

LOCAL CYCLING & WALKING INFRASTRUCTURE PLAN: 2020-2030



READING BOROUGH COUNCIL in partnership with
Wokingham Borough Council & West Berkshire Council

NOVEMBER 2019



Reading
Borough Council

Working better with you

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FOREWORD

Our Local Cycling and Walking Infrastructure Plan, developed in partnership with Wokingham and West Berkshire Councils and a sub-strategy to our emerging Local Transport Plan 4, sets out ambitious plans to transform our streets and encourage more people to choose cycling and walking for local journeys, or as part of longer multi-modal journeys.

The economic, health and environmental benefits of cycling and walking are widely recognised in terms of reduced congestion, improved air quality, increased physical activity and reduced greenhouse gas emissions from transport. This strategy will therefore play a vital part in our response to declaring a Climate Emergency in February 2019 by complementing our ambitious plans for a carbon neutral Reading by 2030 and supporting clean growth, as set out in our new Local Plan and the emerging Berkshire Local Industrial Strategy.

We will do this by continuing to build on the achievements of our Cycling Strategy 2014 ‘Bridging Gaps, Overcoming Barriers and Promoting Safer Cycling’¹, which was supported by our successful £25.6 million Local Sustainable Transport Fund² and the £4.2 million new cross-boundary National Cycle Network route (NCN 422), spanning Newbury to Ascot via Reading, Wokingham and Bracknell.

As part of this joint strategy, we will evolve our existing branded cycle network to include strategic cycle routes connected by a series of orbital, local and leisure routes that support people in travelling to the places they need to go via safe, clean and green transport infrastructure based on the principles of best practice examples, including Mini-Holland, Healthy Streets and Beelines. These routes will be supported by investment in our comprehensive network of footways to encourage people living within a 2km buffer around the town centre to walk or support multi-modal journeys.

Our new Cleaner Air and Safer Transport Forum, along with existing user groups, will have a vital role to play in supporting us in delivering our vision for cycling and walking whilst supporting clean and inclusive growth.

Through the creation of strategic cycling and walking routes, and supporting secondary and linking routes, we will aim to double the number of cycle trips into the town centre from 4% to 8% by 2030, and by 10% by 2036 and reduce the number of cyclists injured on our roads. We will also aim to increase the number of people walking into the town centre from 29% to 35% by 2030, and to 40% by 2036.

In addition, we will continue to support school communities to increase cycling and walking mode share by rolling out the national accreditation scheme, Modeshift STARS, recognising excellence in promoting sustainable transport. As part of this scheme, schools will update their school travel plan and continue to receive support in delivering initiatives, such as Bikeability and road safety training, whilst trialling new initiatives that aim to reduce traffic round school gates and promote active travel, such as school street closures.

Cllr Tony Page

**Lead Councillor Strategic Environment,
Planning & Transport
Deputy Leader of the Council**

Cllr Adele Barnett-Ward

**Chair of Strategic Environment,
Planning & Transport Committee
Chair of Cleaner Air & Safer Transport Forum**

1. INTRODUCTION

Purpose

This report is a sub-strategy to the emerging Local Transport Plan (LTP4)³ and provides the first iteration of the joint cycling and walking strategy and implementation plan for the wider Reading area spanning a ten year period.

This Local Cycling and Walking Infrastructure Plan (LCWIP) is a live strategy developed in partnership with West Berkshire and Wokingham Borough Councils.

The LCWIP was developed using Local Cycling and Walking Infrastructure Plan Technical Guidance for Local Authorities⁴, issued by the Department for Transport (DfT), and also considers best practice examples from the UK.

Technical support was provided by DfT's appointed consultant, WSP, and guidance and advice was provided by Sustrans, who are part of the Strategic Support Team.

Achievements

The previous Cycling Strategy (2014-2019) '**Bridging Gaps, Overcoming Barriers and Promoting Safer Cycling**' was adopted in 2014 as part of our third Local Transport Plan (LTP3). The implementation of key deliverables identified in the strategy was supported by significant investment funded by the Local Sustainable Transport Fund and other Central Government funded schemes.

Key deliverables from the Cycling Strategy 2014, included:

- Creation of a new National Cycle Network route (NCN422), delivered in partnership with Wokingham, Bracknell and West Berkshire Councils and funded by Thames Valley LEP, linking Ascot to Newbury via Reading, Bracknell and Wokingham.
- Opening of Christchurch Bridge provides cyclists and pedestrians with a traffic-free alternative to the heavily congested Reading and Caversham bridges.
- Public realm improvements at Town Hall Square, which complemented wider funding programme, including the reopening of Abbey Ruins.
- Enhancement to, and opening of, Napier Road Underpass removing the barrier of north-south movements associated with the Great Western Mainline.
- Installation of the Northern Interchange Cycle Parking Hub, providing over 600 covered cycle parking spaces.

- Pedestrian and cycle enhancements to Cow Lane as part of the removal of the bottleneck created by height and width restrictions under the railway bridges.
- Extensive programme of behavioural change incentives and initiatives delivered as part of LSTF, EU programme EMPOWER, Bikeability and Pocket Places for People.



Figure 1.1 - Christchurch Bridge

Annual cordon counts have been conducted as part of our LTP monitoring programme since 2008 enabling us to monitor mode split into and out of the town centre over a single 12-hour period in May. Historical trends show increases in the overall number of trips with car and taxi use decreasing by 3.8% for drivers and 4.9% for passengers whilst cycling increased by 1.7% and bus journeys by 6.2%. Historical trends are illustrated in **Figure 1.2**.

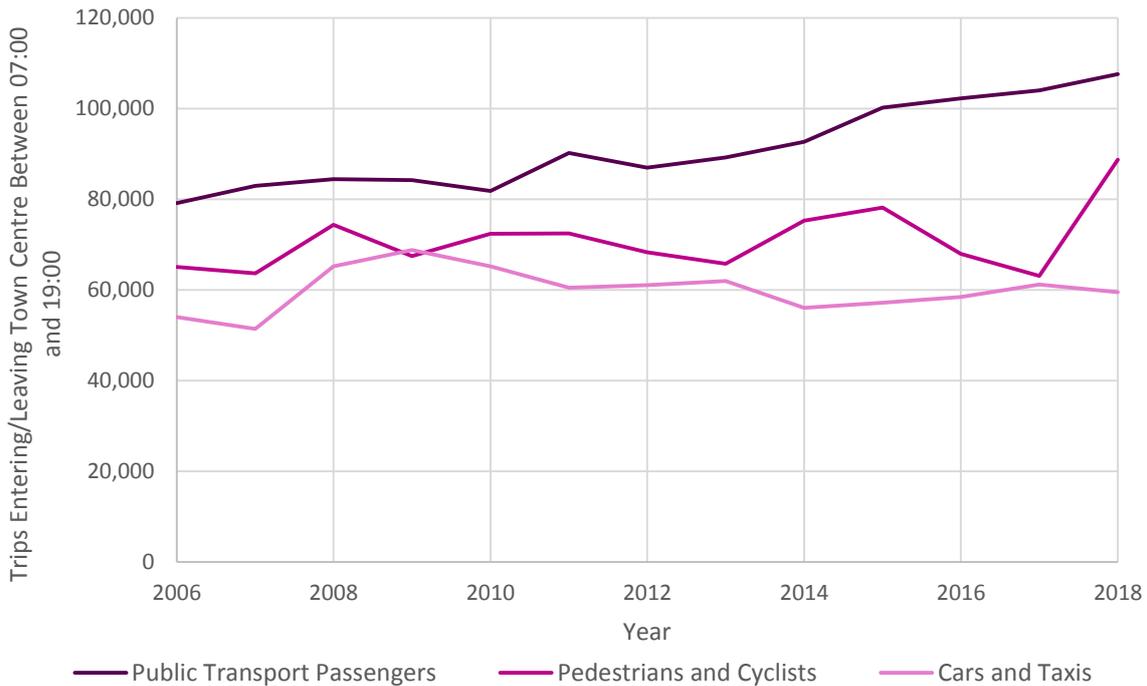


Figure 1.2 - Mode Split into/from Town Centre Between 2008-2019

Aspirations

This LCWIP sets out how we will work towards delivering ambitious plans to increase walking and cycling usage in Reading. The strategy will help to achieve the targets set out in our new Local Plan⁵, setting out housing and employment growth to 2036, and our emerging Climate Change Strategy⁶ and Local Transport Plan, including a carbon neutral Reading by 2030.

Our LCWIP sets out how we will transform our existing network of branded cycle routes and our comprehensive footway network via an improved and expanded network of cycling and walking routes. These routes will better connect people to places, including strategic development sites set out in our new Local Plan, and will encourage people of all abilities to cycle and walk.

These cycling and walking routes will be enhanced and transformed to create a safe, clean and green transport network that supports healthy lifestyle choices including cycling and walking for local journeys, or as part of longer multi-modal journeys. Best practice measures implemented elsewhere, such as **London's Mini-Holland**⁷ and **Healthy Streets**⁸ schemes and **Manchester's Beelines**⁹, feature as part of these improvements.

Infrastructure improvements will be complemented by incentives and initiatives aimed at supporting people in making the switch to cycling and walking and

promoting the benefits of these healthy lifestyle choices, such as the ongoing delivery of our successful Bikeability programme.

Partners will also be encouraged and supported to help us deliver these ambitious plans through engagement programmes, including the national accreditation scheme Modeshift STARS and street closures trialled through our **Play Streets** initiative and **Pocket Places for People** (see Figure 1.3).



Figure 1.3 - Exbourne Road Play Street Closure (2014)

Report Structure

The report is structured as follows:

- Section 2 - sets out our vision and objectives for transforming the cycling and walking network;
- Section 3 - summarises the transport policies, studies and planned schemes relevant to the LCWIP;
- Section 4 - sets out the geographical extent of the LCWIP
- Section 5 - details the methodology followed to develop this LCWIP;
- Section 6 - sets out the approach taken when developing this LCWIP, and future consultation and engagement;
- Section 7 - details how we intend to deliver this LCWIP; and
- Section 8 - provides a summary and conclusion on the Plan as a whole.

2. VISION & OBJECTIVES

This section sets out our vision and objectives for transforming our cycling and walking network building on our existing network of local branded cycle routes, which were first delivered under the Cycling Strategy 2008, and our comprehensive network of walking routes.

Vision

Our vision for cycling and walking integrates the themes of our emerging Local Transport Plan:

‘To transform our cycling and walking network to be safe, **clean and green** and better connect **people** to **places** to support **healthy lifestyle** choices and **inclusive growth**, where everyone benefits from Reading’s success’.

Objectives

Our objectives for the LCWIP have been developed in line with the themes of our emerging LTP4 and the ambitions set out in Central Government’s **Cycling and Walking Investment Strategy**¹⁰.



People and Places

Provide safe, attractive and well connected cycling and walking routes linking residential areas, employment sites and transport interchanges, so **people** can travel to the **places** they need to get to more easily.



Clean and Green

Enhance cycling and walking networks, so they are **clean and green** and people feel safe and happy to cycle and walk for local journeys or as part of longer multi-modal journeys.



Healthy Lifestyles

Encourage people of all ages and abilities to make **healthy lifestyle choices** by making cycling and walking the natural choice and offer support through the delivery of initiatives and

campaigns promoting the benefits of active travel and the transition to cycling and walking.



Inclusive Growth

Provide well connected cycling and walking routes linking to key destinations, such as employment centres, local centres, schools and health services to support **inclusive growth** and reduce congestion.



Smart Solutions

Integrate **smart solutions** into cycling and walking facilities to help us travel faster, cleaner and safer.

Targets

We will aim to achieve our vision by:

- Doubling the number of people cycling into Reading Town Centre from 4% to 8% by 2030, and to 10% by 2036.
- Increasing the number of people walking into the Town Centre from 29% to 35% by 2030, and to 40% by 2036.
- Reducing the number of cyclists and pedestrians injured on our roads.
- Reducing the number of cars travelling into the Town Centre.
- Increasing the number of children cycling and walking to school.

Further targets will be set out in the emerging Local Transport Plan, which is expected to be adopted in Autumn 2020.

3. POLICY CONTEXT

National Policy Context

Industrial Strategy

The **Industrial Strategy** White Paper¹¹ was published in November 2017 setting out the requirement for Local Enterprise Partnerships and Combined Authorities to develop Local Industrial Strategies. The Strategy was developed around five Foundations of Productivity and four Grand Challenges as illustrated below.

Foundations of Productivity:

- **Ideas:** the world's most innovative economy
- **People:** good jobs and greater earning power for all
- **Infrastructure:** a major upgrade to the UK's infrastructure
- **Business Environment:** the best place to start and grow a business
- **Places:** prosperous communities across the UK

Grand Challenges:

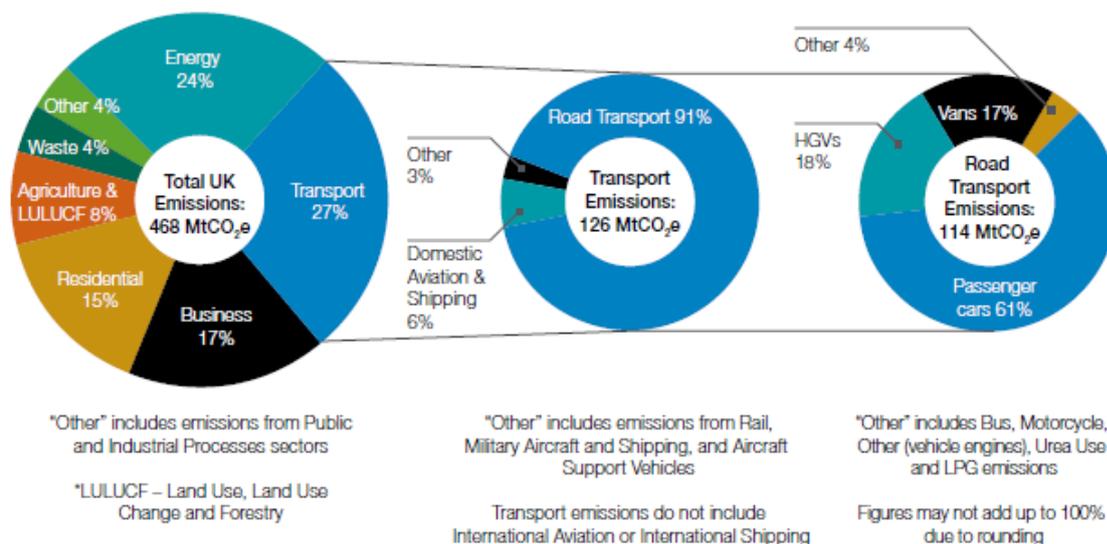
- Artificial Intelligence and data
- Ageing society
- Clean growth
- Future of mobility

Future of Mobility: Urban Strategy

The **Future of Mobility Strategy**¹² sets out Central Government's approach to tackling mobility challenges, which was recognised as one of the four Grand Challenges and opportunities to transform the way we move through a number of underlining principles, including active travel for short urban journeys.

The Future of Mobility Strategy recognises key transport challenges as:

- **Safety:** 24,831 people were seriously injured on British roads in 2017. Of this number, 56 people were seriously injured on Reading’s roads including 19 pedestrians and 15 cyclists.
- **Air Pollution** is the top environmental risk to human health with 80% of nitrogen oxide concentrations at the roadside.
- **Congestion:** Time lost as a result of congestion costs the UK economy approximately £2 billion per year. A recent survey of businesses illustrated that 92% considered congestion affects their growth and productivity¹³.
- **Greenhouse Gas Emissions:** Transport is the biggest greenhouse gas emitting sector in the UK accounting for 27% and road transport making up 91% of emissions.
- **Noise Pollution:** the estimated annual cost of noise pollution was said to be £7-10 billion in 2010.
- **Lack of Physical Activity:** levels of car use contribute to a lack of physical activity. 64% of adults were classified as overweight or obese in 2017.
- **Inefficient Use of Public Space:** “There are six cars for every 10 people in the UK, but the average car is unused 96% of the time”.



Source: BEIS (2018). Final UK greenhouse gas emissions national statistics: 1990-2016

Figure 3.1: Road Transport Emissions as a Shared of UK Greenhouse Gas Emissions From Transport 2017

Clean Air Strategy

The Department for Food and Rural Affairs (DEFRA) published England's first **Clean Air Strategy**¹⁴, another Grand Challenge, in 2019 setting out how the Government will reduce emissions from transport, homes, farming and industrial sectors to improve air quality. This includes investment in active travel as detailed in the Cycling and Walking Investment Strategy.

The Road to Zero¹⁵, **The Clean Growth Strategy**¹⁶ and **A Green Future: A 25 Year Plan**¹⁷ further support the ambitions of the Clean Air Strategy by setting out Government's strategy to delivering growth whilst tackling environmental issues, including air quality and greenhouse gas emissions.

Cycling and Walking Investment Strategy

The benefits of cycling and walking for local journeys are widely known. In April 2017 the Government published its first **Cycling and Walking Investment Strategy**, setting out its ambition to make cycling and walking the natural choice for local journeys through:

- **Better Safety** - 'A safe and reliable way to travel for local journeys';
- **Better Mobility** - 'More people cycling and walking - easy, normal and more enjoyable'; and
- **Better Streets** - 'Places that have cycling and walking at their heart'.



Figure 3.2 – Clean Air Strategy: Investing in Cycling

As part of this Strategy, the Government set out its intention to support Local Highway Authorities in developing ambitious, forward-looking plans (Local Cycling & Walking Infrastructure Plans) to help work towards and achieve the targets set out in the Strategy, including:

- Doubling the number of cycling stages;
- Increasing walking activity; and
- Increasing the percentage of 5-10 year olds that usually walk to school.

A number of national strategies were endorsed by DfT within the technical guidance, including the principles of **London's Design Standards¹⁸**, **Healthy Streets** and **Mini-Holland** projects as well as **Manchester's Beelines**. Reallocation of road space to support the delivery of sustainable transport schemes has been key to supporting increased cycling mode share and the success of creating more attractive facilities for all users. **Figure 3.3** illustrates the space needed to accommodate different modes and therefore additional capacity from reallocating road spaces to cycling and public transport schemes.

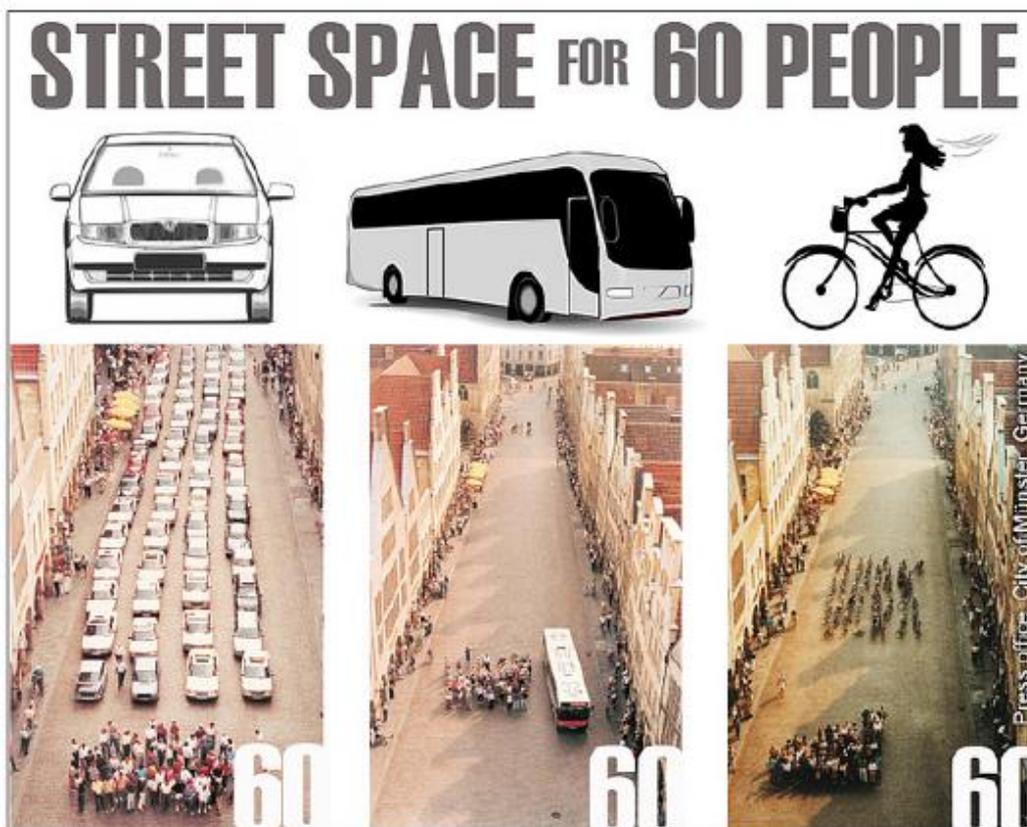


Figure 3.3 - Street Space Needed for 60 people

Inclusive Transport Strategy

The DfT published its **Inclusive Transport Strategy**¹⁹ in 2018 to ensure that our ageing population, and the fifth of people who identify as having some sort of disability have “the same access to transport as everyone else, and that they are able to travel easily, confidently and without extra cost”. The strategy sets out five key themes to delivering the strategy, including improving physical infrastructure, such as streetscapes.

As recognised in the Inclusive Transport Strategy, Local Authorities have a duty to comply with the **Equality Act 2010**²⁰. This includes ensuring that people with protected characteristics are able to access the transport services they need. It is therefore vital that streetscape infrastructure, such as shared spaces, support inclusive multi-modal journeys and are designed to cater for a wider range of specialist mobility equipment, including wheelchairs, mobility scooters and adaptable bikes.

Regional Context

This section set out the emerging regional policy context led by Transport for the South East and Thames Valley Local Enterprise Partnership in consultation with Local Highway Authorities.

Transport for the South-East

Transport for the South East (TfSE) is an emerging Sub-national Transport Body whose primary aim is to support and grow the economy through identifying and prioritising a programme of integrated strategic transport projects across the whole south east region. In 2018 the Council input into the development the TfSE’s Economic Connectivity Review, which supported the development of the **TfSE’s draft Transport Strategy** currently available for consultation. The Council will continue to work with TfSE as it works both towards achieving statutory status and the full adoption of its Transport Strategy in 2020.

Berkshire Local Industrial Strategy

Thames Valley Local Enterprise Partnership is in the process of developing a **Berkshire Local Industrial Strategy** (BLIS) as required in the Industrial Strategy White Paper published in November 2017. The emerging BLIS sets out five key priorities to achieving its vision of being ‘*the best of both global and local*’:

- Enhancing productivity within Berkshire’s enterprises;
- Ecosystems which are maturing and evolving and extend beyond Berkshire;

- International trade, connections, collaborations and investment;
- Vibrant places and a supportive infrastructure; and
- Making Berkshire an inclusive area where aspirations can be realised.
- Responding to climate change emergency

The BLIS will replace the LEP's existing Strategic Economic Plan (SEP) when it is published in 2020.

Local Policy Context

This section sets out the local policy context and how the Local Cycling and Walking Infrastructure Plan, a sub-strategy to LTP4, is fundamental to the delivery of ambitious plans for economic and housing growth set out in the new Local Plan and addressing the Climate Emergency, including making Reading carbon neutral by 2030.

Reading 2050 Vision

The **'Smart and Sustainable Reading' 2050 Vision**²¹, was developed by a partnership of local communities, businesses, education providers and public sector partners to help deliver economic growth and evolution as a smart and sustainable city to 2050 under the three themes of:

- A Green Tech City;
- A City of Rivers and Parks; and
- A City of Culture & Diversity.



Figure 3.4 - Reading 2050 Vision: A City of Rivers and Parks

It is our ambition to help fulfil this vision by delivering a step-change in high quality, high technology, and sustainable transport provision along the key growth corridors. It builds upon our current transport strategy, reflects our adopted and emerging growth strategies and connects economic corridors to address the following core needs:

- Improve accessibility, affordability and journey time/reliability of more sustainable means of travel;
- Provide public transport that is more attractive than single occupancy private car use;
- Increase in active travel;
- Enable 'non-car reliant' planned growth;
- Improve links to national transport networks; and
- Improve air quality.

Local Plan

The **new Local Plan** was approved by the Planning Inspectorate in September and adopted on 4th November 2019. The new plan sets out key development sites up to 2036 and emphasises the importance of addressing challenges, such as climate change and sustainability, in parallel to delivering ambitious plans for over 15,000 new homes and supporting employment, services and infrastructure. The Local Plan is therefore underpinned by new carbon neutral policies and strategies recognising the **Climate Change Emergency Declaration²²** issued by the Council in February 2019 where we set an ambitious target to achieve a net **carbon neutral Reading by 2030**.

Transport mitigation measures were considered as part of the development of the new Local Plan to ensure that accessibility of the strategic development sites was considered at an early stage. The development of this LCWIP was recognised as a key strategy document as part of this process to enable us to secure private sector contributions for the delivery of improvements identified in the prioritisation list.

Local Plan - Neighbouring Boroughs

Plans for neighbouring boroughs, Wokingham and West Berkshire, as well as Oxfordshire and Hampshire, are continuing to be developed and will cover the period up to 2040. It is vital that the LCWIP, and proposals for public transport, enable people living outside of the borough to travel into Reading safely, quickly and easily via dedicated infrastructure for sustainable transport to deliver clean

growth and reduce congestion, particularly along key corridors designated as the Air Quality Management Area.

The cycling and walking routes identified in this strategy consider key development sites under consideration by neighbouring authorities for inclusion in their respective Local Plans, and how these sites access jobs, education, training and other local facilities and services located in Reading.

Local Transport Plan

Preparations are underway to review our existing **Local Transport Plan** in response to the new Local Plan and the Climate Emergency. Whilst the existing Local Transport Plan spans the period 2011 to 2026, significant progress has been made in delivering schemes identified in the plan and it is necessary to update the plan to reflect our ambitious plans to make Reading carbon neutral by 2030 and to deliver planned growth as set out in the Local Plan.

The LTP process was kick-started with an initial consultation that took place in summer 2019. The consultation sought feedback on five themes, shown in **Figure 3.3**, that are considered as being integral to the delivery of policies and schemes that will be set out in the new transport strategy.

Further feedback will be sought on the emerging LTP4 in spring 2020 and feedback integrated into this document.



Figure 3.3 - Emerging Local Transport Plan 4 Themes

As with previous Local Transport Plans, the strategy will be underpinned by statutory and non-statutory sub-strategies, further detailing our approach to tackling the issues identified in the Local Transport Plan, including reduced congestion and emissions, improved air quality and health and wellbeing, whilst ensuring the economic success of the town. Complementary strategies will include a borough-wide parking and air quality strategy, **Sustainable Modes of Travel to School Strategy**, including the delivery of Modeshift STARS illustrated in **Figure 3.4**, and the **Rights of Way Improvement Plan** which will also be integrated into the LCWIP.



Figure 3.4 - Bronze Modeshift STARS Awards for The Heights and Moorlands

This LCWIP will be recognised as one of the sub-strategies to the Local Transport Plan, alongside other documents setting out how we will encourage more people to cycle and walk for local journeys or as part of longer multi-modal journeys. This LCWIP will integrate the principles of **London’s Healthy Streets²³**, as illustrated in Figure 3.5, and **Mini-Holland** schemes, and Manchester’s **Beelines**, to deliver improved infrastructure and achieve our objectives of promoting healthy lifestyle choices and creating a clean and green Reading.



Figure 3.5 - Ten Healthy Streets Indicators

Climate Change Strategy

A **Climate Emergency** was declared by the Council in February 2019 whereby we set out our approach to protecting our planet for future generations with the ambition of creating a **carbon neutral Reading** by 2030. This declaration is further supported by **carbon neutral standards** set out in the new Local Plan and new and emerging strategies for climate change and transport.

The emerging Climate Change Strategy, which will be adopted in Spring 2020, is being developed around seven themes, including ‘transport’. Officers are working alongside **Reading Climate Action Network**, and interested parties, to develop the themes and the emerging action plan. The LCWIP is recognised in the draft ‘transport’ action plan and will help us to work towards a carbon neutral Reading by 2030 through the creation of streets that are safe, clean and green and support people to cycle and walk for local journeys.

Health and Wellbeing Strategy

The emerging LTP plan themes and the supporting LCWIP will support the overall aim of the **Health and Wellbeing Strategy**²⁴ to *‘improve and protect Reading’s health and wellbeing - improving the health of the poorest, fastest’* and sister documents, including the **Healthy Weight Strategy**.

We will work towards this vision by supporting healthy lifestyles through the creation of clean and green streets that encourage active travel, such as cycling and walking, and improved air quality through reduced congestion.

Corporate Plan

Our new **Corporate Plan ‘Shaping Reading’s Future’ 2018-2021**²⁵ details our key priorities over the coming years to ensure that Reading achieves its potential, against the backdrop of financial challenges. We will achieve this through the following priorities:

1. Securing the economic success of Reading;
2. Improving access to decent housing to meet local needs;
3. Protecting and enhancing the lives of vulnerable adults and children;
4. Keeping Reading’s environment clean, green and safe;
5. Promoting great education, leisure and cultural opportunities for people in Reading; and
6. Ensuring the Council is fit for the future.

4. GEOGRAPHICAL SCOPE

As outlined in the Local Policy section, there are significant challenges within the LCWIP area in terms of managing future growth. Reading alone needs 700 new homes a year to accommodate predicted growth, which will have a significant impact on the transport network. In order to address these challenges investment needs to be made to the transport network to encourage more people to consider cycling, walking and using public transport for local journeys or as part of longer trips.

Based on Census 2011 data, the population of Reading is 155,700, which increased by 8.8% when compared to Census 2001 data. Reading's latest population estimate is 163,075²⁶ - a 4.7% increase on the Census 2011 figure.

The LCWIP has identified key cycling and walking routes and improvements to them that better connect trip generators, such as residential areas, with key trip attractors via a series of primary routes.

Priority will be given to the following trip attractors:

- Areas of high employment;
- Transport interchanges, including major bus stops;
- Further and Higher Education establishments;
- Major Local and District Centres, such as Oxford Road and Caversham; and
- Secondary Schools.

Further consideration will be given to key destinations, such as primary schools, parks and open spaces and leisure facilities located off the primary network that fall within the cycling and walking zones illustrated in **Figure 4.1**. This will include proposed development sites recognised in the new Local Plan for Reading and the emerging plans for neighbouring authorities.

LCWIP Area

The geographical scope of the LCWIP has been defined using Lower Super Output Areas (LSOAs). Each LSOA has a minimum population of 1,000 and a maximum of 3,000 and/or a minimum of 400 households and a maximum of 1,200 households. As illustrated by **Figure 4.1**, the Reading urban area exceeds the Reading Borough boundary and therefore the LCWIP extends into three local authorities (Reading Borough, West Berkshire and Wokingham Borough).

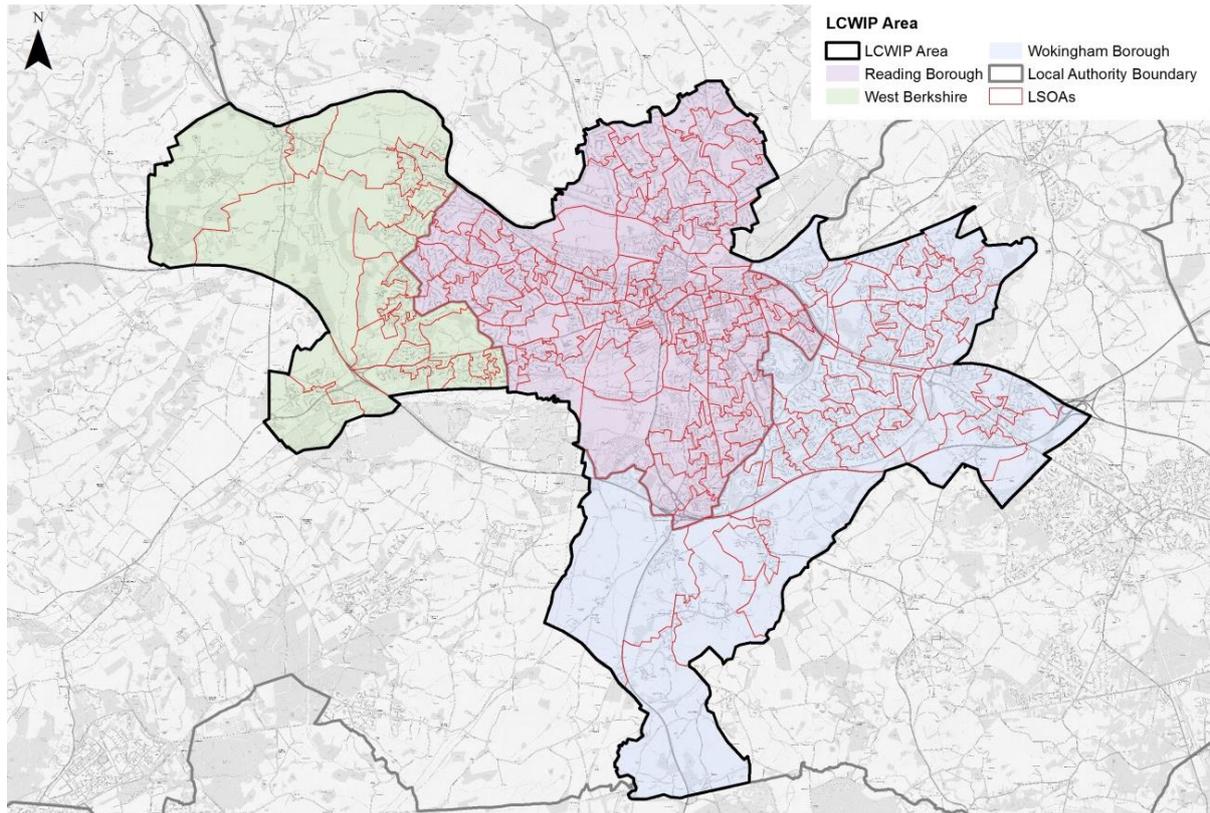


Figure 4.1 - LCWIP Area - Boundary

Travel to Work Area

Reading Borough forms the core of the LCWIP, although a large proportion of people travelling into Reading for employment are from neighbouring boroughs. Reading Borough itself was estimated to be home to 163,075 people in 2017 and around 233,000 in the wider Reading urban area. Reading is a major centre of employment; with approximately 120,000 people working in the Borough²⁷. There are more jobs in Reading than workers²⁸, which means that Reading typically imports workers from other local authority areas, as shown in **Figure 4.2**, placing strain on the transport network.

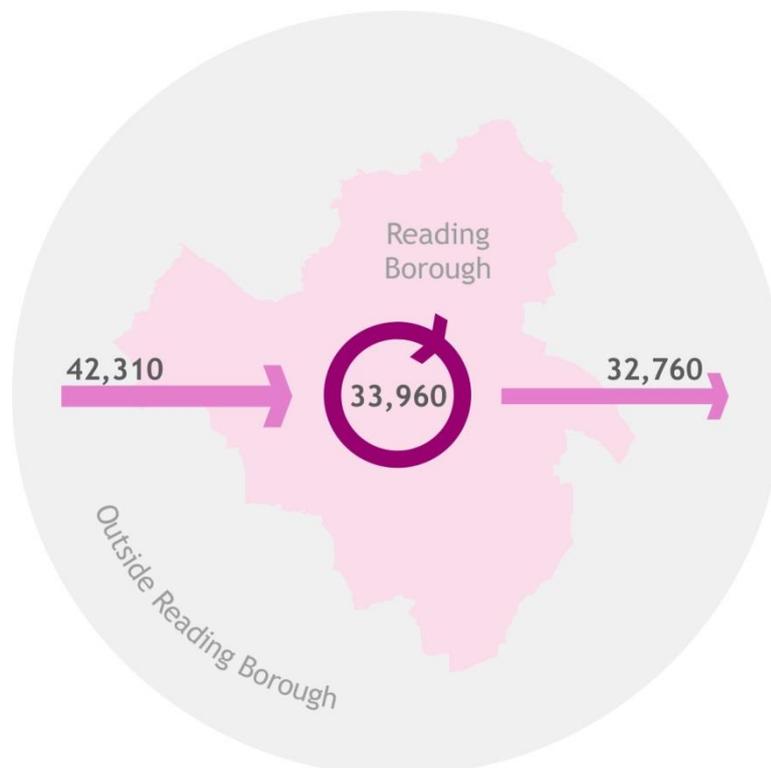


Figure 4.2 - Movement of Workers in Reading

Population Forecasts

With the population set to rise by a further 8.7% by 2036²⁹, coupled with future key developments, and a combined 2,103 homes per year to be delivered by Reading, West Berkshire and Wokingham³⁰, there is a high demand for improvements to be made to the existing cycling and walking infrastructure within this area.

Future Development Sites

As identified in **Figure 4.3**, future development sites have been established as part of Reading Borough Council's new Local Plan which sets out how Reading will develop up to 2036. Strategic development sites identified in the Local Plan have been considered as part of the identification of cycling and walking routes proposed as part of this LCWIP to ensure sites are accessible by sustainable modes, including cycling and walking.

Consideration has also been given to strategic development sites proposed in the emerging Local Plans for neighbouring boroughs, including Wokingham and West Berkshire, which are likely to have a significant impact on travel patterns into Reading.

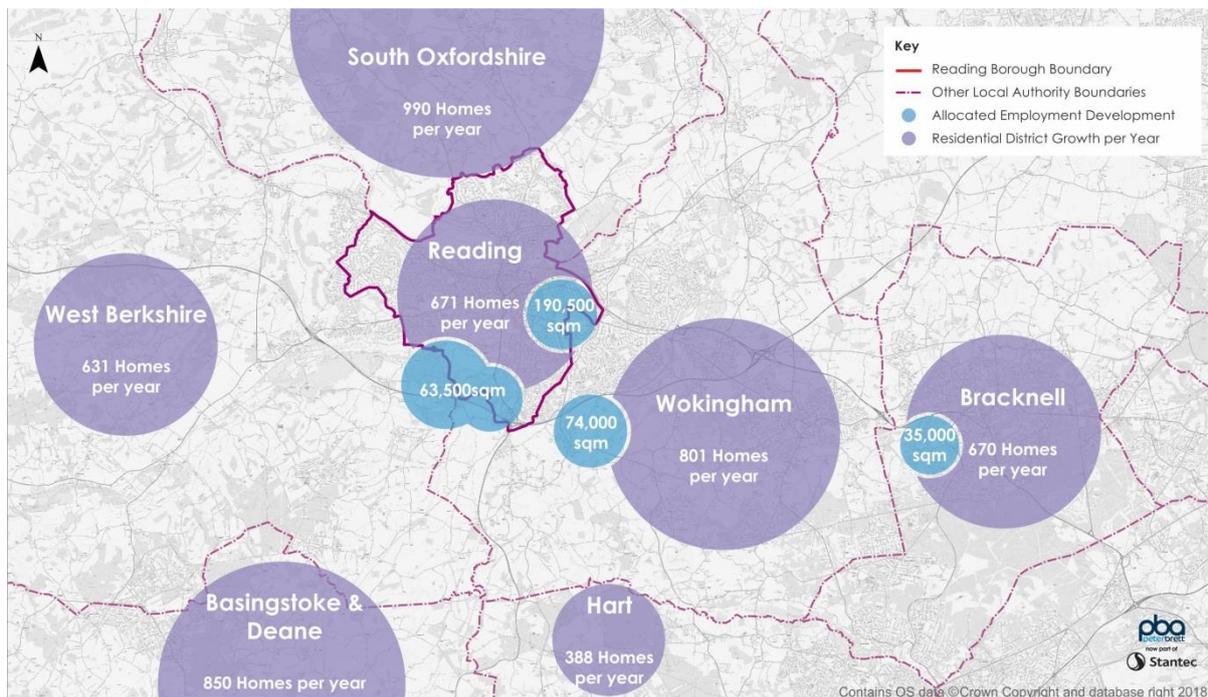


Figure 4.3 - Future Developments in Reading

Key Destinations

The geographical area of the LCWIP has been formed based on existing core employment sites, residential areas and key transport interchanges. As indicated by **Figure 4.4**, the suggested 10km cycling zone covers a much larger area than the LCWIP area. The 10km cycling zone therefore includes business parks, out of town retail parks and residential areas from Pangbourne in the west to Winnersh in the east and the borough boundary in the north to Spencers Wood in the south.

The 2km walking zone targets the town/district centres of Reading and core employment sites and connections to local centres and other facilities and services. Census 2011 Data shows that approximately 80,500 people of working age live within a 2km walk of the Central Reading Area.

Whilst the LCWIP area is concentrated on links to and from Wokingham and West Berkshire, it should be noted that links to planned and proposed developments within South Oxfordshire and Hampshire have also been considered where appropriate.

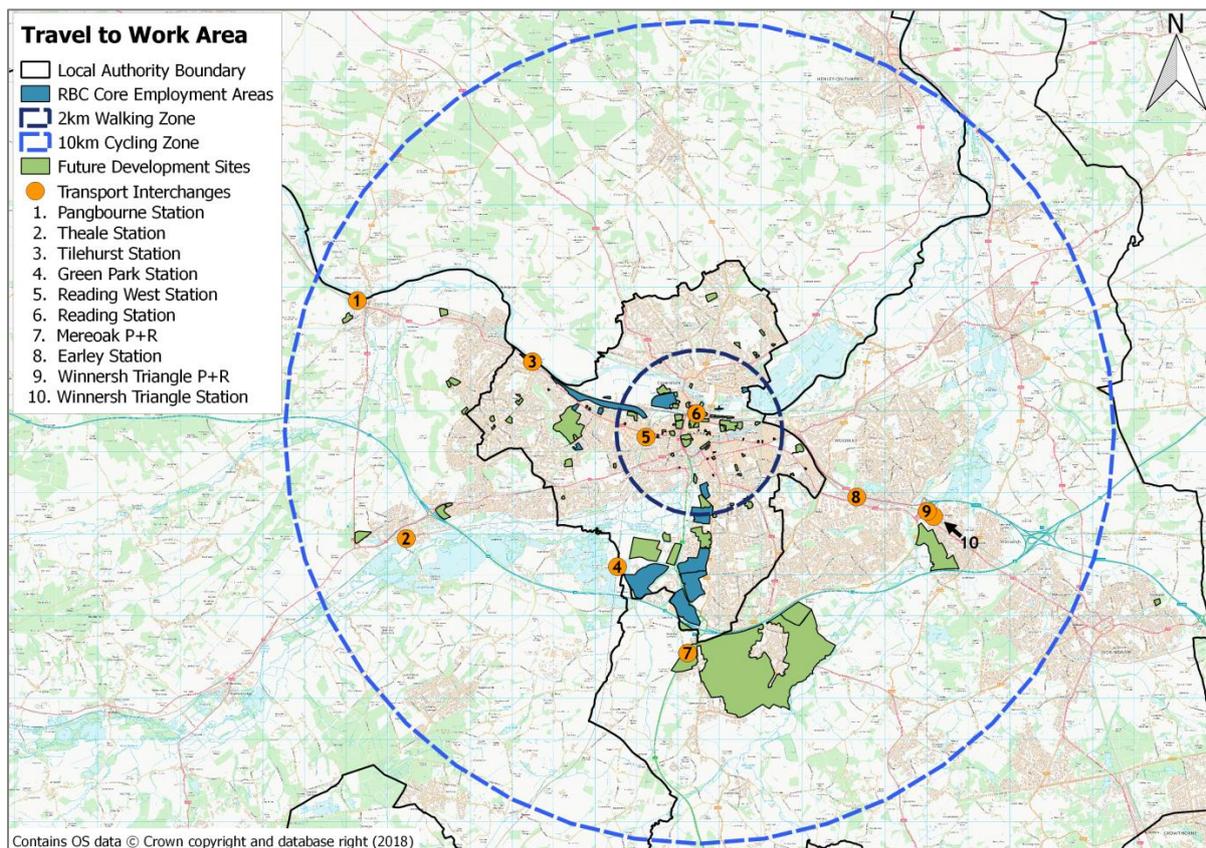


Figure 4.4 - Reading's Travel to Work Area

Local Branded Cycle Network

The existing branded cycling network illustrated in **Figure 4.5** has been considered as part of the identification of routes and improvements in the Local Cycling and Walking Infrastructure Plan. This includes ongoing feedback in relation to the routes from local users, audits undertaken as part of the creation of the network and improvements that have been implemented as part of funded programmes.

Whilst these routes are not always the most direct, they connect people to places, including employment centres, schools, parks and other local facilities and services, and therefore have an ongoing part to play in the evolution of the network.

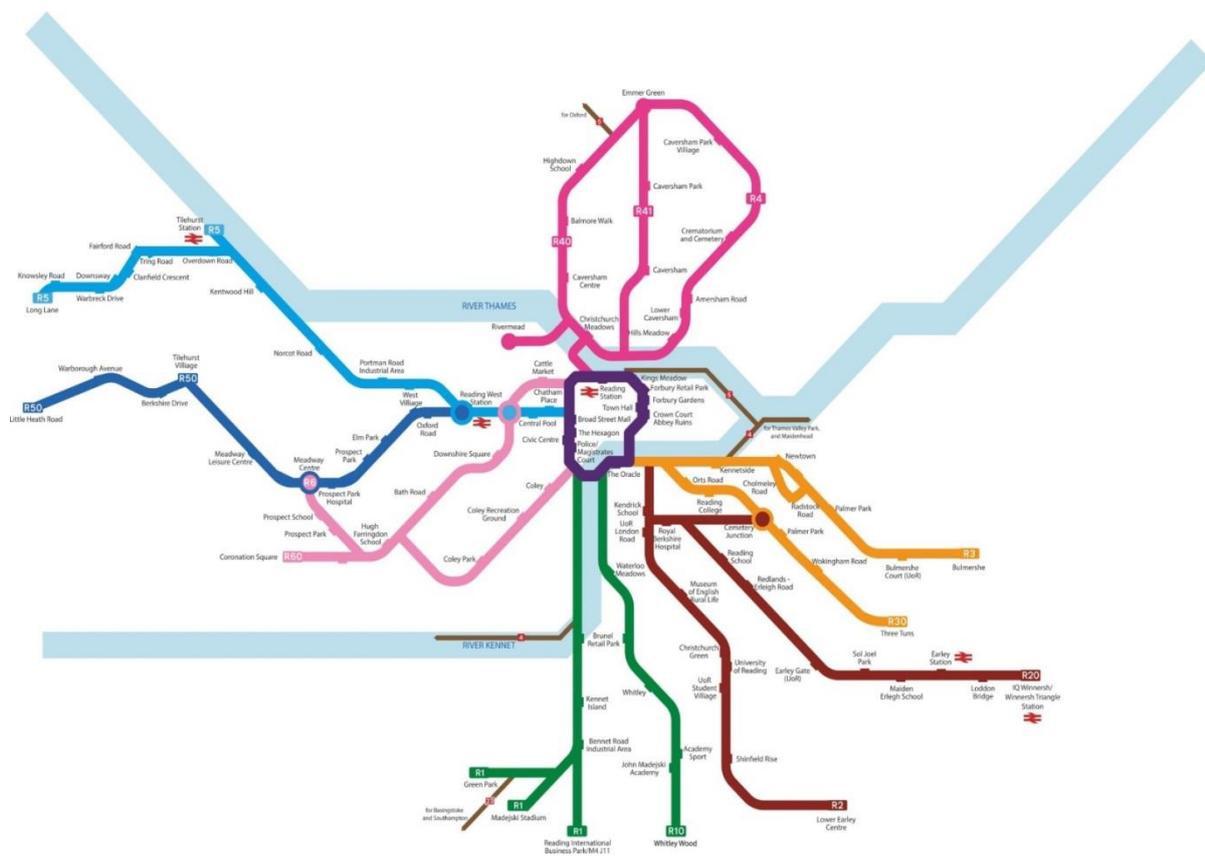


Figure 4.5 - Local Branded Cycle Network

Air Quality Management Area

An Air Quality Management Area (AQMA) has been declared along all the main arterial roads in and out of the centre of Reading (see **Figure 4.6**), including J11 of the M4 and along the railway lines where they pass through built-up areas. Air quality in Reading is generally good; however, there are areas close to congested roads where levels of nitrogen dioxide exceed the air quality objectives and where levels of particulates are elevated. Wokingham has also declared an AQMA that extends into south of our LCWIP area. This AQMA area encompasses properties along the M4 Motorway and along part of the A329 where it passes under the M4.

With the aim of encouraging more people to cycle and walk within our LCWIP area, it is likely that this strategy will have a positive impact on the air quality in the area and the transport mix along these corridors. Improvements identified within this LCWIP will contribute to reducing carbon emissions while improving air quality, public health and overall quality of life.

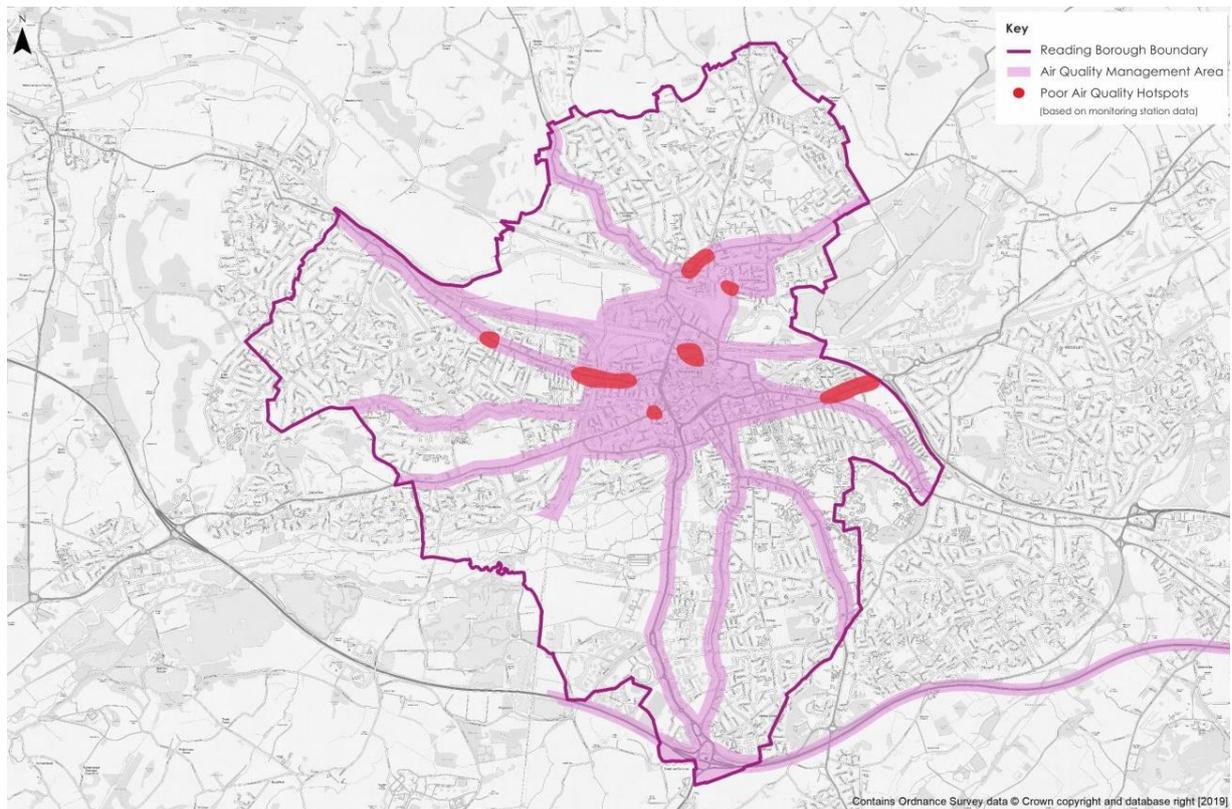


Figure 4.6 - Air Quality Management Area

5. METHODOLOGY

This section builds on Section 4, which details our approach to ‘**Determining the Scope**’ (Stage 1) of the LCWIP, by setting out our approach to developing the LCWIP from information used to inform the process, tools used to analyse potential mode shift and identity improvements to high-level design principles.

Gathering Information (Stage 2)

Having defined the LCWIP area, various datasets were gathered across each local authority and compiled into Geographical Information System (GIS) in order to visually analyse the relationships between different data. Such datasets included Census 2011 (population, journey to work), accident statistics (STATS 19), future development sites, Air Quality Management Areas (AQMAs), educational sites (university, colleges, secondary schools), green spaces, transport (railway stations, park and ride sites, key bus stops), key destinations (hospital, town centre, local centres), key employment areas (business parks, industrial areas), tourist attractions (Reading Museum, Abbey Ruins), cycle parking, existing cycle routes (National Cycle Network, branded routes), public rights of way.

Using this compiled information from each local authority, initial outputs were produced to identify origins and destinations within our LCWIP area - detailed in **Appendix B**. The destinations were categorised by type in order to gain an understanding of the purpose of journeys that are being made within our LCWIP area.

Network Planning for Cycling (Stage 3)

To develop our cycle network, the origins and destinations were analysed using the Propensity to Cycle Tool (PCT). This tool uses Census 2011 Journey to Work data, and essentially maps the trip origins and destinations (trip generation), identifies the desire lines for cycle trips (trip distribution), and allocates trips to specific routes (trip assignment). Once the desire lines were identified, these were then clustered to indicate where the majority of people were cycling to and from. The PCT ‘Go-Dutch’ scenario ³¹ was used to gain an understanding of which routes had the greatest potential for increased levels of cycling, in comparison to current levels. Both the clustered desire lines and PCT ‘Go-Dutch’ information was overlaid to identify our key cycling corridors.

These corridors formed the backbone of our cycle network and act as strategic routes between suburban areas and Reading town centre. Further orbital, local and leisure routes were identified to complement the strategic routes, resulting in our draft cycle network.

The draft cycle network was shared with the Cycle Forum in March, including a member of the public who considered the proposals from a pedestrian point-of-view, and further discussed at a workshop with Cycle Forum in May 2019, consisting of the MP for Reading East, Councillors, Reading Cycle Campaign members and representative from the University of Reading. Other workshops were held with West Berkshire and Wokingham officers, and internally with officers from Transport Planning, Transport Development Control and Network Management. As a result of these workshops, a set of design principles were developed for each type of cycle route, and further improvements were made to the cycle network. **Table 5.1** presents the overall design principles.

Type	Description	Measures	Who for?
STRATEGIC ROUTES	Direct, safe, quickest, high quality, designed for high volumes, segregated from traffic and pedestrians (where possible)	<ul style="list-style-type: none"> - Segregated cycle lanes (physical) on carriageway, - Buffer zones where cycle lanes run adjacent to parking, - Dedicated cycle paths segregated from pedestrians off carriageway, - Bus stop bypasses, - Priority at junctions/side roads, - Advanced stop lines, - Advanced signals at major junctions/town centre area, - Wayfinding (key destinations, Journey time info), - Cycle parking and maintenance hubs at major transport interchanges/key points of interest, - Well lit, - Appropriate surfacing (e.g. black top in urban areas, compacted stone in rural areas), - Minimise street clutter, - Greening of infrastructure, such as landscaping. 	Confident and novice cyclists e.g. Secondary school pupils, commuters, leisure travel
ORBITAL ROUTES	Provide access between strategic corridors, high quality routes, segregation (desirable)	<ul style="list-style-type: none"> - Light touch segregation (where possible), Shared use facilities where segregation is not possible, - Crossing enhancements such as Tiger/Toucans, - Wayfinding, - Appropriate surfacing (e.g. black top in urban areas, compacted stone in rural areas), - Mini Holland treatments (modal filters, contraflow cycling etc.), - Minimise street clutter, - Greening of infrastructure, such as landscaping. 	Confident cyclists e.g. commuters Leisure cyclists Novice cyclists e.g. school children
LOCAL ROUTES	Quieter roads, pleasant to cycle along, low traffic volumes and speeds	<ul style="list-style-type: none"> - Crossing enhancements such as Tiger/Toucans, - Wayfinding, - Well maintained, - Appropriate surfacing (e.g. black top in urban areas, compacted stone in rural areas), - Reassurance for cyclists (e.g. on-carriageway markings, and through junctions), - Shared use facilities near schools, - Mini Holland treatments (modal filters, contraflow cycling, 20mph zones, traffic calming, cycle parking hangers, parklets etc.), - Minimise street clutter, - Greening of infrastructure, such as landscaping. 	Leisure cyclists Novice cyclists e.g. school children
LEISURE ROUTES	Quiet/rural/water way routes (traffic free where possible)	<ul style="list-style-type: none"> - Wayfinding, - Annual maintenance, - Cycle maintenance, - Appropriate surfacing (e.g. black top in urban areas, compacted stone in rural areas), - Minimise street clutter, - Greening of infrastructure, such as landscaping. 	All abilities - Families, non-confident cyclists, group rides etc.

Table 5.1 - Cycle Route Design Principles

As an outcome of the workshops, preferred cycle routes were agreed as illustrated in **Figure 5.1**, and a total of 12 routes (strategic, orbital and local), were audited

using the Route Selection Tool (RST), which scores routes based on 5 core design outcomes for cycling, which are: coherent, direct, safe, comfortable and attractive. **Appendix D** sets out the RST template and summary RST audit sheets.

Recommendations from the audits, feedback from workshops, LTP consultation and an existing unfunded schemes list was incorporated into one long list of cycle infrastructure improvements, with overall recommendations for each route. A prioritised list of cycle infrastructure improvements is presented in **Appendix G**.

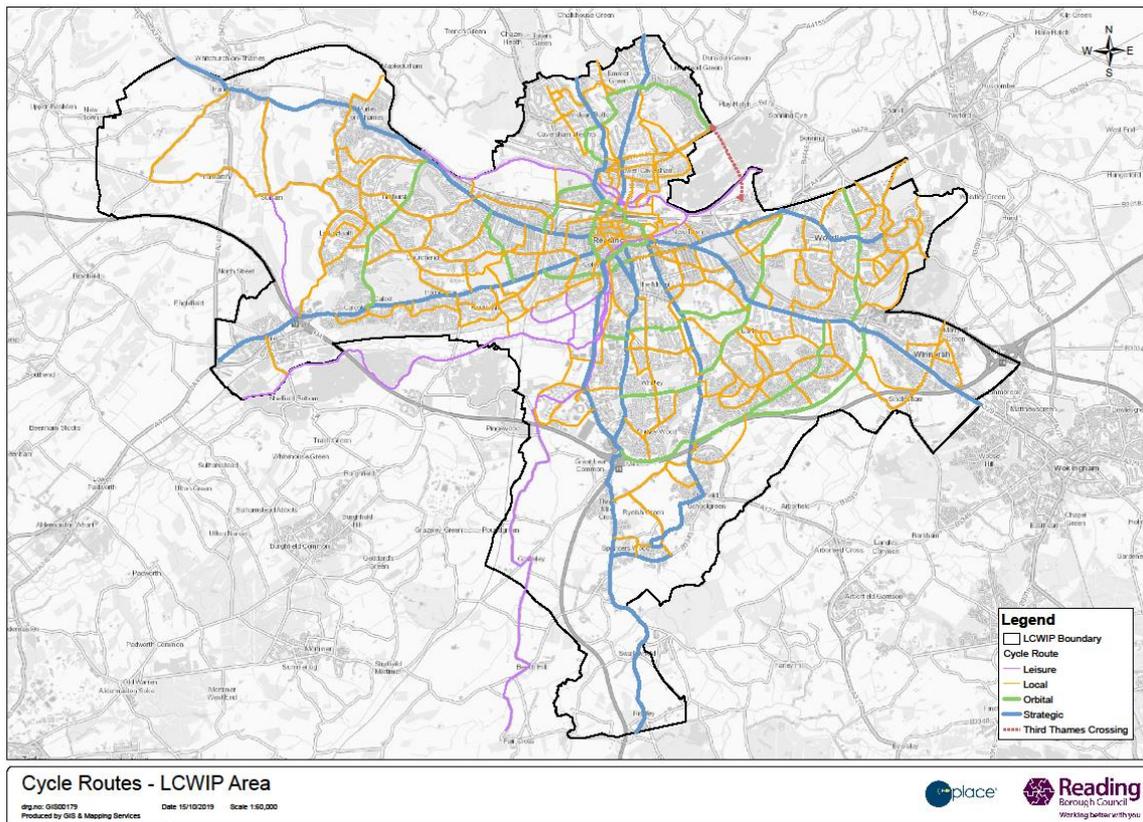


Figure 5.1 - Network Map for Cycling (also see Appendix C)

Network Planning for Walking (Stage 4)

Using the origins and destinations gathered from stage 2, clustered trip attractors were identified where 5 or more trip attractors are located within a 200m radius - 6 clusters were identified as part of this analysis. From the central point of each cluster a 400m buffer was applied. The buffers with the highest number of attractors were identified as possible Core Walking Zones (CWZs). Although a CWZ was identified using this process, it did not fully extend to the Reading Station area. Instead, the CWZ has been based on the town centre boundary defined in Reading’s new Local Plan. This boundary extends beyond the Inner Distribution Road, and covers the key walking area of Reading.

With the CWZ now defined, a 2km buffer was applied to the edge of the CWZ; this represents the average distance one is likely to walk. Key walking routes were then identified within this area, and categorised based on the footway classification set out in the LCWIP Technical Guidance. These classifications have been further developed to provide a set of design principles, similar to the cycling stage - listed below in **Table 5.2**.

Type	Description	Measures
PRESTIGE WALKING ROUTES	Very busy areas of towns and cities, with high public space and street scene contribution.	<ul style="list-style-type: none"> - Priority for pedestrians, pedestrianised areas where possible, - Appropriate lighting and wayfinding, - Well maintained surface, - High quality public realm and amenity space, - Minimise street clutter, - Suitable green time and phasing at signalled crossings, - Green of infrastructure, such as landscaping.
PRIMARY WALKING ROUTES	Busy urban shopping and business areas, and main pedestrian routes.	<ul style="list-style-type: none"> - Appropriate lighting and wayfinding, - Dropped kerbs and tactile at side roads and crossings, - Pedestrian crossing facility at key junctions and key destinations, - Suitable green time and phasing at signalled crossings, - Minimise street clutter, - Well maintained surface.
SECONDARY WALKING ROUTES	Medium usage routes through local areas leading into primary routes, local shopping centres, etc.	<ul style="list-style-type: none"> - Appropriate lighting and wayfinding, - Dropped kerbs and tactile paving at side roads and crossings, - Pedestrian crossing facility at key junctions and key destinations, - Suitable green time and phasing at signalled crossings, - Minimise street clutter, - Well maintained surface.
LINK FOOTWAYS	Linking local access footways through urban areas and busy rural footways.	<ul style="list-style-type: none"> - Appropriate lighting and wayfinding, - Dropped kerbs and tactile paving at side roads and crossings, - Minimise street clutter, - Well maintained surface.
LOCAL ACCESS FOOTWAYS	Footways associated with low usage, short estate roads to the main roads and cul-de-sacs.	<ul style="list-style-type: none"> - Appropriate lighting and wayfinding, - Dropped kerbs and tactile paving at side roads and crossings, - Minimise street clutter, - Well maintained surface.
RIGHT OF WAYS	A path that anyone has the legal right to use on foot, and sometimes using other modes of transport	<ul style="list-style-type: none"> - Appropriate lighting and wayfinding, - Well maintained surface, - Easy access for wheelchair users, pushchairs and adaptable bicycles, etc.

Table 5.2 - Walking Route Design Principles

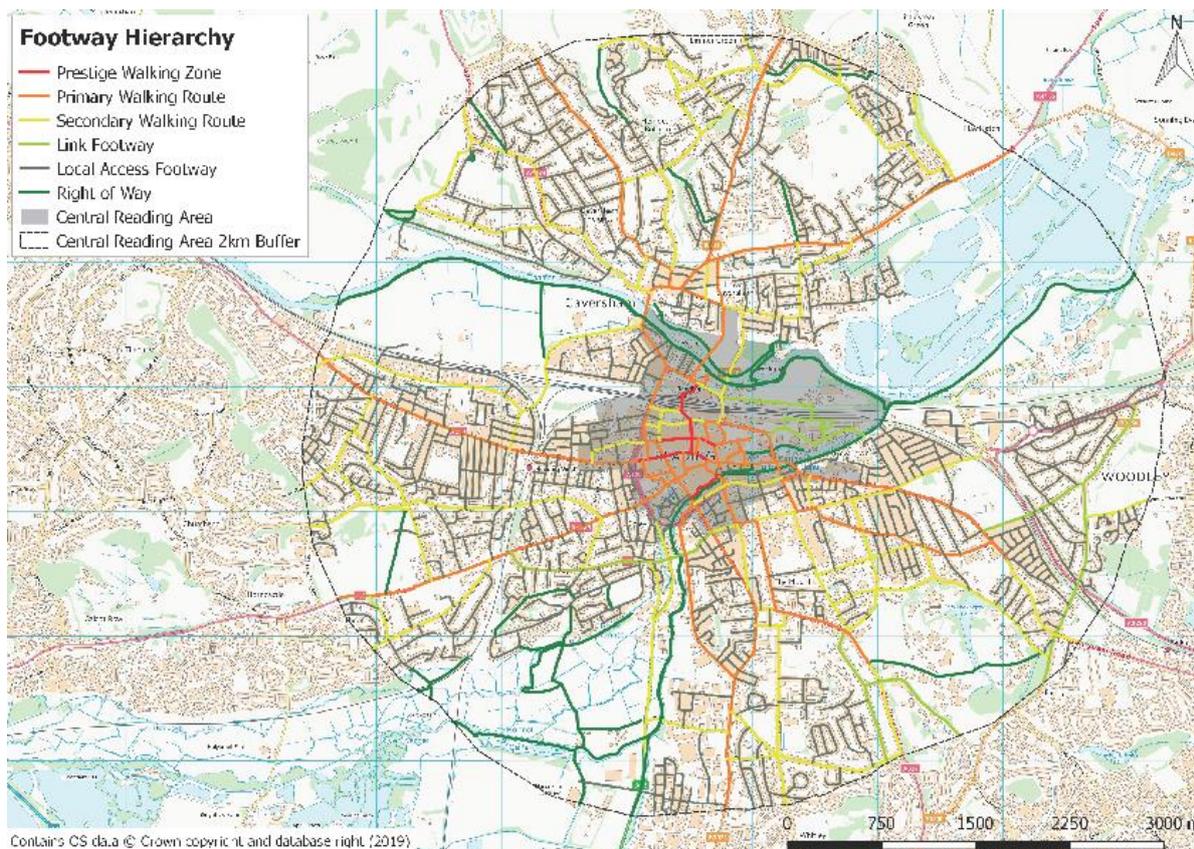


Figure 5.2 - Network Map for Walking (See Appendix E)

Barriers such as rivers, railway lines and heavily-trafficked roads with a limited number of crossing points were also mapped to help identify any funnel routes - where there are high levels of pedestrian flows due to the lack of alternative routes.

Outputs from this analysis are mapped in **Appendix B**.

The Walking Route Audit Tool (WRAT) was used to undertake the audits on selected prestige and primary routes. Six key walking routes /movement corridors were selected and have been audited. The WRAT scores routes based on the same 5 core design outcomes for cycling. **Appendix F** sets out the WRAT template used when carrying out the audits, as well as the summary sheets for each section of each individual route.

Recommendations from the audits, feedback from initiatives and workshops, and officer knowledge were incorporated into one long list of walking infrastructure improvements, with overall recommendations for each route. A prioritised list of walking infrastructure improvements is presented in Section 7.

Prioritising Improvements (Stage 5)

Both the cycling and walking lists of infrastructure improvements were prioritised based on the following criteria:

- Deliverability - political and public acceptability, engineering/regulatory challenges, and availability of space.
- Estimated scheme costs - categorised by high - £5.0m to £9.0m, moderate - £2.0m -£4.9m and low £0 to £1.9m.
- Walking and cycling flows from Readings Annual Monitoring Surveys around the Town Centre and the Propensity to Cycle Tool - categorised by flows.
- Reading's five LTP4 themes:
 1. People and Places - improvements to journey times, number of people who will benefit, and connections to key destinations.
 2. Healthy Lifestyles - number of students who will benefit, reduction in collisions, and potential for modal shift.
 3. Clean and Green - within or near an Air Quality Management Area, reduction in carbon emissions, and connections to green spaces.
 4. Inclusive Growth - serves deprived communities, transport hubs, new housing and employments.
 5. Smart Solutions - use of smart technology at signalled junctions and use of technology more generally.

Each improvement was scored based on how well it met each heading, 1 - no fit and 5 - excellent fit. This then allowed for improvements to be ranked or prioritised based on the total score.

The prioritised list of infrastructure improvements for cycling and walking is set out in **Appendix G**.

Integration and Application (Stage 6)

The LCWIP will be integrated into the local policy documents referenced in Section 3, in addition to their counterparts in for Wokingham and West Berkshire Councils.

Feedback from the initial LTP4 consultation, undertaken in Summer 2019, has been incorporated into the proposals set out in the LCWIP. Further feedback on LTP4 proposals will be sought in Spring 2020 as part of the statutory consultation period. This feedback will again inform future iterations of the LCWIP with any

fundamental changes being integrated into the plan prior to LTP4 adoption in Autumn 2020.

The LCWIP will be updated periodically and supported by delivery programmes as detailed in the emerging Local Transport Plan.

Ongoing feedback from user groups, such as those referenced in **Appendix H**, will continue to inform our delivery programmes, including the LCWIP prioritisation lists.

Further work will continue to be undertaken on the development of the LCWIP to ensure we are best placed to respond to future funding rounds. Key outputs from the LCWIP, including the proposed routes making up the cycling and walking networks and prioritisation lists, will be used to inform future funding applications for capital investment.

Consideration will be given to further application of the LCWIP process to help transform our streets for all users regardless of their age or ability.

6. CONSULTATION & ENGAGEMENT

Reading is keen to ensure that the outputs from the LCWIP support and encourage people, whose main mode of travel is not currently by foot or bike, to consider traveling by these modes. In addition, the Council is keen to seek the views of a range of pedestrians and existing cyclists, including those who use specialist equipment (e.g. trailers, tag-a-longs or adaptable bikes), inexperienced and/or leisure cyclists, utility cyclists and commuters.

Partnership and Stakeholders

This strategy is a live document requiring regular review and updates over the ten year period 2020 to 2030. Engagement and input from stakeholders, including those detailed in **Appendix H**, will therefore continue to play a vital part in the development of this strategy.

The competitive nature of funding rounds means that the endorsement of funding bids by stakeholders and community groups is vital to demonstrate support and secure investment in our transport network. Building a better partnership-based approach will therefore be integral to the development and delivery of this plan.

Development of LCWIP

Our LCWIP has been developed in consultation with both the local community and key stakeholders to ensure the views of a variety of road users and those whose business is affected by the transport network are captured.

The development of the LCWIP has therefore been informed by a number of data sources, including initial feedback from the LTP4 consultation undertaken in Summer 2019, as well as data from sustainable transport initiatives, in accordance with the Data Protection Act. Further feedback from the statutory consultation period on LTP4, expected to be held in spring 2020, will be fed into future updates of the plan.

Sources of information include:

- LTP4 consultation events, including meetings, public drop in sessions, responses to the online survey, etc.
- Cycle Forum Requested Schemes List and workshop
- Feedback from other user groups
- Feedback from initiatives, including PTP, EMPOWER and workplace cycle challenge
- Site meeting with Access and Disabilities User groups



Figure 6.1 - Thames Promenade

Future Consultation & Engagement

Various user groups and forums are available to facilitate engagement and discussion with members of the public and stakeholders around a number of topics. These channels will continue to play a vital role in the ongoing development and delivery of the LCWIP.

Forums particularly relevant to the delivery of our LCWIP include:

- The **Cleaner Air and Safer Transport Forum**, which provides opportunities to engage with a broad spectrum of local interest groups in relation to the Climate Change and transport agenda, acting as a constant and valuable channel of communication;
- The **Cycling Forum**, where Councillors and members of cycling organisations discuss the implementation of better cycling facilities to make Reading a more cycle-friendly town;
- The **Mid and West Berkshire Local Access Forum**, which comprises membership from Reading, Wokingham and West Berkshire unitary authorities, local landowners and user groups, and has been instrumental in the preparation and delivery of our Rights of Way Improvement Plan;
- The **Access and Disabilities Working Group**, which facilitates discussion on improving accessibility in Reading, ensuring that the needs of disabled transport users are considered through our transport strategy and delivery; and
- The **Older People's Working Group**, which identifies and promotes awareness of issues facing older residents and provides a channel for older people to influence the development of local services, including transport.

We will continue to engage and consult with these forums to deliver our transport strategy and vision for Reading.

Equality Act

As set out in the Equality Act 2010, we have a duty to consult and engage with a range of stakeholders including those with protected characteristics. Consultation and engagement with relevant groups and forums will continue to be undertaken via existing channels of communication, such as those set out in above.

In addition, a high-level Equality Impact Assessments (EqIA) has been undertaken on the overall LCWIP to ensure the proposals do not negatively impact those with protected characteristics. Further, scheme specific, EIAs will be undertaken as and when individual schemes are developed and taken forward for implementation. All EqIAs will be reported to the relevant Committee when scheme and spending approval is sought.

7. DELIVERY

This section sets out the management and governance arrangements for the ongoing development of the LCWIP, including funding, monitoring and review.

Funding

This LCWIP will be used as the basis for securing future funding from Central Government and other sources, including Thames Valley Local Enterprise Partnership whom funded the delivery of the new National Cycle Network route NCN 422 to the value of £4.2 million through the Local Growth Deal. We, alongside key stakeholders including neighbouring boroughs, will continue to build joint business cases that seek to secure funding to deliver strategic cross-boundary cycling and walking schemes that demonstrate value for money and work towards achieving the objectives set out in the emerging Local Transport Plan.

In order to support the delivery of capital schemes we will continue to fund the development of business cases and initial concept designs through existing transport budgets via grants, such as the Integrated Transport Block.

Successful funding bids will also be supported by local contributions funded through **private sector contributions**, such as the Community Infrastructure Levy (CIL) and Section 106, or other funding sources secured through competitive funding rounds.

Other sources of income as set out in the Transport Act 2000 include ring-fenced revenue from **demand management** measures, such as bus lane fines, park and display and parking enforcement schemes already in operation as well as road charging schemes that are being investigated as part of the emerging Local Transport Plan, including Clean Air Zones, congestion charging and workplace parking levies.

Management & Governance

Reading Borough Council is the lead authority for the joint LCWIP for the wider Reading area, in partnership with Wokingham and West Berkshire Councils.

The delivery and review of the LCWIP will be led by the Transport Planning teams for the three Local Authorities, making up the Steering Group. They will also be responsible for engaging and working in partnership with wider teams, such as those referenced in the LCWIP Working Group, illustrated in **Figure 7.1**, as well as local interest groups and key stakeholders.

The Project Manager will be responsible for overseeing the Steering Group and ensuring the Senior Responsible Officer, and other key officers, are kept up-to-date on the delivery and review of the LCWIP and reporting updates to relevant Committees.



Figure 7.1: Governance Structure

Monitoring

Local monitoring is important to measure change and understand whether targets such as those included in this Strategy and the Climate Change Strategy are achieved. Cycling and walking journeys will be monitored through various sources and additional information will also be available in the emerging Local Transport Plan and supporting documents, including, but not limited to, the Climate Change Strategy and Air Quality Strategy.

Cycling and walking schemes will continue to be monitored before and after implementation to ensure that it is operating effectively and to evidence modal change. As part of the ongoing development and review of the LCWIP, we continue to welcome individual and collective feedback post implementation.

Cycling and walking usage will continue to be monitored through the annual cordon count measuring trips by all modes coming into and out of central Reading as

referenced in **Figure 7.2**. The count takes place over one day for 12 hours and allows a comparison of mode share. We will also continue to monitor the number of bicycles parked at designated locations in the town centre.



Figure 7.2 - Cordon Count Points

Other data sources that will be used to monitor cycling and walking use include:

- Personal injury collision data
- Air quality monitoring data
- School travel plan data
- Annual cordon count data
- Traffic count data from permanent automatic traffic counters
- Sustainable travel initiatives take-up data
- National Highways & Transport Public Satisfaction Survey

Review

This live strategy is the first iteration of the LCWIP. Whilst this document initially spans a ten-year period until 2030, it should be noted that it forms a fundamental part of delivering our ambitious plans as set out in our emerging Local Transport Plan, including to deliver a carbon neutral Reading by 2030 and managing strategic growth sites set out in the Local Plan (2019-2036).

The strategy and the supporting prioritisation lists will be reviewed in line with the emerging Local Transport Plan (2020-2036) and reported to committees as set out in **Figure 7.1**, including a mid-term review in 2025. Periodic reviews will ensure documents remain 'live' and up-to-date reflecting ongoing feedback from users and delivery programmes.

From time to time, it will be necessary to update the policy context to reflect new and emerging national guidance and influential policy, including those in relation to tackling climate change and reducing carbon emissions, improving air quality, encouraging healthy lifestyles and supporting economic growth. In addition to policy updates, best practice examples from the UK and internationally, particularly those endorsed by DfT and those recognised in delivering excellence in cycling and walking, will also be integrated. We will also integrate guidance and best practice examples that ensure transport improvements also cater for those affected by particular mobility constraints, such as the Inclusive Mobility Strategy.

8. CONCLUSION & NEXT STEPS

This Local Cycling and Walking Infrastructure Plan (LCWIP) is a live strategy developed by Reading Borough Council, in partnership with West Berkshire and Wokingham Borough Councils. This report is the first iteration of the joint strategy and implementation plan for the wider Reading area, spanning a ten year period from 2020-30. The LCWIP was developed using Local Cycling and Walking Infrastructure Plan Technical Guidance for Local Authorities³², issued by the Department for Transport (DfT), and also considers best practice examples from the UK.

As set out in Section 3, the LCWIP will be adopted as a sub-strategy to our emerging Local Transport Plan and complementary strategies as described. Building on the initial LTP4 consultation, further feedback will be sought as part of the statutory consultation period in Spring 2020. Further feedback will be integrated into the LCWIP prior to the adoption of LTP4 in Autumn 2020.

It should be noted that this is the first iteration of the LCWIP, which will be a live and evolving document. Further consideration will be given to the wider application of the LCWIP process to support us achieving our ambition of delivering a carbon neutral Reading by 2030.

The prioritised list of infrastructure improvements set out, in **Appendix G**, will be used to inform future funding bids to Central Government, the LEP and other relevant funding sources.

It should be noted that the improvements set out in this LCWIP are subject to detailed design and securing funding.

Technical drawings developed and adopted as part of the Cycling Strategy 2014 will be updated and expanded upon to include proposed improvements recognised as innovative and radically improve cycling and walking infrastructure.

As set out in Section 6, engagement and support from local user groups will be vital in us demonstrating support for future funding applications and therefore successful bids. We continue to welcome the support and input from these groups in the ongoing development and review of the LCWIP to ensure that we are able to deliver our vision to transform our streets, encourage healthy lifestyle choices and clean and inclusive growth.

9. GLOSSARY

BLIS	Berkshire Local Industrial Strategy
CAST	Cleaner Air and Safer Transport Forum
CWIS	Cycling and Walking Investment Strategy
DFT	Department for Transport
EQIA	Equality Impact Assessment
LCWIP	Local Cycling and Walking Infrastructure Plan
LEP	Local Enterprise Partnership
LSTF	Local Sustainable Transport Fund
LTP	Local Transport Plan
PTC	Propensity to Cycle Tool
RST	Route Selection Tool
SEP	Strategic Economic Plan
SEPT	Strategic Environment, Planning and Transport Committee
TFSE	Transport for the South East
TMSC	Traffic Management Sub-Committee

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³² Local Cycling and Walking Infrastructure Plans Technical Guidance

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