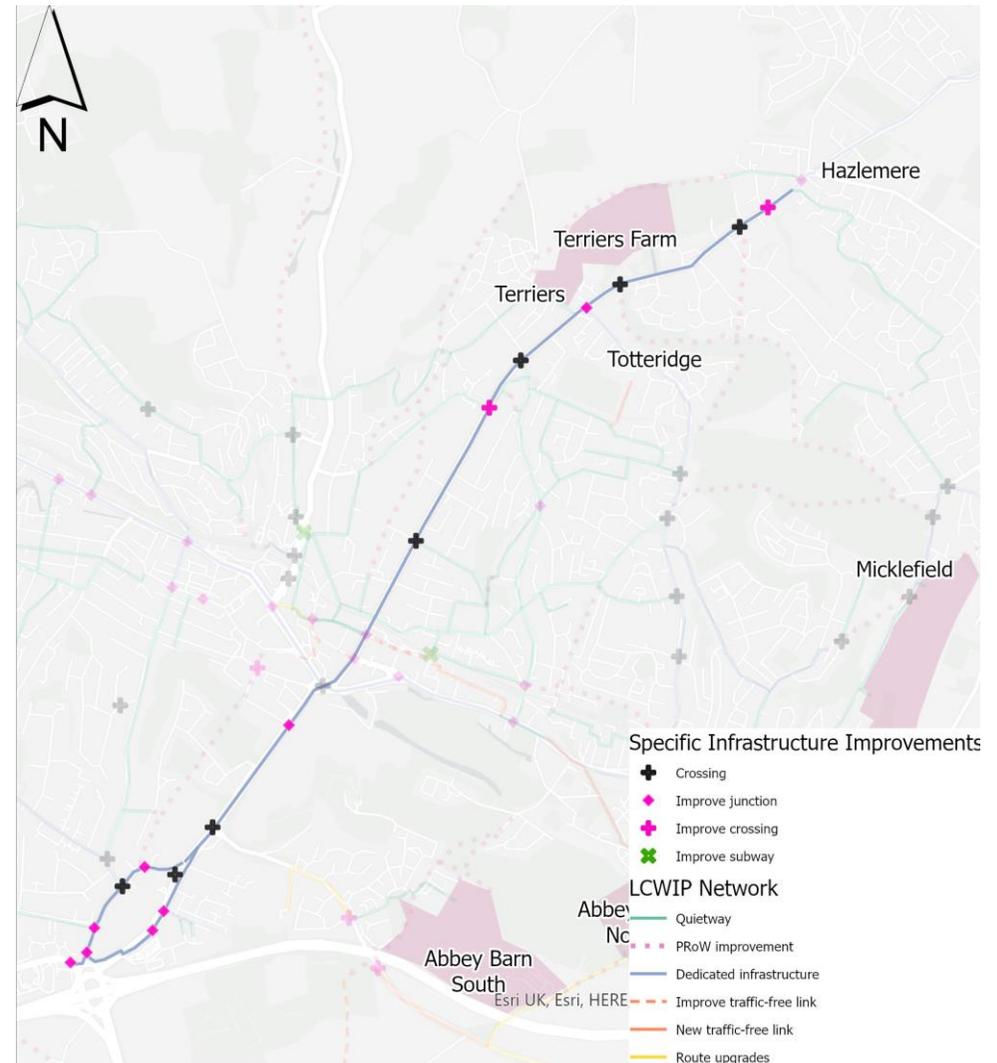


Figure 29: North-south link proposed interventions

2b and 2c. East-west strategic link

Existing conditions

The east-west link is a key route in High Wycombe, connecting with the town centre, and the rail and bus stations. It is also a mostly flat route, so is likely to be more attractive to many users. It is important that this link offers high-quality walking, cycling and wheeling facilities.

The A40 (West Wycombe Road to the west of the town centre, and London Road to the east of the town centre) is the main east-west corridor within High Wycombe. The provision of pedestrian facilities is limited and there are no dedicated cycle facilities along the route.

Unlike the north-south strategic link, there is a parallel route that offers a comparable level of directness – the existing east-west cycle route that runs parallel to the south of the A40. This route travels along off-road sections and quieter roads with less strategic importance and lower traffic volumes. However, it is not as coherent or direct.



Figure 30: A40 London Road (existing)



Figure 31: East-west cycle route (existing)

High Wycombe LCWIP

Proposed interventions

A staged improvement of the walking, cycling and wheeling conditions along the A40 and to the existing east-west cycle route. In the short and medium term, temporal improvements and relatively quick wins (such as new crossings) can be delivered. Longer term, the A40 should benefit from improved infrastructure, either running within or adjacent to the corridor.

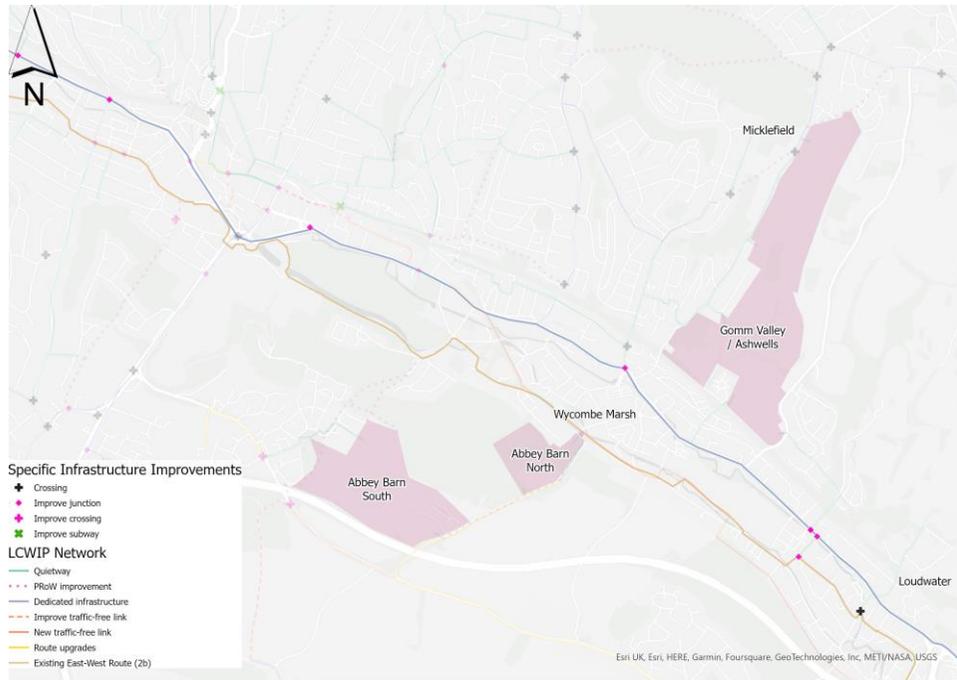


Figure 32: East-west link proposed interventions

	Toolkit of interventions		
Advanced cycle stop lines at junctions Providing priority and a safer start for cyclists at junctions	Light Blue	Light Red	Light Purple
Toucan, pelican or puffin crossings at strategic locations Facilitating more formal crossing opportunities. Ensuring there is no need to rush to cross heavily trafficked roads	Light Blue	Light Red	Light Purple
Dedicated active travel infrastructure along the A40 and upgrades to the east-west cycle route Providing enough space for people to travel comfortably at different speeds. Supported by other consistent design features and signage	Light Green	Light Red	Light Purple
Shared used paths Only to be implemented where space is constrained. Where shared paths are to be designated, appropriate pedestrian priority marking should be in place	Light Green	Light Red	Light Purple
Footway surface improvements Ensuring quality surfaces that are comfortable to all users	Light Green		Light Purple
Localised footway widening at pinch points Securing enough space for more people to use the footways comfortably	Light Green		Light Purple
Footway buildouts, landscaping and greenery, street amenities and resting points Providing more pleasant routes for pedestrians and cyclists, allowing people to take breaks and enjoy street amenities. Localised buildouts can also encourage speed reduction at critical points		Light Red	Light Purple
Accessible crossings Securing accessible crossings either through dropped kerbs or raised tables. To be complemented by tactile paving	Light Blue	Light Red	Light Purple

References to the toolkit of interventions: **Junctions and crossings**, **Links**, **Traffic management**, **Parking and place**, **Access and inclusion**, **Hilly topography**

2d. Daws Hill-Handy Cross Hub link

Existing conditions

The current link along Daws Hill Lane and Marlow Hill provides a key east-west connection, but it is becoming increasingly congested. This issue is likely to be exacerbated by growing travel demands from new developments. At present time, the link also has limitations for people to walk, cycle and wheel comfortably. For example, there is limited cycling facilities, limited crossings and a narrow footway one side of the road.

Emerging proposals

An improved active travel connection between Handy Cross Hub (to the west) and the Daws Hill development (Pine Trees) to the east.

The link is intended to relieve congestion on Daws Hill Lane by providing a route to the Park n' Ride service at Handy Cross Hub and a 'drop off' facility for those taking their children to St Michael's School.

The link could also have a broader network role in connecting future development zones to the south-east of High Wycombe with schools and key transport nodes to the south of the town centre.

A dedicated case study into a more suitable Daws Hill to Handy Cross Hub link has been undertaken in parallel to the High Wycombe LCWIP. It is recommended that further investigative work is undertaken following this.

Separately, supported by government funding, the Council is progressing an improved active travel connection between the Rye and the Daws Hill and Abbey Barn South development sites.



Figure 33: Daws Hill-Handy Cross Hub local context (existing)

2e. Cressex Business Park

Existing conditions

Cressex Business Park is a key employment hub, located between the town centre (c. to the 2.5km south) and Handy Cross Hub (c. 1km to the north).

Given the land use of the area and its strategic location, there is an opportunity to encourage more people to walk, cycle and wheel to work.

Coronation Road / Lancaster Road is the main road through the business park. At the present time, there are footways on both sides of the carriageway but no cycling facilities. There are multiple driveway accesses along the route, and vehicles are often observed parking on the footway.



Figure 34: Cressex Business Park (existing)

Proposed interventions

Providing a network for walking, cycling and wheeling along key routes of the Business Park. To be achieved by implementing improved infrastructure provision and public realm improvements.

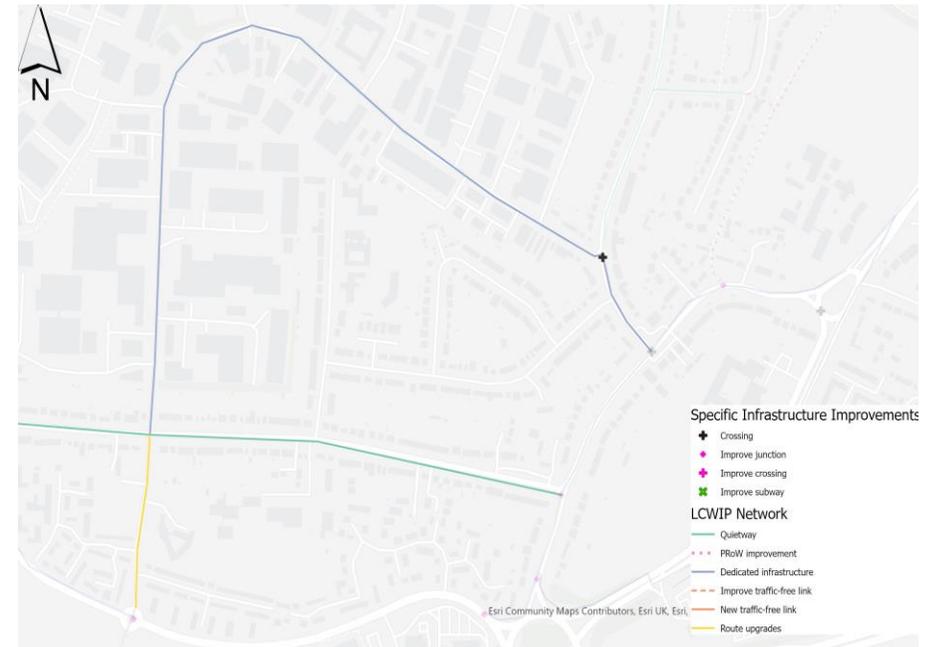


Figure 35: Proposed interventions around Cressex Business Park

High Wycombe LCWIP

Toolkit of interventions

Improvements along Coronation Road / Lancaster Road

Ensuring a quality and safe route along these key routes. Ensuring appropriate separation from heavy traffic.

Advanced cycle stop lines

Providing priority and a safer start for cyclists at junctions and crossings along Coronation Road / Lancaster Road

Upgrades to the existing footway on Coronation Road

Improving surface quality and ensuring consistency along the route

Quietways along Cressex Road

Alternative calmer route could be formally designated through markings on the road, landscaping and traffic calming measures, to provide better connectivity to the business park and also to mitigate the issue of rat-running vehicles avoiding the A4010.

Landscaping, street amenities and resting points

Repurposing underused spaces along the footway (e.g. patches of vegetation) to provide pockets of public amenities

Accessible crossings

Securing accessible crossings either through dropped kerbs or raised tables. To be complemented by tactile paving. Potential to explore with more creative forms of crossings that improve the place experience and indicate pedestrian priority (e.g. road painting, build-outs, etc.)

Wayfinding and signage

To/from key destinations and at decision making points, facilitating navigation along the Business Park. To be set with inclusivity and accessibility in mind, ensuring they can be easily visible and understood and cater for users with diverse needs

References to the toolkit of interventions: [Junctions and crossings](#), [Links](#), [Traffic management](#), [Parking and place](#), [Access and inclusion](#), [Hilly topography](#)

2f. Public rights of way improvements

Proposed interventions

Improvements to key Public Rights of Way (PROW) links to improve accessibility, safety and comfort.

Potential options for improvements will be considered on a case-by-case basis, with landowner engagement where appropriate, and could include:

- Surfacing / re-surfacing with appropriate and sensitive materials
- Improving access, e.g., removing stairs or adding railings
- Regrading and/or widening access points for all users

The overall PROW network is shown in Figure 36.

Equestrians

Some of the proposed PROW upgrades include routes along existing bridleways. It is important to note that equestrians must be taken into consideration when developing these proposals in further detail. This includes consideration for the width of route allocated to equestrians, the arrangement of road crossings and differing surfacing standards. For example, Pegasus crossings will likely be required at locations where the routes intersect a road.

Upgrades along these routes must not compromise the existing facilities for horse riders in favour of walking and cycling and must not worsen the existing equestrian route. Solutions should be sought that maximise the benefit for all users.

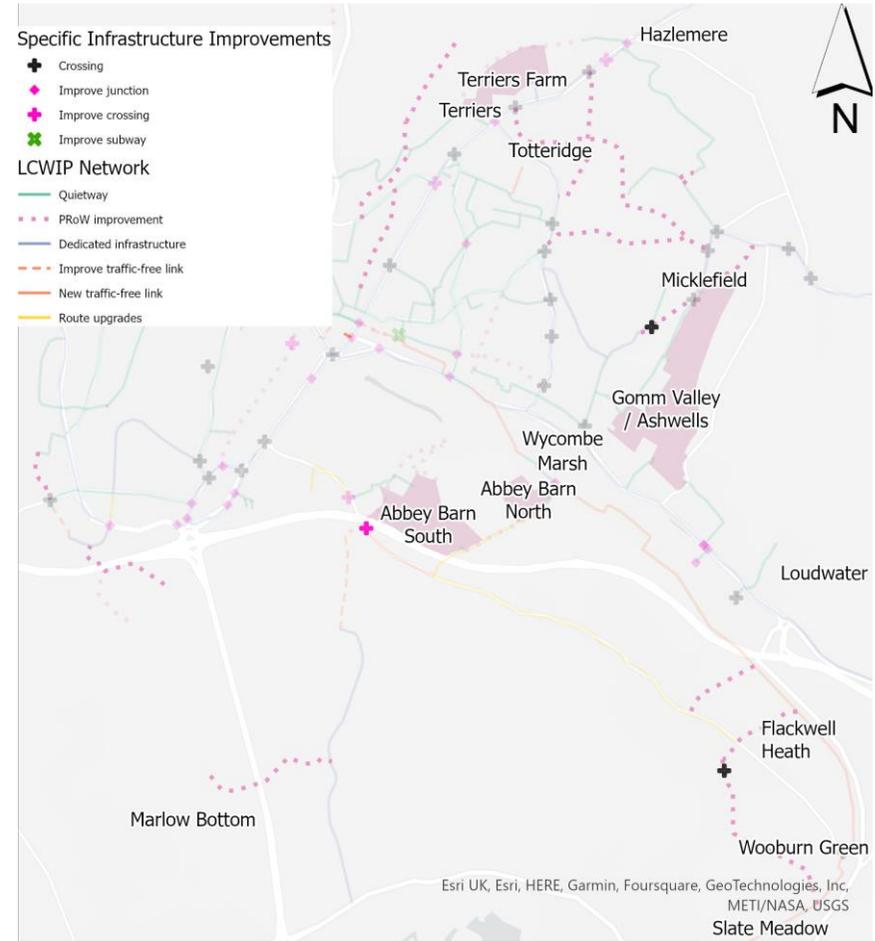


Figure 36: Public right of way improvements

Healthy neighbourhoods

3a. Totteridge

Existing conditions

Totteridge is bounded by the A404 to the west, Totteridge Lane to the east/north and the railway line and the A40 to the south.

The existing network consists mainly of distributor roads and cul-de-sacs, meaning people walking and cycling generally have to follow the same route as people driving. There is little dedicated infrastructure, with busy roads and roundabouts with lack of crossing facilities creating severance. Levels of walking, cycling and wheeling in the area are currently very low.

Key opportunities and constraints for Totteridge include:

Constraints:

- Relatively high car ownership despite proximity to town centre, meaning that many residential streets are busy environments
- Railway acts as a barrier between Totteridge and the train station and town centre, links across the railway are poor

Opportunities:

- Key amenities within a short walking, cycling or wheeling distance, such as the train station and town centre
- Lots of local schools within the area, which should be seen as an opportunity to enable more short journeys by foot and cycle



Figure 37: Bowerdean Road (existing)

Hilly topography

The neighbourhood includes some routes which are very steep (including some with an average slope over 10%). It is recommended that some interventions specific to hilly topography are integrated. Infrastructure interventions should be supplemented with and promotional material and behaviour change programs. These are discussed in more detail in 5c.

Proposed interventions

Improvements to the environmental and walking, cycling and wheeling conditions in and around Totteridge.

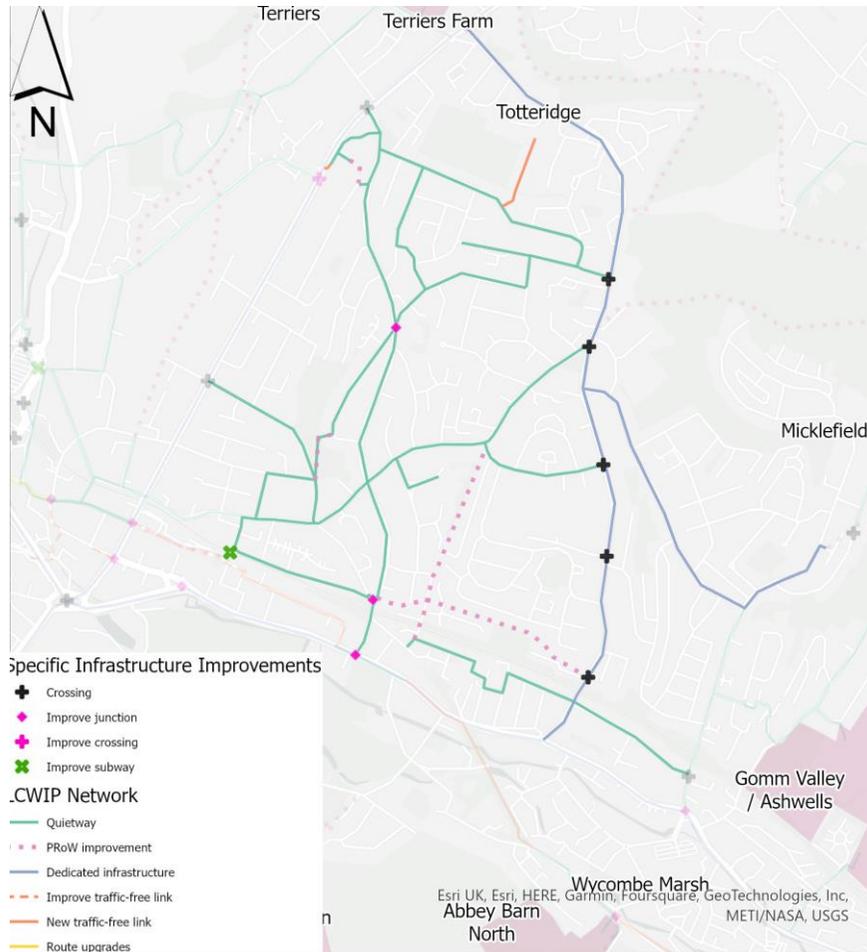


Figure 38: Totteridge Healthy Neighbourhood

	Toolkit of interventions
<p>Dedicated infrastructure along Totteridge Ln/Halter’s Ln</p> <p>Ensuring a quality and safe route for all users. Securing enough space for people to travel comfortably at different speeds and to take breaks if needed.</p>	
<p>Quietways</p> <p>To be formally designated through markings on the road, landscaping, and traffic calming measures. To be delivered in a phased approach</p>	
<p>Junction improvements</p> <p>Layout simplification and complemented by general accessible crossing improvements</p>	
<p>Accessible crossings</p> <p>Securing accessible crossings either through dropped kerbs or raised tables. To be complemented by tactile paving. Potential to explore with more creative forms of crossings that improve the place experience and indicate priority (e.g. road painting, build-outs, etc.)</p>	
<p>Wayfinding and signage</p> <p>These should be set with inclusivity and accessibility in mind, ensuring they can be easily visible and understood and cater for all users</p>	
<p>Greenery and landscaping, street amenities, resting points and improved lighting provision</p> <p>Improving the environment specially along quietways</p>	
<p>Improvements to other existing infrastructure</p> <p>Including PRoWs, access to schools, subways beneath the rail line and traffic free route at the station</p>	
<p>References to the toolkit of interventions: Junctions and crossings, Links, Traffic management, Parking and place, Access and inclusion, Hilly topography</p>	

3b. Desborough

Existing conditions

Desborough is bounded by the A40 to the north, A4010 to the west, Cressex Business Park to the south and A404 to the east.

There is a lack of dedicated infrastructure and currently low levels of walking, cycling and wheeling in the area.

Key opportunities and constraints for Desborough include:

Constraints:

- High levels of deprivation and high levels of physical inactivity
- Lack of direct walking and cycling access to the nearby Cressex Business Park and Handy Cross Hub
- Busy roads and a lack infrastructure limit access to town centre on foot or by cycle

Opportunities:

- Existing levels of car ownership are low, suggesting a strong opportunity to encourage more residents to walk, cycle and wheel
- Very close proximity (within 2km) to significant employment opportunities, including the town centre, Wycombe Hospital and Cressex Business Park



Figure 39: Shelley Road (existing)

Hilly topography

The neighbourhood includes some routes which are very steep (including some with an average slope over 10%). It is recommended that some interventions specific to hilly topography are integrated. Infrastructure interventions should be supplemented with and promotional material and behaviour change programs. These are discussed in more detail in 5c.

High Wycombe LCWIP

Proposed interventions

Improvements to the environmental and walking, cycling and wheeling conditions in and around Desborough.

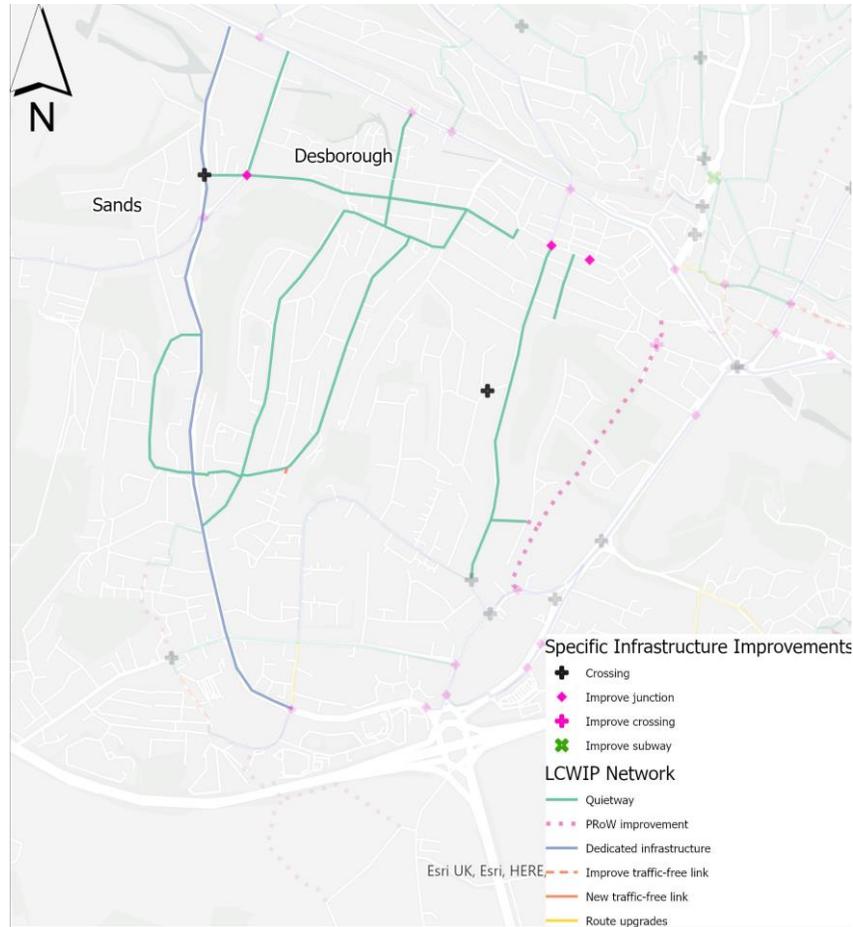


Figure 40: Desborough Healthy Neighbourhood

Toolkit of interventions

Dedicated infrastructure along A4010 New Rd	Green	Brown	Pink	Orange
Ensuring a quality and safe route for all users. Securing enough space for people to travel comfortably at different speeds and to take breaks if needed.				
Quietways	Green	Brown	Pink	
To be formally designated through markings on the road, landscaping, and traffic calming measures. To be delivered in a phased approach				
Junction improvements	Light Blue	Brown	Pink	
Layout simplification and complemented by general crossing improvements to improve walking connectivity, e.g. at the New Road/Lane End Road/Mill End Road junction				
Accessible crossings	Light Blue	Brown	Grey	Pink
Securing accessible crossings either through dropped kerbs or raised tables. To be complemented by tactile paving. Potential to explore with more creative forms of crossings that improve the place experience and indicate pedestrian priority (e.g. road painting, build-outs, etc.)				
Wayfinding and signage			Grey	Pink
These should be set with inclusivity and accessibility in mind, ensuring they can be easily visible and understood by pedestrians and cyclists and cater for all users				
Greenery and landscaping, street amenities, resting points and improved lighting provision			Grey	Pink
Improving the environment				
Improvements to other existing infrastructure	Green	Brown	Grey	Pink

References to the toolkit of interventions: Junctions and crossings, Links, Traffic management, Parking and place, Access and inclusion, Hilly topography

High Wycombe LCWIP

Wider network and strategic routes

4a. Hughenden to Abbey Barn Lane link

Proposed interventions

A link connecting Hughenden Valley, Wycombe Marsh and Abbey Barn Lane via High Wycombe town centre. The proposal could also connect with the longer-term scheme between High Wycombe and Bourne End (as shown in sub-concept 4b).

The LCWIP network considers the emerging proposals for this link. These include exploring the use of the existing road network and making modifications to these links.

	Toolkit of interventions	
New and/or improved crossings and junctions at points of interaction with the road network		
Ensuring compliance with accessibility and inclusivity principles		
Amenities, lightning and resting points		
Improving the place quality and attractiveness of the link whilst providing opportunities to take breaks / rest		
Wayfinding and signage		
To/from key destinations and at decision-making points. These should be set with inclusivity and accessibility in mind, ensuring they can be easily visible and understood by all for users		

References to the toolkit of interventions: [Junctions and crossings](#), [Links](#), [Traffic management](#), [Parking and place](#), [Access and inclusion](#), [Hilly topography](#)

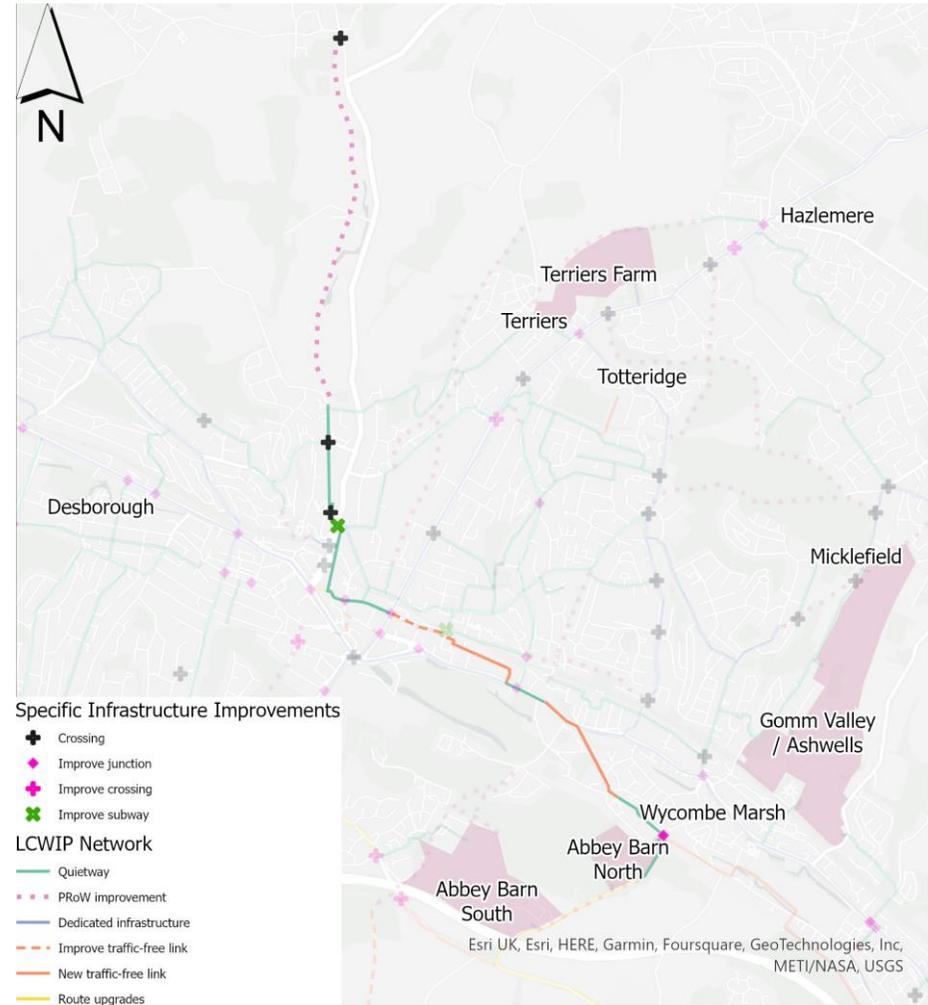


Figure 41: Hughenden to Abbey Barn Lane link

High Wycombe LCWIP

4c. High Wycombe to Bourne End link

Proposed interventions

A link connecting High Wycombe with Bourne End, Loudwater, Flackwell Heath and Wooburn Green.

The Wycombe District Local Plan, adopted by Wycombe District Council, in 2019 outlines the following principle to improve strategic connectivity: *'Provide a strategic walking and cycling route to Bourne End and Wooburn along the former railway line whilst investigating the case for the railway to be re-opened'*.

Policy DM4 of the Delivery and Site Allocations Plan, adopted by Wycombe District Council in 2019, states that *'planning permission will not be granted for developments that would prejudice the construction of a 5m wide walking and cycling corridor between High Wycombe town centre/railway station and Bourne End'*.

The alignment of the former railway line is shown in Figure 42. No exact alignment for an active travel link has been determined at this stage and the proposal will be subject to additional investigations, subsequent to the LCWIP.

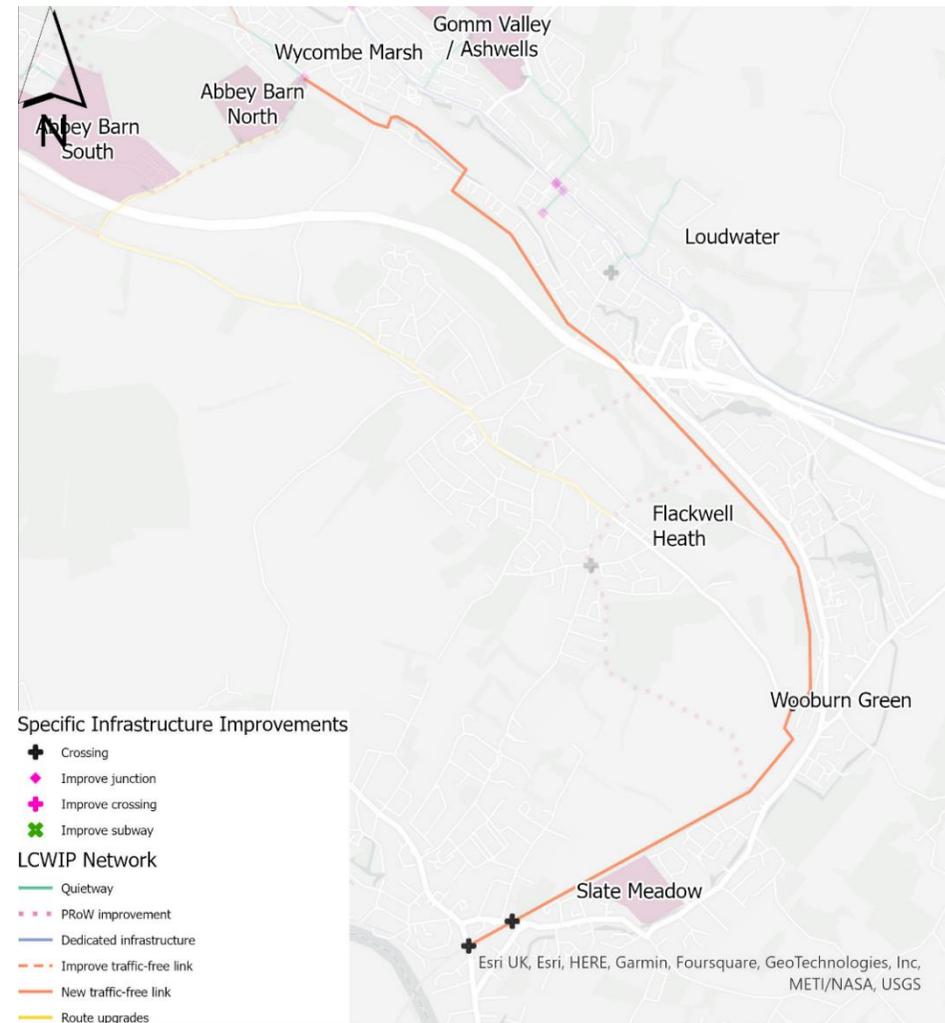


Figure 42: High Wycombe to Bourne End link

4c. Links to other settlements

Proposed interventions

Improved walking, cycling and wheeling links to West Wycombe, Saunderton, Sands, Stokenchurch, Penn, Hazlemere and Holmer Green.

An outline of the proposed network is shown in Figure 43. No exact alignments are determined at this stage, however a link to Hazlemere and Holmer Green could tie in with the A404 (Sub-concept 2a). A direct and least steep route to Penn could be via Church Road, serving schools and the Gomm Valley / Ashwells developments.

	Toolkit of intervention:		
Cycle track with delineation	■	■	■
Ensuring a quality and safe route for cyclists of all levels			
Quietways	■	■	■
Quieter routes to be formally designated through markings on the road, landscaping, and traffic calming measures			
Footway improvements	■		■
E.g. widening, maintenance and installation of new footways where appropriate. Ensuring quality and design is consistent			
New and/or improved crossings and junctions at points of interaction with the road network	■	■	■
Ensuring compliance with accessibility and inclusivity principles			
Traffic calming measures		■	■
Particularly along routes with higher traffic			
Wayfinding and signage			■
To/from key destinations. These should be set with inclusivity and accessibility in mind, ensuring they can be easily visible and understood by all users			

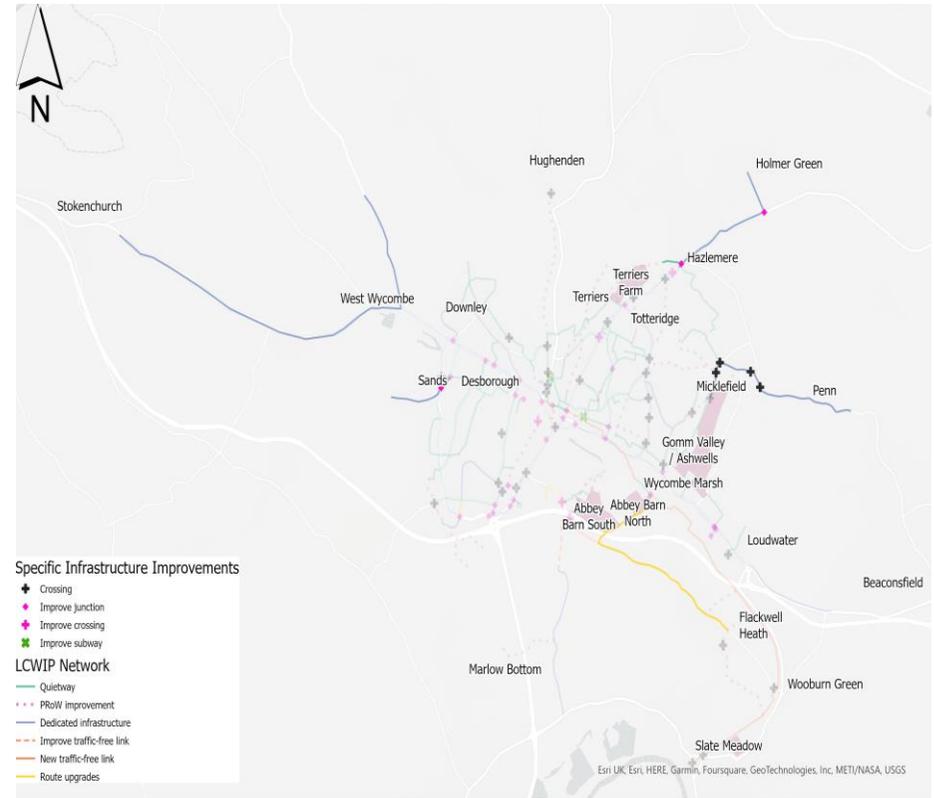


Figure 43: Links to other settlements

A cohesive and connected network

5a. A40/404 roundabout and A40 Abbey Way flyover

Existing conditions

This is a key location that sits at the heart of the strategic network and the town centre. The existing infrastructure poses significant severance in the town centre. The *High Wycombe 2050 Transport Strategy* recommends the repurposing of this flyover (*scheme reference HCM2*). In doing so, there would be significant alterations to the A40/A404 roundabout.

Proposed interventions

Improved walking, cycling and wheeling facilities should consider as part of any future changes to this infrastructure to overcome current severance issues.



Figure 44: Flyover locality plan

5b. Other links and point interventions

Proposed interventions

This sub-section considers other proposed link and point interventions that will complete a cohesive and connected network for High Wycombe. This includes interventions in Downley, Micklefield, Hazlemere and Booker and a potential link towards Marlow Bottom.

Suggested improvements include:

- **Downley:** Dedicated infrastructure along Pheasant Drive / Plomer Green Avenue / The Pastures, due to shallower gradients in comparison to other routes.
- **Booker:** Potential connections to Handy Cross Hub and Cressex Business Park. The interventions included dedicated infrastructure on Holmers Farm Way and improvements to the existing traffic-free route on Holmers Lane.
- **High Wycombe-Marlow Bottom link:** A link to Marlow Bottom could potentially either route via Marlow Bottom Road and PRoW, or via Monkton Lane, both of which could connect to M40 underpass near ASDA, or via Winchbottom Lane. However, further investigation work is required.

A summary of these proposed interventions is shown in Figure 45.

Hilly topography

The proposals includes some locations which are very steep (It is recommended that some interventions specific to hilly topography are integrated.

5c. Behaviour change measures

Existing conditions

The delivery of the proposed infrastructure improvements alone is unlikely to be sufficient to change travel behaviour and choices. Evidence shows that complementing infrastructure with practical support and promotion helps to embed active travel choices in individual's routes, achieving greater levels of uptake in walking and cycling, and ultimately better value for money from investment.

As proposed in the *High Wycombe 2050 Transport Strategy* (scheme reference BC1), a significant element of increasing the cycling and walking levels in High Wycombe will be a supporting package of smarter travel measures, including the implementation of town-wide modal shift activities that can encourage and support people to use sustainable and active modes of travel for everyday local journeys.

This section of the LCWIP outlines some potential measures which can support of the delivery of the town-wide walking and cycling network.

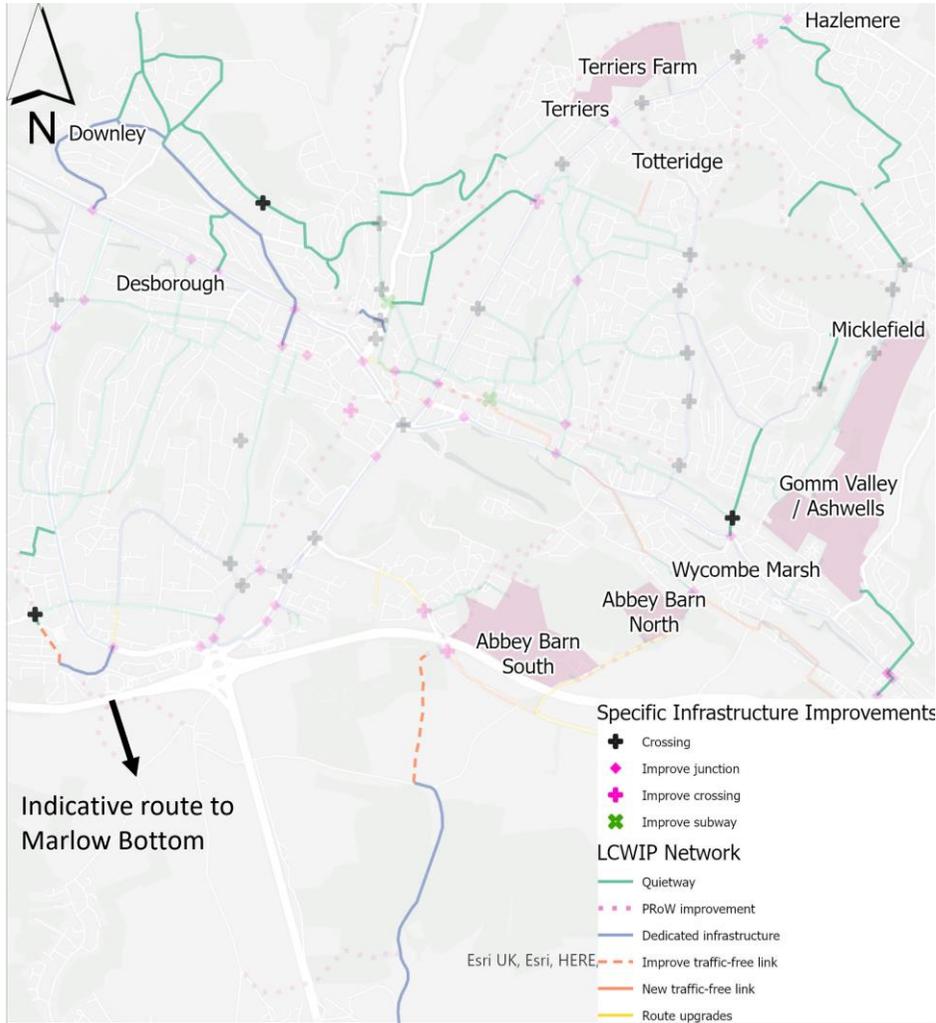
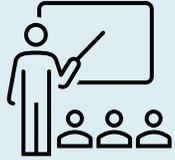
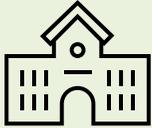


Figure 45: Other links and point interventions

Proposed interventions

<p>Bikeability cycle training</p> 	<p>Driver awareness training</p> 
<p>School travel initiatives</p> 	<p>Cycle hire schemes</p> 
<p>Marketing and promotion</p> 	<p>Community groups and initiatives</p> 

Visit the Buckinghamshire Council website for [travel planning guidance for schools, businesses and communities](#) and examples of ways to [promote cycling, walking and wheeling in the community](#).

Bikeability cycle training and school travel initiatives

A lack of confidence is a common reason for not cycling. Cycle training programmes are currently delivered at schools across High Wycombe. In addition, the Modeshift STARS accreditation scheme successfully recognises schools that demonstrate excellence in their travel plans. Several schools in the LCWIP study area have received local and national awards. A number of schools also encourage parents and children to ‘Park and Stride’ to reduce traffic outside schools. These initiatives could be rolled out across other schools.

Driver awareness training

The travel perception survey carried out during the development of the LCWIP identified the perceptions and behaviour of people driving as a barrier to people walking, cycling and wheeling. Awareness training encourages greater understanding of vulnerable road users.

Cycle hire schemes

Many people struggle to afford or store their own cycle. Public hire schemes can provide access to cycling in a way that overcomes these barriers. Cycle hire schemes have been successfully implemented in several urban areas with challenging topography. E-bikes can be included as part of cycle hire schemes. Opportunities for E-bike and cycle hire schemes in High Wycombe are being explored with and by partners. This aligns with *High Wycombe 2050 Transport Strategy* (scheme references SMH5 and SHM6).

Marketing and promotion

Can raise awareness, provide information and change perceptions. Maps of the emerging LCWIP network, highlighting infrastructure and points of interest will make residents and visitors aware of opportunities to walk, cycle and wheel. Buckinghamshire Council hosts community resources on its website and promotes reoccurring initiatives. Mobile apps such as BetterPoints and Love Exploring promote and reward healthy and active lifestyles.

Community groups and initiatives

Including Simply Walk (free volunteer-led group walks) and Active Communities programme can provide information about the benefits of being active, encourage social interaction, reduce physical inactivity and provide a springboard for sharing information.

7. Prioritising improvements

The fifth stage of the LCWIP process seeks to prioritise the proposed walking and cycling infrastructure improvements.

7.1 Approach

To assess and analyse the proposed LCWIP network, a Multi Criteria Assessment (MCA) methodology has been adopted, drawing on LCWIP guidance and other scoring frameworks. This approach assists in understanding which of the network proposals will have the greatest impact.

In parallel to this, each proposal has been classified as having a short-, medium- or long-term delivery timescale. These timeframes are defined in LCWIP guidance as:

- **Short-term** (typically <3 years): Improvements which can be implemented quickly or are already under development.
- **Medium-term** (typically 3-5 years): Improvements where there is a clear intention to act, but delivery is dependent on further funding availability or other issues (e.g. design work, securing planning permissions, land acquisition etc.)
- **Long-term** (typically >5 years): More aspirational improvements, or those awaiting a defined solution.

It is noted that these timescales are indicative only and, in some instances (where sub-concepts and schemes are interlinked) delivery timescales are contingent on the timescales proposed in the *High Wycombe 2050 Transport Strategy*.

7.2 Prioritisation

A consistent scoring mechanism was developed in line with the LCWIP guidance recommendations. Four key criteria have been identified to score each of the sub-concepts:

- **Safety improvements** – including interaction with vehicles and perceived personal safety risks (e.g. limited passive surveillance)
- **Impact of implementation** – including volume of users, potential level of mode shift and improvements in areas of socio-economic and health deprivation
- **Ease / feasibility of implementation** – including any interdependencies with other schemes and likelihood of the intervention being funded, delivered and implemented
- **Indicative cost** – comparative cost estimate (indicative only).

The results of the MCA are presented in a colour-gradient scale in Table 4 and summarised in Figure 46, in order from highest priority (dark blue) to lowest priority (white). The table also identifies where any LCWIP sub-concepts are interlinked with *High Wycombe 2050 Transport Strategy* schemes.

High Wycombe LCWIP

Table 2: Prioritisation summary table

Concept	Sub-concept	Sub-concept description	Related Transport Strategy scheme	Short / medium / long term?	Priority order (highest to lowest)
3. Healthy Neighbourhoods	3a	Totteridge	WC2	Short-medium	<i>highest</i>
3. Healthy Neighbourhoods	3b	Desborough	WC2	Short-medium	
2. Main radial corridors and key links	2d	Daws Hill to Handy Cross Hub link	WC3	Medium	
2. Main radial corridors and key links	2e	Cressex Business Park	WC3	Medium	
2. Main radial corridors and key links	2c	East-west strategic link (via A40)	WC3, PT7	Long	
2. Main radial corridors and key links	2f	Links to strategic development sites		Medium	
1. Walkable core (Town centre)	1b	Placemaking and public realm improvements		Short	
4. Wider network and strategic routes	4b	High Wycombe to Bourne End link	WC3	Medium	
2. Main radial corridors and key links	2a	North-south strategic link	WC3, PT6, HCM3	Long	
5. A cohesive and connected network	5b	A40/A404 roundabout and A40 Abbey Way flyover	WC3, HCM2	Long	
1. Walkable core (Town centre)	1c	Infrastructure improvements	WC3, HCM1	Medium	
2. Main radial corridors and key links	2b	East-west strategic link (existing)	WC3	Short	
1. Walkable core (Town centre)	1a	Wayfinding and signage	WC1	Short	
4. Wider network and strategic routes	4a	Hughenden to Abbey Barn Lane link	WC3	Medium	
2. Main radial corridors and key links	2g	PRoW improvements (identified by BC)	WC3	Medium	
4. Wider network and strategic routes	4c	Links to other settlements	WC3	Medium	
5. A cohesive and connected network	5b	Other links and point interventions required to complete the network	WC3	Medium	<i>lowest</i>

The identified 'Long' term schemes play a key role in the overall LCWIP network, as reflected in their scoring against the 'Impact of intervention' and 'Improvement to safety' criteria. Many of these projects are complex, meaning investigation work will be required in the short to medium-term.

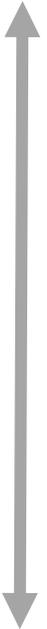
High Wycombe LCWIP

SHORT TERM

MEDIUM TERM

LONG TERM

HIGHER PRIORITY



LOWER PRIORITY

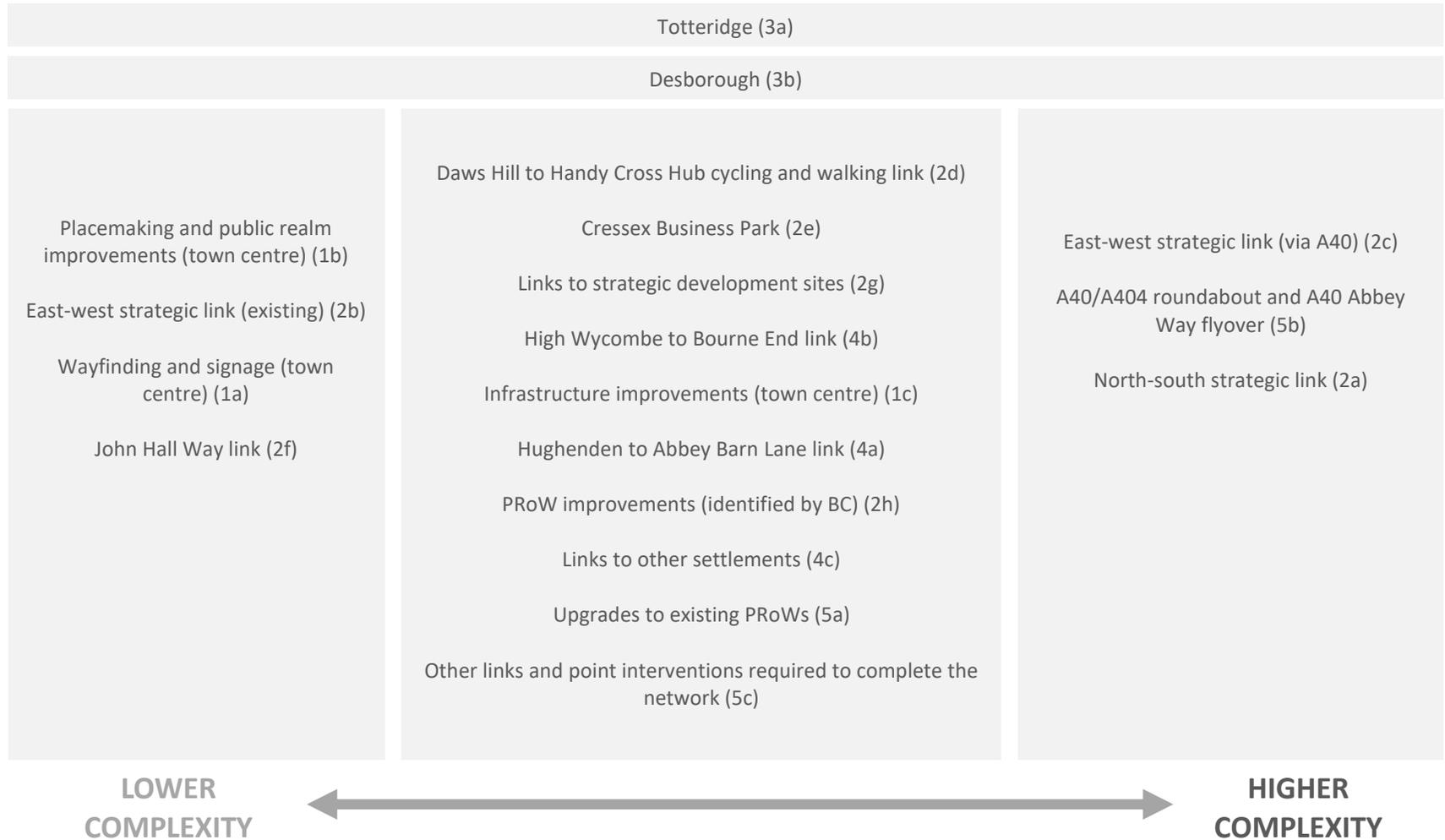


Figure 46: Prioritisation summary

8. Integration and application

The sixth stage of the LCWIP process considers how the LCWIP can be integrated with local policies and how its recommendations will be delivered. All proposals in the LCWIP will be subject to further development and engagement, if and when they are taken forward, with their delivery subject to funding availability.

8.1 Policy integration

The High Wycombe LCWIP has been developed alongside, and is aligned with, the *High Wycombe Transport Strategy*, which outlines a 2050 Vision for High Wycombe. This integration between the LCWIP and Transport Strategy will continue to ensure that emphasis is given to active travel modes across short, medium and long term transport delivery plans.

8.2 Implementation

Key outputs from the High Wycombe LCWIP, including the proposed improvements and prioritisation list, will be used to outline the level of ambition and support future funding applications, both at the local level (through developer contributions and partnership working) and national level (through central government funding streams).

Further work will be undertaken to develop, assess and bring forward the proposed improvements that are currently at concept stage. This includes route-specific feasibility, design, engagement and consultation work. To support the delivery of the infrastructure improvements proposed in the High Wycombe LCWIP, it is recommended that opportunities for increased footway and highway maintenance provision are explored.

8.3 Monitoring and evaluation

The High Wycombe LCWIP will be reviewed and updated periodically (recommended approximately every 5 years). This process will be supported by delivery programmes identified in the *High Wycombe 2050 Transport Strategy*. As part of the review exercise, performance against the following key outcomes, aligned with those in the *High Wycombe 2050 Transport Strategy*, can be considered:

- Cycling and walking travel to work mode share of 13% (blended package, standard and high growth scenarios)
- Car travel to work mode share of 57% (blended package, standard growth scenario) or 58% (blended package, high growth scenario)
- Town centre traffic index of 87 (blended package, standard growth scenario) or 100 (blended package, high growth scenario)
- CO2 emissions (Ktonnes pa) of 54 (blended package, standard growth scenario) or 65 (blended package, high growth scenario).

Additionally, local feedback and personal injury accident data will be monitored, any locations of emerging trends involving active travel modes will be investigated and opportunities for remedial engineering works will be identified where deemed appropriate.

The monitoring and evaluation plans for individual infrastructure projects will be developed as they progress, in line with Buckinghamshire Council's outline engagement strategy, with consideration of the following:

- Data collection requirements (e.g. walking and cycling counts)
- How, when and how much data will be collected
- Outcomes of the scheme (e.g. usage and user feedback)
- Lessons learned that can be applied to future schemes.

Appendices

Appendix A: Glossary of Terms

Acronym or abbreviation	Meaning
AMAT	Active Mode Appraisal Toolkit
CO ₂	Carbon Dioxide
DfT	Department for Transport
IMD	Index of Multiple Deprivation
LCWIP	Local Cycling and Walking Infrastructure Plan
LSOA	Lower Super Output Area
MCA	Multi Criteria Assessment
NO ₂	Nitrogen Dioxide
PCT	Propensity to Cycle Tool
PROW	Public Right of Way
RST	Route Selection Tool

Appendix B: Toolkit of Interventions

Advanced cycle stop line	Parallel crossing	Zebra crossing	Raised table crossing
	 <p data-bbox="698 571 1012 596"><i>(Aylesbury, Gatehouse Road)</i></p>	 <p data-bbox="1146 577 1572 603"><i>(Beaconsfield town centre. Source: DfT)</i></p>	
<p data-bbox="116 612 586 778">A stop line for cyclists at traffic signals marked beyond the stop line for general traffic. This helps bring priority to cyclists as they pull away in front of traffic. It also helps avoid conflict with vehicles turning.</p>	<p data-bbox="622 612 1093 810">A crossing facility for which people walking, cycling wheeling have priority over the road traffic, marked as a zebra crossing with a parallel priority cycleway. The first parallel crossing in Buckinghamshire was installed in Aylesbury.</p>	<p data-bbox="1124 612 1594 810">A crossing facility for pedestrians marked with alternate black and white stripes which gives pedestrians priority. Once a pedestrian has indicated their intent to cross motorists and cyclists are obliged to stop.</p>	<p data-bbox="1630 612 2123 810">A crossing that is raised above the road level. They help indicate pedestrian priority and encourage vehicles to slow down. They can be coupled with other crossing types mentioned in this section to show priority more clearly.</p>
Pelican / Puffin crossing	Toucan crossing	Pegasus crossing	X crossing
			
<p data-bbox="116 1177 586 1327">A signal-controlled crossing for pedestrians. Pelican crossings are demanded by push buttons whereas Puffin crossings also incorporate intelligent detectors to determine when the crossing is clear.</p>	<p data-bbox="622 1177 1093 1295">An unsegregated signal-controlled crossing for pedestrians and cyclists, linking cycle track and footway systems on opposite sides of a carriageway.</p>	<p data-bbox="1124 1177 1594 1295">A signal-controlled crossing for horse-riders, pedestrians and cyclists using signal heads and a flashing light crossing period that is push demanded at a level for horse riders.</p>	<p data-bbox="1639 1177 2110 1295">An all-red traffic signal phase that allows green time for pedestrians to cross at busy junctions in every direction, including diagonally, at the same time.</p>

High Wycombe LCWIP

Delineated and protected lanes	Contraflow cycle route	Greenway	Footway
 <p>A physical feature, such as a kerb or a change in surface material, separates cyclist and pedestrian spaces, or a separated cycle route runs alongside a road, distinguished by vertical barriers, coloured asphalt/paint, or elevation differences.</p>	 <p>Infrastructure that allows people cycling to ride in the opposite direction to one-way motor traffic. It is best implemented by raising the route to footway level or via a protected lane at the road level.</p>	 <p><i>(Waddesdon Greenway, Buckinghamshire)</i></p> <p>An off-road route through a greenfield area separate from traffic. They are typically established along a natural corridor or adjacent to other transport corridors. Greenways should be complemented by high-quality wayfinding.</p>	 <p>Footways should be wide enough to accommodate not just current but planned demand (including families, wheelchair users, etc.), they should have quality paving and minimal street clutter.</p>
Shared use path	Localised footway widening	Public right of way	Quietway
 <p>An area or route open to the public that is separate from motorised traffic and is designated for the use of pedestrians, wheelchair users and cyclists.</p>	 <p>Localised widening of footway infrastructure. This can help allocate new street functions (e.g. seating, cycle parking, greenery and shade, etc.) and to aid movement on challenging, hilly topography.</p>	 <p><i>(source: Buckinghamshire Council)</i></p> <p>A route which the public has a legally protected right to travel along at all times. They are classified according to the nature of use, including footpaths, bridleways and byways.</p>	 <p>Strategic routes which link key destinations using less heavily trafficked local streets, through parks, and along waterways or tree-lined streets. Usually supported by traffic calming measures.</p>

High Wycombe LCWIP

Wayfinding and signage	Footway buildout	Traffic calming	
			
<p>Wayfinding can be provided through user-friendly maps and fingerposts (including walking distance ranges and key landmarks), as well as through distinctive paving and other public realm interventions along key routes.</p>	<p>A section of footway extended out into the carriageway to reduce the crossing distance and improve visibility.</p>	<p>Physical design and/or psychological measures (e.g. different surface material) which encourage caution and slower speeds along a specific section of road. Speed reduction measures can be applied where appropriate.</p>	
Public realm improvements	Street amenities	Parklets	Cycle parking and storage
 <p><i>(source: Aylesbury Garden Town)</i></p>	 <p><i>(source: Aylesbury Garden Town)</i></p>		 <p><i>(source: Aylesbury Garden Town)</i></p>
<p>Measures to enhance the visual aesthetic and feel of an area. This includes greenery, tree planting, street art and other features to make public spaces more enjoyable and encourage biodiversity.</p>	<p>Features that improve the experience of dwelling and moving through a street. They can include hard and soft infrastructure which brings functional, aesthetic or ecological value.</p>	<p>A small seating area or green space created as a public amenity on or alongside a footway, and usually in a former on-road parking space.</p>	<p>Must be secure, sufficient and convenient. It should be located at close proximity to businesses and other key attractors, and preferably at well-overlooked places. Design should consider the needs of all users.</p>

High Wycombe LCWIP

Lighting	Dropped kerb and tactile paving	Pocket parks and bus stops
		
<p>Well-lit active travel infrastructure encourages and enables users to walk and cycle at all times of day, all year round, and can improve personal safety. Conservation-friendly measures can be used in rural or sensitive areas to improve visibility.</p>	<p>Dropped kerbs facilitate non stepped access, usually between the footway and carriageway. These should be accompanied by tactile paving, which provides a distinctive, raised surface profile to be detected by both sighted and visually impaired users.</p>	<p>Pocket parks are areas of green space that could also introduce resting places for the local community. Bus stops can include integrated seating areas, forming a resting point for bus users and people walking, cycling and wheeling.</p>
Localised infrastructure widening and resting points	Wider paths and lanes for uphill travel	Separation from vehicles
		
<p>Localised widening of infrastructure to create resting points / seating on the footway (including amenity improvements such as a shelters). These should be more abundant on hilly routes due to increased need.</p>	<p>Where appropriate, wider pathways and lanes in the uphill direction to accommodate swaying effect of cycling uphill. Wider footways can accommodate people walking their bikes uphill.</p>	<p>Separation of pedestrians and cyclists from vehicles. This enables users to have greater confidence, comfort and improved safety when navigating hilly topography.</p>