Leicestershire County Council

South of Leicester Area

Local Cycling and Walking Infrastructure Plan (LCWIP)

Encouraging and enabling our communities to travel actively for life

2023

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1. Introduction

Following the adoption of our Cycling and Walking Strategy and Action Plan in 2021, we are now in the process of developing Local Cycling and Walking Investment Plans (LCWIPs) for county towns and the urban areas surrounding Leicester City. These LCWIPs will set out the vision and priorities for cycling, walking and wheeling improvement in each of the areas to create attractive, coherent cycling and walking networks to help to encourage and enable our communities to travel actively for life.

This report sets out how we have developed an LCWIP for the South of Leicester area, the evidence base which informed its development, and our first 10-year pipeline of priorities for improvement, as well as some concept ideas of how we could improve our highway spaces and places to help engage with our communities.

1.1 What is an LCWIP?

In essence, LCWIPs are a mechanism to help deliver transformational change in how we travel locally, helping to improve public health and the environment, reducing congestion, connecting our communities and creating cleaner, greener, happier places. They are developed in accordance with the process prescribed in national technical guidance (see section 1.2).

In practical terms, LCWIPs are long term infrastructure plans for investment, which set out the priority cycling and walking route networks for an area. They ensure that the greatest benefit is provided to the most people, to encourage and enable them to travel more actively. The plan will be used to secure funding for delivery of improvements and will evolve and be updated over time, reflecting new routes and priorities as schemes are delivered and new development provides opportunities for active travel.

LCWIPs were introduced in the Government's Cycling and Walking Investment Strategy (2017) as a key part of increasing the number of trips made by active modes such as walking, wheeling,[1] and cycling. They are a strategic approach to identifying priorities for active travel improvements in local areas and enable a long-term (10-year) approach to developing local cycling and walking networks.

LCWIPs will assist Local Authorities in:

- identifying infrastructure improvements and prioritising these for short, medium and long-term delivery,
- ensuring that cycling, walking and wheeling are given appropriate consideration in local planning and transport policies and strategies, and
- making the case for funding for future cycling, walking and wheeling schemes.

Although the term "LCWIP" only refers to cycling and walking, LCWIPs are about having a holistic approach to planning and design, resulting in plans that increase people's opportunity to choose all forms of active travel for their journeys. This covers walking and wheeling in many forms including bikes, trikes, e-cycles, scooters, and inclusive mobility such as adapted bikes and rollators.[2] The plans also consider provision for equestrian use where appropriate.

LCWIPs will be reviewed 3, 5, and 10 years after publication.

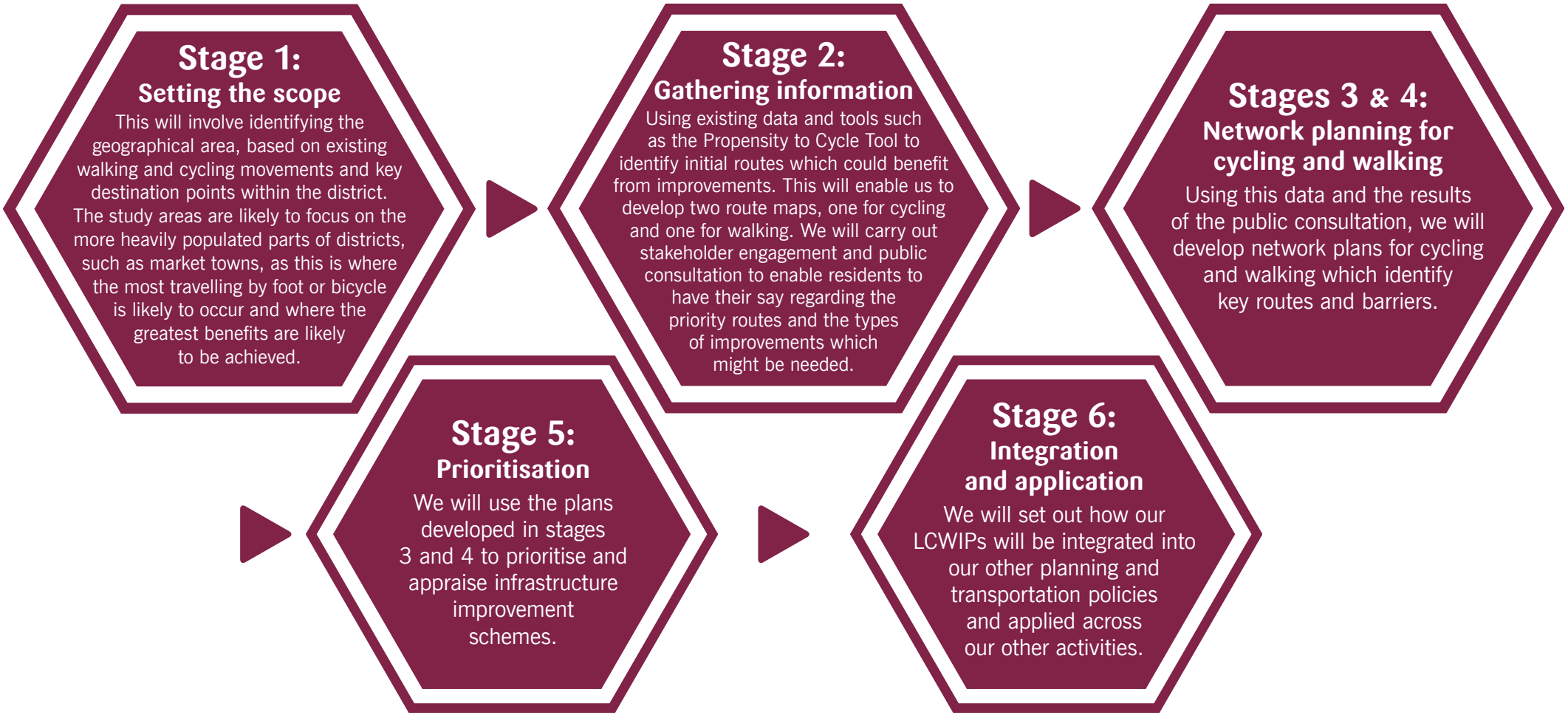
[1] The term 'wheeling' refers to people using wheeled mobility aids such as wheelchairs and mobility scooters, as well as people walking with pushchairs and prams.

[2] For more information about inclusive mobility, visit the Wheels for Wellbeing website.

1.2 The LCWIP development process

Each LCWIP will be developed following the process set out in the LCWIP technical guidance for local authorities, published by Government in 2017. The guidance supports the development of evidenced and meaningful plans for our communities, encouraging and enabling more cycling, walking and wheeling.

Figure 1.1 – The LCWIP process



1.3 Document structure

It is important that LCWIPs comply with the LCWIP technical guidance, as the documents will form the basis for future bids for public funding (i.e. funding from Government) to deliver cycling and walking infrastructure improvements. Below is a summary of the structure of this LCWIP and how it relates to the various stages of the process as set out in the LCWIP technical guidance:

- **Chapter 1** - Introduction. This section explains what an LCWIP is and the process for developing one.
- **Chapter 2** - Context. This chapter provides a summary of the wider national, regional, and local context within which our LCWIPs are being developed.
- **Chapter 3** - Scope and objectives. This sets out the geographical scope and objectives. (Stage 1 of the LCWIP technical guidance)
- **Chapter 4** - The current state of cycling and walking in Leicestershire and the LCWIP area. This chapter sets out our findings from the review of existing data. (Stage 2)
- **Chapter 5** - Developing our network plans. This explains the process that we went through to identify the network plans, including the public consultation and modelling which we have carried out to identify future key routes and barriers to walking and cycling. (Stages 3 and 4)
- **Chapter 6** - In this chapter, we set out how we assessed the priority networks to identify needs for improvements (stages 3 and 4), and went beyond the basic requirements of the LCWIP technical guidance by going the extra step and developing concept scheme ideas.
- **Chapter 7** - Prioritising the schemes and concepts. This chapter builds on chapter 6 to explain how we arrived at a prioritised list of schemes for the first ten-year LCWIP period. (Stage 5)
- **Chapter 8** - How we get from here to there. This chapter covers proposals for implementing the LCWIP, including timescales, future engagement, potential funding sources, and how the LCWIP will be integrated with other policies. (Stage 6)
- **Chapter 9** - Conclusion and next steps. This chapter summarises the immediate next steps which we will look to undertake to deliver the LCWIP.

The detailed technical work which has supported development of the LCWIP can be found on the LCWIP evidence webpage.

2. Context

LCWIPs are predominantly transport plans. However, like all transport plans, they are significantly influenced by non-transport issues such as the environment, health and wellbeing, and access to services such as education and jobs. Therefore, there are a wide variety of national and local policies and considerations which make up the context within which we have developed our LCWIPs.

2.1 National context

2.1.1 Active Travel England

Active Travel England was established in 2022 as an executive agency, sponsored by DfT. Its main objective is for 50% of trips in England's towns and cities to be made by walking, wheeling, and cycling by 2030. Its ambition is that cycling, walking and wheeling will become the preferred choice for everyone travelling in England.

The organisation offers expertise in scheme design, implementation, and stakeholder management. Its role is to work with local authorities to:

- deliver quieter roads and neighbourhoods, which give people an alternative to driving,
- put active travel at the heart of towns and cities,
- ensure that active travel is embedded in major new developments,
- provide the tools to deliver ambitious walking, wheeling, and cycling programmes, including training in active travel delivery best practice, and
- improve active travel safety, including developing new solutions and providing guidance on safe infrastructure design.

However, its most significant function is to assess local authorities' walking, wheeling, and cycling schemes and dispense Government funding to enable delivery of new and improved infrastructure, ensuring that investment delivers schemes which meet new, high, national standards.

2.1.2 National policy

National policies, such as Gear Change – A Bold Vision for Walking and Cycling, the Net Zero and Clean Air strategies, and the Cycling and Walking Investment Strategy (CWIS), have influenced the development of our Cycling and Walking Strategy (CaWS) and Action Plan.

Figure 2.1 illustrates the key national policies which have influenced the development of this LCWIP, in addition to those which influenced the development of the CaWS.

Figure 2.1 – National policy relevant to LCWIPs

2.2 Leicestershire context

Leicestershire is made up of a ring of seven districts – Blaby, Charnwood, Harborough, Hinckley and Bosworth, Melton, North West Leicestershire, and Oadby and Wigston – with Leicester City at its centre. Leicestershire County Council is the highway authority for all of the roads in Leicestershire, excluding the strategic road network, which is managed by the strategic highway authority (currently National Highways), and roads in Leicester City, which are managed by Leicester City Council. The population of Leicestershire is over 700,000 people, of which approximately 55% live in rural areas.

2.2.1 Local policy

Figure 2.2 illustrates the key local policies which have influenced the development of this LCWIP, in addition to those which influenced the development of the CaWS.

Figure 2.2 – Local policy relevant to the South of Leicester LCWIP

2.2.2 Other local authorities

Leicestershire is a two-tier authority. This means that certain functions, such as transport and waste disposal, are managed by Leicestershire County Council, whilst other functions such as air quality monitoring and town planning are managed by the seven district councils listed in 2.2, above.

Leicester City is the responsibility of a single tier authority, Leicester City Council, which carries out all of the functions which are split between the district and county councils in Leicestershire.

2.2.2.1 District local plans

Local plans are important documents, which set out the district councils' plans for managing and improving the local area in their role as local planning authorities.

Part of the role of local plans is to allocate sites for major housing, employment and other development, and identify the infrastructure needed to support them. This includes changes to transport infrastructure, which is needed to support both new development ambitions, and other Local Plan targets, such as those relating to the environment and health.

The major developments which are included in the existing local plans at the time at which this LCWIP was developed were taken into account during the development of the LCWIP. We also considered other Local Plan objectives which can be affected by how people travel, such as health and environmental targets.

Leicestershire County Council is a statutory consultee for local plans. We will use this role to ensure that the LCWIP priorities and plans for future LCWIPs are acknowledged in the development of future Local Plan documents as appropriate.

2.2.2.2 District Council LCWIPs

Some district councils may decide to also develop individual LCWIPs for their districts. These may focus on more priorities at a local level, whilst Leicestershire County Council (LCC) LCWIPs focus on delivering connected priority networks in our towns and most urban areas. However, it is expected there will be strong synergies with aims and ambitions, due to all authorities following the DfT process and guidance for developing LCWIPs and the continued productive partnership engagement between councils.

We have engaged with the district councils, to ensure that their valuable views were considered in the development of this LCWIP (see Chapter 5). We have also aimed to align our priorities with those of the district councils where appropriate. We will review this alignment when we review the overall LCWIPs 3, 5, and 10 years after publication.

We will also engage with the district councils as they develop their own LCWIPs to ensure that, where appropriate, our respective plans and priorities continue to align and complement each other.

2.2.2.3 Leicester City Council

Leicester City is an important start and end point for many journeys in Leicestershire, particularly for people travelling into and out of the urban areas around Leicester. Therefore, it will be important for cycling, walking and wheeling networks which cross the boundary between the two areas to form coherent routes, where possible.

We engaged with the City Council, to ensure that their valuable views were considered in the development of this LCWIP (see Chapter 5), and aimed to align our priorities with those of the City Council where appropriate. We will review this alignment when we review the overall LCWIPs at 3, 5, and 10 years after publication.

You can read more about how we will engage with other local authorities during delivery of our LCWIPs in section 8.3.

3. Scope and objectives

We decided that developing a single LCWIP covering the entire County would not be appropriate to manage the diverse needs of county towns, urban areas adjoining Leicester City, and rural areas. Instead, as outlined below, we developed a programme of LCWIPs, driven by the LCWIP guidance, evidence, and the differing natures of the areas themselves.

3.1 Identifying the programme and geographical scope of our LCWIPs

The LCWIP guidance states that the distances within which cycling, walking and wheeling have the potential to reduce private car travel should be considered when developing the geographical scope of LCWIPs. These distances are typically up to 10km for cycling, and up to 2km for walking. The guidance also states that local authorities should consider the density and number of services and facilities to which people want to travel when defining the geographical boundary of the LCWIP.

In counties such as Leicestershire, the greatest amount of cycling, walking and wheeling takes place in urban areas, rather than rural settlements and villages. This is because towns and urban areas are more densely populated and have a greater number of services and facilities within a short distance conducive to choosing active travel. Therefore, we focused on developing LCWIPs for the towns and urban areas in Leicestershire.

The boundaries for the towns and urban areas were defined according to the Office of National Statistics Lower Super Output Areas[3] (LSOAs). In some places, the close proximity of adjoining urban areas was considered to have the potential to influence active travel. We expanded the boundaries of these areas, to maximise the benefits of LCWIPs to communities. This included expanding the Urban Fringe boundaries around Leicester, to create North of Leicester and South of Leicester LCWIP areas.

This gave us the following priority areas for consideration (in alphabetical order):

- Ashby-de-la-Zouch
- Coalville
- Hinckley
- Loughborough and Shepshed
- Lutterworth
- Market Harborough
- Melton Mowbray
- North of Leicester
- South of Leicester

[3] Lower Super Output Areas are areas which comprise between 400 and 1,200 households and have a usually resident population of between 1,000 and 3,000 people.

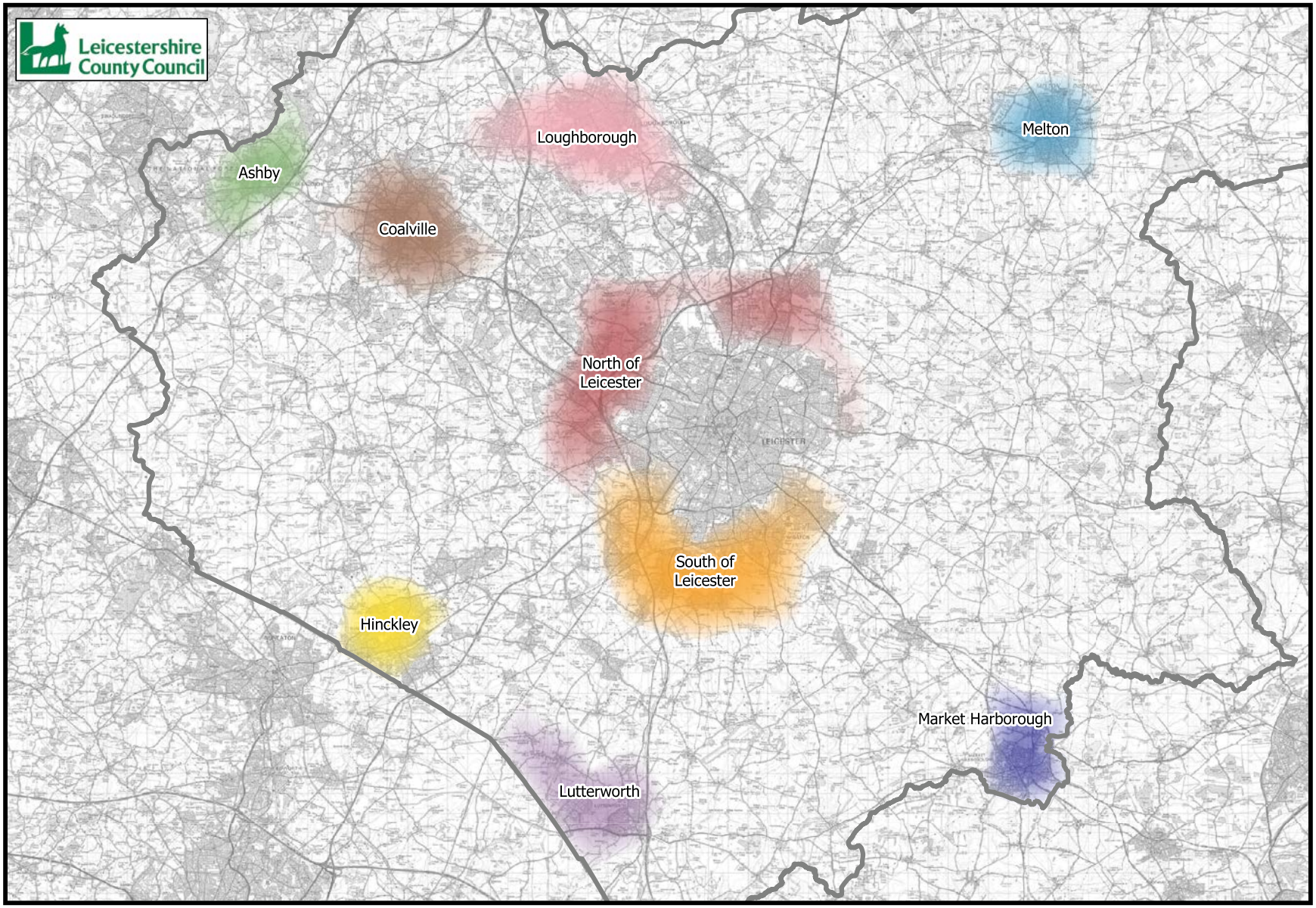


Figure 3.1 – Map of LCWIP areas

3.2 Prioritising the LCWIP areas

After fully considering the requirements of the LCWIP guidance, we identified that developing LCWIPs for all of the identified areas in tandem would be unwieldy, and likely to result in poorer quality LCWIPs. Instead, we decided to prioritise the areas and focus on developing 2 LCWIPs per year.

The development of high-quality evidence led LCWIPs takes time and resources. Therefore, the number of LCWIPs developed per year must also be balanced in consideration of the other financial pressure on the authority's budgets. This approach enables us to develop higher-quality evidence led LCWIPs in an affordable manner and deliver our first LCWIPs earlier.

The LCWIP guidance recommends that, where local authorities are developing multiple LCWIPs, priority should be given to those which have the greatest potential for growing cycling and walking trips.

Prior to the publication of Gear Change and LTN1/20, we had been developing an LCWIP as part of a DfT pilot project. This project provided valuable insight and experience into understanding:

- how people travel,
- the potential benefits of increasing cycling and walking in an urban area, and
- the fundamentals of what makes a good LCWIP aligned to Government aspirations.

This pilot area was considered alongside the other identified areas, to ensure that the delivery of LCWIPs prioritises those which have the greatest potential to deliver benefits.

A review was undertaken of the cycling and walking travel based on 2011 Census[4] data, and cycle count data where available, to establish the current level of cycling and walking travel in each of the remaining areas. A high-level analysis was then carried out of the potential for areas to benefit from increased cycling and walking, based on DfT best practice. As part of this work, several factors were considered, including:

- the DfT's Propensity to Cycle Tool, an open source, online tool for estimating cycling potential and health/CO2 benefits,
- the number of road traffic collisions involving cyclists or pedestrians,
- sociodemographic factors, including population age and gender profiles, access to a car, and deprivation,
- planned future developments, and
- the presence of Air Quality Management Areas.

We also looked at the number of key attractors within the likely cycling and walking distances of 10km and 2km respectively. These are places to which people want to travel, including schools, supermarkets, healthcare facilities, and places of leisure such as libraries, parks, and visitor attractions.

These criteria were weighted, with strongest weighting being given to collisions, the number of key attractors, the Propensity to Cycle analysis, and the sociodemographic profile of the area.

The areas were ranked based on their relative performance against each of the individual metrics, including our understanding of the relative potential benefits in the pilot LCWIP area. We then used an average of the individual rankings, weighted as set out above, to create a final priority order.

Perhaps unsurprisingly, given their population densities, the Loughborough and Urban Fringe South of Leicester areas consistently scored highly across all of the metrics. This meant that they were highest priority areas for development in our first phase of LCWIPs.

[4] 2021 Census data was not available at the time of developing the geographical scope. It will be taken into consideration as part of the LCWIP 3-year reviews.

3.3 The South of Leicester LCWIP area

The South of Leicester LCWIP area is mostly flat. However, there are some steep gradients in some areas, such as the area around Enderby High Street, which could be challenging for cyclists. There are also numerous physical barriers with limited crossing points, including rivers, canals, railway lines, and heavily trafficked roads, as shown in Figure 3.7, below. These often lengthen the routes which people have to take to reach their destinations, and make travelling by cycling, walking and wheeling less attractive.

The South of Leicester LCWIP area covers the main urban and inter-urban areas in the districts of Blaby and Oadby and Wigston. Based on 2021 Census data, the study area has an overall population of 160,673, of which 49% is male and 51% is female.

Blaby, at the time of the 2021 Census, had a population of 102,926 people. The town of Blaby is the only part of the district which is identified as a 'town centre'[5] in the Blaby Local Plan. The remainder of the district contains 24 other settlements of varying sizes. These range from the smallest, Wigston Parva (population: approximately 30 people), to Braunstone Town, which is the largest settlement with a population of about 18,000.

Blaby has good road connections, including to the M1 and M69 motorways. Significant non-residential developments in the district, such as Fosse Park, Meridian Business Park, and Meridian Leisure Centre are generally located around the M1. The district also has a railway station at Narborough, which has an hourly service to Leicester and Birmingham (the latter via Nuneaton).

Oadby and Wigston has a population of 57,747 in an area of 2,400ha. It has a higher percentage of over 74-year-olds as a proportion of its total population than anywhere else in Leicestershire, at 10.7%. This is likely to affect the proportion of journeys which are made by active modes, public transport, and private car across the district, how volume of travel is spread across the day, and the purposes for which people are travelling. For example, older people are less likely to make trips to places of education, and those holding an older person's bus pass are more likely to travel after 9:30am.

The three major settlement areas are Oadby, Wigston, and South Wigston. Of these, Wigston is the only location in the district which is identified as a 'town centre' in the Oadby and Wigston Local Plan. However, residents tend to access the shops and services which are within the area in which they live. The district has various areas identified for employment, and the University of Leicester has had a campus in Oadby since the mid-20th Century.

South Wigston railway station provides the district with rail access to Leicester, and to Birmingham via Nuneaton.

[5] 'Town Centres' are defined in the National Planning Policy Framework as "Area[s] defined on the local authority's policies map, including the primary shopping area and areas predominantly occupied by main town centre uses within or adjacent to the primary shopping area." (National Planning Policy Framework, Ministry of Houses, Communities, and Local Government, June 2021).

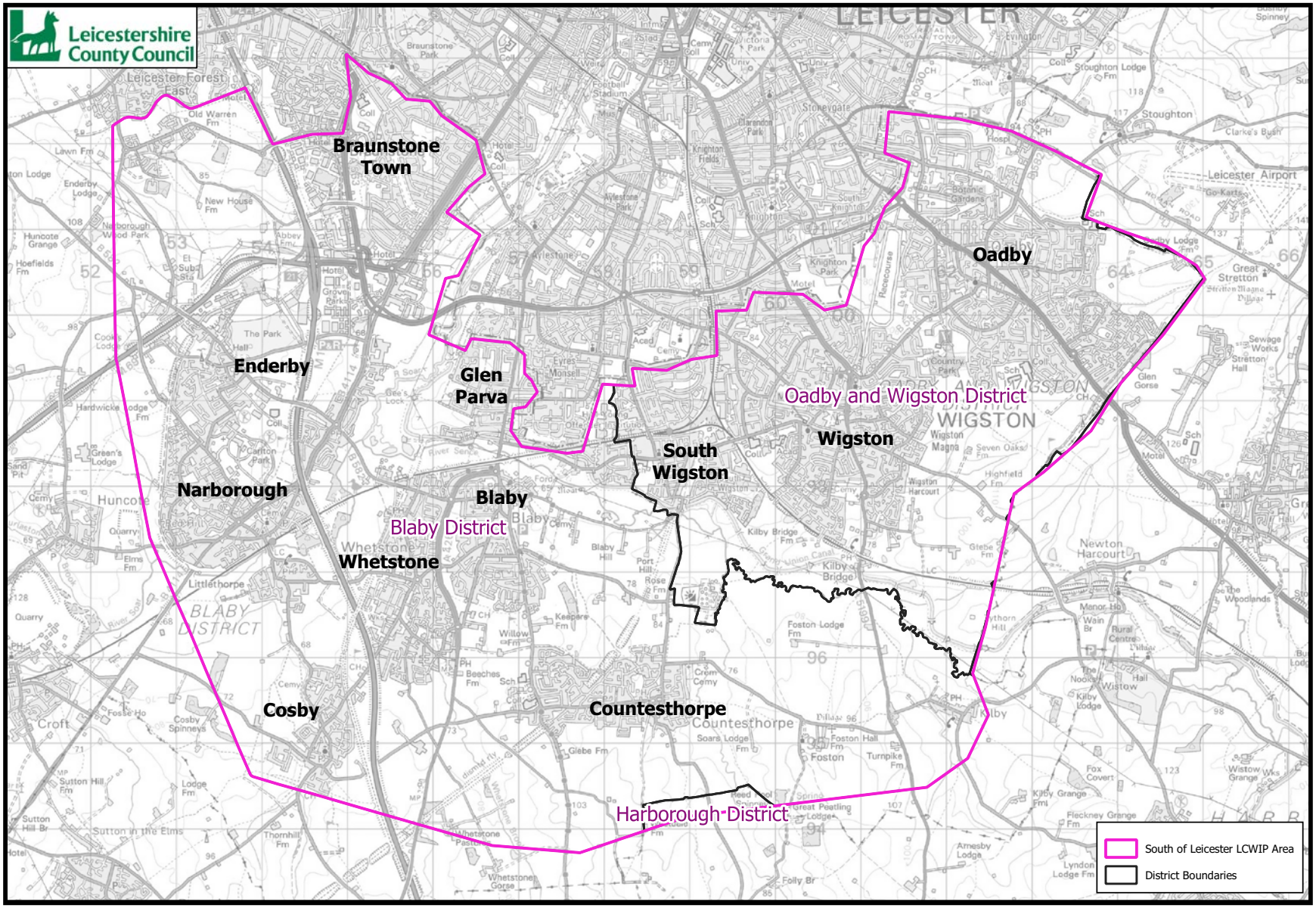


Figure 3.2 – District boundaries, major settlements and parishes in the South of Leicester LCWIP area

Figure 3.3 – Proportion of the South of Leicester LCWIP area population by age[6]

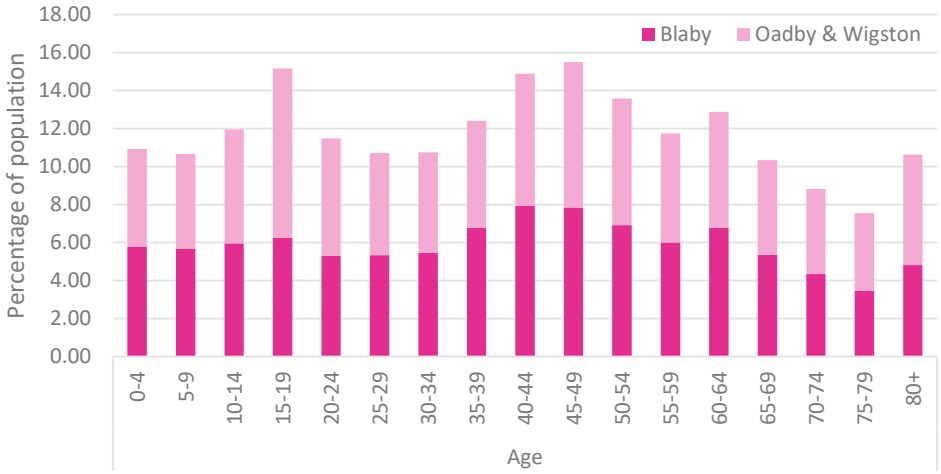


Figure 3.4 – Proportion of reception and year 6 age children who are classified as overweight or obese in the South of Leicester LCWIP area[7]

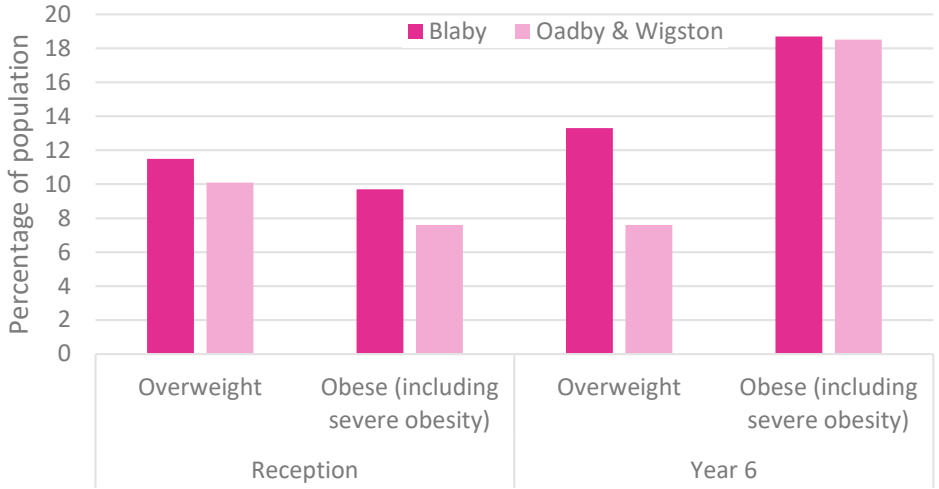
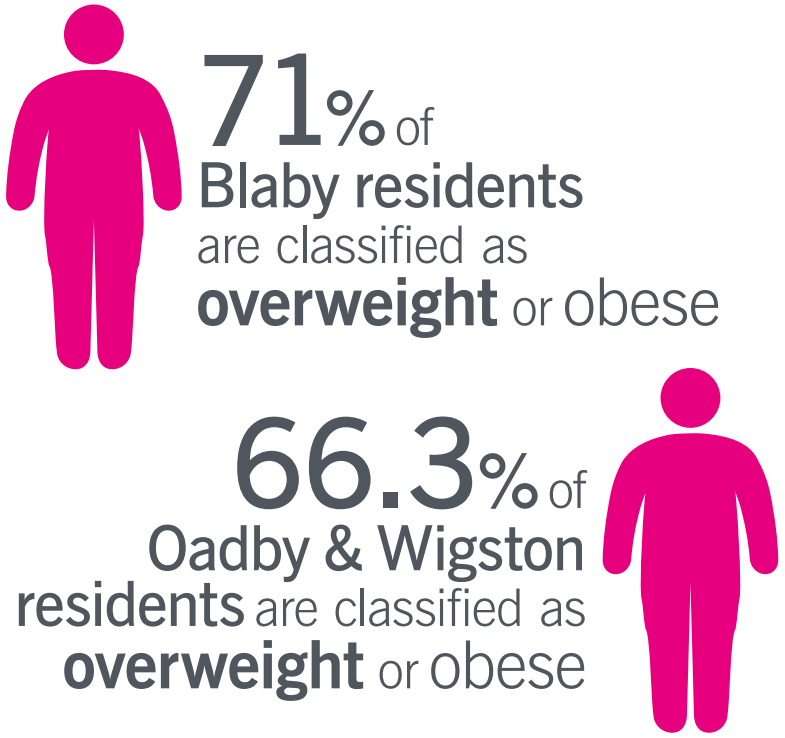


Figure 3.5 – Proportion of adults who are classified as overweight or obese in the South of Leicester LCWIP area[8]



[6] Percentages may not total 100% due to rounding. Source: Office of National Statistics (2011 Census).

[7] Source: Public Health England data, 2021.

[8] Source: Public Health England data, 2021.

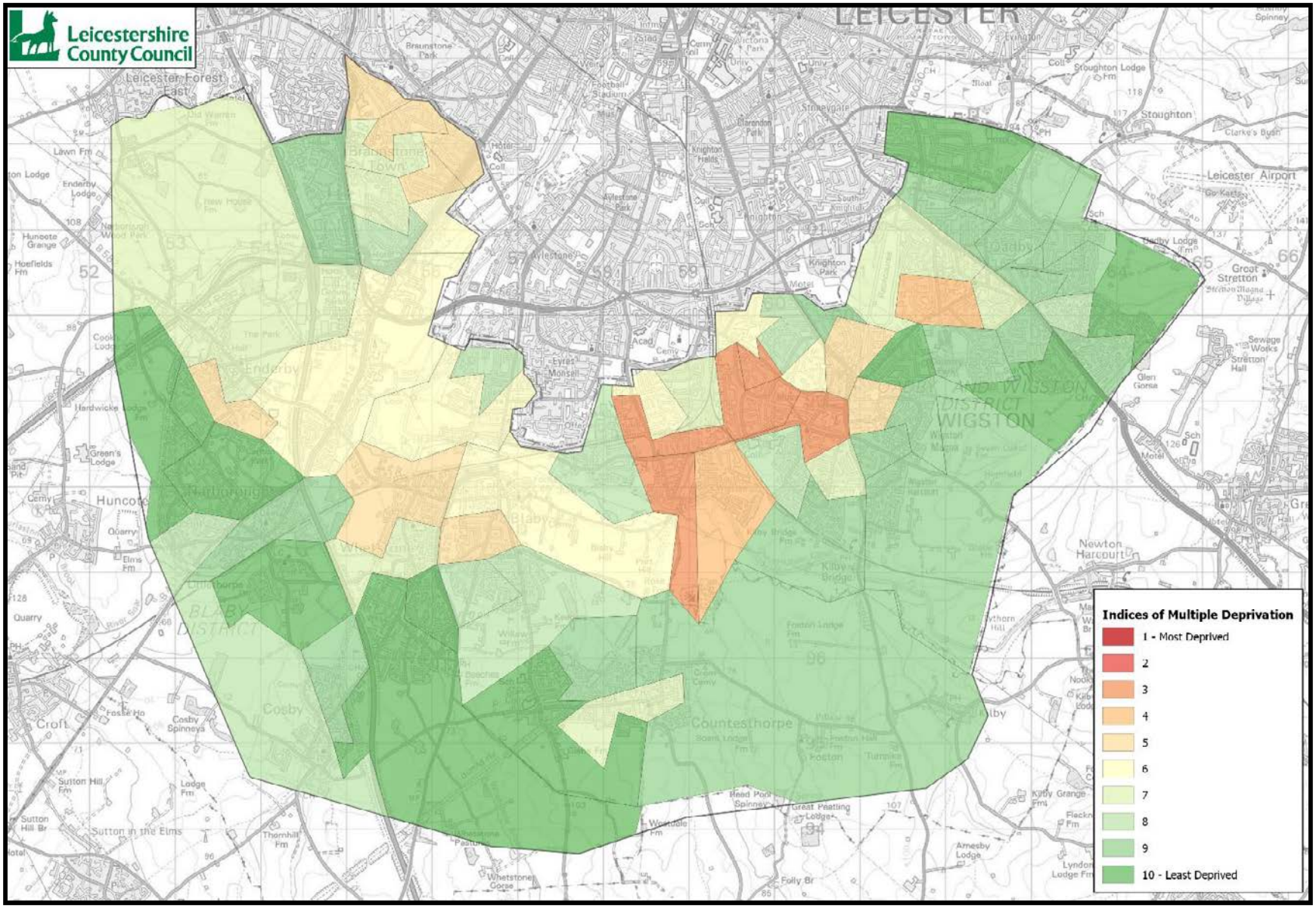


Figure 3.6 – Areas of deprivation in the South of Leicester LCWIP area

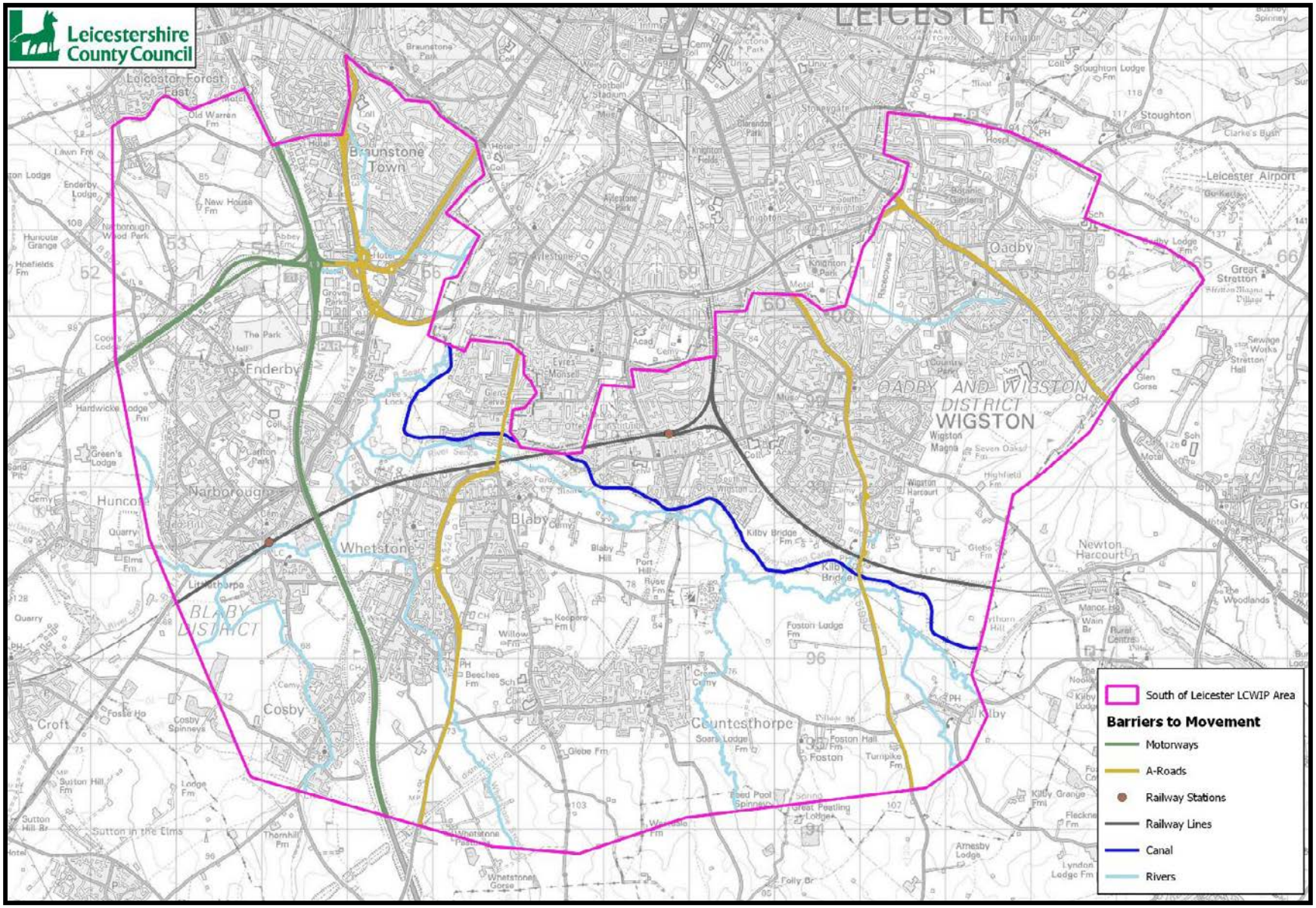


Figure 3.7 – Major physical barriers to travel by cycling, walking and wheeling in the South of Leicester LCWIP area

3.4 Objectives

Each LCWIP is expected to contribute towards the objectives of our Cycling and Walking Strategy (CaWS) and national 'Gear Change' cycling and walking plan, as well as objectives which are more specific to the LCWIP local area.

The CaWS objectives are:

1. **To enhance the infrastructure that supports cycling and walking in Leicestershire.**
2. **To enable people to cycle and walk in Leicestershire.**
3. **To inspire a step change in cycling and walking in Leicestershire.**

In addition to the CaWS objectives, we have used the feedback received from engagement activities (see 5.2, below), combined with demographic information, to identify important issues for local residents and the area as a whole. These have informed our development of objectives specific to the South of Leicester LCWIP:

1. **To improve active travel on corridors from the county towns into Leicester City.**
2. **To improve cycling, walking and wheeling connections for east-west travel across the South of Leicester LCWIP area.**
3. **To improve active travel provision to and from Narborough and South Wigston rail stations.**
4. **To improve cycling, walking and wheeling access to key employment sites including Carlton Park, Fosse Park, Next Headquarters, and Santander.**
5. **To improve access to the University of Leicester Oadby campus and other places of primary, secondary, or higher education by cycling, walking and wheeling.**

4. How people travel in the South of Leicester LCWIP area

4.1 Travel to work and education

4.1.1 Travel to work

According to 2011 Census data, approximately 39% of people who work in the South of Leicester LCWIP area also live there, and private car is the dominant mode of travel to work. Travel by private car as a proportion of all travel to work in the major settlement areas varies from 58.3% in South Wigston to 71.7% in Blaby. Outside of Blaby, Oadby, Wigston, and South Wigston, it is approximately 77% of all travel to work.

The next most common mode of travel to work is walking, which ranges from 14% of journeys outside of the major settlements to over 28% in South Wigston. Cycling accounts for an average of 5.6% of journeys to work throughout the LCWIP area.

Most journeys to work in all parts of the LCWIP area are under 10km. This is particularly high in Blaby and the area outside of the major settlements, where over 50% of journeys to work are under 2km. This suggests that there is a very high potential for modal shift from private car to cycling and walking for travel to work within the South of Leicester LCWIP area.

Figure 4.1 – Journeys under 10km as a percentage of all travel to work (2011 Census)

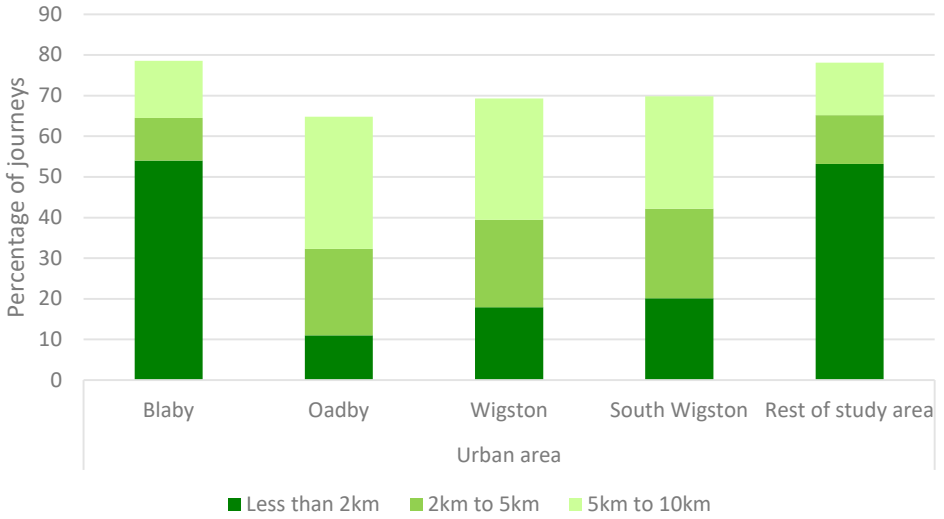
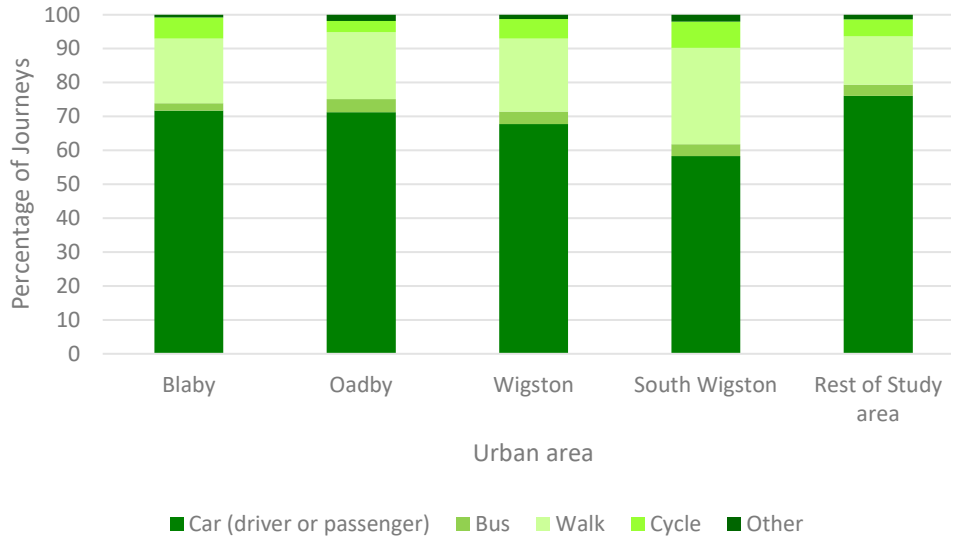


Figure 4.2 – Journey to work by mode in the South of Leicester LCWIP area[9]



4.1.2 Travel to education

The Department for Transport's National Travel Survey identified that 11% of 16-24 year-olds cycle at least once a week for travel purposes, as opposed to for fitness or leisure. This is followed by 25-34 year-olds and 35-44 year-olds, both at 8%.

These age groups account for 34% of the South of Leicester LCWIP area population. This suggests that there could be good scope to encourage walking and cycling travel to higher education.

4.2 The existing cycling, walking and wheeling networks

The figures below show the cycling, walking and wheeling networks in the South of Leicester LCWIP area as they were prior to the development of this LCWIP. This includes:

- designated Public Rights of Way (including public footpaths and bridleways),
- off-road segregated cycle tracks,
- on-road non-segregated cycle lanes,
- shared bus lanes, and
- the National Cycle Network Route 6.

Low-usage footways, such as those linking housing estates to main roads, cul-de-sacs etc, are not shown on the map. This is due to the high number of these routes, which would make the map unreadable at the scale it is published here.

[9] Percentages may not total 100% due to rounding.

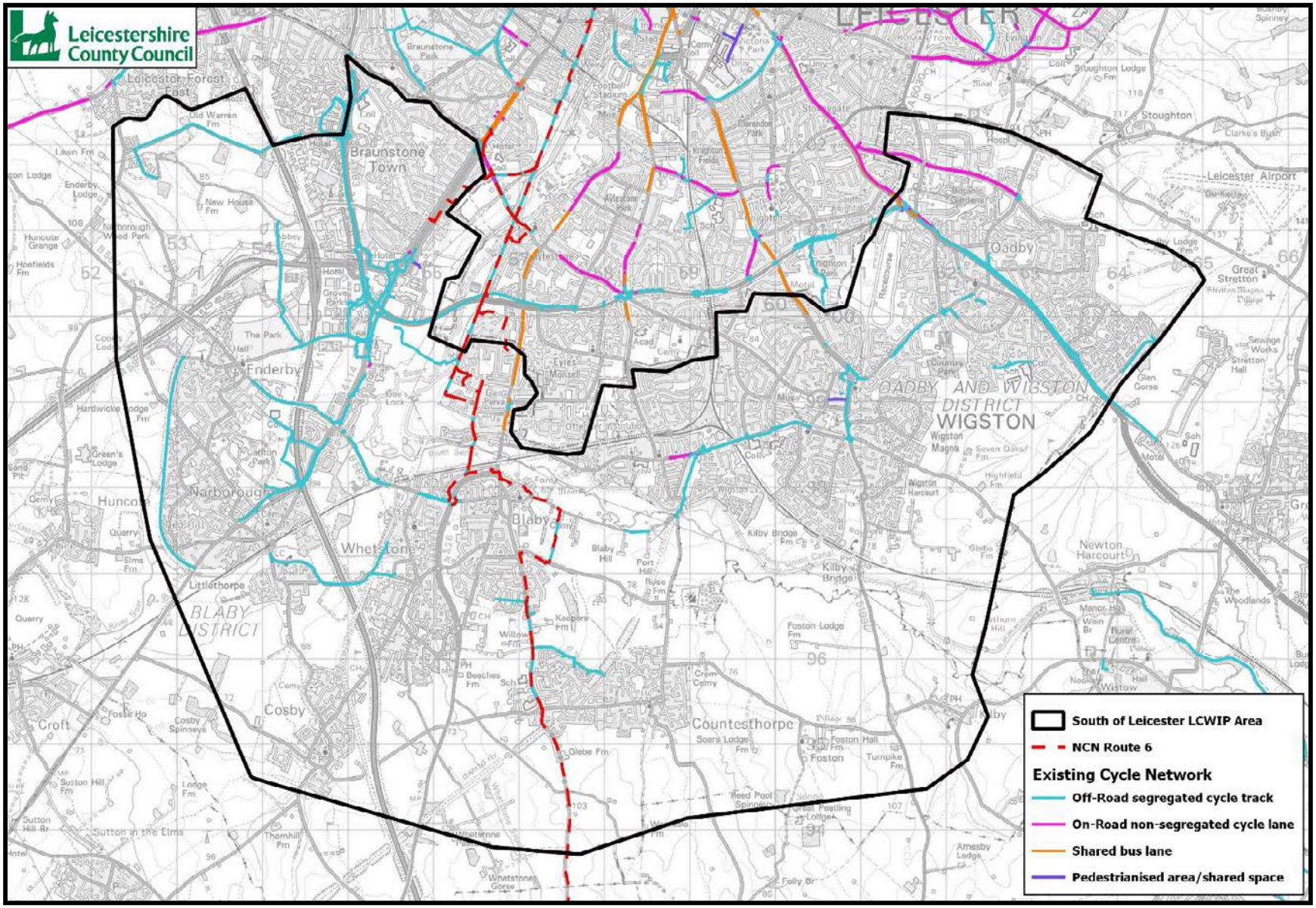


Figure 4.3 – Existing cycling network in the South of Leicester LCWIP area

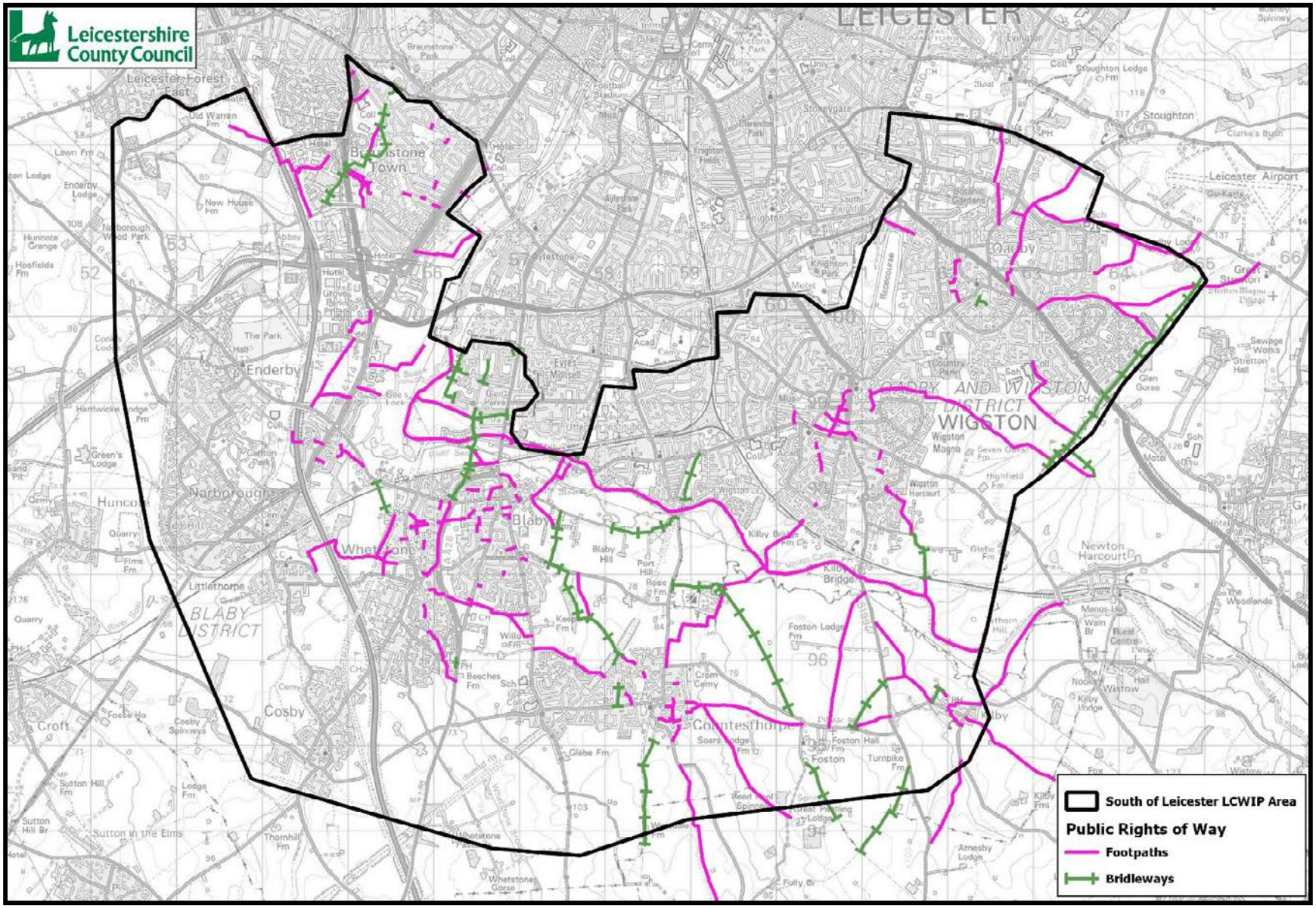


Figure 4.4 – Existing Public Rights of Way network in the South of Leicester LCWIP area

4.2.1 Safety

Leicestershire County Council is a high performing authority when it comes to road safety and the number of collisions that occur compared with other county councils, East Midlands' authorities and statistical neighbours. Nevertheless, any injury is considered one too many. Improving safety for pedestrians and cyclists is a key priority for LCC, and the Government's Cycling and Walking Investment Strategy. As such it is an important objective of this LCWIP. An analysis was undertaken of collisions involving pedestrians and cyclists which occurred in the LCWIP area over a 5-year period from 2015-2019. Data was not analysed for collisions in 2020, due to the impacts of the COVID-19 pandemic on transport. Table 4.1 summarises the collision data for this period. Figure 4.5 shows the location of fatal, serious, and minor injury collisions.

Table 4.1 – Reported collisions involving pedestrians or cyclists in the South of Leicester LCWIP area over the 5-year period 2015 – 2019

	Pedestrians	Cyclists
Fatal	3	1
Serious injury	22	18
Slight injury	79	101
Total	**102**	**122**

Both pedestrian and cyclist collisions occurred over the whole of the LCWIP area. There were clusters of collisions along the arterial routes into Leicester and in Oadby and Wigston town centres. The three fatal pedestrian collisions all occurred in Oadby, and the fatal cyclist collision occurred in Whetstone.

4.3 Using the analysis

The above analysis gave us the baseline position for cycling and walking in the LCWIP area, from which we can measure the potential for improvement. This is used as a starting point to develop ideas for what the future cycling and walking networks might look like, and to inform our engagement with stakeholders and the public, as set out in Chapter 5.

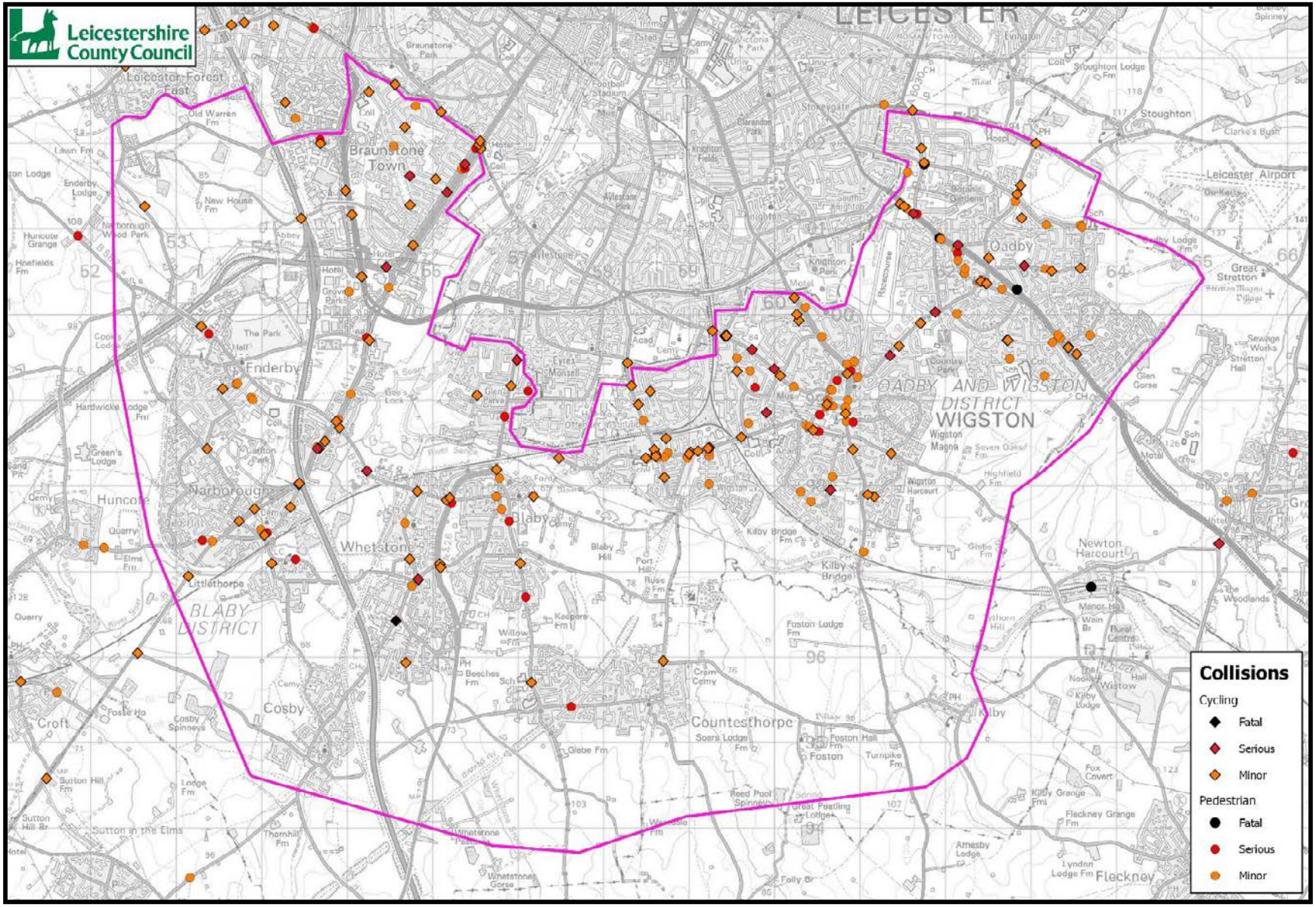


Figure 4.5 – Location of recorded cycling and pedestrian collisions in the South of Leicester LCWIP area over the 5-year period 2015 – 2019

5. Developing our LCWIP network plans

We recognise that the existing cycling, walking and wheeling networks do not maximise opportunities to increase active travel or meet the future needs of people living and travelling in the South of Leicester LCWIP area. Developing up-to-date network plans in consultation with residents – the people who will, or could, benefit most from improved cycling and walking infrastructure – is a key part of the LCWIPs.

The methodology for developing the priority network plans was developed from the LCWIP technical guidance and follows several steps, as set out below.

5.1 Initial network plan development

5.1.1 Cycle network plan development

The LCWIP technical guidance sets out the following steps for developing the priority network plans for cycling:

1. **Identifying key origins and destinations.**
2. **Clustering of origins and destinations.**
3. **Identifying desire lines between origins and destinations (indicative, straight lines, rather than specific routes on the network).**
4. **Identifying routes serving the desire lines ("preferred routes").**
5. **Identifying a route hierarchy.**
6. **Producing draft network maps.**

5.1.1.1 Identifying key origins and destinations

Cycling trips usually start at home. We used Office of National Statistics (ONS) data to map population centres for Lower Layer Super Output Areas (LSOA) within the LCWIP study area. The ONS data only included developments up to 2011. Residential developments built since 2011 and committed future developments of 100 or more dwellings were mapped separately, to identify likely current and future origins for active travel.

We then identified the destinations that people want to travel to, based on the direction given in the LCWIP technical guidance document:

- healthcare facilities such as GP surgeries and health centres,
- pharmacies,
- large employment sites such as Carlton Park, Santander, and the Next Headquarters,
- committed employment sites employing more than 50 people,
- key local plan growth areas,
- large supermarkets,
- primary education establishments,
- secondary and higher education establishments, including the University of Leicester Oadby campus,
- Narborough and South Wigston stations,
- other transport interchanges, such as clusters of bus stops,
- libraries, and
- leisure sites such as sports stadiums, entertainment venues, visitor attractions, leisure centres, and parks. This category includes sites like Meridian, Everards Meadows, and Fosse Park.

5.1.1.2 Clustering origins and destinations

The LCWIP technical guidance recommends that origins and destinations are clustered together where multiple sites are located within 400m of each other (a 5-minute walking distance and the recommended density for a joined-up urban cycling network), to simplify analysis of preferred routes.

The origins were already clustered together, due to our use of the ONS LSOA centroids. Destination clusters were defined using a Geographic Information System (GIS) to create a buffer around destinations within a 400m radius. These buffers were drawn to include as many destinations as possible, without including sites separated by a significant barrier (e.g. a major road or railway line) or creating any overlap across clusters.

Unsurprisingly, many of the key destination clusters are in the town and village centres, with a further cluster at Fosse Park.

The destination clusters were then weighted to provide an assessment of their desirability. Weightings ranged from 1-5 and were based on the number and type of destinations present and the number of cyclists the destination is likely to attract. The highest weighting was given to employment sites, transport interchanges, and secondary schools, in support of the CaWS targets to increase cycling and walking/wheeling to places of employment and education.

5.1.1.3 Identifying desire lines for cycling

'Desire lines' represent existing and potential demand for travel between origins and destinations. They are indicative, straight lines, rather than following specific routes on the network.

Desire lines were mapped between every origin and destination. We then assigned cycling demand to origin clusters based on the number of commuting trips from that LSOA according to the 2011 Census. This demand was combined with the destination cluster weightings, to give overall desirability scores.

Figure 5.1, below, shows the top 25% desire lines for each settlement in the South of Leicester LCWIP area.
The thicker, darker lines are likely to be more desirable to cyclists. Thinner, lighter lines are less likely to be desirable.

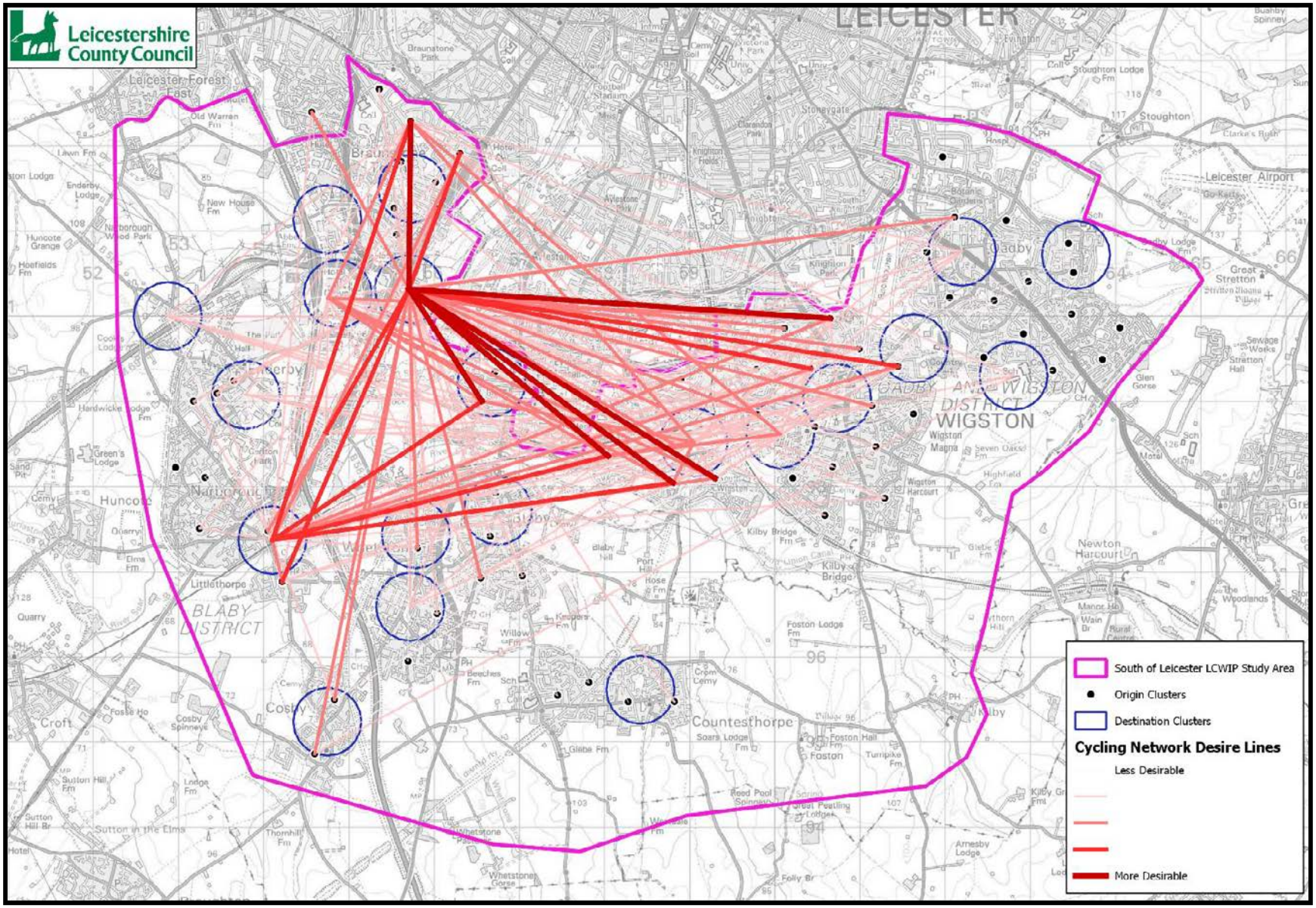


Figure 5.1 – Cycling desire lines for settlements in the South of Leicester LCWIP area

5.1.1.4 Identifying preferred routes

These desire lines indicate where people are most likely to cycle to/from in the study area, but they don't show us what routes people will use to get between these places. In most cases, there are many routes which people can take to get between the various origins and destinations. Google Maps, Strava Metro, and BetterPoints data was used to help identify which routes people are likely to prefer.

Google Maps

Google Maps' journey planning function was used as a starting point for narrowing down the possible routes, by identifying which routes are quickest and tend to have the best travel conditions.

Strava Metro (Strava)

Strava is a social networking app, which allows people to track activities such as walking, cycling, and running. The app records data such as distance travelled, how long the user spent doing the activity, and the route taken. This data is made available in an anonymised form to local authorities to help identify investment opportunities.

Not everyone uses Strava, or records all of their activities on the app. For example, some people may only use the app to record leisure activities such as jogging, rather than journeys to the shops or their place of work or education. However, the company estimates that 17% of the UK population have downloaded and registered an account on the app.[10] Therefore, the data set is considered to offer valuable insight into how and where people travel actively.

Strava data was used to identify which routes people currently use or avoid when travelling between origins and destinations in the LCWIP area.

BetterPoints

The BetterPoints app is available to people who live in, or commute into, Leicester and Leicestershire. It tracks users' journeys, and rewards active travel such as walking, wheeling, and cycling with points which can be redeemed for high street vouchers or donated to charity. Data is shared with the County Council and Leicester City Council, to provide data on where people are travelling by walking and cycling in Leicestershire.

The BetterPoints app is less well-known and used by fewer people than Strava. As it is incentivised, there is also a risk that its user base may be more weighted to lower-income users such as students and less representative of the population as a whole. This means that it is not a reliable data source in isolation. However, the app is specific to Leicestershire and focuses on encouraging people to switch from car journeys to active modes, which is a key aim of the LCWIPs. Therefore, the data was used to complement Strava data to identify the routes that people prefer to use to get from A to B.

The routes identified through this process were prioritised, before being developed into an initial draft cycling and walking network.

[10] Year in Sport report, Strava, 2021.

5.1.1.5 Identifying a route hierarchy

The Government's LCWIP technical guidance sets out criteria for prioritising the routes which make up the cycling and walking networks in LCWIPs. Cycling routes are split into three categories as set out below:

1. Primary: High flows of cyclists are forecast along desire lines that link large residential areas to trip attractors, such as a town or city centre.

2. Secondary: Medium flows of cyclists are forecast along desire lines that link to trip attractors, such as schools, colleges, and employment sites.

3. Local: Lower flows of cyclists are forecast along desire lines that cater for local cycle trips, often providing links to primary or secondary desire lines.

We identified and categorised the routes according to the LCWIP technical guidance. Cycling routes which will serve future developments are identified separately as indicative routes, due to the fact that many of these developments still need to go through the planning process:

- **future Primary** (Indicative),
- **future Secondary** (Indicative), and
- **future Local** (Indicative).

5.1.1.6 Producing the draft network map

Once all of the above steps were complete, the current and indicative Primary, Secondary, and Local cycling routes in this LCWIP area were brought together into a draft priority network map.

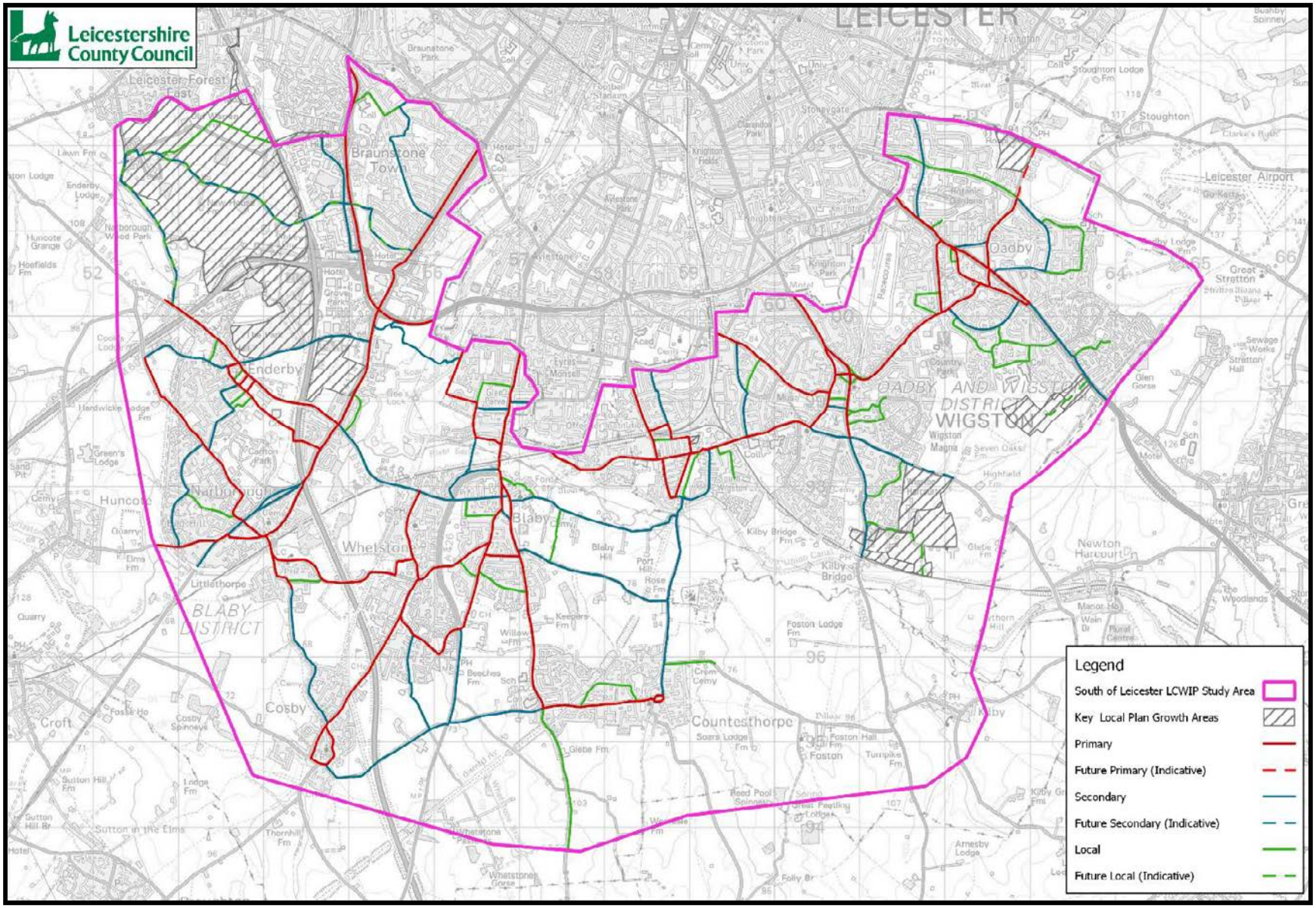


Figure 5.2 – The draft LCWIP priority cycling network

5.1.2 Walking and wheeling

The LCWIP technical guidance methodology for creating priority network maps for walking and wheeling differs from the methodology for cycling, and contains the following steps:

1. **Mapping walking trip generators.**
2. **Identifying core walking zones.**
3. **Identifying key walking routes.**
4. **Identifying a route hierarchy.**
5. **Producing a draft walking network map.**

The actions and technical work which we undertook in following this methodology are set out below.

5.1.2.1 Mapping walking trip generators

Trip generators for walking and wheeling are generally the same as those for cycling, although people are likely to travel further on a bicycle. Therefore, we used the key destinations identified for cycling to determine the walking trip generators.

As the South of Leicester LCWIP covers a large area, we only included the most significant trip generators for walking. These are where several destinations are located close together. This gave us the following:

- **town centres**
  - Blaby Town Centre
  - Oadby Town Centre
  - Wigston Town Centre
- **village centres**
  - Cosby Village Centre
  - Countesthorpe Village Centre
  - Enderby Village Centre
  - Narborough Village Centre
- **business and retail**
  - Fosse Shopping Park
  - Meridian Business Park / Leicestershire Police Headquarters
  - The Whittle Industrial Estate
- **transport hubs**
  - South Wigston Rail Station
- **education**
  - Oadby cluster of schools
  - Wigston cluster of schools

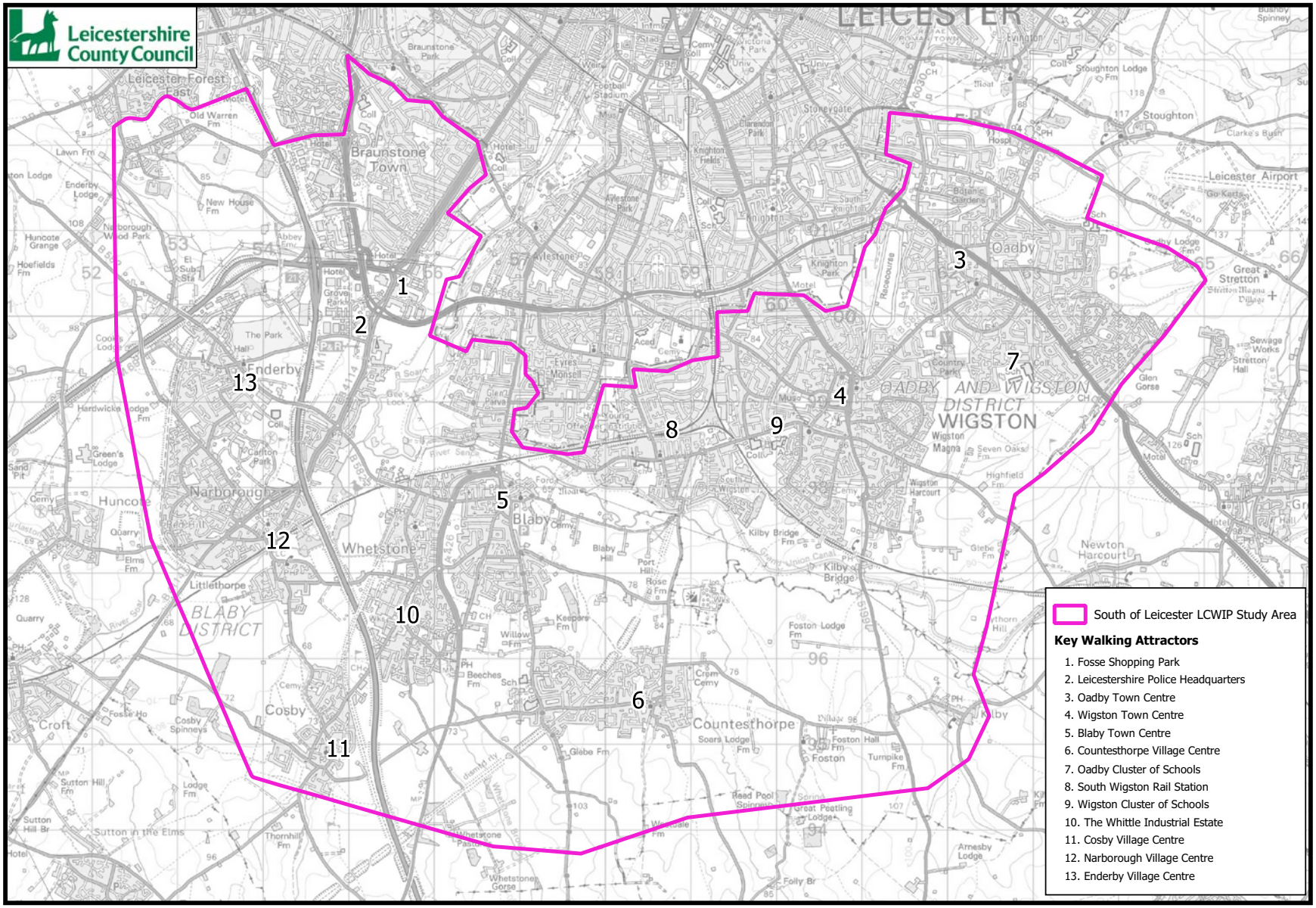


Figure 5.3 – Key walking attractors

5.1.2.2 Identifying core walking zones

Core walking zones consist of several key trip generators which are close together and where there is the potential for a high number of walking and wheeling journeys.

A distance of 400m (representative of approximately 5-minutes of walking) between core walking zones and key trip generators is recommended in the LCWIP technical guidance, whilst 2km is generally accepted as the maximum distance at which people are likely to consider walking and wheeling to be a viable mode for their journeys.

Therefore, we identified core walking zones which are within 400m of the key trip generators, as mapped via the shortest road network route in GIS. We then applied 2km buffers to help to identify the key routes serving the core walking zones. This resulted in a map of core walking zones as shown in Figure 5.4, below.

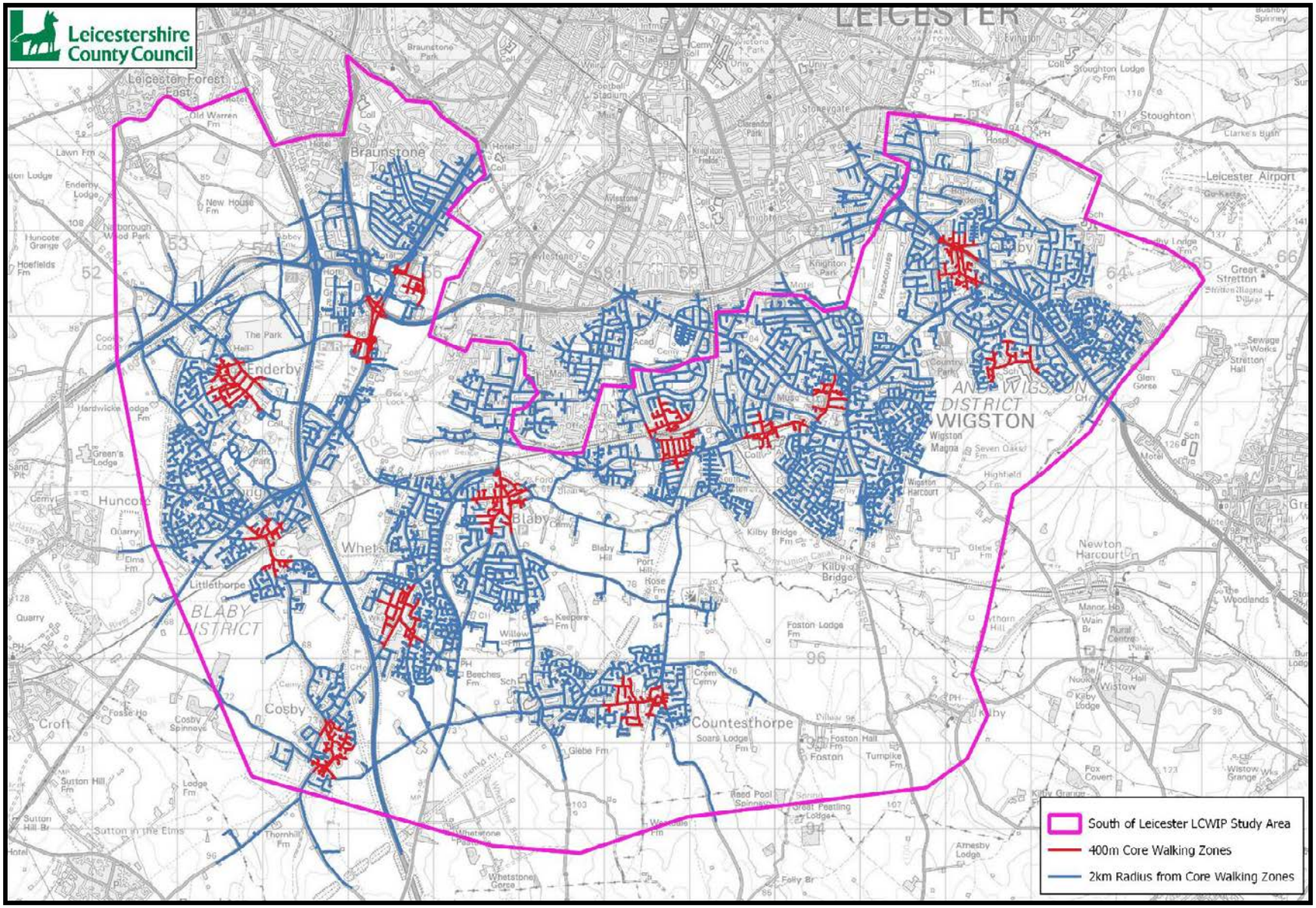


Figure 5.4 – Core walking zones in the South of Leicester LCWIP area

5.1.2.3 Identifying key walking and wheeling routes

In many cases, there is more than one route which can be used to walk or wheel between an origin and a destination. We used Google Maps, Strava Metro, and BetterPoints, as set out in 5.1.1.4, to help us identify the key walking and wheeling routes within the 400m and 2km zones.

5.1.2.4 Identifying a route hierarchy

The LCWIP technical guidance advises that key walking and wheeling routes should be defined according to the Footway Maintenance Classification as set out in the Code of Practice for Highway Maintenance Management.[11]

There is a greater range of categories for walking routes, reflecting the fact that they are significantly larger in number and often more diverse than the cycling network:

1(a). Prestige walking zones: Very busy areas of towns and cities, with high public space and street scene contribution.

1. Primary walking routes: Busy urban shopping and business areas, and main pedestrian routes.

2. Secondary walking routes: Medium-usage routes through local areas feeding into primary routes, local shopping centres etc.

3. Link footways: Linking local access footways through urban areas and busy rural footways.

4. Local access footways: Footways associated with low usage, short estate roads to the main roads, and cul-de-sacs.

As with the cycling routes, a series of indicative routes which are likely to serve significant future developments have also been identified. This have been given the categories of:

1. **Future Primary (Indicative).**
2. **Future Secondary (Indicative).**
3. **Future Links (Indicative).**

5.1.2.5 Produce a draft walking and wheeling network map

Following completion of the analysis and ranking of routes, a draft walking and wheeling network map was produced. Local access footways were not included in the map, as the density of the network would have made it illegible.

[11] Well-maintained Highways: Code of Practice for Highway Maintenance Management, Roads Liaison Group (2005, updated September 2013).

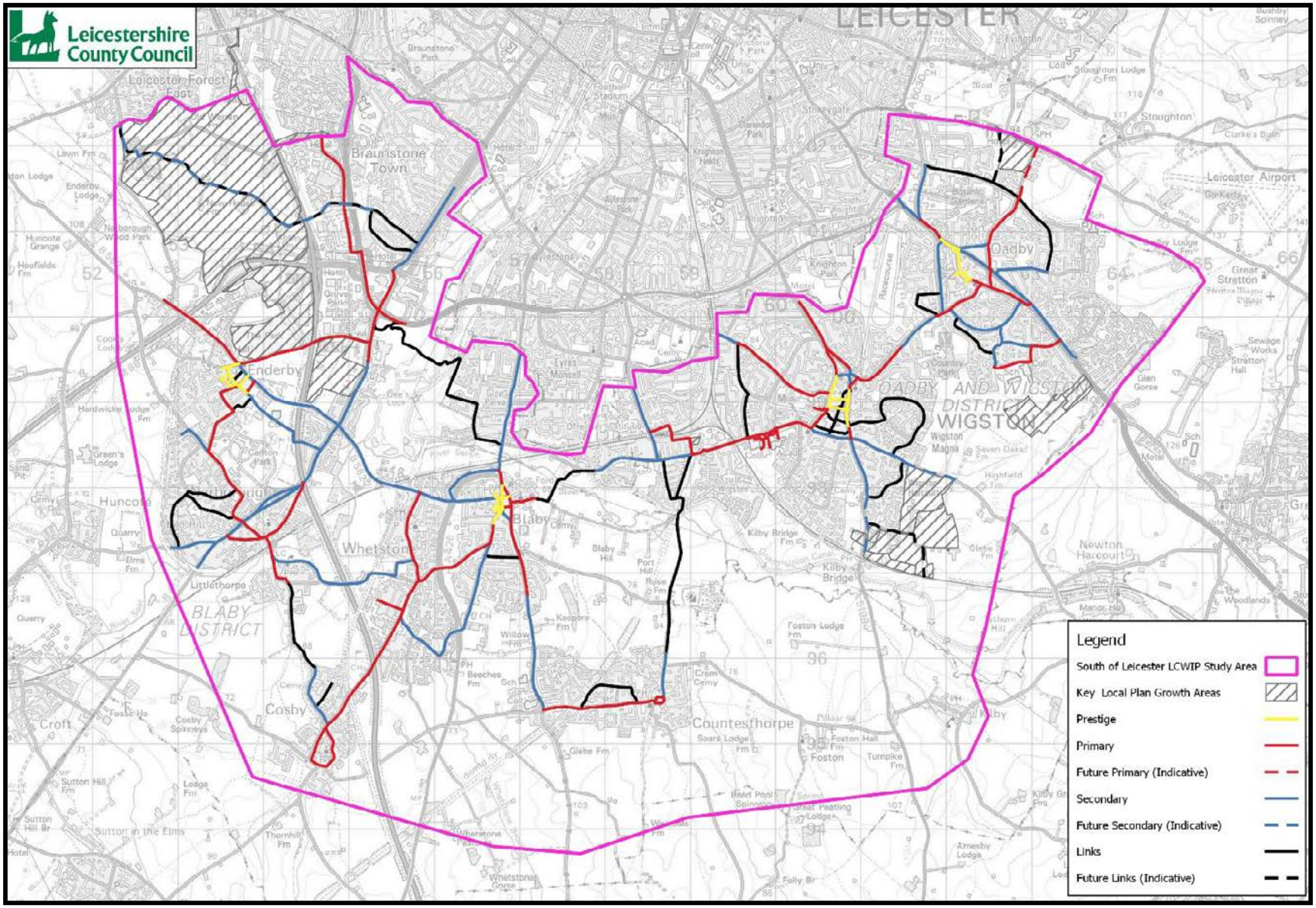


Figure 5.5 – Draft LCWIP priority walking and wheeling network map

5.2 Public engagement

5.2.1 Stakeholder engagement

Blaby and Oadby and Wigston district councils were invited to an engagement workshop, where we explained the concept and purpose of the LCWIPs. The aim of this workshop was for us to understand their plans and aspirations for travel in the South of Leicester LCWIP area and to provide an opportunity for them to give us their comments on the initial cycling and walking network maps.

The network maps were refined following this engagement. New routes were added and, where appropriate, existing routes were replaced with alternatives as suggested by the district councils. Where we considered that it would not be appropriate to include routes which they had suggested, for example because the routes serve smaller destinations, this was discussed and agreed with the District Council.

The revised cycling and walking and wheeling maps were combined into one plan and published as part of a map-based public consultation exercise (see 5.2.2.2, below).

In tandem with the public consultation exercise, we asked the elected members and councillors for the LCWIP area to provide us with their top 5 priorities for walking and cycling in their wards. We also sought comments from special interest groups who have expert knowledge and experience of the needs of walkers, cyclists, equestrians etc. These included the British Horse Society and the Canals and Rivers Trust.

5.2.2 Engagement with the general public

5.2.2.1 Widen My Path

As part of the management of the COVID-19 pandemic, Government announced that local highway authorities (LHAs) should improve streets and cycleways to support physical distancing. To support this, and assist LHAs in prioritising immediate locations for improvement, Cycle Streets created the Widen My Path online tool, which members of the public could use to tell LHAs what improvements they would like to see, and where.

Improvement types were categorised as:

- **width** – where the width of the path should be increased,
- **condition** – where the condition of the path needs to be improved (e.g., resurfacing),
- **parked cars** – where parked cars make a path difficult or dangerous to use,
- **new footway / cycle path** – where a new footway or cycle path is needed,
- **time restriction** – where an existing time restriction should be extended for cyclists,
- **multiple** – where more than one of the above has been selected, and
- **other** – things which were only mentioned once or didn't fit into the above categories (e.g., toucan crossing timings, difficulty finding the entrance to cycle paths).

We used this information to guide our perception of the types of improvements which people prefer, and the locations which members of the public view as priorities.

5.2.2.2 Map-based engagement

A public, map-based, forum exercise was undertaken as part of early engagement for the LCWIP area, helping to shape the cycling, walking and wheeling networks and inform what infrastructure should be provided on the network to encourage and enable the community to travel actively.

During this early engagement activity, we invited feedback on:

- the draft key cycling, walking and wheeling network, e.g., were there key routes missing that lots of people currently use, or could use if improved, or did they feel a change to a route was needed,
- comments on types of infrastructure improvements they would like to see on the cycling and walking network – e.g., dedicated cycle lanes, junction improvements, shelters, benches etc, and
- other feedback they thought would be of value in developing the LCWIP for this area.

There were over 1,000 visits to the engagement portal, with 173 comments relating to the South of Leicester LCWIP area. These comments included lots of useful feedback on the draft networks, and the infrastructure people would like to see in these areas, as well as feedback on the general approach to LCWIPs.

Respondents were also able to 'like' and reply to posts to show their support for, or discuss the comments and suggestions raised by, other users. The number of comments given above includes those posted as replies.

Respondents using the forum were able to ask questions and seek clarification from the engagement team, which was posted publicly to help other users. People who had difficulty using the forum were sent electronic and/or paper copies of the maps and forum questions and given the opportunity to provide comments by letter or email.

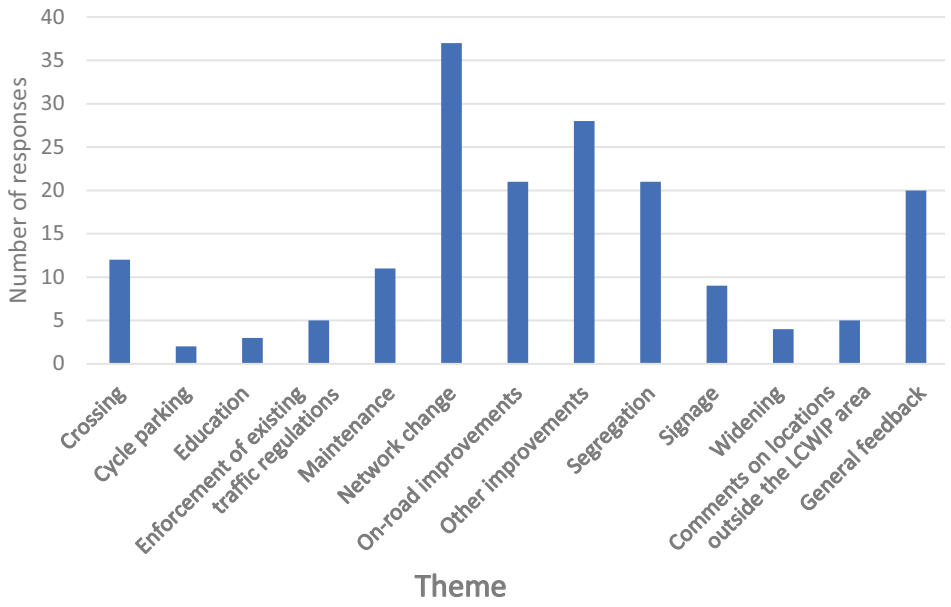
5.2.2.2.1 Analysing the feedback

Once the consultation closed, the feedback was anonymised and analysed to identify which routes received the most comments, and the improvements and issues which residents told us they think are important. Comments which were left in reply to other users were analysed in the same way as other posts.

We identified the primary 'themes' of the comments, including those posted as replies, depending on what issue the respondent had raised or what type of improvement they had requested. Multiple themes were assigned to comments where respondents raised more than one issue and/or improvement. We did this by reading the comments thoroughly and identifying the key points from the comments, rather than categorising the comments into a pre-existing list of themes. This ensured that the themes accurately reflected the issues and improvements which were raised.

The infographic below shows the proportion of comments received for each theme for the South of Leicester LCWIP area. (It should be noted that some comments requested more than one type of intervention, so the total number of comments by theme may exceed the total number of individual responses).

Figure 5.6 - Confers responses by theme as a proportion of overall responses



5.3 Network plan refinement

Following analysis of the key stakeholder and public engagement feedback, the network plan was revised further. Our decision to include new routes or extend existing routes as proposed by members of the public was informed by the following criteria:

- the sizes of the origins and destinations which would be connected by the proposed route,
- the overall density of the network,
- the deliverability of improvements on the proposed route, and
- the potential for cycling, walking, wheeling, and horse riding on the proposed route, in comparison to alternative routes already in the cycling, walking and wheeling networks.

5.4 The LCWIP network maps

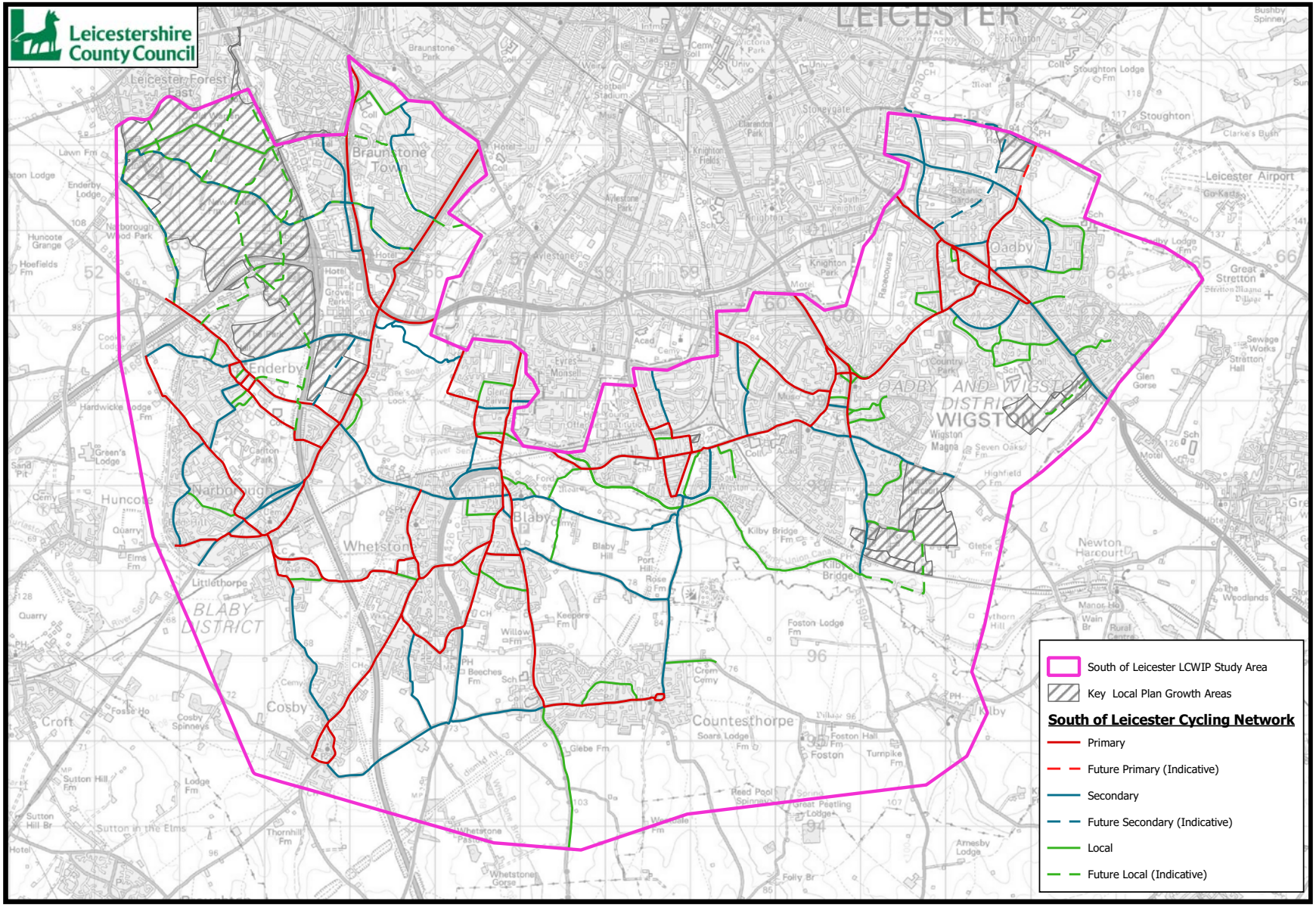


Figure 5.7 – Final South of Leicester LCWIP area cycling priority network map

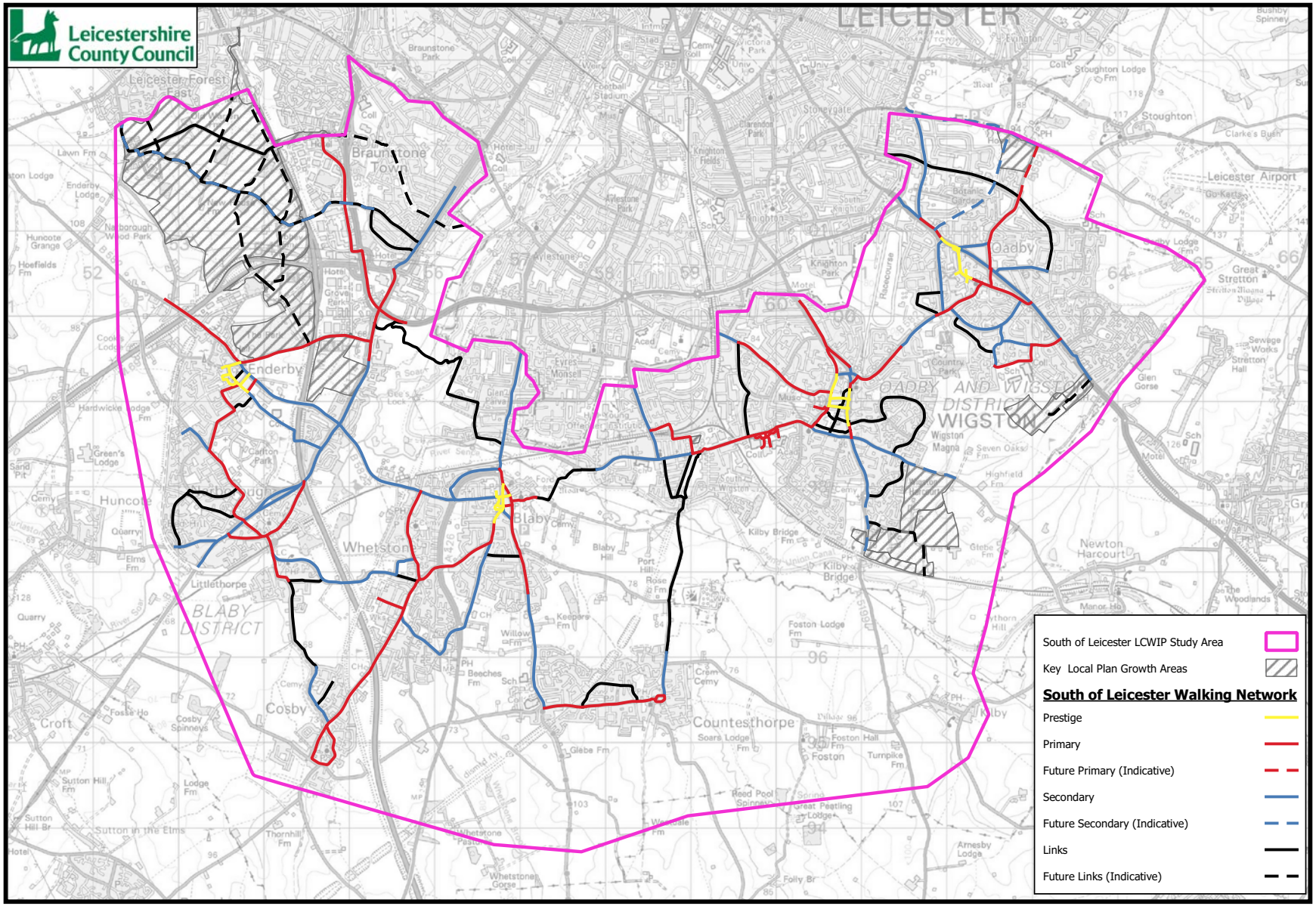


Figure 5.8 – Final South of Leicester LCWIP area walking and wheeling priority network map

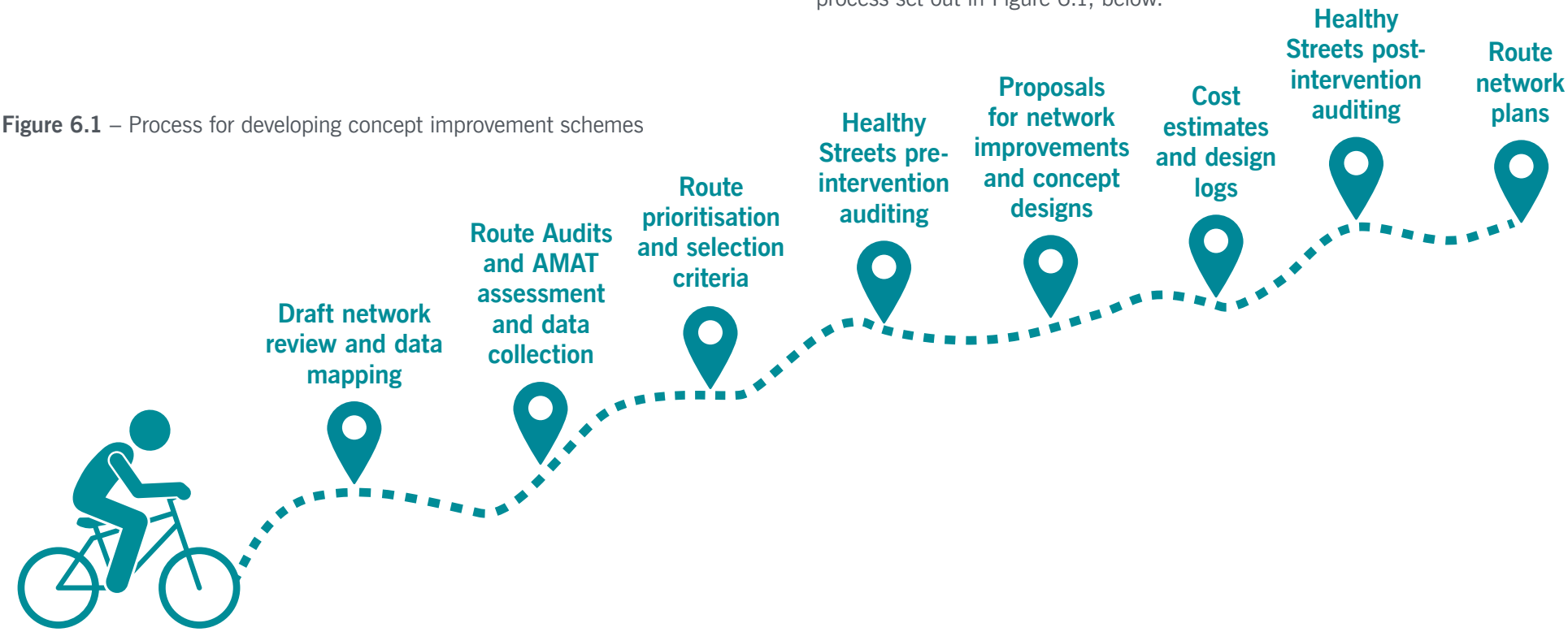
6. The future of cycling, walking and wheeling in the South of Leicester LCWIP area

Once the maps for the LCWIP priority cycling, walking and wheeling networks had been finalised, the next step of the process was to:

- analyse the needs and concerns on each route, and
- develop the long list of schemes that will make up our initial 10-year pipeline of improvement schemes.

As part of our commitment to encouraging and enabling our communities to travel actively and realising our aspirations, we have also gone a step further than many local authorities when drafting our LCWIPs, by undertaking a significant programme of auditing and concept design work. This has enabled us to explore some concept ideas for potential improvement schemes, developing a short list of routes with concept design drawings. To do this, we followed the process set out in Figure 6.1, below.

Figure 6.1 – Process for developing concept improvement schemes



These steps were combined into four work phases:

1. **Network review:** a review of the existing policy documents and best practice relating to designing inclusive cycling and walking/wheeling schemes; followed by a review of the network to identify the preliminary areas of interest.
2. **Route auditing:** preliminary audits, carried out using Google Maps and site visits on bike and on foot, and a review of the routes against the Healthy Streets criteria.
3. **Concept designs:** development of concept scheme designs and final scheme maps.
4. **Post-intervention audits:** the route audits against Healthy Streets criteria were repeated to assess the level of improvement which the schemes will provide.

6.1 Network review

All of the routes identified that make up the priority LCWIP networks for improvement are those which are considered to greatest potential to benefit local communities, encouraging and facilitating active travel to be a part of daily life. As defined in Government guidance, LCWIPs set out an initial 10-year pipeline of improvement schemes which are to be prioritised first, representing part of the entire network to ultimately be improved.

The priority network maps were reviewed against traffic speed and volume data, road collision data, local growth sites, the key origins and destinations set out in chapter 5, and public engagement data, including information from Widen My Path and the results of the public consultation and engagement on the draft network maps.

As Prestige, Primary, and Secondary routes are expected to be used by the most people to access the greatest number of key origins and destinations, these routes were prioritised for the first 10-year pipeline of potential improvement schemes. The routes were reviewed to ensure that focusing interventions on the Primary and Secondary routes would not impact negatively on the overall coherence of the cycling and walking networks.

Figures 6.2 and 6.3 show the 'hot spots' which were identified for further investigation. These are where clusters of points of interest are most prevalent, including:

- serious pedestrian and cyclist collisions,
- Widen My Path and public consultation areas of interest,
- essential services such as education and employment sites, and
- future growth sites as identified in local plans.

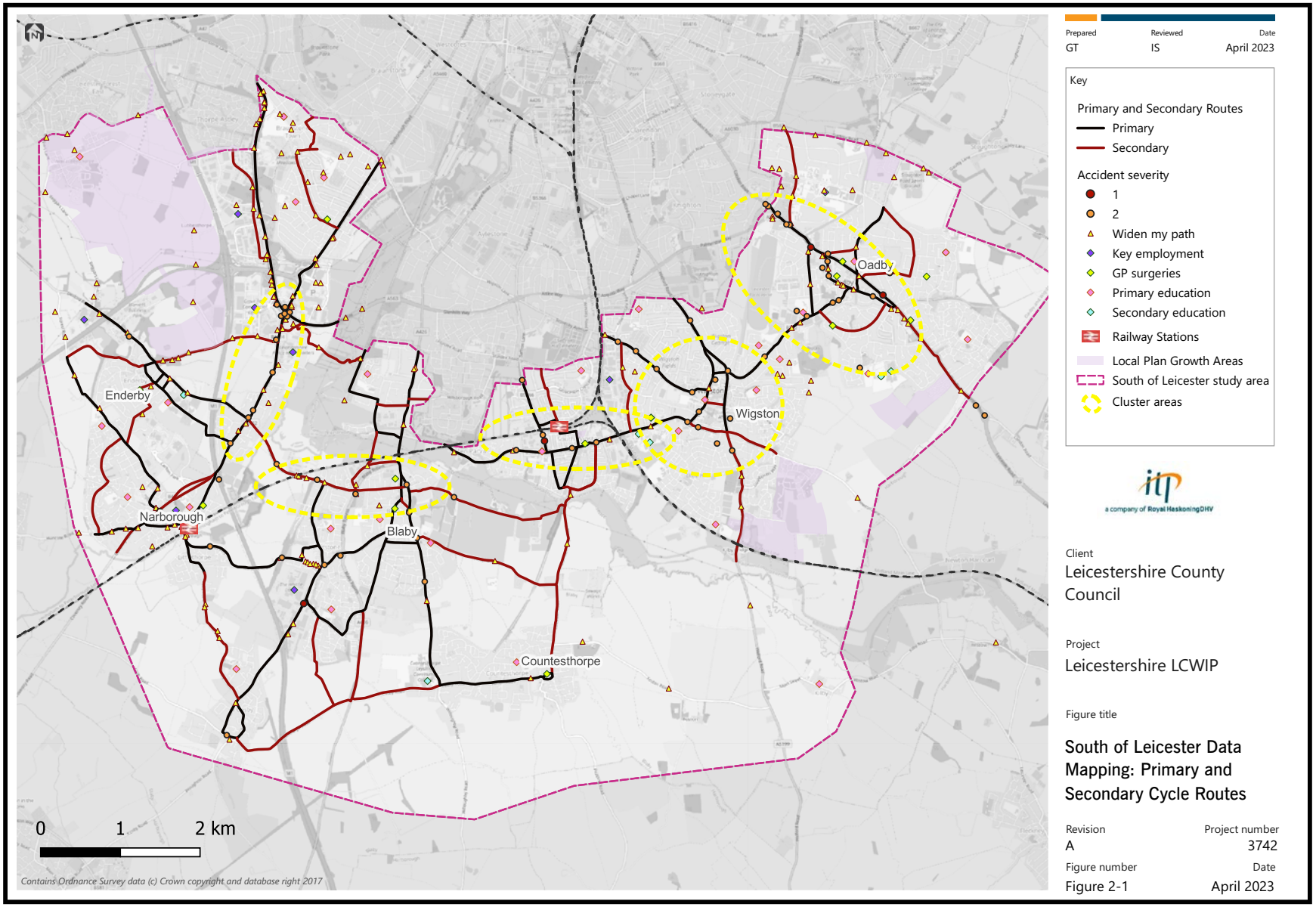


Figure 6.2 – Cycling network hotspots for further investigation

As shown in the maps, there are five key clusters in the South of Leicester LCWIP area. These are mainly located around the towns and larger villages such as Blaby, Oadby, and Wigston. The most north-western cluster focuses on Fosse Shopping Park, as an important leisure and employment site for the area.

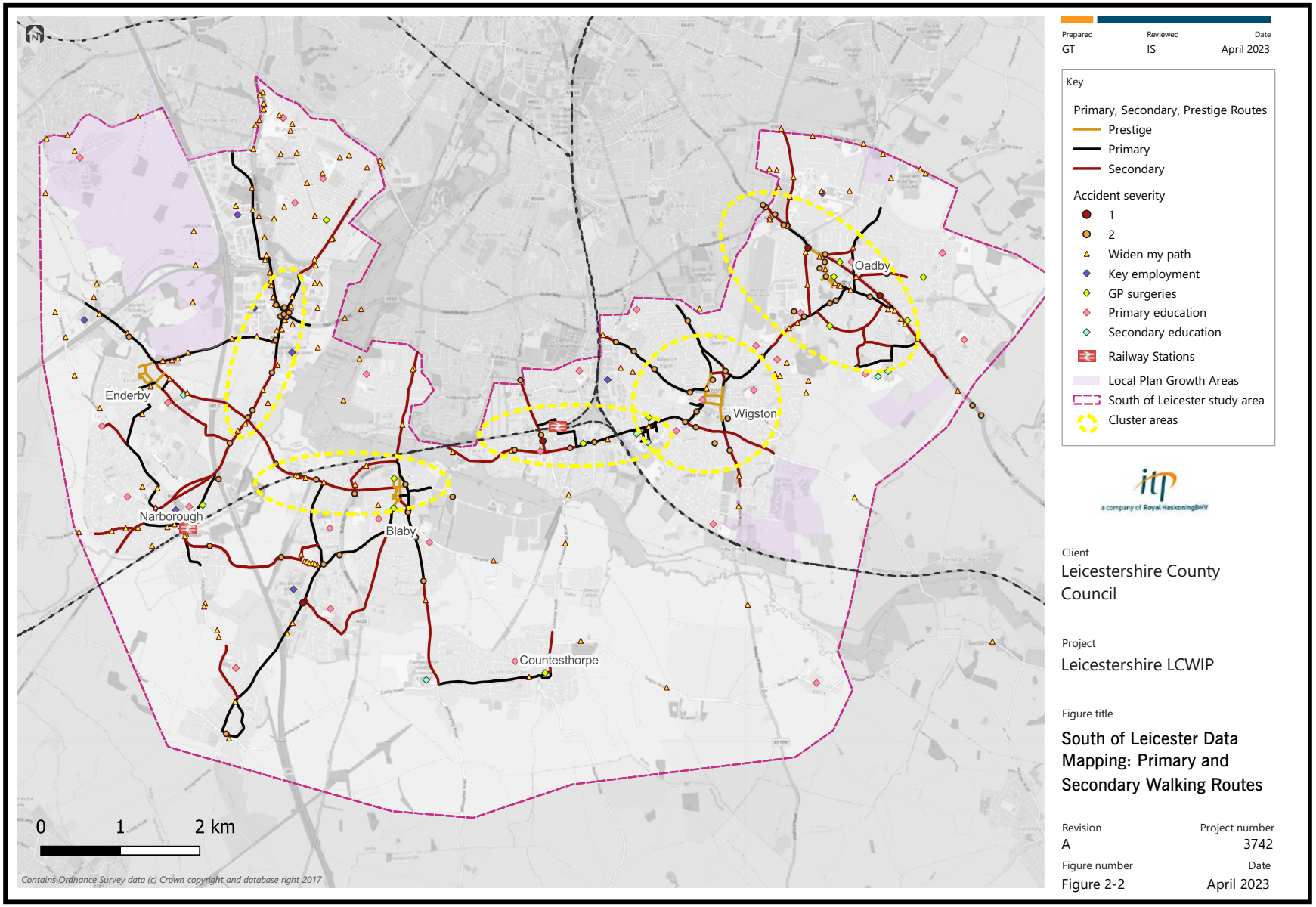


Figure 6.3 – Walking and wheeling network hotspots for further investigation

The parts of the LCWIP network which were highlighted by the hotspots were taken forward for detailed route auditing.

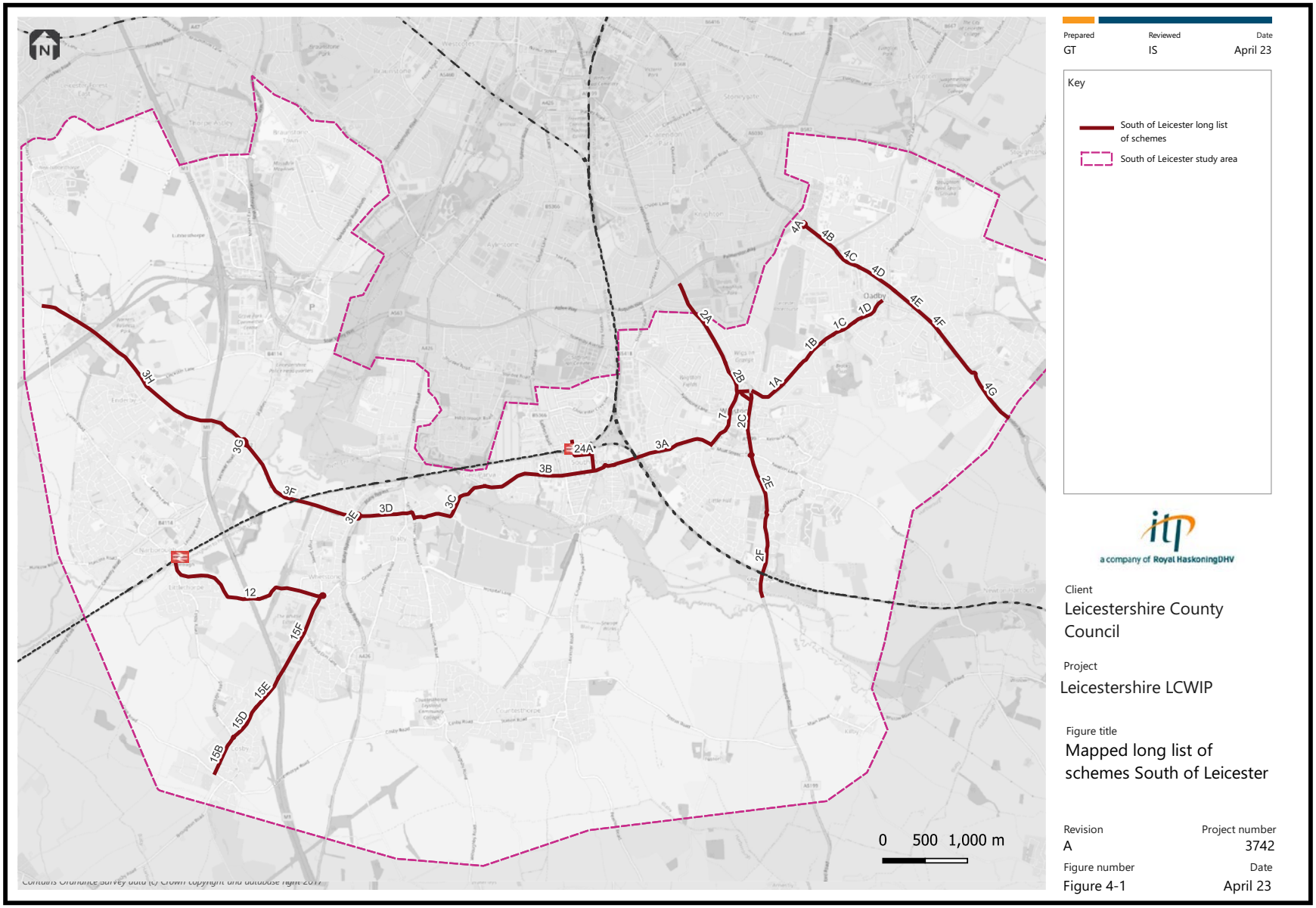


Figure 6.4 – Map of the routes to be taken forward for detailed route auditing

6.2 Detailed route auditing

The auditing of routes is a key part of the process, helping us to understand the current condition of existing routes and facilities and informing what improvements are needed to improve a route for active travel.

The routes were initially audited using a desk-based process, with selected routes receiving follow-up site visit audits. Proformas were completed to appraise the existing conditions on the cycling and walking routes and provide a baseline, against which to assess future improvements.

Once the outputs of these audits were known, a select number of appropriate routes were audited using the Healthy Streets Design Check toolkit (see 6.2.5, below).

6.2.1 Development of audit criteria and proformas for desk-based audits and site visits

Bespoke audit proformas were created for use during the desk-based audits and site visits. Separate proformas were created for walking and cycling, to take account of the differing needs of cyclists and pedestrians.

The audit criteria were selected based on the results of the literature review and industry standard tools:

- Propensity to Cycle Tool,[12]
- Route Selection Tool,[13]
- Walking Route Audit Tool,[14]
- Cycling Level of Service,[15] and
- Junction Assessment Tool.[16]

[12] Active Travel: local authority toolkit, Department for Transport, August 2022.

[13] Active Travel: local authority toolkit, Department for Transport, August 2022.

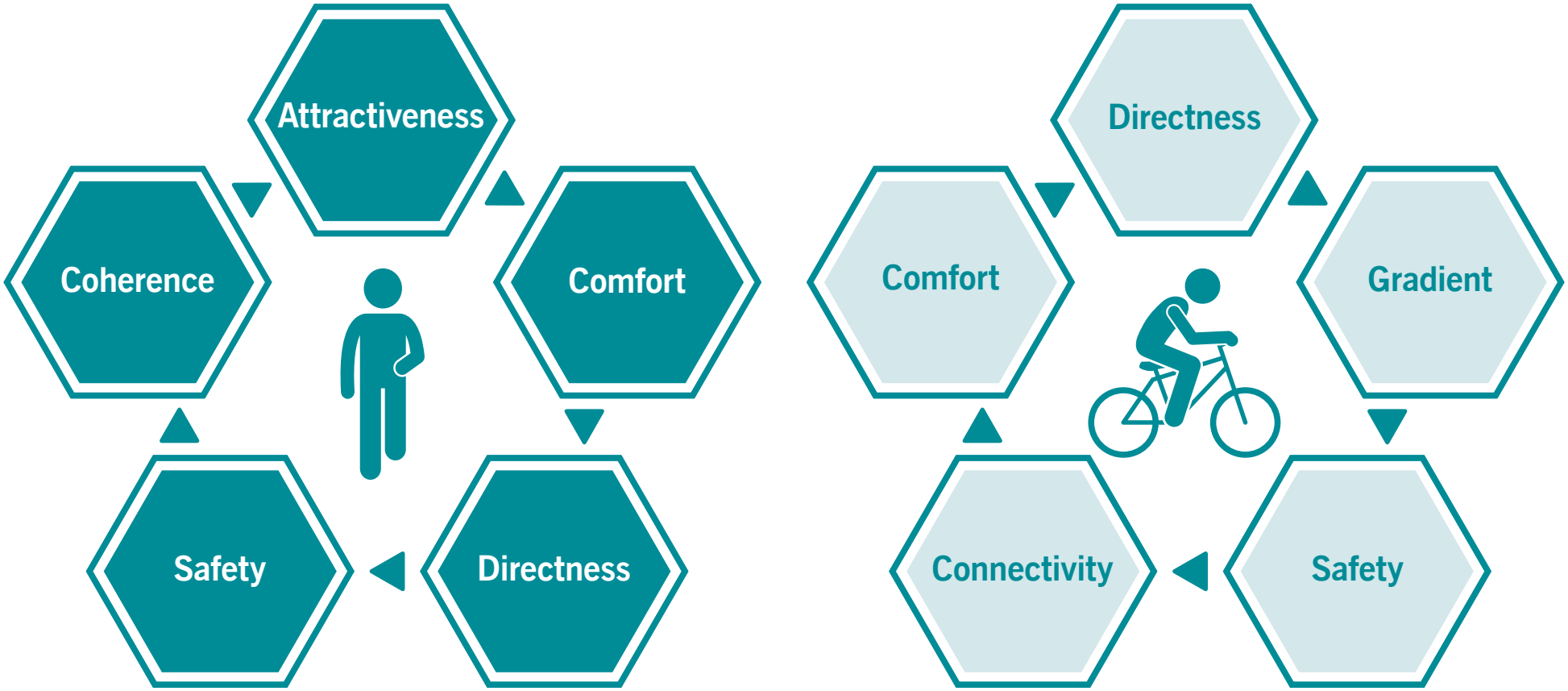
[14] Planning local cycling and walking networks: Technical guidance and tools, Department for Transport, April 2017.

[15] Cycle infrastructure design (LTN 1/20) (Appendix A), Department for Transport, July 2020.

[16] Cycle infrastructure design (LTN 1/20) (Appendix B), Department for Transport, July 2020.

The proformas also considered how well the routes meet core design outcomes as set out in the Route Selection Tool for cycling and Walking Route Audit Tool for walking and wheeling. These principles are set out in figure 6.5, below.

Figure 6.5 – Walking and cycling core design principles from the Route Selection Tool and Walking Route Audit Tool[17]



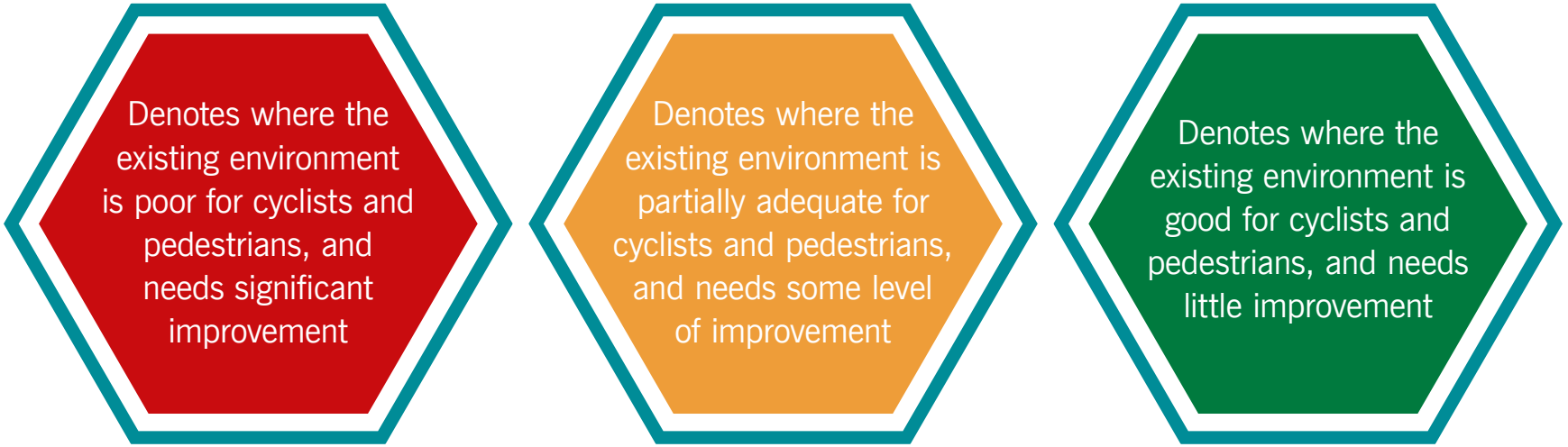
[17] Planning local cycling walking networks: Technical guidance and tools, Department for Transport, April 2017.

Finally, the proformas and audit criteria considered the core design principles as noted in the LCWIP technical guidance (see appendix A).

Bringing all of these sources together resulted in identification of 24 criteria as shown in figure 6.6, and an audit proforma which allowed for each criterion to be rated red, amber, or green (known as "RAG rating") with a score of 0, 1, or 2 as shown in figure 6.7.

Figure 6.6 – Audit score criteria

Figure 6.7 – Red / Amber / Green audit indicators



A detailed scoring methodology was developed. This specified the considerations required for awarding each score against criterion, to ensure consistency of approach. The criteria were assessed in a predominantly quantitative way. For example, quantifiable metrics such as distance parameters, design specifications, or number of occurrences, to differentiate between a red, amber, or green score.

As well as scorable criteria, the proformas also collected information relating to:

- road names,
- route length,
- route classification (prestige, primary, or secondary),
- on-road or off-road,
- hub or spoke route (yes or no),
- key employment (yes or no), and
- strategic priority (e.g., routes connecting key settlements) (yes or no).

6.2.2 Initial, desk-based, audits

The initial audits were undertaken using a desk-based, virtual approach. Google Street View imagery was used to view the routes, with the dates of the images recorded in the proforma. Where images were out of date or did not provide sufficient information for a conclusive audit, the route was flagged as 'review required' and included in the list of routes to be validated with site visits.

Longer routes were broken down at 'change of circumstance' points such as where a clear change in walking/wheeling/cycling provision or a significant difference in awardable score was identified.

Each route segment received a final score, which denoted the overall quality of the route.

6.2.3 Active travel site visits

Site visits focussed on:

- the areas of interest,
- hub or spoke routes,
- routes connecting to employment and education,
- growth locations, and
- routes which were flagged as 'review required' in the desk-based audits.

The site visits were undertaken on a weekday, during daylight hours. A training and safety briefing and quality control exercise was undertaken at the start of the site visit day, to ensure consistency of scoring.

Audit teams walked and cycled each of the routes, to ensure that they experienced the route as pedestrians and cyclists and that full consideration was given to the differing needs of all types of user.

6.2.4 Desk-based audit and site visit results

Figures 6.8 and 6.9 show the overall audit scores for each section of route in the South of Leicester LCWIP area.

North to south movements along radial routes from Leicester City centre generally perform better than east to west movements connecting the key settlements in the study area. This is particularly the case on the B4114 Leicester Road to the west of the study area and corridors to the south through Blaby, Wigston, and Oadby.

There is limited consistency along routes connecting key settlements. A single journey may involve travelling along high and low scoring segments of route. Even a short section of red or amber quality provision in an otherwise green route can be enough to deter people from travelling by bicycle or walking/wheeling.

Cycling provision to Local Plan growth sites is variable across the network. For example, there are strong sections of route along the A5119 through Wigston town centre, but the B582 to Enderby scored mostly red and amber. It is important to ensure that active travel to new developments is encouraged and made attractive from 'day one'. Therefore, building in high quality walking/wheeling and cycling provision which can accommodate long-term growth in active travel will be essential.

The different needs between cyclists and pedestrians are reflected in the variance in audit scores across routes which appear in both the cycling and walking/wheeling networks. Notable examples include the A6 Leicester Road through Oadby, which connects to a future growth site, directly linking it to off-site facilities such as supermarkets and primary schools, but which received a lower audit score for walking/wheeling than cycling. High quality LCWIP network routes must consider and address the distinct needs of all types of user.

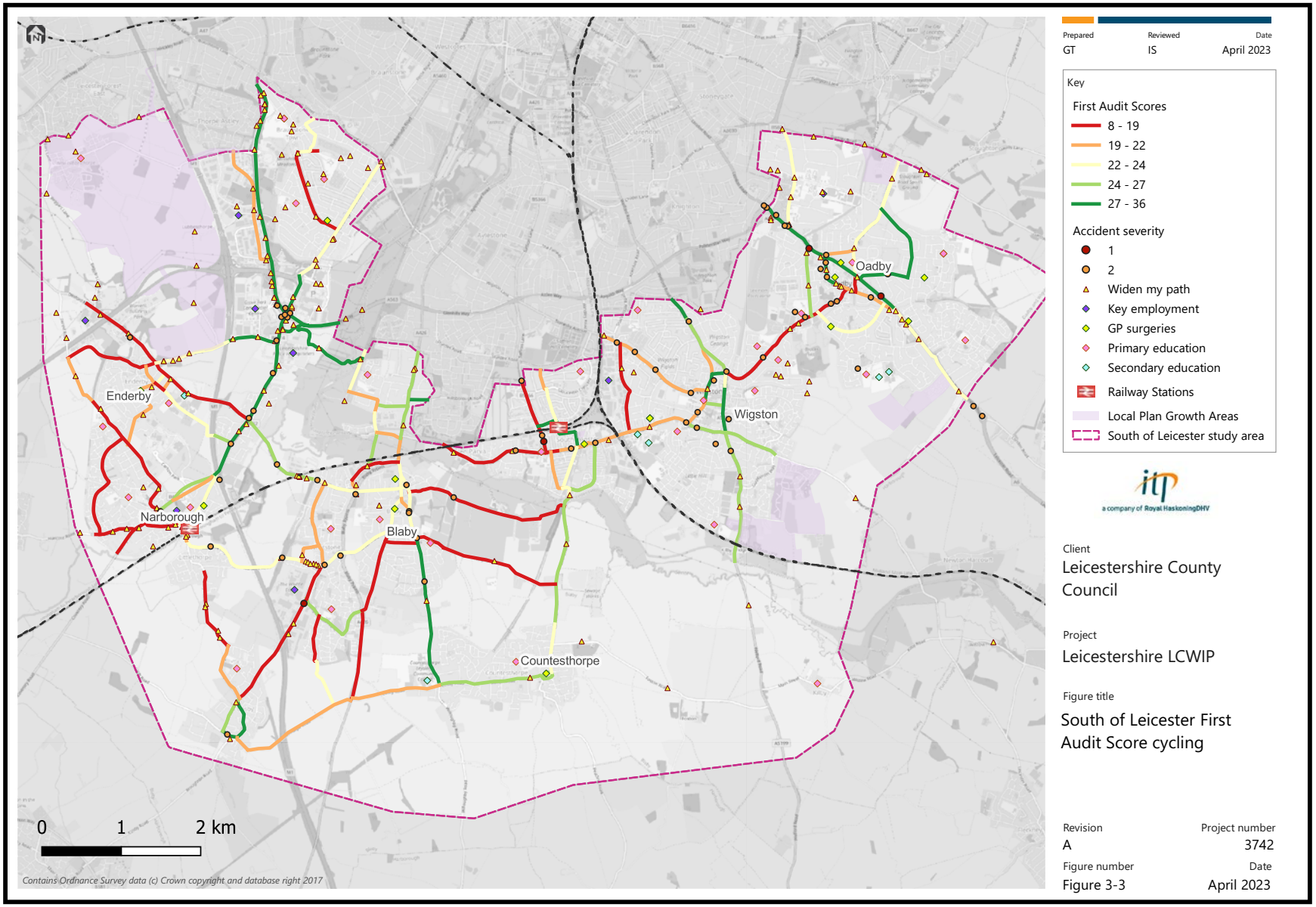


Figure 6.8 – Cycling audit scores

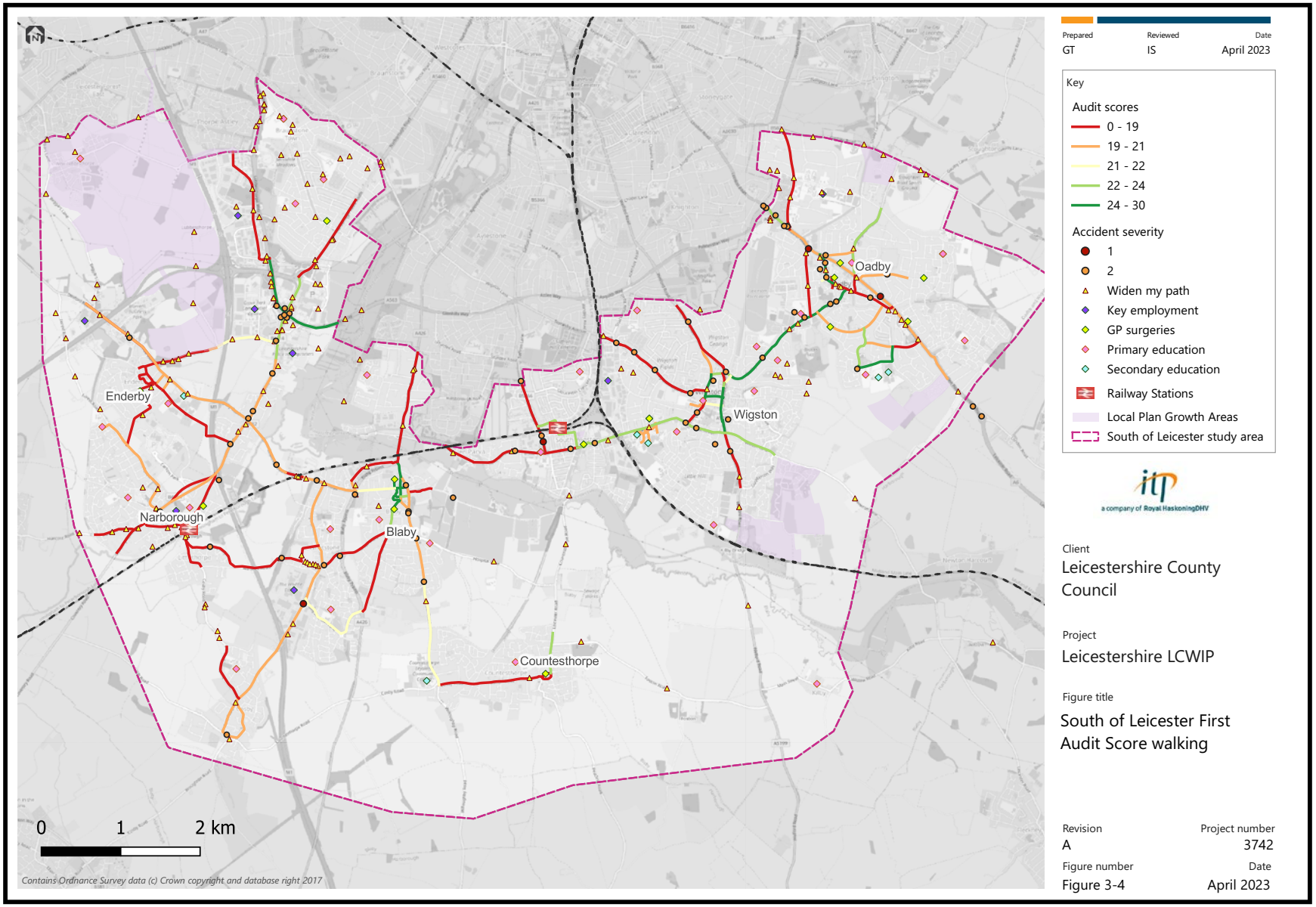


Figure 6.9 – Walking and wheeling audit scores

6.2.5 Healthy Streets Design Check

The Healthy Streets Design Check toolkit was developed by Lucy Saunders, of Healthy Streets, in collaboration with Sustrans, Transport for London, and a number of local authorities. It has been adopted by the DfT as best practice for assessing how humans experience using streets as cyclists or pedestrians.

The approach emphasises the need to prioritise active travel, reduce the dominance of motor traffic, and create street environments which are safe, accessible, and attractive for all users. The tool uses 19 metrics, against 10 indicators, which each focus on a different aspect of being on the streets.

Each metric is scored on a four-point scale (0, 1, 2, or 3) and weighted according to its role in the 10 Healthy Streets indicators. On the four-point scale, zero indicates a poor street environment, whilst three indicates a good environment which is welcoming to all people who are walking/wheeling, cycling, or spending time in the street. The 19 metrics must all be scored to produce a final Healthy Streets score out of 100.

The toolkit does not define a threshold for an 'acceptable' quality of environment. Designers are encouraged to focus on maximising the increase in score between the original environment and the environment post-intervention.

The audits against the Healthy Streets Design Check toolkit found that there are some streets, such as the B4114 between Narborough and Fosse Park and the link connecting South Wigston train station to Kirkdale Road and Saffron Road, which have attractive, accessible, and safe walking/wheeling and cycling infrastructure. However, even these scored a total of 80 or less, indicating that there is still room for improvement on these routes.

Other areas, particularly those extending northwest of Enderby, the route connecting Wigston and Oadby, and the B582 northeast of Oadby, performed more poorly. These routes received a total Healthy Streets Design Check score of less than 15, indicating that they currently provide a very poor environment for cycling and walking/wheeling, and need significant improvement.

Figure 6.10 – Healthy Streets Design Check indicators[18]

Figure 6.11, below, shows the full results of the Healthy Streets Design Check in the South of Leicester LCWIP area.

[18] Healthy Streets.

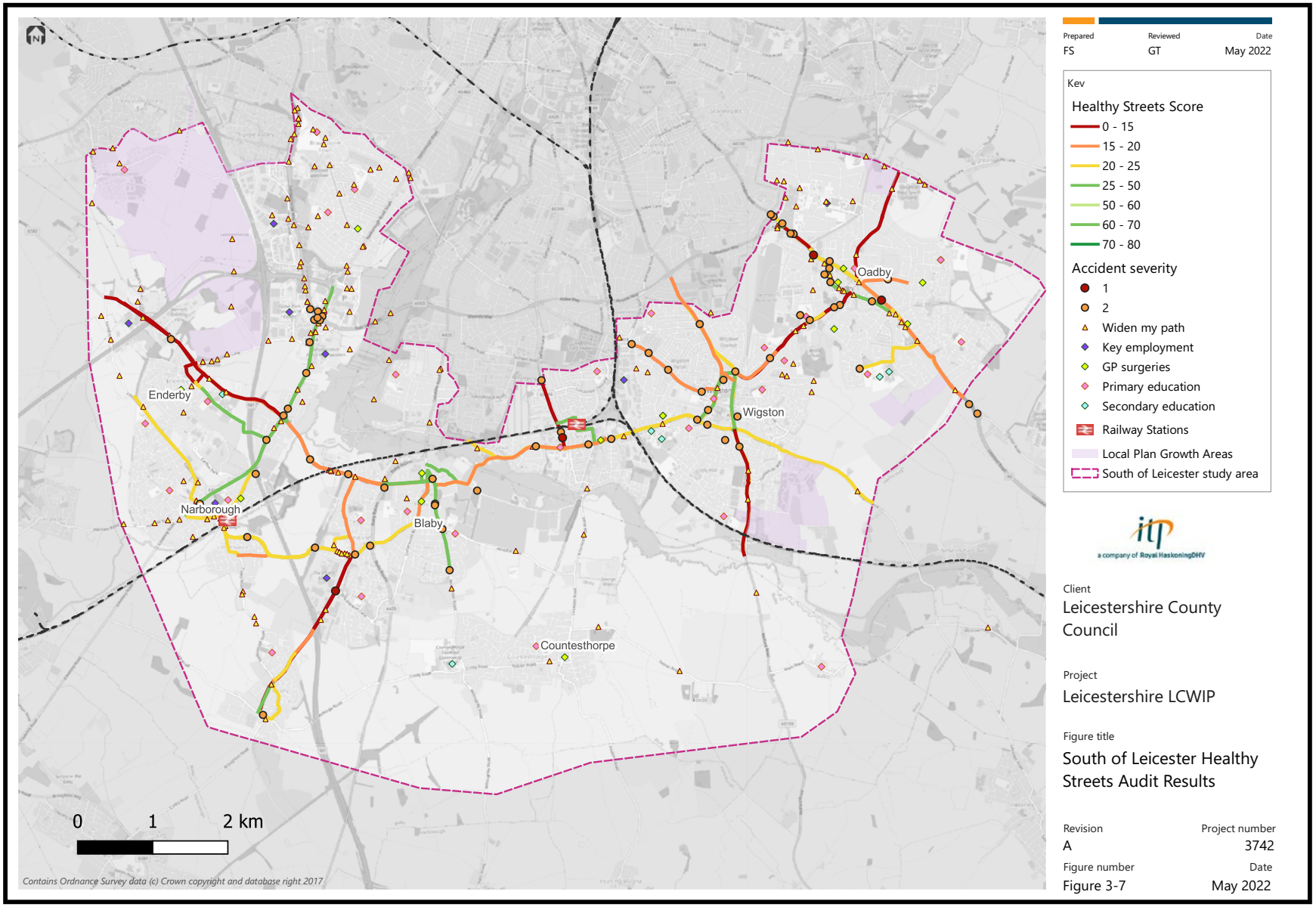


Figure 6.11 – Results of the Healthy Streets Design Check audit

6.3 Developing our 10-year pipeline of schemes and concept ideas

The completion of the auditing and Healthy Streets Design Checks highlighted the strengths and weaknesses of each route segment assessed against the 19 metrics and, ultimately, the 10 Healthy Streets Indicators. Based on the results of this detailed auditing, as well as our engagement process, we identified a long list of routes and key corridors which, if improved to the latest design standards including LTN 1/20, have the greatest potential to benefit people travelling actively in the South of Leicester area, ensuring the needs of a diverse range of users are met.

The design team, guided by our level of ambition, and latest best practice, developed the proposed design features that would bring these routes up to the latest standards, improving active travel provision for all users.

This long list forms our initial 10-year pipeline of high-level schemes in the South of Leicester LCWIP area.

Each of these routes were assigned a number, and the individual route sections were assigned letters for ease of identification throughout the process. They are referred to in this way throughout the LCWIP report. As a result of the process, the long list contains non-continuous reference numbers for corridors which are kept for consistency and continuity. Figure 6.12, and table 6.1 below, show the long list of routes and design improvement features, which form our initial 10-year pipeline of schemes in the South of Leicester LCWIP area.

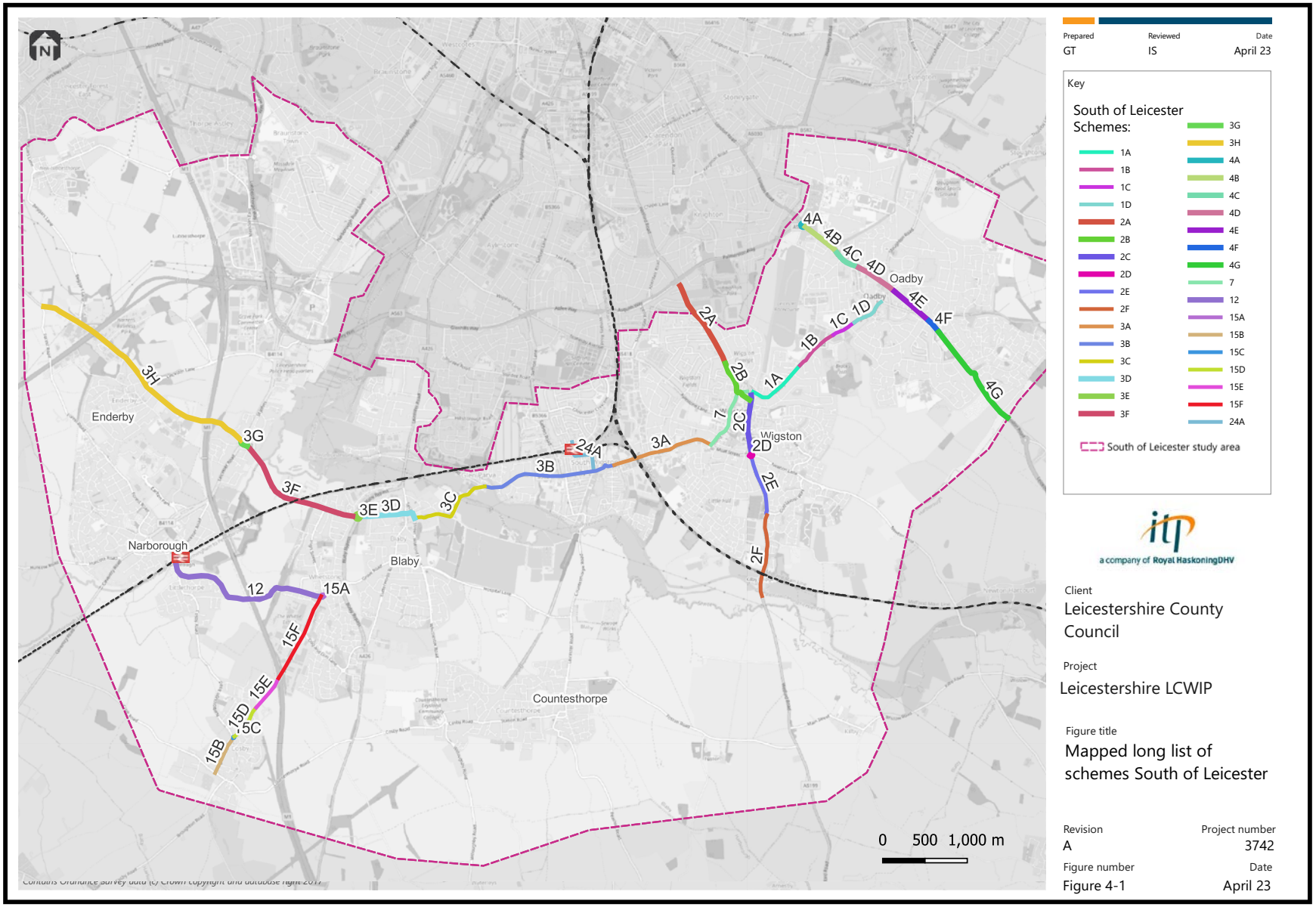


Figure 6.12 – South of Leicester long list of schemes for consideration

Table 6.1 – Long list of South of Leicester LCWIP 10-year pipeline schemes

Corridor No.	Corridor Name	Route ID	Road Name	Route Description and Improvements
Corridor 1	B582 / Oadby Road / Wigston Road **Wigston - Oadby**	1A	B582 Oadby Road	Wakes Road roundabout to Shenley Road mini roundabout. Segregated cycleway, upgraded crossings, compact roundabouts, pocket park with seating.
		1B	B582 Wigston Road	Shenley Road mini roundabout to Oadby Town Football Club. Segregated cycleway.
		1C	B582 Wigston Road	Oadby Town Football Club to Rosemead Drive. Junction improvements, compact roundabout, upgraded crossings.
		1D	B582 Wigston Road	Rosemead Drive to London Road mini roundabout. Segregated cycleway, pocket parks with seating.
Corridor 2	A5199 Leicester Road / Bull Head Street **Wigston**	2A	Leicester Road / Bull Head Street	Hillcrest Road to Highfield Drive. Segregated cycleway, widened footway, priority raised table crossing, upgraded segregated crossing, pocket parks with seating.
		2B	Bull Head Street / B582 roundabout	Highfield Drive to Maromme Square. Signalised roundabout, upgraded segregated crossings, low-level vegetation.
		2C	Bull Head Street	Wakes Road roundabout to Moat Street. Segregated cycleway, priority raised table crossing, upgraded segregated crossing, floating bus stop with cycle bypass.
		2D	Bull Head Street / Newton Lane junction	Bull Head Street / Newton Lane junction only. Junction improvements, upgraded segregated crossing.
		2E	A5199 Welford Road	Bull Head Street / Newton Lane junction to Guthlaxton Way roundabout. Segregated cycleway, priority raised table crossing, floating bus stop with cycle bypass, signalised roundabout with upgraded crossing, benches, bus shelters, low-level vegetation.
		2F	A5199 Welford Road	Guthlaxton Way roundabout to Kilby Bridge. Segregated cycleway, priority raised table crossing, upgraded segregated crossing, lower speed limit to 30, traffic calming measures, pocket parks with seating.

Table 6.1 – Long list of South of Leicester LCWIP 10-year pipeline schemes cont'd

Corridor No.	Corridor Name	Route ID	Road Name	Route Description and Improvements
Corridor 3	B582 Station Road / Enderby Road / Blaby Road **Wigston - Blaby - Enderby**	3A	B582 Bushloe End / Station Road / Blaby Road	Long Street / Moat Street mini roundabout to 'Lansdowne Grove' bus stop. Segregated cycleway, priority raised table crossing, upgraded segregated crossing.
		3B	B582 Blaby Road / Little Glen Road	'Lansdowne Grove' bus stop to The Ford. Segregated cycleway, priority raised table crossing, upgraded segregated crossing.
		3C	The Ford / Mill Lane / Church Street	B582 Little Glen Road to Church Street junction with Sycamore Street. Shared use, wayfinding, and lighting improvements.
		3D	Sycamore Street / Cross Street / Enderby Road	Church Street junction with Sycamore Street to Blaby Bypass. Segregated cycleway, parallel crossing, priority raised table crossing.
		3E	Blaby Bypass / Enderby Road roundabout	Blaby Bypass / Enderby Road roundabout junction only. Segregated cycleway, signalised roundabout
		3F	B582	Blaby Bypass to Foxhunter roundabout. Segregated cycleway, priority raised table crossing, upgraded segregated crossing.
		3G	Foxhunter roundabout	Foxhunter roundabout only. Segregated cycleway, signalised roundabout.
		3H	Blaby Road / Mill Hill	Foxhunter roundabout to Forest Road. Segregated cycleway, priority raised table crossing, upgraded segregated crossings.

Table 6.1 – Long list of South of Leicester LCWIP 10-year pipeline schemes cont'd

Corridor No.	Corridor Name	Route ID	Road Name	Route Description and Improvements
Corridor 4	A6 Leicester Road / Harborough Road **Oadby**	4A	Leicester Road / Palmerston Way roundabout, A6	Palmerston Road roundabout only. Segregated cycleway, signalised roundabout, upgraded segregated crossing, rainwater gardens and low-level vegetation.
		4B	Leicester Road, A6	From Palmerston Road roundabout to Oadby Hill Drive. Segregated cycleway, rainwater gardens, benches, low-level vegetation crossing upgrade.
		4C	Leicester Road to Harborough Road, A6	Oadby Hill Drive to Lyndhurst Road. Segregated cycleway, pocket parks and rainwater gardens with seating, upgraded crossing, junction improvements, cycle parking.
		4D	Harborough Road, A6	Lyndhurst Road to B582 New Street, inclusive. Segregated cycleway, bus shelter, cycle parking, contra-flow cycle lane, priority raised table crossing, upgraded segregated crossing, rainwater gardens and benches
		4E	Harborough Road, A6	Uplands Road to Waldron Drive. Segregated cycleway, priority raised table crossing, street furniture de-cluttering and relocation.
		4F	Harborough Road to Glen Road, A6	Waldron Drive to Sainsbury's access junction. Segregated cycleway, upgraded crossing, wider footway, priority side road crossings.
		4G	Harborough Road, A6	Sainsbury's access junction to Gorse Lane. Segregated cycleway, upgraded segregated crossings, priority side road crossings, bus stop with cycle bypass, bus shelters.
Corridor 7	Leicester Road / Long Street **Wigston**	7	Leicester Road / Long Street	Long Street junction with Moat Street to B4518 Wakes Road. Mixed traffic cycling on quiet residential roads and High Street / Leicester Road, compact roundabouts, side road junction treatments, pocket parks and benches.

Table 6.1 – Long list of South of Leicester LCWIP 10-year pipeline schemes cont'd

Corridor No.	Corridor Name	Route ID	Road Name	Route Description and Improvements
Corridor 12	Warwick Road **Narborough**	12	Warwick Road	Cambridge Road / Warwick Road roundabout to Narborough railway station. Segregated cycleway, mixed traffic cycling on 20mph roads, parallel crossing.
Corridor 15	Park Road / Cambridge Road **Cosby - Whetstone**	15A	Cambridge Road / Grove Road roundabout	Cambridge Road / Grove Road roundabout only. Segregated cycleway, parallel crossing, Dutch-style roundabout.
		15B	Park Road	Croft Road to Narborough Road mini roundabout. Segregated cycleway, limiting on-street parking.
		15C	Narborough Road / Cambridge Road mini roundabout	Narborough Road / Cambridge Road mini roundabout only. Parallel crossing, Dutch-style roundabout.
		15D	Cambridge Road	Narborough Road / Cambridge Road mini roundabout to start of 40mph posted speed limit. Segregated cycleway, priority raised table crossing, upgraded toucan crossing.
		15E	Cambridge Road	Cambridge Road start of 40mph posted speed limit to M1 Underpass. Segregated cycleway with some shared footway, lower speed limit to 30mph, traffic calming measures.
		15F	Cambridge Road	M1 Underpass to Cambridge Road / Grove Road roundabout. Mixed traffic cycling on 20mph roads, priority junction, junction improvements, lower speed limit to 30mph, traffic calming measures.
Corridor 24	Blaby Road, Kirkdale	24	Station St, Kirkdale Road and Saffron Road	Mixed traffic cycling on quiet residential roads, modal filters at the South Wigston station footbridge, side road junction treatments, priority raised table crossing.

6.3.1 Area wide improvement measures, as part of our 10-year pipeline

6.3.1.1 Traffic calming and speed reduction measures

The public feedback included requests for traffic calming and speed reduction measures, for the safety of cyclists and pedestrians and to create a more pleasant environment for active travel. These types of measures may include the introduction of 20mph zones or limits on parts of the network.

We will consider the nature of the road and the surrounding area when deciding whether a scheme to reduce the speed limit is appropriate as part of an assessment of road safety. For example, distributor roads like the A6 are unlikely to be included in any 20mph zone schemes as the roads' intended function is to move vehicle traffic quickly from residential areas to major roads.

The introduction of any schemes to reduce speed limits, including any 20mph zones, will be subject to road safety assessments, discussion with the emergency services and public consultation. It would also be dependent on funding availability, in the same way as other LCWIP schemes.

6.3.1.2 Benches and cycle parking

The inclusion of benches and cycle parking in walking/wheeling and cycling improvement schemes has been found to have a significant effect on the number of people travelling by active modes, for relatively low costs. Where appropriate, these elements have been incorporated into the concept designs for the short list of scheme ideas set out in 6.5, below.

Where the only improvements required to a route are the addition of benches, cycle parking, or other 'small scale' measures, these will be delivered, subject to funding availability, in the same way as other LCWIP schemes.

6.3.1.3 Cycle repair stations

Cycle repair stations are a low-cost form of infrastructure that, if installed in key locations, can help encourage cycling and wheeling. These repair stations generally include a range of tools and tire pump to help keep people moving.

6.3.1.4 Initial wider area schemes identified as part of the long list of schemes

The wider area schemes as described above, such as bench seating, cycle parking and cycle repair stations that have been identified, are also included in our 10-year pipeline of schemes. It is expected that these types of wider area schemes that support active travel will be included in many larger schemes, and potentially more will be identified as the schemes progress through design stages, public engagement, and delivery, once funding is secured. Table 6.2, below shows the type and location of initial wider area schemes identified, which are also included in the 10-year pipeline.

Table 6.2 - Initial wider area schemes included in 10-year pipeline

Road Name	Description and Improvement
Winchester Road, Blaby	New benches along Winchester Road, Blaby Bench at Bouskwell Park / Church Street corner Bench at Blaby Methodist Church Bench at Barrowcliffe Way
Lutterworth Road, Blaby	Cycle parking at Johns Court shopping area and bike repair point outside Aldi near Rotary Club board and post-box Sheffield stands in pedestrianized area Bike repair station at Rotary Club
High Street Blaby - Whetstone	Benches and planters on High Street 1 bench Wales Rd / High St 1 bench High Street / The Nook
Uplands Park, Oadby / Aylestone Lane Park, Wigston / Blaby Road Park, South Wigston	Bike lockers and cycle repair stations at Uplands Park / Aylestone Park / South Wigston Skatepark 3 x bike lockers and 1 x bike repair station at South Wigston Skatepark 3 x bike lockers and 1 bike repair station at Uplands Park 3 x bike lockers and 1 bike repair station at Aylestone Lane Park

6.4 LCWIPs and other infrastructure projects and programmes

Schemes proposed through LCWIPs are part of the wider delivery of highway schemes across the county. Government guidance sets out that all highway schemes must consider active travel in their design and delivery. If active travel provision is not required, then this must be clearly evidenced where schemes are fully or partly funded by Government. Under our area transport strategies, supporting local plan development and other delivery mechanisms, a range of active travel improvement schemes are proposed and delivered in areas both covered by LCWIP areas and not. For example, we continue to seek funding toward delivery of packages of smaller local connectivity schemes, which include lower cost schemes such as dropped access kerbs, minor footway cycle way/track improvements, in addition to specific safety led improvements and accessibility improvements to improve connectivity across existing facilities.

6.5 Going the extra step – developing a short list of concept scheme ideas

From the long list of schemes which represents our 10-year pipeline, a short list of routes was selected to be taken forward to concept design stage. At this stage, the broad idea for a scheme is drawn as a high-level plan. The purpose of preparing concept designs was to explore the 'art of the possible' for differing route characteristics, on a corridor basis (as opposed to individual locations treated in isolation from each other) and reflecting the outputs of the original sifting methodology, route audits, and Healthy Streets Design Check. Interlinking sections of route were chosen, to avoid fragmentation or the risk of increasing inconsistency along route corridors. Having concept scheme drawings helps when engaging with local communities on what types of measures could be provided to improve active travel, as well as supporting future funding bids. The schemes which were selected to be shortlisted for concept design are shown in figure 6.13 and table 6.3.

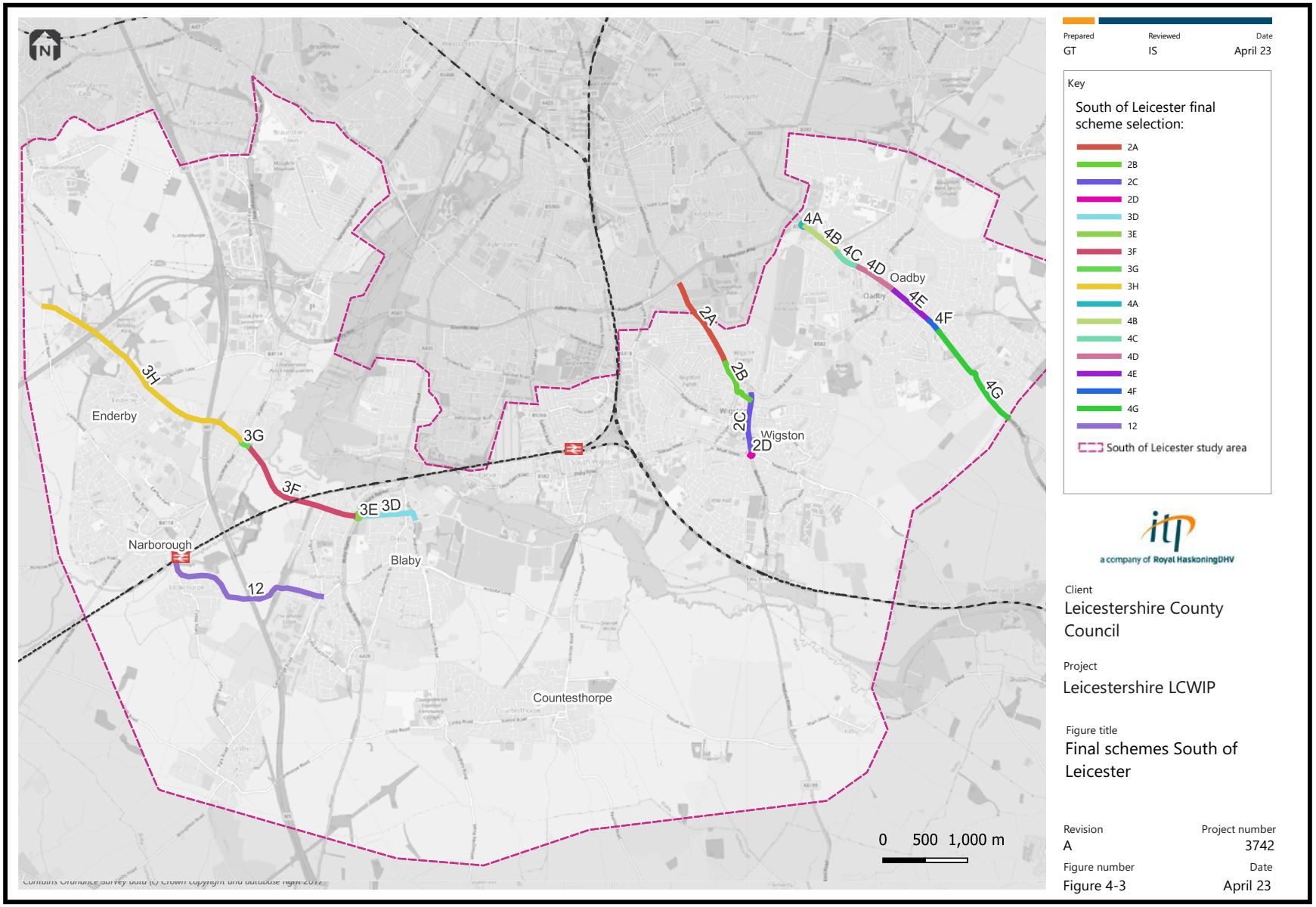


Figure 6.13 – Schemes selected for concept design in the South of Leicester LCWIP area

Table 6.3 – Short list of schemes selected for concept design

Corridor No.	Corridor Name	Route ID	Road Name	Route Description	Why selected
Corridor 2	A5199 Leicester Road / Bull Head Street, **Wigston**	2A	Leicester Road / Bull Head Street	Hillcrest Road to Highfield Drive	Chosen because it is a growth corridor for development, connects growth South of Wigston, and acts as a key corridor into the City of Leicester, as identified by the auditing and Healthy Streets Design Check.
		2B	Bull Head Street / B582 roundabout	Highfield Drive to Maromme Square	
		2C	Bull Head Street	Wakes Road roundabout to Moat Street	
		2D	Bull Head Street / Newton Lane junction	Bull Head Street / Newton Lane junction only	
Corridor 3	B582 Enderby Road / Blaby Road, **Blaby - Enderby**	3D	Sycamore Street / Cross Street / Enderby Road	Church Street to Blaby Bypass	Chosen as a key east-west corridor between New Lubbesthorpe to settlements south-west of Leicester, including key employment. This corridor also addresses community severance caused by existing road infrastructure (A426 and B4114) as identified by the auditing and Healthy Streets Design Check.
		3E	Blaby Bypass / Enderby Road roundabout	Blaby Bypass / Enderby Road roundabout junction only	
		3F	B582	Blaby Bypass to Foxhunter roundabout	
		3G	Foxhunter roundabout	Foxhunter roundabout junction only	
		3H	Blaby Road / Mill Hill	Foxhunter roundabout to Forest Road	

Table 6.3 – Short list of schemes selected for concept design cont'd

Corridor No.	Corridor Name	Route ID	Road Name	Route Description	Why selected
Corridor 4	A6 Leicester Road / Harborough Road, **Oadby**	4A	Leicester Road / Palmerston Way roundabout, A6	Palmerston Road roundabout junction only	Chosen as an example of a dual carriageway road that provides significant scope / opportunities for improving cycling, walking and wheeling provision as identified by the auditing and Healthy Streets Design Check.
		4B	Leicester Road, A6	From Palmerston Road roundabout to Oadby Hill Drive	
		4C	Leicester Road to Harborough Road, A6	Oadby Hill Drive to Lyndhurst Road	
		4D	Harborough Road, A6	Lyndhurst Road to B582 New Street, inclusive	
		4E	Harborough Road, A6	Uplands Road to Waldron Drive	
		4F	Harborough Road to Glen Road, A6	Waldron Drive to Sainsbury's access junction	
		4G	Harborough Road, A6	Sainsbury's Access Junction to Gorse Lane	
Corridor 12	Warwick Road, **Narborough**	12	Warwick Road	Cambridge Road / Warwick Road roundabout to Narborough railway station	Chosen in response to strong local stakeholder and public engagement feedback. This corridor is a key link between Narborough train station and settlements further east.

The selected scheme ideas were developed into 2D concept designs using AutoCAD design software. The designs were primarily guided by LTN 1/20 and the Design Manual for Roads and Bridges, but also considered the core design principles identified in the Walking Route Audit Tool and Route Selection Tool (see figure 6.5, above), the LCWIP technical guidance, and the Healthy Streets design principles.

The Healthy Streets Design Check toolkit encourages designers to consider how to minimise zero scores. Therefore, consideration was also given to specific placement of design features which can help to make cycling and walking/ wheeling more appealing to a wide range of users, including trees, benches, and pocket parks.

The intervention options which are available for each route depend on the nature of the road and the surrounding area. For example, roads which have a distributor or proxy distributor function, where there are no alternative routes for vehicles, or where there are physical constraints, such as the overall width of the pavement and road, may be restricted in terms of the active travel infrastructure which can be installed.

The types of highway design features which were considered during development of the concept ideas included:

- CYCLOPS (Cycle Optimised Protected Signals) Junctions,
- Dutch style roundabouts. These designs include parallel crossings for pedestrians and cyclists to give them priority over motorised traffic,
- speed reduction for motorised vehicles,
- floating bus stops, with shelter and seating,
- additional pedestrian crossing points, both informal and signalised,
- segregated cycle lanes, and
- junction improvements for cyclists and pedestrians, including
    - separate signal stages
    - advanced stop lines
    - reduced crossing distances.

Table 6.4, below, shows examples of some of these features.

Design logs were used to record the justification for design choices. These helped to ensure that proposed major infrastructure is complementary to that proposed on adjacent scheme sections.

Table 6.4 – Examples of design features which were considered during concept scheme development

Low-level rainwater garden

Pocket park

Segregated one-way cycleway

Side road entry treatment/raised table, with cycle crossing

Dutch-style entrance kerbs

Bi-directional cycleway

CYCLOPS junction

Floating bus stop, with cycle bypass

Advanced stop lines

Parallel crossing

On-carriageway cycling

Cycle signals

6.6 Assessing the potential impact of the concept scheme ideas

Healthy Streets Design Checks were repeated, this time with the assumption that all of the measures identified in the concept designs for each route section were implemented. The new scores were compared to the scores for the route sections in their existing state. The difference between the two sets of scores indicated how effective the proposed interventions are likely to be.

An overall assessment for each corridor, combining the scores for each individual section, would hide the strengths and weaknesses of each section. Therefore, the assessments were carried out on individual sections and there were no assessments made of the overall corridors.

Improvements on route sections in the South of Leicester LCWIP area ranged from a 1-point increase to a 22-point increase when all ten Healthy Streets indicators were considered. The three sections which received the greatest point increase were Leicester Road/Bull Head Street (route ID 2A) and Harborough Road to Glen Road (route ID 4F), which both received a 22-point increase, and Bull Head Street (route ID 2C), which received a 21-point increase. Table 6.5 sets out details of the interventions which are proposed for each of these route sections.

Table 6.5 – Top-scoring intervention proposals for the South of Leicester LCWIP area

Route ID	Before Score	After Score	Change	Intervention Proposals
2A	19	41	+22	• Segregated 1-way cycleway (2m wide, 0.5m buffer) northbound and southbound along Welford Road/Leicester Road • Bus stop bypasses in accordance with LTN 1/20 • Low-level rainwater garden for public realm improvement • Segregated toucan crossings (LTN 1/20 10.4.21) • Declutter street furniture/ traffic signs • Raised side roads with entry treatment – features priority crossings for cycleways

Table 6.5 – Top-scoring intervention proposals for the South of Leicester LCWIP area cont'd

Route ID	Before Score	After Score	Change	Intervention Proposals
4F	21	43	+22	• Segregated 1-way cycleway (2m wide, 1m buffer) northbound and southbound along A6 Harborough Road / Glen Road • Junction upgrades to Waldron Drive and access to Sainsbury's – including toucan crossing points, and two-stage right turn features • Footway buildouts • Bus stop bypasses in accordance with LTN 1/20 and provision of upgraded bus shelters to provide additional shade and shelter • Provision of continuous footways at private accesses
2C	28	49	+21	• Shared foot and cycle path northbound and southbound along Bull Head Street • Provision of upgraded bus shelters to provide additional shade and shelter • Raised side roads with entry treatment • Low-level rainwater garden for public realm improvement • Upgrades to existing crossing facilities and provide new segregated toucan crossings (LTN 1/20 10.4.21)

Table 6.6, on the next page, shows the improvement in scoring across all of the schemes.

The interventions which resulted in the greatest improvement between the 'before' and 'after' Healthy Streets Design Checks included:

- segregated protection for cyclists from cars and other motorised vehicles,
- rainwater gardens,
- tree planting,
- new crossing points, and
- bus bypasses.

Applying these interventions in line with LTN 1/20 and the CaWS would significantly improve routes which carry a large volume of cars, vans, and HGVs.

Table 6.6 – Detailed before and after Healthy Streets Design Check scores

Audit Route ID	Everyone feels welcome		Easy to cross		Shade and Shelter		Places to stop and rest		Not too noisy		People chose to walk and cycle		People feel safe		Things to do see and do		People feel relaxed		Clean air		Healthy Streets Score Before	Healthy Streets Score After	Change
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After			
2A	23	46	8	29	17	67	7	53	20	20	23	46	18	41	44	56	23	46	8	8	19	41	+22
2B	17	19	4	8	33	33	8	8	20	20	17	19	10	13	56	56	17	19	8	8	19	20	+1
2C	33	56	21	50	17	67	27	53	27	27	33	56	28	49	44	56	33	56	17	17	28	49	+21
2D	35	49	42	50	0	50	13	33	27	27	35	49	44	49	22	33	35	49	17	17	27	41	+14
3D	32	49	13	42	33	67	33	53	20	27	32	49	18	38	56	56	32	49	8	17	28	45	+17
3E	35	59	25	42	33	33	25	50	20	20	35	59	31	56	78	78	35	59	0	0	32	46	+14
3F	23	46	8	50	17	17	0	13	13	13	23	46	18	49	44	44	23	46	0	0	17	32	+15
3G	30	49	17	42	17	33	27	40	13	13	30	49	26	44	78	78	30	49	0	0	27	40	+13
3H	14	32	0	29	17	17	0	0	13	27	14	32	10	28	44	44	14	32	0	17	13	26	+13
4A	37	59	29	46	100	100	0	42	20	20	37	59	31	62	67	67	37	59	8	8	37	52	+16
4B	14	26	13	13	0	17	0	27	13	13	14	26	15	23	0	44	14	26	8	8	9	22	+13
4C	32	46	21	29	17	67	27	53	13	13	32	46	26	33	33	56	32	46	0	0	23	39	+16
4D	25	47	17	46	33	50	7	27	20	20	25	47	18	46	44	44	25	47	25	25	24	40	+16
4E	26	42	13	33	17	17	0	13	20	20	26	42	23	44	44	44	26	42	8	8	20	31	+11
4F	28	51	21	33	17	67	0	60	13	13	28	51	23	38	44	56	28	51	8	8	21	43	+22
4G	25	42	13	33	17	67	7	33	13	13	25	42	18	33	56	56	25	42	8	8	20	37	+17
12	22	41	8	29	33	33	25	42	27	40	22	41	13	31	44	44	22	41	17	33	23	37	+14

7. Prioritising our 10-year pipeline

The LCWIP technical guidance sets out a suggested approach for prioritising improvements based on effectiveness, cost, and deliverability. We built on this approach to undertake prioritisation assessments and develop a prioritised 10-year pipeline of locations for improvement from the long list of locations set out in chapter 6, above.

7.1 Prioritisation criteria

In order to establish the priority order of schemes, each scheme was assessed against five factors:

- effectiveness,
- attractiveness,
- policy,
- economics (cost, economic benefits, and value for money),
- deliverability,

Table 7.1 shows how the schemes were assessed against each criterion.

Table 7.1 – How the prioritisation criteria were assessed

Criteria	How it was assessed
Effectiveness	
Potential to encourage new walking trips	Access to key destinations
Potential to encourage new cycling trips	Number of vehicle trips under 10km
Population who directly benefit from the intervention	Number of residents living in the area around the intervention, based on 2011 Census data
Potential to improve road safety	Number and severity of pedestrian and/or cyclist accidents from 2015-2019
Attractiveness	
Healthy Streets score	Overall Healthy Streets score
Policy	
Improvement in air quality (1)	Proximity to an Air Quality Management Area
Improvement in air quality (2)[19]	Place Based Carbon Calculator car emissions grade
Links to or through an area of deprivation	Indices of Multiple Deprivation deciles
Proximity to schools or education	Distance from a school, college, or university
Importance of the intervention as defined through the engagement process	Extent to which the route or area was raised as being in need of improvement during the stakeholder and public consultation process
Improved multimodal transport connections	Distance from a rail station, bus station, park & ride, or other key transport route
Economic	
Value for money	Active Mode Appraisal Toolkit (AMAT) benefit-cost ratio (BCR), based on a 40-year appraisal period
Proximity to a major growth site	Distance from Local Plan committed developments (at least 100 houses or jobs by 2036)
Deliverability	
Scheme feasibility	Land ownership, based on whether the route is on county highway National designation, based on whether the route falls within a protected area (Site of Special Scientific Interest, conservation area, parks & gardens, scheduled monument, listed building etc)

[19] The scores for the two air quality criteria were averaged, to ensure that air quality wasn't given a greater weighting than other factors.

7.2 Economic assessment

Economic assessment is a crucial part of appraising whether the benefits of a scheme outweigh the costs of implementing it. Economic assessment for walking and cycling schemes, including those developed for delivery as part of LCWIPs, is carried out using the Active Mode Appraisal Toolkit.

7.2.1 Active Mode Appraisal Toolkit (AMAT)

The AMAT is a DfT-produced tool to assess the overall benefits and costs of proposed cycling and walking/wheeling schemes. It is spreadsheet-based and accompanied by an Active Mode Appraisal Toolkit User Guide. The User Guide sets out how the tool is to be used and the process which should be undertaken to complete an assessment in the AMAT.

Several AMAT spreadsheets have been completed for each of the proposed schemes, using the 'User Interface Intervention' inputs shown in appendix B.

7.2.2 Cycling and walking/wheeling demand

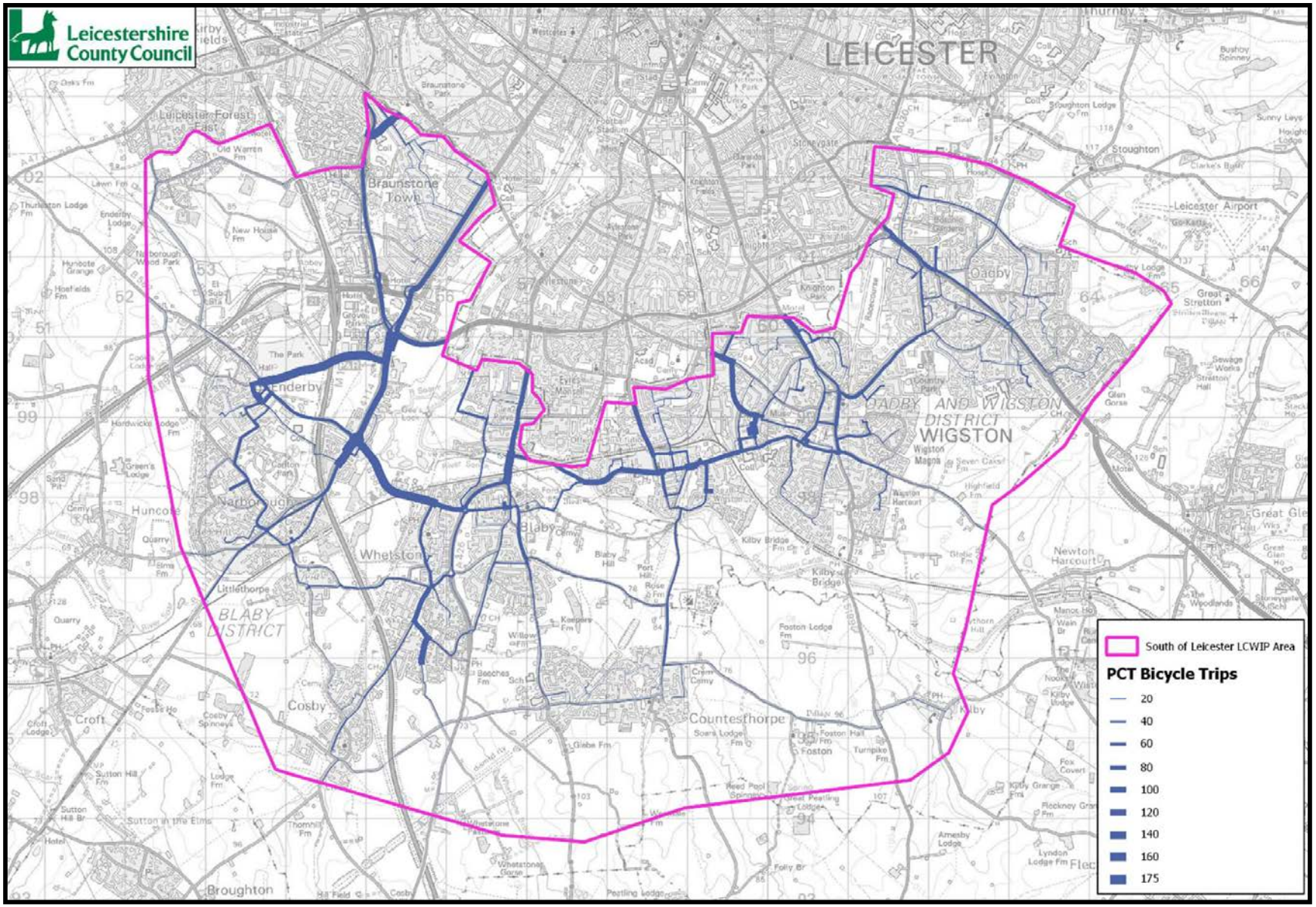
VivaCity smart traffic monitoring sensors have recently been installed around the study area. However, the sensors have not been in place for a full year, so there was insufficient data to determine the average level of walking/wheeling and cycling use on these routes. Therefore, we relied upon established tools to analyse cycling and walking/wheeling on these routes, both in the current situation (without the scheme) and in the future (with the scheme).

7.2.2.1 Before intervention

7.2.2.1.1 Cycling trips

For corridor schemes, the number of cycling trips without the proposed scheme was determined using the route network (Lower Super Output Area) data from the Propensity to Cycle Tool (PCT). This data includes the number of weekday cycling trips assumed along each link, based on 'main mode of travel to work' data from the 2011 Census. Where more than one option was available for a scheme, the highest trip rate was used for the AMAT. Figure 7.1, below, shows the levels of bicycle trips as identified in the PCT over the whole LCWIP network, from which specific PCT data for the relevant corridors were used.

Figure 7.1 – Cycling trips as shown in the Propensity to Cycle Tool (PCT)



This data was supplemented with information from the National Travel Survey (NTS) Table NTS0409,[20] to calculate what percentage of total cycling trips was commuters. According to NTS data, commuters made up 33.59% of all cycling trips. In addition, the AMAT User Guide states that 90% of all cycling trips result in a return cycling journey on the same day. Therefore, the total number of cycling trips identified in the NTS data was uplifted to account for non-commuting and return journeys.

[20] Purpose of travel, Department for Transport, updated August 2022.

7.2.2.1.2 Walking and wheeling trips

The number of walking and wheeling trips without the proposed scheme was determined using travel to work data from the DataShine Tool.[21] This tool is a collection of Census data presented in a mapping platform, developed by researchers at University College London and partially funded by the Economic and Social Research Council.

The data includes the number of weekday walking and wheeling trips for each Lower Super Output Area at the time of the 2011 Census. In order to determine the number of walking and wheeling trips on a specific section of road, the number of trips per metre of the road network in the associated area was calculated. This figure was then multiplied by the length of the proposed route.

The DataShine Tool data only includes commuting trips, which made up only 7.08% of walking and wheeling trips in 2018. In addition, it does not include return journeys. Therefore, the total number of walking and wheeling trips identified in the data was uplifted to account for non-commuting and return journeys.

[21] Layer QS701EW0011 – Number of trips 'on foot', DataShine Blog, Oliver O'Brien & James Cheshire, 2016 (Interactive mapping for large, open demographic data sets using familiar geographical features, Journal of Maps, 12:4, 676-683, DOI: 10.1080/17445647.2015.1060183).

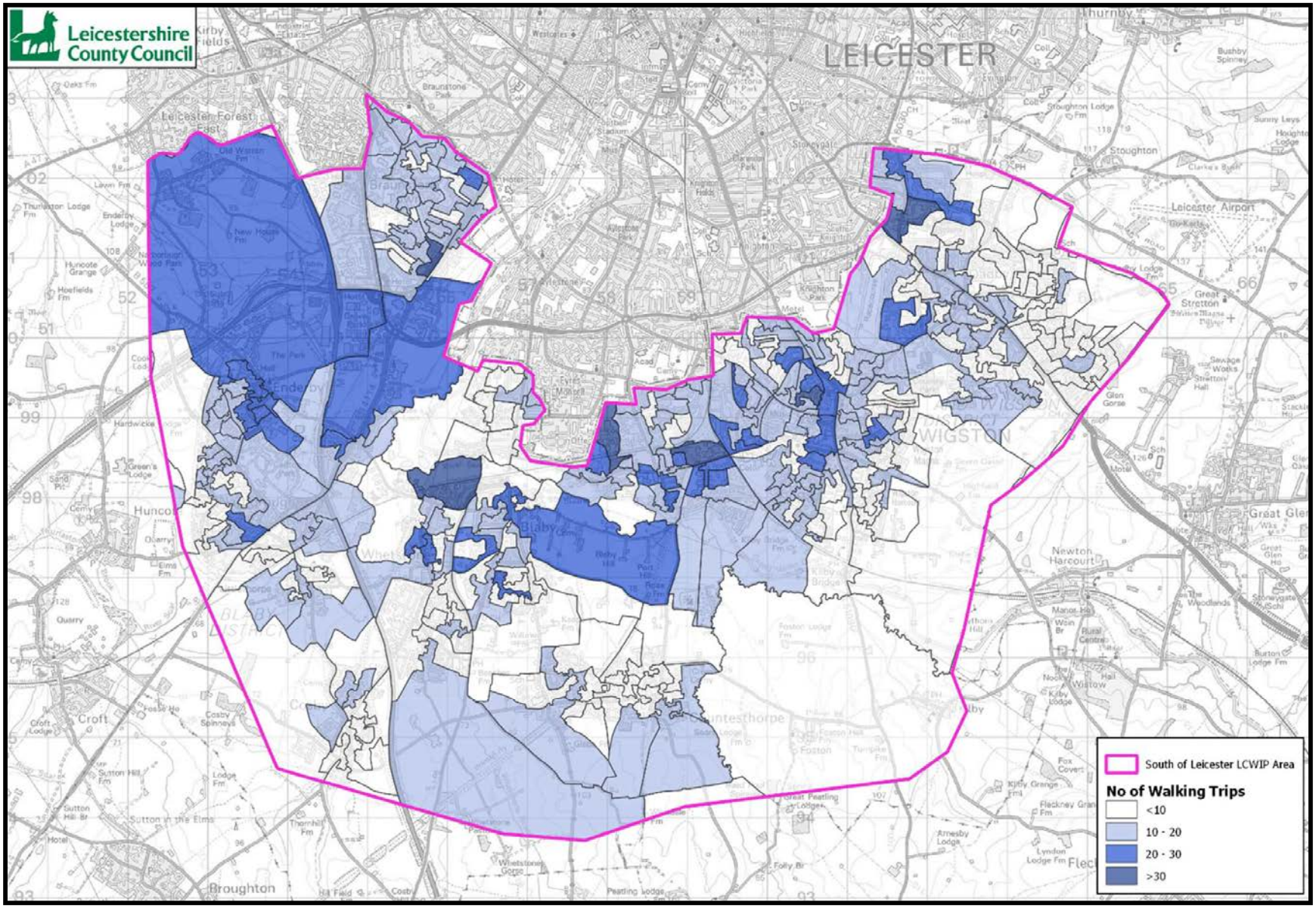


Figure 7.2 – Commuting walking and wheeling trips as shown in the DataShine Tool

7.2.2.2 After intervention

A key part of assessing the potential benefits of the proposed scheme ideas is understanding the likely increase in cycling, walking and wheeling trips as a result of the scheme.

The number of cycling, walking and wheeling trips with the proposed intervention has been estimated using the Active Travel England Uplifts Tool. The tool estimates the increase in weekday trips 'based on data for scheme cost, evaluation evidence for the cost effectiveness of past spending by infrastructure type and estimates for the relative cost effectiveness of spending by area'. It was developed using pre-COVID evaluation evidence and was informed by a comprehensive literature review of around 200 studies.

The Uplifts Tool was completed for each of the proposed schemes using the following inputs:

- scheme name,
- local authority,
- total scheme cost,
- pre-intervention walking and cycling trips (per weekday),
- scheme cost by infrastructure category, and
- percentage difference between scheme and benchmark costs,

The tool gives a range of estimated walking and cycling trips with the proposed scheme. The central estimates, based on the intrinsic cycling and walking potential and car ownership in the local authority area, have been used for the AMAT.

Table 7.2 – Daily cycling, walking and wheeling trips without and with the proposed interventions

		Cycling				Walking	
		Without Scheme	With Scheme			Without Scheme	With Scheme
Corridor No.	Corridor Segment	PCT 2011 Census	PCT 2011 Census	Govt. Target Scenario	Go Dutch Scenario	PCT 2011 Census	All Scenarios
1	1A	379	486	628	2511	187	448
	1B	294	396	469	2138	147	396
	1C	170	230	288	1488	42	188
	1D	51	144	96	634	95	322
2	2A	566	674	888	2404	319	582
	2B	130	159	249	854	87	158
	2C	356	463	583	2223	190	451
	2D	334	388	583	2053	49	181
	2E	11	118	23	68	304	565
	2F	6	100	11	34	61	292
3	3A	441	459	826	3094	112	145
	3B	667	660	1177	3564	239	226
	3C	187	261	351	1114	91	228
	3D	373	437	673	2036	75	194
	3E	311	404	554	1787	78	249
	3F	781	869	1408	4090	74	236
	3G	922	1011	1629	4661	52	216
	3H	348	427	716	2447	22	166

Table 7.2 – Daily cycling, walking and wheeling trips without and with the proposed interventions cont'd

		Cycling				Walking	
		Without Scheme	With Scheme			Without Scheme	With Scheme
Corridor No.	Corridor Segment	PCT 2011 Census	PCT 2011 Census	Govt. Target Scenario	Go Dutch Scenario	PCT 2011 Census	All Scenarios
4	4A	368	451	758	2890	76	278
	4B	272	360	509	1946	16	230
	4C	351	455	611	2410	144	399
	4D	221	321	407	1380	77	321
	4E	221	328	379	1244	280	541
	4F	209	279	221	645	44	215
	4G	119	227	283	956	117	380
7	7	351	453	667	2455	162	412
12	12A	170	201	209	588	33	90
	12B	181	242	441	1550	78	192
15	15A	334	355	537	1635	11	50
	15B	153	235	283	1029	106	257
	15C	153	168	283	1029	13	42
	15D	153	227	255	826	67	204
	15E	153	233	255	826	88	236
	15F	453	626	752	2099	25	345
24A	24A	351	455	577	1691	368	622

7.2.3 Scheme costs

The proposed schemes are at a very early stage of development. Therefore, work to assess the likely costs of the improvements has been based on the concept design work and will be subject to refinement as the designs are developed further. The scheme costs for the AMAT are comprised of:

- the costs of constructing the scheme ('investment costs'), and
- the costs of maintaining the scheme ('operating costs').

In order to provide detailed investment cost estimates for the AMAT, indictive costings were developed based on an average per meter cost of similar schemes. For the 18 schemes which were prioritised for concept design, the investment cost estimates were based on the design work undertaken to date.

The operating costs were based on a programme of 10-year minor maintenance and 20-year major maintenance for similar schemes in the LCWIP area. The indicative costs based on the early work which we have done are set out in section 7.5.2, and below (see table 7.3).

The indicative cost to deliver the initial 10-year pipeline of priority active travel schemes is in the region of £107,000,000. This initial 10-year pipeline of schemes represents only part of the total number of improvements that could be made over the entire priority network defined in this LCWIP, in order to bring it up to the latest active travel design standards. This initial indicative cost of the 10-year pipeline of priority schemes is an early indication of the level of investment required to bring our highway spaces and infrastructure up to an appropriate standard to meet the Government's Cycling and Walking Investment Strategy ambitions and deliver the transformation change in the way our communities travel for short distances.

Table 7.3 – Indicative cost estimates for schemes

Corridor No.	Corridor Segment	Street(s)	Indicative Costs (including maintenance)
1	1A	Oadby Road B582	£3,290,000
	1B	Oadby Road B582	£2,530,000
	1C	Oadby Road B582	£1,320,000
	1D	Oadby Road B582	£1,990,000
2	2A	Leicester Road / Bull Heads Street	£3,930,000
	2B	Bull Head Street / B582 Roundabout	£580,000
	2C	Bullhead Street	£3,410,000
	2D	Bull Head Street / Newton Lane Junction	£1,140,000
	2E	Welford Road / Guthlaxton Way Roundabout	£3,120,000
	2F	Welford Road	£4,790,000
3	3A	Blaby Road (East)	£6,710,000
	3B	B582	£7,310,000
	3C	The Ford / Mill Lane / Church Lane	£4,470,000
	3D	Sycamore Street / Cross Street / Enderby Road	£1,650,000
	3E	B582	£3,460,000
	3F	B582	£4,900,000
	3G	B582 / St Johns Roundabout	£2,970,000
	3H	Blaby Road / Mill Hill	£4,850,000

Table 7.3 – Indicative cost estimates for schemes cont'd

Corridor No.	Corridor Segment	Street(s)	Indicative Costs (including maintenance)
4	4A	Leicester Road / Palmerston Way Roundabout, A6	£2,040,000
	4B	Leicester Road, A6	£2,090,000
	4C	Leicester Road to Harborough Road, A6	£2,950,000
	4D	Harborough Road, A6	£2,680,000
	4E	Harborough Road A6	£3,240,000
	4F	Harborough Road to Glen Road, A6	£1,580,000
	4G	Harborough Road, A6	£3,910,000
7	7	Leicester Road / Long Street	£4,410,000
12	12A	Warwick Road	£660,000
	12B	Warwick Road	£5,790,000
15	15A	Cambridge Road	£450,000
	15B	Park Road	£1,970,000
	15C	Cambridge Road	£310,000
	15D	Cambridge Road	£1,650,000
	15E	Cambridge Road	£2,240,000
	15F	Cambridge Road	£4,710,000
24	24A	Station Street / Kirkdale Road / Marstown Avenue	£3,800,000
		Total Indicative Cost Estimate:	**£106,900,000.00**

7.2.4 Value for money assessments

The AMAT provides a measure of the Value for Money (VfM) of a scheme, in the form of a benefit-cost ratio (BCR). A BCR above 1 indicates that each pound spent is expected to generate more than a pound's worth of benefits. Table 7.4 shows how DfT categorises value for money based on BCR scores.

Table 7.4 – Value for Money categories and equivalent BCR scores

VfM Category	Implied by…
Very High	BCR greater than or equal to 4
High	BCR between 2 and 4
Medium	BCR between 1.5 and 2
Low	BCR between 1 and 1.5
Poor	BCR between 0 and 1
Very Poor	BCR less than or equal to 0

BCRs were developed for each of the schemes. For robustness, multiple BCR assessments were undertaken, based on 20-year and 40-year appraisal periods and using 3 scenarios for increased cycling:

- **PCT 2011 Census** – cycling levels as identified using the PCT as set out in 7.3.2.1.1.,
- **Government Target** – a doubling of cycling nationally, occurring as a function of trip distance and hilliness plus several sociodemographic and geographical characteristics (including age, sex, ethnicity, car ownership, and income deprivation), and
- **Go Dutch** – represents what would happen if Dutch cycling levels were reached in England and Wales.

Table 7.5 demonstrates how the BCR scores change, depending upon the appraisal period and scenario used. As expected, the BCR scores for the Government Target and Go Dutch scenarios are much higher than those using the PCT.

Table 7.5 – Number of proposed corridor segments in each Value for Money category, by appraisal period and scenario

	20-Year Appraisal			40-Year Appraisal		
BCR	**PCT 2011 Census**	**Government Target Scenario**	**Go Dutch Scenario**	**PCT 2011 Census**	**Government Target Scenario**	**Go Dutch Scenario**
No of Segments with a BCR >=4	0	2	22	1	7	32
No of Segments with a BCR 2 – 4	1	5	11	1	7	1
No of Segments with a BCR 1.5 - 2	0	2	0	8	11	0
No of Segments with a BCR 1 – 1.5	2	7	0	14	5	0
No of Segments with a BCR 0 – 1	32	19	2	11	5	2
No of Segments with a BCR <=0	0	0	0	0	0	0

Details of the BCRs for all of the route segments can be found in appendix C. The BCRs for the wider corridors have also been established, based on an average of the segments that make up the overall route. The routes scoring higher BCRs are the corridors from Whetstone to Cosby and Wigston to Oadby, as well as the two radial routes into Leicester City from Oadby (A5) and Wigston (A5199).

Table 7.6 – Average BCRs for full corridor schemes

Location	Corridor Segments	20-Year Appraisal			40-Year Appraisal		
		PCT 2011 Census	Govt. Target Scenario	Go Dutch Scenario	PCT 2011 Census	Govt. Target Scenario	Go Dutch Scenario
Whetstone to Cosby	15A / 15B / 15C / 15D / 15E / 15F	1.17	2.19	13.65	2.32	4.14	26.10
East to West - Wigston to Oadby	1A / 1B / 1C / 1D	0.81	1.03	6.74	1.52	1.93	12.66
A6 Oadby	4A / 4B / 4C / 4D / 4E / 4F / 4G	0.77	1.19	5.86	1.45	2.22	11.03
A5199 Wigston	2A / 2B / 2C / 2D / 2E / 2F	0.74	1.33	6.52	1.43	2.49	12.26
Kirkdale Road / Station Street, South Wigston	24A	0.61	0.92	3.73	1.15	1.73	7.03
East to West - Enderby to Oadby	3D / 3E / 3F / 3G / 3H / 3A / 3B / 3C / 7 / 1A / 1B / 1C / 1D	0.52	1.17	6.29	0.97	2.20	11.87
Whetstone to Littlethorpe	12A / 12B	0.51	0.72	4.19	0.97	1.36	7.95
East to West - Enderby to Blaby	3D / 3E / 3F / 3G / 3H	0.50	1.66	8.12	0.94	3.12	15.32
Wakes Road / Leicester Road / Long Street, Wigston	7	0.46	0.90	4.57	0.88	1.71	8.70
East to West - Enderby to Wigston	3A / 3B / 3C / 3D / 3E / 3F / 3G / 3H	0.38	1.27	6.29	0.71	2.40	11.88
East to West - Blaby to Wigston	3A / 3B / 3C / 7	0.24	0.70	3.57	0.46	1.31	6.77

7.3 Using stakeholder and public engagement feedback in prioritisation

It is essential that the location and nature of the LCWIP improvements meet the needs of the communities that are going to use the LCWIP cycling, walking and /wheeling networks. The data work carried out to establish the potential increases in cycling, walking and wheeling, described above, helps us to assess this at a theoretical level. However, feedback from stakeholders (including public engagement) is critical to understanding whether the proposed improvements will be attractive to existing and potential users and achieve an increase in active travel in practice.

The responses to the stakeholder and public engagement described in chapter 5 were assessed using a 0-3 scale, in a similar way to the other elements of the prioritisation table (see 7.4 Completing the prioritisation table, below).

The stakeholders were categorised as:

- district and county councillors,
- parish councils,
- expert stakeholders and lobbying groups (including national groups such as Sustrans and the British Horse Society, and local specialist groups such as Better Biking for Blaby), and
- general public.

Scores were assigned to each of the four categories of stakeholder, based on the number of responses relevant to the scheme and level of detail.

District and county councillors and expert stakeholders and lobbying groups were given a greater weighting, as these stakeholders are considered to speak on behalf of their district/county ward or have expert knowledge of the issues faced by people travelling by active modes. Parish councils were weighted lower than the district and county councillors, as they speak for a smaller population.

This meant that the maximum score available for individual stakeholder categories was 9. To avoid the risk that the stakeholder and public engagement score might unduly influence the overall scoring, the weighted scores were normalised to give a maximum of 3 in the district and county councillors and expert stakeholder and lobbying groups category, 2 in the parish councils category, and 1 in the general public category.

The weighted and normalised scores were then averaged, to give a single overall score for stakeholder and public engagement.

7.4 Completing the prioritisation table

For consistency, the same methodology and scoring system is being applied to all LCWIPs which are being prepared by Leicestershire County Council. This enables direct comparison between the proposed schemes across different areas when funding opportunities become available.

The route segments were given a score of 0 – 3 for each of the prioritisation criteria. Higher scores indicate where infrastructure improvements are likely to provide the greatest benefits. Individual route sections were scored separately, to account for the different interventions which were proposed on each part of the route. Schemes were prioritised based on their overall score:

- very high (scores greater than 16),
- high (13.1 – 16),
- medium (10 – 13), and
- low (scores less than 10).

None of the individual route segments scored highly on their own. Therefore, they were also prioritised as part of a corridor, to establish the benefits of delivering a complete and coherent route. For example, people are more likely to walk or cycle a route which is high quality along its whole length than a route which varies between high and low quality. Table 7.7, below, shows the order of priority of the overall corridors when the scores for all of the route segments which make up the corridors are combined and averaged.

Table 7.7 – Full corridor schemes in order of priority

Location	Corridor Segments	Effectiveness	Attractiveness	Policy	Economic	Deliverability	Total Score
Wakes Road / Leicester Road / Long Street, Wigston	7	9.0	2.0	4.0	1.0	0.0	**16.0**
Kirkdale Road / Station Street, South Wigston	24A	5.0	1.0	6.0	3.0	0.0	**15.0**

Table 7.7 – Full corridor schemes in order of priority cont'd

Location	Corridor Segments	Effectiveness	Attractiveness	Policy	Economic	Deliverability	Total Score
East to West - Blaby to Wigston	3A / 3B / 3C / 7	7.3	2.0	4.8	0.8	0.0	**14.7**
East to West - Enderby to Blaby	3D / 3E / 3F / 3G / 3H	5.4	2.0	3.6	1.2	2.4	**14.6**
East to West - Enderby to Wigston	3A / 3B / 3C / 3D / 3E / 3F / 3G / 3H	5.9	2.0	4.2	1.1	1.5	**14.5**
Whetstone to Littlethorpe	12A / 12B	4.0	2.0	5.3	1.5	1.5	**14.3**
East to West - Enderby to Oadby	3D / 3E / 3F / 3G / 3H / 3A / 3B / 3C / 7 / 1A / 1B / 1C / 1D	5.6	2.0	3.7	1.2	1.6	**14.2**
A6 Oadby	4A / 4B / 4C / 4D / 4E / 4F / 4G	5.4	2.0	2.2	1.6	3.0	**14.0**
East to West - Wigston to Oadby	1A / 1B / 1C / 1D	4.3	2.0	3.1	1.8	2.3	**13.3**
A5199 Wigston	2A / 2B / 2C / 2D / 2E / 2F	4.5	2.3	1.9	2.2	2.0	**13.0**
Whetstone to Cosby	15A / 15B / 15C / 15D / 15E / 15F	3.6	2.2	1.9	2.2	3.0	**12.8**

Figure 7.3, below, shows the breakdown of the prioritisation scores for the individual corridor segments, highlighting the impact of the various criteria.

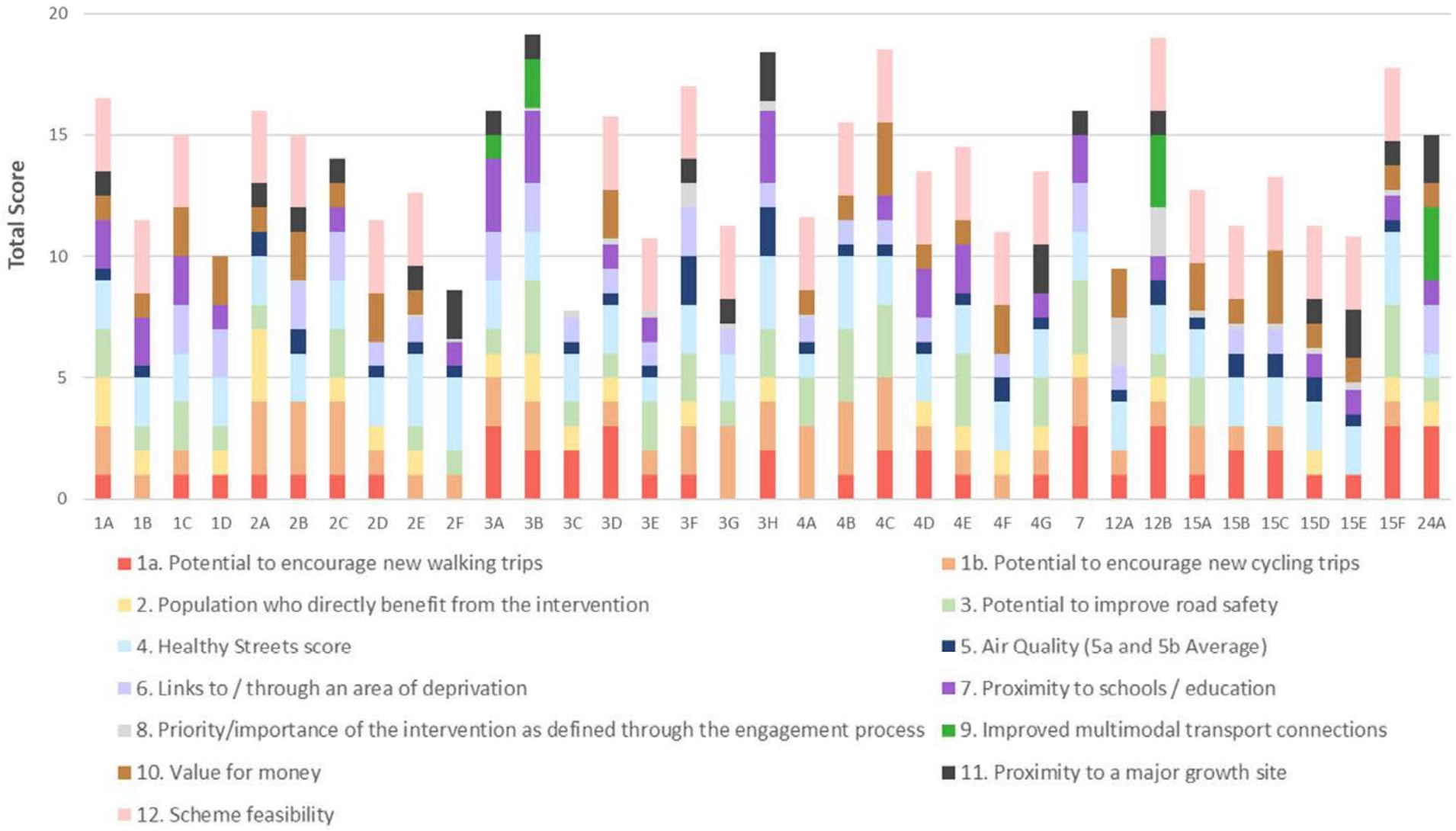


Figure 7.3 – Breakdown of the total prioritisation scores

(It should be noted that the results of the prioritisation process are a guide, and some flexibility may be required to account for external factors. For example, it may be necessary to tailor specific schemes to meet the criteria of external funding opportunities. In addition, proposals near to the County boundary may also need to be prioritised if they align with cycling and walking schemes being brought forward by neighbouring authorities).

7.5 Prioritised list of schemes

The full prioritisation table with scoring is included in appendix D.

7.5.1 Timescales

Once the schemes were prioritised, they were allocated timescales for delivery using the definitions set out in the LCWIP Technical Guidance:

- **short-term (typically implemented in <3 years)** – improvements which can be implemented quickly, or which are currently under development,
- **medium-term (typically implemented in <5 years)** – improvements where there is a clear intention to act, but delivery is dependent on further funding availability or the need to resolve other issues such as further design work, securing planning permission, land acquisition etc, and
- **long-term (typically implemented in >5 years)** – more aspirational improvements or those where a solution has not yet been defined.

Timeframes for each corridor segment were applied based on a combination of priority, project deliverability, and indicative cost, as shown in table 7.8, below.

Table 7.8 – Scoring of prioritisation timescales

Priority	Conditions	Timescale
Very High	Scored 3 for criteria 12 (scheme feasibility) and is <£3,000,000	Short-term
	Scored 0 for criteria 12 and / or is >£3,000,000	Medium-term
High	Scored 3 for criteria 12 and is <£3,000,000	Short-term
	Scored 0 for criteria 12 and / or is >£3,000,000	Medium-term
Medium	Scored 3 for criteria 12 and is <£3,000,000	Medium-term
	Scored 0 for criteria 12 and / or is >£3,000,000	Long-term
Low	Scored 3 for criteria 12 and is <£3,000,000	Medium-term
	Scored 0 for criteria 12 and / or is >£3,000,000	Long-term

7.5.2 Indicative prioritisation of schemes

Table 7.9, below, shows the indicative prioritisation of the individual schemes, including where they rank on the prioritisation table, priority (low, medium, high, or very high, as described in section 7.4), indicative costs including maintenance, and timescales.

The wider areas schemes identified in the long list of schemes, such as cycle storage and bench seating, were not included in list of schemes to be considered for concept design stage, as these schemes do not require this level of highway design in order for their benefits to be assessed. However, they are included in the 10-year pipeline.

Table 7.9 – Indicative prioritised list of schemes and scheme cost estimates

Corridor Segment		Street(s)	Route Description	Length (km)	Prioritisation Score	Rank	Priority	Indicative Costs (including maintenance)	Timescales	Shortlist
1	A	Oadby Road B582	Wakes Road roundabout to Shenley Road mini roundabout. Segregated cycleway, upgraded crossings, compact roundabouts, pocket park with seating.	0.72	16.5	7	Very High	£3,290,000	Medium-term	N
	B	Oadby Road B582	Shenley Road mini roundabout to Oadby Town Football Club. Segregated cycleway.	0.52	11.5	24	Medium	£2,530,000	Medium-term	N
	C	Oadby Road B582	Oadby Town Football Club to Rosemead Drive. Junction improvements, compact roundabout, upgraded crossings.	0.27	15	13	High	£1,320,000	Medium-term	N
	D	Oadby Road B582	Rosemead Drive to London Road mini roundabout. Segregated cycleway, pocket parks with seating.	0.43	10	32	Medium	£1,990,000	Long-term	N

Table 7.9 – Indicative prioritised list of schemes and scheme cost estimates cont'd

Corridor Segment		Street(s)	Route Description	Length (km)	Prioritisation Score	Rank	Priority	Indicative Costs (including maintenance)	Timescales	Shortlist
2	A	Leicester Road / Bull Heads Street	Hillcrest Road to Highfield Drive. Segregated cycleway, widened footway, priority raised table crossing, upgraded segregated crossing, pocket parks with seating.	1.10	16	8	High	£3,930,000	Medium-term	Y
	B	Bull Head Street / B582 roundabout	Highfield Drive to Maromme Square. Signalised roundabout, upgraded segregated crossings, low-level vegetation	0.50	15	13	High	£580,000	Short-term	Y
	C	Bullhead Street	Wakes Road roundabout to Moat Street. Segregated cycleway, priority raised table crossing, upgraded segregated crossing, floating bus stop with cycle bypass.	0.65	14	17	High	£3,410,000	Medium-term	Y
	D	Bull Head Street / Newton Lane Junction	Bull Head Street / Newton Lane junction only. Junction improvements, upgraded segregated crossing.	0.17	11.5	24	Medium	£1,140,000	Medium-term	Y
	E	Welford Road / Guthlaxton Way roundabout	Bull Head Street / Newton Lane junction to Guthlaxton Way roundabout. Segregated cycleway, priority raised table crossing, floating bus stop with cycle bypass, signalised roundabout with upgraded crossing, benches, bus shelters, low-level vegetation.	0.65	12.6	22	Medium	£3,120,000	Long-term	N

Table 7.9 – Indicative prioritised list of schemes and scheme cost estimates cont'd

Corridor Segment		Street(s)	Route Description	Length (km)	Prioritisation Score	Rank	Priority	Indicative Costs (including maintenance)	Timescales	Shortlist
2	F	Welford Road	Guthlaxton Way roundabout to Kilby Bridge. Segregated cycleway, priority raised table crossing, upgraded segregated crossing, lower speed limit to 30, traffic calming measures, pocket parks with seating.	1.00	8.6	34	Low	£4,790,000	Long-term	N
3	A	Blaby Road (East)	Long Street / Moat Street mini roundabout to 'Lansdowne Grove' bus stop. Segregated cycleway, priority raised table crossing, upgraded segregated crossing.	1.40	16	8	High	£6,710,000	Medium-term	N
	B	B582	Lansdowne Grove' bus stop to The Ford. Segregated cycleway, priority raised table crossing, upgraded segregated crossing.	1.50	19.1	1	Very High	£7,310,000	Medium-term	N
	C	The Ford / Mill Lane / Church Lane	B582 Little Glen Road to Church Street junction with Sycamore Street. Shared use, wayfinding, and lighting improvements.	1.00	7.8	35	Low	£4,470,000	Long-term	N
	D	Sycamore Street / Cross Street / Enderby Road	Church Street junction with Sycamore Street to Blaby Bypass. Segregated cycleway, parallel crossing, priority raised table crossing.	0.70	15.8	11	High	£1,650,000	Short-term	Y

Table 7.9 – Indicative prioritised list of schemes and scheme cost estimates cont'd

Corridor Segment		Street(s)	Route Description	Length (km)	Prioritisation Score	Rank	Priority	Indicative Costs (including maintenance)	Timescales	Shortlist
3	E	B582	Blaby Bypass / Enderby Road roundabout junction only. Segregated cycleway, signalised roundabout	0.40	10.8	31	Medium	£3,460,000	Long-term	Y
	F	B582	Blaby Bypass to Foxhunter roundabout. Segregated cycleway, priority raised table crossing, upgraded segregated crossing.	1.56	17	6	Very High	£4,900,000	Medium-term	Y
	G	B582 / St Johns roundabout	Foxhunter roundabout only. Segregated cycleway, signalised roundabout.	0.42	11.3	26	Medium	£2,970,000	Medium-term	Y
	H	Blaby Road / Mill Hill	Foxhunter roundabout to Forest Road. Segregated cycleway, priority raised table crossing, upgraded segregated crossings.	2.49	18.4	4	Very High	£4,850,000	Medium-term	Y
4	A	Leicester Road / Palmerston Way Roundabout, A6	Palmerston Road roundabout only. Segregated cycleway, signalised roundabout, upgraded segregated crossing, rainwater gardens and low-level vegetation.	0.20	11.6	23	Medium	£2,040,000	Medium-term	Y
	B	Leicester Road, A6	From Palmerston Road roundabout to Oadby Hill Drive. Segregated cycleway, rainwater gardens, benches, low-level vegetation crossing upgrade.	15.50	15.5	12	High	£2,090,000	Short-term	Y

Table 7.9 – Indicative prioritised list of schemes and scheme cost estimates cont'd

Corridor Segment		Street(s)	Route Description	Length (km)	Prioritisation Score	Rank	Priority	Indicative Costs (including maintenance)	Timescales	Shortlist
4	C	Leicester Road to Harborough Road, A6	Oadby Hill Drive to Lyndhurst Road. Segregated cycleway, pocket parks and rainwater gardens with seating, upgraded crossing, junction improvements, cycle parking.	0.38	18.5	3	Very High	£2,950,000	Short-term	Y
	D	Harborough Road, A6	Lyndhurst Road to B582 New Street, inclusive. Segregated cycleway, bus shelter, cycle parking, contra-flow cycle lane, priority raised table crossing, upgraded segregated crossing, rainwater gardens and benches	0.45	13.5	18	High	£2,680,000	Short-term	Y
	E	Harborough Road, A6	Uplands Road to Waldron Drive. Segregated cycleway, priority raised table crossing, street furniture de-cluttering and relocation.	0.64	14.5	16	High	£3,240,000	Medium-term	Y
	F	Harborough Road to Glen Road, A6	Waldron Drive to Sainsbury's access junction. Segregated cycleway, upgraded crossing, wider footway, priority side road crossings.	0.29	11	29	Medium	£1,580,000	Medium-term	Y
	G	Harborough Road, A6	Sainsbury's access junction to Gorse Lane. Segregated cycleway, upgraded segregated crossings, priority side road crossings, bus stop with cycle bypass, bus shelters.	1.23	13.5	18	High	£3,910,000	Medium-term	Y

Table 7.9 – Indicative prioritised list of schemes and scheme cost estimates cont'd

Corridor Segment		Street(s)	Route Description	Length (km)	Prioritisation Score	Rank	Priority	Indicative Costs (including maintenance)	Timescales	Shortlist
7		Leicester Road / Long Street	Long Street junction with Moat Street to B4518 Wakes Road. Mixed traffic cycling on quiet residential roads and High Street Leicester Road, compact roundabouts, side road junction treatments, pocket parks and benches.	1.00	16	8	High	£4,410,000	Medium-term	N
12	A	Warwick Road	Cambridge Road / Warwick Road roundabout to Narborough railway station. Segregated cycleway, mixed traffic cycling on 20mph roads, parallel crossing.	0.29	9.5	33	Low	£660,000	Long-term	Y
	B	Warwick Road		1.81	19	2	Very High	£5,790,000	Medium-term	Y
15	A	Cambridge Road	Cambridge Road / Grove Road roundabout only. Segregated cycleway, parallel crossing, Dutch-style roundabout.	0.09	12.8	21	Medium	£450,000	Medium-term	N
	B	Park Road	Croft Road to Narborough Road mini roundabout. Segregated cycleway, limiting on-street parking.	0.44	11.3	26	Medium	£1,970,000	Medium-term	N
	C	Cambridge Road	Narborough Road / Cambridge Road mini roundabout only. Parallel crossing, Dutch-style roundabout.	0.07	13.3	20	High	£310,000	Medium-term	N

Table 7.9 – Indicative prioritised list of schemes and scheme cost estimates cont'd

Corridor Segment		Street(s)	Route Description	Length (km)	Prioritisation Score	Rank	Priority	Indicative Costs (including maintenance)	Timescales	Shortlist
15	D	Cambridge Road	Narborough Road / Cambridge Road mini roundabout to start of 40mph posted speed limit. Segregated cycleway, priority raised table crossing, upgraded toucan crossing.	0.37	11.3	26	Medium	£1,650,000	Medium-term	N
	E	Cambridge Road	Cambridge Road start of 40mph posted speed limit to M1 underpass. Segregated cycleway with some shared footway, lower speed limit to 30mph, traffic calming measures.	0.50	10.8	30	Medium	£2,240,000	Medium-term	N
	F	Cambridge Road	M1 Underpass to Cambridge Road / Grove Road roundabout. Mixed traffic cycling on 20mph roads, priority junction, junction improvements, lower speed limit to 30mph, traffic calming measures.	1.00	17.8	5	Very High	£4,710,000	Medium-term	N
24	A	Station Street / Kirkdale Road / Marstown Avenue	Mixed Traffic cycling on quiet residential roads, modal filters at the South Wigston station footbridge, side road junction treatments, priority raised table crossing.	0.82	15	13	High	£3,800,000	Medium-term	N
					Total cost			**£106,900,000**		

7.6 Types of improvement scheme interventions / concept schemes

The concept drawings included below and in appendix E are shown for illustrative purposes only. They are intended purely to show how aspects of LTN1/20 could be applied along the corridors. They are not definitive schemes. The design of actual schemes will be subject to the amount of funding available, detailed design, public engagement, affordability of long-term maintenance etc.

7.6.1 Segregated cycleway

LTN 1/20 requires that "cyclists must be physically separated and protected" from motor vehicles. Therefore, cycle lanes which are separated from motor traffic by only a white line are not acceptable under the guidance. It also requires that cyclists on urban streets are physically separated from, and do not share space with, pedestrians.[22]

The document suggests a variety of ways in which cycle facilities can be segregated, including "full segregation" (a kerb between motor vehicles and the cycle lane) or "light segregation" such as installing wands or planters to separate motor vehicles from cyclists.

People who are new to or considering taking up cycling, or who do not feel confident cycling, tend to perceive cycle routes indicated only with road markings or cycle symbols to be unsafe for cycling, due to the lack of a physical barrier to remind drivers of the existence of the cycle lane or to protect cyclists from cars, vans, and HGVs.

Examples of where segregated cycleways have been included in LCWIP concept design ideas: A5199 Leicester Road / Bull Head Street (corridor 2), B582 Station Road / Enderby Road / Blaby Road (corridor 3), Warwick Road (corridor 12).

Figure 7.4 – Example of a cycle lane with light segregation using flexible wands

(Source: LTN 1/20 Cycle Infrastructure Design (page 12), Department for Transport (2020))

[22] LTN 1/20 Cycle Infrastructure Design (section 1.6 Summary Principles), Department for Transport, 2020.