

High Wycombe Local Cycling & Walking Infrastructure Plan (LCWIP)



Buckinghamshire Council

High Wycombe Local Cycling and Walking Infrastructure Plan (LCWIP)

Public consultation draft

This report takes into account the particular instructions and requirements of our client.

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Acronyms and abbreviations

Acronym or abbreviation	Meaning
AMAT	Active Mode Appraisal Toolkit
CO ₂	Carbon Dioxide
DfT	Department for Transport
IIT	Infrastructure Impact Tool
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
РСТ	Propensity to Cycle Tool
PROW	Public Rights of Way
RST	Route Selection Tool
WRAT	Walking Route Audit Tool

1 Introduction

1.1 What is a LCWIP?

The development of Local Cycling and Walking Infrastructure Plans (LCWIPs) is a recommendation of national government policy (*Cycling and Walking Investment Strategy, 2017*), which focuses on improving streets and cycling and walking conditions at the local level and outlines an overall ambition to "make cycling and walking the natural choices for shorter journeys, or as part of a longer journey"¹.

The government has published guidance on the planning of active travel networks through the development of LCWIPs. LCWIPs are focused around providing a strategic long-term approach to developing cycling and walking networks, enabling local improvements to walking and cycling infrastructure and networks over a defined period.

The key outputs of a LCWIP include:

- A network plan for cycling and walking which identifies preferred routes and areas for further development
- A prioritised programme of walking and cycling 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

These key outputs provide local authorities with 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?

The purpose of developing a LCWIP for High Wycombe is to enable Buckinghamshire Council to adopt a strategic, informed approach to improving the cycling and walking networks in High Wycombe and its links to surrounding settlements over the short, medium and long term.

Previous investigative work has been undertaken in High Wycombe to identify existing, proposed and aspirational cycling and walking links in the town and towards surrounding settlements.

The High Wycombe LCWIP seeks to consolidate and enhance this information into a comprehensive and cohesive future network plan, supported by a prioritised programme of active travel infrastructure improvements. These outputs are to be used by Buckinghamshire Council to guide 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'.

Inclusivity is a crucial aspect of the High Wycombe LCWIP, which intends to make cycling and walking 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 for the local community, and improving the environment and amenity within High Wycombe.

The High Wycombe LCWIP forms a supporting plan to the High Wycombe Transport Strategy. The aims and recommendations of the LCWIP are all aligned with those outlined in the High Wycombe Transport Strategy.

¹<u>https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachm</u> ent_data/file/874708/cycling-walking-investment-strategy.pdf

1.3 Study area

High Wycombe is 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.



surrounding High Wycombe town centre, as well as key connections to surrounding settlements including Bourne End, Flackwell Heath, Hazlemere, Holmer Green, Hughenden, Loudwater, Penn, Sands, Saunderton, 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.

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 LCWIP study area.





1.4 High Wycombe LCWIP Vision

Building on the High Wycombe 2050 Transport Strategy Vision, which sets the overall direction of travel and the scale of ambition for the town's transport system, a bold vision for the High Wycombe LCWIP has been defined as follows. The High Wycombe LCWIP vision is also aligned with Buckinghamshire Council's key corporate plan priorities.

Background: The attractiveness of cycling and walking as transport modes in High Wycombe has been historically constrained by the town's hilly topography, particularly for north-south journeys. However, with the appropriate infrastructure and supporting measures, it is possible to achieve increases in local walking and cycling levels despite the hilly topography.

Encouraging and increasing cycling and walking is crucial in reducing and mitigating the negative impacts of vehicle-based transport. The High Wycombe LCWIP will propose a range of active travel interventions and measures that will set out the infrastructure required to tackle current challenges, such as congestion, and the ongoing challenges of climate change, housing growth, air pollution and the growing public health crisis of physical inactivity.

The COVID-19 pandemic has highlighted the need for an increased focus on local living and local trips. High Wycombe has untapped demand for encouraging more local cycling and walking trips and unlocking this will aim to achieve various health and economic benefits. This includes reduced congestion, savings to the NHS from a more active and healthy society, and increased spending within the local economy as a result of increased footfall.

Vision: The bold vision and ambition for the High Wycombe LCWIP is to identifystreets to be transformed into better places where cycling and walking are encouraged and enjoyed by people of all ages, backgrounds and abilities. The High Wycombe LCWIP will assist in providing healthier, happier and greener communities in High Wycombe and safer streets for everyone, and ultimately assist in achieving the strategic vision for the town.



1.5 Wider application

The High Wycombe LCWIP is intended to form part of a broader emerging vision for an accessible Buckinghamshire-wide cycling and walking network, which is to be developed further through the forthcoming Buckinghamshire Cycling and Walking Infrastructure Plan (LCWIP). This will enable a strategic approach to active travel provision across the county; outlining the Council's ambition for cycling and walking and establishing its priorities for future investment in order tomake active travel the first choice for everyday local journeys in Buckinghamshire.

Therefore, it is important that the High Wycombe LCWIP considers how improvements within its study area can also complement and enhance overall connectivity with the wider existing and future active travel network.

1.6 How we developed the High Wycombe LCWIP

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**

2.1 Local area context – High Wycombe

Summary:

Geography: Hilly topography presents a challenge for active travel 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 compared with the national average. Deprivation is generally low but with pockets of high deprivation around certain areas, typically of high population density. Several wards are identified as being of highest activity need.

Transport context: Historic development and changing movement patterns saw High Wycombe become a car dominated environment. The High Wycombe LCWIP seeks to shift the focus towards walking and cycling.

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

Air quality: Key arterial roads in High Wycombe exceed national and EU limits of NO₂ concentrations. Switching to sustainable transport modes is recognised as playing 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, 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 both of the Amersham and Marlow hills, whilst the 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 provides 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: High Wycombe Transport Vision baseline report, 2019)

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's Public Health Profile (2020)* identifies the High Wycombe area as having the highest IMD score in Buckinghamshire². However, the 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 within the town. Figure 5 shows the IMD ranks within High Wycombe.



Figure 5: IMD overall rank (source: High Wycombe Transport Vision baseline report, 2019)

² <u>High Wycombe Community Board - Public Health Profile Pack.pdf</u> (moderngov.co.uk)

Public health

The High Wycombe Community Board Public Health Profile (2020)² provides a high-level overview of health and wellbeing indicators from existing data. Of particular relevance for the LCWIP are the findings that 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)

Several wards within High Wycombe have been identified by Leap (an Active Partnership organisation aiming to improve the lives of residents in Buckinghamshire and Milton Keynes) as being priority wards with the highest activity need³. The level of activity need is determined by inactivity levels (Active People Survey), ward level deprivation (national IMD) and inactivity risk (4 Global's DataHub). The priority wards identified by Leap include:

- Micklefield
- Bowerdean
- Totteridge
- Oakridge and Castlefield
- Ryemead
- Booker and Cressex
- Terriers and Amersham Hill

³ <u>Priority areas | Leap (leapwithus.org.uk)</u>

Transport context

This section provides an overview of the historical and current transport context in High Wycombe.

Historical

Transport to, from and within High Wycombe, was once dominated by pedestrians and cyclists. Historical photos show that the town centre in particular was a pedestrian-focussed environment.

However, in the 1960s, the town centre was redeveloped which fundamentally shifted the transport and movement patterns within the town toward car-dominance. This shift was aligned with the increasing prominence of the car in modern society.

This redevelopment included constructing the A404/A40 'magic roundabout' and flyover, various additional pieces of road infrastructure, numerous multi-storey carparks and two new shopping centres.

Present day

In the present day, similar movement patterns and travel behaviour to what has been seen since the late 20th century can be observed, with much of the available road space allocated to vehicles. An example of this is shown in Figure 6, which shows traffic volumes and congestion on Marlow Hill.

Works have recently been undertaken to improve the road network and street environment within High Wycombe Town Centre – see Figure 7.

Building on the existing ambition and good practice, the LCWIP aims to re-shift the focus away from the car dominance that has been seen over the last few decades, and back towards walking and cycling.

Further information on the existing conditions is provided in Section 3.2.





Frogmoor / Town centre c. 1900 (source: Wycombe Museum / SWOP)

Paul's Row / Church Street c. 1914 (source: Bucks Free Press / SWOP)





Town centre 1968 (source: SWOP)

High Street 1970 (source: Bucks Free Press / SWOP)





Figure 6: Marlow Hill, High Wycombe (source: Google)

Figure 7: High Wycombe Town Centre (source: High Wycombe Transport Strategy)

Trip attractors and generators

Key trip attractors in High Wycombe, and their relationship to population density, are shown in Figure 8.

Most of the 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 walking and cycling distances to the town centre (for example, those around Desborough, Totteridge and Micklefield). These distances are typically considered to be in the order of 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 routes between these areas and key services and attractors.



Figure 8: Distribution of local attractors relative to population density

Travel patterns

Figure 9 and Figure 10 show journeys to work originating and ending in High Wycombe (*Census, 2011*). 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 itself or adjacent towns.



Figure 9: Journeys to work from High Wycombe (source: High Wycombe Transport Vision baseline report, 2019)



Figure 10: Journeys to work to High Wycombe (source: High Wycombe Transport Vision baseline report, 2019)

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
- Chiltern area (including Amersham and Chesham) (6%)
- South Bucks area (including Marlow and Bourne End) (5%).

The mode of transport for journeys to work varies significantly depending on the 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 itself having the highest mode share of 2%.

Figure 11 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.



Driving a car or van On foot Bus, minibus, coach Passenger in a car or van Bicycle Taxi Other

Figure 11: Mode of transport for journeys to work originating and ending in High Wycombe (source: 2011 Census)

More broadly, there is high car ownership and reliance in High Wycombe. Data from the 2011 Census shows that 83.4% of High Wycombe households have access to one or more cars, which is higher than the South East average (81.4%) and the national average (74%).

Air quality

Poor air quality has adverse health impacts. Within High Wycombe, air pollution is considered to attribute to 5.7% of deaths, with the percentage considered to be higher for those that live, work or spend large amount of time alongside the town's main arterial roads where high volumes of vehicles contribute towards poor air quality.

An air quality modelling exercise in 2017 found that substantial areas adjacent to the main arterial roads through High Wycombe and Marlow, along with the length of the M40, exceeded national limits of Nitrogen Dioxide (NO₂) (annual mean). This led to the declaration of an Air Quality Management Area (AQMA) covering the town centre and main arterial roads, as shown in Figure 12.

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 recommended measures relate to the promotion of active travel.



Figure 12: High Wycombe AQMA (declared on 22 December 2017)

COVID-19 and travel - national and local response

National

Now more than ever, there is recognition of the importance that cycling and walking play in the health and wellbeing of both people and planet.

The COVID-19 pandemic undoubtedly impacted the way people travel around towns and cities. In the initial national lockdown stages, a significant reduction in private vehicle and public transport trips was observed across the nation, in some instances upwards of a 90% reduction in comparison to a typical day. However, alongside this, steep increases in cycling and walking were observed, quieter streets and an increased focus on local living and local trips. This highlighted the increasing need for safe and accessible cycling and walking facilities for users of all ages and abilities.

In May 2020, the Department for Transport (DfT) announced £2 billion in funding to focus on infrastructure that supports walking, cycling and other forms of active travel. The first stage of this package was a £250 million fund for the swift introduction of emergency interventions designed to make cycling and walking safer, such as pop-up cycleways, wider pavements, and cycle and bus-only streets.

In July 2020, DfT released the '*Gear change: a bold vision for cycling and walking*', which outlines a vision for making England a great cycling and walking nation. The plan recognises the need for significant changes to active travel infrastructure in the coming years, whilst acknowledging the associated challenges. It recognises that there is a unique opportunity to transform the role cycling and walking can play in the transport system.

These actions and announcements from the government indicate the importance of active travel, and the large step change needed to achieve significant increases in cycling and walking. These announcements and plans strongly align with the direction of the High Wycombe LCWIP, highlighting the relevance of, and the need for, improved infrastructure.

Local

At the local level and in response to the COVID-19 pandemic, Buckinghamshire Council undertook a refresh and upgrade to the existing East-West cycle route in High Wycombe. This included additional wayfinding signs, improved accessibility, refreshing of existing markings and installation of solar studs through the park near Millbrook Combined School, through Lilys Walk and along the path by the Rye (the south side of The Dyke).

Additionally, an e-scooter rental trial, led by Zipp Mobility in conjunction with Buckinghamshire Council, was launched in High Wycombe in November 2020. Over 30,000 journeys were made in High Wycombe during the first 12 months of the trial, with 55,000+ total miles covered.

These examples highlight the opportunities to change typical travel behaviour patterns in High Wycombe, and to collect data on how these changes evolve over time.

2.2 Policy context

National	Gear Change: A bold vision for cycling and walking (2020)	Active travel: Trends, policy and funding (2020)		Decarbonising Transport: A better, Greener Britain (2021)		C	Cycling and Walking Infrastructure Strategy (2017)		Local Cycling and Walking Infrastructure Plans: Technical Guidance for Local Authorities (2017)	
Strategic	Buckinghamshire Local Transport Plan 4 (2016)	Buckinghamshire Physical Activity Strategy (2018)		Buckinghamshire Cycling and Walking Infrastructure Plan (forthcoming)			Buckinghamshire's Rights of Way Improvement Plan (2020)		Buckinghamshire Council Climate Change and Air Qua Strategy (2021)	
Local	High Wycombe Transport Strategy (forthcoming)	Wycombe District Local Plan (2019)	High Wy Regener Strate (2019, re forthcor	ation gy efresh	High Wycom Town Centr Masterplar (2019)	re	Reserve Sites Transport Framework (2016)		Vycombe District ir Quality Action Plan (2018)	Wycombe Air Quality SPD (2020)
	High Wycombe Local Cycling and Walking Infrastructure Plan		\bigcirc)						

Figure 13: Policy context

National policy

There has been increased support for active travel at the national level. The policies referenced in Figure 13 provide a snapshot of the key national guidance and vision-setting documents that informed this LCWIP. Key targets considered include for half of all journeys in towns and cities to be cycled or walked by 2030, and the planned delivery of a world class cycling and walking network in England by 2040.

Strategic policy

Buckinghamshire's *Local Transport Plan 4 (LTP4)* sets out the key policies and high-level approach to transport in Buckinghamshire from 2016 - 2036, aligned with Council's vision to make Buckinghamshire a great place to live and work.

While active travel is weaved throughout a number of key LTP4 policies, 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".

Local policy

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

"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 emission-free, seamless, and safe for all residents, businesses and visitors." The *High Wycombe Transport Strategy* also outlines three key themes which have been used to inform the concept network: *connecting locally, connecting regionally* and *connecting green spaces*.

The *High Wycombe Transport Strategy* initiatives shown in Figure 14 have all been considered when developing the High Wycombe LCWIP. The initiatives specific to cycling and walking, which the LCWIP seeks to develop further, include:

Reference	Description
BC1	High Wycombe behaviour change package
WC1	Town centre wayfinding signage scheme
WC2	'Healthy Neighbourhood' schemes
WC3	Segregated cycling lanes and 'quiet way' style network on all arterial corridors and key routes



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Figure 14: High Wycombe 2050 Transport Strategy initiatives

Other relevant local policies include the *Wycombe District Local Plan* and the *Reserve Sites Framework*, which have been reviewed in consideration of current and planned development sites with their existing and proposed walking and cycling infrastructure. This policy review has identified opportunities to develop new and improved links from these developments as well as to mitigate against potential impacts.

The Wycombe District Local Plan and the Wycombe District Air Quality Action Plan also support and encourage the ultimate aims of the LCWIP to deliver high quality and inclusive cycling and walking infrastructure. Additionally, the Wycombe District Air Quality Action Plan details a series of measures to improve air quality, many of which are associated with promoting active travel with an emphasis on working collectively with schools, businesses and local policy and planning processes.

Additionally, the *High Wycombe Town Centre Masterplan* and the *Regeneration Strategy for High Wycombe, Princes Risborough and Marlow* articulate a clear vision for improved cycling and walking facilities, and ultimately transforming public spaces and bringing the town together. This includes making changes to the road network to make the town centre more pedestrian friendly, delivering enhancements to the public realm, and also downgrading the Abbey Way flyover.

2.3 How the High Wycombe LCWIP supports key policy objectives

The High Wycombe LCWIP is a necessary next step in supporting the delivery of wider policy ambitions and local benefits. Table 1 considers how the proposed investment in walking and cycling infrastructure is aligned with the themes and objectives of the policies in Figure 13

Table 1: LCWIP alignment with key policy objectives.

Accessibility and Inclusivity

Investment in active travel is key to providing inclusive access and delivering economic and heath benefits to a wider segment of the population. This is recognised at the national and strategic policy level.

Gear Change: A bold vision for cycling and walking (2021) aims to achieve:

- 'Safer streets: Nobody is afraid to cycle; every child is confident and safe walking or cycling to school; all road users treat each other with mutual respect'
- **'Convenient and accessible travel:** Cycling and walking are recognised as the most convenient, desirable and affordable way to travel in our local areas; more women and disadvantaged groups enjoy walking and cycling as part of their daily journeys; everybody has opportunities to take up walking and cycling'

Buckinghamshire's Local Transport Plan (2016) support the achievement of these goals through policies 12 and 13:

- **'Policy 12 Walking** We 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'
- **'Policy 13 Encouraging cycling** We will look to develop the cycling network through a combination of new infrastructure, maintenance and promotion. We will support initiatives to help cycling become one of the most convenient and well used forms of transport for short journeys'

Public Health

Physical inactivity costs the NHS up to £1bn per annum, with further indirect costs calculated at £8.2bn. It is also the cause of 1 in 6 deaths in the UK. However, only 20 minutes of exercise per day has health benefits, cutting the risk of developing depression by up to 30%, dementia by 30%, hip fractures by 68%, diabetes type 2 by 40%, among others.

Recognising this, Gear Change: A bold vision for cycling and walking (2021) aims to achieve:

• **'Healthier, happier and greener communities:** Peoples' health and quality of life is improved by more people walking and cycling; the number of short journeys made by car is vastly reduced, meaning people from all parts of our communities around the country can enjoy the benefits of cleaner, healthier, safer and quieter streets'

The Buckinghamshire Physical Activity Strategy (2018 – 2023) recognises the health benefits of walking and cycling, seeking to achieve:

• *`a reduction in the proportion of Buckinghamshire residents who are inactive by 2023'* through *`active environments' and `active communities'*

Climate Change and Air Quality

By law the UKs emissions must now be net zero by 2050 and active travel has a key role to play in achieving this.

Decarbonising Transport (2021) supports this goal by setting milestones and commitments which include:

- *'Half of the journeys in towns and cities will be cycled or walked by 2030'*
- *'We will deliver a world class cycling and walking network in England by 2040'*

At the local level, the Buckinghamshire Physical Activity Strategy (2018 – 2023) makes a commitment to seeking opportunities to improve the local environment:

 'Policy 10 – Improving our environment – We will protect Buckinghamshire's unique countryside and other special environments, working with partners to manage air quality, take advantage of opportunities to encourage more sustainable travel choices and reduce noise pollution'

This commitment is echoed in local policies, including the Wycombe District Air Quality Action Plan (2018) and the Wycombe District Local Plan (2019), which has at its core '*Policy CP1 – Sustainable development*' supported by '*Policy CP12 – Climate Change*'.

Mitigating Development

Active travel and sustainable connectivity is key to mitigating the impacts of development, whilst also providing new opportunities to existing residents, local business and visitors to enjoy the benefits offered by new sustainable mobility options.

In Buckinghamshire's Local Transport Plan 4 (2016) it is stated that:

- 'We will need to secure road, rail, bus, walking, cycling and other essential infrastructure to meet the current and future needs of our residents'
- This need is explored further in 'Policy 3 Managing the impact of new developments'

The Wycombe District Local Plan (2019) also acknowledges the role sustainable transport infrastructure plays in ensuring sustainable growth:

• This is explored in 'CP1 – Sustainable Development: The Council will require all new development to contribute towards delivering sustainable development'

Place-Making

Investment in walking and cycling infrastructure can improve placevitality and local environmental quality, especially when active travel is integrated into at all stages of the planning process. Gear Change: A bold vision for cycling and walking (2021) sets as one of its key 4 principles:

• *At the heart of transport decision-making:* Better cycling and walking infrastructure has allowed more efficient use of road space, to the benefit of all road users; cycling and walking routes are well connected with wider public transport services; cycling and walking measures are no longer seen as an afterthought but have moved to the very heart of considerations for all transport policy and planning, at all levels of leadership.'

Wycombe District Local Plan (2019) also acknowledges the role that active travel can play in improving town centre vitality:

• This is explored in 'Policy CP6 – Securing vibrant and high-quality town centres'

Economic Vitality

Well-planned improvements in the walking environment are proved to achieve up to 40% increase in shopping footfall. Cycling contributes £5.4bn to the economy per year. This is recognised at a number of national strategies which aim to use active travel as a tool for sustainable economic growth and town-centre and high-street revitalisation.

At the strategic policy level, Buckinghamshire Physical Activity Strategy (2018 - 2023) states that physical inactivity costs approximately £85m to Buckinghamshire each year.

At the local level, the Wycombe District Local Plan (2019) **'Policy CP6**– Securing vibrant and high-quality town centres', the High Wycombe Regeneration Strategy (2019) and the High Wycombe Town Centre Masterplan (2019) all include a focus on improving active travel connectivity to increase access to and the vitality of High Wycombe town centre and other key areas of local economic activity.

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:

9	General context data	 Topography Demography (e.g. population density, Index of Multiple Deprivation) Locations and types of key attractors, trip generators and amenities 	
50	Transport specific data	Travel to work dataCollision dataCycle count data	The
	Stakeholder engagement inputs	 WidenMyPath Travel perception survey Comments received through workshops 	
\Box	Policy, plans and guidance	• As shown in Figure 13	



- Existing transport infrastructure and networks
- Known active travel route and network aspirations (including identified routes and existing feasibility studies)
- Other active travel projects underway (e.g. improvements to the east-west cycle route, and E-scooter trial data)

Case Studies With a specific focus on areas with hilly topography where increased active travel levels have been achieved

These data sources are explored further in the following chapters of the LCWIP.

3.2 Existing network and infrastructure review

Figure 15 shows the 'baseline' transport network, including the existing active travel network, 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 infrastructure and considers potential future demand.



Figure 15: Baseline summary map - existing transport infrastructure

3.2.1 Cycling and walking network

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. 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 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 the PRoW routes, particularly near the town centre.

3.2.2 Other transport infrastructure

A review of other transport infrastructure in the study area identified:

• 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 former RAF Daws Hill site, the Handy Cross Hub and Cressex 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 and Reading to the east and south.
- The Chiltern Railways line passes through High Wycombe, providing direct, frequent and fast rail connectivity to London (Marylebone), Oxford, Aylesbury, Warwick, Solihull, Birmingham and Kidderminster. The railway station is located just to the 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. Though the local bus services are quite comprehensive and frequent, especially during weekdays, the evening and weekend frequency is lower.
- The Park and Ride is located at the Handy Cross Hub. There is a bus route connecting the site to Cressex Business Park, Wycombe Hospital, the railway station and the bus station, typically with a 20minute frequency.

3.3 Future network and potential demand

3.3.1. Route and network aspirations

Various existing route feasibility studies have been considered as part of the development of the High Wycombe LCWIP. These include aspirational links within High Wycombe and to various surrounding settlements.

Consideration has also been given to opportunities for enhancing High Wycombe's connectivity with the emerging 'Buckinghamshire Greenway' vision for an accessible walking and cycling route that will stretch from Silverstone and Brackley to Uxbridge and Heathrow Airport. Forming the key spine of a future countywide active travel network, the Buckinghamshire Greenway (see Figure 16: Buckinghamshire Greenway) will connect with local routes, communities and public transport infrastructure, providing an attractive and safe active travel alternative to car transport.

The Buckinghamshire Greenway is proposed to be located approximately 10km to the north-east of High Wycombe. The most direct road route from the centre of High Wycombe to the proposed Greenway alignment is via the A404.



Figure 16: Buckinghamshire Greenway

3.3.2. Future demand

Propensity to Cycle Tool (PCT)

The LCWIP guidance recommends the use of the DfT-funded *Propensity to Cycle Tool (PCT)*. This online tool comprises 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 as inputs, and provides numerical and graphical outputs, including estimated numbers of cyclists in an area, along straight 'desire' lines and along routes⁴.

The tool has been used throughout the development of this LCWIP to plan the cycle network, identify potential demand for cycling across the geographical area covered by LCWIPs, under different scenarios, and assist with scheme prioritisation.

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

- <u>2011 Census</u> based on current levels of cycling as per the 2011 Census data for method of travel to work
- <u>Government target of gender equality</u> a scenario in which women are as likely as men to cycle
- <u>Go Dutch</u> a scenario that uses Dutch propensity to cycle trips that are of particular length and hilliness⁵.

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 (WRAT), as recommended in the LCWIP guidance, as well as the Healthy Streets Framework, the Sustrans Infrastructure Impact Tool (IIT) and guidance about low traffic neighbourhoods. These tools all provide assistance, in different ways, for planning the walking and cycling networks, identifying preferred routes, ensuring the proposed routes are fit-for-purpose and assisting with scheme prioritisation.

⁵https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachm ent_data/file/883081/cycling-walking-infrastructure-tools.pdf

⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachm ent_data/file/883082/cycling-walking-infrastructure-technical-guidance.pdf

3.3.1.1 Strategic development sites

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 development (Reserve) sites that will be required to provide new cycling and walking links within the High Wycombe LCWIP study area are:

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

These sites are shown in Figure 17.



Figure 17: 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 18.



Figure 18: Main development proposals in High Wycombe (source: Wycombe Local Plan)

The LCWIP network has been developed with due consideration given to identified future growth areas as set out within the Wycombe Local Plan. It will be expected that as part of any development brought forward across the plan period, contributions will 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.

3.4 Stakeholder engagement

A three stage engagement-led approach has been taken when developing the High Wycombe LCWIP. A large number and wide range of stakeholders were engaged with from the outset of the project to ensure that local knowledge informed the development of the proposed LCWIP 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



Stage 2: Developing the LCWIP

We are

Summary of engage	gement		
Buckinghamshire Co Steering Grou		In-depth workshops with targeted groups	
Buckinghamshire Cour worksh		and individuals to confirm and refine initial findings and provide check-points during the development of the High Wycombe LCWIP	
Buckinghamshire C worksh		Local stakeholders engaged include	
High Wycombe loc worksh		representatives from key employers, interest groups and partner organisations.	
Confirming the	vision, objectives an	and opportunities relating to active travel d concept network for the LCWIP ioritisation of proposed interventions	
Confirming the	vision, objectives an ssessment and the pri	d concept network for the LCWIP ioritisation of proposed interventions	
Confirming theInforming the as	vision, objectives an ssessment and the pri-	d concept network for the LCWIP ioritisation of proposed interventions	
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 Confirming the Informing the as <i>ge 3: Finalising a Summary of enga</i> Buckinghamshire Court	vision, objectives an ssessment and the pri- and adopting the gement ncil local members top the High Wycombe	d concept network for the LCWIP ioritisation of proposed interventions	

3.5 Challenges and opportunities

This section summarises the key challenges and opportunities that have been 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 active travel uptake in High Wycombe, including:

- Challenging, hilly topography for active travel and implications for accessibility
- Lack of dedicated infrastructure, particularly for cyclists, and varying quality of existing infrastructure
- Significant severance through the town centre, particularly for movements north-south, caused by the A40 and the railway line
- Areas of the town with constained highway width
- 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
- Pressure on existing infrastructure from current and planned development, and from forecast growth. Associated lack of route choices or dedicated links from planned growth areas to the town centre.

Opportunities

Numerous opportunities have also been identified, including:

- To harness the recent increased local and national political support for active travel
- To build on existing feasibility studies and current investigative work to develop a comprehensive, aspirational cycle and walking network for High Wycombe
- To meaningfully contribute to the *Buckinghamshire Cycling and Walking Infrastructure Plan* and the *Buckinghamshire Greenway vision*
- To strengthen the existing appetite for more trips to be undertaken by cycling and walking, as identified by local residents in the travel perception survey and during workshop sessions
- To encourage more uptake in cycling and walking for local trips and recreational purposes
- To encourage more trips to, from and within the town centre by cycling and walking
- To encourage more commuters to travel to the railway station by walking or cycling, as opposed to driving
- To introduce dedicated, high-quality walking and cycling 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 growth whilst promoting healthy, sustainable and more connected communities.

4 Network planning concepts

In order to deliver a comprehensive, cohesive walking and cycling network for the High Wycombe LCWIP study area, five overarching concepts have been developed 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 19 and explained in further detail below

Each of these concepts consider both walking and cycling and have been broken down into sub-concepts which help guide the network development process and the prioritisation approach, detailed in Chapters 6 and 7.



Figure 19: Network planning concepts

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 will consider how active travel can make the town centre a more attractive and thriving place.

The concept supports *High Wycombe Transport Strategy* (scheme reference WC1) and *High Wycombe Regeneration Strategy* (High Wycombe Town Centre – Big Moves 4 and 6).

Key features and considerations for the walkable core include:

- Access and connectivity: Reducing severance, improving active travel connections and securing good linkages with key attractors (such as transport and educational hubs) for all.
- Activity and liveability: Prioritising active travel modes, improving environmental quality (green landscaping, air quality, lighting, seating and shade provision) and securing inclusive infrastructure to meet varied mobility requirements.
- **Improved wayfinding and signage:** Making the town centre (and access to the centre) easier to navigate for both those who are local and visitors to the area, including the creation of 'Town Centre Gateways'.
- **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 / hubs**: Providing a sufficient quantum of safe, protected overlooked and high-quality cycle parking in strategic and easy to access locations to accommodate existing and future demand and to enable interchange with other transport modes.



Figure 20: High Wycombe town centre

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. John Hall Way link
- 2g. Links to strategic development sites
- 2h. PRoW improvements (identified by BC)

This concept supports *High Wycombe Transport Strategy (scheme reference WC3)* by considering the existing strategic road network in High Wycombe, and how this can be utilised to provide the most direct cycling and walking routes to the north, east, south and west. It also looks at maximising connectivity with other routes and hubs that, whilst not located on main radial routes, serve an important function for the town. Further detail is provided below:

• **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. For example, the east-west connection can be made via the A40 (direct, but potential issues with safety concerns due to lack of existing dedicated high-quality infrastructure,) or via the existing east-west cycle route that runs to the south of the A40 (less direct and more circuitous, but will likely appeal to less confident cyclists). The A404 also provides a direct connection to the proposed Buckinghamshire Greenway alignment to the north-east of High Wycombe.

• Key links and hubs: In addition to the main radial routes, 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. For example, the Handy Cross Hub and Cressex Business Park.

When planning for these routes, it is important to ensure:

- An **appropriate allocation of space** for people walking and cycling, considering fully inclusive provision for families, wheelchair users and people with varied mobility requirements. This translates to wide sidewalks, and segregated cycle infrastructure in line with the latest design guidance.
- Availability of **resting points**, where it is possible and appropriate to introduce them, and ensuring they are located so that there is no loss of minimum footway width.
- Availability of **crossings** outside key attractors and at key intersections, including signal-controlled crossings at busy roads, and provision for informal crossings along quieter links.
- **Wayfinding** provided at key decision-making points such as intersections, showing the direction to key attractors.

Further detail on potential walking and cycling interventions is provided in Chapter 5.



Figure 21: Examples of two-way protected cycle track (left) and road space reallocation (right)

3. Healthy neighbourhoods

Sub-concepts:

3a. Totteridge

3b. Desborough

A 'healthy neighbourhood' is a concept that involves grouping local neighbourhood streets together to form a local network where cycling and walking are encouraged and prioritised, and private vehicle trips that are not local to, or do not require access to, the area are discouraged. This concept aims to tackle rat-running, improve air quality and ultimately make these streets safer and more welcoming places for everyone. This approach is now relatively widespread in London and similar concepts have been trialled other cities such as Oxford, Leeds and Manchester.

All properties within a healthy neighbourhood area remain accessible by car, however the approach aims to filter out through-traffic by introducing modal filters, bus gates and traffic-free links. The approach is most effective when implemented in conjunction with protected cycling infrastructure on main roads that bound each neighbourhood.

The concept of 'healthy neighbourhoods' is a key cycling and walking scheme recommended in the *High Wycombe Transport Strategy* (scheme reference WC2). The 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 these are the areas identified as having the most urgent need 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 applied to future healthy neighbourhood schemes in Downley, Micklefield and Wycombe Marsh. The key components of a healthy neighbourhood include:

- **15-minute neighbourhoods:** Improving active travel connections to local services and key attractors within the local neighbourhood area, through the creation of strategic, safe and enjoyable routes.
- School/Play/Safe Streets: Securing safe and enjoyable residential streets where active travel modes are prioritised and environmental quality is safeguarded (e.g. through traffic calming measures).

These key components are complemented by specific design considerations, including:

- **'Informal' crossing provision:** Provided through footway build outs, pedestrian and cyclist priority crossings, ramps, etc.
- **Traffic calming measures:** Including speed humps, carriage narrowing, build outs and landscaping.
- **Ensuring quality of footways:** Aiming for a minimum 1.8m width (with an aim of providing 2m clear width everywhere in line with Manual for Streets and CD143), ensuring quality of pavement, continuity and inclusive crossings (seamless where possible).
- Landscaping and other public realm interventions.



Figure 22: Examples of interventions for healthy neighbourhoods

4. Wider network and strategic routes

Sub-concepts:

4a. Hughenden Greenway and Cross-Valley link

- 4b. High Wycombe to Bourne End Greenway
- 4c. Links to other settlements

The fourth concept looks at enhancing active travel connectivity with the wider geographical area surrounding High Wycombe. Improving the wider network connectivity is an important aspect of linking local settlements and enabling journeys between these locations to be made by walking and cycling.

The majority of these settlements are within an acceptable walking and/or cycling distance from High Wycombe. Table 2 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 2: Approximate distance from High Wycombe station to surrounding settlements

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

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

Links to the following key settlements have been considered when developing the LCWIP network:

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

The High Wycombe LCWIP also identifies potential links towards the surrounding settlements of Marlow Bottom and Beaconsfield, which are on the border or fall outside of the LCWIP study area. Future feasibility work will be required to investigate options and for connections to these settlements to be established.



Figure 23: Example of a local Greenway style route (Phoenix Trail, Princes Risborough-Thame) (source: Sustrans)
5. A cohesive and connected network

Sub-concepts:

- 5a. Public rights of way improvements
- 5b. A40/A404 roundabout and A40 flyover
- 5c. Other links and point interventions

The previous four network planning concepts focus on specific locations or links. The fifth and final concept aims to bring all of the previous concepts together to produce a singular, cohesive and connected cycling and walking network for High Wycombe and its surrounds.

This concept captures a wide variety of interventions across the study area, including:

- Recognition of the future vision of removing the A40/A404 'magic roundabout' and A40 flyover and reimagining the existing transport infrastructure.
- Various other interventions including public rights of way improvements, protected cycling infrastructure, quietways and new and improved junctions and crossings.

It is recognised that while infrastructure is crucial to enabling and encouraging more active travel journeys, this provision alone is unlikely to be sufficient. Supporting interventions, such as behaviour change measures, will be required to complement new walking and cycling infrastructure provision. Further information about potential supporting measures is provided in Section 8.4.



Figure 24: Example of a quietway

5 Toolkit of interventions

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

These improvement options are summarised in a Toolkit of Interventions, grouped into the six following categories that collectively contribute to a comprehensive and inclusive walking and cycling network. Each category is color coded in the Toolkit.

To support the recommended improvement options for hilly topography, Section 5.1 outlines case studies of hilly towns in the UK where increased cycling and walking levels have been achieved.

Chapter 6 details the proposed LCWIP network and its sub-concepts, and identifies which elements of the Toolkit are to be used to deliver each of the proposed interventions.

	杰	Junctions and crossings
	A	Links
\langle	ŧ	Traffic management
~	٩ <u>(مَرْهَيْمُ مَنْ</u>	Parking and place
0	222	Access and inclusion
	*	Hilly topography

Advanced cycle stop line



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 issues of conflict with vehicles turning.

Pelican / Puffin crossing

Parallel crossing

(Aylesbury, Gatehouse Road)

A crossing facility for pedestrian and cyclists which has priority over the road which it crosses, marked as a zebra crossing with a parallel priority cycleway. The first parallel crossing in Buckinghamshire has been installed in Aylesbury.



Zebra crossing

(Beaconsfield town centre. Source: DfT) 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.

Pegasus crossing

Raised table crossing



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.

X crossing



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.



Toucan crossing

An unsegregated signal-controlled crossing for pedestrians and cyclists, linking cycle track and footway systems on opposite sides of a carriageway.



A signal-controlled crossing for horse-riders, pedestrians and cyclists which uses far-side signal heads and a flashing amber/flashing green crossing period which is push demanded at a level for horse riders.



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.

Delineating	Bus gate	Contraflow cycle route	Cycle track
A physical feature that separates cyclist and pedestrian space, such as a kerb and/or a change in surface material.	A short section of road through which only buses, cyclists and other authorised vehicles can travel. They can operate 24/7, or on a time basis (e.g. during peak periods).	Infrastructure that allows cyclists to ride in the opposite direction to one- way motorised traffic, bringing more flexibility and convenience to this mode. It is best implemented by raising the route to footway level or via a protected lane at the road level.	A separated route specifically for cycles that runs alongside a road or street. It is distinguished by vertical barriers, coloured asphalt/paint and/or elevation differences.
~			
Greenway	Footway	Shared use zone	Localised footway widening
Greenway	Footway	Shared use zone	Localised footway widening



Car parking space reallocation	Cycle parking and storage	Street amenities	Parklets
	<i>(source: Aylesbury Garden Town)</i>	(source: Aylesbury Garden Town)	
Removal and repurposing of one or	Must be secure, sufficient and	Features that improve the experience	A small seating area or green space
more parking bays to other modes.	convenient. It should be located at	of dwelling and moving through a	created as a public amenity on or
Examples of this include for widening footways, providing	close proximity to businesses and other key attractors, and preferably	street. They can include hard and soft infrastructure which brings	alongside a footway, and usually in a former on-road parking space.
protected cycle infrastructure,	at well-overlooked places. It must	functional, aesthetic or ecological	Tormer on-toau parking space.
parklets or cycle parking.	consider the needs of all users by	value.	
	catering different cycle types.		
Resting points	Public realm improvements	Lighting	Dropped kerb and tactile paving
			AND
	(source: Aylesbury Garden Town)		
A space for pedestrians and cyclists	Measures to enhance the visual	Well-lit active travel infrastructure	Dropped kerbs facilitate non stepped
to rest without disrupting existing	Measures to enhance the visual aesthetic and feel of an area. This	encourages and enables users to	access, usually between the footway
to rest without disrupting existing movement patterns. They are	Measures to enhance the visual aesthetic and feel of an area. This includes greenery, tree planting,	encourages and enables users to walk and cycle at all times of day,	access, usually between the footway and carriageway. These should be
to rest without disrupting existing movement patterns. They are usually provided at regular intervals	Measures to enhance the visual aesthetic and feel of an area. This	encourages and enables users to	access, usually between the footway
to rest without disrupting existing movement patterns. They are	Measures to enhance the visual aesthetic and feel of an area. This includes greenery, tree planting, street art and other features to make	encourages and enables users to walk and cycle at all times of day, all year round, and can improve	access, usually between the footway and carriageway. These should be accompanied by tactile paving, which

Separation from vehicles Localised infrastructure widening Wider cycle lanes for uphill travel Wider footways and resting points Localised widening of cycling Wider cycle lanes in the uphill Significant separation of pedestrians Wider footways to accommodate infrastructure to accommodate space direction to accommodate swaying and cyclists from vehicles. This people walking their bikes uphill. for cyclists to stop and rest. This effect of cycling uphill. enables users to have greater Some users may prefer to walk their includes provision of a resting point confidence, comfort and improved bikes up steep hills, so adequate / seating on the footway (including safety when navigating hilly footway width in these locations is amenity improvements such as a topography. important. shelters, drinking fountains). These should be more abundant on hilly routes due to increased need.

5.1 Case studies

Hilly topography is often cited as being a significant barrier to enabling greater walking and cycling levels. This section summarisies data and outlines case studies of hilly towns in the UK where increased cycling and walking levels have been achieved. When considered alongside the measures recommended in the Toolkit of Interventions, these examples highlight that hilly topography should not preclude active travel being a viable mode of transport in High Wycombe.

5.1.1 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 3.

While hilly topography is often perceived as a significant barrier to active travel, the DfT statistics show that in reality the barrier is 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 trips⁶.

Table 3: 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)

5.1.2 Oxford LCWIP (2020)

The recently published Oxford LCWIP identified that there was significant propensity to increase cycling in the 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 proposed 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). For example, this included proposing wider infrastructure on uphill segments and freedom of sideways movements and measures to conserve momentum for downhill segments.

⁶ Local Area Walking and Cycling in England: 2014/15 (publishing.service.gov.uk)

5.1.3 Bristol: Becoming a Cycling City (2008-2011)

Between 2008 and 2011, Bristol and South Gloucestershire Councils undertook a major project to encourage more people to cycle within their towns. The project was focused on a variety of different measures to encourage more people to cycle, such as:

- Infrastructure upgrades, including:
 - Constructing new cycling infrastructure and making improvements to existing
 - On-road and traffic free improvements
 - o Introduction of 20mph limit areas
 - Tackling pinch points
 - Increased cycle parking
 - Improved wayfinding and signage
- Providing help and support through training and working with key local groups, including:
 - Engagement with numerous local businesses, schools and community groups
 - o Bike to school week
 - Community grants
 - Bristol Bike Project vulnerable residents provided a bike and taught how to refurbish it
 - Personalised travel planning
 - o Loan bikes
 - Adult cycle training

- Running promotional events to engage the community, including:
 - Cycle carnival and festival
 - o Bristol's Biggest Bike Ride
 - o Bike breakfasts
- Raising awareness of the benefits of cycling.

The project resulted in some significant positive changes, including:

- 50% reduction in the number of serious injuries to cyclists
- 20mph speed limit areas have resulted in an increase in cycling, a reduction in cycle accidents and strong support from locals (83% of residents supported the speed limits post-implementation)
- Increase in cycling trips by 102% and 84% along two new routes
- Average number of commuters cycling to work increased by c. 3% (up to almost 10% in 2010), with some areas showing over one quarter of residents now cycling to work⁷.

⁷ <u>https://betterbybike.info/wp-content/uploads/2020/07/Cycling-City-end-of-project-report.pdf</u>

6 Network planning for cycling and walking

6.1 Introduction

This chapter outlines the holistic approach taken to develop the proposed cycling and walking network for High Wycombe. The network planning process has considered cycling and walking modes together as they are heavily interlinked. Both modes are therefore included across all aspects of the network sub-concepts.

When identifying and comparing potential routes and interventions for inclusion in the future cycling and walking 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 design guidance and good practice for the design of active travel infrastructure. It supports the LCWIP objectives of delivering high-quality inclusive infrastructure.

While LTN 1/20 has a focus on cycling, it also includes commentary about pedestrian infrastructure. The High Wycombe LCWIP has been developed based on the core design principles outlined in LTN 1/20, shown in Figure 25.

Most notably, these principles state that cycling and walking infrastructure must be **coherent**, **direct**, **safe**, **comfortable** and **attractive** for all users.



Figure 25: Core design principles (source: LTN1/20, 2020)

6.3 Approach

The High Wycombe LCWIP has been developed using both a 'top down' and 'bottom up' approach, producing a robust and well-balanced walking and cycling network that has considered all appropriate inputs.

Top-down: In order to develop a comprehensive understanding of the local context, an iterative layering process was employed using all baseline data available in GIS, as illustrated Figure 27. This process identified where new or improved routes would be best located. For the majority of locations, it was identified that this would be via the road network or the PRoW network (with appropriate interventions). This approach enabled an assessment of the emerging network and to ensure that it will provide a step-change in town-wide connectivity.

Bottom-up: The first step in this process was to identify 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 routes for residents to access these facilities (see Figure 26).

Step 1: Existing barriers and severance Step 2: Potential interventions





Figure 26: Bottom-up network development process



Figure 27: Top-down layering approach

6.4 **Proposed LCWIP network map**

Using baseline review data, findings from the stakeholder engagement sessions and recommended route assessment tools, a comprehensive walking and cycling network has been developed that covers High Wycombe and also provides links to surrounding settlements. The proposed High Wycombe cycling and walking network is shown in Figure 28.

In certain locations, new infrastructure is proposed, whilst in others improvements to existing routes and infrastructure are recommended. These are clearly differentiated on the network through different line colours and types. Additionally, across all schemes, opportunities for complementary improvements to urban greening and landscaping should be sought to tie into any proposed works.

Walking and cycling have been considered across and integrated within all recommendations. The proposed network has been assessed against the Propensity to Cycle visualisations, and there is a strong correlation between the two. All the major employment sites, key attractors / 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.

The following sections of the LCWIP discuss the proposed active travel improvements (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, also proposed in Chapter 4.



Figure 28: Walking and Cycling Network for High Wycombe

6.5 **Proposed interventions**

6.5.1 Walkable core

Existing conditions

The Town Centre is the 'heart' of High Wycombe as it is the major focus of the local economy in terms of employment and retail, whilst providing a great platform for leisure and community interaction.

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, poor lighting, and insufficient cycle parking facilities at particular locations, in addition to a number of untapped opportunities that could make the Town Centre a more thriving environment. Part of the Town Centre is currently designated as a pedestrian zone which prohibits all 'vehicles', including cycles, from this area.

These opportunities have been recognised and started to be addressed through recent public realm schemes, including those proposed in local policies.

Building on this, the Walkable Core proposal integrates the ongoing thinking around securing a high-quality and inclusive walking and cycling network, exemplar public realm, leading to a strengthening of the local economy and improved connectivity.



Figure 29: High Wycombe's Town Centre (existing)

Proposed interventions

1a. Wayfinding and signage

Seeking to deliver a consistent approach to wayfinding through inclusive signage and distinctive features.

This will make the town centre easier to navigate and improve access 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 can be provided through user-friendly and attractive, engaging street maps (with walking distance ranges and key landmarks), as well as through distinctive paving, public art, interactive play areas and other public realm interventions along key routes.

Wayfinding should also consider cycling through the provision of bigger signs which can point cyclists in the right direction whilst on the move, with distance and travel time advice.

The specific locations and type of wayfinding features should be decided through a place-based approach, considering how they could be implemented in conjunction with wider schemes and how they would align and complement existing wayfinding and other place features.



Figure 30: Inclusive wayfinding examples

1b. Public realm and placemaking improvements

Specific interventions include:

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 by pedestrians and cyclists 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**

viater rountains

Accessible for people with different needs

Cycle parking

Regular and accessible 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 highly recommended, potentially by utilising an area of public realm which could act as an integrated mobility hub, with associated retail offering

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



Figure 31: Example of shared space management

1c. Infrastructure improvements

A combination of measures along key routes to improve walking and cycling links within the Town Centre and to key attractors.

Specific interventions include:

Parklets, parking space reallocation, loading bay designation

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, Xcrossings 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. The accessible crossing principles listed below should also be secured

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

Proposals for improved walking and cycling infrastructure within the town centre will be developed further alongside emerging local proposals in the High Wycombe 2050 Transport Strategy, Buckinghamshire Council Bus Service Improvement Plan and forthcoming town centre regeneration activities.



Figure 32: Transforming key corridors - Widening of sidewalks, provision of cycle parking, greenery, seating and improved crossings along Castle Street (indicative visualisation)

6.5.2 Main radial routes, key links and hubs

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 very pleasant conditions for people walking and cycling. Most of the link includes two vehicle lanes in each direction, carrying significant levels of traffic. Pedestrians are constrained to narrow footways and are not offered many crossing opportunities. There is also a lack of street infrastructure and amenities that could improve the experience of those travelling by active modes.



Figure 33: Marlow Hill and Amersham Hill (existing)

Terriers Farm

Totteridge

Protected cycle infrastructure

Point Interventions (Indicative)

Improve Existing Modal Filter

Quietway

Route upgrades

New Crossing Improve Crossing

H

•

Improve Junction

Improve Subway

Modal Filter

Bus Gate

New traffic-free link Improve existing traffic-free link

PRoW improvements

Terriers

Proposed interventions

Enhancement of the pedestrian environment and introduction of protected cycle infrastructure on both sides of the A404 northsouth strategic link, along Marlow Hill and Amersham Road.

Specific interventions include:



N

Figure 34: North-south link proposed interventions

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

The exact locations for footway widening, and the introduction of landscaping, street amenities and resting points will need to be assessed in coordination with the space requirements for the introduction of the protected cycle infrastructure. Any space reallocation to accommodate these improvements will need to be developed in conjunction with proposals in *the High Wycombe Transport Strategy*, such as the introduction of a north-south bus priority corridor along the A404 Marlow Hill (*scheme reference PT6*).

It should be noted that the A404 provides a direct connection from the centre of High Wycombe to the proposed Buckinghamshire Greenway alignment to the north-east of the town and therefore this route has been identified as a potential connector to the main 'spine' of the Greenway.

Key Constraint: Hilly topography

This route is very steep (average slope of around 8%) which presents a significant challenge for active travel. It is therefore recommended that some of the identified interventions for hilly topography are implemented. This includes wider cycle facilities in the uphill direction, resting / stopping points for both pedestrians and cyclists, and encouraging the use and uptake of e-cycles.



Figure 35: A404 intervention (indicative visualisation)

2b and 2c. East-west strategic link

Existing conditions

The east-west link through the town is one of the most important routes in High Wycombe, as it connects numerous locations 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 in comparison to other routes. Considering these opportunities, it becomes crucial that this link offers high-quality walking and cycling facilities for more people to enjoy.

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 on the A40 is poor, with many of the footways being too narrow or in poor condition. There are also 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 alternative 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 as the A40 route, requiring users to navigate along a zig-zagging route and through multiple junctions.



Figure 36: A40 London Road (existing)



Figure 37: East-west cycle route (existing)

Proposed interventions

A staged improvement of the walking and cycling conditions along the A40 and the existing east-west cycle route. Longer term, there is vision for the A40 to be converted into a 'pedestrian friendly' corridor, with infrastructure either running within or adjacent to the corridor. In the short and medium term, temporal improvements and quick wins (such as new crossings and junctions) that align with this vision can be delivered, helping to inform the development of the wider scheme.

Specific interventions include:

Advanced cycle stop lines at all junctions

Providing priority and a safer start for cyclists at junctions **Toucan, pelican or puffin crossings at strategic locations** Facilitating more formal crossing opportunities for pedestrians and cyclists. Ensuring there is no need to rush to cross heavily trafficked roads

Protected / delineated cycle tracks along the A40 and, as much as space deems possible, on the east-west cycle route Ensuring a quality and safe route for cyclists of all levels. Securing enough space for people to travel comfortably at different speeds. Delineated cycle tracks should not consist of line markings only. They are to be supported by other consistent design features and signs to ensure the safety of cyclists and pedestrians

Pedestrian – cyclist shared used paths

Only to be implemented where space is too constrained to separate people walking and cycling and where path widening to accommodate both is not possible (otherwise, implementation of protected / delineated cycle tracks should always be prioritised).



Figure 38: East-west link proposed interventions

Where shared paths are to be designated, appropriate pedestrian

priority marking should be in place

Footway surface improvements

Ensuring quality surfaces that are comfortable to all users

Localised footway widening at pinch points

Securing enough space for more people to use the footways comfortably

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

Accessible crossings

Securing accessible crossings either through dropped kerbs or raised tables. To be complemented by tactile paving

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

The exact locations for footway widening, and the introduction of landscaping, street amenities and resting points will need to be assessed in coordination with the space requirements for the introduction of the protected cycle infrastructure and wider scheme development of the A40.

While the existing east-west link and the A40 has been mapped separately on the network, planning for these corridors will need to be aligned to ensure an integrated vision and approach that incorporates the design recommendations suggested above and meets LTN 1/20 requirements.

2d. Daws Hill to Handy Cross Hub Cycling and Walking 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 expected to be exacerbated by growing travel demands from proposed and recently delivered new developments. At present time, the link also has limitations for pedestrians and cyclists to use it comfortably. For example, it provides a narrow footway one side of the road, lacks cycling facilities and has limited crossing points.

Emerging proposals

Provision of a high-quality 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 safe and attractive 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 would 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, however the LCWIP seeks to recognise the aspiration to provide an active travel link between these locations so as to ensure it can be integrated with the proposed town-wide network.



Figure 39: Daws Hill to Handy Cross Hub local context (existing)



2e. Cressex Business Park

Existing conditions

The Cressex Business Park is a key employment hub within High Wycombe. It is 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 or cycle to work within Cressex, building on the previous work of the 'Be Active at Work Cressex' programme. However, due to the industrial nature of the area, sufficient separation from vehicles is necessary to ensure that any cycling and walking routes are safe and comfortable for all users and to ensure quality of surface materials can be kept to retained for longer.

Coronation Road / Lancaster Road is the main road through the business park. At the present time, there are no cycling facilities and the road surface is of poor quality. There are footways on both sides of the carriageway however the quality is poor and there is limited separation from the road. Maintenance of adjacent vegetation is also poor which encroaches onto the footway reducing its effective width in many places. There are multiple driveway accesses along the route, and vehicles are often observed parking on the footway.



Figure 40: Cressex Business Park (existing)

Proposed interventions

Delivering a coherent, enjoyable and safe network for pedestrians and cyclists along key routes of the Business Park. To be achieved by implementing protected cycling facilities and upgrades to the existing footway on Coronation Road / Lancaster Road; quietways along Cressex Road and Verney avenue; improvements to the existing PRoW at the northern end of Verney avenue (connecting to Coronation Road); and a number of public realm improvements.

Specific interventions include:



Figure 41: Proposed interventions around Cressex Business Park

| Public consultation draft |

vegetation) to provide pockets of public amenities

Improve Existing Modal Filter

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 by pedestrians and cyclists as well as catering 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

The proposed protected cycling facilities on Coronation Road / Lancaster Road will connect to the east to the proposed protected cycling facilities on Desborough Avenue and Marlow Road. To the south, they will connect with the Cressex Link, where a shared use path was installed in 2020 on the eastern side. There have also been recent upgrades to the junction at Cressex Road to improve the facilities for walking and cycling (e.g. through toucan crossings, kerb buildouts and tactile paving). A photo of the upgraded junction is shown in Figure 42. This connects with John Hall Way and Handy Cross Hub at the southern end.

The proposed interventions along Coronation Road / Lancaster Road are supplemented by a quietway on Verney Avenue and improvements to the existing PRoW at the northern end, connecting to Coronation Road. This provides an alternative route for users to access Cressex.

The network also proposes Cressex Road is converted to a quietway to provide better connectivity to the business park and also to mitigate the issue of rat-running vehicles avoiding the A4010.



Figure 42: Cressex Road / Cressex Link junction upgrade (recently implemented)

2f. John Hall Way link

Proposed interventions

As part of the future development of the Cressex Island site, improvements are being delivered along Crest Road. These include:

- New signalised junction and removal of existing roundabout at Crest Road/A4010 John Hall Way
- New shared use path on the south side of John Hall Way for cyclists and pedestrians
- New toucan crossings at the Crest Road Junction
- Additional right turn lane from Crest Road into John Hall Way
- Additional westbound through lane on John Hall Way
- New landscaping and tree planting
- Necessary tree removal along Holiday Inn boundary to improve sight lines of the junction
- New wayfinding and signage
- New road surfacing.

Work has recently been completed to deliver new junction arrangements and improvements to mitigate the impacts of new developments around Cressex Island. This is focused around John Hall Way and the junction with Crest Road, with advanced stop lines and new signalised crossings where previously there was no provision for crossing. New shared use paths will also be provided to complement these facilities.



Figure 43: John Hall Way link location

Specific interventions include:

	Тоо	olkit o	of inte	rvent	ions
Pedestrian and cycle shared use path along John Hall Way					
Providing a safe route connecting with the Handy Cross Roundabout to					
the east and Cressex Link to the west. Securing quality and consistency of	•				
materials as well as appropriate widths for the shared use of the path					
Conversion of the current Crest Road / John Hall Way					
roundabout into a signal controlled junction					
Securing a simpler and safer layout for pedestrians and cyclists. Also					
providing enough time for people of all abilities to cross comfortably at					
the signal controlled junction					
New toucan crossings and advanced cycle stop lines at all					
junctions.					
Providing enough time for people of all abilities to cross comfortably and					
securing a safer start for cyclists at crossings					
Accessible crossings					
Securing accessible crossings either through dropped kerbs or raised					
tables. To be complemented by tactile paving					
References to the toolkit of interventions: Junctions and crossings, Link	s, Tra	affic 1	nanag	emen	t,
Parking and place, Access and inclusion, Hilly topography					

 \sim

Protected cycle infrastructure

New traffic-free link

Quietway Route upgrades

2g. Links to strategic development sites

Proposed interventions

Delivery of consistent high-quality active travel routes and connectivity to proposed development sites.

Specific interventions include:



Terriers Far

Figure 44: Proposed links to development sites

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

Speed reduction and traffic-calming measures

Contributing towards a safer and more enjoyable environment for pedestrians and cyclists specially as they enter quieter zones

Wayfinding and signage

Facilitating the integration of the new developments to the existing urban fabric. These should be set with inclusivity and accessibility in mind, ensuring they can be easily visible and understood by pedestrians and cyclists as well as catering 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

The LCWIP network proposes links to tie into each of the reserve sites within High Wycombe. Cohesiveness and connectivity between the LCWIP network and the internal transport network for the development sites is key. The tie-in points and type of infrastructure must align to achieve this.

If the internal structure or access points of the development sites change in the future, the LCWIP network should be updated to accommodate these changes. This would likely only be minor changes and would not be expected to fundamentally impact the LCWIP network and the principles behind it.

Figure 44 shows the proposed links to development sites. These links vary depending on the proposed adjacent interventions in the network.

Key Constraint: Hilly topography

The routes to some of the development sites are steep. This is a particular issue for Gomm Valley / Ashwells, and to an extent Abbey Barn North and South (depending on the user's access point to the development). It is therefore recommended that some interventions for hilly topography are implemented. As identified in the Toolkit of Interventions, this includes wider cycle facilities in the uphill direction, resting / stopping points for both pedestrians and cyclists.

2h. Public right of way improvements (identified by Buckinghamshire Council)

Emerging proposals

PRoW improvements:

- Linking Terriers Farm to the town centre (via the existing PRoW route adjacent to the High Wycombe cemetery and parallel to Amersham Hill)
- Linking Ashwells and Terriers Farm (via Kings Wood).

These proposals have been identified by Buckinghamshire Council as a series of desirable improvements relating to the key development sites noted above.

The two PRoW recommendations have been included within the LCWIP, including appropriate connections to the proposed adjacent network – as shown in Figure 45.

Key Constraint: Hilly topography

Some segments of these PRoW routes are steep. The routes are separated from vehicles, which eliminates the interaction between these user groups thereby reducing the safety and comfort concerns for pedestrians and cyclists. However, other interventions that cater to hilly topography should still be investigated, such as dedicated points for users to stop and rest.



Figure 45: Public right of way improvements (identified by Buckinghamshire Council)

6.5.3 Healthy neighbourhoods

Two of the five healthy neighbourhoods identified in the *High Wycombe Transport Strategy*, Totteridge and Desborough, are explored in detail below. These neighbourhoods have been identified as having the most urgent need for interventions due to the population density, indices of deprivation and the overall greatest opportunities for improvement.

The LCWIP has also proposed numerous walking and cycling interventions in the remaining three identified healthy neighbourhoods of Downley, Micklefield and Wycombe Marsh. Similar principles as shown below for Totteridge and Desborough can be applied to further develop the healthy neighbourhood schemes for these areas in the future. These interventions are outlined in sub-concept 5c.

It should be noted that the proposed interventions have been developed based on available background data sources and tools (e.g. PCT, WRAT) and good transport planning principles. This work should be verified by feasibility studies (including traffic surveys) to develop the proposals further and identify the precise interventions, locations and phasing / delivery requirements.

Phasing:

The potential interventions for healthy neighbourhood schemes are highly variable in terms of scale, cost and design work required. It is therefore recommended that they are introduced in a phased approach. This will maximise opportunities for quick-wins in the short term, whilst allowing for appropriate planning and consultation for more complex schemes.

Examples of possible quick-win schemes include modal filters and traffic calming measures, amenity improvements and wayfinding and signage.

Examples of possible schemes that require additional planning and design include link, junction and other infrastructure improvements.

The quietway routes can be implemented across all phases, as appropriate. The ainterventions can be used as a catalyst for introducing these quietways.

Key Constraint: Hilly topography

These neighbourhoods include some routes which are very steep (including some with an average slope over 10%) which presents a significant challenge for active travel. When developing the healthy neighbourhoods, hilly routes were bypassed as much as possible, however in some instances the hills are unavoidable.

It is therefore recommended that some interventions specific to hilly topography are integrated within the healthy neighbourhoods. This includes resting / stopping points for both pedestrians and cyclists. These infrastructure interventions should be supplemented with neighbourhoodwide marketing and promotional material and broader travel behaviour change programs. These are discussed in more detail in Section 8.4.

3a. Totteridge

Existing conditions

Totteridge is bounded by the A404 to the west, Totteridge Lane to the east/north and London to Birmingham 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 very little dedicated cycling infrastructure and conditions for walking are poor, with busy roads and lots of roundabouts with lack of crossing facilities creating severance. Walking and cycling rates are currently very low.

An example of a typical street within Totteridge is shown in Figure 46. This photo is taken on Bowerdean Road and shows the priority that has been given to vehicles in the area. For example, cars are observed parking on-road and on footways. There are no cycle facilities and the footway and pavement quality is poor in parts.

Key opportunities and constraints that have been considered when developing the Totteridge Healthy Neighbourhood 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 walking and cycling links across the railway are poor.
- Housing is generally low density with few shops and services within walking distance of homes.

Opportunities:

- Key amenities within a short walking and cycling 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
- Many of the roads are not strategic links, allowing motorised traffic to be redirected.



Figure 46: Bowerdean Road (existing)

Proposed interventions

A 'Healthy Neighbourhood' to improve the environmental and walking and cycling conditions around Totteridge.



Figure 47: Totteridge Healthy Neighbourhood

Specific interventions include:

Ouietways

Modal filters and bus gates

Junction improvements

Wayfinding and signage

improved lighting provision

Accessible crossings

Toolkit of interventions Protected cycle infrastructure along Totteridge Ln/Halter's Ln Ensuring a quality and safe route for cyclists of all levels. Securing enough space for people to travel comfortably at different speeds and to take breaks if needed. Ensuring the surface pavement quality is maintained to appropriate standards for cyclist to travel comfortably To be formally designated through markings on the road, landscaping, and traffic calming measures. To be delivered in a phased approach Reducing traffic volumes at streets where pedestrians and cyclists will take priority Layout simplification and complemented by general accessible crossing improvements 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.) Within quietways and to/from key destinations. These should be set with inclusivity and accessibility in mind, ensuring they can be easily visible and understood by pedestrians and cyclists as well as catering for all users Greenery and landscaping, street amenities, resting points and Improving the pedestrian and cycling environment specially along quietways Improvements to other existing infrastructure Including PRoWs, access to schools, subways beneath the rail line and traffic free route at the station, the modal filter on Priory Avenue

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

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.

Similar to Totteridge, there is a lack of dedicated cycle infrastructure and the existing pedestrian facilities in Desborough are typically of poor quality. Lack of cycling facilities, heavy traffic volumes and rat-running have resulted in very low levels of walking and cycling within the area.

An example of a typical street in Desborough is shown in Figure 48. Similar to Totteridge, the streets are heavily dominated by car-oriented infrastructure, with limited road space allocated for pedestrians and cyclists.

Key opportunities and constraints that have been considered when developing the Desborough Healthy Neighbourhood include:

Constraints:

- High levels of deprivation and high levels of physical inactivity in the area
- Lack of direct walking and cycling access to the nearby Cressex Business Park and Handy Cross Hub
- Busy roads and a lack of both cycling infrastructure and pedestrian crossings 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 and cycle in the absence of owning a private vehicle and for bringing wide-spread benefits associated to these modes
- Very close proximity (within 2km) to significant employment opportunities, including the town centre, Wycombe Hospital and Cressex Business Park
- Many of the roads are not strategic links, allowing motorised traffic to be redirected.



Figure 48: Shelley Road (existing)
Proposed interventions

A 'Healthy Neighbourhood' to improve the environmental and walking and cycling conditions around Desborough



Figure 49: Desborough Healthy Neighbourhood

Specific interventions include:

Ouietways



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

6.5.4 Wider network and strategic routes

4a. Hughenden Greenway and Cross-Valley link to Abbey Barn Lane

Proposed interventions

A link connecting Hughenden, Wycombe Marsh and Abbey Barn – Lane via High Wycombe town centre.

The Hughenden Greenway and cross-valley link to Abbey Barn Lane provides a direct and primarily off-road connection to the town centre from Hughenden, Wycombe Marsh, and the reserve sites at Abbey Barn Lane. The proposal will also connect with the longer term scheme between High Wycombe and Bourne End (as shown in sub-concept 4b).

The emerging proposals for this route explore the use of the existing road network and consider that modifications to these links can be achieved to improve the environment for walking and cycling. As the proposals continue to be developed in further detail, the design will be revised in line with new government design standards (LTN 1/20).

The LCWIP network includes the alignment of the emerging proposals for this link. Recommendations have been given of some further interventions that could be included, such as:



New and/or improved crossings and junctions at points of interaction with the road network

Enrusing 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 pedestrians and cyclists as well as catering 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



Figure 50: Hughenden to Abbey Barn Lane proposed interventions

4b. High Wycombe to Bourne End Greenway

Proposed interventions

A link connecting High Wycombe to Bourne End, via Loudwater, Flackwell Heath, Wooburn Green.

The High Wycombe to Bourne End Greenway is a proposed strategic greenway route linking the town centres of High Wycombe and Bourne End, via Wooburn Green, Loudwater and Wycombe Marsh. It will connect with the Hughenden to Abbey Barn Lane route at the Abbey Barn North reserve site.

The overall aim of the link is to enable more walking and cycling and reduce the reliance on the car for local journeys between Bourne End, Wooburn Green and High Wycombe. This will also help reduce congestion on the busy A40 and A4094 and absorb increasing demand for access to local schools, employment and services.

The LCWIP network includes an indicative route (shown in Figure 51). This is comprised of several segments, including sections of disused railway track, green space and private residential land. The proposals will be subject to additional investigations, subsequent to the LCWIP.

The route would be largely separate from interaction with vehicular traffic and have a consistent and gentle gradient that is well suited to walking and cycling. It would be an alternative to existing narrow and busy on-road routes. Where the alignment runs in close proximity to a settlement, but does not connect directly to it (e.g. Loudwater and Flackwell Heath), the LCWIP has proposed walking and cycling links from the greenway to these settlements.





4c. Links to other settlements

Existing conditions

High Wycombe is located at an accessible distance to key settlements including West Wycombe, Sands, Penn, Hazlemere, Holmer Green, Marlow Bottom and Beaconsfield. However, the existing walking and cycling conditions along the connections to these are poor. The routes do not have any cycling facilities and the pedestrian infrastructure is often substandard (e.g. too narrow) or non-existent.

Proposed interventions

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

An outline of the proposed network is shown in Figure 52. These routes have been selected for a variety of reasons, including the available cross-sectional width, the directness to each respective settlement and their alignment with pedestrian and cyclist desire lines.

The proposed network includes protected cycling facilities along routes to each of these settlements, with connections into the High Wycombe walking and cycling network. Upgrades to the existing pedestrian facilities should be included as part of these schemes, which will subject to additional investigations, subsequent to the LCWIP.

Ensuring smooth connections with the LCWIP network is key. For example, the route to Hazlemere and Holmer Green connects directly to the proposed protected facilities on the A404 (Sub-concept 2a). Another proposed link is the route to Penn via Church Road. This is the most direct and least steep





route from the LCWIP network to Penn. It also connects to numerous schools and the Gomm Valley / Ashwells development site.

Specific interventions include:



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

6.5.5 A cohesive and connected network

5a. Public rights of way improvements

Existing conditions

In addition to the Public Rights of Way (PROW) improvements identified by Buckinghamshire Council (in sub-concept 2g), the LCWIP also proposes a number of improvements to other PROWs around High Wycombe. This will assist in providing a well-connected and holistic network.

The existing quality of these routes is typically poor, with the majority unsurfaced. In some instances, the access points are virtually inaccessible due to overgrown vegetation or other obstructions. An example of this is along the PRoW parallel to Marlow Hill is shown Figure 53.

Proposed interventions

Reopen and reinvigorate existing PROWs, thereby improving their accessibility, safety and comfort.

The proposed improvements include (re)surfacing, improving access by removing stairs, regrading and/or widening access points (particularly important for those with mobility needs or those with bicycles), clearing / pruning back any overgrown vegetation and other amenity improvements.

The overall PRoW network (including sub-concept 2h) is shown in Figure 54.



Figure 53: Marlow Hill PRoW (existing)

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.

Key Constraint: Hilly topography

Some segments of these PRoW routes are steep. The routes are mostly separated from vehicles, which limits the interaction between these user groups thereby reducing the safety and comfort concerns for pedestrians and cyclists. However, other interventions that cater to hilly topography should still be investigated, such as dedicated points for users to stop and rest.



Figure 54: PRoW proposed interventions

5b. A40/404 roundabout and A40 flyover

Existing conditions

This existing infrastructure poses significant severance in the town centre. The *High Wycombe Transport Strategy* recommends the closure of this flyover (*scheme reference HCM2*). In doing so, there will be significant impacts and changes to the A40/A404 roundabout.

Proposed interventions

High quality cycling and walking facilities should be provided as part of the future resign of this infrastructure. This is a key location that sits at the heart of the strategic network and the town centre, so it is crucial that safe and inclusive infrastructure is considered at the forefront of the planning and design process.

Whilst this is highlighted as a key improvement required, the required changes to the flyover are significant and have multiple dependencies. Therefore, whilst improvements to walking and cycling provision are recommended, a scheme to change the flyover is considered outside of the immediate scope of the LCWIP.

Figure 55: A40 Flyover (existing)



Figure 56: Flyover locality plan



5c. Other links and point interventions

Proposed interventions

This final sub-section considers all other proposed link and point interventions that will complete any remaining gaps and hence deliver a fully cohesive and connected network for High Wycombe. This includes interventions in Downley, Micklefield, Hazlemere and Booker and towards Marlow Bottom.

A wide range of interventions have been proposed, reflecting the variable nature of these locations.

For example, in Downley, a protected cycle route is proposed along Pheasant Drive / Plomer Green Avenue / The Pastures. This route has been selected due to the available cross-section width and shallower gradients in comparison to other routes. This is supported by a secondary quietway network on numerous routes including Commonside and Hithercroft Road.

Another example is the network proposed through Booker. These routes connect to Handy Cross Hub and Cressex Business Park. The interventions included protected cycle facilities on Holmers Farm Way and improvements to the existing traffic-free route on Holmers Lane.

A complete summary of these proposed interventions is shown in Figure 57.



Figure 57: Other links and point proposed interventions

Specific interventions include:

	Toolkit of interventions
Protected / delineated cycle tracks	
Ensuring a quality and safe route for cyclists of all levels. Securing enough space for people to travel comfortably at different speeds	
Quietways	
Alternative calmer routes to be formally designated through markings on the road, landscaping, and traffic calming measures such as the ones below 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	
Enrusing compliance with accessibility and inclusivity principles	
Fraffic calming measures	
Particularly along routes with higher traffic	
References to the toolkit of interventions : Junctions and crossings, Links, Parking and place, Access and inclusion, Hilly topography	Traffic management,
	· · · ·

Key Constraint: Hilly topography

Some of the routes within this sub-concept are very steep and it is therefore recommended that some of the interventions for hilly topography are implemented. This includes wider cycle facilities in the uphill direction for protected cycle routes and resting / stopping points for both pedestrians and cyclists.

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 existing active travel 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 Transport Strategy*.

7.2 Scoring

A robust and 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 against:

- **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, 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 Transport Strategy* schemes. The results are discussed in the subsequent pages.

Table 4: MCA summary table

Concept	Sub- concept	Sub-concept description	Trancnort	Short / medium / long term?	Priority order (highest to lowest)
3. Healthy Neighbourhoods	3a	Totteridge	WC2	Short-medium	highest
3. Healthy Neighbourhoods	3b	Desborough	WC2	Short-medium	
2. Main radial corridors, key links and hubs	2d	Daws Hill to Handy Cross Hub link	WC3	Medium	
2. Main radial corridors, key links and hubs	2e	Cressex Business Park	WC3	Medium	
2. Main radial corridors, key links and hubs	2c	East-west strategic link (via A40)	WC3, PT7	Long	
2. Main radial corridors, key links and hubs	2g	Links to strategic development sites	\sim	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 Greenway	WC3	Medium	
2. Main radial corridors, key links and hubs	2a	North-south strategic link	WC3, PT6, HCM3	Long	
5. A cohesive and connected network	5b	A40/A404 roundabout and A40 flyover	WC3, HCM2	Long	
1. Walkable core (Town centre)	1c	Infrastructure improvements	WC3, HCM1	Medium	
2. Main radial corridors, key links and hubs	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 route	WC3	Medium	
2. Main radial corridors, key links and hubs	2h	PRoW improvements (identified by BC)	WC3	Medium	
2. Main radial corridors, key links and hubs	2f	John Hall Way link	WC3	Short	
4. Wider network and strategic routes	4c	Links to other settlements	WC3	Medium	
5. A cohesive and connected network	5a	Upgrades to existing public rights of way	WC3	Medium	
5. A cohesive and connected network	5c	Other links and point interventions required to complete the network	WC3	Medium	lowest

A summary of these results is presented in Figure 58, and discussed in further detail below.

SHORT TERM

MEDIUM TERM

LONG TERM



Short-term

The prioritised list of short-term projects is documented below, from highest to lowest priority:

- 1. Totteridge (3a)*
- 1. Desborough (3b)*
- 3. Placemaking and public realm improvements (town centre) (1b)
- 4. East-west strategic link (existing) (2b)
- 5. Wayfinding and signage (town centre) (1a)
- 6. John Hall Way link (2f)

Medium-term

The prioritised list of medium-term projects is documented below, from highest to lowest priority:

- 1. Totteridge (3a)*
- 1. Desborough (3b)*
- 3. Daws Hill to Handy Cross Hub cycling and walking link (2d)
- 4. Cressex Business Park (2e)
- 5. Links to strategic development sites (2g)
- 6. High Wycombe to Bourne End Greenway (4b)
- 7. Infrastructure improvements (town centre) (1c)
- 8. Hughenden to Abbey Barn Lane route (4a)
- 9. PRoW improvements (identified by Buckinghamshire Council) (2h)
- 10. Links to other settlements (4c)

- 11. Upgrades to existing public rights of way (5a)
- 12. Other links and point interventions required to complete the network (5c)

*Totteridge and Desborough Healthy Neighbourhoods have been included within both the short and medium term due to the size of the areas and the varying possibilities of interventions. As noted in the network planning section for these neighbourhoods, a phased approach to these interventions should be adopted. This reflects the quick-win nature of some interventions, but the more complex nature of other interventions.

Long-term

The prioritised list of long-term projects is documented below, from highest to lowest priority:

- 1. East-west strategic link (via A40) (2c)**
- 2. A40/A404 roundabout and A40 flyover (5b)**
- 3. North-south strategic link (2a)**

**Each of the long-term schemes are strategic pieces of infrastructure and play a crucial 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 highly complex, for which appropriate planning engagement and design work will be required to bring them to fruition. This means that investigation into these schemes in the short to medium-term will be required, to ensure they can be delivered within the appropriate timescales..

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.

8.1 Policy integration

The High Wycombe LCWIP has been developed alongside, and is aligned with the connectivity, inclusivity, and decarbonisation objectives and recommendations detailed within the *High Wycombe Transport Strategy*, which outlines a 2050 Vision for High Wycombe. This integration between the LCWIP and Transport Strategy ensures 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 making up the cycling and walking networks and prioritisation lists, 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. Schemes will be designed in line with the latest design guidance, LTN 1/20. To support the delivery of the infrastructure improvements proposed in the High Wycombe LCWIP, it is recommended that increased footway and highway maintenance provision is required to ensure that active travel is a viable transportation mode for all.

8.3 Monitoring and evaluation

Ongoing monitoring and evaluation is an important aspect of delivering the LCWIP network and project vision.

The High Wycombe LCWIP will be reviewed and updated periodically (recommended approximately every 3 to 5 years). This will help to reflect progress on delivery of recommendations in the *High Wycombe Transport Strategy*, Local Plan approvals, availability of resourcing, new funding opportunities and the progression of walking and cycling improvements in the town. This process will be supported by delivery programmes identified in the *High Wycombe Transport Strategy*.

As part of the review exercise, performance against the following key outcomes 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).

These key outcomes are aligned with those from the emerging *High Wycombe Transport Strategy*. Further information on these key outcomes, the different 'packages' and the growth scenarios are provided in the *High Wycombe Transport Strategy*.

Additionally, personal injury accident data will continually be monitored. Any locations of emerging trends involving pedestrians and cyclists will be investigated. Opportunities for remedial engineering works will be identified where appropriate. The monitoring and evaluation plans for individual routes will be developed as they progress, but will likely consider 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.

8.4 Supporting measures

The delivery of the proposed infrastructure improvements alone are 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^[8].

As proposed in the High Wycombe 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 a town-wide behaviour change package formed of a holistic programme of campaigns focused on encouraging and supporting people to use sustainable modes of travel for journeys to the shops, for leisure, to work and/or to school, college or university.

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

Bikeability cycle training

Cycle training, or bikeability, is an effective way to encourage more people of all ages, backgrounds and abilities to cycle. Many people never learn to ride a bike and others never ride once they are adults. Also, for many people, a lack of confidence and feelings of vulnerability are common reasons for not cycling. Training programmes are currently delivered at a number of schools across High Wycombe, with funding to support further training made available to Buckinghamshire Council by central government.

School travel initiatives

Buckinghamshire Council promotes sustainable travel initiatives, helping to reduce car use, improve pupil's road safety awareness and schools. This includes the Modeshift STARS accreditation scheme that recognises schools who demonstrate excellence in their travel plans and supporting initiatives that encourage children to walk, pedal and scoot to school. Several schools in the LCWIP study area have received local and national awards. A number of schools in High Wycombe also encourage parents and children to 'Park and Stride' to reduce traffic outside schools and enable children to benefit from walking part of their journey to and from school. These initiatives could be rolled out more widely across schools in the LCWIP study area.

Another potential measure that could be explored is the introduction of School Streets, which aim to create walking and cycling friendly environments on the roads immediately surrounding schools at key school drop-off and pick-up times by limiting vehicular traffic (with appropriate exemptions). It is recommended that any School Streets are piloted on a trial basis with appropriate local engagement undertaken.

⁸Investing in cycling and walking: rapid evidence assessment (publishing.service.gov.uk)

Driver awareness training

The travel perception survey undertaken during the development of this LCWIP identified that one of the key barriers to residents walking and cycling in High Wycombe is the behaviour and perception of drivers towards pedestrians and cyclists. Driver awareness training allows motorised vehicle drivers to gain a greater understanding of the needs of more vulnerable road users, including those on cycles, on foot and those with disabilities, and consider how to share road space safely.

Cycle hire schemes

Many people struggle to afford their own bicycle or find space the space to store one. Public cycle hire schemes provide access to cycles for both residents and visitors for shared use without the need of owning a bicycle, enabling users to get around without a car and experience the many benefits of cycling. Cycle hire schemes have been successfully implemented in several urban areas with challenging topography, including Edinburgh, Exeter and Dundee.

E-bikes can be included as part of cycle hire schemes. E-bikes are battery-powered, meaning they can assist riders when cycling. This is particularly applicable for High Wycombe where E-bikes could assist users when cycling up hills within the town, helping to encourage more people to try cycling. Opportunities for E-bike and cycle hire schemes at key employment sites and transport hubs in High Wycombe are being explored by partners. These activites align with *scheme references SMH5 and SHM6* in the High Wycombe Transport Strategy.

Marketing and promotion

Well-tailored marketing and promotion can raise awareness of the emerging LCWIP network, provide educational information, and change perceptions of walking and cycling. This can be achieved include via social media, information and awareness raising campaigns and literature.

Supporting promotional leaflets and maps of the emerging LCWIP network highlighting designated routes, facilities, and points of interest will make residents and visitors aware of the opportunities and benefits of walking and cycling within High Wycombe. Reoccurring initiatives such as Walk to School Walk and Cycle to Work Week should also be promoted at local schools and employers to raise awareness and encourage an uptake of active travel modes.

Community groups and initiatives

There are a number of existing local walking and cycling groups in High Wycombe and conversations could be held about how their community reach could be extended.

Buckinghamshire Council supports initiatives that encourage regular and participation in community-led physical activities, benefiting the individual, members and wider community by encouraging interaction, improving health and wellbeing and developing skills and education. This includes the Simply Walk programme of free regular volunteer-led group walks and the Active Communities programme which seeks to reduce inactivity by providing communities with information about the benefits of sitting less and moving more.

As part of the Active Communities programme, the first ever Active Park Walks have been launched in open green spaces in areas of high activity need across High Wycombe, including West Wycombe, Booker, Cressex, Castlefield and Abbey. The Active Park Walks are supported by display maps and waymarking signs that provide information about the location, activity and health benefits of physical movement, local events, support and news.

These community groups and initiatives offer a springboard for investment in infrastructure to sustain behaviour change.

