SHROPSHIRE COUNCIL

LCWIP Appendix: Ludlow Delivery Plan

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Shropshire Council

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V1.0	20/01/2023	Final Draft LCWIP (Pre-Consultation)
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Contents

1 Introduction

This appendix summarises the identification of the cycle network and Core Walking Zones (CWZs) for Ludlow, including setting out in detail the network planning and prioritisation stages of the Shropshire LCWIP as relevant to Ludlow.

1.1 Ludlow Context & Study Area

Ludlow is a historic market town located in the south of the county of Shropshire and lies near the midpoint of the England-Wales border. It has had a significant role in the history of Wales and the Welsh Marches. Ludlow has retained its medieval centre, and has over 500 listed buildings, as well as its original street structure intact.

1.1.1 Population

The population of Ludlow is 10,515 (ONS, 2015). Ludlow's population is 48.1% male and 51.9% female. There has a slightly older age profile in Ludlow compared to wider county, with 25% of people aged over 65 compared to 21% of people in Shropshire as a whole. Ludlow has a similar rate of residents of traditional working age (16-64) in Shropshire at 58% of the population compared to 62% of residents in the whole of Shropshire, 61.7% in the West Midlands and 62.1% in England (Figure 1-1).

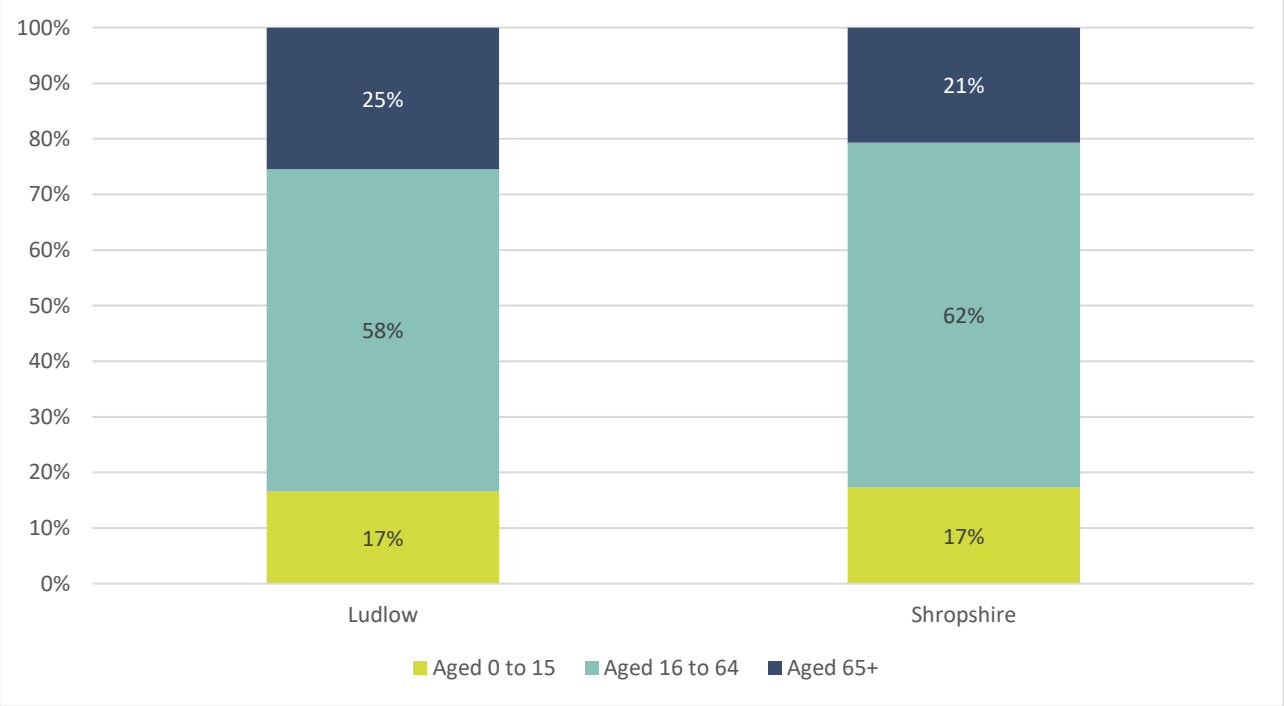

Figure 1-1: Demographic Profile of Ludlow Compared to Shropshire

1.1.2 Population Density

The majority of the town and surrounding area has relatively low population density, with higher density being recorded in the centre and north east corner of the town (see Figure 1-2).

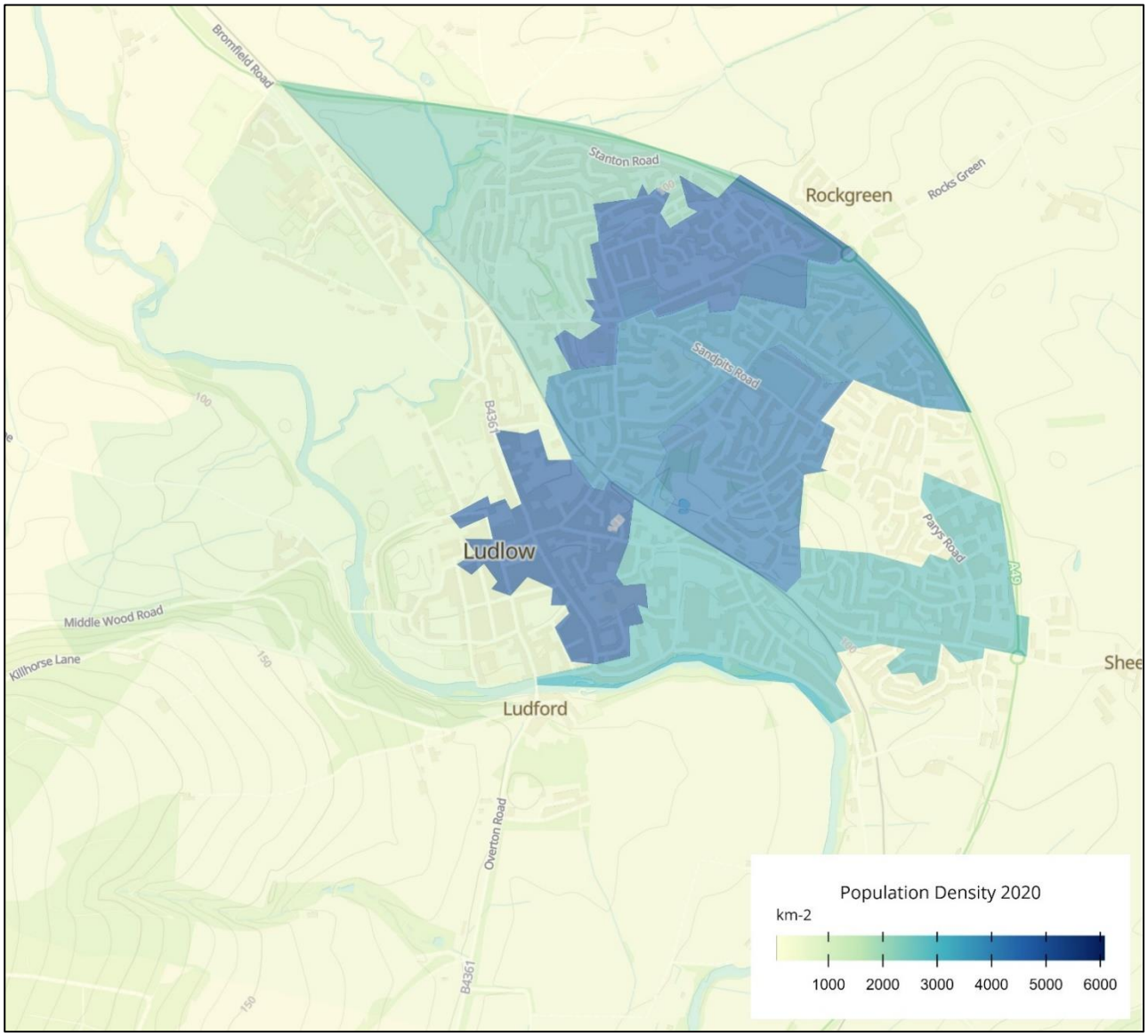

Figure 1-2: Population Density around Ludlow

1.1.3 Deprivation

Ludlow's deprivation indices are relatively low except for a couple of residential areas, most notably around Sandpits Avenue which has deprivation level 2 (see Figure 1-3).

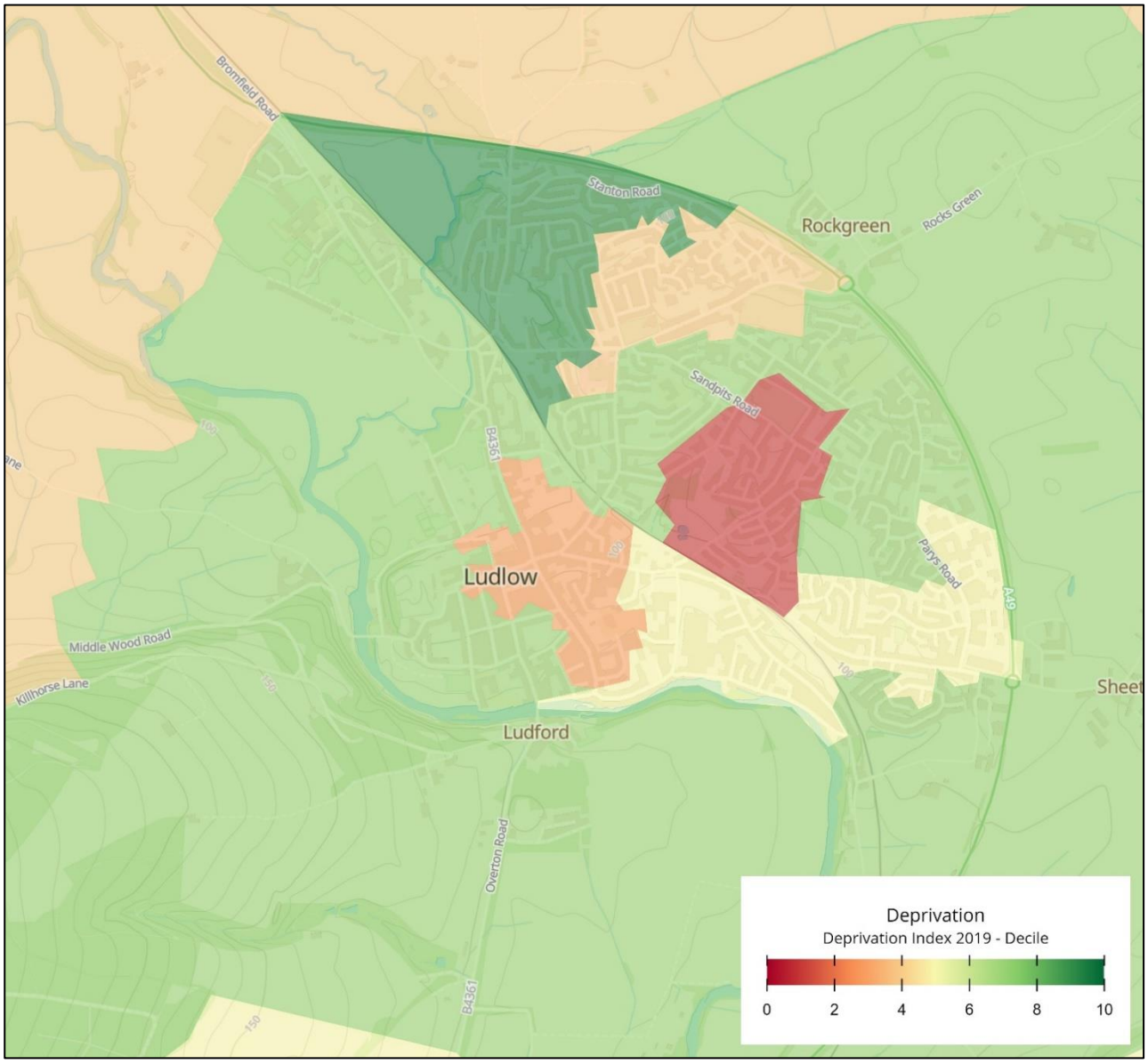

Figure 1-3: Deprivation Indices around Ludlow

1.1.4 Mode Share – Travel to Work

The mode share for commuting (Nomis, 2011) shows that there is a slightly lower mode share for travel to work by bicycle (2%) compared to Shropshire as a whole (3%) but that Ludlow has the highest mode share for walking to work of any of the seven focus towns (24%) compared to Shropshire as a whole (13%) (Figure 1-4). This may reflect the compact walkable nature of Ludlow, but also the relatively high levels of deprivation in some areas.

Note this analysis covers all commuting trips travelling to Ludlow so captures the journeys made from the town's hinterland arriving in the town centre.

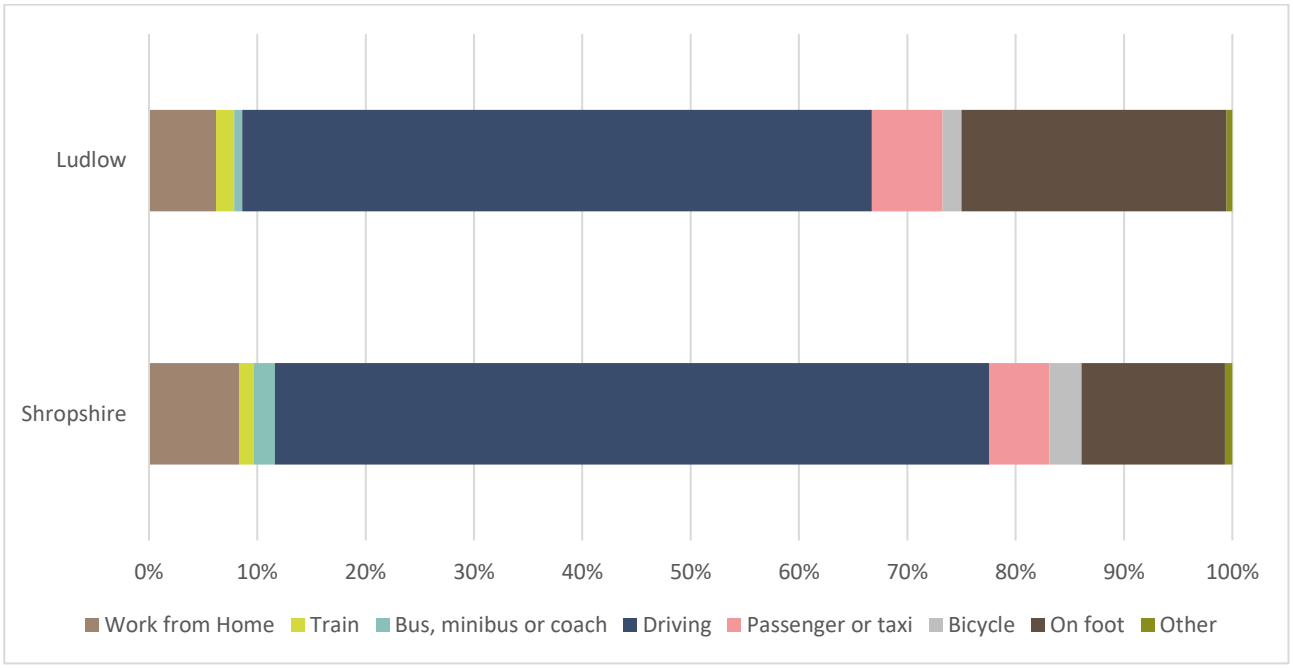

Figure 1-4: Commuting Mode Share in Ludlow Compared to Shropshire

40% of Ludlow residents' commutes are under 2km, with a further 5% under 5km and 3% are between 5-10km (Figure 1-5). This indicates that there is potential for modal shift to active modes for over half of commuting journeys.

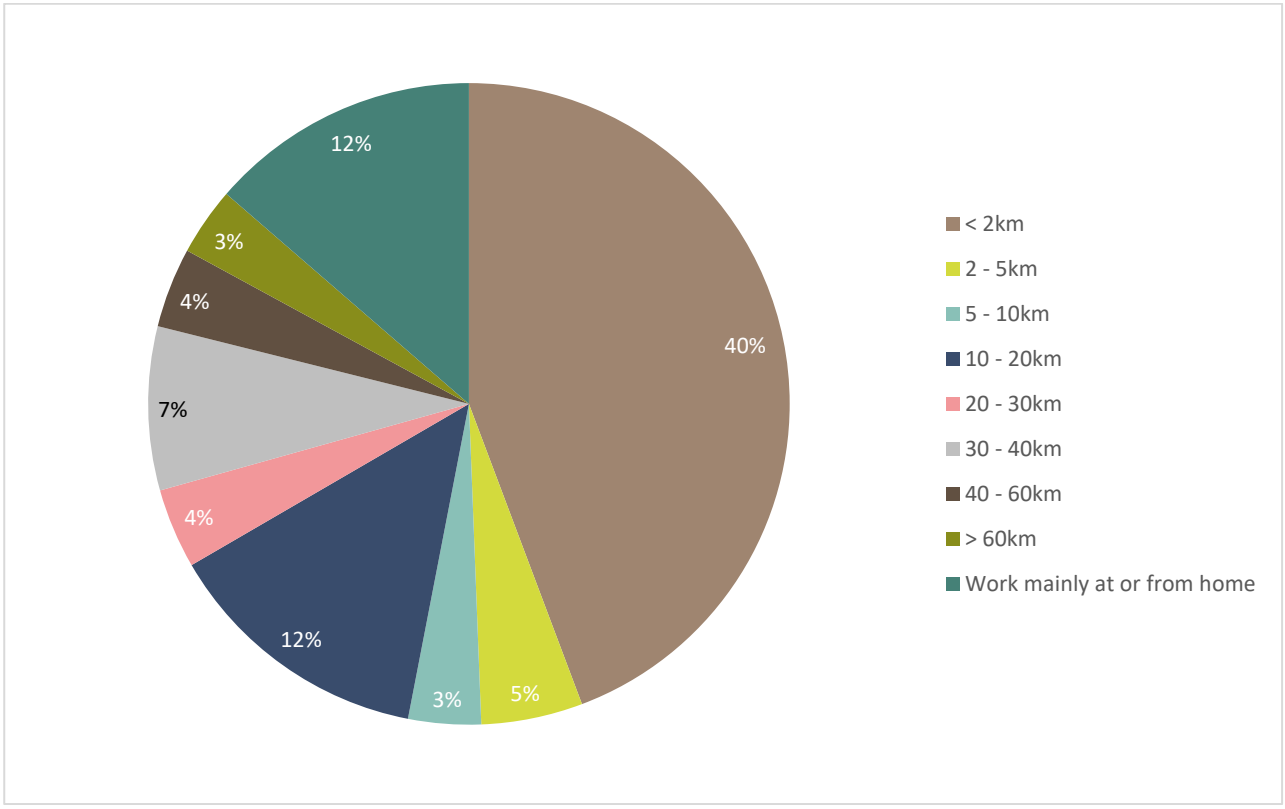

Figure 1-5: Commuting Distances in Ludlow

1.1.5 Topography

Ludlow is set within the Shropshire Hills and therefore topography is a notable barrier to active travel. The town centre is at one of the highest points in the town, and journeys to and from require navigation of steep hills on each side. However, the increasing popularity of electric bikes may provide a solution to this problem.

1.2 Geographical Scope

As per the Department for Transport's (DfT) Local Cycling and Walking Infrastructure Plan Guidance (DfT, 2017), the network planning for Ludlow has been carried out within 10km from the town centre for cycling and 2km for walking which encapsulates the whole of the town and most of its surrounding area. The area this covers is shown in Figure 1-6.

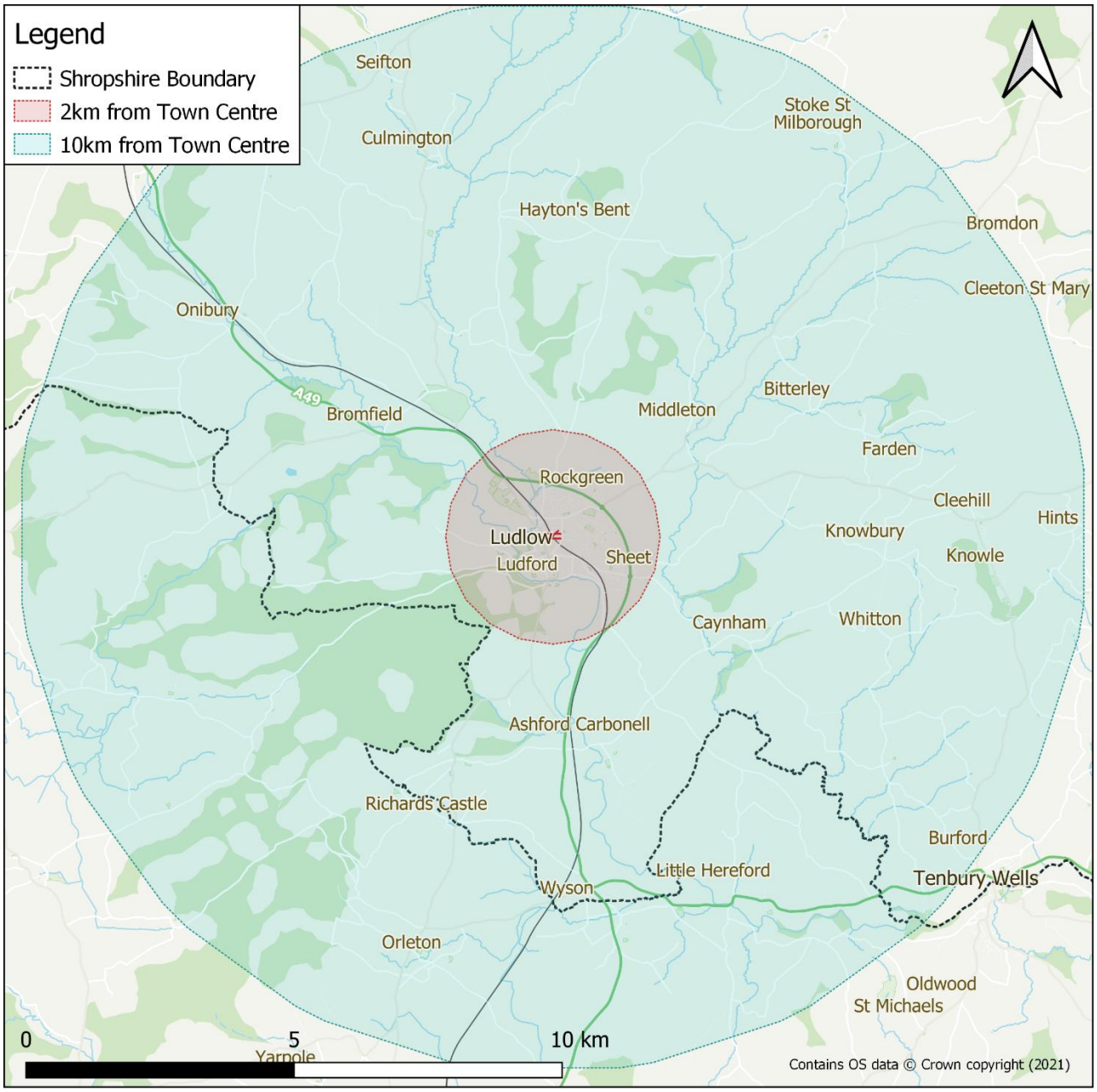

Figure 1-6: Study area for Ludlow

1.3 Report Structure

Following this chapter, this report has been structured in the following way:

- **Chapter 2:** Stakeholder Engagement
- **Chapter 3:** Network Planning for Cycling
- **Chapter 4:** Network Planning for Walking
- **Chapter 5:** Prioritisation Results

2 Stakeholder Engagement

2.1 Overview

As mentioned in the main LCWIP report, stakeholder engagement was fundamental to the development of the LCWIP. As such, engagement was carried out at multiple points throughout its development (See Section 4 of the main LCWIP report for more detail).

2.2 Stakeholder Survey

As part of the Evidence Gathering stage (Stage 2), a survey was circulated to key stakeholder groups in Ludlow (see Table 2-1 for the full list of stakeholder groups contacted) to capture their views on network-wide opportunities and constraints for active travel.

Stakeholder Groups Contacted During Stakeholder Engagement
Ashford Carbonel Parish Council
Bitterly Parish Council
British Horse Society
Bromfield Parish Council
Caynham Parish Council
Ludford Parish Council
Ludlow 21 Sustainable Transport Group
Ludlow Cycling Club
Ludlow East Ward Councillor
Ludlow North Ward Councillor
Ludlow South Ward Councillor
Ludlow Town Council
Onibury Parish Council
Richards Castle Parish Council
Shropshire Climate Action Partnership
Shropshire Council (Portfolio Holder for Climate Change, Natural Assets & the Green Economy, Officer for Place Plan)
South Shropshire Access Group
Stanton Lacy Parish Council
Sustrans

Table 2-1: Stakeholder groups contacted through Ludlow Stakeholder Engagement activities

Table 2-2 shows some of the feedback that was collected on the current walking and cycling provision in and around Ludlow. Using this survey, individual concerns were aggregated to prioritise areas of interest as well as recommendations.

Question: How would you rate the current walking & cycling networks on the following criteria?	Score (5 = Excellent, 1 = Very Poor)
Coherence (how easy it to use and navigate to access key day-to-day destinations)	2.5
Directness (how direct are routes compared to routes for vehicles)	2.5
Safety (how safe do the routes feel to use)	2.3

Comfort (to what extent are routes good quality, well-maintained, of a suitable width and avoid steep gradients)	2.1
Attractive (to what extent are routes enjoyable to use and spend time in e.g. adjacent to nature)	2.8

Table 2-2: Survey results on the current state of the walking and cycling networks in and around Ludlow

2.3 Site Visit & Workshop

Once key data and feedback had been processed from Stage 2, a desktop audit of the area, a local workshop and a site visit were undertaken in Ludlow to gain a better understanding of the area and to identify key barriers to walking and cycling. The local workshop (which was held on 15th February 2022) provided stakeholders with context of the LCWIP development process and helped confirm, as well as add to, the findings of the desktop audit. The objectives of the workshop were to:

- Present and gather feedback on the evidence base for Ludlow
- Seek feedback on the identification of the Core Walking Zone (CWZ) and Key Walking Routes both to and within the CWZ (see Chapter 4)
- Identify key opportunities for walking improvements and cycling schemes (see Chapters 3 & 4)
- Seek feedback on cycle desire lines (see Chapter 3)

A site visit, attended by some workshop participants, was held on the 7th of March 2022. The stakeholder input helped to provide detailed insights into the biggest problems residents face when walking, cycling and using other active modes to travel around Ludlow.

After the workshop and site visit, a further survey was sent out to those stakeholders that attended the workshop to capture their feedback on the emerging proposals for the draft cycling network and CWZ, including town centre improvements and improvements proposed around the Ludlow railway station. The feedback received helped further refine the route proposals prior to undertaking the prioritisation process (see Chapter 5).

2.4 Public Consultation

Shropshire Council ran a public consultation over a period of six weeks from Tuesday 2nd May to Tuesday 13th June 2023. The purpose of this consultation was to listen to what local people thought about the draft plans we developed for improving the walking and cycling network across the seven towns. During this period, a number of different events were run to ensure a wide range of people were given the opportunity to participate. This section gives an overview of the results of the consultation for Ludlow. The feedback has been used to refine the schemes included in this final LCWIP appendix.

2.4.1 Survey Results

A total of 537 survey responses were received in response to the Ludlow walking and cycling proposals. The survey asked questions about the respondents' views on the objectives, their main barriers to walking and cycling in Ludlow, and on the specific walking and cycling proposals.

The responses indicate that 'healthier' is the most important objective for Ludlow, followed by 'zero carbon'. In terms of barriers to active travel, the need to carry things combined with the poor maintenance of surfaces were the key barriers. 184 respondents said that they do not own a bicycle.

2.4.2 In-Person Roadshow

The Roadshow for Ludlow was held on the morning of Thursday 11th May 2023 in the Ludlow Market, near the entrance to Ludlow Castle.

The discussion was largely dominated by feedback on three main schemes: closure of the Castle Car Park, pedestrianisation of the High Street and some form of pedestrianisation of King Street. The feedback reflected concerns that residents with disabilities would no longer be able to access the town centre, and from market traders and other business owners that it would reduce footfall in the town centre.

3 Network Planning for Cycling

3.1 Existing Cycling Network

Ludlow has some existing cycling infrastructure (Figure 3-1), however this is limited to a handful of locations across the town and is not joined up to provide a network.

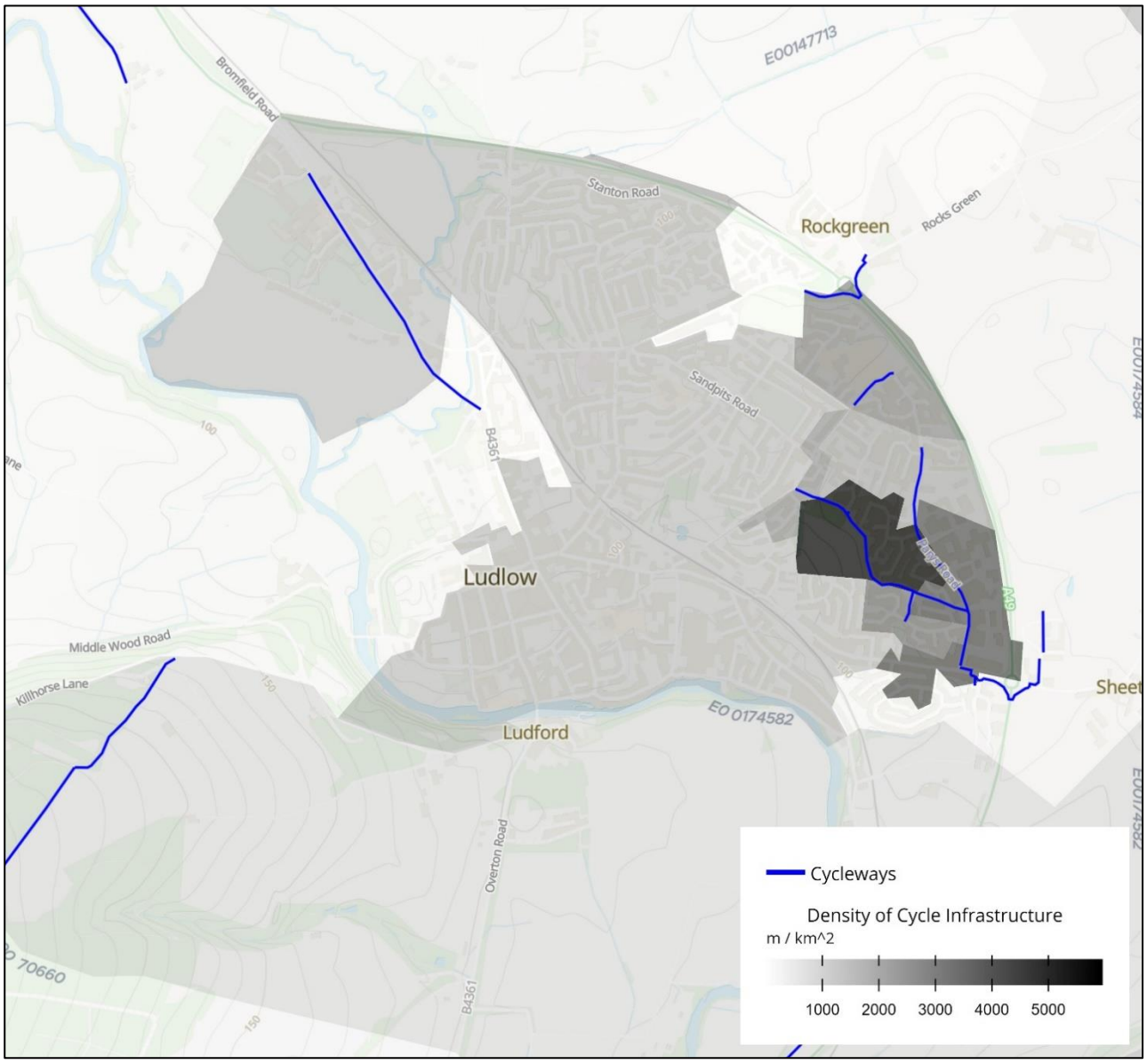

Figure 3-1: Cycle infrastructure around Ludlow

In order to identify routes and close the existing gaps, a network of preferred routes has been defined for Ludlow drawing on an analysis of the following data:

- Trip Origins Points (see Section 3.1.1)
- Trip Destination Points (see Section 3.1.2)
- Accessibility Catchment Analysis (see Section 3.1.3)
- Desire lines for cycle movement (see Section 3.1.4)
- Stakeholder Engagement (see Section 3.2)
- Cycle Route Selection: Route alignment of cycle routes (see Section 3.33.3)

3.1.1 Trip Origin Points

Trip origin points generally consist of residential areas which generate the most travel demand and therefore present the greatest potential to achieve a shift to active modes (DfT, 2017). As indicated in Figure 3-2, 14 key origin areas have been identified in Ludlow, which reflect both the existing resident population density as well as future population density through delivery of allocated residential developments identified in the emerging Shropshire Local Plan (2016 – 2038).

3.1.2 Trip Destination Points

Trip destination points constitute common trip generating land uses such as town centres, key employment areas and other amenities such as schools, community and healthcare facilities (DfT, 2017). As indicated in Figure 3-2, six key trip destination areas have been identified within Ludlow through consolidation of a variety of data sources including land use, commuting trip origin-destination pairs from the 2011 Census, and local knowledge gained through stakeholder engagement and an on-site audit.

Figure 3-2: Trip Origins and Destinations around Ludlow

3.1.3 Accessibility Catchment Analysis

An analysis of the time taken to cycle to key origin points and key destination points from the town centre was undertaken. This analysis, alongside other evidence (see the LCWIP Main Report, Section 5.1.2) helped inform the identification of desire lines (see Section 3.1.4). A maximum cycle journey time of 30 minutes was applied (this is the time it takes the average person to cycle 10km). The accessibility analysis revealed:

- All of Ludlow's residential areas are within a 15-minute cycle of the town centre
- Some surrounding villages are within a 30-minute cycle from the town centre

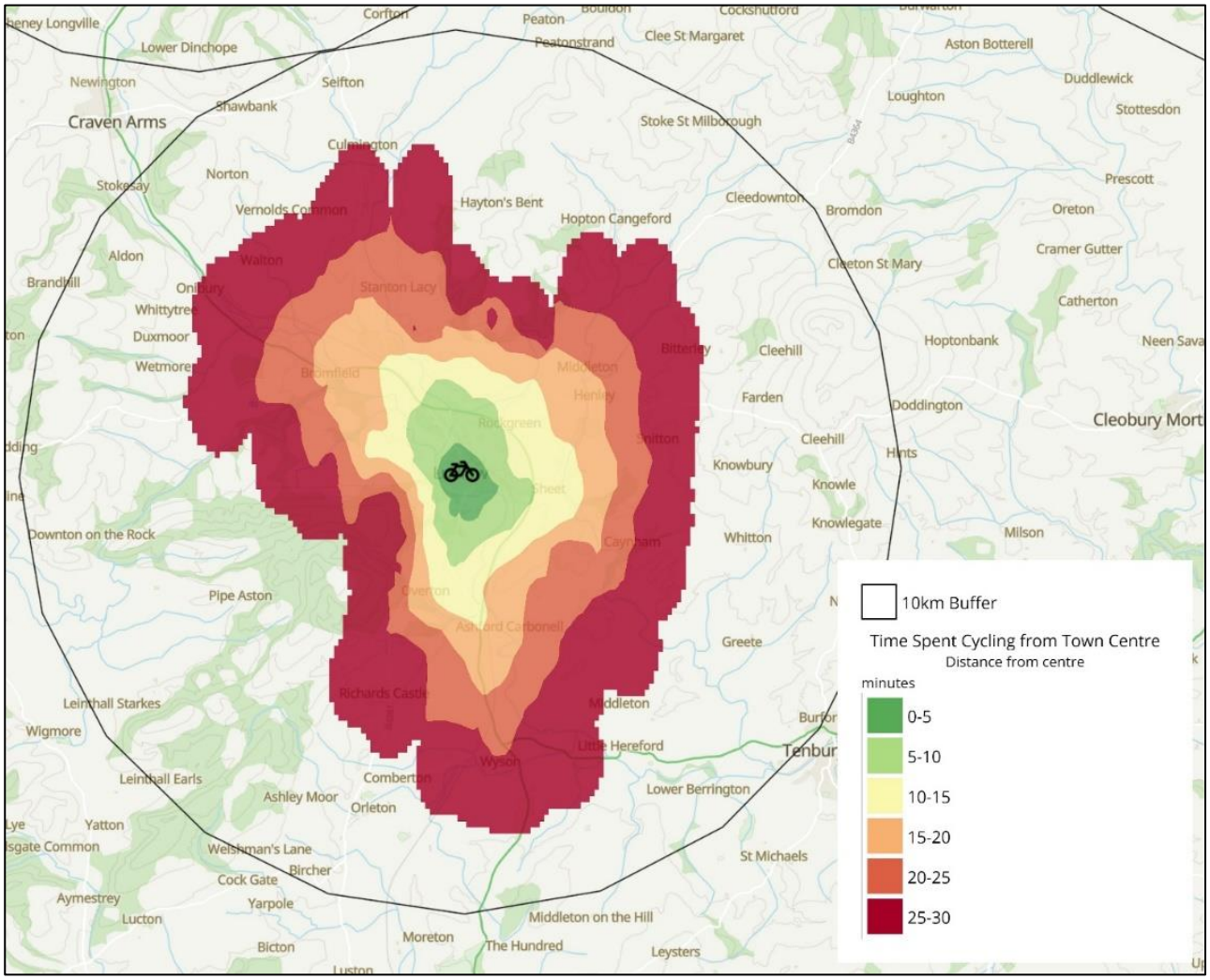

Figure 3-3: Cycling Catchment Map from Ludlow Town Centre

3.1.4 Desire Lines for Cycle Movement

Once the origin and destination areas were identified, desire lines, which are straight 'as the crow flies' lines, were identified. These desire lines, informed by an evidence base (see main LCWIP Report, Section 5.1.2) show existing and potential cycling demand between origins and destinations and are a core component of the cycle route identification process. The desire lines for Ludlow are shown in Figure 3-4.

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. The purpose of the subsequent route selection process is to convert these desire lines into potential routes. Each desire line's relative importance was classified using the following criteria, considering both the existing numbers of cyclists 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 typically linking large or high-density existing or planned residential areas with key destinations
- Secondary Desire Line: Potential for a moderate number of people (as a general rule between approximately 50 and 250 per day but this is relative to the population of the area) cycling from existing or planned residential areas, typically connecting to destinations including education, hospitals and existing or planned employment sites

- Local Desire Line: Low number of people (as a general rule less than approximately 50 people per day but this is relative to the population of the area) cycling between local destinations and to access primary and secondary desire lines

Figure 3-4 indicates that there are several key desire lines in the study area:

- There are two Primary Desire Lines heading from the northern residential area and a potential future housing site into the Eco Park and the town centre respectively
- There are Secondary Desire Lines heading into the town from surrounding residential areas, and towards some key employment areas including the industrial park and the hospital
- There are Local Desire Lines connecting the town's residential areas to local services, and connecting the village of Steventon to the town centre

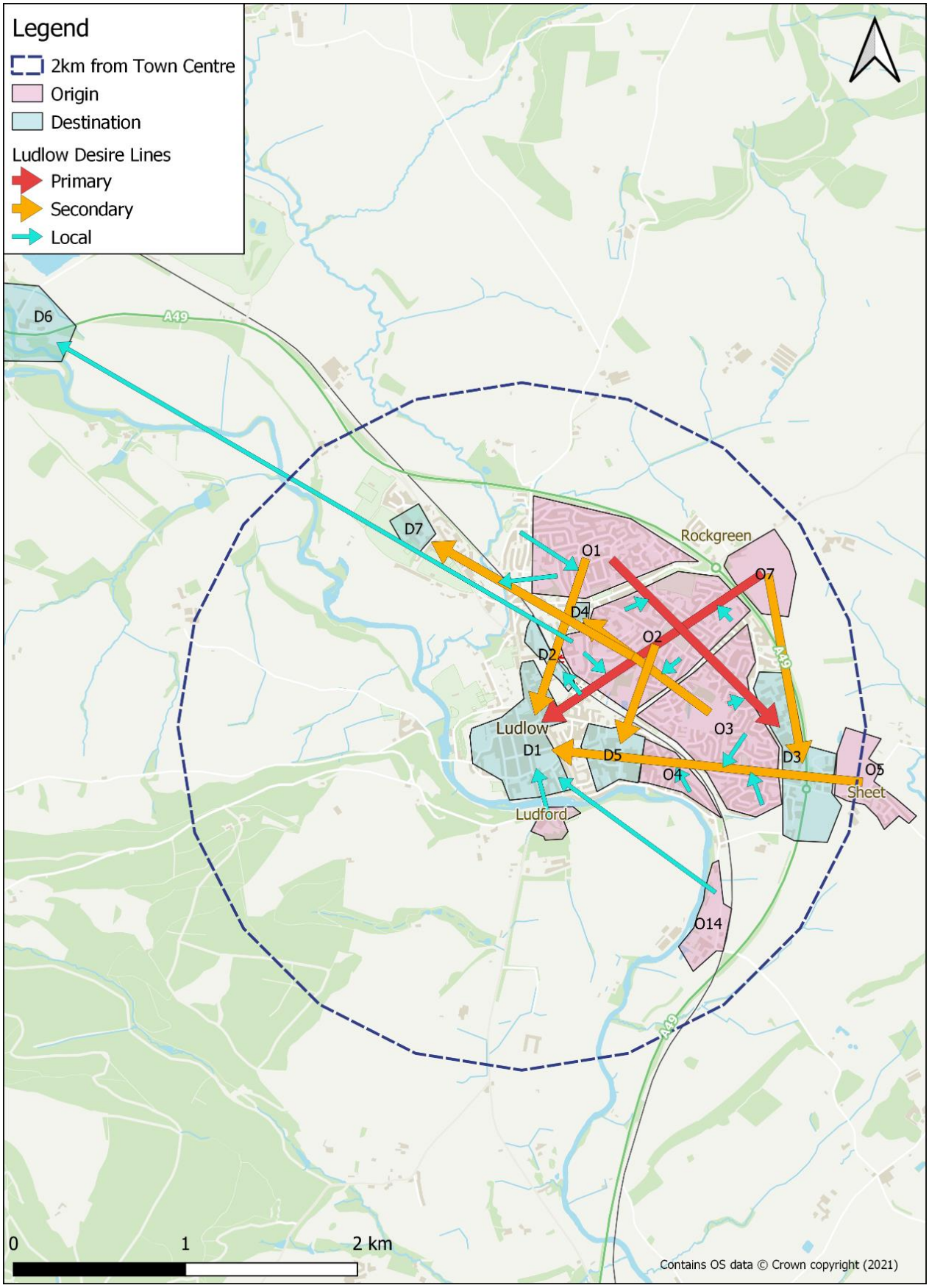

Figure 3-4: Cycle Desire Lines

3.2 Stakeholder Engagement

Alongside the desire line analysis, the route selection process has also been informed by suggestions from people cycling in the study area to reflect the opportunities and current challenges of cycling around Ludlow. These suggestions were collected through a local workshop and a site visit (see Chapter 2). All suggestions were collated on a virtual platform called Miroboard, a snapshot of which is shown in Figure 3-5. Route suggestions by stakeholders were considered in the proposed network, with evidence-backed suggestions being included in the network.

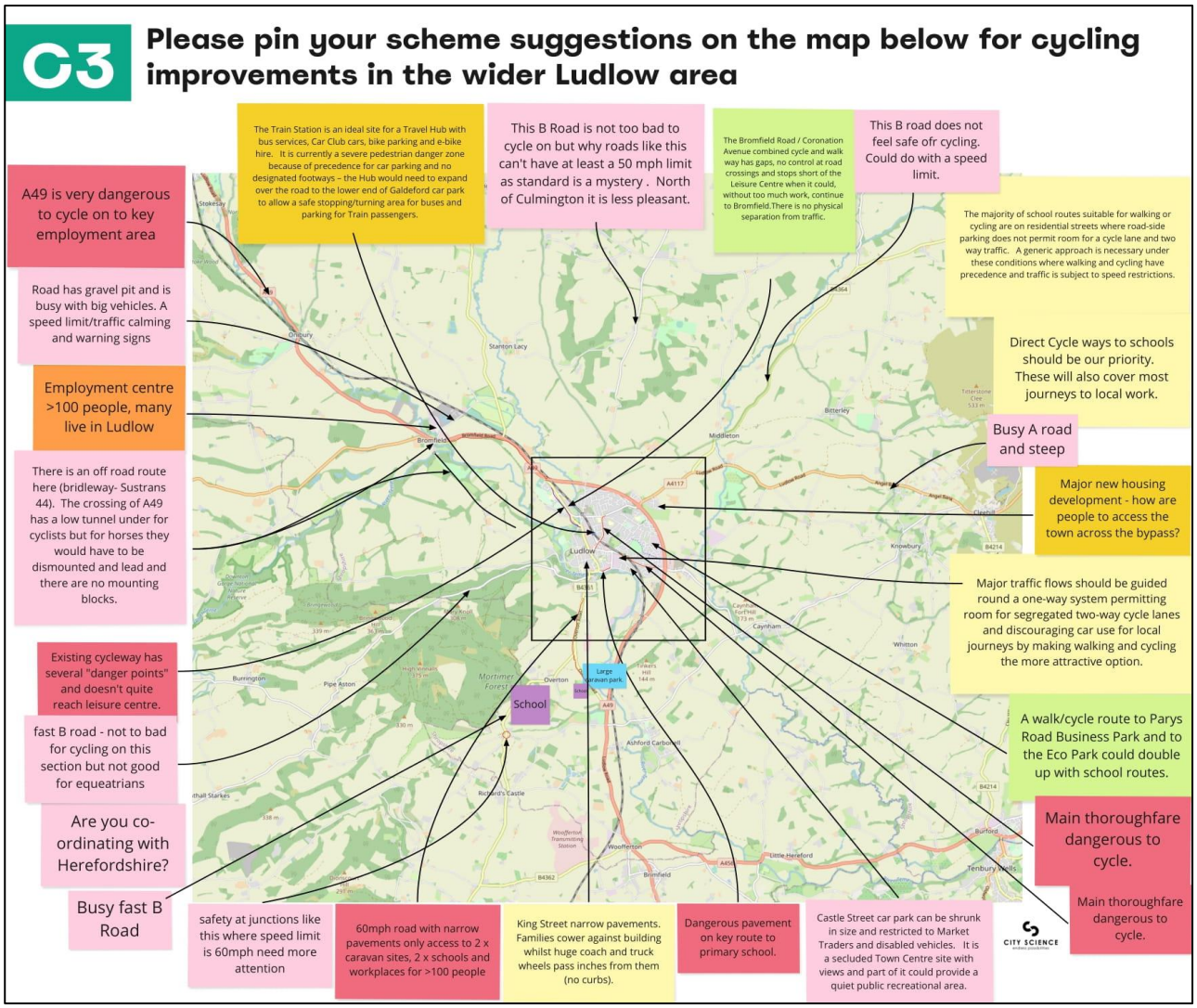

Figure 3-5: Stakeholder scheme suggestions in wider Ludlow, snapshot taken from Miroboard

3.3 Cycle Route Selection – Route Alignment of Cycle Routes

The straight desire lines were then converted into routes that aligned with street networks, using Google Maps and Open Street Maps and informed by current and potential future cycling demand. This included use of Strava Metro and Propensity to Cycle tool data as well as feedback from the stakeholder workshop and on-site observations of existing infrastructure and road layouts.

3.3.1 Design Principles

The selection of routes was further refined by applying the following LTN 1/20 Core Design Principles (DfT, 2020) which, as identified in the main LCWIP Report, are essential requirements for Shropshire Council to meet in order to qualify for future active travel grant funding from Active Travel England.

Design Principle	Route Selection Process Compliance
Coherent	Routes have been selected that follow logical routes and are of a consistent nature, where possible and practical, which easily connect to key identified destinations.
Direct	Routes have been selected that provide the most direct connection, where practical, between key origins and destinations. This includes the identification of upgrades to current routes which do not currently satisfy the main desire lines.
Safe	The precise type of route provision is subject to further refinement through the concept and detailed design stages of the process. A key focus through the process in this LCWIP has been to establish the need to upgrade routes that currently constitute an advisory cycle lane next to a general traffic lane as well as delivering new routes that are segregated from general traffic, where achievable in available carriageway space.
Comfortable	The precise type of route surfacing is subject to further refinement through the concept and detailed design stages of the process. Focus through this LCWIP process has been to propose improvements where surface quality has been identified as a problem and to upgrade current sections of the network which involve frequent transitions between on and off carriageway facilities.
Attractive	The precise nature of route attractiveness is subject to further refinement through the concept and detailed design stages of the process. This LCWIP establishes the principle of routes which complement natural assets (e.g. the waterfront) alongside network wide improvements, such as wayfinding, that could make cycling a more enjoyable and hassle-free experience.

Table 3-1: Summary of Route Selection Process with LTN 1/20 Core Design Principles

3.3.2 Guiding Principles

To support the desired design principles, the cycling improvements proposed (see Section 3.4), will adhere to the general guiding principles contained in Appendix – Guiding Design Principles.

3.4 Proposed Routes

Figure 3-6 illustrates the proposed routes across the study area alongside the existing network. Proposed routes have been categorised depending on the classification of the desire line they support (see Section 3.1.4). Details of the proposed schemes are outlined in the below Sections 3.4.1 to 3.4.3.

Route Alignment Uncertainty

It should be noted that due to the strategic nature of LCWIPs, it is not possible to capture all detailed engineering constraints, such as precise carriageway width and the impact of removing on-street car parking, which may affect the future delivery of new routes. In these cases, routes have been identified based on key principles including their ability to directly fulfil desire lines whilst also accounting for high-level constraints which may impinge on deliverability such as width of existing funnel points (e.g. bridges). This means the precise route alignment detail (e.g. specific streets) is subject to change through any future preliminary and detailed route design process.

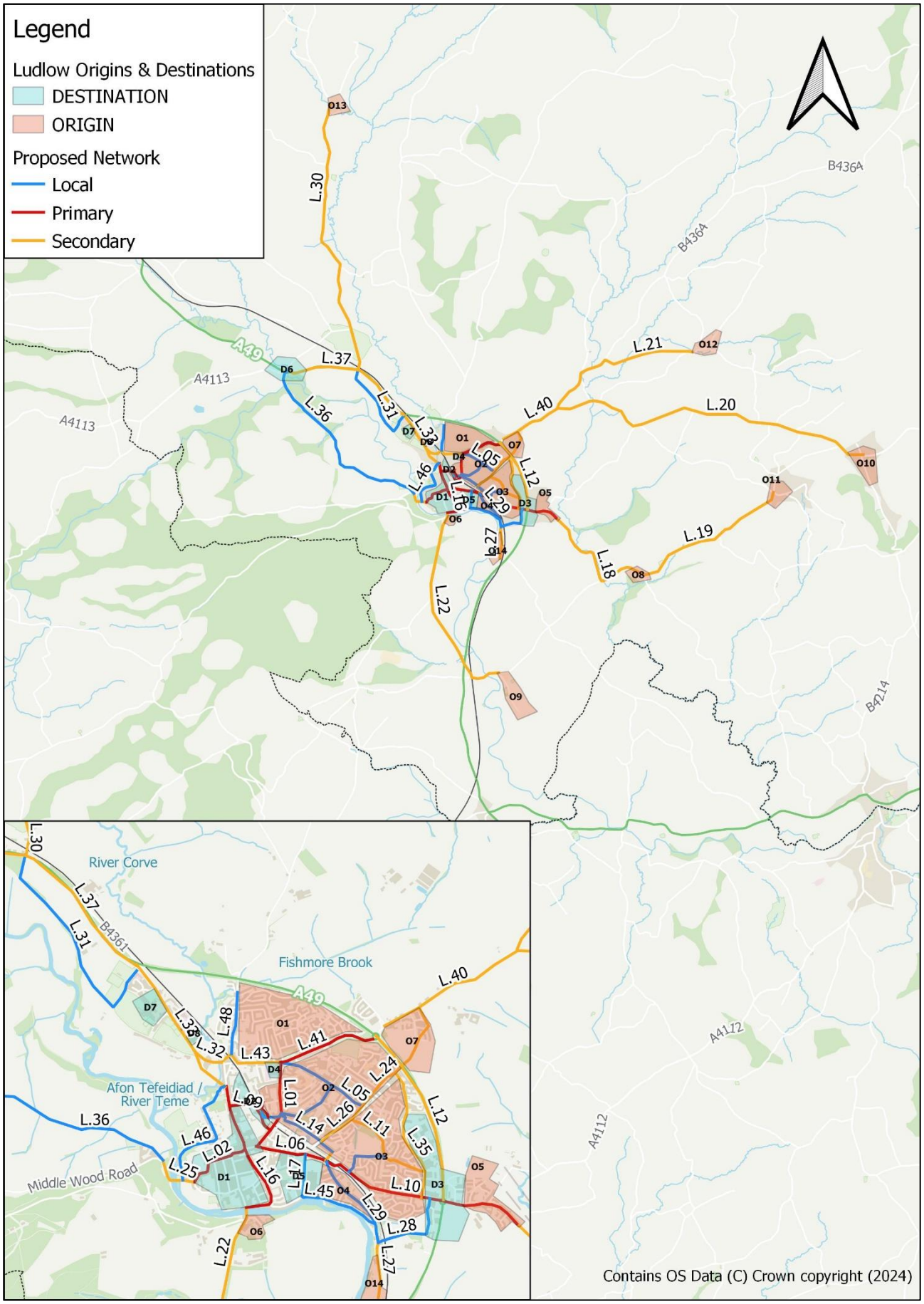

Figure 3-6: Proposed routes in the Ludlow Study Area

Note: categories of routes are based on the desire line they follow, not the priority of their delivery

3.4.1 Primary

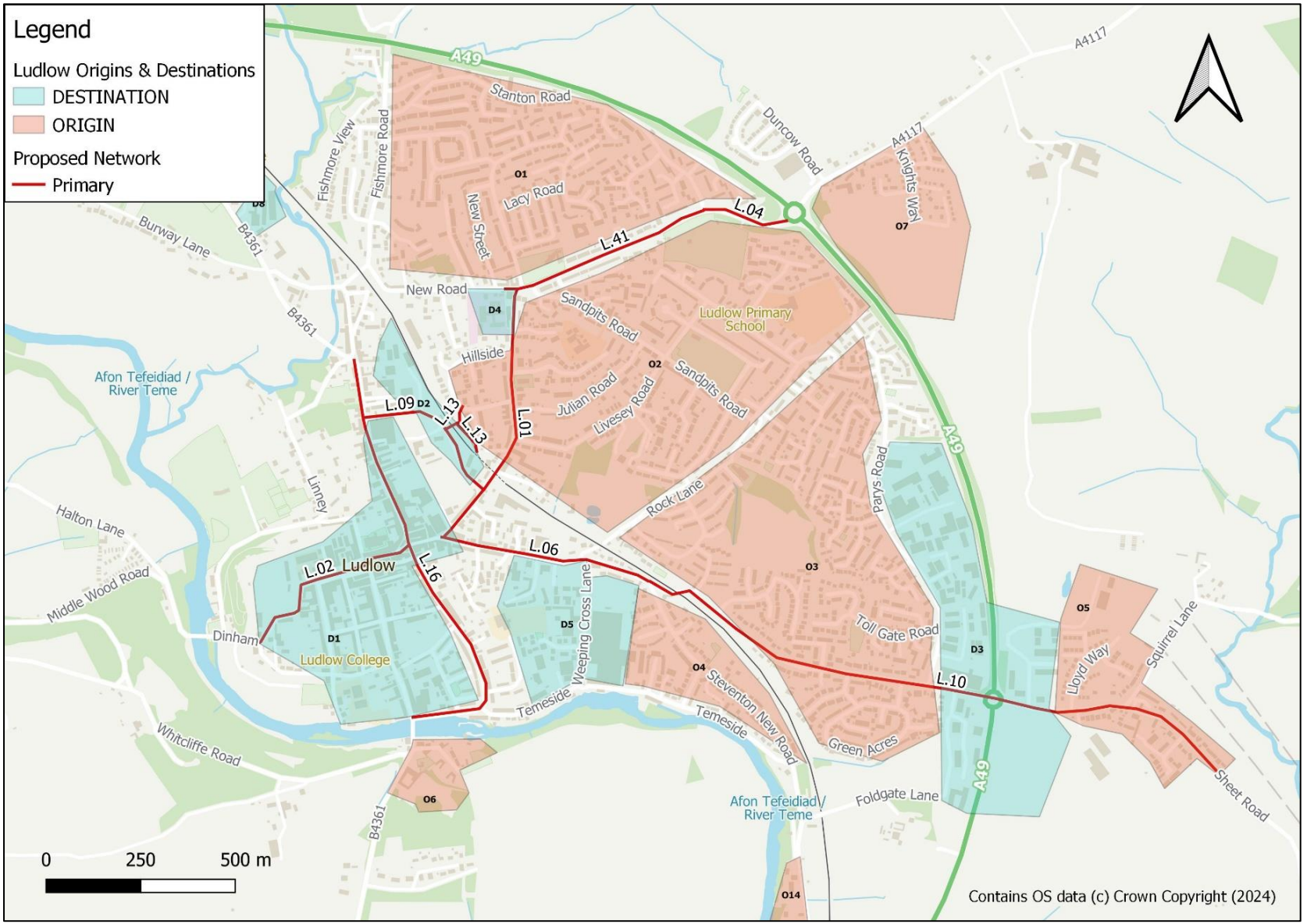

Figure 3-7: Ludlow Proposed Network Plan; Schemes Following a Primary Desire Line

Scheme	Description	Recommendation
L.01	Main thoroughfare to the town centre, along Gravel Hill	Repaint advanced stop boxes. Create cycle bypass of signals on Upper Galdeford. Implement 20mph speed limit zone
L.02	Route through the main town centre/high street areas	Consider movement and public realm study to identify options for all modes of transport in the town centre (King St, High St, Castle St/Castle Square and Dinham)
L.04	Henley Road between the A49 and Weyman Road	Investigate provision of a light segregated cycling facility (with localised treatments at pinch-points) or reduction of traffic speeds to allow for a shared space with vehicular traffic
L.06	Connection along Lower Galdeford from Upper Galdeford to Steventon New Road	Investigate provision of a light segregated cycling facility (with localised treatments at pinch-points) or reduction of traffic speeds to allow for a shared space with vehicular traffic
L.09	Route along Station Drive to connect into the train station from the town centre and other trunk roads	Investigate provision of a segregated cycling facility (with localised treatments at pinch-points). Include side road crossing treatments and provision/upgrade of crossings in line with definitive design standards.
L.10	Route along Sheet Road connecting Sheet towards the town centre	Investigate provision of a segregated cycling facility (with localised treatments at pinch-points). Include side road crossing treatments and provision/upgrade of crossings in line with definitive design standards.
L.13	Railway crossing into the station entrance from Quarry Gardens	Improve step free access between platforms (already being investigated at the time of adoption of LCWIP)
L.16	Route along Old Street and Corve Street connecting the north of the town to the town centre and railway station	Investigate provision of a segregated cycling facility, with localised treatments at pinch-points. Include upgrade/provision of crossings in line with definitive design standards
L.41	Henley Road between Weyman Road and Sandpits Road	Investigate widening of existing footway into a shared use-path and/or segregated cycleway. Include side road crossing treatments and upgrade/provision of crossings in line with definitive design standards.
L.42	Henley Road approach to and crossing of the roundabout with Gravel Hill	Investigate improving safety for cyclists and pedestrians at the Gravel Hill/ Sandpits Rd/Henley Rd/New Rd roundabout in line with definitive design standards

Table 3-2: Details of Proposed Schemes in Ludlow Following a Primary Desire Line

3.4.2 Secondary

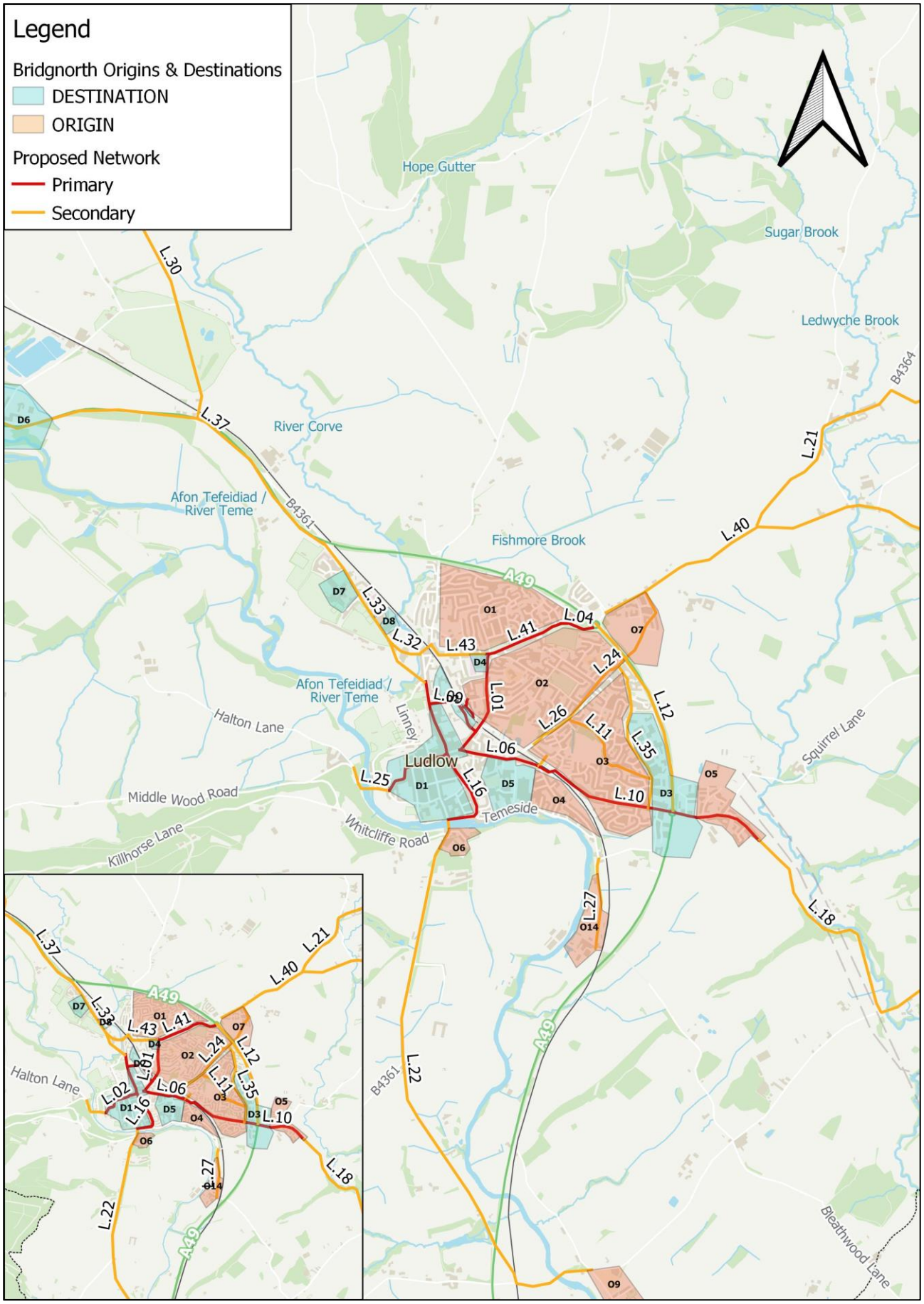

Figure 3-8: Ludlow Proposed Network Plan; Schemes Following a Secondary Desire Line

Scheme	Description	Recommendation
L.03	Bromfield Rd (B4361)	Widen existing footway at the northern end of Bromfield Rd (B4361) into a shared-use path to connect to the existing shared-use path.
L.07	Railway crossing between Sheet Road and Housman Crescent	Improve safety perceptions with increased lighting, replace chicane barriers with something easier to navigate for non-standard bikes
L.08	Ludford Bridge river crossing	Improve provision for cyclists on the Ludford Bridge including Introduction of cycle priority signals and cycle advanced stop boxes.
L.11	Connection through Gallows Bank along Dark Lane between Rock Lane and the industrial and eco parks	Upgrade existing pathway (e.g. widen, improve surfacing, lighting and provision of signage), ensuring no user loses their right of access (e.g. equestrians)
L.12	Route along A49 between Rocks Green and The Sheet	Investigate provision of a shared-use off-road path parallel to A49, accessible to all users. in partnership with National Highways. Include upgrade of the A49/Henley Rd/Rocks Green Rd (A4117) roundabout and the A49/Sheet Rd roundabout in line with definitive design standards (and in partnership with National Highways).
L.18	Connection from Caynham to Ludlow	Investigate provision of a new pedestrian/cyclist bridge over the railway line in partnership with Network Rail. Investigate reduction of traffic speeds along the residential roads to allow for a shared space with vehicular traffic. Encourage shared use of the rural part of this route, considering, where appropriate and practical, provision of measures, potentially to include passing places and installation of signage, as well as through active engagement with local communities.
L.19	Connection from Knowbury to Caynham, links in with further connection to Ludlow	Investigate provision of off-road shared-use path, which would be accessible to both active and equestrian users
L.20	Connection from Cleehill to Ludlow	investigate widening of existing narrow footway into a shared-use path, which would be accessible to active and equestrian users
L.21	Connection from Bitterley to Ludlow (B4364)	Investigate provision of an off-road shared-use path on the B4364. Upgrade PROW between Middleton and Bitterley (e.g. widen, improve surfacing, lighting and provision of signage), ensuring access for all users is retained (including equestrians)
L.22	Connection from Ashford Carbonell to Ludlow (B4361)	Encourage shared use of the B4361, considering, where appropriate and practical, provision of measures, potentially to include passing places and installation of signage, as well as through active engagement with local communities.
L.24	Connection from Rocks Green development site into Ludlow across A49, heading towards town centre following existing PROWs and Ridings Road	Upgrade existing PROW (e.g. widen, improve surfacing, lighting and provision of signage). Upgrade of the A49/Henley Rd/Rocks Green Rd (A4117) roundabout in line with definitive design standards (and in partnership with National Highways).

Scheme	Description	Recommendation
L.25	River crossing along Dinham bridge, connect leisure route along National Cycle Network Route 44	Investigate priority treatments for active travel users on the Dinham Bridge.
L.26	Route along the pathway parallel to Rock Lane between Sandpits Road and the Railway line	Upgrade existing pathway (e.g. widen, improve surfacing, lighting and provision of signage). Upgrade crossing provision at either end of the route in line with definitive design standards
L.27	Connection from Steventon to Ludlow along Steventon Rd and Steventon New Road	Investigate provision of a shared-use cycling facility parallel to Steventon Road (with localised treatments at pinch-points). Include side road crossing treatments and upgrade/provision of crossings in line with definitive design standards. Investigate reduction of traffic speeds/volumes to allow for a shared space with vehicular traffic along Steventon New Rd.
L.30	Connection between Culmington and Ludlow along B4365	Investigate widening and extending the existing sections of footway into a fully connected off-road shared-use footway/cycleway.
L.32	Route along Bromfield Road and Corve Bridge	Improve provision for cyclists on the Corve Bridge including investigating a new widened footway/cycleway bridge attachment
L.33	Connecting the town centre to Ludlow CofE School and beyond to A49 along Coronation Avenue (B4361)	Improve and extend existing shared-use path and/or provide segregated cycling facility. Include side road crossing treatments and upgrade/provision of crossing facilities in line with definitive design standards. Extend 20mph zone
L.35	Route along Parys Road connecting residential areas to the industrial estate and other local destinations	Improve existing cycle provision by creating a segregated cycling facility (including a light segregated cycling facility. Include side road crossing treatments and upgrade/provision of crossings in line with definitive design standards
L.37	A49 to Bromfield	Upgrade existing off-road shared-use path parallel to the A49 (e.g. widen, improve surfacing, lighting and provision of signage) in partnership with National Highways. Improve crossing provision at key locations, including the A49/Rocks Green roundabout and the A49/Bromfield Rd (B4361) junction.
L.40	A4117 Rocks Green from A49 roundabout to Henley	Investigate widening of existing narrow footway into shared-use path with localised treatments at pinchpoints. Include side road crossing treatments and upgrade/provision of crossings in line with definitive design standards. Link with L.12 and L.24.
L.43	Henley Road between Gravel Hill roundabout and Corve Street	Review parking provision and investigate addition of segregated cycleway.

Table 3-3: Details of Proposed Schemes in Ludlow Following a Secondary Desire Line

3.4.3 Local

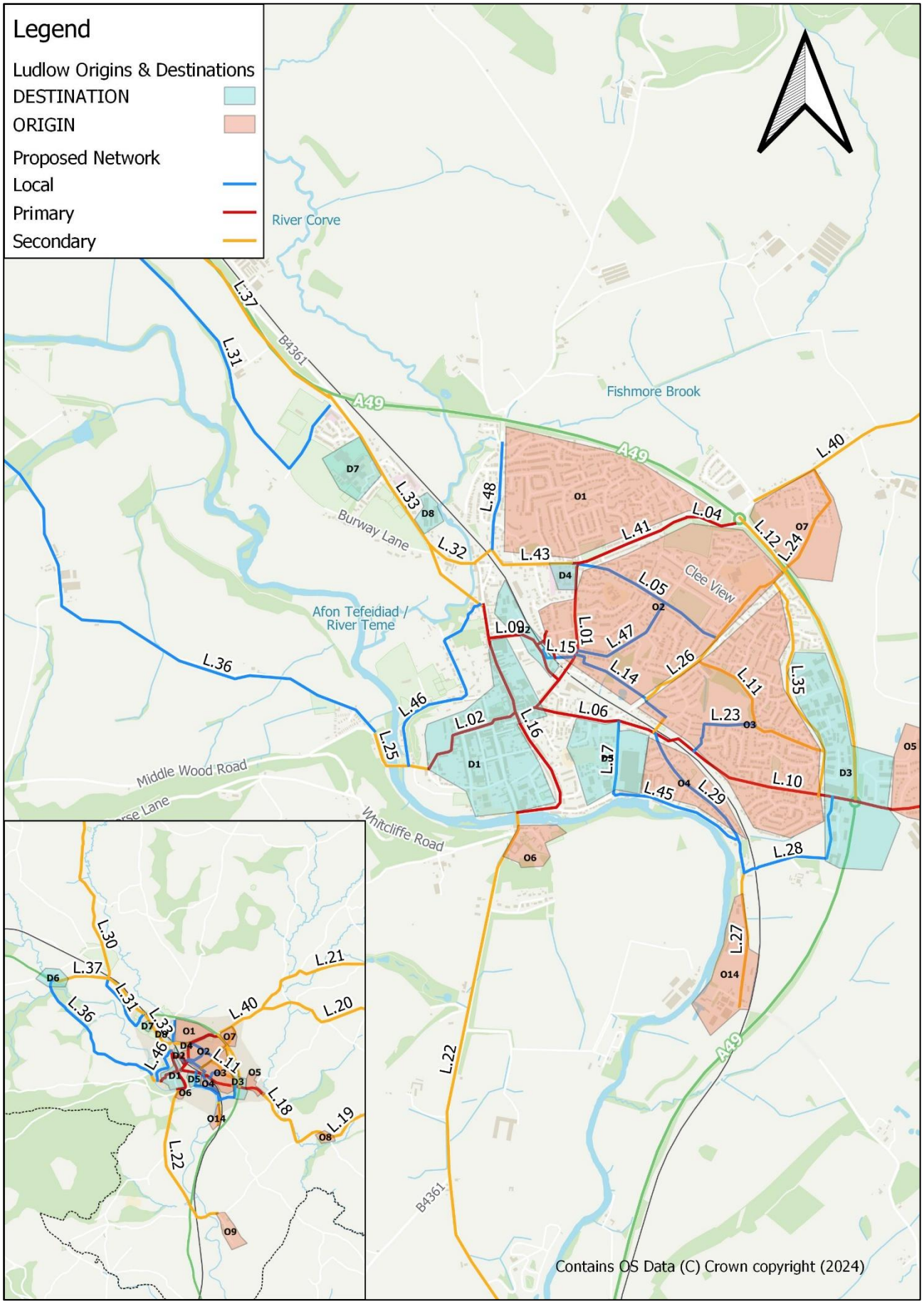

Figure 3-9: Ludlow Proposed Network Plan; Schemes Following a Local Desire Line

Scheme	Description	Recommendation
L.05	Local route through residential area along Sandpits Road connecting to the hospital	Create shared-use path from the Sandpits Road/Riddings Road junction up to the Sandpits Road/Wheeler Road junction and continuing on alongside the park (to investigate whether the existing covenant that prohibits use of the land for any other purpose other than young people can accommodate a shared-use footway/cycleway). Reduction of traffic speeds from Sandpits Road/Livesey Road/Whitbread Road junction up to where the cycle route connects with Henley Road/ New Rd/Gravel Hill junction (L.42, L.43 and L.47) to allow for a shared space with vehicular traffic.
L.14	Connection through residential area along PROW linking towards the train station	Upgrade PROW to shared-use path (e.g. widen, improve surfacing, lighting and provision of signage) ensuring no user loses their right of access (e.g. equestrians)
L.15	Eastern access to the railway station from Gravel Hill	Upgrade existing pathway (e.g. widen, improve surfacing, lighting and provision of signage).
L.17	Connection through the centre employment area along Weeping Cross Lane	Introduce double yellow lines on Weeping Cross Lane. Investigate segregated cycleway and side-road crossing treatments.
L.23	Route through Gallows Bank along PROWs connecting to Sheet Road	Upgrade existing PROW (e.g. widen, improve surfacing, lighting and provision of signage).
L.28	Back route from Steventon to Ludlow Eco Park along Foldgate Lane	Investigate reduction of traffic speeds/volumes to allow for a shared space with vehicular traffic. Include links to/from the new housing development off Foldgate Lane
L.29	Connection through south-eastern residential area along Steventon New Road linking the zone to local destinations south of the town	Investigate reduction of traffic speeds/volumes to allow for a shared space with vehicular traffic.
L.31	Connection between Culmington and Ludlow along existing PROW	Upgrade existing PROW (e.g. widen, improve surfacing, lighting and provision of signage), ensuring that no users lose their access rights
L.36	Connecting Bromfield to Ludlow, upgrade of existing National Cycle Network Route 44 along existing PROWs	Upgrade existing PROW (e.g. widen, improve surfacing, lighting and provision of signage), ensuring that no users lose their access rights
L.45	Temeside between Weeping Cross Lane and Steventon New Road	Investigate reduction of traffic volumes and/or speed to allow for a shared space with vehicular traffic.
L.46	Linney between Dinham Bridge and Corve Street	Investigate reduction of traffic volumes and/or speed to allow for a shared space with vehicular traffic.
L.47	St Julians Avenue and Livesey Road	Investigate reduction of traffic volumes and/or speed to allow for a shared space with vehicular traffic.
L.48	Fishmore Road	Investigate provision of a segregated cycling facility or a shared use facility with side road crossing treatments. Upgrade the Fishmore Rd/New Rd/Bromfield Rd roundabout in line with definitive design standards. Include upgrade/provision of crossing points in line with definitive design standards.

Table 3-4: Details of Proposed Schemes in Ludlow Following a Local Desire Line

4 Network Planning for Walking

This chapter summarises the identification of the walking network for Ludlow as part of the Shropshire LCWIP. Development of the walking network is focused on identification of Core Walking Zones (CWZs), as identified in the main LCWIP report (see Chapter 6). The identification of CWZs allows walking improvements to be prioritised in areas of higher pedestrian footfall where there is a particularly high concentration of key destinations.

Ludlow Town Centre, including Ludlow railway station, has been identified, based on analysis of key locations of destinations such as retail facilities, employment areas and transport interchanges, as Ludlow's key CWZ. This was also agreed via discussions with key stakeholders at the Ludlow workshop. Figure 4-1 below shows the CWZ for Ludlow alongside key origin and destination points within the town, which include retail spaces, the railway station, the hospital, local schools and the castle

Figure 4-1: Ludlow CWZ

In order to identify routes both to and within the CWZs, a network of preferred walking routes has been defined for Ludlow drawing on an analysis of the following data:

- Key Walking Trip Generators - Accessibility Analysis (see Section 4.1.1)
- Key Walking Routes (see Section 4.1.2)
- Stakeholder Engagement (see Section 4.1.3)
- Walking Route Audits (see Section 4.1.4)

The resulting CWZ improvements are detailed in Section 4.2.

4.1 Core Walking Zone Analysis

4.1.1 Key Walking Trip Generators Accessibility Analysis

Figure 4-2 shows the results of a walking accessibility assessment, categorised by walking journey time, undertaken for Ludlow town centre CWZ. This incorporates an identification of key trip generators that can be accessed on foot within a 30-minute walk from the isochrone centroid shown on King Street. This indicates:

- All of Ludlow's residential areas are within a 25-minute walk of the High Street
- The railway station is within a 10-minute walk of the high street
- The A49 provides a major barrier to walking to the east of Ludlow

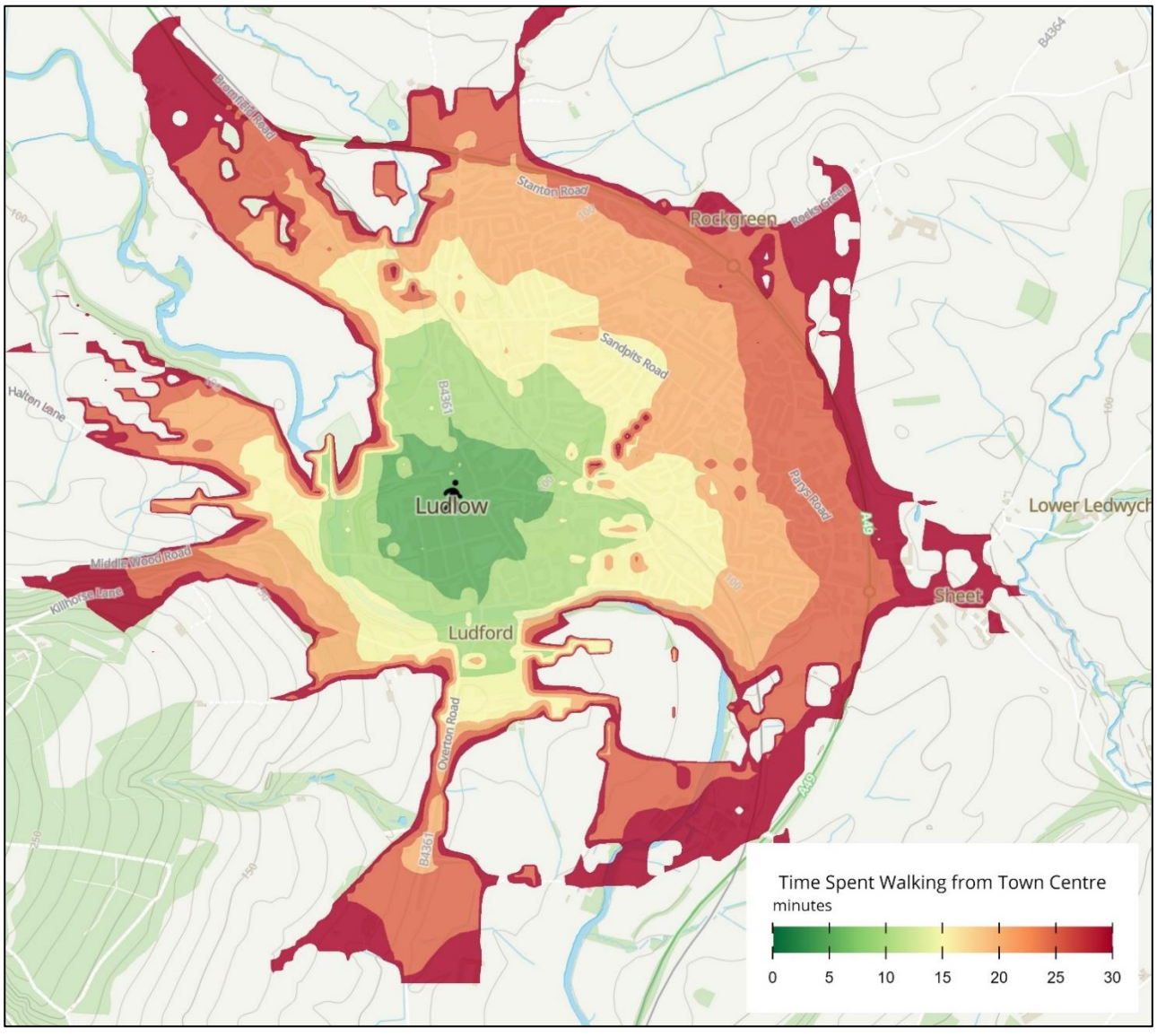

Figure 4-2: Ludlow Town Centre CWZ Accessibility Analysis

4.1.2 Key Walking Routes

Figure 4-3 illustrates the key walking routes within a ten-minute walk of the centre point of the Ludlow CWZ. The key walking routes area categorised using the following criteria which is contained within the DfT Guidance (DfT, 2017):

- **Primary Walking Routes:** Such as busy shopping streets, business areas and main pedestrian thoroughfares
- **Secondary Walking Routes:** Moderate use routes connecting to primary routes and local centres
- **Link Footways:** Connecting local access footways through urban areas
- **Local Access Footways:** Low use footways such as estate roads and cul-de-sacs

Figure 4-3 indicates:

- The Primary Routes (red routes) through the town centre link up the high street with the key secondary routes which connect to the railway station and residential areas
- The Secondary Routes (yellow routes) provide connectivity through residential areas adjacent to the town centre, and to the rail station and the hospital
- Numerous link and local access footways (blue and purple routes) provide cut-throughs within residential areas and provide access to multiple local destinations

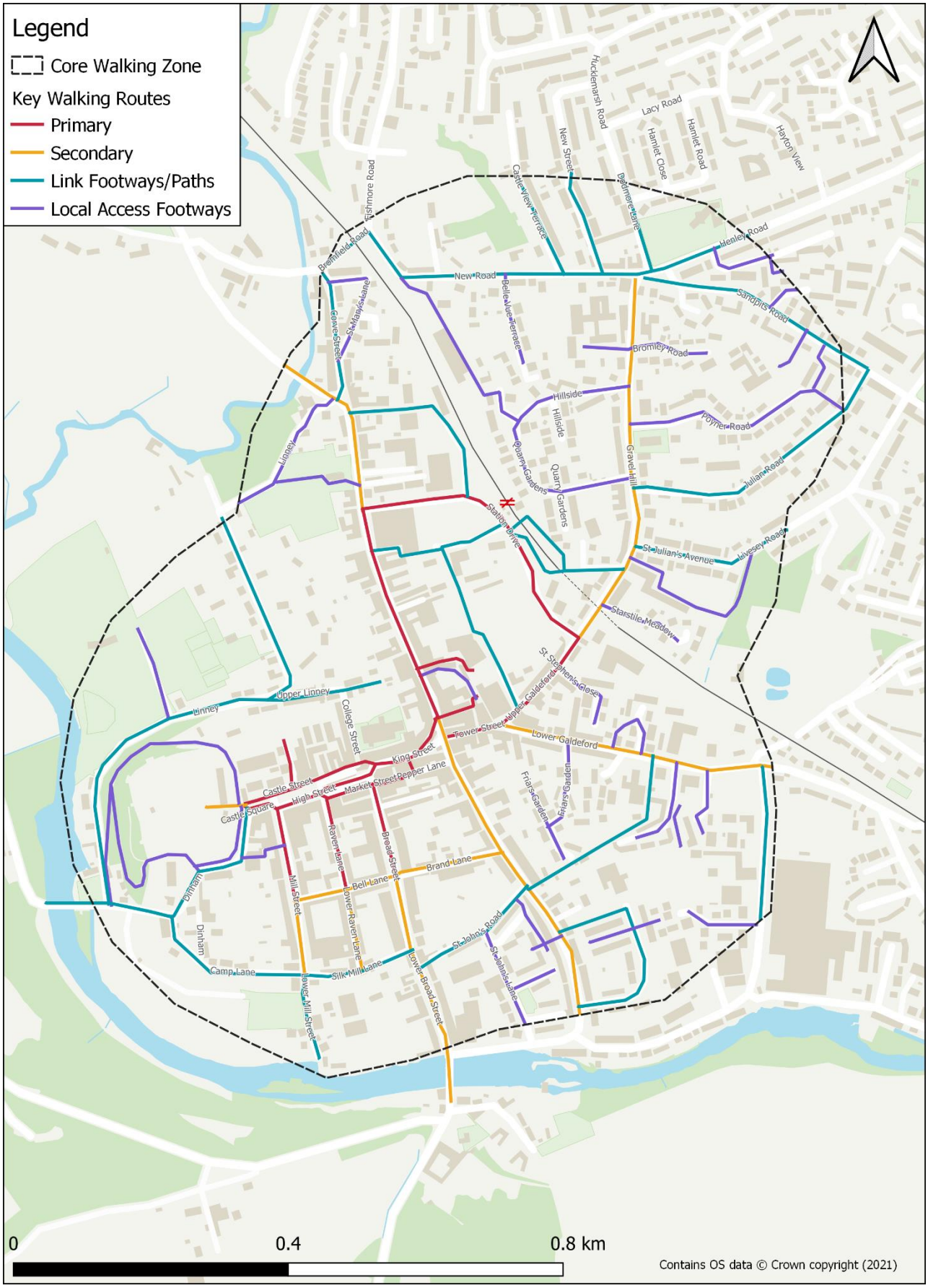

Figure 4-3: Ludlow Town Centre CWZ Key Walking Routes

4.1.3 Stakeholder Engagement

Similar to the route selection process for the cycling network (See Chapter 3), the key walking routes have been informed by suggestions from local stakeholders who walk and cycle around Ludlow. An initial survey was circulated to local stakeholder groups to support the evidence base by capturing their views on network-wide opportunities and constraints for active travel within Ludlow.

Further suggestions and feedback on the identification of the CWZ's and key walking routes and opportunities for walking improvements were collected through a local workshop. All suggestions were collated on Miroboard, a snapshot of which is shown in Figure 4-4.

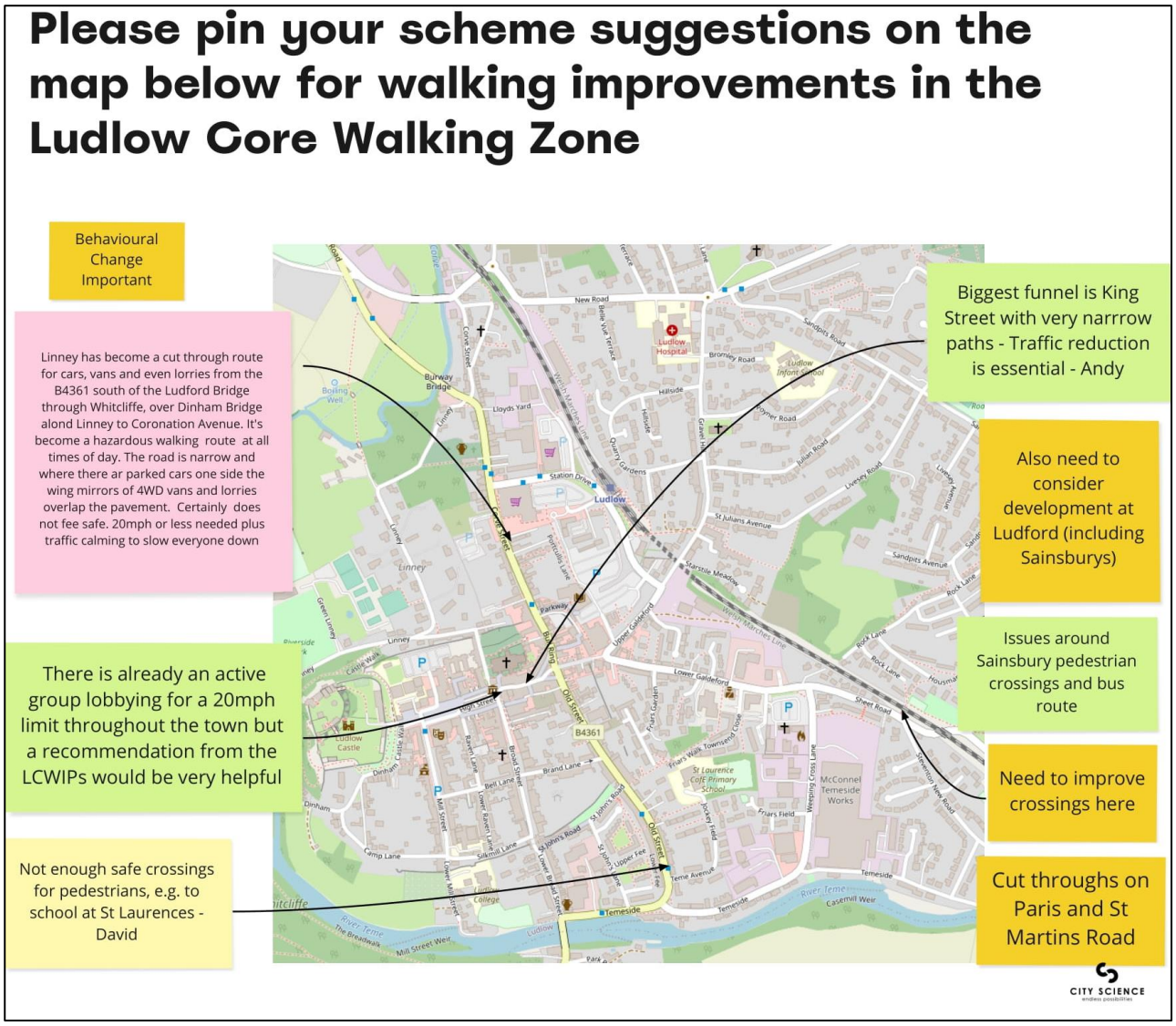

Figure 4-4: Stakeholder Feedback on Ludlow Town Centre

A subsequent site visit, as well as follow-up survey sent to those stakeholders that attended the workshop, enabled validation and further refinement of the CWZs, key walking routes and proposed improvements (see Chapter 2 for further detail).

4.1.4 Walking Route Audits

The ease of walking both to the CWZ from the town's residential areas as well as through the CWZ (known as permeability) can be affected by the presence of barriers such as railway lines, rivers and heavily trafficked routes, this is known as 'severance'. Crossing points at these barriers create 'funnel routes' which have higher pedestrian flows.

A desktop audit, validated by a site visit (undertaken March 2022) of the existing key pedestrian routes (including footway provision and condition, crossing points and wayfinding signage) both to the Ludlow CWZ from the surrounding residential areas and through the Ludlow CWZ was undertaken to determine where improvements were needed. The audit included a review of footway provision and condition, the availability of crossing points and way-finding signage. A key focus of the audit was reviewing the infrastructure for those with mobility impairments. It also included consideration of historical collision data involving pedestrians.

The Walking Route Assessment Tool provides a baseline for existing conditions and identified the existing barriers and funnel routes (see Figure 4-5) when walking both to and within the CWZ. The results of the audit are shown in Table 4-1, Ludlow's CWZ achieved a score of 44%, far below the minimal provision score of 70% set out by the guidance.

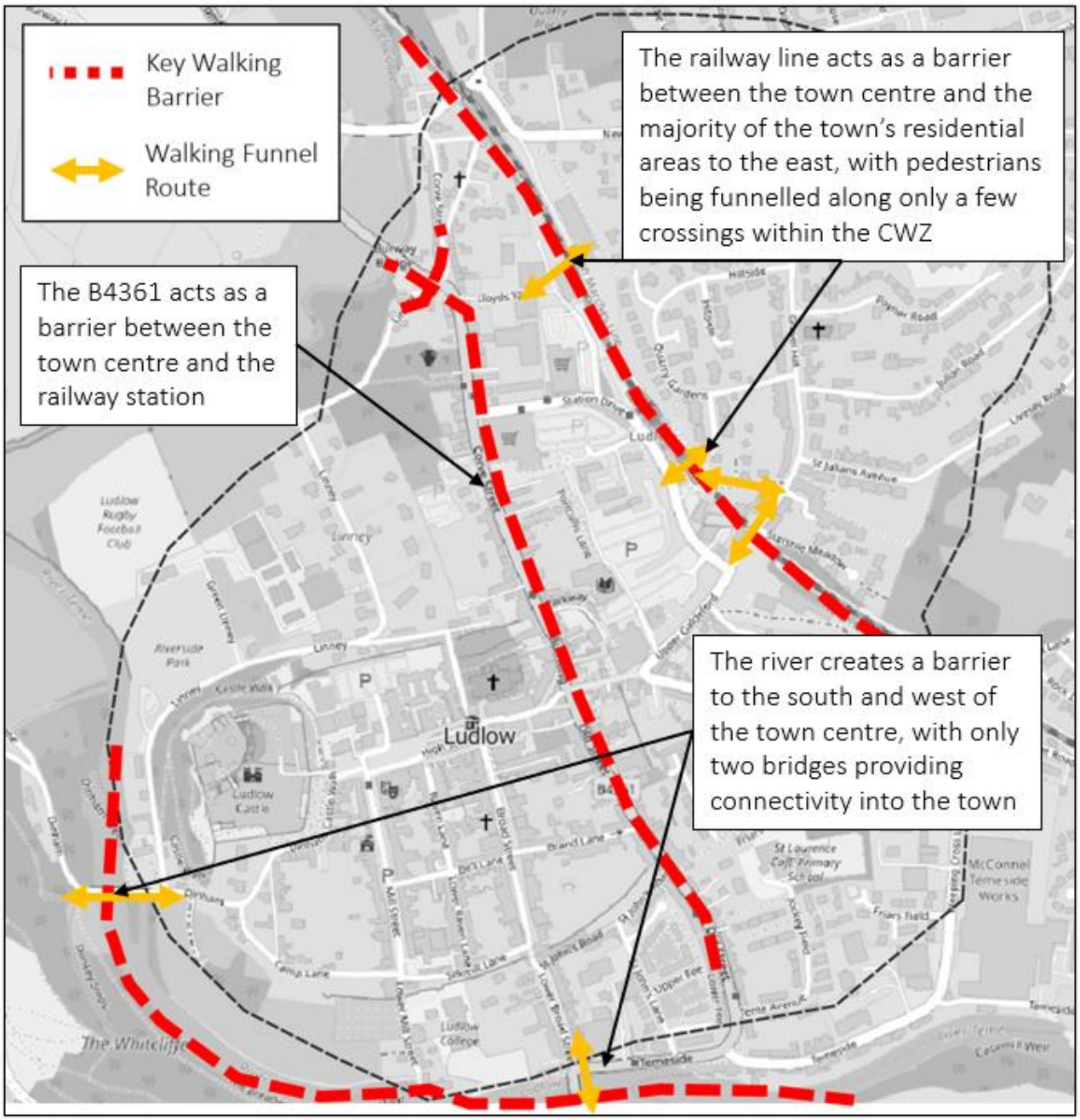

Figure 4-5: Ludlow town centre CWZ Barrier & Funnel Analysis

Principle	Performance Score	% Score
Attractiveness *(includes maintenance, fear of crime, traffic noise and pollution)*	4	67%
Comfort *(includes condition of footways, footway width, width on staggered crossings/pedestrian islands/refuges, prevalence of vehicles parked on the footway and gradient of footways)*	3	30%
Directness *(includes footway provision, location of crossings in relation to desire lines, gaps in traffic, impact of controlled crossings on journey time and green man time)*	6	60%
Safety *(includes traffic volume, traffic speed and visibility)*	2	33%
Coherence *(includes provision of dropped kerbs and tactile paving)*	0	0%
Total	**15**	**44%**

Table 4-1: Walking Route Audit Scores for the Ludlow CWZ

4.2 Core Walking Zone Improvements

Strategic recommendations for each CWZ have been based upon the key outcomes of Section 4.14.1 above.

Table 4-2 provides a series of overarching recommendations for improving the walking environment in the Ludlow CWZ, categorised by the key Gear Change (2020) principles of Attractiveness, Comfort, Directness, Safety & Coherence. As identified in the main LCWIP report, these principles are essential requirements for Shropshire Council to meet in order to qualify for future active travel grant funding from Active Travel England.

The proposed interventions are high-level and identify concepts for further consideration in the next stage of design. The interventions identified seek to address the issues and barriers identified in this chapter. Walking improvement measures for each of the CWZs range from minor interventions such as dropped kerbs to new crossings, footway widening and public realm improvement projects. Although the proposed interventions focus on the CWZs in line with DfT LCWIP guidance, they provide examples of the types of interventions that can be implemented in other parts of Ludlow and county-wide.

It is also worth noting that the majority of the cycle schemes proposed in Section 3.4 include provision for pedestrians and so also act as walking recommendations. The recommendations proposed below cover wider area improvements as most of the route specific changes are covered by cycling proposals above.

Key Principle	Scheme Number	Strategic Walking Improvement Recommendations
Attractiveness & Comfort	LW.01	Improve the sense of welcome outside the railway station
	LW.02	Increase width of footways along Corve Street by taking space from the wide carriageway
Directness	LW.03	Improve connection between the railway station and the town centre to make easier to navigate
	LW.04	Increase crossing points along Corve Street and within the town centre, including dropped kerbs for disability access
Safety	LW.05	Extend the 20mph area in the town centre to merge with the one to the north, creating a town centre wide 20mph zone

	LW.06	Provide continuous footways outside the railway station and crossings from the station towards the town centre
	LW.07	Public realm improvements to Town Street to further discourage through traffic
Coherence	LW.08	Improved signage and public realm improvements required to the walkway to the centre (south of Tesco to Corve Street and via Galdeford car park)
	LW.09	Improved signage and route-finding from the railway station towards the town centre

Table 4-2: Strategic Walking Improvement Recommendations in Ludlow Town Centre CWZ

5 Prioritisation Results

As explained in the main LCWIP Report, the purpose of the prioritisation process is to help inform which routes or areas could be considered for further development first. The LCWIP Guidance (DfT, 2017) states 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.

The LCWIP Main Report provides further detail on the Appraisal approach used to inform the prioritisation of schemes.

5.1 Top Performing Schemes

Table 5-1 shows the top performing schemes for Ludlow; a full list of the prioritisation results for Ludlow is shown in Appendix: Full Prioritisation Results.

The top scoring schemes are a mix of short connections which support local movements and new active travel links alongside key routes in and out of the town centre. The highest scoring scheme is improved access to and crossing of the Henley Road/Gravel Hill roundabout.

Scheme	Description	Zero Carbon	Healthier	Mode Shift	Inclusive	Sustainable Growth	Objective Total	Deliverability	Total Score	Local Rank
L.42	Henley Road approach to and crossing of the roundabout with Gravel Hill	5.25	7.5	9	7.5	6.75	36	**24**	**60**	**=1**
L.01	Main thoroughfare to the town centre, along Gravel Hill	5.25	7.5	9	7.5	8.25	38	**22**	**60**	**=1**
L.10	Route along Sheet Road connecting Sheet towards the town centre	6.75	7	8	6.75	8.25	37	**22**	**59**	**3**
L.47	St Julians Avenue and Livesey Road	4.5	6.5	7	6.75	7.5	32	**26**	**58**	**=4**
L.43	Henley Road between Gravel Hill roundabout and Corve Street	6	7.5	8	6	8.25	36	**22**	**58**	**=4**
L.05	Local route through residential area along Sandpits Road connecting to the hospital	4.5	7.5	7	7.5	6.75	33	**24**	**57**	**=6**
L.06	Connection along Lower Galdeford from Upper Galdeford to Steventon New Road	4.5	7.5	9	7.5	8.25	37	**20**	**57**	**=6**
L.02	Route through the main town centre/high street areas	4.5	7.5	9	8.25	7.5	37	**20**	**57**	**=6**
L.11	Connection through Gallows Bank along Dark Lane between Rock Lane and the industrial and eco parks	5.25	7.5	7	7.5	7.5	35	**22**	**57**	**=6**
L.13	Railway crossing into the station entrance from Quarry Gardens	3.75	7.5	9	6.75	6.75	34	**22**	**56**	**10**

Table 5-1: Top Performing Schemes in Ludlow

Figure 5-1: Top Scoring Schemes in Ludlow (coloured by individual scheme)

5.2 Prioritised Routes

5.2.1 Timescales

In line with DfT Guidance, this LCWIP considers a prioritised series of network upgrades across a ten-year period.

Future infrastructure improvement schemes have been categorised as follows:

- **Short Term Network Improvements (2 – 5 years):** *'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. Schemes can only be categorised as Short Term if they are either in the top 100 schemes over the county or have a score within the top 10 for the town they are in.
- **Medium Term Network Improvements (5 – 8 years):** Schemes that potentially require more than one round of consultation before progression, and are subject to further feasibility assessment and/or reliant on some dependency such as another scheme progressing.
- **Long Term (8 – 10 years):** Schemes that are more challenging to deliver due to the need for more in-depth consultation, noteworthy scheme engineering feasibility challenges and/or are reliant on other schemes progressing.

5.2.2 Prioritised Routes

Based on the outcomes of the appraisal and prioritisation process, the recommended delivery timescales for the cycling network are indicated in Figure 5-2.

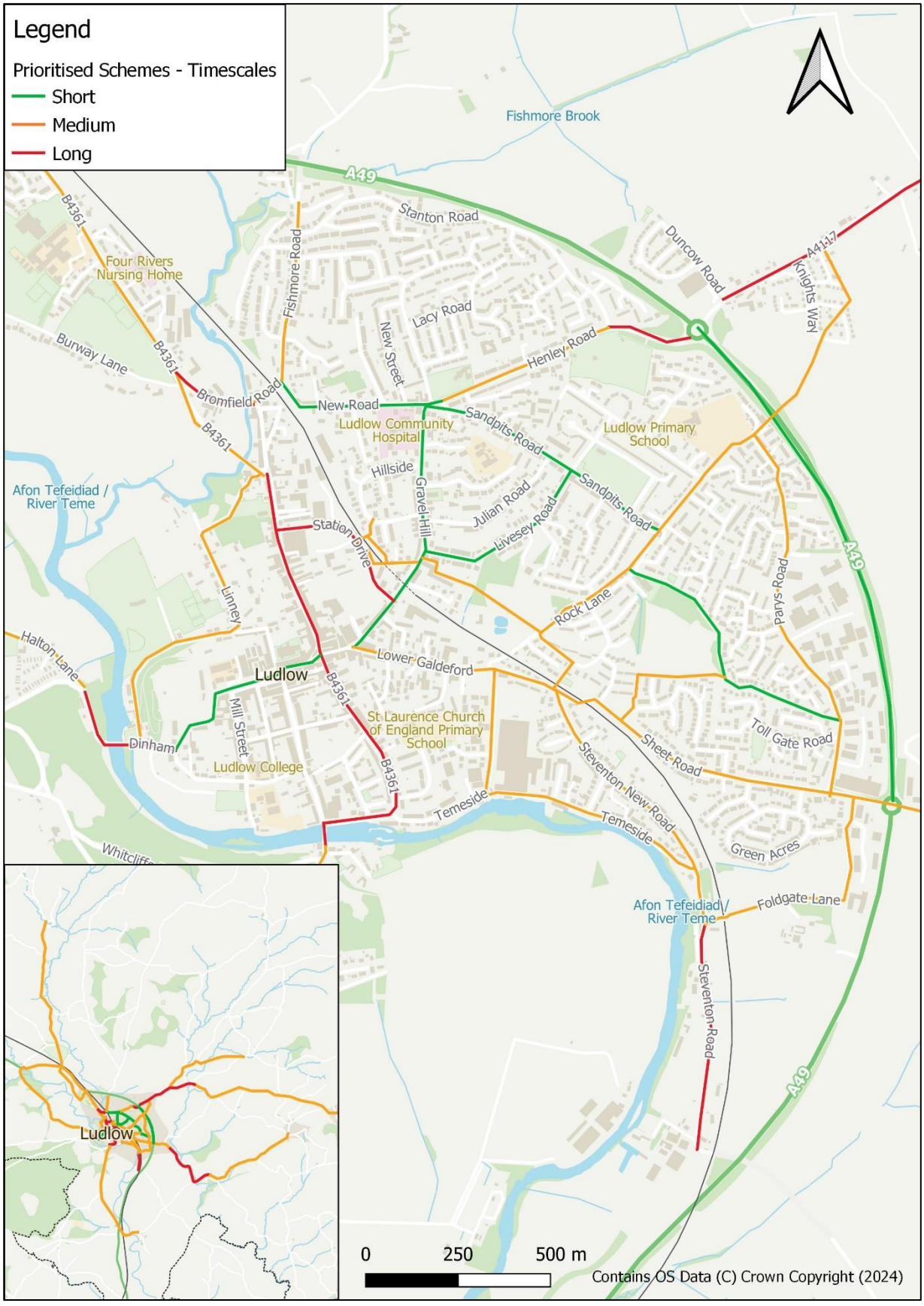

Figure 5-2: Prioritised Schemes in Ludlow

6 Appendix: Full Prioritisation Results

Scheme	Description	Zero Carbon	Healthier	Mode Shift	Inclusive	Sustainable Growth	Objective Total	Deliverability	Total Score	Local Rank	Time Scale
L.42	Henley Road approach to and crossing of the roundabout with Gravel Hill	5.25	7.5	9	7.5	6.75	36	24	**60**	**=1**	Short
L.01	Main thoroughfare to the town centre, along Gravel Hill	5.25	7.5	9	7.5	8.25	38	22	**60**	**=1**	Short
L.10	Route along Sheet Road connecting Sheet towards the town centre	6.75	7	8	6.75	8.25	37	22	**59**	**3**	Medium
L.47	St Julians Avenue and Livesey Road	4.5	6.5	7	6.75	7.5	32	26	**58**	**=4**	Short
L.43	Henley Road between Gravel Hill roundabout and Corve Street	6	7.5	8	6	8.25	36	22	**58**	**=4**	Short
L.05	Local route through residential area along Sandpits Road connecting to the hospital	4.5	7.5	7	7.5	6.75	33	24	**57**	**=6**	Medium
L.02	Route through the main town centre/high street areas	4.5	7.5	9	8.25	7.5	37	20	**57**	**=6**	Short
L.06	Connection along Lower Galdeford from Upper Galdeford to Steventon New Road	4.5	7.5	9	7.5	8.25	37	20	**57**	**=6**	Medium
L.11	Connection through Gallows Bank along Dark Lane between Rock Lane and the industrial and eco parks	5.25	7.5	7	7.5	7.5	35	22	**57**	**=6**	Short
L.13	Railway crossing into the station entrance from Quarry Gardens	3.75	7.5	9	6.75	6.75	34	22	**56**	**10**	Medium
L.07	Railway crossing between Sheet Road and Housman Crescent	6.75	6.5	5	7.5	7.5	33	22	**55**	**=11**	Medium
L.12	Route along A49 between Rocks Green and The Sheet	7.5	6	6	8.25	7.5	35	20	**55**	**=11**	Long
L.24	Connection from Rocks Green development site into Ludlow across A49, heading towards town centre following existing PROWs and Ridings Road	6	5.5	6	8.25	7.5	33	22	**55**	**=11**	Medium
L.35	Route along Parys Road connecting residential areas to the industrial estate and other local destinations	7.5	6.5	5	8.25	7.5	35	20	**55**	**=11**	Medium
L.15	Eastern access to the railway station from Gravel Hill	4.5	7.5	7	6.75	6.75	33	22	**55**	**=11**	Medium
L.46	Linney between Dinham Bridge and Corve Street	4.5	6	7	8.25	6.75	33	22	**55**	**=11**	Medium

Scheme	Description	Zero Carbon	Healthier	Mode Shift	Inclusive	Sustainable Growth	Objective Total	Deliverability	Total Score	Local Rank	Time Scale
L.09	Route along Station Drive to connect into the train station from the town centre and other trunk roads	4.5	7.5	8	6	7.5	34	20	**54**	**17**	Long
L.04	Henley Road between the A49 and Weyman Road	4.5	7	6	8.25	7.5	33	20	**53**	**=18**	Long
L.29	Connection through south-eastern residential area along Steventon New Road linking the zone to local destinations south of the town	5.25	6	4	5.25	6.75	27	26	**53**	**=18**	Medium
L.41	Henley Road between Weyman Road and Sandpits Road	4.5	7.5	9	7.5	6.75	35	18	**53**	**=18**	Medium
L.16	Route along Old Street and Corve Street connecting the north of the town to the town centre and railway station	5.25	7.5	9	7.5	7.5	37	16	**53**	**=18**	Long
L.14	Connection through residential area along PROW linking towards the train station	4.5	6.5	7	6.75	7.5	32	20	**52**	**=22**	Medium
L.26	Route along the pathway parallel to Rock Lane between Sandpits Road and the Railway line	4.5	6	7	6.75	7.5	32	20	**52**	**=22**	Medium
L.28	Back route from Steventon to Ludlow Eco Park along Foldgate Lane	6.75	5.5	4	4.5	6	27	24	**51**	**=24**	Medium
L.17	Connection through the centre employment area along Weeping Cross Lane	4.5	6	5	7.5	7.5	31	20	**51**	**=24**	Medium
L.45	Temeside between Weeping Cross Lane and Steventon New Road	5.25	6	4	8.25	8.25	32	18	**50**	**=26**	Medium
L.23	Route through Gallows Bank along PROWs connecting to Sheet Road	5.25	6.5	5	6.75	6	30	20	**50**	**=26**	Medium
L.33	Connecting the town centre to Ludlow CofE School and beyond to A49 along Coronation Avenue (B4361)	5.25	6	8	6.75	5.25	31	18	**49**	**=28**	Medium
L.03	Bromfield Rd (B4361)	5.25	7	6	5.25	5.25	29	20	**49**	**=28**	Medium
L.31	Connection between Culmington and Ludlow along existing PROW	6.75	6	4	6	3.75	27	22	**49**	**=28**	Medium
L.37	A49 to Bromfield	6.75	6	6	6	3.75	29	20	**49**	**=28**	Medium
L.48	Fishmore Road	5.25	7	5	6	6	29	18	**47**	**32**	Medium

Scheme	Description	Zero Carbon	Healthier	Mode Shift	Inclusive	Sustainable Growth	Objective Total	Deliverability	Total Score	Local Rank	Time Scale
L.36	Connecting Bromfield to Ludlow, upgrade of existing National Cycle Network Route 44 along existing PROWs	5.25	6.5	6	4.5	5.25	28	18	**46**	**33**	Medium
L.22	Connection from Ashford Carbonell to Ludlow (B4361)	5.25	6.5	5	4.5	6	27	16	**43**	**=34**	Medium
L.20	Connection from Cleehill to Ludlow	6.75	6	4	5.25	3	25	18	**43**	**=34**	Medium
L.25	River crossing along Dinham bridge, connect leisure route along National Cycle Network Route 44	4.5	6.5	6	6	4.5	28	14	**42**	**=36**	Long
L.27	Connection from Steventon to Ludlow along Steventon Rd and Steventon New Road	6.75	5	4	5.25	4.5	26	16	**42**	**=36**	Long
L.19	Connection from Knowbury to Caynham, links in with further connection to Ludlow	7.5	5	4	3.75	3	23	18	**41**	**=38**	Medium
L.08	Ludford Bridge river crossing	6	6	5	6.75	5.25	29	12	**41**	**=38**	Long
L.30	Connection between Culmington and Ludlow along B4365	6	5.5	4	4.5	3	23	18	**41**	**=38**	Medium
L.40	A4117 Rocks Green from A49 roundabout to Henley	6	5.5	4	4.5	5.25	25	14	**39**	**41**	Long
L.32	Route along Bromfield Road and Corve Bridge	3.75	6	6	5.25	5.25	26	12	**38**	**=42**	Long
L.21	Connection from Bitterley to Ludlow (B4364)	6	5.5	4	4.5	3.75	24	14	**38**	**=42**	Medium
L.18	Connection from Caynham to Ludlow	6	5	4	4.5	3.75	23	10	**33**	**44**	Long

Table 6-1: Full Prioritisation Results for Ludlow

7 References

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