



SHROPSHIRE COUNCIL

*Local Cycling & Walking
Infrastructure Plan*



CITY SCIENCE
delivering decarbonisation



Shropshire
Council

Date issued: 12/02/2024
Document status: Final
Version number: 1.0

Prepared by:

Aoife Dudley BA Principal Transport Consultant

Rifat Foysal BSc Graduate Transport Consultant

Authorised by:

Simon Lusby CTPP MET BSc Managing Director

This Report has been prepared by City Science Corporation Limited with reasonable skill, care and diligence. This Report has been prepared for Shropshire Council and should not be shared with any third parties, nor reproduced in whole or in part, without the prior written approval of City Science Corporation Limited.

Contents

1	Introduction	1
1.1	Overarching Context & Purpose	1
2	Stage 1: Determining Scope	2
2.1	Geographical Extent	2
2.2	LCWIP Objectives	2
3	Stage 2: Gathering Information	4
3.1	Policy Context	4
3.2	Potential Future Transport Schemes & Development	6
3.3	Data Gathering	7
4	Stakeholder Engagement	8
4.1	Stage 1: Determining the Scope	9
4.2	Stage 2: Developing the Evidence Base	10
4.3	Stages 3 & 4: Network Planning	10
4.3.1	Site Visits	10
4.4	Stage 5: Prioritising Infrastructure Improvements	10
5	Stage 3: Network Planning for Cycling	11
5.1	Process	11
5.1.1	Trip Origins & Destinations	11
5.1.2	Desire Lines	13
5.1.3	Route Alignment of Cycle Routes	15
5.2	Network Plans	15
6	Stage 4: Network Planning for Walking	17
6.1	Process	17
6.1.1	Core Walking Zones	17
6.1.2	Walking Accessibility Analysis	17
6.1.3	Barriers & Funnel Routes	18
6.1.4	Walking Route Audit	19
6.2	Walking Network Improvements	20
7	Stage 5: Prioritising Improvements	21
7.1	Criteria Used in Assessment	21
7.2	Prioritised Schemes	22
7.2.1	Timescales	22
7.2.2	Prioritised Routes	22
8	Next Steps	25
8.1	Integration & Application	25
8.2	Policy Integration	25
8.3	Future LCWIP Review	25
8.4	Feasibility & Design	25
9	Glossary of Terms	26
10	Appraisal Metrics	27
11	References	29

1 Introduction

1.1 Overarching Context & Purpose

This Shropshire Local Cycling & Walking Infrastructure Plan (LCWIP) has been developed to provide a cohesive approach to the delivery of a high-quality walking and cycling network across the county. The purpose of this LCWIP is to identify and prioritise long term investment over a ten-year period (to 2032) in new and upgraded walking and cycling provision across Shropshire. This LCWIP will cover the whole county with particular focus on seven key towns:

- Bridgnorth
- Church Stretton
- Ludlow
- Market Drayton
- Oswestry & Gobowen
- Shrewsbury
- Whitchurch

This LCWIP incorporates the following outputs:

- Network plans for walking and cycling covering each of the seven key towns
- A prioritised programme of infrastructure improvements for each of the seven key towns
- This final report which incorporates the analysis outcomes and an associated narrative

As identified in the Department for Transport (DfT) LCWIP Technical Guidance for Local Authorities (DfT, 2017), LCWIPs are comprised of six key stages (identified in Figure 1-1).

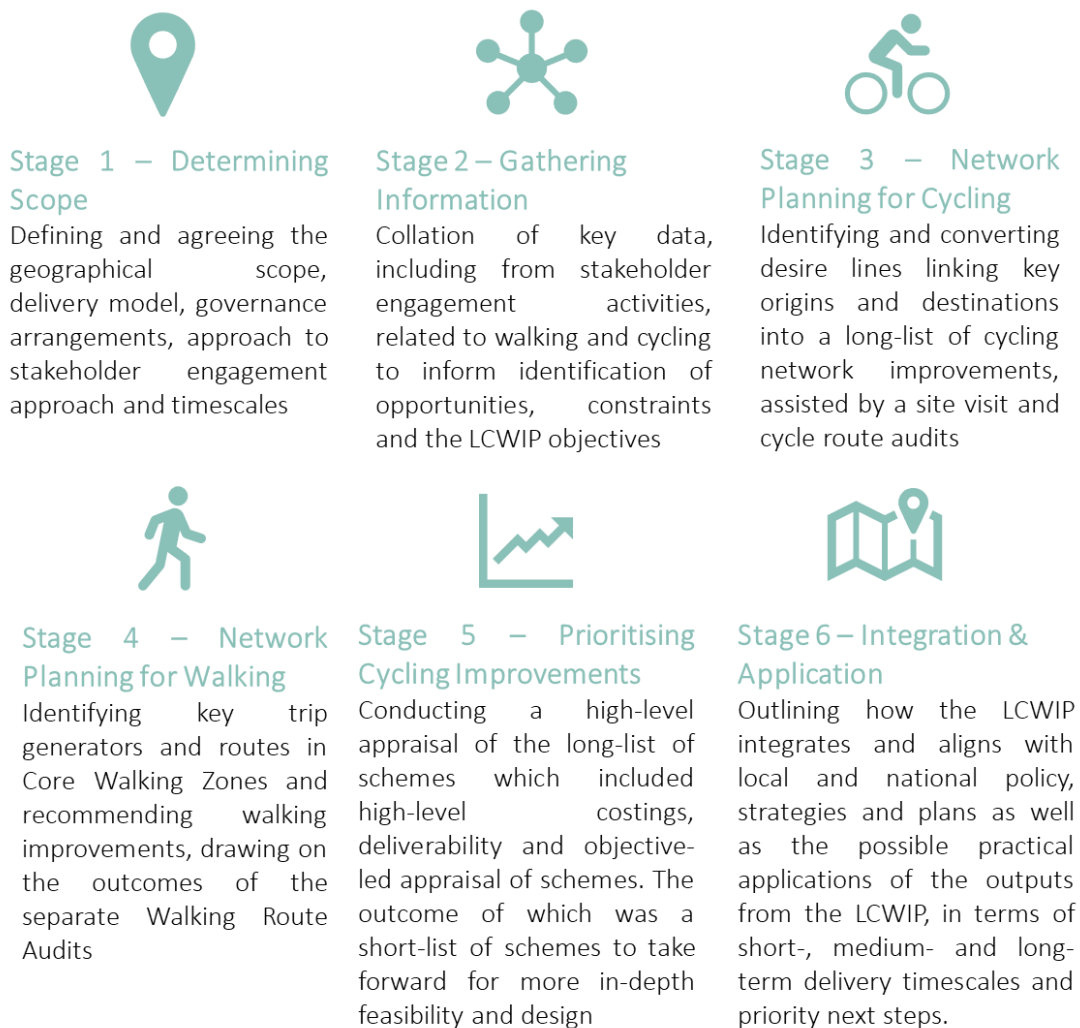


Figure 1-1: Summary of LCWIP Process

2 Stage 1: Determining Scope

2.1 Geographical Extent

Shropshire is a predominantly rural county located between Birmingham and the Welsh border. It is the second largest inland county in England with a population of around 330,000, spread over a landmass of 1,250 square miles. Being mainly rural, the county is made up of many small towns, with Shrewsbury acting as the county town.

This LCWIP covers the whole county of Shropshire with a focus on the following seven key towns:

- Shrewsbury
- Bridgnorth
- Church Stretton
- Ludlow
- Market Drayton
- Oswestry (including Gobowen Railway Station)
- Whitchurch

These towns have been selected by Shropshire Council, as they have the highest propensity for growth in cycling and walking journeys due to their high population density and the percentage of short distance trips made within them.

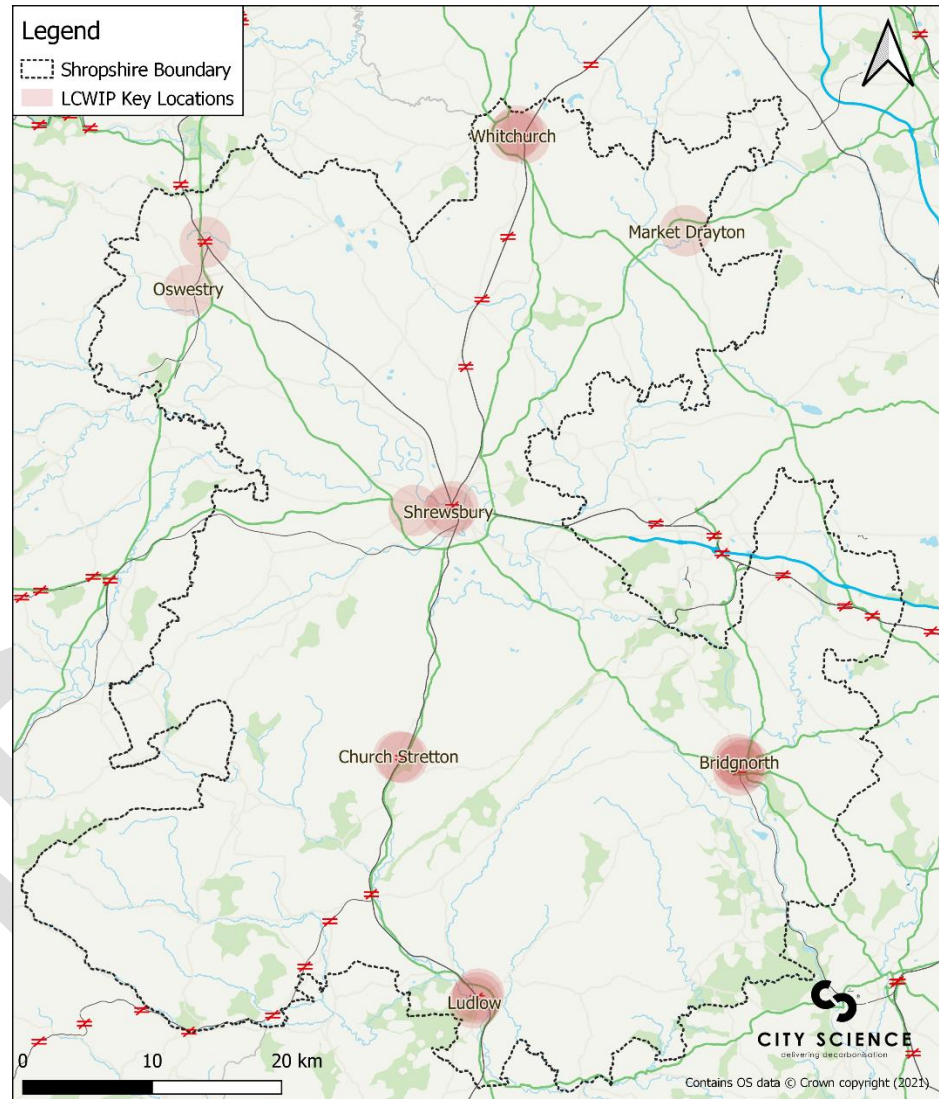


Figure 2-1: Key towns and locations considered as part of this LCWIP

2.2 LCWIP Objectives

The aim of this LCWIP is to:

- Gather information to understand the current patterns of walking and cycling across Shropshire
- Engage with stakeholders to understand the requirements for walking and cycling in Shropshire
- Develop a network of cycling infrastructure across the county with a focus on those areas with the highest population density
- Develop walking infrastructure improvements in Core Walking Zones (areas which consist of a number of local destinations within close proximity like a town centre or a business park) within the county
- Ensure integration of proposed networks with transport and land use planning policies
- Develop an implementation plan for the delivery of the network

These aims will help deliver on the LCWIP objectives, which are shown in Figure 2-2. These objectives have been developed in collaboration with the Council and align with wider goals contained within the draft Shropshire Local Plan 2016-38 (which is under review at the time of writing this report) and Shropshire Local Transport Plan 4 (LTP4).

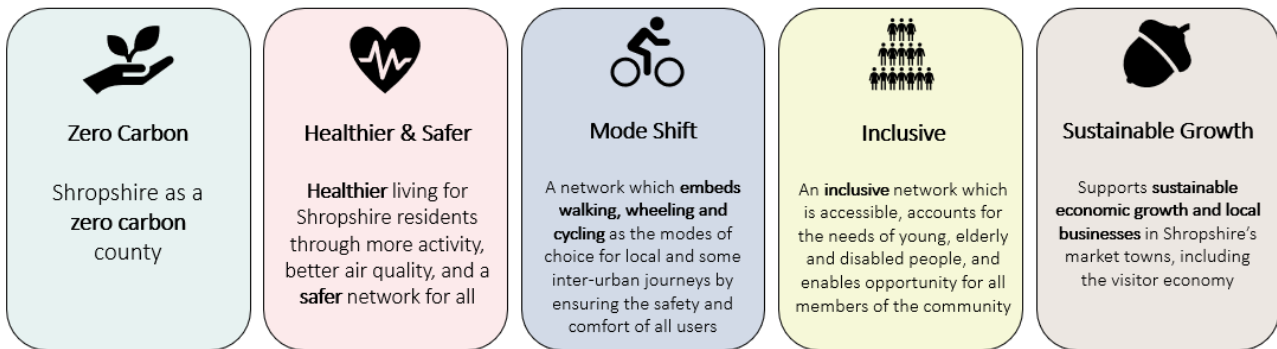


Figure 2-2: Shropshire LCWIP Objectives

DRAFT

3 Stage 2: Gathering Information

3.1 Policy Context

Figure 3-1 below sets out all the policy documents reviewed as part of this LCWIP. They cover a range of subject matter from land use planning to mode-specific transport policies.

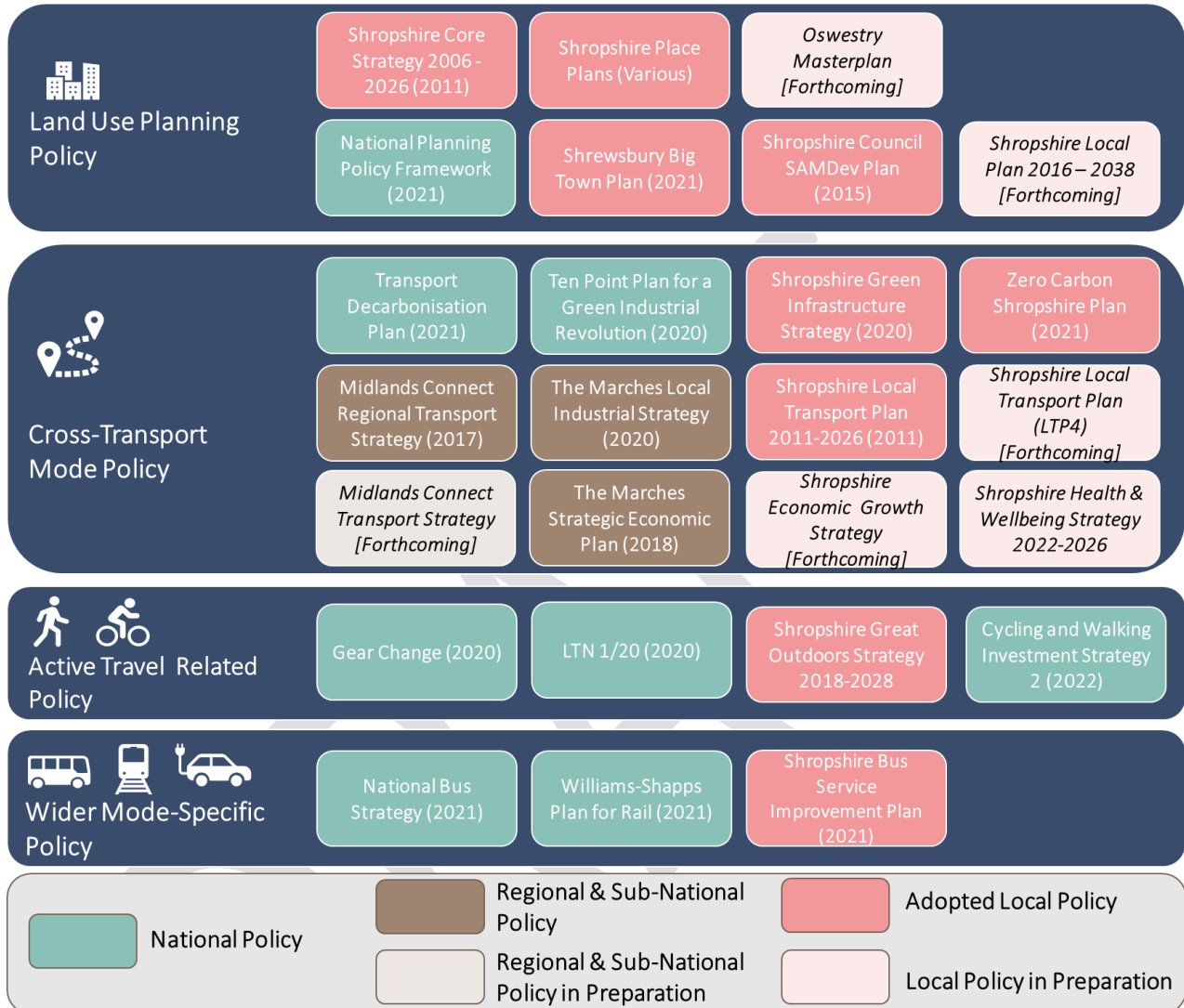


Figure 3-1: Policy documents reviewed as part of the Shropshire LCWIP

Key Policy Document	What Is the Purpose of the Policy?	Why is it Relevant to the Shropshire LCWIP?
Transport Decarbonisation Plan (2021)	This sets out how net zero carbon emissions (related to transport nationally) will be achieved by 2050	<ul style="list-style-type: none"> • Decarbonisation: Increased walking and cycling is identified as playing a key role to reducing car-based carbon emissions
Gear Change (2020)	This contains the DfT’s policies and ambitions at a national level related to walking and cycling	<ul style="list-style-type: none"> • Mode Shift Targets: Opportunity to deliver upon the target of ensuring half of all short journeys in towns are walked or cycled by 2030
Local Transport Note 1/20 (2020)	This sets out key design requirements and principles at a national level that all new cycling infrastructure must conform to	<ul style="list-style-type: none"> • Alignment with Design Principles: All future cycling infrastructure is required to comply with the principles to qualify for future national funding
Cycling & Walking Investment Strategy 2 (CWIS2)	This sets out the government’s ambition for walking and cycling in England, how it can be achieved and the financial resources available to support this ambition.	<ul style="list-style-type: none"> • Alignment with National Objectives: The ambition is for active travel to be the natural choice for many journeys, with half of all urban trips being active by 2030. • Funding Streams: It sets out different funding streams available to active travel investment in England.
Shropshire Local Transport Plan (LTP4) (Forthcoming)	Once published in 2023, this will provide the overarching transport strategy for Shropshire identifying what the future priorities are across all transport modes	<ul style="list-style-type: none"> • Integration of Objectives: The LCWIP will be a subset element of the Local Transport Plan and will align with its strategic aims
Shropshire Local Plan 2016 – 2038 (Forthcoming)	Once finalised, this will identify where and how future strategic housing and employment development will be delivered in Shropshire covering the period to 2038	<ul style="list-style-type: none"> • Development Impact: The LCWIP considered the impact of development growth across the seven towns including on future active travel use • Scheme Delivery: The LCWIP considered how new developments could contribute or deliver new schemes as part of Stage 6
Shrewsbury Big Town Plan & Movement Strategy (Forthcoming)	Once complete, this will provide the overarching future transport priorities for Shrewsbury across all modes, with a particular focus on the town centre.	<ul style="list-style-type: none"> • Active Travel Priority: The LCWIP delivers on a key vision of the Big Town Plan to prioritise active modes in the town centre
Zero Carbon Shropshire Plan	Developed by the Shropshire Climate Action Partnership, this identifies how net zero carbon emissions could be achieved by 2030	<ul style="list-style-type: none"> • Decarbonisation: Increased walking and cycling for short journeys is identified as playing a key role to reducing car-based carbon emissions

Key Policy Document	What Is the Purpose of the Policy?	Why is it Relevant to the Shropshire LCWIP?
<p>Shropshire Joint Health & Wellbeing Strategy 2022 – 2027 (2021)</p>	<p>This document identifies the long-term vision and key priorities to improve the health and wellbeing of people living in Shropshire</p>	<ul style="list-style-type: none"> • Physical Activity Increase Potential: The LCWIP has the potential to deliver upon a key priority to increase activity and reduce obesity levels • Access to Healthcare: Schemes identified in the LCWIP have the potential to improve access to local health facilities

Table 3-1: Summary of key policies and their relevance to the Shropshire LCWIP

3.2 Potential Future Transport Schemes & Development

There were numerous potential transport schemes and potential development sites considered as part of the evidence gathering process and subsequent network planning process to understand the possible impacts on future active travel behaviour. The analysis of potential development sites included those allocated in the Adopted Shropshire Core Strategy (2011) as well as those in the emerging Shropshire Local Plan. This included the following:

- **Shrewsbury North West Relief Road:** A potential transport scheme located to the north west of Shrewsbury Town centre including a new single carriageway crossing of the River Severn and accompanying active travel facilities
- **Oswestry Sustainable Urban Extension:** A strategic development site allocated in the Adopted Shropshire Core Strategy for the Oswestry Innovation Park and up to 900 new homes
- **Shrewsbury Sustainable Urban Extension (South):** An allocated strategic development site for around 900 new homes and 26 hectares of new employment land adjacent to the Montgomery Waters Meadow Stadium
- **Shrewsbury Sustainable Urban Extension (West):** An allocated strategic development site for around 750 new homes and 12 hectares of new employment land near the Oxon Park and Ride
- **Tasley Gateway Development, Bridgnorth:** A potential development site of around 1,000 new homes located at the north western edge of Bridgnorth

3.3 Data Gathering

Figure 3-2 outlines the data that was analysed as part of this LCWIP. It includes a wide range of data sources looking at all elements surrounding active travel including potential demand, existing infrastructure and population data.

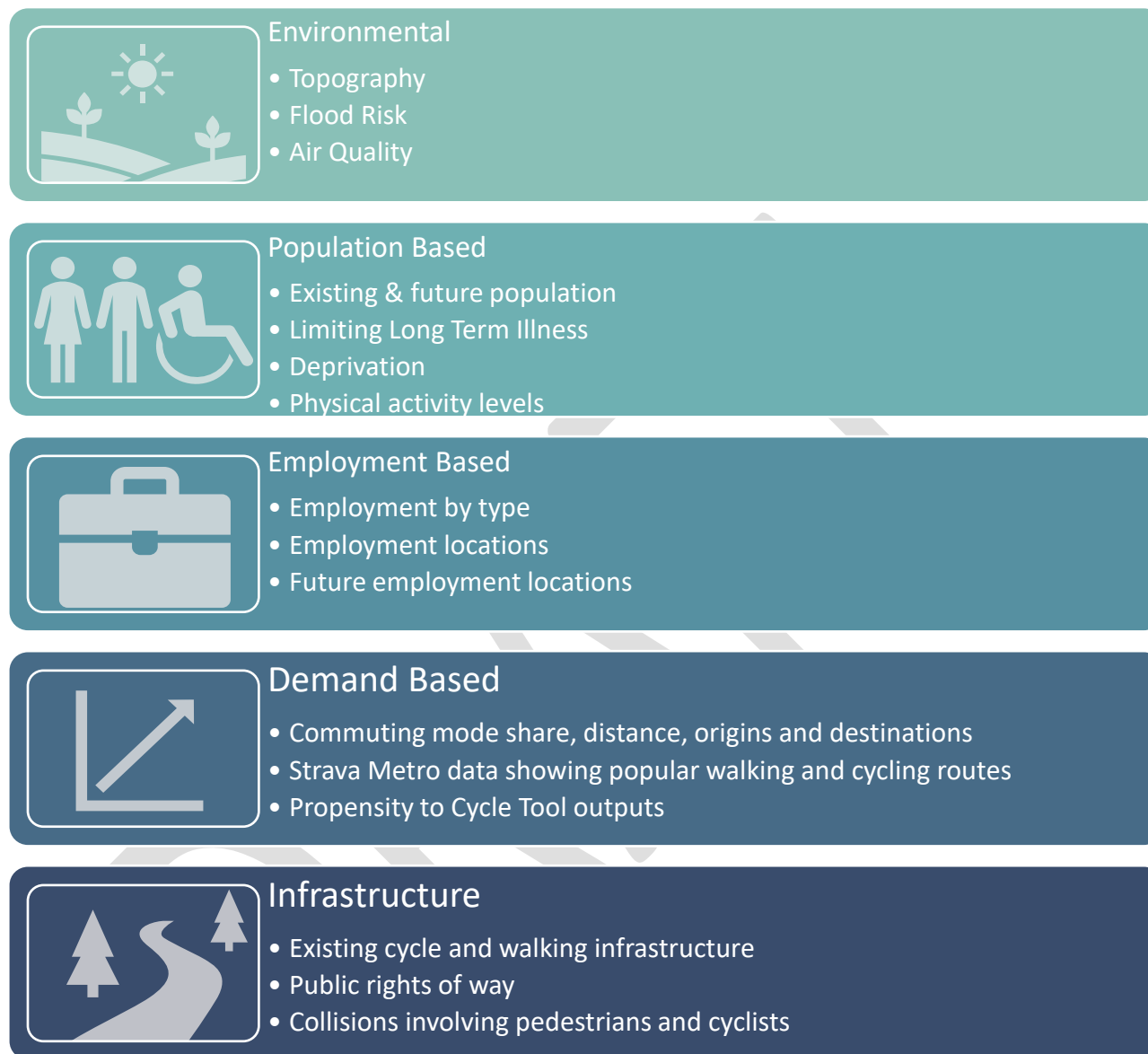


Figure 3-2: Data analysed as part of the Shropshire LCWIP

4 Stakeholder Engagement

Engaging with local stakeholders and people was fundamental to the development of this LCWIP, and was undertaken throughout all stages of the process. Engagement was undertaken according to three key principles:

- **Broad:** Through engaging with a wide range of people
- **Accessible:** Through using a variety of different communication methods to suit people's needs and preferences both in person and in a digital format
- **Clear:** Through ensuring that the engagement approach avoided technical jargon and through use of visual graphics and prompts to collate people's views

Stakeholder categories are summarised below.

Group	Category	Purpose of Engaging
Shropshire Council Officers	Core Stakeholders	To collate views both within Highways (transport) and wider teams such as Planning Services, Environment, Health, Economic Development teams about walking and cycling and its integration with wider policy aims.
Shropshire-Wide & Town / Parish Council Elected Representatives	Wider Stakeholders	To collate views from Shropshire Council Elected Members alongside Town and Parish Councillors on the potential opportunities for new walking and cycling schemes to be included in the LCWIP.
Potential National Scheme Delivery Partners	Core Stakeholders	This includes national organisations who Shropshire Council could partner with in future to deliver schemes such as National Highways, The Canal and River Trust and Sustrans. The main objective was to ascertain any shared priorities for future schemes.
Neighbouring Local Authority Transport Officers	Wider Stakeholders	This included officers from local authorities immediately adjacent to Shropshire to understand any potential opportunities for future cross-boundary walking and cycling schemes.
Education Bodies & Local Schools	Wider Stakeholders	This included officers responsible for Education in Shropshire Council as well as local schools, school groups and colleges. The purpose of this engagement was to understand specific opportunities for future schemes that could improve access to places of education like schools.
Local Community Groups	Wider Stakeholders	This included a wide range of groups such as the British Horse Society, Better Shrewsbury Transport, Living Streets, Ludlow 21 Sustainable Transport Group, Shropshire Union Canal Society, Shropshire Climate Action Partnership, Sustainable Transport Shropshire, local cycling groups and equalities / access groups. The purpose of engaging with local groups was to understand current challenges in relation to active travel and obtain suggestions for new walking and cycling schemes.

Group	Category	Purpose of Engaging
Business Groups & Major Employers	Wider Stakeholders	This included large business groups like the Marshes Local Enterprise Partnership and Shropshire Chamber of Commerce alongside major employers who were invited to local workshops held across the seven towns. The purpose of engaging with these groups was to understand the role of walking and cycling schemes in supporting business and employment and to collate any suggestions for future schemes

Table 4-1: Summary of stakeholder groups engaged during the preparation of the LCWIP

Each stage of the LCWIP process involved specific and targeted stakeholder engagement using workshops, surveys and/or meetings. This provided a comprehensive and detailed understanding of the concerns and interests of the various groups across the county. Engagement with Shropshire Council was maintained throughout the process.

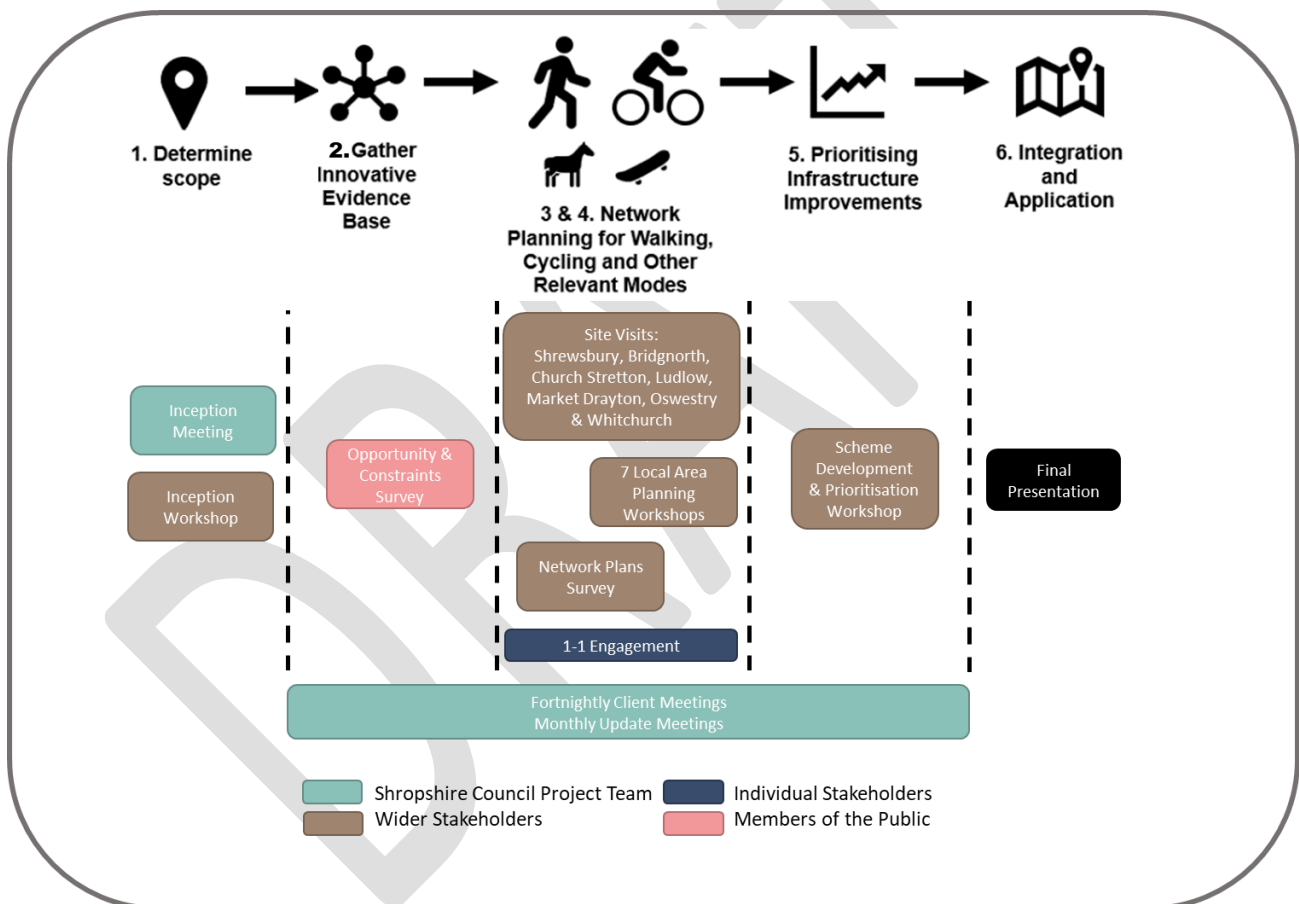


Figure 3-3: Stakeholder Engagement timeline for Shropshire LCWIP process

4.1 Stage 1: Determining the Scope

Within Stage 1 of the LCWIP process, both an Inception Meeting with the internal Shropshire Council Project Team and an Inception Workshop with various other core project stakeholders were held. The purpose of these meetings was:

- To develop a consistent understanding of the LCWIP’s context, scope and approach and obtain key feedback
- To obtain feedback and reach agreement on the strategic fit of the LCWIP within Shropshire’s wider policy context

- To build consensus on key active travel related strengths, weaknesses, opportunities and threats in Shropshire
- To obtain feedback on our proposed LCWIP objectives

4.2 Stage 2: Developing the Evidence Base

To support Stage 2 of the LCWIP, a survey was circulated to all the wider stakeholders to capture their views on key network-wide opportunities and constraints. Through this, individual concerns could be combined to prioritise areas of interest and recommendations.

4.3 Stages 3 & 4: Network Planning

Once key data and feedback had been processed from Stage 2, progress was made on developing a deeper understanding of the local area context for each of the areas. This included site visits to each of the seven towns. These visits were aided by local stakeholders, such as councillors and members of local community groups, who helped to provide detailed insights into the biggest problems they faced regarding the use of active modes of transport throughout their towns. Additionally, Local Area Planning Workshops were also held with each of the seven towns. The purpose of these workshops held with core and wider stakeholders was to:

- Present the emerging evidence base for each town
- Seek feedback on the Core Walking Zone (CWZ), the Key Walking Routes and the barriers to active travel uptake
- Identify key opportunities for walking improvements and cycle schemes
- Seek feedback on key Cycling Desire Lines (indicative links between origin and destination point that do not, at this stage, necessarily adhere to the existing road or cycle network)

Furthermore, a Network Planning Survey was circulated to core and wider stakeholders and used to capture detailed views on the emerging draft proposals for the cycling and walking network within each of the seven focus towns. These network plans were developed following the gathering of the evidence base (Stage 2), and the information gathered from each of the initial local area workshops and site visits (in Stages 3 & 4). The outcomes of the survey were used for the sole purpose of refining route proposals prior to scheme prioritisation (Stage 5).

For the consideration of specific requirements and recommendations, one-to-one meetings were held with key individual stakeholders including:

- Local councillors
- British Horse Society
- Sustrans
- National Highways
- Canal and River Trust

4.3.1 Site Visits

Team members from City Science visited Shrewsbury and Bridgnorth on the 17th of February 2022 to conduct a site walkover and meet with local stakeholders, with further site visits to Ludlow, Church Stretton, Whitchurch, and Market Drayton on the 7th of March 2022 and Oswestry on the 8th of March 2022.

4.4 Stage 5: Prioritising Infrastructure Improvements

Stage 5 of the LCWIP process involved a final workshop with the core stakeholder group. This meeting aimed to:

- Provide a consolidated update on the Shropshire LCWIP
- Present the high-level outcomes of the Network Planning process across all seven towns under consideration
- Obtain feedback on the Shropshire-wide proposed approach to scheme prioritisation
- Obtain feedback on the Shropshire-wide metrics to apply in the scheme prioritisation process

5 Stage 3: Network Planning for Cycling

This chapter summarises the development of the cycle network for the Shropshire LCWIP. The proposed network aims to address gaps in the county’s strategic cycling network, connecting settlements to clusters of key destinations (e.g. town centres, schools, public transport hubs) within a cyclable distance (less than 10km) (DfT, 2017).

Shropshire has the potential for growth in levels of cycling. Generally, its cycling infrastructure is neither comfortable nor attractive for people who are new to cycling or less confident when cycling with traffic. Consequently, short trips into town centres, railways stations, schools and for leisure are overwhelmingly made by private car.

5.1 Process

The process followed to determine the proposed cycle network is outlined in Figure 5-1 and detailed in the following sections.

In order to identify and address existing gaps in the network, a set of preferred routes have been defined, drawing on analysis of the following data:

- Trip origins and destinations (see Section 5.1.1)
- Desire lines for cycle movements (see Section 5.1.2)
- Route alignment of cycle routes (see Section 5.1.3)

Preferred routes have been identified for further development through an appraisal and prioritisation exercise (see Section 7).

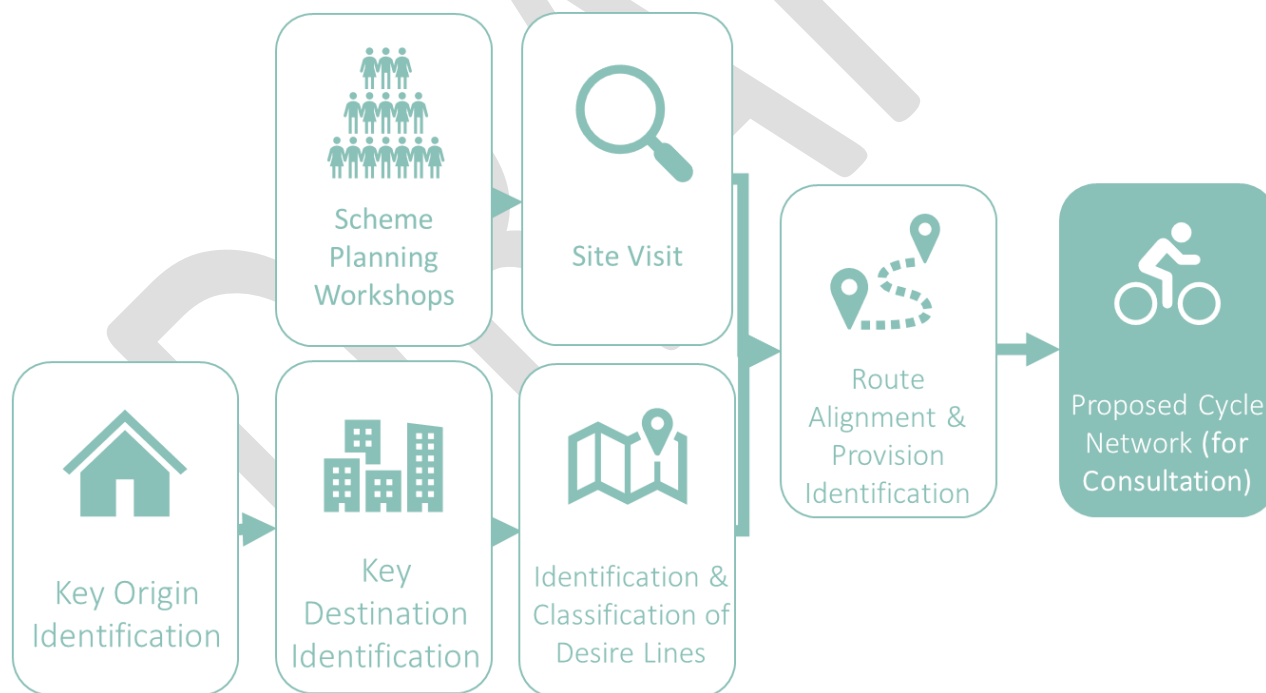


Figure 5-1: Cycling Network Development Process

5.1.1 Trip Origins & Destinations

Trip origin points generally consist of residential areas, including planned developments, which generate the most travel demand and therefore present the greatest potential to achieve modal shift to walking, wheeling and cycling (DfT, 2017). Trip destination points mostly consist of key employment or community areas such as industrial estates, town centres, railway stations, schools, health care services and leisure centres.

Key origin and destination points were clustered into origin and destination ‘areas’. Figure 5-2 shows a high-level view of the origin and destination areas identified across Shropshire, details of which are provided in each of the attached appendices for the respective towns. Note that locations that are not included in the origin or destination areas are by no means excluded from the LCWIP network planning. These key areas simply provide a focus for further analysis. Development of the origin and destination zones looked at:

- Population density
- Demographic changes (e.g. where an area went from high to low deprivation)
- Where future development is planned
- Scale of employment (workplace) population in the area

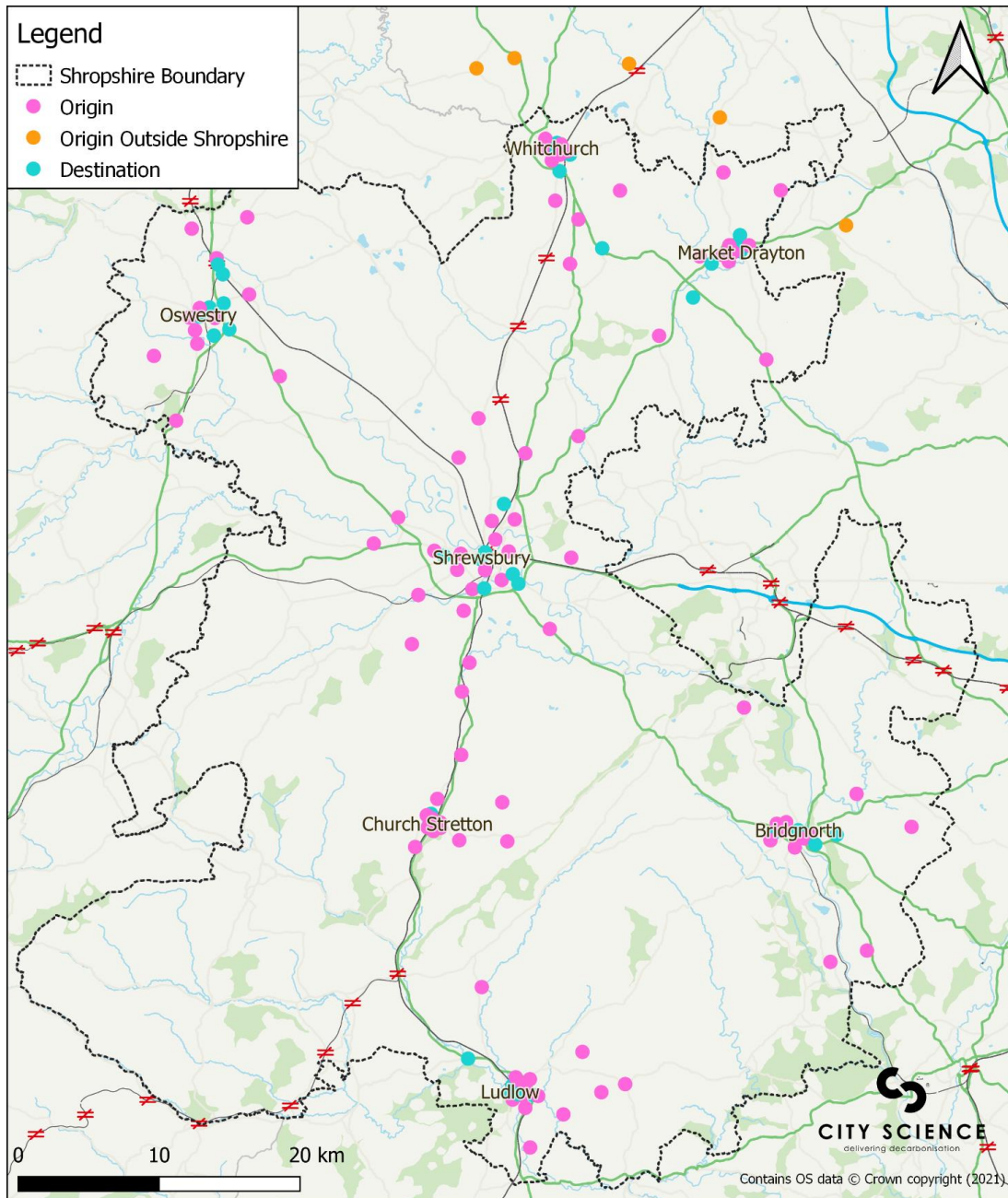


Figure 5-2: Example of Origins and Destinations used to inform the Network Planning for Cycling phase of the Shropshire LCWIP

5.1.2 Desire Lines

Once the origin and destination areas were identified, desire lines were drawn between them (Figure 5-3). These desire lines were informed by the following evidence:

1. **Propensity to Cycle Tool (PCT):** This tool uses data from the 2011 Census to highlight routes which are currently used by commuter cyclists. The PCT was also used to forecast the number of commuter cyclists on these routes under the government target (as set out in the Second Cycling and Walking Investment Strategy) to double cycling at a national level. The model accounts for the local socio-economic and demographic factors which may impact cycling levels in Shropshire, including the notably higher proportion of older people living in Shropshire (25% of the population is aged over 65 compared to 19% of the population for the West Midlands and England as a whole)
2. **Strava Metro Data:** This data, collected from users of the Strava exercise tracking app, supplements the PCT data with more up-to-date data on those routes used by commuter, leisure and recreational cyclists. It does not identify trip purpose
3. **Cycle Collision Data:** Five years of data (2018 -2022) containing locations of collisions involving a cyclist, collated by the DfT
4. **Demand From Future Employment Growth:** Proposed developments identified in the (emerging) Local Plan and Site Allocations and Development Management Plan

These desire lines are 'straight lines', which means that they do not account for the presence of specific cycle routes (whether existing or proposed) at this stage. Each desire line's relative importance was classified using the following criteria, taking into account both the existing numbers and future projections of cyclists:

- **Primary Desire Line:** Potential for a high number of people (as a general rule greater than 250 people per day, but this is relative to the population of the area) to cycle. These typically link large or high-density existing or planned residential areas with town centres
- **Secondary Desire Lines:** Potential for a moderate number of people (as a general rule between 50 and 250 people per day, but this is relative to the population of the area) cycling from existing or planned residential areas. These typically link to employment zones
- **Local Desire Lines:** Potential for a low number of people (as a general rule less than 50 people per day, but this is relative to the population of the area) cycling from residential areas. These typically link to smaller destinations such as schools or link into primary/secondary desire lines

Links to large destinations that are further distances away are not included as desire lines, as it is assumed the take up of cycling would be negligible.

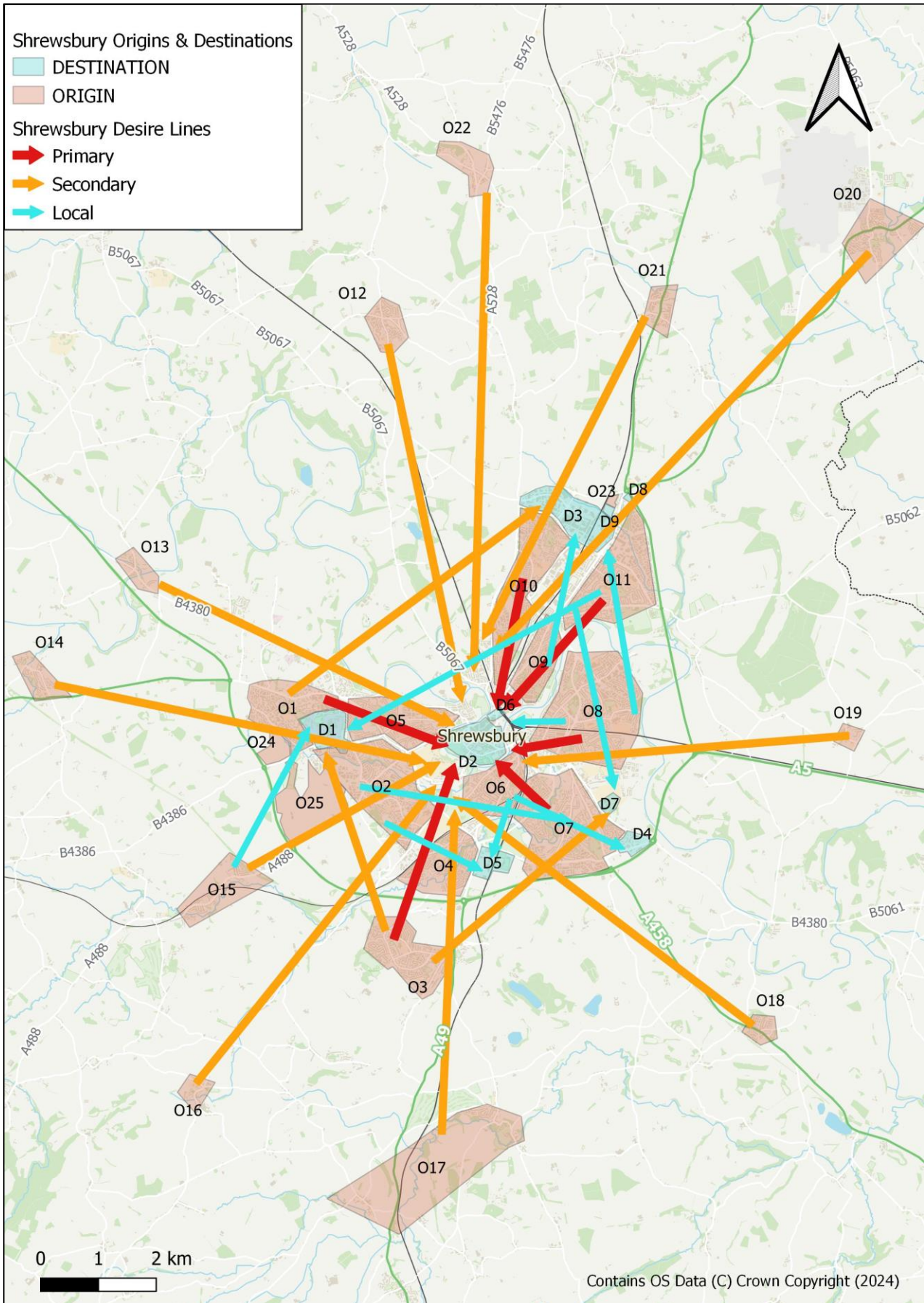


Figure 5-3: Desire lines around Shrewsbury

5.1.3 Route Alignment of Cycle Routes

The straight desire lines were converted into routes that aligned with street networks, using Open Street Map and Google Streetview. This was informed by current and potential future active travel demand, including Strava Metro Data and Propensity to Cycle Tool (PCT) data as described above, as well as feedback from the stakeholder workshop and on-site observations of existing infrastructure and road layouts.

It is important to note that the route alignment of each scheme will be revisited at the initial feasibility and concept design stage, which is not included within the scope of this LCWIP. This may result in adjustments to route alignments.

LTN 1/20 (DfT, 2020) was used as design guidance for this LCWIP, it is regarded by the DfT (and latterly Active Travel England) as best practice for the design of cycling infrastructure. The five core design principles set out in LTN 1/20 (shown below) provide a basis for the design standard and align with the LCWIP objective of delivering high-quality inclusive infrastructure. The guidance indicates that the five core principles of inclusive and accessible design should run through all route and infrastructure recommendations.

5.1.3.1 Design Principles

The five core principles of inclusive and accessible design from LTN 1/20 are:

- **Coherent:** Cycle networks should be designed to allow people to reach their day-to-day destinations easily, along routes that connect, are simple to navigate and are of a consistent high quality
- **Direct:** Cycle corridors should be at least as direct – and preferably more direct – than those available for private motor vehicles
- **Safe:** Not only must cycle infrastructure be safe, it should also be perceived to be safe so that more people feel able to cycle
- **Comfortable:** Comfortable conditions for cycling require routes with good quality, well-maintained smooth surfaces, adequate width for the volume of users, minimal requirement to stop and start and avoidance of steep gradients where possible
- **Attractive:** Cycle infrastructure should help to deliver public spaces that are well designed and finished in attractive materials, are well lit and are places that people want to spend time using

5.1.3.2 Guiding Principles

To support the desired design principles, the cycling improvements proposed (see Appendix – Guiding Design Principles), will adhere to the following general guiding principles. These consist of the following sections:

- | | |
|--------------------------------------|--|
| • Cycle Facility Typology | • Uphill Cycling |
| • Lower Traffic Speeds | • Competition with Motor Vehicle Journey Times |
| • Reduced Motor Vehicle Flows | • Cycle Parking |
| • Review On-Street Parking & Loading | • Context Sensitive Design |
| • Junction & Crossing Improvements | |

5.2 Network Plans

Figure 5-4 shows the proposed network of improvements across the whole of Shropshire. Detail of the schemes for each town are shown in the respective appendices attached to this LCWIP.

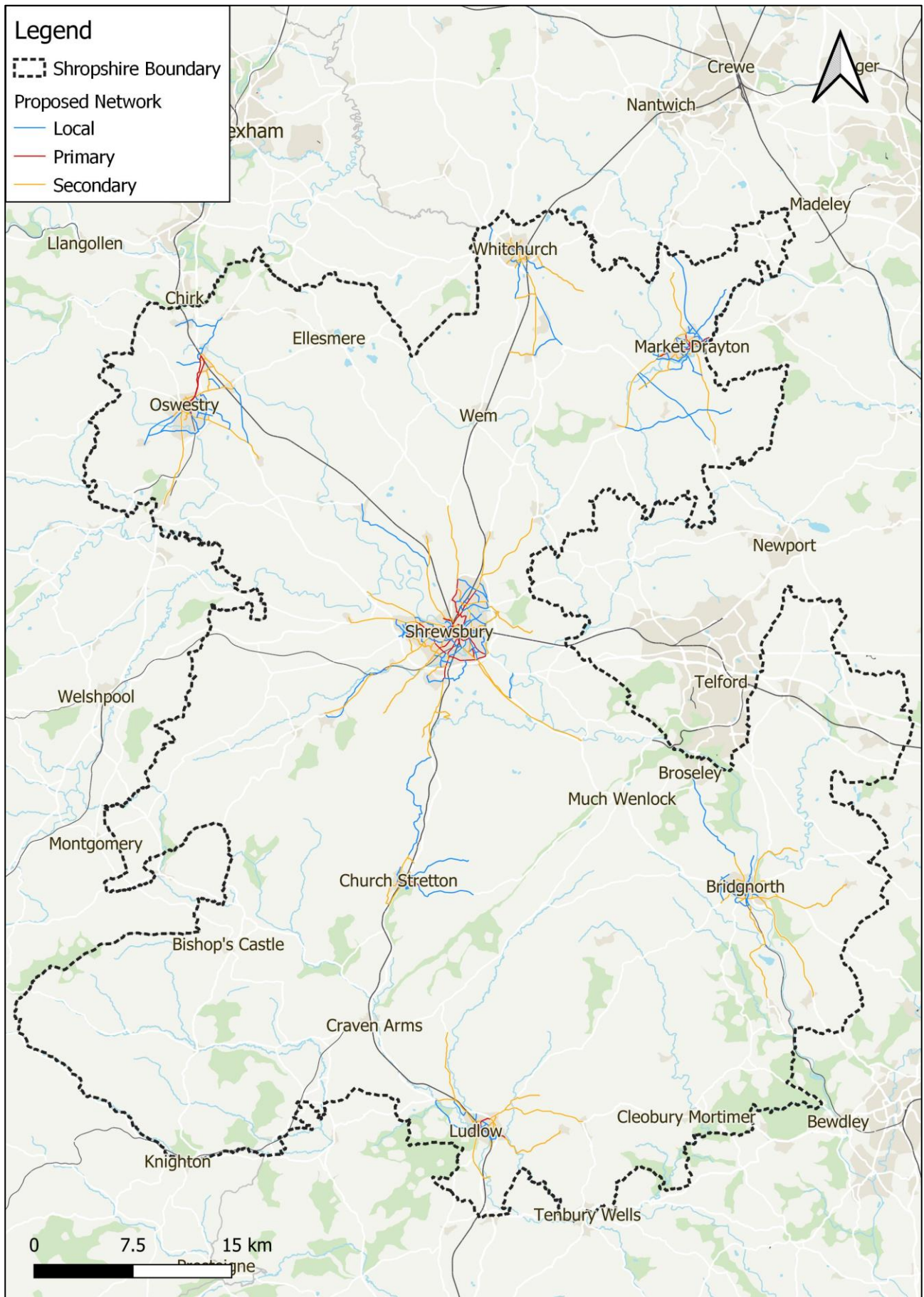


Figure 5-4: High-level view of cycling schemes developed as part of the Shropshire LCWIP, classified by the desire line they support

6 Stage 4: Network Planning for Walking

6.1 Process

As outlined in the DfT LCWIP Guidance (DfT, 2017), the identification of Core Walking Zones (CWZs) enables walking improvements to be prioritised according to pedestrian footfall level and concentration of key destinations.

In order to identify and address existing gaps in the network, a set of walking recommendations have been defined, drawing on analysis of the following data:

- Identification of Core Walking Zones (see Section 6.1.1)
- Walking Accessibility Analysis (see Section 6.1.2)
- Barriers & Funnel Routes (see Section 6.1.3)
- Walking Route Audits (see Section 6.1.4)

6.1.1 Core Walking Zones

CWZs have been identified across each of the towns based on analysis of key destinations such as retail facilities, employment areas and transport interchanges i.e. train stations and bus stations. As per the guidance, a radius of 400m (approximately a 5-minute walk) was defined around each of the CWZs, within which walking improvements could be made. The CWZs were refined using input from the Shropshire Council team and from discussions at workshops with key stakeholders. The final CWZs identified are:

- Shrewsbury town centre and Royal Shrewsbury Hospital
- Bridgnorth town centre
- Church Stretton town centre
- Ludlow town centre
- Market Drayton town centre
- Oswestry town centre and Gobowen railway station
- Whitchurch town centre

Following the identification of the CWZs, further analysis was carried out, the process for which is detailed below. The results of this analysis for each town is shown in the respective appendices attached.

6.1.2 Walking Accessibility Analysis

Walking accessibility assessments were carried out for each of the CWZs. This consisted of identifying locations that can be reached within a 30-minute walk from the CWZ centres, by creating a walking isochrone for each area. Figure 6-1 shows this analysis for Oswestry town centre, which shows that walking accessibility is relatively uniform from the town centre in terms of footway provision, however there are areas at the edge of the 30-minute walk-time boundary which are less uniform. The majority of these areas are rural with little or no footway provision. This exercise highlights locations in which walking infrastructure improvements could significantly improve overall walking accessibility and therefore which locations should be considered for improvements during later stages of this process.

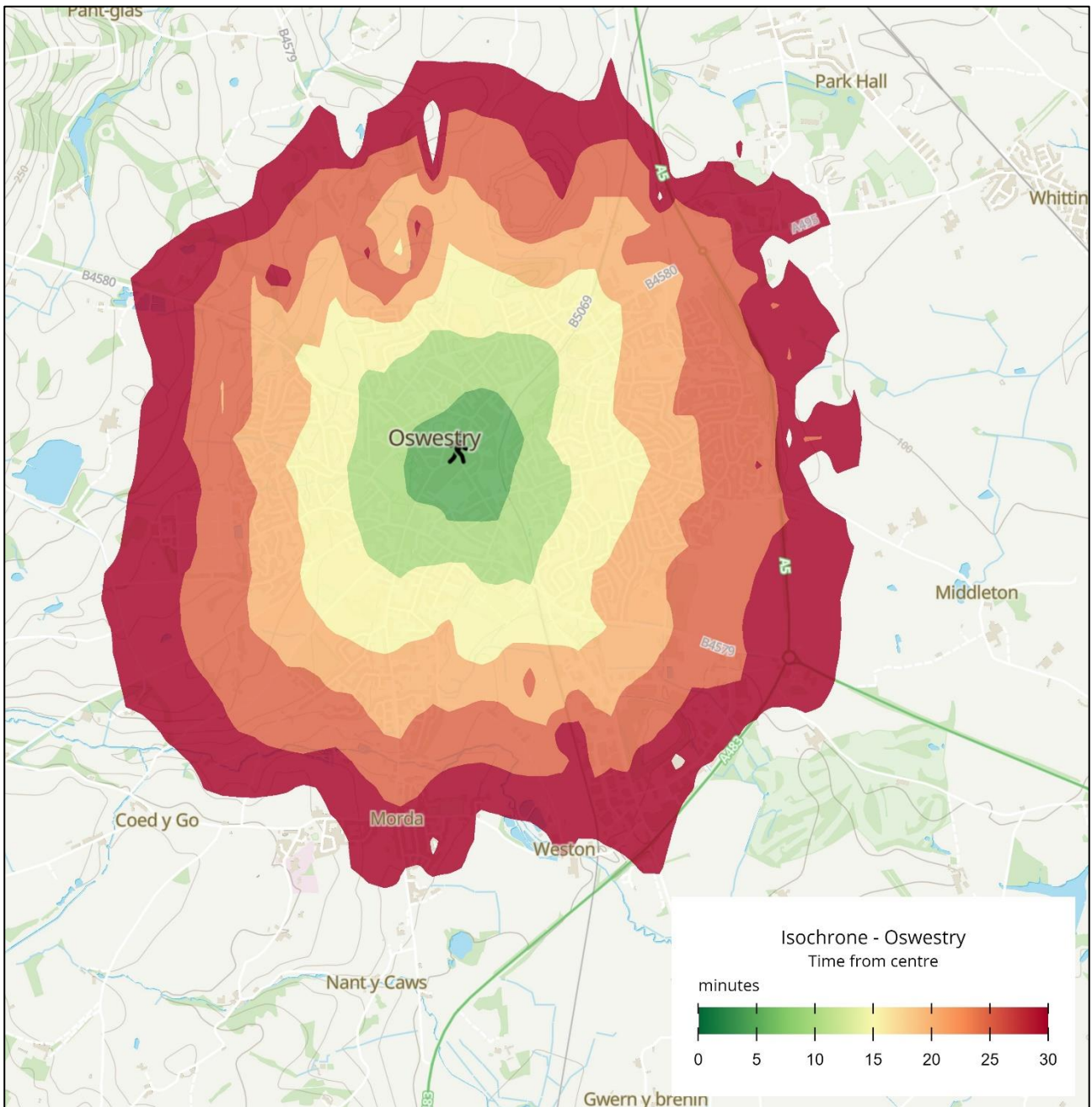


Figure 6-1: Example walking accessibility from Oswestry town centre Core Walking Zone

6.1.3 Barriers & Funnel Routes

As identified in the DfT Guidance (DfT, 2017), walking connectivity and permeability within and to CWZs can be severed by the presence of barriers such as railway lines, rivers, and heavily trafficked roads. A limited number of crossing points at these barriers can create ‘funnel routes’ where there are higher pedestrian flows. The barriers and funnel routes were identified for each town to help identify areas of focus for the walking improvements. An example for Church Stretton is shown in Figure 6-2.

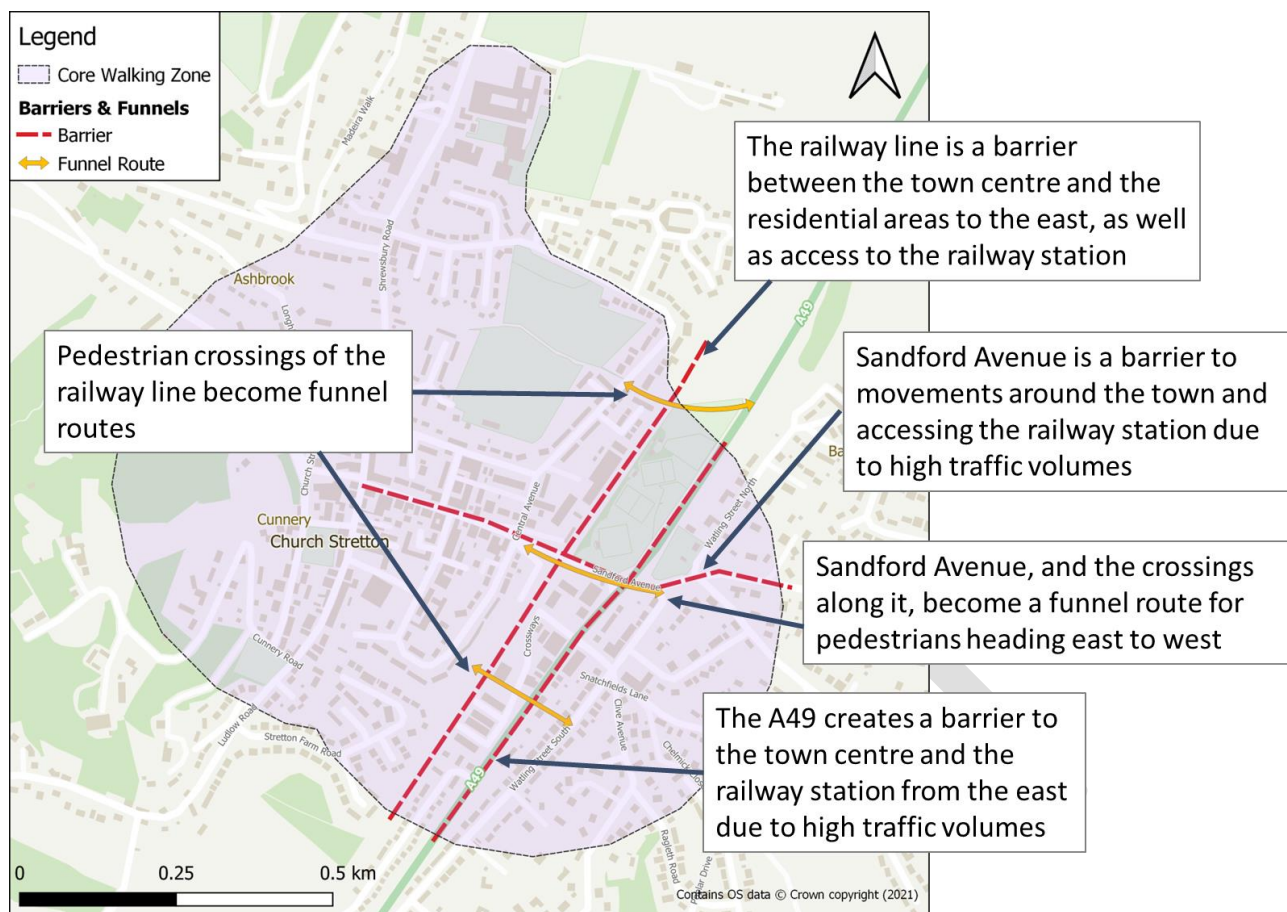


Figure 6-2: Example barrier & funnel analysis for Church Stretton

6.1.4 Walking Route Audit

For each of the CWZs, a Walking Route Audit was carried out using the DfT’s Walking Route Audit Tool. This was completed using a combination of findings from the site visit, stakeholder responses and a desktop review. In the audit, the route (or in this case series of routes within the CWZ) was assessed against the key design principles:

- **Coherent:** Walking infrastructure should be designed to allow people to reach their day-to-day destinations easily, along routes that connect, are simple to navigate and are of a consistent high quality
- **Direct:** Walking corridors should be at least as direct – and preferably more direct – than those available for private motor vehicles
- **Safe:** Not only must walking infrastructure be safe, it should also be perceived to be safe so that more people feel able to walk in the area
- **Comfortable:** Comfortable conditions for walking require routes with good quality, well-maintained smooth surfaces, adequate width for the volume of users, plenty of spaces to stop to rest and avoidance of steep gradients
- **Attractive:** Walking infrastructure should help to deliver public spaces that are well designed and finished in attractive materials, are well lit and are places that people want to spend time using

It is recommended that a score of 70% should normally be regarded as a minimum level of provision overall, however only one CWZ within Shropshire achieved this: the area around Shrewsbury Hospital. This means that improvements are needed to the walking environment in all of the CWZs, with particular focus on improving the coherence of the areas.

	Bridgnorth	Church Stretton	Ludlow	Market Drayton	Oswestry	Oswestry (Gobowen)	Shrewsbury (Town Centre)	Shrewsbury (Hospital)	Whitchurch
Attractiveness	67%	83%	67%	83%	83%	83%	50%	83%	83%
Comfort	30%	30%	30%	50%	60%	80%	60%	80%	40%
Directness	70%	40%	60%	20%	50%	60%	40%	70%	70%
Safety	50%	50%	33%	50%	50%	50%	50%	67%	50%
Coherence	0%	0%	0%	0%	50%	0%	0%	0%	0%
Total	50%	44%	44%	44%	59%	65%	47%	71%	56%

Table 6-1: Walking Route Audit scores for each Core Walking Zone

6.2 Walking Network Improvements

Following on from the process outlined above, walking network improvements were suggested for each of the CWZs. These took the form of strategic recommendations to improve the walking environment and routes using the key design principles outlined above.

The specific recommendations for each town are detailed in their respective appendices. It is also worth noting that walking considerations were incorporated within the recommendations for the cycling network plans. This means that, where appropriate, opportunities for walking have been provided alongside the cycle routes and that no cycling scheme disadvantages pedestrians. For example, where a cycle path has been suggested, it is noted that space should not be taken away from the footpaths in order to deliver it.

The proposed interventions are high-level and identify concepts for further consideration in the next stage of design. The interventions identified in the respective appendices seek to address the issues and barriers identified in the walking route audits and accessibility analyses. Walking improvement measures for each of the CWZs range from minor interventions such as dropped kerbs to more significant measures such as new crossings, footway widening and public realm improvement projects. Although the proposed interventions focus on the CWZs, they provide examples of the types of interventions that can be implemented county-wide. Guiding Principles

To support the desired design principles, the walking improvements proposed, will adhere to the general guiding principles contained in Appendix – Guiding Design Principles. These consist of the following sections:

- Pedestrian Desire Lines
- Pedestrian Crossings
- Footway Width
- Lower Traffic Stress
- Pedestrian Priority
- Place Function of the Street
- Context Sensitive Design

7 Stage 5: Prioritising Improvements

The purpose of the prioritisation is to help inform which routes or areas could be considered for further development first.

The LCWIP Guidance (DfT, 2017) identifies that proposed schemes should be prioritised based on their ability to ‘have the greatest impact on increasing the number of people who choose to walk and cycle and therefore provide the greatest return on investment.’ It also identifies other factors, including deliverability of schemes or opportunities to integrate with wider schemes, that should be considered.

Accounting for this, the scheme prioritisation process has two elements (see Figure 7-1):

- A. **Effectiveness & Needs Based Appraisal:** Assessing the extent to which the proposed scheme has the potential to deliver upon the five LCWIP objectives
- B. **Deliverability:** Assessing the relative ease with which the proposed scheme can be implemented, considering factors such as cost, feasibility, and political acceptability

These are underpinned by a total of 26 bespoke metrics (21 in Part A and 5 in Part B) to provide a robust and evidence-led approach to the prioritisation process. The outcomes of these metric assessments are then combined to formulate an overall score, which is used to rank the schemes relative to one another and understand the level of priority for each scheme’s implementation.

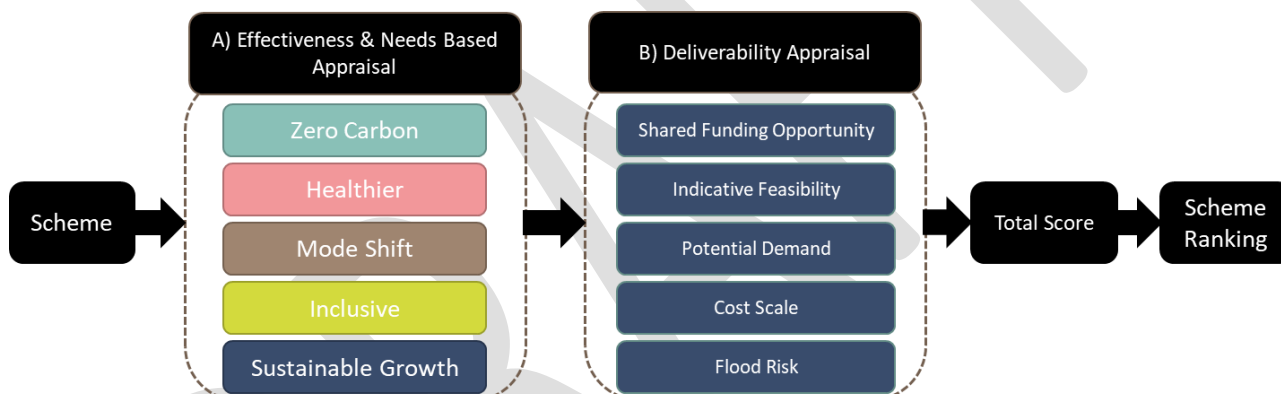


Figure 7-1: Scheme Prioritisation Framework

7.1 Criteria Used in Assessment

The appraisal framework used for the Effectiveness and Needs Based Appraisal (element A above) is based around the objectives set in the Evidence Base for this LCWIP (see Table 7-1). These are outcome-led and account for the key opportunities and constraints for walking and cycling in Shropshire. Weightings were applied to each Objective category so that they represent an equal portion of the score (20% for each objective), regardless of how many appraisal metrics were used. Further details of these metrics are given in Section 10.

Objective	Description	Appraisal Metric
Zero Carbon	Shropshire as a Zero Carbon County	<ul style="list-style-type: none"> • Car-related carbon emissions • Propensity to Cycle Tool • Strava Metro Data • Embodied Carbon of schemes (the carbon footprint of a scheme before it becomes operational) • Links with existing walking/cycling Infrastructure • Existing car mode share

Objective	Description	Appraisal Metric
Healthier	Healthier living for Shropshire residents	<ul style="list-style-type: none"> • Deprivation • Percentage of people classed as physically inactive • Collisions involving pedestrians and cyclists • Air quality (Annual Mean NO₂ Levels) • Prevalence of diagnosed depression • Access to green space • Access to health services (e.g. hospitals, GP surgeries)
Mode Shift	Reduced congestion and car dependency through embedding walking and cycling as the modes of choice for local and some inter-urban journeys	<ul style="list-style-type: none"> • Conformity with LCWIP Desire Lines • Access to public transport hubs • Cycle parking
Inclusive	An inclusive network which is accessible, perceived to be safe and enables opportunity for all regardless of age or ability	<ul style="list-style-type: none"> • Deprivation Index • Scale of hilliness • Population • Proximity to education facilities (Schools & Colleges)
Sustainable Growth	Supports sustainable economic growth in Shropshire's market towns, including the visitor economy	<ul style="list-style-type: none"> • Integration with future allocated residential & employment sites • Workplace population • Access to tourist destinations • Access to existing employment areas

Table 7-1: Shropshire LCWIP Objective Appraisal Metrics

7.2 Prioritised Schemes

7.2.1 Timescales

In line with DfT Guidance, this LCWIP has produced a number of schemes and network upgrades, which must be prioritised over a ten-year period.

Future infrastructure improvement schemes have been categorised as follows:

- **Short Term Network Improvements (2023-2026):** ‘Quick wins’ which can be delivered relatively easily with limited local opposition, do not rely on other schemes progressing and could be delivered within current or already identified forthcoming funding streams available to Shropshire Council
- **Medium Term Network Improvements (2026-2029):** Schemes that require several rounds of consultation before progression, subject to further feasibility assessment and/or dependent on another scheme progressing
- **Long Term (2029 +):** Schemes that are more challenging to deliver due to the potential for local opposition and the potential need for several rounds of consultation, noteworthy scheme engineering feasibility challenges and / or reliant on other schemes progressing

7.2.2 Prioritised Routes

The top ten scoring schemes across Shropshire are shown in Table 7-2 and Figure 7-2 and Figure 7-3. A full list of all the schemes and their prioritisation results are shown in Appendix – Full Prioritisation

Results. Of the top 10, all of the schemes lie within Oswestry & Gobowen or Shrewsbury. All of the top 10 schemes have a short delivery time scale.

Scheme Name	Description	Objective Total	Deliverability	Total Score	Rank	Time Scale
O.20	Route through residential area connecting The Meadows Primary School and the community hub, following existing pathways	38	26	64	1	Short
S.17	Connect missing sections of infrastructure along A5191 (Shrewsbury Train Station to New Park Rd) and upgrade old Canal Path	40	24	64	1	Short
O.23	Gittin St	38	26	64	3	Short
S.126	Connection between Bank Farm Rd and Roman Rd (B4380)	36	28	64	3	Short
O.27	Route between Shrewsbury Road, the new Sustainable Urban Extension (SUE) residential development site and the new Oswestry Innovation Park.	35	28	63	5	Short
S.125	The Mount (A458)	35	28	63	5	Short
O.07	Route along Willow Street providing a connection into the town centre	38	24	62	7	Short
O.14	North-South route through the eastern residential area along College Road connecting to the Mile Oak Industrial Estate	36	26	62	8	Short
S.124	Copthorne Rd (B4386)	34	28	62	8	Short
O.15	North-south route through the residential area along Unicorn Road connecting to the employment zone off Gobowen Road	35	26	61	10	Short

Table 7-2: Top 10 scoring schemes across the Shropshire LCWIP

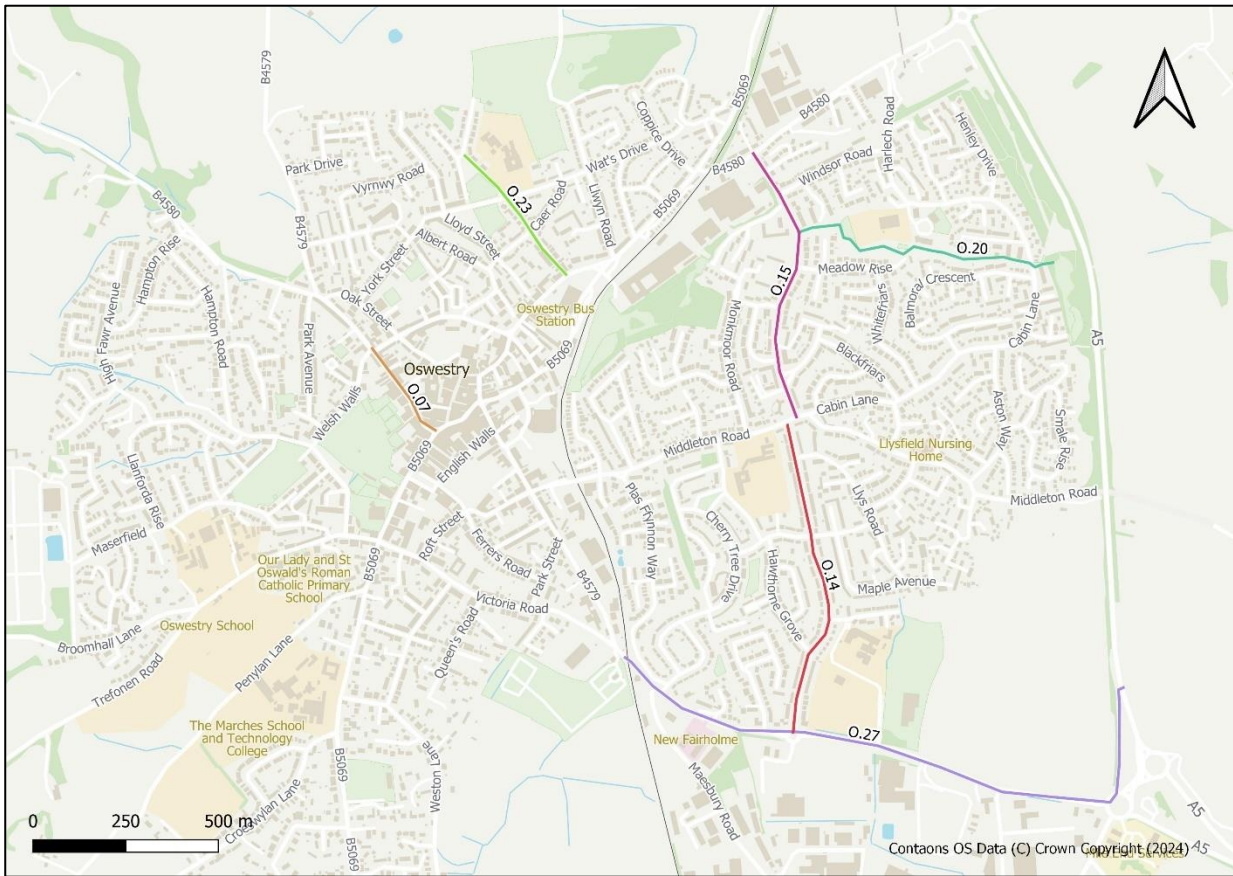


Figure 7-2: Oswestry schemes in the top 10 scoring schemes in the Shropshire LCWIP

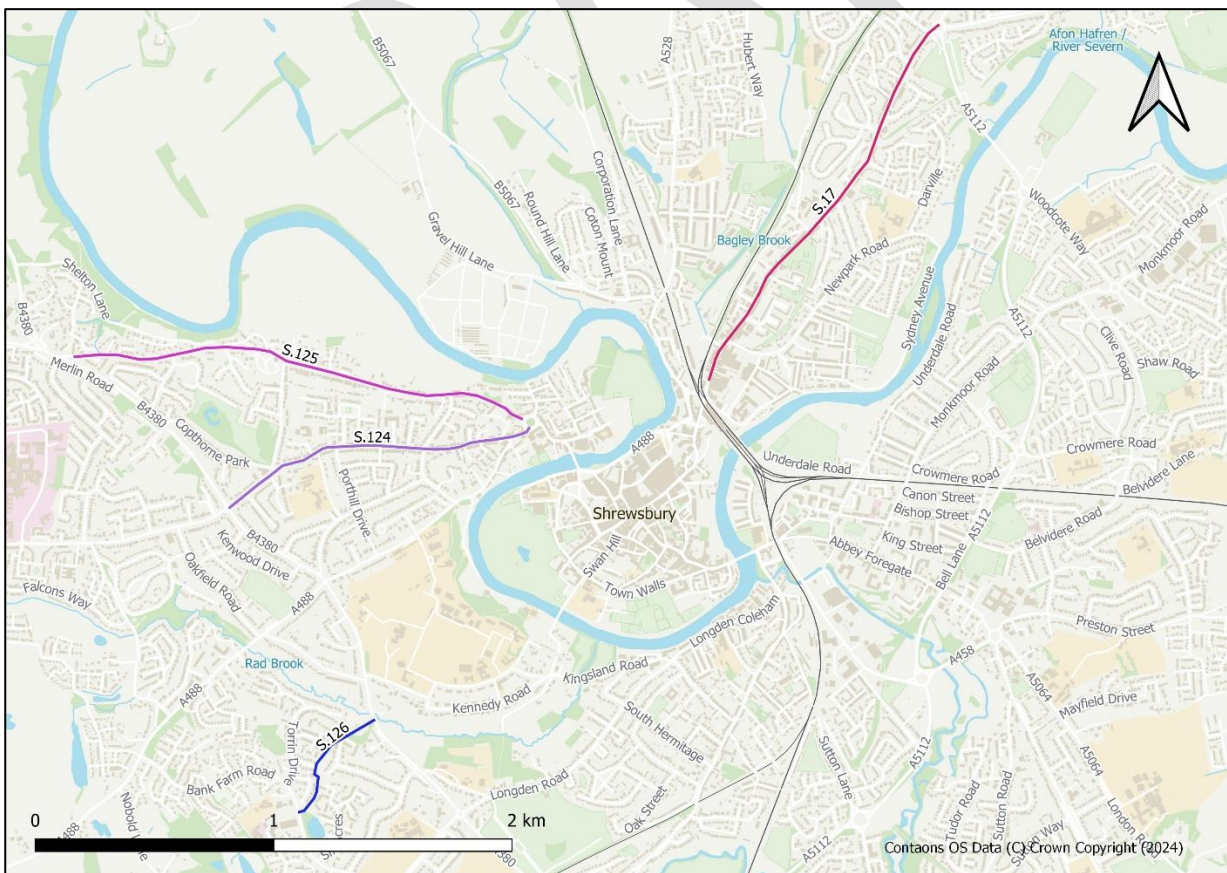


Figure 7-3: Shrewsbury schemes in the top 10 scoring schemes in the Shropshire LCWIP

8 Next Steps

8.1 Integration & Application

This LCWIP sets out a ten-year plan of infrastructure measures to improve conditions for walking, cycling and other active modes in the county and support a shift from car travel to active modes. It will also support the case for funding for further stages of design, assessment and stakeholder engagement and consultation.

8.2 Policy Integration

To ensure the future success of this LCWIP, it is vital for Shropshire Council to integrate its key principles, including objectives, alongside the route proposals (where appropriate) within emerging policy documents and to apply this LCWIP in practical terms in current processes, including the planning process.

Key actions to embed this LCWIP are:

- To integrate LCWIP proposals and key principles within the emerging Shropshire LTP4
- To integrate LCWIP proposals and key principles into the ongoing planning of highway improvements and new developments, through the introduction of policy levers in the emerging Shropshire Plan and associated Supplementary Planning Documents, which embed active transport into all new developments in Shropshire
- To ensure that future travel plans, including school, residential and workplace travel plans, account for proposals and key principles within this LCWIP

8.3 Future LCWIP Review

This LCWIP has been produced at a point in time (August 2022) and is subject to uncertainty due to the length of the planning horizon considered (2029 and beyond). This is especially the case where scheme dependencies (either on other schemes or future development) are concerned.

It is vital that this LCWIP becomes a *'living document'* which means it requires regular review and updates to ensure it continues to remain relevant, with new schemes being prioritised as others are delivered. It should therefore be updated regularly – at least every four to five years, particularly where a material change occurs that will affect its relevance, such as a major new local or national policy.

Future opportunities to further expand the proposed network will also be considered in subsequent reviews of this LCWIP, including a focus on areas not identified within the current LCWIP, with the aim to deliver a high-quality network which reflects an appropriate density of routes.

8.4 Feasibility & Design

The next stage of LCWIP implementation will be to advance the prioritised high-level concepts to feasibility and concept design. This will allow a more detailed review of individual routes or interventions, evaluation of constraints, and refinement of the proposed measures. This stage is dependent on availability of funding and will be sought through funding mechanisms such as:

- The Capability & Ambition Fund (administered by Active Travel England)
- The Active Travel Fund (administered by Active Travel England)
- Levelling-Up Funding
- Developer contributions including section 106 and Community Infrastructure Levies
- Other funding opportunities

Depending on the funding mechanisms available, approaches to implementation vary between:

- Progression of the Phase 1 areas in full
- Progression of a subset of proposed measures
- Progression of 'quick win' interventions, which may be implemented relatively easily in the short-term

9 Glossary of Terms

Department for Transport (DfT)

The government body who look after the transport network in England.

Active Travel England

Active Travel England is the government's executive agency responsible for making walking, wheeling and cycling the preferred choice for everyone to get around in England.

Core Walking Zone (CWZ)

Core Walking Zones (CWZs) are areas of likely high footfall due to a high number of walkable locations located close together, such as town centres or business parks.

Key Walking Routes

Key walking routes are routes which serve the Core Walking Zones, they can be classified on the type of usage they get. For example, in a town centre Core Walking Zone, the high street would be a key walking route. Other key walking routes would be those that link onto the high street to provide access to the wider area.

Desire Lines

Desire lines are 'straight lines' which represent the key movements within a town, independent of the actual route they would take.

Propensity to Cycle Tool (PCT)

The Propensity to Cycle tool is a tool which provides an evidence base to inform cycling investment. It looks at things such as current and projected cycle levels and most popular cycling routes. The PCT answers the question: 'where is cycling currently common and where does cycling have the greatest potential to grow?'

Strava Metro Data

Strava Metro data is data collected anonymously from users of the activity tracking app, Strava. The data is provided by Strava Metro who aim to help local authorities better plan for active travel investment. The data shows popular route choices, common origins and destinations of trips and information on popular routes (such as when the route is used).

Embodied Carbon

Embodied carbon is the carbon dioxide (CO₂) emissions associated with materials and construction processes throughout the whole lifecycle of a building or infrastructure.

Deprivation

Deprivation indices are a UK based data set which are used to classify the relative deprivation (essentially a measure of poverty) of an area. It looks at a wide variety of factors such as income, employment levels, quality of education and crime rates.

Physically Inactive

A person is classed as physically inactive if they perform less than 30 minutes of exercise a week.

10 Appraisal Metrics

Objective	Measure	Purpose	Data Source
Zero Carbon	Car Related Carbon Emissions	To prioritise routes where current transport-related carbon emissions from car travel are high	CREDS Place-Based Carbon Calculator
	Embodied Carbon	To prioritise schemes with low embodied carbon	City Science analysis on scale of embodied carbon of a scheme
	Links with Existing Infrastructure	To prioritise routes which link in with existing infrastructure to create a coherent network	Open Street Maps & Shropshire Council
Healthier	Percentage of People Classed as Physically Active	To prioritise investment for routes in areas with lower rates of physical activity to encourage localised targeted mode shift to active travel	Sport England Local Area Estimates
	Active Travel Collisions	To prioritise schemes in areas with higher incidence of collisions involving people walking & cycling	STATS19 Database (2016 – 2021)
	Air Quality (Annual Mean NO2 Levels)	To prioritise investment for routes in areas with poor levels of air quality to encourage localised targeted mode shift to active travel	DEFRA Air Quality Data
	Prevalence of Diagnosed Depression	To prioritise investment for routes in areas with higher rates of depression & anxiety to encourage localised targeted mode shift to active travel	Small Area Mental Health Index
	Access to Green Space	To prioritise investment in routes which improve access to green spaces	Open Street Map locations of parks & communal green spaces
	Access to Health	To prioritise investment in routes which improve access to health providing services	Locations of GPs and Hospitals

Objective	Measure	Purpose	Data Source
Mode Shift	Conformity with LCWIP Desire Lines	To prioritise routes which are likely to result in a greater mode shift to active travel for local journeys to support decarbonisation	City Science Desire Line Classification (Network Development Report)
	Access to Public Transport Hubs	To prioritise routes which support integration with other modes of sustainable transport	Locations of bus and railway stations
	Cycle Parking	To prioritise routes which integrate with existing cycle parking provision	Shropshire Council data on cycle parking locations
Inclusive	Deprivation Index	To prioritise investment in routes where deprivation levels are relatively high to support enhanced active travel connectivity to employment and services	Index of Multiple Deprivation (IMD) 2019
	Scale of Hilliness	To prioritise routes which are less hilly and therefore most accessible to all	Open Street Maps
	Population	To prioritise investment in routes which serve the largest amount of people	IMD 2019
	Proximity to Education Facilities (Schools & Colleges)	To prioritise investment in routes adjacent to schools to encourage localised mode shift to active travel for pupil journeys	Open Street Maps
Sustainable Growth	Integration with Future Allocated Residential & Employment Sites	To support growth and enhanced accessibility of future proposed residential & employment sites by active modes	Local Plan Residential & Employment Allocations
	Workplace Population	To prioritise investment in routes which support high numbers of commuters	IMD 2019
	Access to Tourist Destinations	To support enhances accessibility to tourist destinations by active modes	Open Street Map
	Access to Existing Employment Areas	To support enhanced accessibility to employment areas by active modes	Open Street Map / Shropshire Council

11 References

DfT, 2017. *LCWIP Technical Guidance for Local Authorities*, s.l.: s.n.

DfT, 2017. *Local Cycling & Walking Infrastructure Plans: Technical Guidance for Local Authorities*. [Online]

Available at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908535/cycling-walking-infrastructure-technical-guidance-document.pdf

DfT, 2017. *Local Cycling & Walking Infrastructure Plans: Technical Guidance for Local Authorities*. [Online]

Available at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908535/cycling-walking-infrastructure-technical-guidance-document.pdf

DfT, 2020. *Cycling Infrastructure Design LTN 1/20*. [Online]

Available at:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951074/cycle-infrastructure-design-ltn-1-20.pdf

DRAFT