Leicester City Council

Local Cycling and Walking Infrastructure Plan

August 2025

Leicester City Council

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Introduction

Purpose

Leicester's LCWIP (Local Cycling and Walking Infrastructure Plan) sets out the infrastructure improvements needed over the next 10 years to promote walking, wheeling, and cycling as the natural choice for shorter journeys across the city.

The LCWIP focuses purely on required infrastructure, adopting an evidence and data led approach to identify gaps in the existing network, opportunities for enhancements, and routes or locations with the most potential for growth.

The LCWIP will sit alongside the Walk Leicester Action Plan and the Cycle City Action Plan – strategies to promote walking and cycling respectively - as part of a trio of documents underneath the Local Transport Plan.

Walking, Wheeling, and Cycling

The terms walking, wheeling, and cycling are used extensively within this document, and refer to the ability for all people to travel active and sustainably by the mode of their choice. At the heart of all networks should be accessibility and inclusivity, and as such we have opted to combine walking and wheeling, and cycling and wheeling, as follows:

Walking and Wheeling

Our walking network – footways, footpaths, and crossings – should allow people that are using scooters, wheelchairs, pushchairs, or other mobility or walking aids to travel comfortably and safely. That means wide footways, limited obstructions, space to wait, and opportunities to walk with a companion or partner.

Cycling and Wheeling

Our cycling network should allow for users of nonstandard cycles – handcycles, recumbent bicycles, tandem cycles, or any other variant that may suit their needs – to travel safely, as well as providing an option for people using mobility scooters or electric wheelchairs to travel safely away from pedestrians and motor traffic.

Leicester

Leicester is the largest city in the East Midlands with a population of around 368,600 as of the 2021 census. This represents a growth of almost 12% since 2011, well over the average for the East Midlands region (8%) and England (7%). Unsurprisingly, Leicester is also one of the densest urban areas in England, with 5,000 residents per square kilometre.

The city has proud environmental credentials, becoming Britain's first environmental city (1990) and the country's first European Sustainable City (1996).

The core of the city, within the inner ring road, comprises a mixture of dense medieval streets, a centralised leisure and retail area, and a cultural quarter that offers event spaces, cinemas, destination caves, and theatre venues. Most of these are part of an expansive pedestrian priority zone, one of the largest in the country and the largest that allows full cycling permeability.

The city centre retains a high level of motor vehicle accessibility thanks to a total car parking capacity of over 8,500 spread across both private and council run facilities.

In recent years, the city centre has also offered an increasing number of residences – 10,000 households as of the 2021 census, an increase of 67% since 2011.

Key local attractors around the immediate city centre include the Leicester Royal Infirmary, the railway station, and campuses for both De Montfort University and the University of Leicester.

Two principle east-west barriers fall either side of the city centre. To the west is the River Soar, to the immediate east is the Midlands Main Line. In places – notably to the southwest and northeast – this severely constrains possible movements for all modes to certain narrow road corridors.

Outside of the city centre, Leicester's neighbourhoods each have a distinctive local character, in part due to many originating as villages and suburbs that have been gradually absorbed by the city over time. Many streets are terraced, with a high demand for parking despite low overall ownership numbers for vehicles.

There is a good spread of facilities for leisure, education, and retail across the city, including vibrant neighbourhood centres in Clarendon Park, Westcotes, Belgrave, Narborough Road, and Beaumont Leys. There are 112 schools spread across the city, with an average daily pupil population of 55,000. There are additionally higher and further education establishments including Leicester College, the New College, and the City of Leicester College that cater to a wide variety of students and courses across the city and region – alongside two universities with international renown and recognition.

There are additional hospital sites to the east (Leicester General) and west (Glenfield hospital) of the city, which alongside the Royal Infirmary form the University Hospitals of Leicester NHS Trust. The sites see considerable movement from within the city and beyond for both staff and patients, to the point where one of the city's busiest principal bus routes – the Hospital Hopper – serves as a direct link between the three.

Visitor attractions within and just beyond the city include the National Space Centre, Leicester North heritage railway station, Fosse Park retail park, large greenspaces including Victoria Park, Bradgate Park, and Abbey Park, and venues such as De Montfort Hall.

Sports venues including the King Power Stadium, the Mattioli Woods Stadium, and the Leicestershire County Cricket Ground attract visitors from across the nation, and though they are near key transport interchanges continue to see a high proportion of motor vehicle travel on event days – including for trips made by city residents.

Since 2011, the city council has invested heavily in providing new, high-quality infrastructure along key connector routes and within the city centre itself under both the Transforming Cities and Connecting Leicester programmes. This has included the provision of stepped cycle tracks, lightly segregated cycle lanes, and upgrades to junctions, off-road paths, and accesses to promote cycling access and permeability. Other works outside of scope

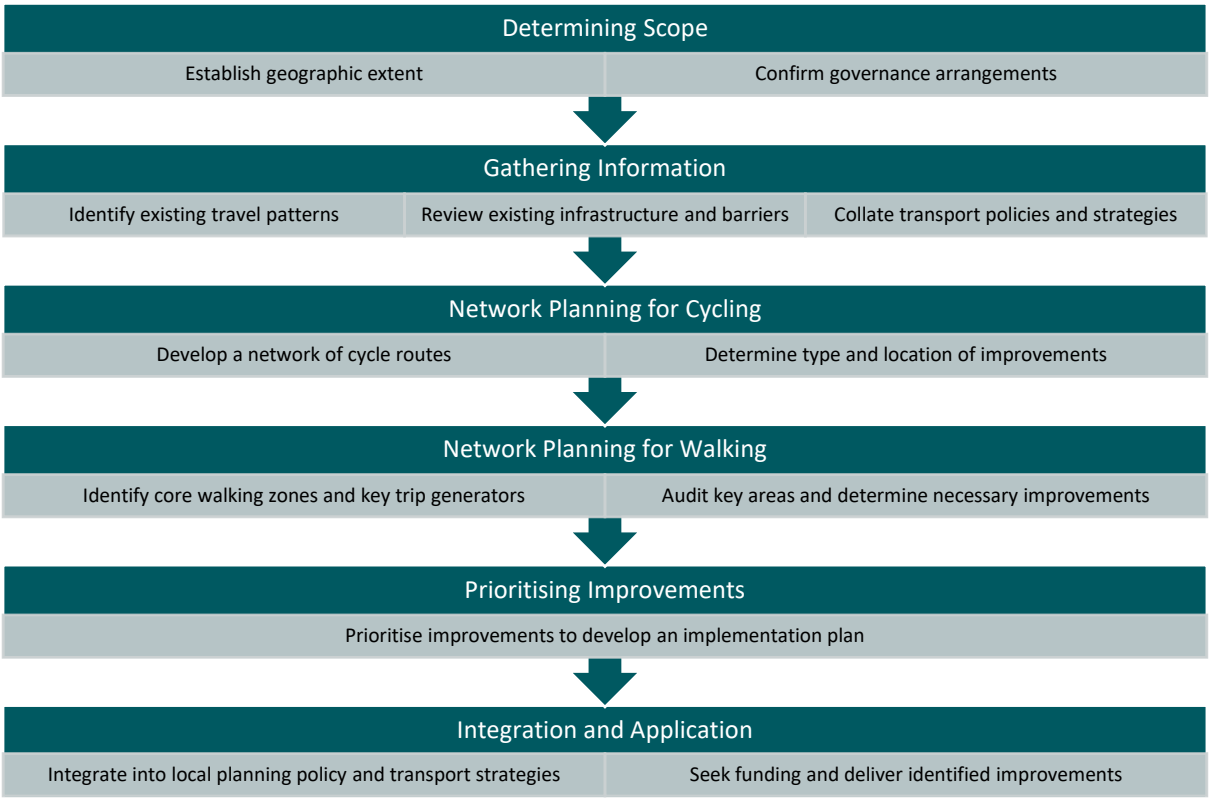


Figure 1 - LCWIP Process

for the LCWIP include investment in electric buses, real time information, and bus priority features including bus lanes and gates – both of which are designed to be fully permeable for cyclists.

The city has additionally been expanding a programme of 20mph streets across the network, with over half of residential streets now operating having a 20mph limit or zone in place. The city council retain an ambition to convert 80% of the residential network to 20mph by 2028.

Section 5 includes more detail on Leicester's existing transport networks.

The LCWIP Process

The Department for Transport published technical guidance[1] in April of 2017 to support local authorities in developing LCWIPs. This would subsequently be repeated and endorsed in later cycle design guidance, LTN 1/20, as the preferred approach for developing cycle networks.

The process as defined in the guidance follows 6 discreet stages. These stages, and a brief description of each, are listed in Figure 1.

An effective LCWIP is developed with support from and engagement with local users, communities, and stakeholders. It should ensure that current users of walking and cycling facilities are given opportunity to comment on existing infrastructure.

Scope

The LCWIP covers the entirety of the Leicester City Council unitary authority area.

Improvements across or in the vicinity of the city boundary have been shared with the relevant authorities for their

[1] https://www.gov.uk/government/publications/local-cycling-and-walking-infrastructure-plans-technical-guidance-and-tools

awareness. Should any of these projects come forward, further detailed discussions will be needed to ensure the authorities operate collaboratively to achieve shared aims.

Locations and schemes within 8km of the city boundary are considered to have the potential to interface with the LCWIP and generate additional cross boundary trips. A simplified model has been developed to calculate and account for these trips as part of route identification. Projects outside of the city boundary have not been considered, though the city council will continuing to work with the county council to develop plans and improvements in proximity to the boundary.

The LCWIP considers only the necessary infrastructure to create an effective, unified cycling network. Matters related to behaviour change or attitudes to cycling are outside of scope, and as detailed before are the subject for other strategies and plans to consider.

The LCWIP does not consider interventions that solely benefit passenger transport or vehicle users. Where benefits may be shared with other modes, these have been

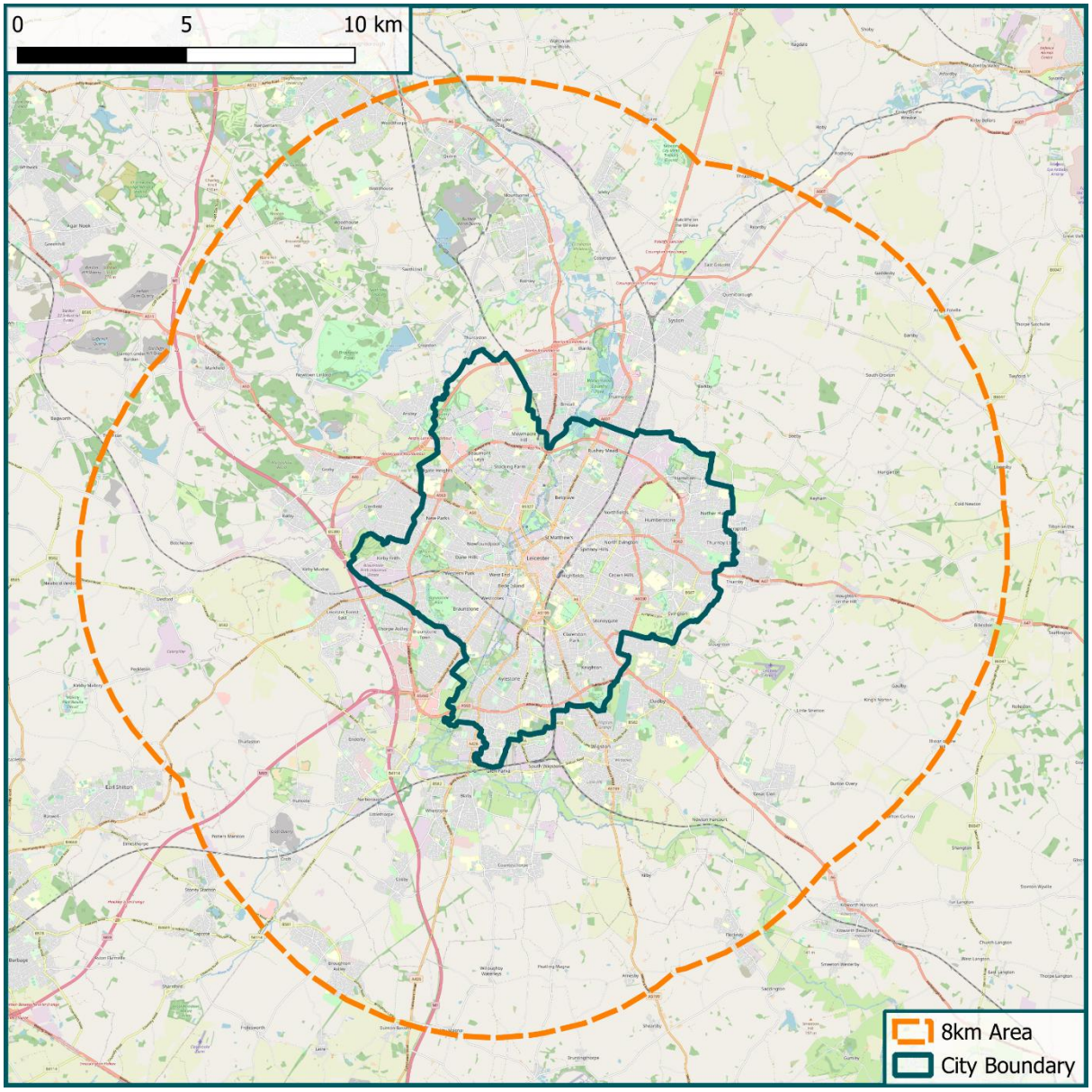


Figure 2 - LCWIP Scope

noted but are outside of scope for detailed consideration. Infrastructure proposed or promoted by the LCWIP is subject to further detailed design, modelling, and engagement. Provided costs are indicative only and based on costs for similar interventions elsewhere in the city.

Infrastructure identified within the LCWIP is subject to further feasibility review and may be substantially changed or considered nonviable during the design and delivery process.

The final priority list is intended to represent the ideal delivery programme that will result in the highest impact and greatest benefit in the shortest amount of time, whilst ensuring value for money and local factors. It is not a commitment to deliver.

Governance

The LCWIP has been developed by a project team consisting of:

- The City Transport Director (Senior Responsible Officer),

- The Active Travel (Neighbourhoods) Service Manager
- The Active Travel (Networks) Service Manager, and
- Transport Development Officers from the Transport Strategy team

Progress has been reported to members of the Transport and Planning Board, which includes:

- The City Mayor,
- The Deputy and Assistant City Mayors,
- The City Highways Director,
- The City Transport Director,
- The Head of Planning,
- The Director of Planning, Development, and Transportation, and,
- The Strategic Director for City Development and Neighbourhoods

Members of the Economic Development, Transport, and Climate Emergency Scrutiny Commission have engaged at key points in development of the LCWIP

Principles of Leicester's LCWIP

Leicester's LCWIP is developed around five principles:

Cohesion

The network must provide a connected approach at the start, during, and end of every journey with no gaps or sections that are unusable.

Directness

The network should aim to provide both the shortest distance and quickest time possible to those who choose to walk, wheel or cycle.

Safety

The network must be safe, and be perceived as safe, to users at all times. This includes both road safety and physical safety, recognising that different users operate from different points of view.

Comfort

The network must not add nuisance or otherwise hinder those that choose to walk, wheel or cycle – routes should reduce the amount of time spent waiting, stopping, accelerating, or decelerating and take into account local topography.

Attractiveness

Routes should be made from good, high quality materials , pass through or connect lively public spaces, and present a pleasant and well-lit street environment.

The Reason for Investment

There is substantial evidence that providing good infrastructure can inform, influence and shape attitudes to transport and encourage a shift to more sustainable travel modes.

Wave 5 of the National Travel Attitudes Survey sought views specifically on walking and cycling, including what would encourage greater usage of these modes. 55% of the 2,554 respondents identified off-road or segregated cycle paths as a measure that would increase uptake, alongside safer roads (53%), and well-maintained road surfaces for cycling (43%)[2].

Similarly, 74% said that well-maintained pavements would encourage more walking, alongside safer roads (45%) and more safer crossing points (44%)[3].

Transitioning more journeys to walking and cycling is a key priority for the city council and central government, given it can produce a multitude of benefits across a variety of areas. Some of these are detailed below:

Health

The impact of physical inactivity on health is well understood. A lack of activity contributes to obesity, high blood pressure, heart disease, type 2 diabetes, and has been linked to depression and other mental health concerns.

Despite this, there continues to be a global trend towards inactivity and obesity – The World Health Organisation reports 1.4b adults that have low levels of physical activity[4] – which has been attributed to widespread usage of the private car alongside other social factors including a change in the nature of work and leisure[5].

There is a tangible cost to these numbers. It is estimated that, in the UK, this costs the NHS £1 billion a year in direct costs, with indirect costs as high as £8.2 billion per year. Note that these figures were calculated against 2006 prices, and in real terms are likely to have increased considerably in the intervening years.[6]

Data from the Office of Health Improvement and Disparities shows Leicester performs poorly, nationally. For 2021/22, 68% of adults were overweight or obese, above the England average of 64%.[7]

The same applies for children – with 41% of year 6 children considered overweight in Leicester, against an England average of 38%.

32.5% of adults in Leicester are considered physically inactive, placing the authority

[2] National Travel Attitudes Study: Wave 5 - GOV.UK (www.gov.uk)
[3] Ibid.
[4] https://www.who.int/news/item/26-06-2024-nearly-1.8-billion-adults-at-risk-of-disease-from-not-doing-enough-physical-activity
[5] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/371096/claiming_the_health_dividend.pdf
[6] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/371096/claiming_the_health_dividend.pdf
[7] https://fingertips.phe.org.uk/profile/national-child-measurement-programme/data#page/4/gid/8000011/pat/6/par/E12000004/ati/401/are/E06000016/iid/20602/age/201/sex/4/cat/-1/ctp/-1/yrr/1/cid/4/tbm/1/page-options/car-ao-1_car-do-0

within the bottom 5 authorities in England for activity levels.[8]

The recommendation from the chief medical officers of the United Kingdom is for adults to be active every day – and that "walking, wheeling or cycling for daily travel is often the easiest way to get physically active". The improvement and expansion of the city's walking and cycling networks enables such activities, and can directly benefit levels of activity amongst city residents of all ages.

Decarbonisation

As shown in Figure 3, transport is the largest contributing sector to greenhouse gas emissions in the UK, accounting for 29% of all domestic emissions in 2023. Passenger cars alone produce 54% of all transport emissions and represent 16% (60.2 million tonnes carbon dioxide

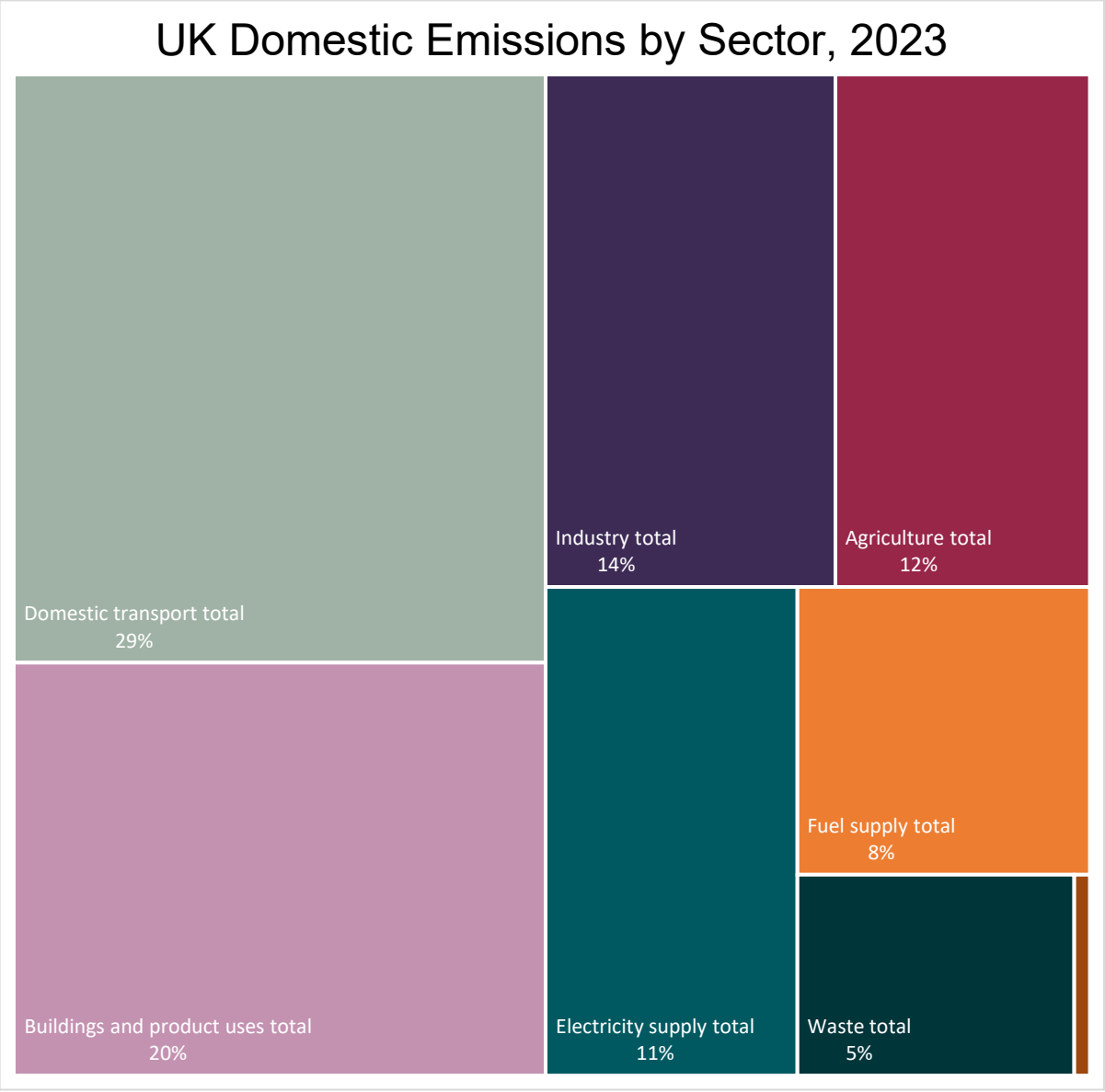


Figure 3 - UK domestic emissions by proportion, by sector, 2023

[8] https://fingertips.phe.org.uk/profile/physical-activity/data#page/1/gid/1938133004/pat/6/par/E12000004/ati/401/are/E06000016/yrr/1/cid/4/tbm/1/page-options/car-ao-1_car-do-0

equivalent as of 2023) of the UK's overall total annual emissions[9] - more than industry, agriculture, residential buildings, commercial buildings, or even the supply of domestic electricity.

Nationally, 60% of car journeys are under 5 miles[10] - about twenty minutes by cycle – and 26% of are under 2 miles[11] – about half an hour at a gentle walking pace. Many of these are trips that can be walked, wheeled, or cycled. Even a 50% reduction in the overall number of these short trips could reduce overall emissions from cars by 30%. That's about 17 million tonnes of CO_2 a year.

The transition to electric cars is accelerating, but we are unlikely to transition all vehicles to electric in the immediate future. As of Q1 2025, of the 161,383 cars registered in Leicester, only 10,096 (around 6%) are electric in some fashion[12]. 60% of these of these are hybrid vehicles and will therefore continue to contribute to overall emissions, albeit at a lower rate.

It must also be recognised that a full EV is still not an entirely clean mode of transport – there is a high carbon cost to the manufacture of the vehicle, and unless powered by a 100% green grid will contribute to some amount of centralised carbon emissions. A straight replacement will also do nothing to improve the various social, economic, and health challenges that result from car dependency and car-focused design – such as road traffic collisions or congestion.

Air Quality

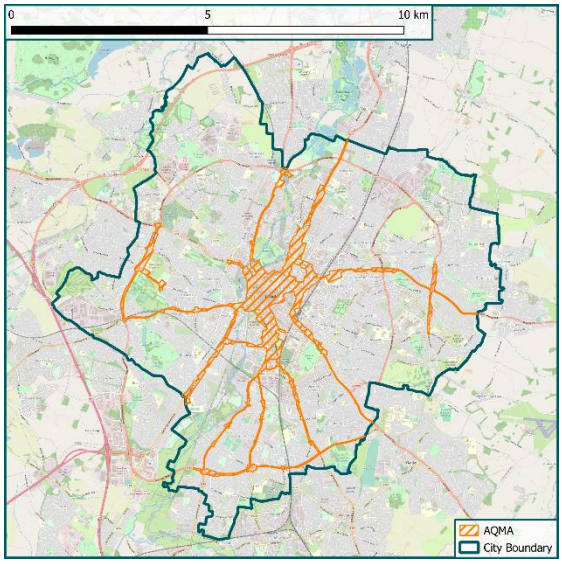


Figure 4 - Leicester Air Quality Management Area

Leicester has a sizeable Air Quality Management Area (AQMA) that covers much of the city centre and inner ring road, alongside key arterial routes in and out of the city – as may be seen in Figure 4.

The alignment with transport corridors is representative of the importance of transport to air quality in the city.

Vehicular traffic is still thought be the dominant source of nitrogen dioxide (NO2) in the city – 66% attributable to motor traffic – and can be linked to lung and heart complications for all ages. It is also, to an extent, a contributing factor to particulate matter emissions, which can over time build up to dangerous if not lethal concentrations in the heart, brain, and lungs.

[9] https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-statistics-1990-to-2023

[10] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1101159/nts0308.ods

[11] Ibid.

[12] https://assets.publishing.service.gov.uk/media/689a1ddf3080e72710b2e380/veh0142.ods

All told, air quality remains one of the largest environmental risk factors in the UK, with some research suggesting up to 36,000 deaths a year can be attributed to impacts from human made air pollution[13].

Whilst it is true that more modern vehicles and emissions standards, alongside EVs, can contribute to better air quality they still contribute to poor air – particulate matter, for example, is mostly independent of fuel source and there is some suggestion the heavier weight of EVs may contribute more due to increased tyre and brake wear (though the prevalence of regenerative brake systems has cast some doubts on this). Studies also suggest that the worst concentration for toxins is within vehicle cabins, given proximity to other traffic and a lack of natural airflow to aid diffusion, which makes vehicles not only a primary contributor but additionally a primary exposure vector.

For these reasons, the reduction in car use is a key tenet of air quality plans locally and nationally – recognised by both the city council and the government as being an effective means of reducing the overall impact and concentration around the city. Our recently published Air Quality Action Plan, for the period 2025-2030, primarily targets a reduction in motor traffic and a shift to more sustainable modes of transport to achieve local and national air quality targets.[14]

Congestion

Data provided by Inrix shows Leicester to be the tenth most congested city in the UK and estimates over £90m a year lost to congestion[15]. This equates to £551 per driver, or 62 hours a year.

Over 1 billion vehicle miles were travelled in Leicester in 2022. As shown in Figure 5, this is a sharp increase from 2019 and resumes an overall trend since 1993. As traffic volumes are expected to grow between 8 and 54% by 2060[16], this is likely to worsen.

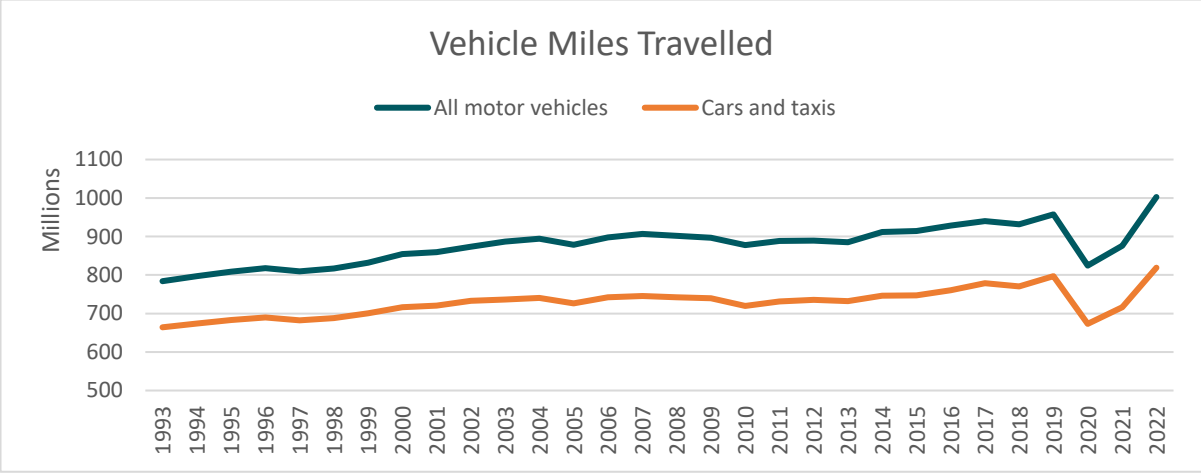


Figure 5 - Vehicle miles travelled in Leicester.

[13] https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health#air-pollution-explained

[14] https://www.leicester.gov.uk/media/cb4m4m2b/air-quality-action-plan-leicester-2025-2030.pdf

[15] https://inrix.com/scorecard-city-2022/?city=Leicester&index=72

[16] National road traffic projections 2022 (publishing.service.gov.uk)

Congestion, at a base level, is caused when demand for road space exceeds available capacity. This is often noticed most when vehicles are attempting to make conflicting movements or where multiple routes converge, which is why congestion is most often found around junctions and interchanges with key routes.

The solution is not to increase road capacity. Aside from this being, at best, expensive and impractical in as dense an urban area as Leicester, this runs immediately into the principle of induced demand - providing new traffic lanes or making a material difference to the ease of driving attracts new drivers and vehicle trips and ultimately results in the return of congestion to a similar or greater level than previous found.

Instead, the focus must be on providing routes that promote the most efficient movement of users possible for the space available. This means bus lanes, cycle tracks, and measures that promote and ensure the safety of users traveling by these means.

Research[17] has shown the capacity of a 2.5m cycle lane can range from 6,500 to 9,000 bicycles an hour – we can equate this to between 6,500 to 9,000 people an hour. In comparison, data tables previously included in the Design Manual for Roads and Bridges show urban carriageways have a flow of between 750-1020 vehicles. Average vehicle occupancy for data modelling is 1.5[18], leading us to assume an effective rate of between 1,125 and 1,530 people an hour.

These benefits, of course, require people to shift from vehicle journeys to cycling, walking, or wheeling. There is strong evidence from Leicester, England, and Europe that shows that the provision of good infrastructure will attract an increase in users, providing the infrastructure is fit for purpose and connects destinations as a sensible, safe network. The LCWIP is intended to provide the framework to enable this.

Economy

Studies have consistently shown the local economic benefits of active travel on high streets and retail establishments. The introduction of protected cycle lanes in New York – on Ninth Avenue – was directly attributed to a growth in local trade by 49% over a three-year period[19].

Within the UK, research by Living Streets found that the creation of pedestrian friendly streets, and expansion of cycling networks, can increase footfall and sales by up to 30%[20]. More detailed comparative research, meanwhile, has shown that cycle parking can delivery 5 times the retail spend per metre than equivalent car parking[21].

With businesses continuing to face a difficult period, investment to support access and usage of High Streets, commercial centres, and other retail establishments is key to retaining a healthy

17 https://onlinepubs.trb.org/Onlinepubs/trr/1991/1320/1320-009.pdf

18 DfT TAG guidance

19 https://www.nyc.gov/html/dot/downloads/pdf/dot-economic-benefits-of-sustainable-streets.pdf

20 https://www.livingstreets.org.uk/media/3890/pedestrian-pound-2018.pdf

21 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/509587/value-of-cycling.pdf

local economy and ensuring Leicester has a vibrant offer for local investment. This includes the tourism sector, and the city council retains a key ambition within the tourism action plan to promote cycle routes and activities as a means of encouraging greater access and usage of facilities across the city by residents and visitors.

On a wider scale, the nation's economy benefits from a healthy workforce. Employees that regularly cycle take 1.3 fewer sick days than those that don't, with the accompanying productivity benefit of over £100m[22]. The wider health benefits to the NHS and other local health and social care services have been previously noted, but continues to show a strong return of investment in real terms.

Walking, wheeling or cycling schemes were shown to have an average cost benefit ratio of 13:1 when reviewed in 2014[23]. This means for every pound invested, £13 worth of benefits are returned to the local economy. DfT guidance is that schemes have a "very high" value for money if the cost benefit ratio is over 4:1[24].

At an individual level, the impact of car ownership and dependency on finances cannot be overstated. 2,171 people were surveyed as part of wave 7 of the National Travel Attitudes Survey in August and September 2022, and were asked whether the cost of living crisis had an impact on their transport habits. 63% of respondents said that it had, and 35% said they replaced some car journeys with walking and cycling.[25]

Research from 2020 shows that for 64% of people, the car is the most expensive outgoing after rent or mortgage payments[26]; for the East Midlands, this is represented by an average monthly running cost of £360. At £4,320 a year, this is 30% of the average gross disposable household income for Leicester (£14,266 as of 2020)[27]

This is a significant sum of money that is directed purely towards accessing one mode of transport, and can be better served improving quality of life, access to essentials, and the local economy.

Safety

Between 2016 and 2021, there were 245 incidents in Leicester that resulted in a pedestrian being killed or seriously injured,

[22] https://assets.publishing.service.gov.uk/media/5a74ad3aed915d7ab83b5a59/value-of-cycling.pdf

[23] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/348943/vfm-assessment-of-cycling-grants.pdf

[24] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/918479/value-for-money-framework.pdf

[25] National Travel Attitudes Study (NTAS): Wave 7 - GOV.UK (www.gov.uk)

[26] https://www.nerdwallet.com/uk/personal-finance/cost-of-car-ownership/

[27] https://www.ons.gov.uk/economy/regionalaccounts/grossdisposablehouseholdincome/datasets/regionalgrossdisposablehouseholdincomelocalauthoritiesbyitl1region

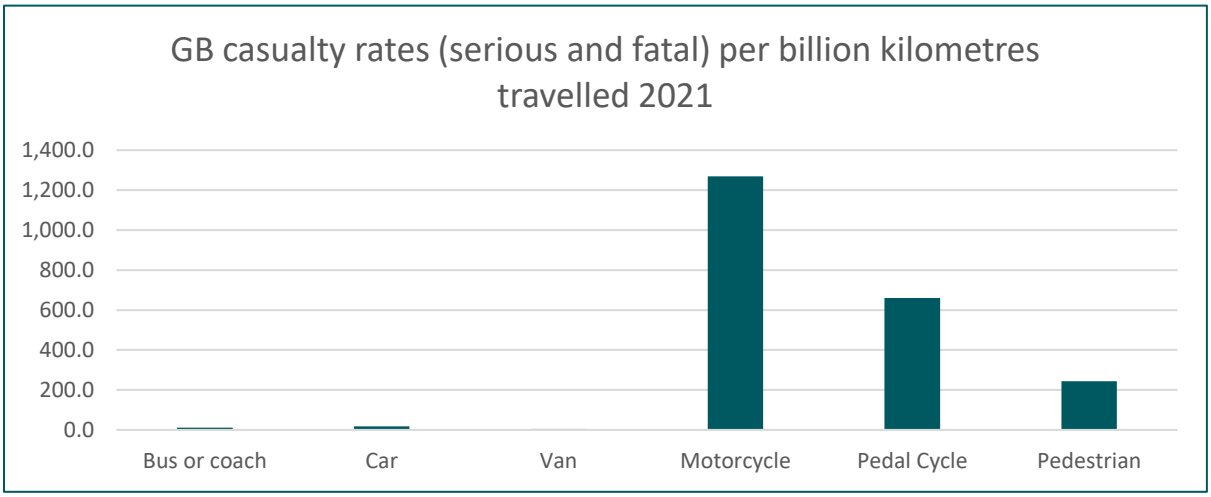


Figure 6 - 2021 casualty rates per billion kilometres, Great Britain

and 103 incidents that resulted in a cyclist being killed or seriously injured.[28]

As a proportion of all reported casualties, that is 14% of all cycling injuries and 28% of all pedestrian injuries. Whilst some allowance can be made for reporting bias – the data is generated from police attendance, which is more likely to be after series incidents or upon the collision of multiple road users – the absolute number of incidents of a serious or fatal nature show there to be a valid safety concern.

Analysing trends, pedestrian incidents have decreased year on year, though cycling incidents have remained steady, and – worryingly - saw a notable increase in 2021. It remains to be seen if this is the start of a new trend or represents a statistical anomaly.

As a comparator, for the same period 95% of all driver or vehicle occupant casualties were deemed slight. Though the number of casualties in those classes is much, much higher (2623 between 2016 and 2023), the apportionment suggests greater risk to vulnerable users; especially when considering that current mode share in Leicester is not equal and remains car-dominant.

This remains true at a national level where, as Figure 6 shows, the casualty rates for motorcyclists, pedestrians, and cyclists are all significantly higher than other modes. Some allowance should be made for the nature of trips and key differences between modes – alongside the sheer volume of car, van, and bus or coach journeys undertaken – but, again, the difference is not proportionate and clearly shows an increased vulnerability for active travel modes.

The city council maintain that there is no acceptable number of incidents. The provision of appropriate, high-quality infrastructure can serve to prevent, or at the very least reduce the severity, of incidents on the network and ensure the safety of the traveling public.

Safety extends beyond motor traffic – findings from Wave 8 of the National Travel Attitudes Survey (published August 2023) found that a considerable number of respondents actively take precautionary measures when walking or cycling – such as

[28] DfT STATS19 data

letting others know plans (48%), only using certain routes (40%) or travelling at certain times (45%)[29]. Closer analysis of the data shows a clear gender disparity, with a much higher proportion of female respondents taking safety precautions.

High quality infrastructure, providing lit routes with good quality materials, passive surveillance, and a good level of usage at all times can assist with the perception of safety and reduce the need for additional precautions or abandoned journeys.

Equality of Access

Access to opportunities for leisure, employment, and education is the key to inclusivity, and high-quality active travel infrastructure is by its nature both accessible and inclusive.

The Index of Multiple Deprivation, the official measure of relative deprivation in England as defined and scored by the Department for Levelling Up, Housing, and Communities, was last compiled in 2019 from a suite of indices including income, education, disability, employment, and crime.

Whilst Leicester was not placed within the 20 most deprived areas, as a comparator with other local authorities the city is notably deprived in the areas of income (14th) and health (49th)[30] –areas that can benefit substantially from the low cost of walking, wheeling, and cycling alongside the compounding health increase.

Recent (2021) census data has shown that 33% of Leicester households do not own a car or van, and though this is much higher than the England average of 24%[31], further analysis of the data – as shown in Figure 7 – shows that the level of single car households is exactly in line with the England average of 41%. Instead, there are fewer households that have 2 (20% vs 26%)

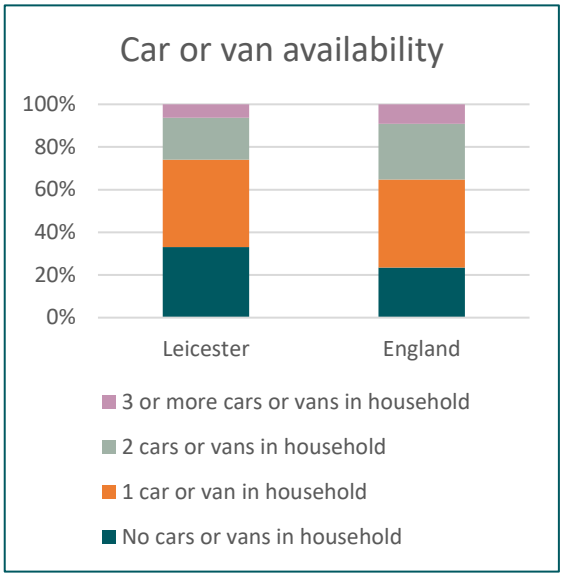


Figure 7 - car or van availability. Source: Census 2021, TS045 dataset (ONS)

or 3 or more (6% vs 9%) vehicles when compared to the England average.

This suggests that there is a need – real or perceived – for households to continue to retain at least one running vehicle. Not only does this create an additional cost burden, but in the absence of suitable alternative means of accessing goods and services the ability for other household members, be they adults or children, become reliant on a single car and single driver.

The provision of infrastructure that can both remove the need to own a vehicle and ensure those without are not denied access to either essentials or luxuries is therefore a key method in ensuring that

[29] National Travel Attitudes Study Wave 8 - GOV.UK (www.gov.uk)

[30] English indices of deprivation 2019 - GOV.UK (www.gov.uk)

[31] ONS TS045 dataset

there is equality of access across the city, and ensuring that low earners are not unduly penalised due to needing to run or maintain a vehicle.

Wheels for Wellbeing – the disabled cycling charity – found that 64% of disabled cyclists found riding a bike easier than walking, and most made use of a regular, standard bicycle rather than an adapted cycle such as a handcycle, recumbent, or trike.[32]

However, response to the National Travel Attitudes Survey (2020) suggest a very different public perception. Only 29% of respondents felt a bicycle – regular or electric – was a travel or mobility aid for a user with a disability, illness, or mobility impairment. Slightly more, 42%, felt a specialist cycle could be used in this fashion[33]

Wheels for Wellbeing also identified that the two primary barriers to cycling journeys are poor infrastructure and poor parking or storage provision – the same barriers that exist for non-disabled users.

So it is that appropriate infrastructure, designed to be sympathetic to users of all ability levels physical and mental, can ensure disabled users are not prevented from accessing walking, wheeling, or cycling network for leisure, utility, or any other trip they choose to make.

[32] https://wheelsforwellbeing.org.uk/wp-content/uploads/2022/05/Disability-and-Cycling-Report-of-2021-national-survey-results.pdf

[33] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/905906/ntas0701.ods

Literature Review and Context

Introduction

This section provides a summary of literature – including policies, strategies and plans that relate to Leicester's LCWIP. These have been divided by geographical scope for ease of reference and sorted by publication date. Unless otherwise stated and in exceptional circumstance, all policy or guidance documents are active as of publication.

Additionally, the section includes the regulations, design documents, and guidance that has been considered in the planning of the network and will be used during the design and development of schemes.

National Policies

Inclusive Transport Strategy

DfT, 2018

Strategy to create a more inclusive transport system for all users. The report focusses on transport inclusivity, explaining how vehicles, stations and streetscapes can be designed, built and operated to be inclusive to all people with different forms of disability.

Clean Air Strategy

DEFRA, 2019

A comprehensive action plan is set out in this strategy, seeking to address all sources of air pollution. The central tenet of the strategy rests on is that encouraging uptake in cycling and walking for short journeys results in a reduction of congestion and emissions, in addition to the health benefits from lifestyles that are more active.

Future of Mobility: Urban Strategy

DfT, 2019

A strategy to harness technological innovations to offer more adaptable and agile transport options. The document suggests that much of the change in travel will happen first and fastest in urban areas, where transport is busiest, economic opportunities greatest, and space most constrained.

Gear Change

DFT, 2020

Government's plan to boost walking and cycling in England. Strategy details how the government intends to increase numbers of people cycle and walk under four key themes, to be achieved by 2030.

Second Cycling and Walking Investment Strategy (CWIS2)

DfT, 2022

Updated strategy to deliver on government's ambition to shift people over to walking, wheeling and cycling for shorter journeys or part of longer journeys. This second version of the strategy reflects the increase in active travel, the significant impact that this strategy can have for reducing emissions and reducing congestion and noise pollution on the roads.

Ten Point Plan for a Green Industrial Revolution

HM Gov, 2020

Government vision set across ten points on how they will lay the foundations for a Green Industrial Revolution, seeking to put the UK at the forefront of global markets for clean technology. Point 5 is 'Green

Public Transport, Cycling and Walking' which mentions the need to increase the share of journeys that are cycled and walked.

National Planning Policy Framework NPPF (2021)

DLUHC (then MHCLG), 2021

The National Planning Policy Framework sets out the Government's planning policies for England and how they ought to be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

Decarbonising Transport

DfT, 2021

Broad mission statement type document, highlighting government's commitment and strategy to decarbonising the transport system in the UK. Feeds into the legal target of the UK's emissions being net zero by 2050. Includes a section on increasing cycling and walking and the multiple benefits this can bring, and states that increased levels of active travel can improve everyday life for all.

Bus Back Better

DfT, 2021

The long-term national bus strategy, setting out a vision and the opportunity to deliver better bus services for passengers across England. This is aimed to be achieved through ambitious and far-reaching reform of how bus services are planned and delivered. The strategy also serves to highlight the social and environmental benefits that could be achieved through reform of bus services.

Net Zero Strategy: Build Back Greener

HM Gov, 2021

Document outlining continuing commitments since 1990 to reduce greenhouse gas emissions, the latest iteration of which at the time of publication was the introduction of the net zero 2050 binding target. One of the key commitments for transport is to increase the share of journeys taken by public transport, cycling and walking.

Highway Code (latest version)

DfT, 2022.

Rules for all types of road users have been updated in The Highway Code to improve the safety of people walking, cycling and riding horses.

Air Quality Strategy: Framework for Local Authority Delivery

DEFRA, 2023

A strategic document outlining the powers and responsibilities for local authorities alongside commitments from government. The document specifically references the need to boost active travel alongside public transport as a means of improving air quality (priority 6), and the need to embed air quality concerns in local plans, consultations, and engagements.

Carbon Budget Delivery Plan

Department for Energy Security and Net Zero, 2023

This plan collates government targets, proposals, and policies aimed to reduce emissions across the entire UK economy. Much of the relevant comments for transport are derived directly from the Transport Decarbonisation Plan, though it once again references both the continued growth in transport demand – which has been majorly filled by vehicle traffic – and

the persistence of the sector as being the highest emitter.

Progress in reducing emissions: 2023 Report to Parliament

Climate Change Committee, 2023

Most recent – at time of publication – report on national progress in reducing greenhouse gas emissions. The document cites a need to continue to reduce car demand, and recognises that whilst there has been little overall progress to date the key is to pursue enabler such as appropriate quality infrastructure and local policies for land use that prioritise movements made outside of the private vehicle.

Understanding the requirements and barriers for modal shift

WSP (for the Climate Change Committee), 2023

This research paper, commissioned by the Climate Change committee, identifies key barriers to the transition to active or sustainable transport. Whilst much of the findings are of more relevance to behaviour change work – and, indeed, will inform the city council on this matter – it does highlight the convenience of car use and the lack of connectivity as being barriers found through focus group testing. The LCWIP can influence both of these, after a fashion.

Plan for Drivers

DfT, 2023

This plan identifies thirty actions intended to endorse and support motor vehicle usage nationally, whilst also claiming government support for walking, wheeling, and cycling. At time of writing, the exact impact on transport planning is yet to be understood – much of the actions promise new guidance, calls for evidence, or consultation in areas such as 20mph speed limits, 15-minute cities/area wide traffic management, and bus lanes.

Regional Policies

Fairer, greener, stronger: A Strategic Transport Plan for the Midlands

Midlands Connect, 2022

A successor to the previous strategic transport plan published in 2017. This plan is focused on meeting the political, societal and environmental challenges that have arisen since 2017 to deliver a fairer, greener and stronger Midlands region. The plan advocates for investment and innovation in rail, rural mobility, road networks and Electric Vehicles.

Our Shared Vision for the East Midlands - Midlands Connect and Transport for the East Midlands

Midlands Connect and Transport for the East Midlands, 2022

The short document promotes eight strategic investment policies to contribute to the Government's Net Zero and Levelling Up agendas, whilst also highlighting the need to rollout Electric Vehicle charging points and alternative fuels such as hydrogen.

Local Policies

Draft Leicester City Local Plan

Leicester City Council, UNPUBLISHED

This Draft Local Plan sets out the vision and objectives for the growth of the city over the next 15 years. Includes a section on Transportation, explaining that promoting walking and cycling is a key aspect of achieving a sustainable transport system. States that improvements are needed in walking and cycling provision and

infrastructure in order to achieve modal change. Also includes details on how the Local Plan can support the Transport Plan, and states that the council is developing a new Cycle City Action Plan 2023-2030.

Draft Leicester Local Transport Plan

Leicester City Council, UNPUBLISHED

This Draft Transport Plan sets out the transport vision for Leicester, which is "a carbon neutral, growing, healthy, accessible and connected city, with clean air supporting a high quality of life and travel experience for people and a vibrant local economy". Ambitions include walking and cycling to be most people's first choice for shorter journeys and 'Healthier neighbourhoods' where all local services should be accessible by walking and cycling with 15 minutes. The three key themes are 'Connected Corridors & Hubs', 'Connected Healthy Neighbourhoods', and 'Managing Demand for Car Use'. Includes details on the Connecting Leicester and Transforming Cities Fund programmes.

Walk Leicester Action Plan

Leicester City Council, UNPUBLISHED

Note this Walk Leicester Action Plan is draft from 2019 and was never published. Explains the benefits of walking and how the council will continue to encourage walking, aiming to make Leicester a 'great walking city'.

Leicester Cycle City Action Plan 2015 – 2024

Leicester City Council, 2015

This plan details how Leicester will achieve its aim of being the UK's leading cycling and people-friendly city. States that the council will build a mainstream and inclusive citywide cycling culture and create a plan for strategic cycling infrastructure and address missing links. It also includes case studies on successful cycling projects and events in Leicester.

Healthier Air for Leicester - Leicester's Air Quality Action Plan (2015-2026)

Leicester City Council, 2015

This plan details air quality and air pollution in Leicester and measures to improve air quality. It includes the ambition of doubling the number of people cycling daily to 26,000 by 2018 and again by 2023. Mentions the 'Connecting Leicester' projects including city centre public realm improvements to encourage further walking and cycling.

Leicester Green Infrastructure Strategy 2015-2025

Leicester City Council, 2015

Strategic vision for maximising the benefits of Leicester's green spaces and describes the actions needed for a successful 'Green Infrastructure (GI) Strategy'. Priorities include improving the accessibility and opportunity for walking and cycling in green spaces, and mentions about creating 'walkable' neighbourhoods.

Strategic Growth Plan Leicester & Leicestershire 2050: Our Vision For Growth

Leicester City Council and other local authorities, 2018

Plan developed by ten partner organisations including LCC, exploring the long-term vision to address challenges and opportunities and stating that Leicester and Leicestershire has huge potential for growth. Defines Leicester as the 'central city' and talks about how developments on the fringes of Leicester need to be accompanied by improvements in walking and cycling. Mentions infrastructure

including road and rail projects, and acknowledges the need for better connections to the strategic network including looking for ways to improve cycling and walking.

The Joint Health and Wellbeing Strategy 2019-2024

Leicester City Council, 2019

Strategy to improve the health and wellbeing of residents in Leicester. Includes promoting and encouraging cycling and walking to help improve levels of physical activity and improve mental health and wellbeing.

Leicester and Leicestershire Strategic Transport Priorities 2020-2050

Leicester City Council and Leicestershire County Council, 2020

Joint document between Leicester City Council and Leicestershire County Council that outlines priorities and highlights scope for working together for common transport aims and objectives. Includes five themes of 'Travel between cities', 'Travel around Leicester', 'Travel around Leicestershire', and 'Travel around county and urban areas', and 'Resilient Transport Network'. Multiple mentions of investments to improve and increase walking and cycling.

Leicester Climate Emergency Strategy 2020-2023

Leicester City Council, 2020

This is the council's strategy and action plan for tackling the Climate Emergency. One of the key areas for action is travel and transport, which involves improvements and investment in infrastructure and services to increase walking and cycling, and also promotion to encourage more walking and cycling.

Leicester COVID-19 Transport Recovery Plan

Leicester City Council, 2020

This document was created in response to the COVID-19 pandemic and followed three principles of safety, sustainability, and social equity. Highlights the opportunity of the pandemic to encourage and increase walking and cycling and includes details of the pop-up cycleways and paths.

Leicester Economic Recovery First Steps

Leicester City Council, 2020

Plan developed in response to the COVID-19 pandemic. Details how the council will support the Leicester economy and communities, and mentions the cycling and walking pop-ups.

Joint Strategic Needs Assessment: Living in Leicester Adults JSNA chapter (2020)

Leicester City Council, 2020

Explores the health and wellbeing needs of Leicester's population. Talks about the benefits of regular physical activity. States that Transport Strategy at the council is planning for 'people not cars' and encouraging more walking and cycling.

Tourism Action Plan 2020-2025

Leicester City Council, 2020

Plan explores the city's tourism successes over the past few years and explores the targets, objectives and plans for tourism from 2020-2025. Highlights the leisure potential of the city's waterways that could provide an attractive green corridor for walkers and cyclists. One of the identified actions is to encourage active families to

visit through awareness of cycling routes and organised cycling activities.

Leicester Enhanced Bus Partnership Plan 2022–2030

Leicester City Council, 2022

Reflects the Bus Service Improvement Plan developed between LCC and all local bus operators. Explores details of the bus networks and work packages that will improve Leicester's bus services, including the 'Mainlines' urban network, 'Greenlines' strategic network and the small 'Flexlines' network. All bus journeys start and end with a walking stage, and it is therefore key to ensure that there is a suitable street environment for users to access stops and opportunity to integrate multi stage travel via cycle to key hubs.

Carbon Neutral Roadmap

Leicester City Council, 2022

The Roadmap outlines the key achievements that are needed to ensure the city achieves its ambition of being carbon neutral no later than 2030 – including via the reduction in car trip demand by modal shift of at least 50% of journeys to walking and cycling.

Transport Infrastructure Assessment 2020-2036

Leicester City Council, 2022

This document is the evidence base for the Regulation 19 submission of the emerging Local Plan, and sets out the infrastructure requirements to support the Local Plan. States that since 2020 to 2022 the two main events that will challenge and change the transport system are the COVID-19 pandemic and the declaration of a Climate Emergency. Lists the infrastructure requirements and associated funding committed and required, also lists sources of funding.

Leicester Local Plan 2020-2036

Leicester City Council, 2023

The Local Plan provides the vision and framework for future development of the city, including the provision of new housing, retail, employment and leisure sites. A key element of the local plan is ensuring that development is sustainable in both design and usage, including that there exists means to travel without reverting to the private car.

Leicester Air Quality Action Plan 2025 – 2030

Leicester City Council, 2024

Leicester's new Air Quality Action Plan continues to recognise the impact of transport on local air quality, and identifies a transition to active modes and subsequent reduction of vehicle trips as a main tool in improving overall air quality within Leicester.

Guidance and Regulation

Note – only specifically relevant guidance and regulation is included below. Schemes are to be delivered in accordance with active regulation at time of design and construction, including but not limited to the Traffic Signs Manual and the Traffic Signs Regulations and General Directions.

Manual for Streets

DfT, 2007

A technical guidance document covering, principally, residential streets to ensure they are designed to place appropriate focus on place and people. Many of the principles within, such as a reduction in through traffic and speed, are now seen as good practice for various other street

environments and can be used and applied to a variety of street archetypes including high streets and commercial centres. The document is not binding, though good

Manual for streets 2

CIHT, 2010

A supplement to the first Manual for Streets, designed to apply the same principles to busier streets and roads within a local authority context – such as estate roads, urban corridors, and high streets. Much of the design advice for foot or cycle traffic has now been replicated or expanded via more recent guidance, but the principles of accessibility and inclusivity, alongside consideration of practical constraints, make it a useful reference document.

Design Manual for Bicycle Traffic

CROW, 2016

A design manual originating from the Netherlands, and well regarded internationally as an example of best practice at all stages of infrastructure design. Whilst many of the specific concepts and designs need to be translated to work within a UK context – and the publication of the LTN 1/20 design guide has aided this process considerably – the document is useful for aspects of wider strategic planning. Principally, the document advocates for infrastructure designed at a network level, and identifies 5 key areas that will determine the effectiveness of any network: Cohesion, Directness, Attractiveness, Safety, and Comfort. These areas are considered in the development of the Leicester LCWIP, and will be used to support the prioritisation and scoring system.

LCWIP Guidance

DfT, 2017

Document that builds on the Government's Cycling and Walking Investment Strategy (The Strategy). Underpins rationale behind LCWIPs, being that they enable a long-term approach to developing local cycling and walking networks and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle. The guidance sets out a recommended approach to planning networks of walking and cycling routes that connect the places people want to get to, whether for work, education, leisure or other reasons.

Leicester Street Design Guide

Leicester City Council, 2020

This is the First Edition of the Leicester Street Design Guide, exploring street design principles and elements. Includes details of Healthy Streets with a healthy street defined as "a street where people are encouraged to walk, cycle or use public transport for everyday trips", and states that all new scheme designs should be assessed using the Healthy Street Check. Also includes a section on 'Walking and Cycling in Harmony' which talks about how shared spaces for pedestrians and cyclists can work.

Local Transport Note 1/20: Cycle Infrastructure Design

DfT, 2020

Explains the five overarching design principals (cycle routes and networks must be coherent, direct, safe, comfortable, and attractive) and provides context to the need to improve the quality of cycle infrastructure as part of wider strategies, such as increasing physical activity, reducing carbon emissions and stimulating economic growth.

A Guide to Inclusive Cycling

Wheels for Wellbeing, 2020

This guide, developed by an inclusive cycling charity, promotes infrastructure designed around accessible cycling and identifies key measures to ensure that cycle routes and networks are open and usable to all. Much of the individual concepts and principles are, now, included within LTN 1/20, but the guide does provide useful context and reasoning behind concepts and design elements, alongside an additional focus on visual accessibility for signage and wayfinding. Taken with LTN 1/20, the guide provides a useful means of ensuring that inclusive cycling is at the heart of cycle infrastructure design and mistakes that create exclusions can be avoided.

Inclusive Mobility:

Department for Transport , 2022

Guidance document on the provision of features and design elements to ensure the public realm is accessible to those with visual, mobility, or other impairments.

Healthy Streets Design Check

Healthy Streets

An approach developed by the titular organisation as a means of scoring and recording the overall suitability of a street as a place for people. The methodology is well established, and uses 10 scored indicators – including air quality, safety, support for active travel, and crossing accessibility, that collectively form a score for the street. The Design Check was developed as a way of ensuring that proposals for improvements to streets could be suitably quantified and identify areas that require further investment to improve overall street quality.

Active Design

Sport England, 2023

Developed by Sport England and Active Travel England, the Active Design guidance is focused around shaping the street environment to encourage activity as part of everyday life. Key to the document are the ten principles, with the core principle being Activity for all (that all environments should support equitable physical activity) alongside: walkable communities, connected active travel routes, mixed use and co-located facilities, networks of multi-functional open space, high quality streets and spaces, providing activity infrastructure, active buildings, maintaining flexible spaces, and activating spaces.

Cycle-Rail Guidance 2023

Cycle Rail Working Group, 2023

The latest cycle rail toolkit, toolkit 3, is designed to promote interconnectivity between rail and cycle modes via improving the quality, ease, and safety offered to users that opt to cycle to rail stations and interchanges. Whilst the guidance is aimed primarily at train operating companies, the principles are based on LTN 1/20 and are designed to ensure there is a smooth interconnection with local networks. Given the impending (at time of writing) redevelopment of Leicester Railway Station, this is a prime opportunity to ensure opportunities to promote multi-modal journeys are taken.

Cycle Storage: Design Guide for Applicants

Leicester City Council, 2023

A design guide for cycle parking and storage in the city, covering a multitude of use cases from residential storage hangers to neighbourhood or commercial cycle

hubs. Though aimed at developments and developers, the guidance provides advice on the application and retrofitting of new storage options on existing streets in a way that is fitting with the street scene and compliant with planning.

Implementing Low Traffic Neighbourhoods

Department for Transport, 2024

A guidance note issued as an addition to the Traffic Management Act (2004), that obliges authorities to consider wider impacts and ensure a robust and extensive consultation process is undertaken prior to installing area wide traffic management schemes designed to remove or reduce motor traffic.

Gathering Information

As a data driven approach to network planning, the development of Leicester's LCWIP has required the collation and analysis of a wide-ranging amount of data, from a wide range of sources.

This section details the data used in creation of the LCWIP, arranged by source.

Data Collection Principles

To ensure the LCWIP is built on an accurate foundation, data has only been used when any of the following criteria have been met:

- The data was collected by or on behalf of either Leicester City Council or a trusted partner
- The data is sourced from a recognised academic journal, publication, or study
- The data is from a dataset published by a government agency or body
- The data is from a tool created, promoted, or endorsed by a government agency or body

Where possible, data has been converted to a geographical format and loaded into a GIS (Graphical Information System) database which has subsequently been used for comparative analysis.

Covid-19 Data

The Covid-19 pandemic created exceptional traffic conditions and it is accepted that data from 2020 and 2021 cannot be considered representative.

The period of national and local lockdowns saw a substantial increase in working from home, a significant reduction in traffic volume upon the network, and an increase in the number of cycling and walking trips undertaken for purposes including retail, commuting, and leisure.

As the UK passes the second anniversary of the end of all legal restrictions (19th July, 2021), the permanency of these changes to the wider transport networks remains unclear. There continues to be a reduction in passenger transport trips, an increase in working from home has changed commuter movement patterns and times, and peak traffic flows have become much more attributable to school journeys than the previous 9-5 working day.

Usage of data from the 2020 – 2021 period can be used to identify:

- Trends in movement patterns that have resumed following the pandemic,
- Trends in movement patterns that have developed since the pandemic,
- Potential movement patterns and travel choices when passenger transport demand is reduced,
- Potential movement patterns and travel choices when motor traffic volume is reduced,

The approach adopted by LCC for data from these years is to use only in the following circumstances:

- There is data available from before the 2020-2021 period, or
- There is data available for after the 2020-2021 period, or
- The data is serving as a comparative tool and is not being used to assess traffic movements, or

- The data is weighted to account for factors influenced by the pandemic, or
- The data source is not expected to be impacted by pandemic factors and is such accurate and representative.

Census 2011

Car or Van Availability

KS404EW Dataset

Car or van availability by economic activity

LC4609EW Dataset

Distance travelled to work by car or van availability

LC7402EW Dataset

Method of travel to work (2001 specification) by car or van availability

LC7401EW Dataset

Method of travel to work (2001 specification) by distance travelled to work

LC7701EW Dataset

Population (Workplace population)

WP101EW Dataset

Method of travel to work (2001 specification) (Workplace population)

WP703EW Dataset

Distance travelled to work (Workplace population)

WP702EW

Location of usual residence and place of work by method of travel to work (MSOA level)

WU03EW

Census 2021

Note – at time of development a number of datasets were not available to be included within development of the LCWIP.

Car or van availability

TS045 Dataset

Distance travelled to work

TS058 Dataset

Distance travelled to work by car or van availability

RM015 Dataset

Method used to travel to work by distance travelled to work

RM077 Dataset

Method used to travel to work by car or van availability

RM076 Dataset

Disability by car or van availability

RM068 Dataset

Propensity to Cycle Tool

The Propensity to Cycle Tool was developed as a tool to rapidly identify routes where there is a high likelihood for cycling journeys, and where there is a strong potential for growth.

As the tool is built from a 2011 census dataset, there is a need to consider alongside more accurate, recent data to ensure accuracy.

Department for Transport

Average number of trips and distance travelled by trip length and main mode, England

NTS0308 Dataset

Average number of trips and distance travelled by trip length and main mode, England

NTAS0101 Dataset

Attitudes around road journeys and the environment

NTAS0201 Dataset

Attitudes around road congestion

NTAS0401 Dataset

Attitudes around disability and transport

NTAS0701 Dataset

Road Safety Data – Accidents

STATS19 Dataset

Road Safety Data – Casualties

STATS19 Dataset

Road Safety Data – Vehicles

STATS19 Dataset

Passenger casualty rates by mode (road, air, rail and water): Great Britain

RAS0203 Dataset

Department for Levelling Up, Housing, and Communities

Index of Multiple Deprivation

Combined Dataset

'Indoor' Dataset

'Outdoor' Dataset

Office for Health Improvement and Disparities

Physical Activity Dataset

Department for Business, Energy & Industrial Strategy

UK greenhouse gas emissions national statistics: 1990 to 2021

Leicester City Council

Ward Priorities

Pedestrian Crossing Request List

Local Centre Data (Local Plan)

Police

Bicycle Thefts and Outcomes

Police open data platform

Widen My Path

The widen my path service gained prominence during the pandemic, where it was used by the public to suggest areas suitable for temporary feature such as widened pavements, temporary cycle lanes, or road closures. Leicester City Council heavily promoted the system, and there continues to be suggestion and votes made on the platform. An export from the 23 July has been used as part of developing this LCWIP

Ordnance Survey

AddressBase Plus

Highway Network Overview

Road Network

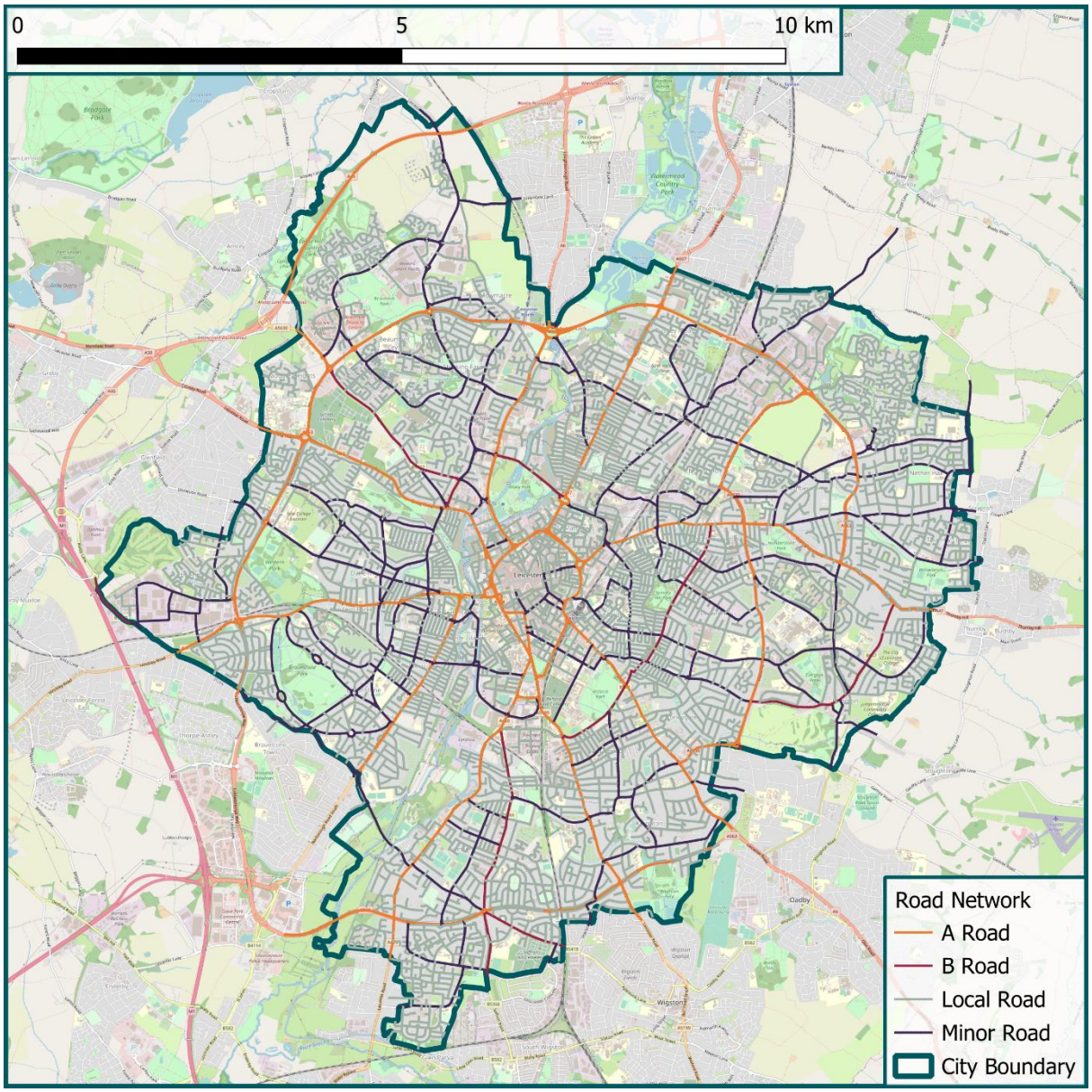


Figure 8 - Leicester Road Network

Leicester has a sizeable road network, with a total length running to around 820km not including private roads, unadopted roads, access roads or car parks.

Roads within the city display considerable variety, and include urban dual carriageways designed for high volume motor traffic, through to residential terraced streets that have been reduced to a de facto one way by heavy on street parking. Indeed, much of the city can be dated by the approaches favoured by the designers and traffic engineers at the time of construction or expansion.

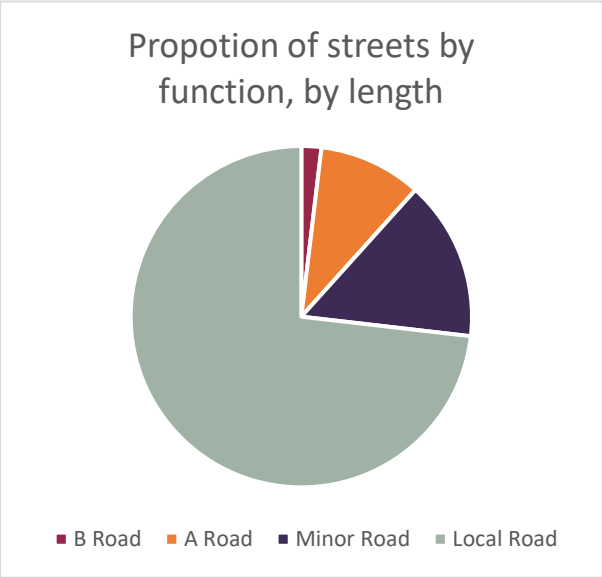


Figure 9 - Proportion of streets by function, by length

This lack of homogeneity contributes greatly to the neighbourhood – and by extension, Leicester's – character though does prevent a summative assessment of the network.

For the purpose of network planning, however, it is important to provide a network hierarchy. This is displayed in Figure 8. The naming convention used is derived from the Ordnance Survey. Brief definitions and examples from across the city are given below:

A Road

A563 Troon Way || A607 Melton Road || A5199 Welford Road

Highest class of classified road, a major road intended to provide large-scale transport links within or between areas.

B Road

B5366 Saffron Lane || B5327 Anstey Lane || B416 East Park Road

A road intended to connect different areas or provide a link to feed traffic between A roads and smaller, local roads on the network.

Minor Road

Upperton Road || Fosse Road North || Thurncourt Road

A road that provides connectivity between higher classes of roads or key destinations and points of interest

Local Road

Davenport Road || Stokes Drive || Harrison Road

A road that, whilst providing access to land, businesses, points of interest, or houses is generally not intended for through traffic.

As shown in Figure 9, most of the Leicester network is recorded as a local road – with over 600km (381 miles) of roadway within that category. In the majority of cases these will be residential streets, though some that provide a level of access to local amenities such as parks, schools, or shopping precincts will fall under the category.

What can be consistently stated is that in many locations the network was not designed for the traffic volumes currently experienced. In certain areas on street parking is at a high premium, and city council have a number of residential parking permit areas, with more in demand and under consideration. Through a combination of high traffic volume, narrow carriageways, and reduced road space due to parked vehicles much of the network is not conducive to walking or cycling.

In addition to the above, the city council – via the Leicester Street Design Guide – has adopted a place and movement approach, that allows the identification and assignment of street typologies based on the function of the street. Place relates to the importance of the street to people, whilst movement relates to the function of the street as a conduit for traffic or overall network importance. These typologies, as taken from the design guide, are shown in Figure 10.

Alongside categorising and identifying street types, the approach can be used to identify what infrastructure may be suitable for the expected purpose, volume, users, and network value of the given street.

Main Arterial	Arterial Connector	Centre Connector/Hub
Neighbourhood Connector	Neighbourhood High Street	Centre Link
Neighbourhood Residential Street	Centre Calmed Street	Pedestrian Priority Zone

Movement >

Place >

Figure 10 - Leicester Place and Movement matrix

Strategic Road Network

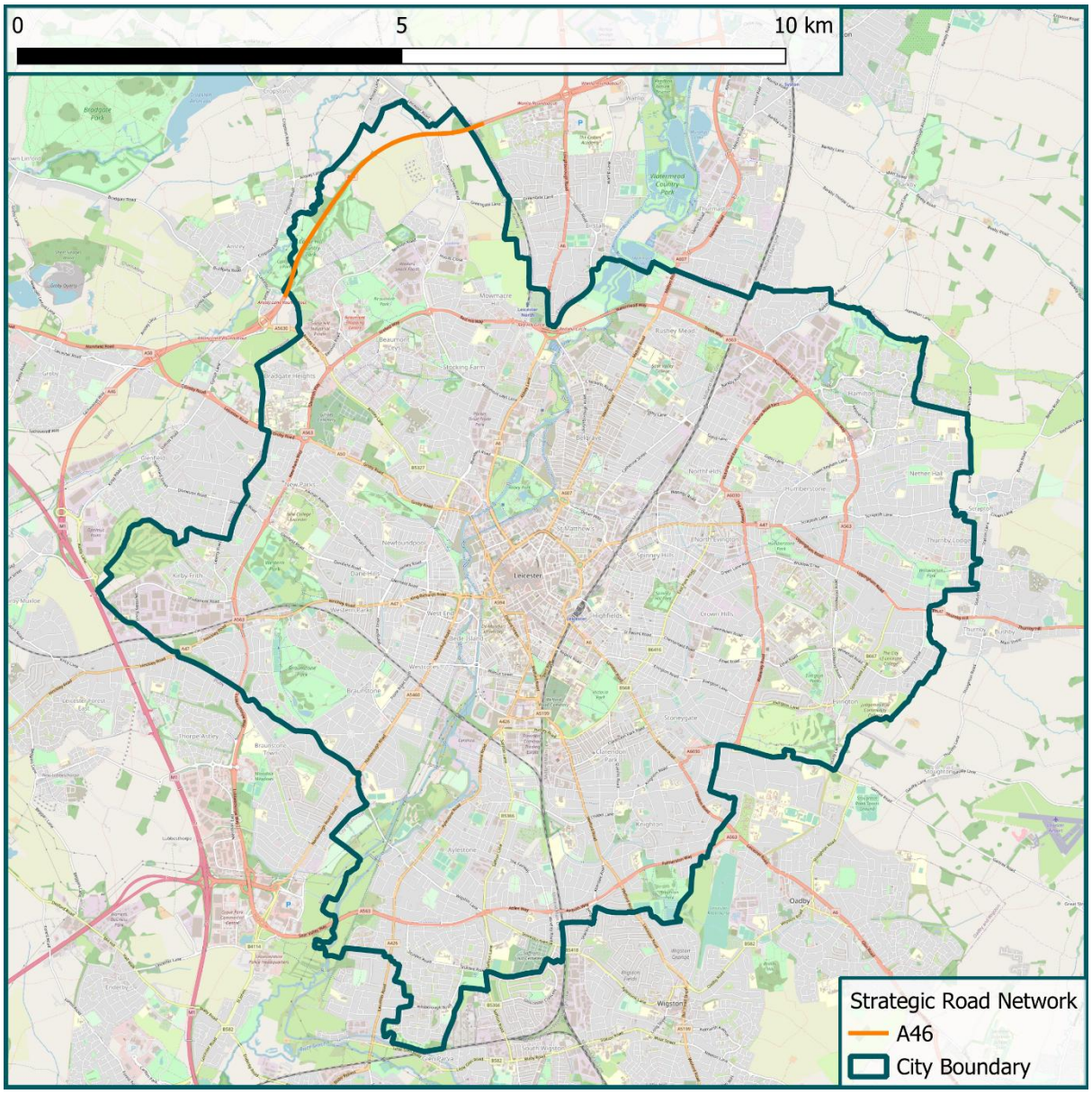


Figure 11 - Strategic Road Network within Leicester City Council Area

A very limited stretch of the A46 is within the Leicester City Council area, and there are no connections to the route within the city boundary. The A46 is a car dominant dual carriageway, with no facility for pedestrians or cyclists. No interventions are proposed along this route and therefore no engagement with National Highways beyond high level consultation is deemed necessary.

Major Road Network

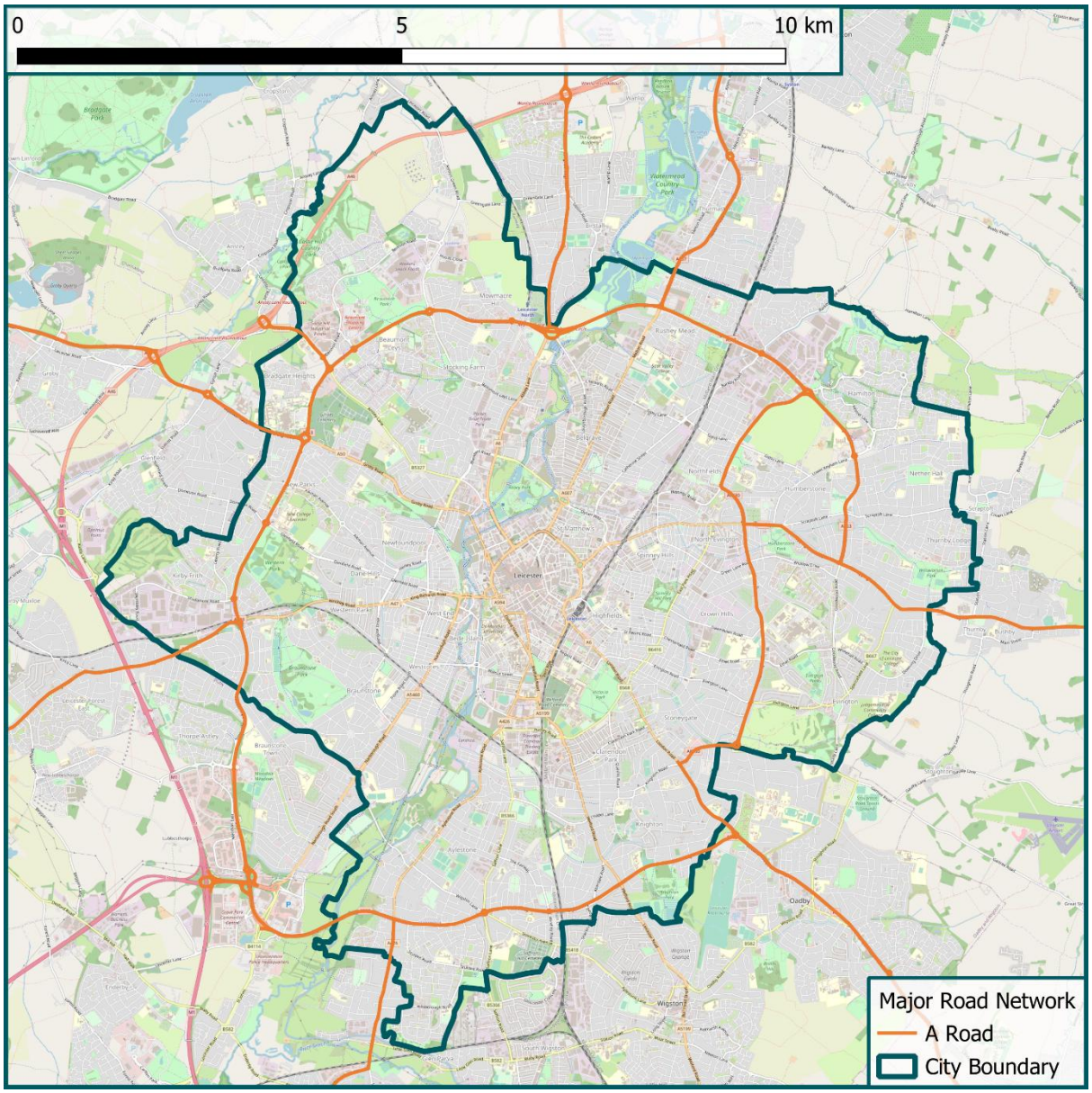


Figure 12 - Major Road Network

The Major Road Network forms, notionally, Leicester's Outer Ring Road and key connections across the city boundary.

Though most of the MRN is designed to be motor traffic dominant there are some sections – notably to the east and southeast of the city – that have active frontages despite a high volume of traffic flow and severe width constraints.

The volume and type of traffic along the MRN is not conducive to mixed use cycling. There is some scattered provision of segregated routes found in isolated parts of the network, but it is not cohesive and there remains a lack of adequate treatment at junctions and for considerable lengths.

Resilience Network

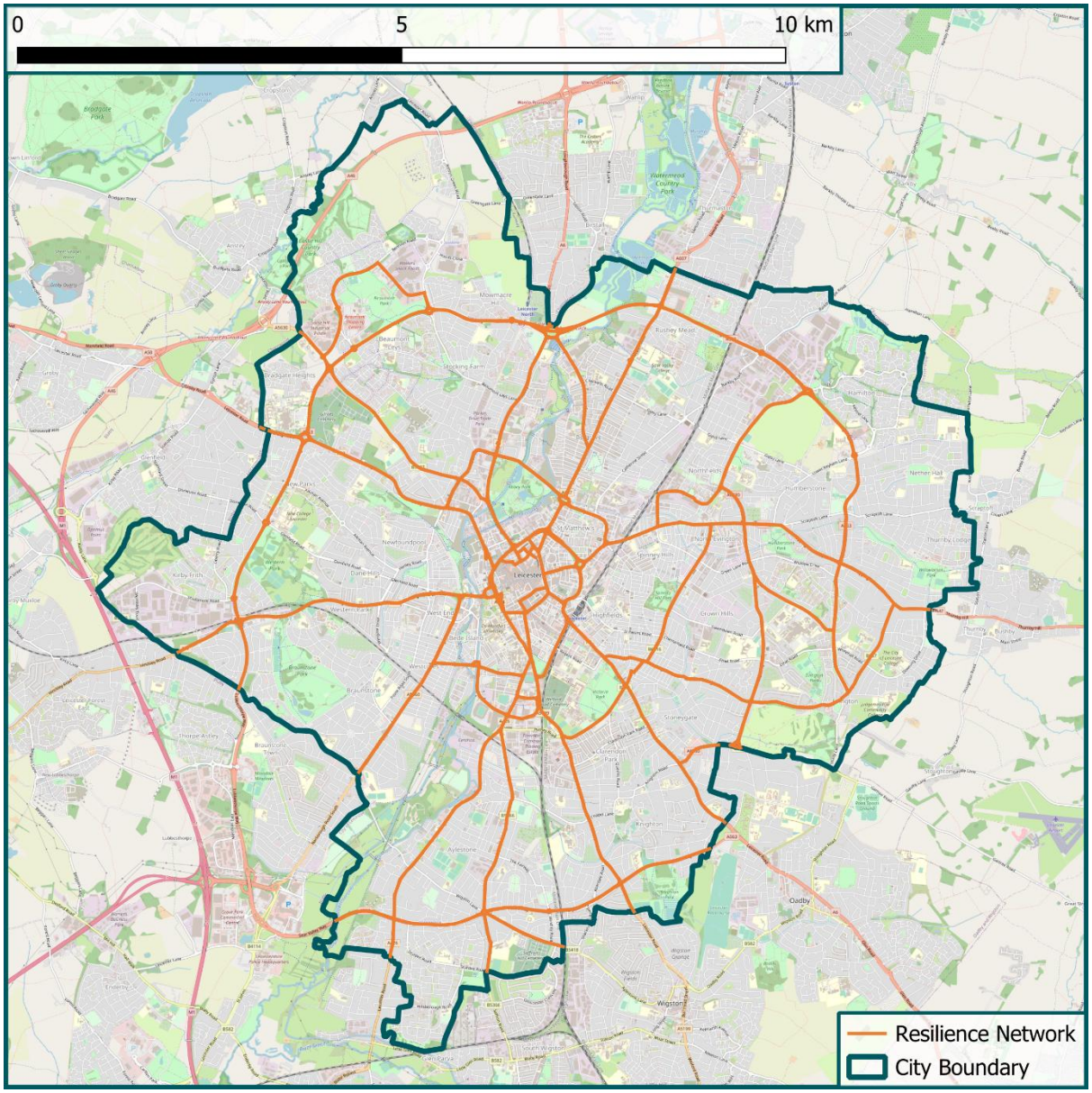


Figure 13 - LCC Resilience Network

The resilience network is a subset of the network that is deemed critical to the operation of the city and for access to key services. The resilience network is used as a tool to prioritise maintenance investment and resource planning during emergencies or severe weather events. The network has been determined based on a number of factors, including the ability to connect across borders and allow access to key infrastructure such as hospitals, bridges, and the railway station.

Given all this, it is accurate to say that the resilient network forms some of the most vital and busy routes within the city, and therefore the routes where there is likely to be a need for effective separation between motor vehicles and walkers, wheelers, or cyclists – to the benefit of all users.

20mph Network

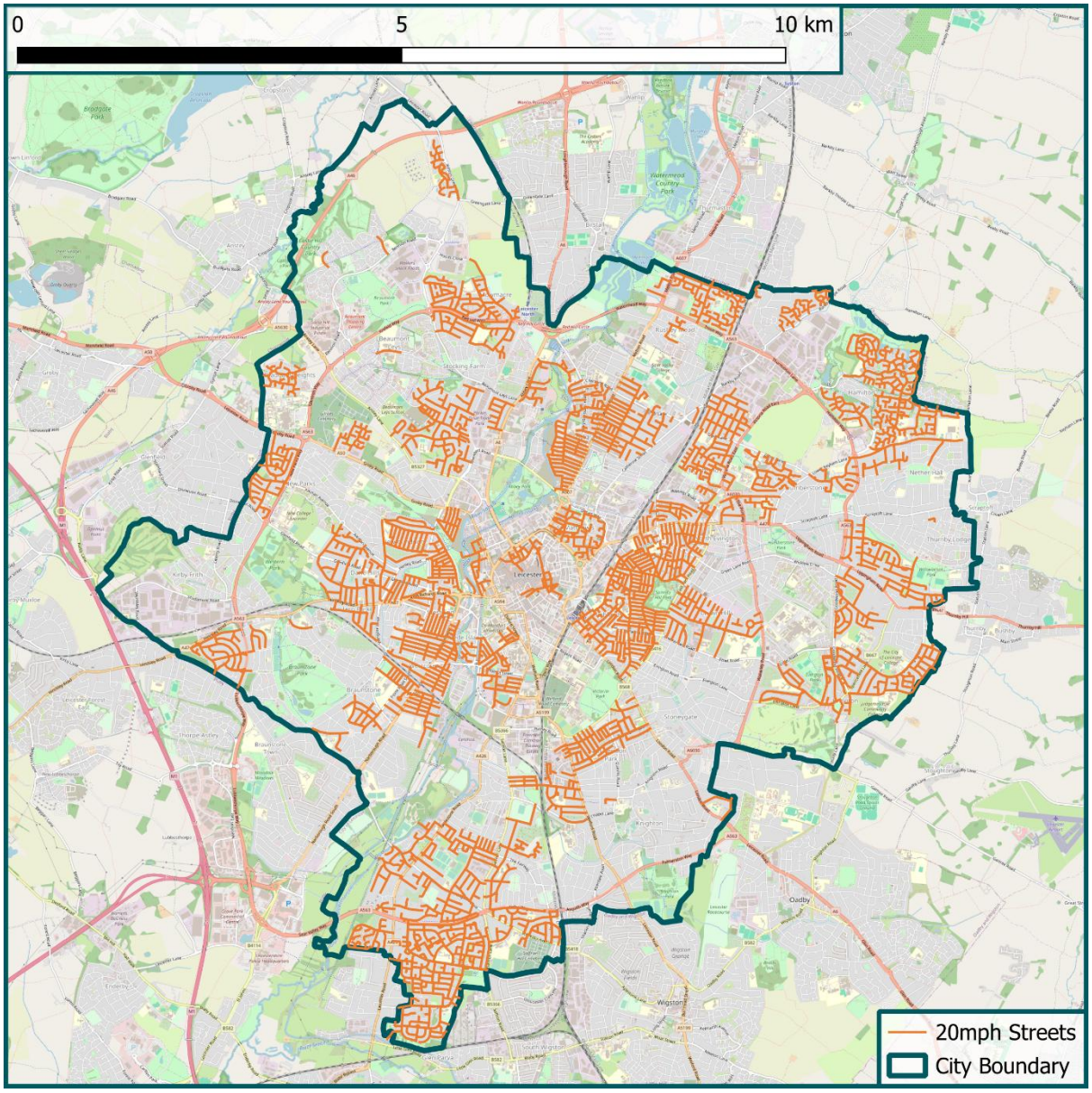


Figure 14 - 20mph Streets

Leicester has continued to expand its network of 20mph streets, working on the principle of ensuring average speeds are compliant (24mph or below) prior to the introduction of signage and legal speed limit changes. This has, in places, required the introduction of speed or traffic calming features to the local street environment to ensure passive enforcement and provide a level of reassurance to users that vehicular traffic will be traveling at a speed appropriate for its environment.

Speed reduction measures have been reviewed and consideration given to usage by users of all classes, including cyclists, motorcyclists, and adapted vehicle users.

The city council have an ambition to transition at least 80% of suitable routes in the city to 20mph by 2027. The majority of these will be considered local roads and represent – for most – the start or end of local journeys possible to make by walking and cycling. Aside from the

localised improvements to street scene and safety this will have tangential benefits to traffic volumes and provide a growing network of calmer streets more suitable for walking and cycling journeys.

The map shown in Figure 14 is indicative of schemes complete as of December 2023 only. Exact extents cannot and should not be determined from this map.

Traffic Volume

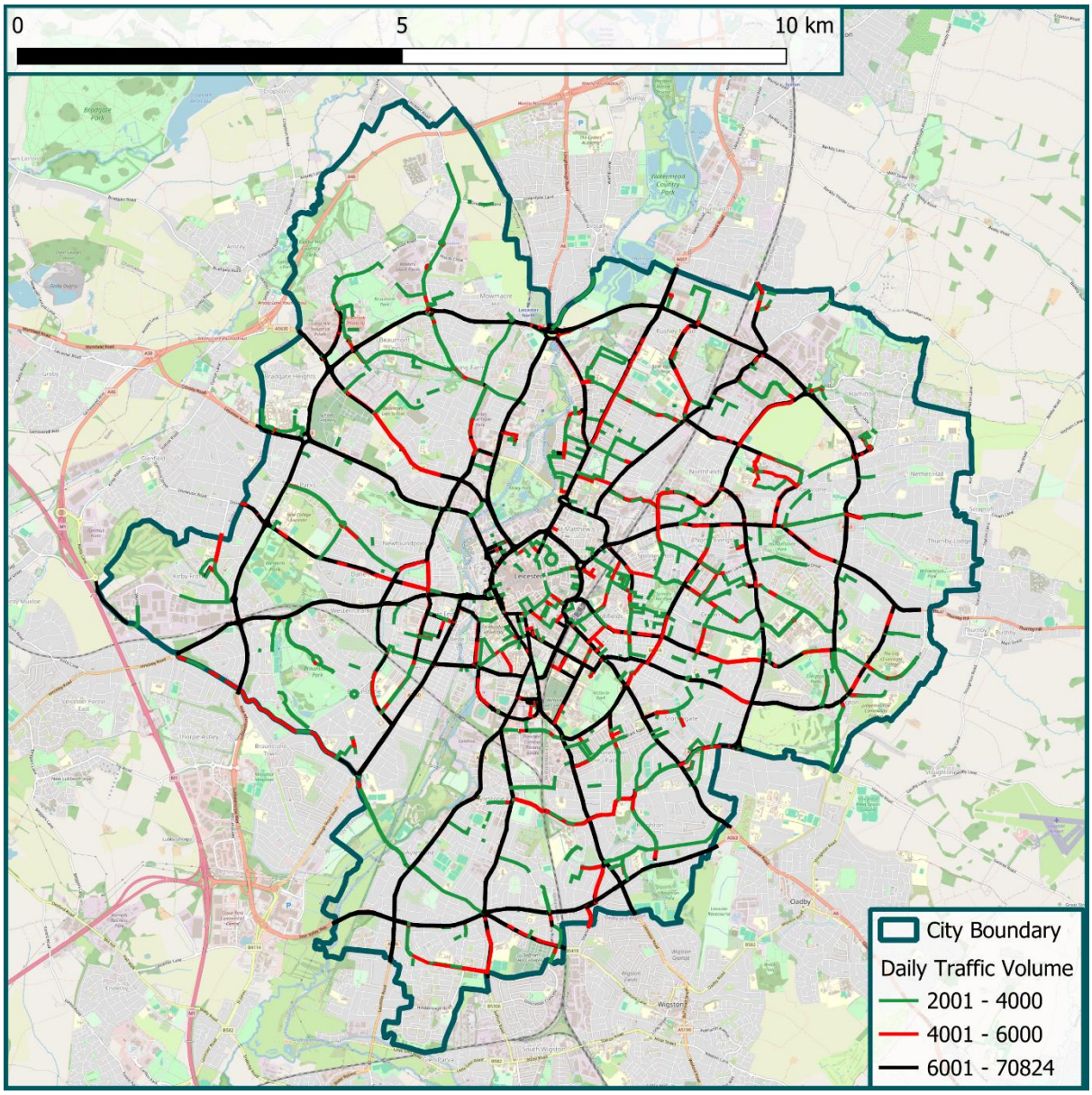


Figure 15 - Traffic flow, measured in PCU/24hr

Figure 15 shows the average daily traffic flow, as measured in Passenger Car Units (PCU) over a 24-hour period

The categories used are adapted from LTN 1/20 (Figure 4.1, pg. 33), and serve to identify where traffic volume would prove a barrier for most users to cycle in mixed traffic, and would require either protected and segregated facilities or work to reduce traffic volume. To aid visibility, roads with a daily volume under 2000 PCU have been excluded from the map.

The data is measured at link level – the busiest in the city are found at roundabout junctions on the inner and outer ring road, which is expected given they serve to funnel traffic. The busiest linear links are found within the city centre though, on Oxford Street (outside the LRI), Vaughan Way (outside of Highcross), and Welford Road (outside of HMP Leicester).

This data is mostly sourced from national data for 2022 and is extrapolated using an approved model and calculation. Whilst not accurate at a local level, it is accurate both as a citywide strategic mapping tool and as comparator. Note that some links within the city boundary are missing from this dataset, and this will be corrected as part of development for phase 2.

Walking Infrastructure Overview

Footways

Most roads within Leicester benefit from a footway on at least one side of the carriageway, with exceptions notably due to:

- The few rural routes found nominally within the city boundary, primary to the east or north of the city,
- Newer residential roads built with shared surface principles,
- Older industrial roads designed for access purposes that have become vehicle dominant.

Though this is welcome, and allows for many complete walking journeys to be undertaken without vehicle conflict, there are parts of the footway network that are not to a desirable level of quality. Widths are, in places, substandard due to obstructions or local geography, and though the city council remains an effective preventative and reactive maintenance regime for footway defects the scale of the network and resources available inevitably means some sections have deteriorated.

Particularly noticeable is the impact of mature trees planted before the introduction of modern route systems and urban planning on footway surfaces, with many areas of the city having footways marred by raised root systems regarding of paving type.

Footways across the city are a mix of slabs and flexible pavement, with certain heritage or social value areas having selective material palettes to create a more attractive and sympathetic environment.

Many of the footways across the city are narrow, and at times necessary street furniture such as lamp columns and traffic signs reduce the available width. Certain residential areas of the city are also susceptible to high levels of footway parking due to extremely high levels of demand for parking capacity, an ongoing challenge that in places reduces available footway space beyond acceptable levels.

Off Road Routes

Leicester has a sizeable network of routes away from roads, ranging from small access route for rows of housing, to historical boulevards such as the New Walk, to Rights of Way and permissive paths across greenspace and alongside the River Soar. There is a high utility value to many if not most of these routes, given they can often provide a more efficient link between points of interest instead of simply following the road network.

The network is shown in Figure 16. As can be seen it is in places incredibly dense, notably around certain green spaces and historical developments that embraced sympathetic design principles, though is not extensive enough to provide for all possible routes without reliance on the standard highway network to provide connectivity.

It must be recognised that the cities permissive routes, which are often found in greenspace and parks, limit access to hours of opening via gates and barriers. In places there is a strategic

value to opening these paths for usage at all hours, provided they are suitably lit and offer a safe environment for pedestrians.

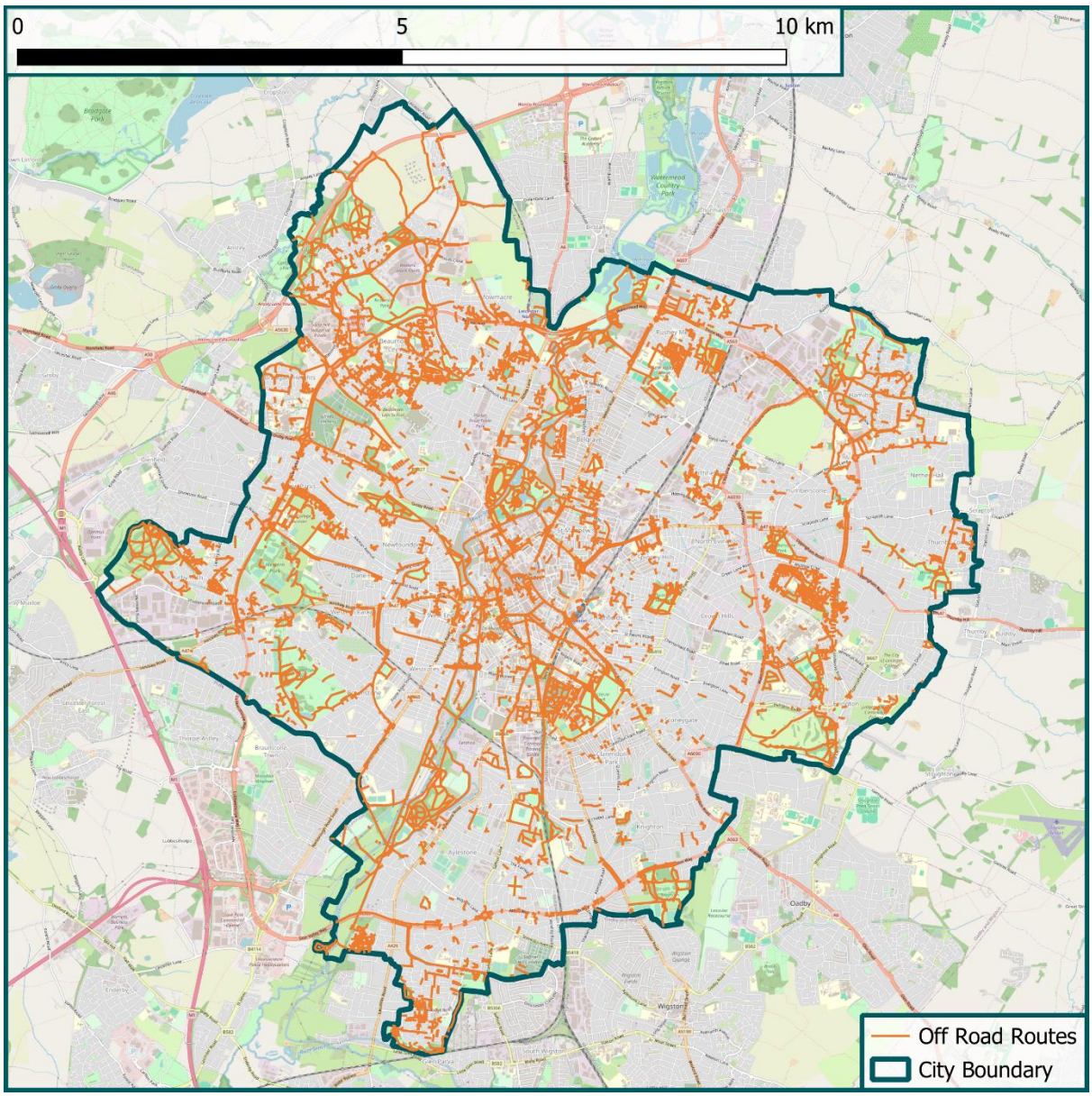


Figure 16 - Off road pedestrian routes

A number of routes do not meet expected quality standards, either due to poor surfaces – particularly noticeable in areas where root systems have caused damage – or insufficient width. The latter is mostly evident in sections that have been dedicated as shared use, or that form some of the city's bridleways, where a level of pedestrian demand can be catered for but increasing cycle volumes create perceived issues with safety or comfort.

City Centre Pedestrian Priority Zone

Leicester's City Centre (Figure 17) includes both fully pedestrianised streets, with extensive anti-vehicle measures and strong access restrictions, and streets that have been traffic calmed to create a more pleasant urban environment. Taken together, the city has one of the largest Pedestrian Priority Zones in the country and the largest that permits cycling.

The city centre in its current form grew from the concept of connecting “oases of activity” that were segregated by what were, at the time, high volume roads for traffic of all classes. Reclamation of this space, including the redirection of traffic at a network level from the outer city through to the inner ring road, allowed for the creation of a modern urban environment that maximises permeability and access for pedestrians and cyclists. In addition, the work delivered has allowed for the creation of pockets of public realm, including the space around the historic clocktower – the nominal centre of the city – or Jubilee Square, an urban green and event space on what was previously a car park.

The result has been to maximise available pedestrian space and create a thriving environment for entertainment, leisure, and retail. At the same time, routes through the city centre are vital as interchanges between bus services using the Haymarket or St Margarets Bus Station or rail stations given the close proximity to the rail station.

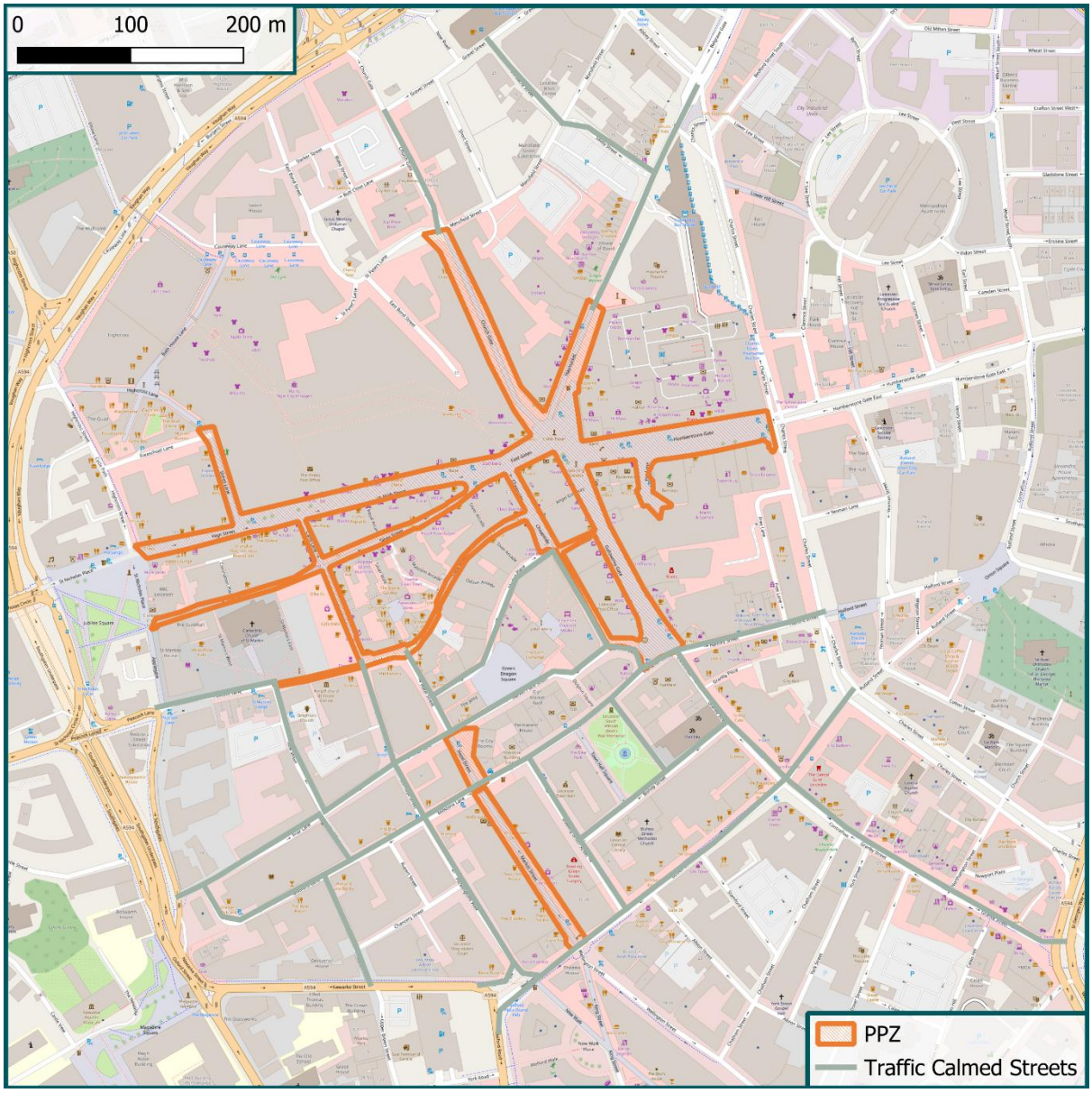


Figure 17 - Leicester City Centre Pedestrian Priority Zone and traffic calmed streets

The city centre has been deliberately excluded from the LCWIP due to the development of the Heart of Leicester plan. This is intended to provide the framework for both the regeneration of the cultural quarter, east of the city centre, and to allow for further expansion of city centre access and permeability principles across the local environment. The documents are closely aligned.

Crossing Facilities

Most standard crossing facilities can be divided into three categories:

- Uncontrolled crossings
- Zebra or parallel crossings
- Signal controlled crossings

An additional classification can be used as a collective term for underpasses and bridges - grade-separated crossings,

The primary differences between crossing types is the method of controlling motor vehicles, and level and methodology by which pedestrians or other users are awarded priority. There is not one type of crossing that is inherently superior to any others, each one should fit the volume of vehicle traffic, cycle traffic (if applicable), pedestrian traffic, and the overall street environment.

Leicester, as a large urban area, relies heavily on crossing facilities of all types to manage the conflict and interplay between motor vehicles and more vulnerable pedestrian or cycling traffic. There is therefore a significant number or crossings of all types across the city, some of which were installed under older regulation and guidance. Summaries of the various types of crossings are found below:

Uncontrolled Crossings

Uncontrolled crossings require the pedestrian to wait for a break in traffic before crossing the road.. Traffic is not obliged to wait nor stop to allow people to cross. Good quality crossings will include lowered kerbs – or, on rarer occasions, a raised carriageway – and tactile paving to indicate the presence of a crossing point to mobility or visually impaired users.

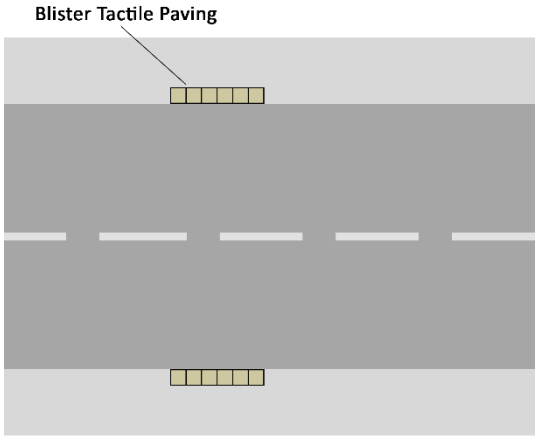


Figure 18 - Standard uncontrolled crossing alignment

Uncontrolled crossings are, as a rule, only suitable in environments with low speed and vehicle volume, to ensure pedestrian comfort and reduce time waiting to cross.

Wider roads, or those with higher volumes of traffic, may also have a pedestrian refuge so pedestrians may cross in stages. These can also serve as a traffic calming or deflection feature.

Zebra or Parallel Crossings

Zebra and parallel crossings award a level of priority to pedestrians and cyclists over vehicle traffic, which must stop when users have entered the crossing area. The need to assert priority can make crossing challenging for impaired or younger users, particularly when drivers fail to stop or acknowledge priority. Zebra crossings may be built on to a raised surface, to allow users to cross at footway level and to further slow traffic speeds at the location.

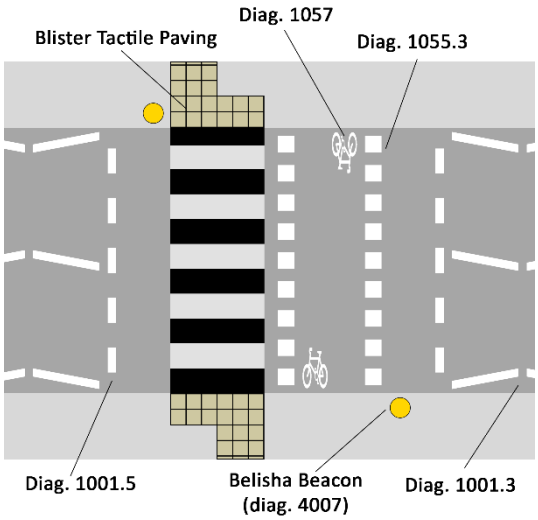


Figure 19 - Standard parallel crossing alignment

Under current regulations zebra crossings require amber Belisha beacons to be installed – though this does increase the cost, it further aids visibility for those waiting to cross and driver awareness.

Zebra crossings are suitable for most urban environments, though are not recommended for use where the majority of traffic is moving faster than 35mph due to the implications for visibility of users, driver reactions, and braking speeds and distances.

Signal Controlled Crossings

Crossings found at signal-controlled junctions, alongside standalone Toucan, Pegasus, Pelican, and Puffin crossings, differ in uses that they are designed for and the technology deployed, but are connected by the usage of traffic signals to determine and award priority. These crossings may have an on-demand pedestrian phase, called via a button, or may instead have an allocated time set into the light sequence to ensure minimal disruption to traffic flow.

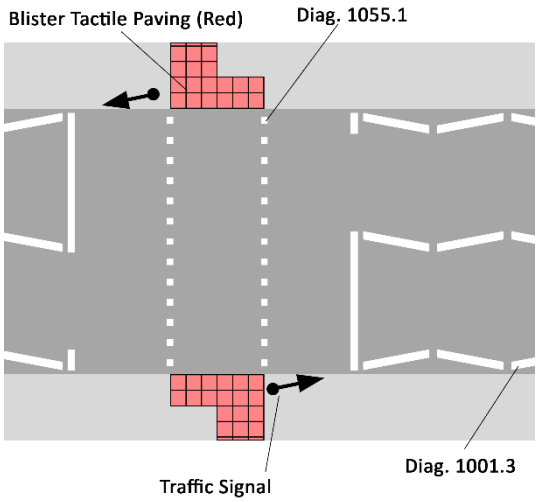


Figure 20 - Standard toucan crossing alignment

Signal controlled crossings are most appropriate on high speed or volume roads, where the signals offer greater visibility to approaching vehicles and provide a mechanism for traffic to stop before use. They may be entirely continuous, or may be staggered in the case of particularly wide or unusual geographic arrangements. Many now include on crossing detectors, to ensure that traffic is held until the crossing is clear. Modern crossings additionally feature near side signals to reduce confusion risk, allow access to tactile or audio features for visually impaired users, and force waiting users to look towards oncoming traffic whilst waiting for a green signal.

Signal crossings do, however, dictate when users are able to cross the road and are dependent on programming that may introduce considerable wait cycles. Often this is due to balancing local traffic flow, and is particularly notable at junctions. At times the waiting environment can

also be unpleasant, due to the presence of high-speed traffic and limited space for larger groups to wait at the kerb edge.

Leicester have installed a number of “super crossings” – toucan crossings with an exceptionally wide footprint to maximise user throughput and provide adequate space for users when held for a gap in sequence.

Grade Separated Crossings

Anything that provides complete physical separation from motor traffic, such as a subway or bridge, can be designated as a grade separated crossing. Though such measures do provide a level of safety from motor traffic, they are exceedingly costly to retrofit into an existing urban environment, and often require users to compromise on convenience or comfort without the purchase of land adjacent to the highway or significant redesign of existing local road networks.

Accessibility access can be a significant concern, with the need for all types of grade separated crossing to have shallow ramps for mobility and visually impaired users, again adding to the footprint required for installation. For subways in particular, poor drainage can lead to flooding and standing water and there is a general perception of a lack of safety due to isolation inherent in the standard design used in the UK.

The city council has a considerable number of bridges and subways within its estate, most of them historical and many of them heritage assets, and has routinely delivered programmes to improve and upgrade where possible. This has most recently included programmes to infill existing subways to replace with at grade crossings that provide a greater deference to user safety, lighting, and access requirements and remove the need for extensive detours or junction controls to enforce usage.

Cycle Infrastructure Overview

An exhaustive review of all infrastructure across the city is outside of the immediate scope of the LCWIP, however what follows is a high level overview of the network alongside consideration of various examples representing types of infrastructure, locations, and areas in need of change or improvement.

For the purpose of this document and clarification, the following naming conventions are used:

Cycle Tracks

These are facilities that offer segregation and protection from motor traffic for most of their route, either due to the inclusion of kerbs or other features or running along lanes and streets where vehicles are not permitted.

Cycle Lanes

These are facilities that lack segregation from motor traffic for the majority of their route, and may be advisory, part time, or mandatory. In most cases these will be demarked by a white line – broken or unbroken – or by the placement of cycle symbols in the carriageway.

Off-Road Paths

These are the various bridleways, greenways, and other rights of way that fall within the city boundary and offer a parallel network away from most forms of motor traffic. Many of these routes are historical in nature – such as the Great Central Way – and are shared with pedestrian or foot traffic.

The city councils preferred approach is, at all times, to install cycle tracks and ensure complete and safe separation from motor vehicles.

Existing Cycle Network

Leicester's cycle network consists of a mixture of cycle tracks, cycle lanes, and off-road paths. Figure 21 shows the network composition and length at time of writing, using the categories previously given.

The distance of the network is expressed in linear metres, based on the infrastructure directly. In practice, this means that monodirectional tracks or lanes contribute twice as much to overall network length as bidirectional tracks.

In total, the recorded network is 189km long, with 68% either being an off-road path or a cycle track and therefore protected from vehicular traffic.

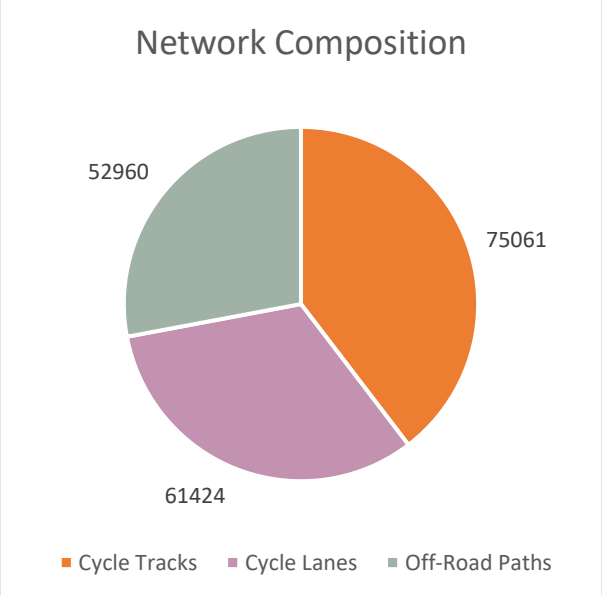


Figure 21 - Cycle Network Composition, measured in metres

Though this is a sizeable number, and the network has grown substantially, this is less than a quarter of the total road network length and – as noted – the recording mechanism does not lend itself to a comparative analysis. It is clear from the overall network, as shown in Figure 22, that there remain quite substantial gaps in provision that effects the overall quality and utility of the network.

Furthermore, not all infrastructure is of equal quality. The city council has taken great strides and continues to deliver high quality infrastructure under extensive capital programmes, but there are pieces of legacy infrastructure that provide a much lower standard of quality. This extends not only to some of the cycle lanes found in the city - or the off-road paths that offer a shared use facility constrained by width or surface type - but also a significant number of junctions that do not offer full and safe separation from motor traffic, nor award the level of priority that would be expected from both design standards and revisions to the Highway Code.

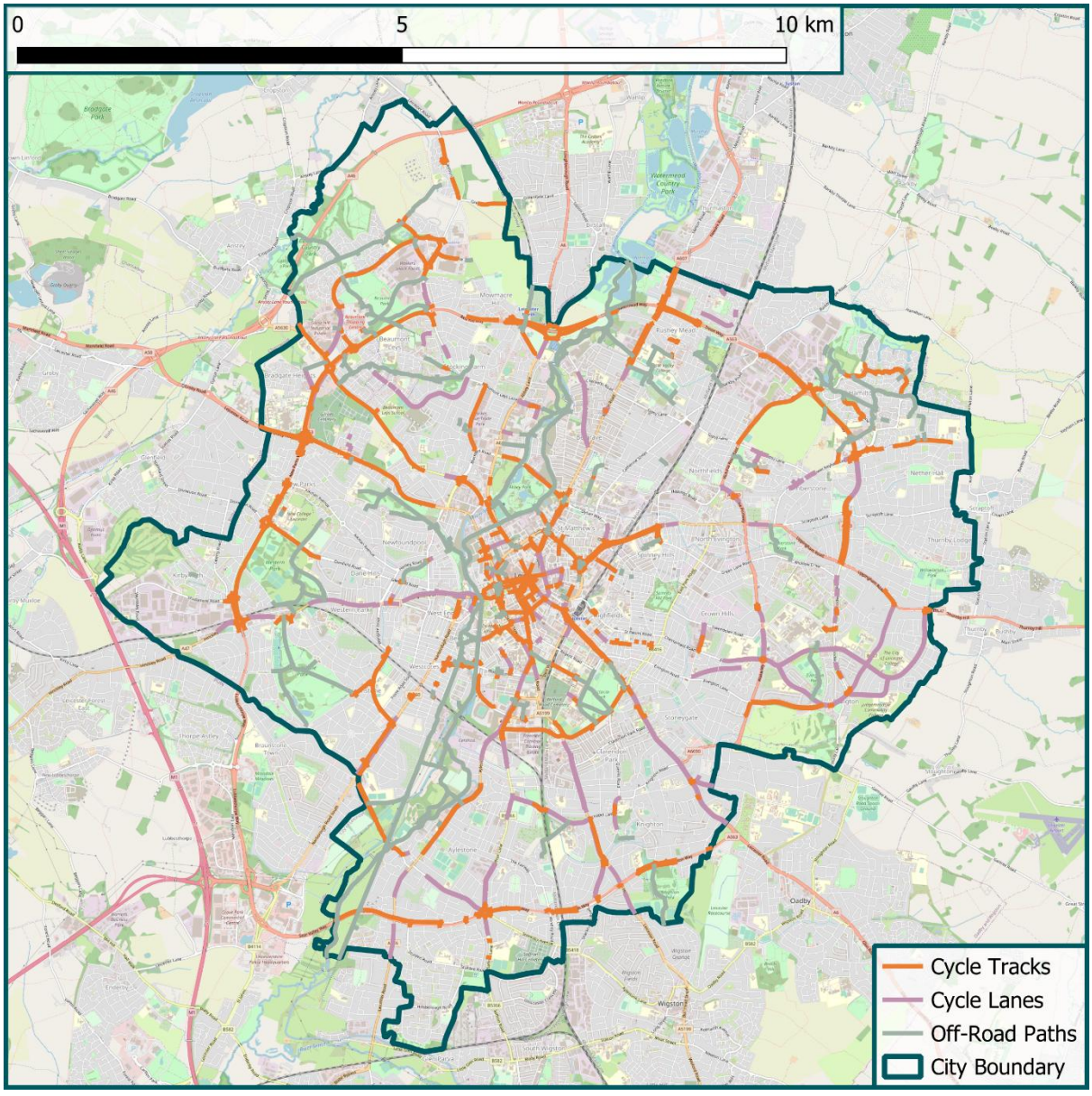


Figure 22 - Cycle Network (Infrastructure)

Cycle Parking Facilities

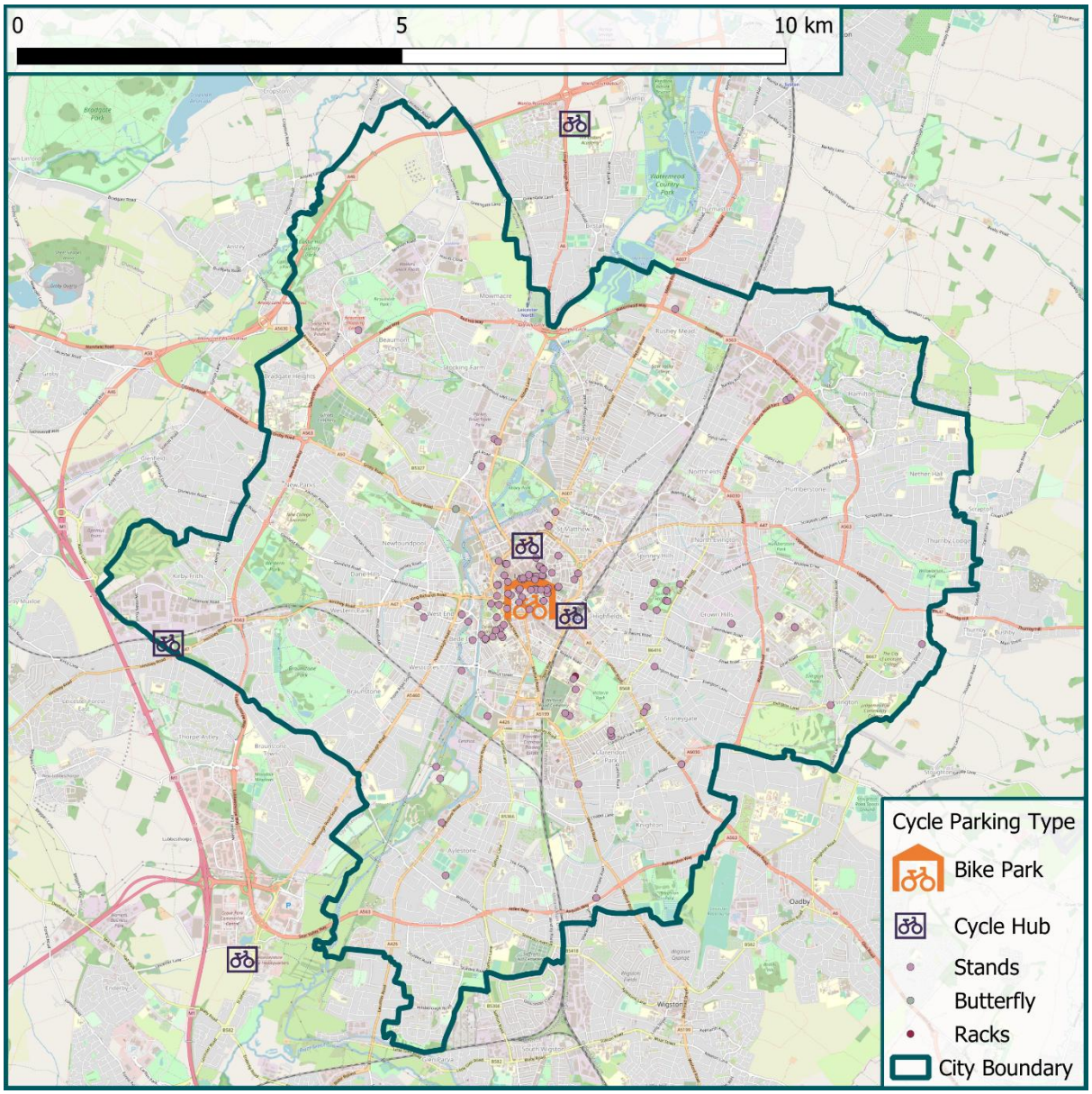


Figure 23 - Cycle parking facilities, citywide

The provision of accessible, high quality cycle parking facilities is key to ensuring the network can cater for trips of all natures. To date, there has been no unified programme for the delivery of cycle parking infrastructure, and as such records and knowledge of facilities is patchy.

The map shown in Figure 23 may be considered a reasonable reference, but it is likely that there are some facilities that are not recorded.

The vast majority of cycle parking facilities across the city are simple Sheffield stands secured to the ground. There are facilities located at most major food outlets and commercial centres, but they require a good lock connected securely and appropriately, in an area of high passive surveillance, to offer true protected parking.

There are a smaller number of butterfly stands – wall or post mounted holders that allow a cycle to be secured by the front wheel – and racks.

The city council operate the Bike Park from the town hall, which offers secure, indoor cycle parking for users of the city centre for no charge. It could accurately be said that the bike park is the hub of the Leicester network, both geographically and it being a key destination for users across the city accessing city centre services or employment.

A number of cycle hubs – which offer a level of security and access control to covered or sheltered facilities – are in the process of being delivered across the city centre to support the Bike Park. At time of writing there are additional cycle hubs at all three park and ride sites and St Margaret's Bus Station, and these are gradually moving to a card access system that allows user registration and improved security and access controls.

The redevelopment of the Leicester Railway Station will also allow for a refurbishment of the cycle parking facilities there, and there is an intention to move those to the same system of access as the other cycle hubs. The city council is also planning to expand on the hub network with key locations across the city centre and beyond, that will be guided by this LCWIP.

Finally, the provision of secure on street residential cycle parking will soon be trialled in a number of sites across the city to gauge interest, suitability, and allow the city council to review proposals ahead of wider programmes and rollouts.

Network Planning for Walking

Walking Zones and Walking Routes

Walking network planning is focused on two developing two distinct categories:

- Walking zones are clusters of trip generators or destinations that support local journeys, particularly multistage journeys.
- Walking routes are key links between and within these zones, that serve high volumes of pedestrian traffic and are therefore key to all possible walking journeys.

Walking routes are, at least in part, determined by inherited scoring from the walking zones and there is therefore an absolute link between the two. It is also true that for the purpose of network design, infrastructure investment has focused on walking routes rather than zones and the LCWIP heavily promotes infrastructure along these routes at this stage.

However, it is not accurate to say that walking zones are not key targets. These areas should enable absolute permeability, and provide good links and crossing facilities – alongside high quality footways, street environments, and amenities such as benches and bins – to enable all local journeys to be undertaken with safety and comfort.

As detailed below, interventions within these zones remains highly desirable, and is often delivered as part of neighbourhood and school improvement projects.

The entirety of the city has been considered as part of this process, with the exception of the city centre. The walking environment is already of a high standard and extensive, thanks to both traffic calmed streets and the pedestrian priority zone. Instead, a detailed plan is being developed that will include improvements to walking and amenity access within the city centre environment, and embrace LCWIP principles and practices to ensure parity with all areas of the city.

Identifying Walking Zones

Work undertaken as part of Leicester's emerging local plan to identify district, town, and local centres has formed the basis for walking zone identification.

These centres provide essential city services and day-to-day retail, alongside increasing options for independent retail, dining, and leisure that can serve as a strong trip attractor for their neighbourhoods and beyond. They are therefore likely to not only attract a considerable number of trips, but also provide environments where people would be keen to travel within in order to access various points of interest as part of chained trips.

21 such centres were identified across the city, representing a considerable geographic spread across the city. Note that some smaller local shopping parades or independent services have not been included – as zones serve as clusters of trip generators, areas with low generator intensity are not best suited to this process and therefore not included.

As detailed above, the city centre area has been excluded pending development of a dedicated regeneration and connectivity plan.

Walking zones have been established by expanding each local centre with an 800m buffer, representing a distance traversable within 10 minutes at an average walking speed of 3mph. The result of this process, and our identified walking zones, are shown in Figure 24.

In total, walking zones cover 47.45 km^2, 65% of the city, and 123,740 residential addresses.

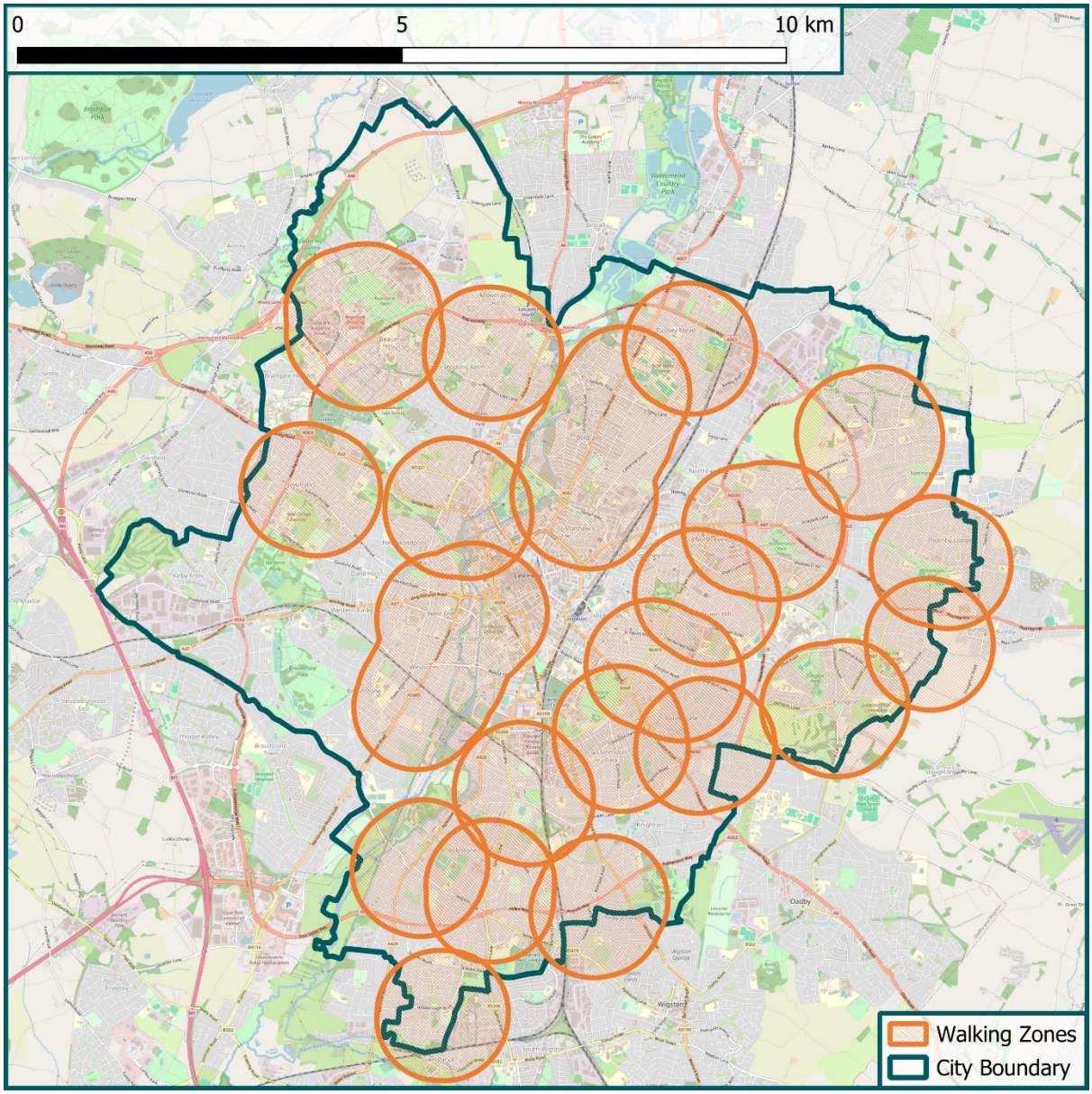


Figure 24 - Walking Zones

Scoring Walking Zones

After identification, each walking zone was taken through a scoring and ranking process based on seven key scoring areas:

- Local Amenities
- School proximity
- Bus frequency
- Workplace population

- Residential population
- Proximity to growth
- Areas of health deprivation

Amenities

All amenity types within a walking zone were given one of four categories: critical services, merit services, neutral services, and demerit services. The category is based on three factors – level of need, which is how often these services are likely to be accessed; pedestrian demand, which is how likely it is for people to attend these establishments on foot; and level of local attraction, which is how likely it is for people to travel to the closest option, rather than travel a greater distance or be selective.

Critical and merit services are more likely to be frequently accessed services, where people travel to the closest available offer. These offer good opportunity for walking trips at a high density and frequency.

Neutral services can attract local users, but given a niche or infrequent demand can attract users from distances less suited to entirely walking trips.

Demerit services includes those that primarily cater to motor vehicles, as in most cases the vehicle will need to be brought to the location, alongside those that are highly susceptible to selection bias by users and where people would willing travel a considerable distance.

All amenities provide a positive score, and it's important to note that even demerit services can provide or influence walking demand – the categorisation is purely to represent the potential and likelihood for walking journeys.

A detailed breakdown of the grouping for these follows. Note that these have been grouped and truncated for clarity, the scoring model was built using data directly from land registry to ensure all amenities were captured.

The number in brackets is the score awarded for each amenity of that type found within the zone.

Critical Services (1 point)

- Audiologists
- Banks
- Care providers
- Chiropodists
- Colleges
- Community centres
- Cosmetic surgeries
- Council offices
- Dentists
- Doctors' surgeries
- Educational establishments
- Emergency service buildings
- Function halls
- Health centres
- Leisure centres
- Libraries
- Medical centres
- Neighbourhood centres
- Nursery
- Opticians
- Pharmacies
- Physiotherapists
- Places of worship
- Podiatry & acupuncture clinics
- Post offices

- Vets
- Women's centre
- Youth centres

Merit services (0.75)

- Apothecaries
- Bicycle shops
- Book shops
- Boxing clubs
- Bureaux de change
- Cash & carry stores
- Charity shops
- Cinemas
- Convenience stores
- Courier services
- Dry cleaners
- Estate agents
- Event halls
- Florists
- Food stores
- Greengrocers
- Gyms
- Herbal clinics
- Home care agency
- Hotels
- Laundrettes
- Newsagents
- Offices
- Recruitment agencies
- School wear
- Social clubs
- Solicitors
- Spas
- Sports halls
- Supermarkets
- Thai massage

Neutral services (0.5)

- Accessory stores
- Accountants
- Advice centres
- Alternative therapists
- Angling stores
- Antiques stores
- Aquatic stores
- Art & craft stores
- Art galleries
- Audiovisual stores
- Bakeries
- Barbers
- Bars
- Bathroom furniture stores
- Beauty parlours
- Bed stores
- Blind stores
- Boutique gift shops
- Builders' merchants
- Butchers
- Cafés
- Card shops
- Carpet stores
- Caterers
- Catering services
- Clothing stores
- Cobblers
- Coffee shops
- Computer and technology shops
- Cosmeticians
- Delicatessen
- Design and print shops
- Discount stores
- DIY and hardware stores
- Domestic appliance stores
- Financial advisors
- Fishmongers
- Funeral directors
- Furniture stores
- Garden centres
- General stores
- Haberdashers
- Hairdressers
- Insurance brokers
- Internet café
- Ironmongers
- Jewellers

- Locksmiths
- Manufacturers
- Music studios
- Pawnbrokers
- Pet & reptile suppliers
- Phone stores
- Photo studios
- Plumbing stores
- Restaurants
- Retail services
- Stationers
- Surveyors
- Tailors
- Takeaways
- Tattoo parlours
- Travel agents
- Wedding stores
- Wholesalers

Demerit services (0.25)

- Adult stores
- Amusement arcades
- Bars
- Cake shops
- Car parts and accessories retailiers
- Car showrooms and dealers
- Car washes
- Confectioners
- Dessert parlours
- E cigarette stores
- Filling stations
- Garages and mechanics
- Hand car washes
- Motorcycle dealers
- Night clubs
- Off licences
- Petrol filling station
- Petrol station
- Public houses
- Taxi firm offices
- Wine merchants

The categorisation of amenities is intended to reflect how often places are visited and the likelihood of walking journeys to be generated to these locations.

Critical and merit services are more likely to be frequently accessed services, where people travel to the closest available offer. These offer good opportunity for walking trips at a high density and frequency.

Neutral services can attract local users, but given a niche or infrequent demand can attract users from distances less suited to entirely walking trips.

Demerit services includes those that primarily cater to motor vehicles, as in most cases the vehicle will need to be brought to the location, alongside those that are highly susceptible to selection bias by users allowing for travel over some considerable distance.

Other Scoring Criteria

School proximity criteria was derived from route mapping between schools within the walking zone, to identify the overall saturation level of school journeys and ability for residents within the zone to access education offers.

Bus frequency represents the number of services operating from the local centre at peak hours. More services provide more opportunity for residents to use walking stages to interchange with the cities bus network, and therefore increase the zones score.

Workplace and residential population levels are taken from the census, and represents the number of daily workplaces and residents within an area respectively. It is recognised that not

all residents will live a walking distance from a suitable place of work, but the possibility for walking stages remains. In particular, workplaces can allow employees to access local services either side of the working day, and therefore allow for the generation of additional trips to amenities.

Proximity to growth is derived from local plan data, to reflect areas where there may be proposed development sites. This can introduce new amenities, workplaces, education establishments, or residents to an area and therefore increase demand or supply for walking journeys. It is key to capture this demand so as not to allow new developments to adversely impact the city transport network.

Finally, areas of health deprivation represents health inequalities found within an area, such as levels of obesity – including childhood obesity – inactivity, long term managed health conditions, or other factors that can be managed or improved by more frequent walking stages or access to key local services.

All scores have been normalised to ensure that particularly large or dense areas do not skew the scoring and dominate priority. The summary of these scores are shown in Table 1.

Table 1 - Walking zone scoring

Name	Amenities	Amenities	Proximity	Bus	Workplace	Residential	Proximity	Health	Overall	Rank
Narborough Road / Hinckley Road	2.12	0.74	0.65	0.74	1.00	1.00	0.75	0.50	5.38	1
Belgrave Road / Melton Road	1.81	0.32	0.72	0.99	0.59	0.83	0.50	0.50	4.44	2
Blackbird Road / Groby Road / Woodgate	1.96	0.37	0.94	0.19	0.18	0.29	0.75	0.50	3.23	3
Saint Saviour's Road (West)	2.02	0.40	0.73	0.01	0.32	0.82	0.10	0.75	3.13	4
Evington Road	2.36	0.53	0.52	0.19	0.36	0.83	0.25	0.33	3.01	5
Beaumont Leys Shopping Centre	1.08	0.02	0.22	0.41	0.31	0.18	0.75	0.75	2.64	7
Saffron Lane / Cavendish Road	1.53	0.20	0.83	0.14	0.21	0.19	0.33	0.75	2.64	6
Marnwood Road	1.74	0.29	0.72	0.06	0.04	0.27	0.50	0.75	2.63	8
Aikman Avenue	2.37	0.54	0.41	0.14	0.03	0.15	0.50	0.75	2.52	9
Queens Road	2.39	0.55	0.65	0.03	0.34	0.32	0.25	0.25	2.38	10
Allendale Road / Francis Street	2.26	0.50	1.00	0.01	0.05	0.22	0.25	0.25	2.27	11
Aylestone Village	2.19	0.47	0.52	0.13	0.05	0.08	0.50	0.50	2.25	12
Dunblane Avenue	2.50	0.59	0.58	0.05	0.03	0.14	0.50	0.33	2.23	13
Uppingham Road East	2.19	0.47	0.18	0.26	0.20	0.49	0.25	0.25	2.10	14
Saffron Lane / Burnaston Road	1.21	0.08	0.68	0.05	0.08	0.33	0.25	0.50	1.96	15
Thurncourt Road	1.95	0.37	0.42	0.14	0.02	0.17	0.25	0.50	1.87	16
Swinford Avenue	1.96	0.38	0.60	0.00	0.00	0.05	0.50	0.25	1.79	17
Asquith Boulevard	1.74	0.29	0.00	0.02	0.03	0.17	0.50	0.75	1.76	18
Hamilton	1.02	0.00	0.67	0.05	0.09	0.21	0.25	0.25	1.52	19
Downing Drive	2.16	0.45	0.43	0.02	0.01	0.01	0.25	0.25	1.42	20
Evington Village	2.00	0.39	0.15	0.02	0.01	0.00	0.25	0.25	1.08	21

Prioritisation and Integration

The five highest scoring walking zones are listed as our priority walking zones, and schemes that promote or enable walking within these zones specifically will be prioritised. This includes the provision of new crossings, alongside projects that may improve the streetscape such as parking controls or amendments to ensure there is sufficient space at junctions and key points to cross safely.

There is the ambition to undertake a complete audit of the priority walking zones over the course of the phase 1 LCWIP, which will provide a series of improvements for inclusion within the phase 2 LCWIP.

Identifying Walking Routes

In order to ensure a good representation of routes across the city and ensure that geographical biases are considered, three different methodologies have been used to select routes to be added to the walking route shortlist. These are detailed below.

Footway Hierarchy – Stage 1

The city council is obliged, under the Well-Managed Highway Infrastructure code of practice, to establish a hierarchy of infrastructure assets across the city to allow for categorisation, asset management, repair, and inspection. Under the code, highway authorities are able to exercise discretion, but are advised to take into account the following criteria:

- Pedestrian Volume,
- Traffic sensitivity,
- Current and proposed usage,
- Contribution to public space and streetscene,
- Age and distribution of the local population,
- Proximity of schools or other amenities that serve as a trip attractors,
- Character and traffic usage of adjoining carriageway,
- Accident history and risk assessments

Hierarchies are, again, a matter for consideration but the code presents an example template as below: The city council has broadly adopted the same hierarchy, though given the nature of the urban environment has not made use of the sixth category, and has used them to determine inspection frequency. The hierarchy is shown in Table 2

Type	Description	Inspection Frequency
Prestige Walking Zones	Very busy areas, with a high utility value	Fortnightly
Primary Walking Routes	Busy pedestrian routes and shopping or business areas	Monthly
Secondary Walking Routes	Medium density routes that link key amenities to primary walking routes	Trimonthly

Link Footways	Footways that link local access footways to secondary or primary routes	Biannually
Local Access Footways	Footways associated with low usage estate roads or culs-de-sac	Annually
Minor Footways	Rural footways with little use	*Not used*

Table 2 - Footway Inspection Frequency

A total of 287 routes, comprising the busiest footways across the city, are found in the top three categories and were used for assessment as part of this stage of the LCWIP.

These routes were weighted using a simplified amenities score, with the categories as below. The number in brackets is the points awarded by each category.

- Residential Streets **(2)**
- Schools **(3)**
- Shops **(3)**
- Business/Industry **(2)**
- Main Roads **(1)**
- Parks **(3)**
- Pedestrian Facilities **(3)**
- Other **(1)**

The top scoring 20 routes identified as part of this process form the core of the walking route network, and are as follows:

- Bruin Street
- Checketts Road
- Clarendon Park Road
- Coleman Rd
- Downing Dr
- East Park Rd
- Fosse Rd North
- Fullhurst Ave
- Gipsy Lane (East pt)
- Harrison Rd
- Keyham Close
- Maidstone Rd
- Narborough Rd (N)
- Narborough Rd (S)
- Pindar Rd
- Saffron Lane
- Spinney Hill Rd
- St Stephens Rd
- Stonesby Ave
- Thurcaston Rd

Widen My Path – Stage 2

Data from widen my path from within the top five walking zones was exported, and used to identify roads where the public have identified issues or made suggestions for improvements. Over 30 roads were identified at this stage, and were ranked using the same amenity scoring as above.

The top 12 from this process were added to the assessment and audit programme, and are as follows:

- Belgrave Rd
- Briton St
- Catherine St (South End pt)
- Dysart Way
- East Avenue
- Green Lane Rd
- Henton Rd
- Infirmary Rd
- Melton Rd
- River Walk
- Soar Lane
- St Margaret's Way

Geographic Spread – Stage 3

Reviewing the routes found at this point found they were clustered heavily around the top scoring walking zones, and did not provide a consistent or appropriate level of support for routes across the city. To rectify this, the footway hierarchy process was expanded and additional routes included, to ensure each council ward of the city had at least three routes available to audit. A total of 42 routes were identified as part of this process, and are as follows:

- Astill Lodge Rd
- Aylestone Rd
- Blackbird Rd
- Blackbird Rd Pt
- Braunstone Ln E
- Broughton Rd
- Catherine St (South End)
- Colchester Rd
- Eastcourt Rd
- Egginton Street
- Ellesmere Rd
- Evington Rd
- Forest Rd
- Fosse Rd (S)

- Francis St
- Gervas Rd
- Gipsy Lane (West pt)
- Groby Rd
- Hattern Ave
- Hazel St
- Hillsborough Rd
- Hinckley Rd
- Humberstone Rd
- Keyham Lane
- Keyham Ln West
- Knighton Ln E
- Marfitt St
- Melbourne Rd
- Mere Rd
- Nedham St
- Old Barn Walk
- Queens Rd
- Sandfield Close
- Simmins Cres
- Spencefield Lane
- St Oswalds Rd
- St Peters Rd
- Upperton Rd
- Uppingham Rd
- Victoria Rd East
- Wigston Ln
- Woodgate

Combined list.

The 74 total routes that form the long list are shown in Figure 25. As can be seen, routes are well spread across the city and include a wide array of road types and lengths, from short residential or school access roads through to busy urban corridors featuring multiple lanes of traffic.

In total, the walking route shortlist is over 50km in length, and is equivalent to around 5% of the city's total network.

Audit Process

All 74 routes were audited using the Leicester Walking Route Audit (LWRA) Tool. This tool scores each route between 0-3 across 9 metrics, based on the principles of both the LCWIP and Healthy Streets methodology, and provides a means of comparing routes to identify where investment is most needed across objective measures. The nine metrics are:

- Vehicle speed
- Vehicle volume
- Ease of side road crossing
- Ease of crossing away from junctions
- Ease of crossing at junctions
- Navigation of crossings for visually impaired users
- Footway quality
- Safety – including street lighting and passive surveillance
- Space available for pedestrians

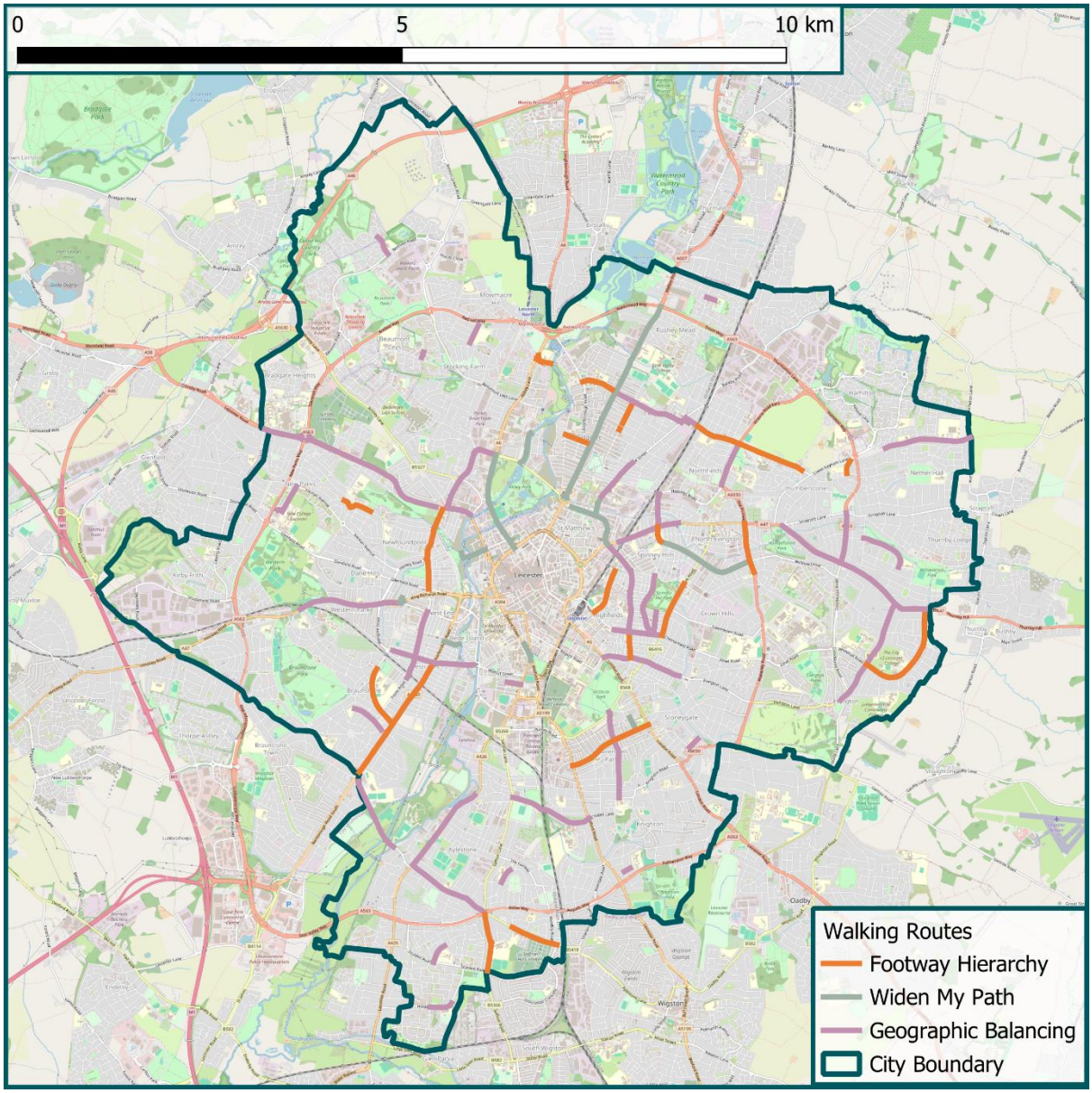


Figure 25 - Combined Walking Routes

Higher scores represent a more pedestrian friendly environment conducive to walking trips, with the maximum achievable score being 27. Alternatively, routes with a low LWRA evidence the need for significant improvement and unrealised potential; high walking zone scores show

the scope of local services that are reachable via improved links and volume of trips that could be supported.

In developing a priority list, both the individual route score and the walking zone score have been considered, and those combinations that yield low LWRA scores and higher walking zones are those that are prioritised. All scores are normalised, to ensure accurate comparisons.

The resultant score range is between -1 to 1, with the lower the value representing the higher priority, and is shown in Table 3. Note that final score values are shown to two decimal places, but for the purpose of calculation and differentiation were ranked to eight decimal places.

Rank	Route name	Final Score	Rank	Route name	Final Score
1	Fosse Rd (S)	-1.00	38	East Avenue	0.01
2	Upperton Rd	-0.93	39	Wigston Ln	0.03
3	Dysart Way	-0.77	40	Green Lane Rd	0.06
4	Infirmary Rd	-0.60	41	Uppingham Rd	0.07
5	Narborough Rd (S)	-0.60	42	Evington Rd	0.08
6	River Walk	-0.57	43	Hillsborough Rd	0.08
7	Catherine St (South End pt)	-0.57	44	Simmins Cres	0.08
8	Nedham St	-0.57	45	Aylestone Rd	0.10
9	Hinckley Rd	-0.53	46	Bruin St	0.10
10	Narborough Rd (N)	-0.53	47	St Margaret's Way	0.12
11	Checketts Rd	-0.50	48	Woodgate	0.12
12	Ellesmere Rd	-0.40	49	Spencefield Lane	0.15
13	Fullhurst Ave	-0.33	50	Knighton Ln E	0.16
14	Gipsy Lane (West pt)	-0.30	51	Braunstone Ln E	0.16
15	Soar Lane	-0.27	52	Broughton Rd	0.17
16	Henton Rd	-0.27	53	Clarendon Park Rd	0.21
17	Keyham Lane	-0.25	54	Victoria Rd East	0.21
18	Belgrave Rd	-0.23	55	Thurcaston Rd	0.27
19	Catherine St (South End)	-0.23	56	Colchester Rd	0.28
20	Harrison Rd	-0.23	57	Egginton Street	0.28
21	Marfitt St	-0.23	58	Keyham Close	0.29
22	Blackbird Rd	-0.21	59	St Oswald Rd	0.29
23	Briton St	-0.20	60	Pindar Rd	0.29
24	Queens Rd	-0.19	61	Gervas Rd	0.33
25	Keyham Ln West	-0.18	62	Hattern Ave	0.33
26	East Park Rd	-0.17	63	Francis St	0.37
27	Old Barn Walk	-0.14	64	Astill Lodge Rd	0.39
28	Melbourne Rd	-0.14	65	Saffron Lane	0.44
29	Fosse Rd North	-0.14	66	Downing Dr	0.44
30	Coleman Rd	-0.14	67	Forest Rd	0.47
31	Melton Rd	-0.10	68	Stonesby Ave	0.53
32	St Peters Rd	-0.05	69	Gipsy Lane (East pt)	0.53

33	St Stephens Rd	-0.05	70	Sandfield Close	0.66
34	Mere Rd	-0.04	71	Eastcourt Rd	0.68
35	Humberstone Rd	-0.03	72	Maidstone Rd	0.73
36	Blackbird Rd Pt	-0.01	73	Spinney Hill Rd	0.87
37	Groby Rd	0.01	74	Hazel St	0.93

Table 3 - Walking route priority list

The top ten routes have received a detailed street audit, which has identified the barriers and opportunities for improving the local street environment and developed a suite of infrastructure improvements necessary for each route.

Those areas that were not chosen for audit at this time, due to constraints on resource, will be audited when future resources allow either as part of future iterations or due to completion of the projects identified in phase one. In addition, projects that are currently running across the city – such as the Neighbourhood Street Scene Improvement Programme or the pedestrian crossing programme – have an element of priority awarded to projects within identified walking routes or zones.

Network Planning for Cycling

Methodology

The identification of the cycle network has followed a multiple stage process.

Firstly, to assist with network planning and ensure an objective and data led system is in place, a forecast demand model has been built that is intended to assess the potential of any given link in the network to support additional cycling trips.

At its core, the model simulates trips between origin and destination points across a simplified version of the city's highway network, up to trips with a maximum distance of 8,001m (8.001km) – this reflects the a journey under 5 miles, which for most users would be suitable for cycling.

The model emulates variances in trip purpose, choice, and frequency by applying weighting across origins, destinations, and origin and destination pairs. Trip numbers are based on the number of specific origin points within a cluster – i.e. daily arrivals at a rail or bus station, residences within a given area.

In total, the model simulated 3.5m trips across the network from 103 origin points to 1703 destination points or groups, resulting in the identification of over 585km of potential journey links. The number of trips that are simulated across each link is used to identify how important that part of the network is for allowing for journeys to be made, and therefore where new infrastructure can provide the highest benefit.

Cross boundary trips are not generated as part of this model. Instead, a simplified version, with data at Middle Layer Super Output Area (MSOA) level, has been used and serves to identify what key routes have the most potential for key boundary trips, and uses these trip numbers to uplift the value of routes that pass through the relevant MSOA within the city boundary.

Identifying Origin and Destination Points

The initial stage of network development is to establish clear origin and destination points for journeys of various purposes including utility, leisure, and commuting to work or education.

In most cases, origin points will be residential property addresses – though passenger transport infrastructure, including the railway and bus stations can be considered of as nodes within the network where a user could reasonably begin a cycling stage.

Destination points are, instead, the location at which the purpose or intent of the journey may be fulfilled, and will usually consist of neighbourhood centres, employment areas, education establishments, retail establishments, or various other businesses.

It should be recognised that an origin can be a destination – a trip to visit friends of family at their place of residence, for example, will begin and end within a residential area. Similarly, a journey may either start or end at a bus station depending on the distance, length, and purpose.

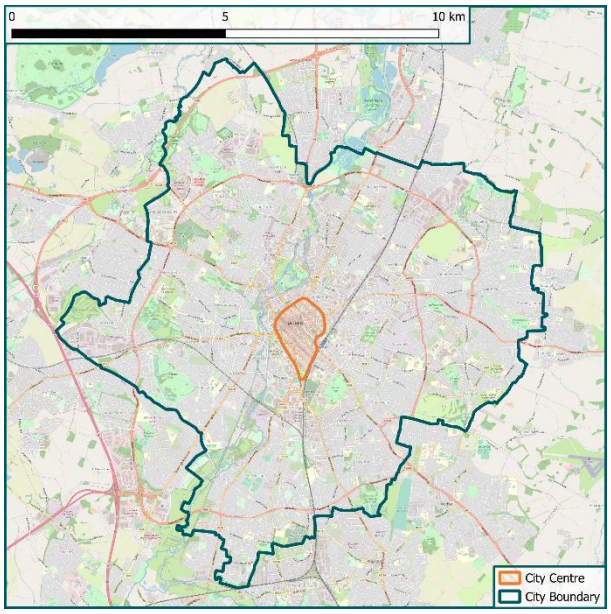


Figure 26 - City centre area

Residential addresses have been grouped into 100 discrete areas using a k-means algorithm, with an attached value based on the number of residential addresses found within the area. Centroids for these areas were then determined and form the basis for residential calculations. Proposed development sites from the most recent local plan draft have been included within the algorithm.

Employment sites and retail areas have been determined grouped using a k-means algorithm, into 122 and 101 discrete areas respectively. Centroids for these areas have been created and are used as destination points for the purpose of the model, with weighting being based partly on the number of specific destinations found within the area. Proposed employment sites from the most recent local plan draft have been included within the algorithm, and their occupancy forecast added to the weighting value.

Most retail and leisure destination points within the city centre have been removed from the model, with the notable exception of cultural facilities, tourist attractions, or unique buildings. Instead, an overall city centre feature with a high demand weighting has been added to the model. On preliminary analysis, the density, proximity, and relatively high value of city centre amenities interfered with the output of the model. For the avoidance of doubt, the city centre is given to be the area encircled by the inner ring road, and is depicted in Figure 26

Details of the origin and destination datasets are as follows. The number in brackets shows the total number of features considered per dataset.

Origins (103)

- Bus stations **(2)**
- Residential addresses **(100)**
- The railway station **(1)**

Destinations (1703)

- Bus stations **(2)**
- Colleges **(13)**
- Community centres **(139)**
- Cultural facilities such as theatres or cinemas **(56)**
- Cycle Hubs **(2)**
- Dentists **(58)**
- Employment sites **(122)**
- Green or open space **(393)**

- Healthcare **(94)**
- Hospitals **(3)**
- Junior schools **(7)**
- Libraries **(16)**
- Markets **(2)**
- Nurseries **(74)**
- Park and ride sites **(1)**
- Places of worship **(228)**
- Primary Schools **(55)**
- Pubs/Bars/Clubs **(90)**
- Residential areas **(100)**
- Retail areas **(101)**
- Secondary Schools **(22)**
- Sports or leisure centres **(61)**
- Supermarkets **(19)**
- The Bike Park **(1)**
- The city centre **(1)**
- The railway station **(1)**
- Tourist attractions **(39)**
- Universities **(3)**

Weighting

Whilst the LCWIP is intended to cater to all journey types, it is recognised that not all journeys are undertaken with the same purpose or frequency.

To emulate this, each destination point has been assigned a value used as a proxy for the frequency at which a user may wish to access these sites. Destinations are scored on a percentage scale, and represent the chance that, on a given day, a trip will be generated to one of those destinations.

The weighting for sites has been determined based on the National Travel Survey (NTS). Each destination type was awarded a primary and secondary category from the NTS, and the NTS0403 dataset was then used to derive the average number of trips made to a particular category. This is expressed as a proportion of overall trips, thereby allowing it to be used as a proxy for trip purpose.

The usage of two categories allows for the full capture of the 'escort' category (for those that are not making trips independently) and to ensure that destinations that fulfil multiple functions are captured appropriately – for example universities or schools being places of employment and education.

The specific weighting value is the sum of the primary category and half of the secondary weighting category.

Destination Type	Weighting
Neighbourhood centres	0.22

Libraries	0.09
Universities	0.10
Tourist attractions	0.04
Green or open space	0.07
Sports or leisure centres	0.07
Retail parks	0.22
Healthcare	0.05
Dentists	0.05
Primary Schools	0.10
Secondary Schools	0.10
Cultural facilities such as theatres or cinemas	0.10
Places of Worship	0.10
Hospitals	0.09
Bus stops with more than 10 services per hour	0.05
Bus stations	0.05
The railway station	0.05
Park and ride sites	0.05
Cycle Hubs	0.05
The Bike Park	0.05
Community Centres	0.07
Colleges	0.10
Markets	0.22
Nurseries	0.10
Supermarkets	0.22
Residential areas	0.13
Employment sites	0.14
Proposed residential areas within the draft local plan	0.13
Proposed employment sites within the draft local plan	0.14
Pubs/Bars/Clubs	0.07
Junior Schools	0.10
City Centre	0.25

Table 4 - Destination weighting values

Identifying Desire Lines

The raw model output is shown in Figure 27. Line thickness denotes relative potential for trip volumes across the network.

The model shows that there is a considerable level of potential trip demand across the city, which is mostly consolidated around key corridors, and that route potential increase with

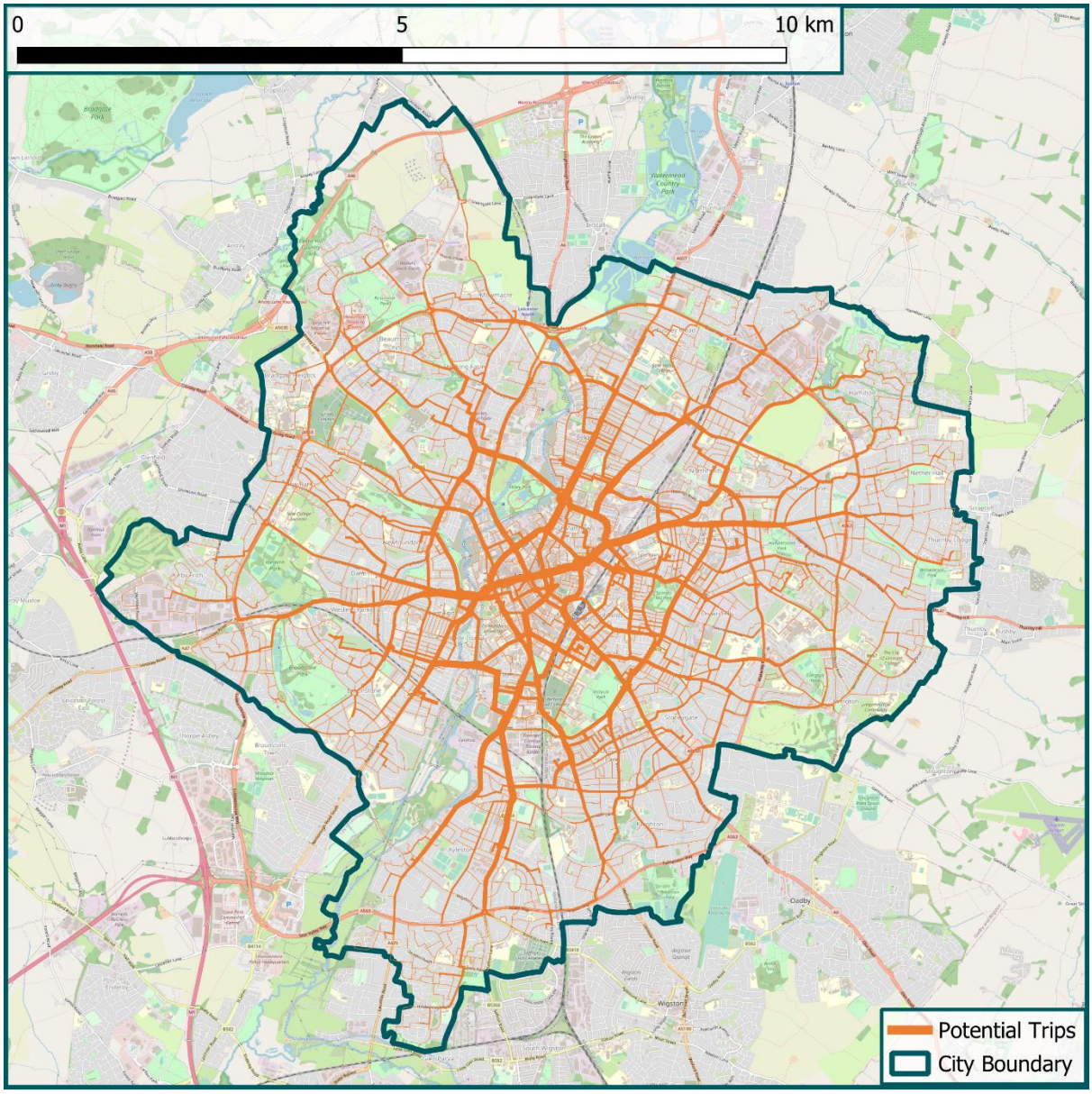


Figure 27 - Model output, line thickness shows comparative potential trip values

proximity to the city centre. This is expected, given the increase in density and number of services found within the core of the city.

It is important at this point to recognise the limits of the model. As it operates on a Leicester specific dataset, routes tend to wither on proximity to the city boundary. For some communities – such as Hamilton or Beaumont Leys – this can reduce the identified level of potential considerably and discount the impact of urban extensions found to the west and southeast of the city, where the boundary between city and county is less strongly defined.

Cross-Boundary Journeys

Cross boundary journeys have been assessed using a much simpler model to understand volume and potential travel into the city. This allows us to identify routes where continuing to the boundary – or, with support from Leicestershire County Council, beyond – can capture more journeys and encourage further modal shift.

All Middle Layer Super Output Areas (MSOAs), including those within 8km/5 miles of the city boundary (48 in total) and those within the city itself (38 in total) are converted to origin zones based on population statistics from the 2021 census. Each origin zone score is the sum of the population within the MSOA.

The number of unique destination points within each MSOA is additionally counted, and the return value becomes the score for the destination zone. This does not consider specific destination categories and is used solely as supplementary data for the intracity routes.

The model then runs in two stages, match each origin zone within the city with the closest destination zone in the county and the reverse, with each origin zone within the county matched with the closest destination within the city. The product of the origin and destination score then returns the likely trip volume. These values are then used to uplift values within the MSOA that holds the origin or destination point, allowing for trips that carry past the city boundaries to be considered as additional volume along key routes.

The result of this process is shown in Figure 28. As can be seen, there are strong demand links to the north of the city, to the south, and along the London Road/A6 corridor.

Additional Geospatial datasets

Whilst not being full data models, other geospatial datasets have been converted for usage as part of route identification and prioritisation processes.

Existing Cycling Infrastructure Network

Gaps in the provision or quality of the existing network, where they align with desire lines, have been identified. At this stage, the existing infrastructure network does not change route ranking. Street audits are required to ensure that infrastructure is appropriate, and this section has allowed for auditors to collate necessary information and ensure that parallel or alternative routes are considered, alongside constraints around junctions or network pinch points.

Traffic Flow and Resilience Networks

High volume routes where it would be unsafe to direct large numbers of cyclists have been identified, and those sections have been overlaid with the model output. This has not directly influenced route priority, but has ensured that route selection takes into account high volume areas and junctions to ensure that routes do not end at points where it would be dangerous for cyclists to rejoin carriageway traffic.

The resilience network has been used for the same purposes, ensuring that identified routes provider coverage for the busiest roads in the city that may at times carry exceptional traffic.

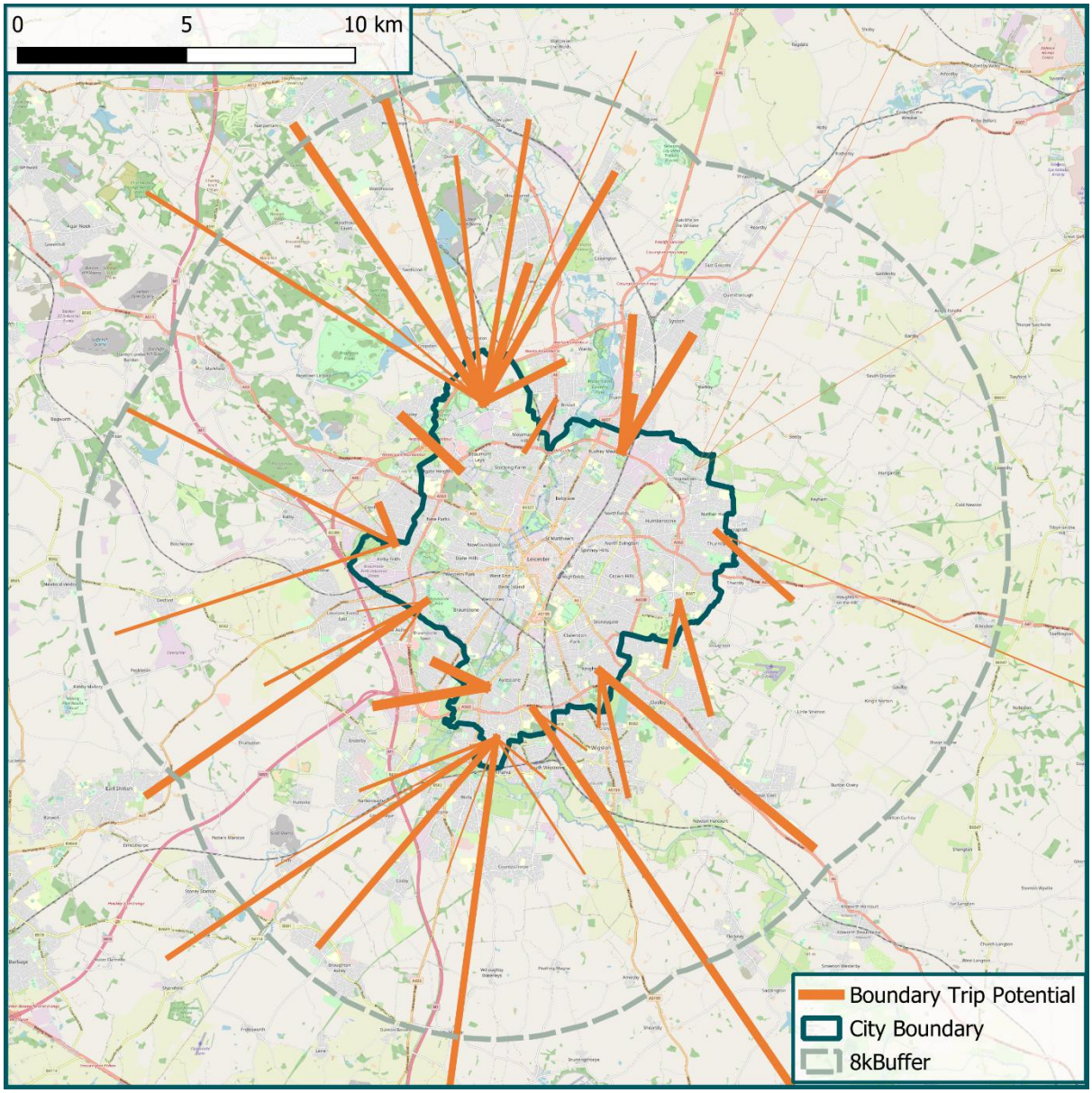


Figure 28 - Cross Boundary Trip Potentials, line thickness shows comparative route value

Route Identification and Ranking

The LCWIP operates at route level, and there must therefore be a process to convert the data identified in previous sections to a discrete series of routes that can be suitably ranked, audited, and infrastructure identified and designed.

Selection and Ranking Process

The primary means of route identification is the potential trip values as found on the model, which can quickly present a comparative baseline. Desire lines have been consolidated into routes based around journey levels between network nodes, continuing when demand has been high and ending where demand either splits or weakens considerably or reaches a natural termination point. Not all links have been included in routing, an element of selection

has had to be used to ensure there is a manageable baseline and a suitable number put forward for future assessment and development.

To ensure the network is serviceable, a number of routes have been selected based on their ability to aid network coherence or ensure there is continuity of routes. Known as the coherence network, these are subject to the same prioritisation and scoring system.

In total, the identification process has yielded a total of 102 routes, as shown in Figure 29.

These routes form a comprehensive network across the city, comprising not only linear but also radial routes that are effective in connecting to local services and encouraging journeys between neighbourhoods.

It is recognised that there are some areas where the outer ring road may be seen as an effective boundary and termination, particularly to the northwest, south, and northeast of the city. Though the model has not identified strong trip demand in these areas, they are vital to ensuring residents are not isolated from the remainder of the city network.

A separate study, purely focused on the outer ring road, has been commissioned that will explore the opportunities for enhanced walking, cycling, and passenger transport links across the major junctions. The outcomes will be folded into the LCWIP during the first review and update period.

It is not feasible to undertake detailed work on all 102 routes as part of a singular project, and as such there is a need to identify what will become the priority routes – those that will be audited and assessed for new infrastructure as part of this initial LCWIP development stage.

Usage of the model alone does not take into account other statistically relevant data, including accident data sourced from the police or the level of public support shown via the Widen My Path platform, which are invaluable in determining where resources should be directed as a matter of priority.

To this end, a spreadsheet-based tool, that allows for the inclusion of these additional datasets in determining priority, has been developed. The various elements that go into this tool are as follows:

Model Output

Routes inherit the highest potential trip value (PTV) from constituent links, ensuring that important connectors are not missed or lost when they are part of longer routes.

For the purposes of scoring, the PTV is divided by the total length of the link, in metres, and normalised by a factor of 100 so scores are manageable and influenced by other sets of data.

Stats19 Data

Road traffic incidents involving cyclists from the previous 5 full years of police Stats19 data have been identified and mapped to routes to provide a points-based scoring system.

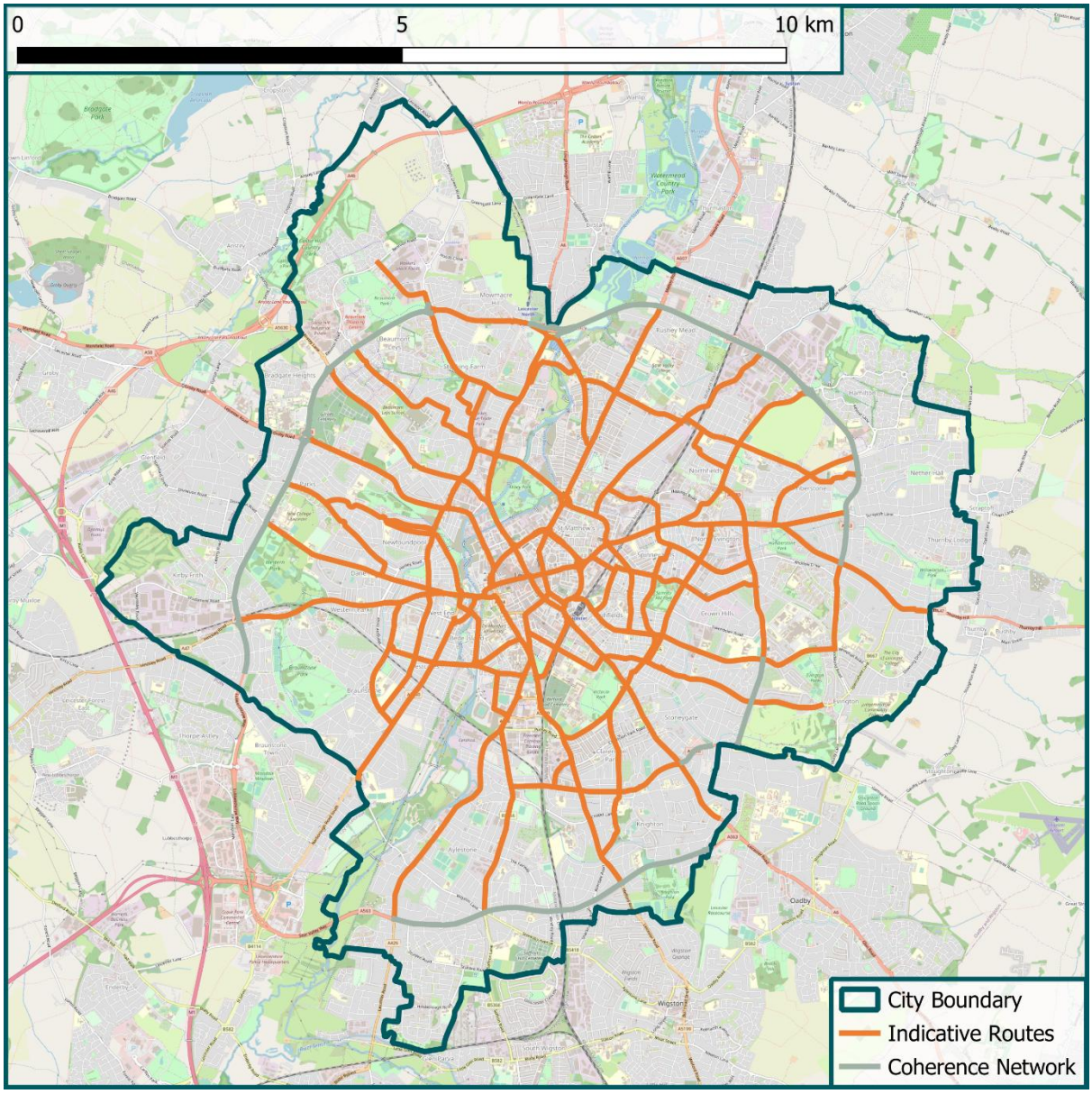


Figure 29 - Indicative Cycling Routes

Stats19 data is collected when the police attend an incident and there is an injury to at least one party – there are likely to be a number of incidents that are not reflected in this data, either due to a lack of reporting or no injuries. This is a recognised limitation of the dataset, nationally.

Each incident provides a value as follows, and the sum is added to the total score:

- Slight injury – 1 point
- Serious injury – 2 points
- Fatal injury – 4 points

Widen my Path Data

Data from the Widen my Path system was exported at the point of the model run, August 2024. For the purpose of data analysis, only those requests under the category of 'cycleways'

– which, from a random sampling of comments and suggestions, includes requests for new infrastructure, junction improvements, quality improvements, alterations, and modifications – have been used.

The Widen my Path platform allows for 'votes' of support for suggestions. Each is a valuable metric in its own right, representing the level of public sentiment and the level of change desired. To ensure both are represented, the overall score value is derived from the quotient of the total number of likes by the number of suggestions, normalised by a factor of ten.

Routes without any suggestions are given a score of zero.

Output

The result – to two decimal places – is a score range of 0.78 to 43.78. Figure 30 shows the geographical spread of these routes across the city.

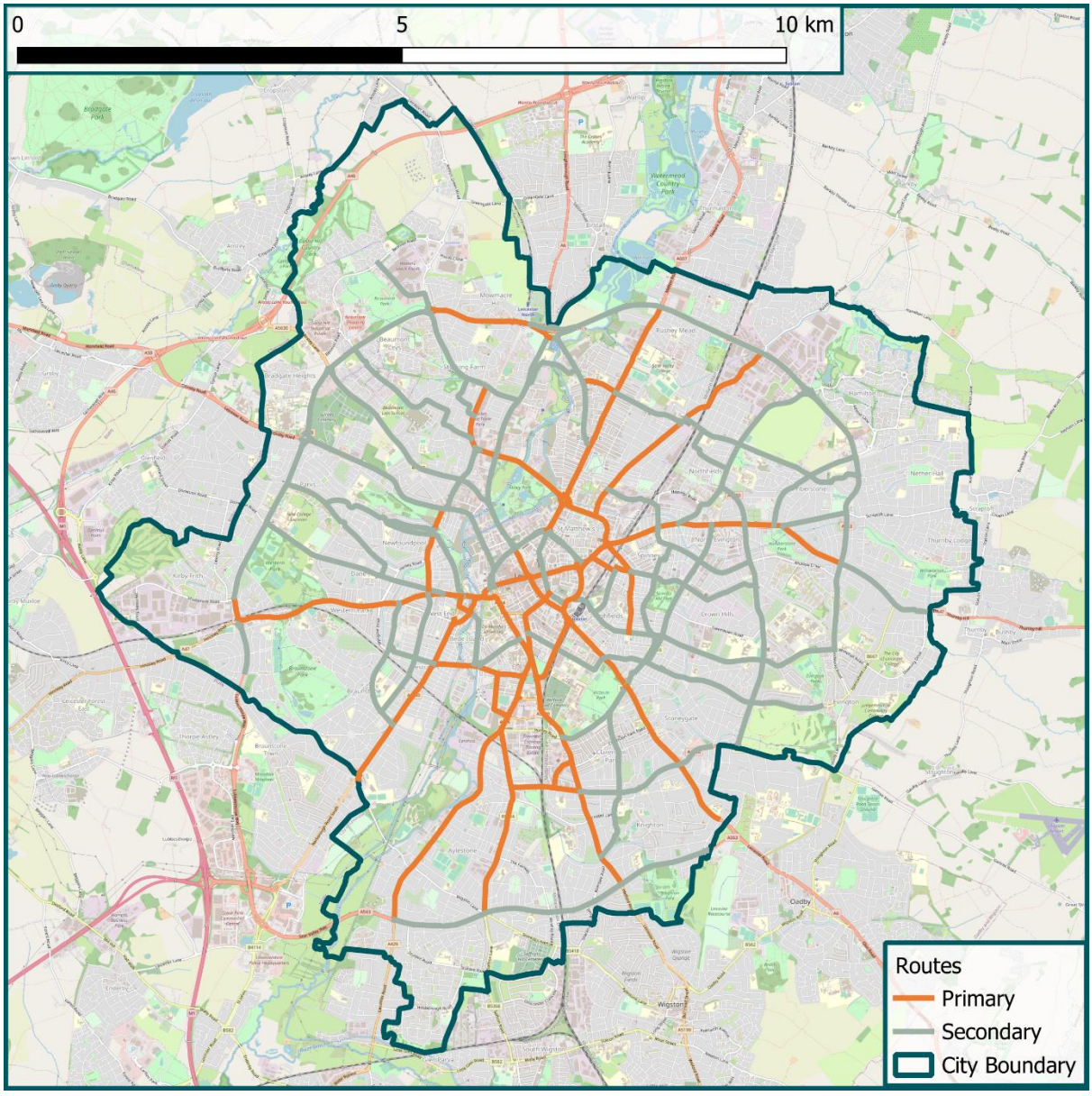


Figure 30 - Final scored routes.

Route Number	Length (m)	Route Name	Total	Rank
7	586	Belgrave Gate	37.88	1
31	408	Church Gate	32.88	2
1	3611	Hinckley Road Corridor	32.15	3
18	1168	Inner London Road Corridor	30.99	4
2	2286	Humberstone Road Corridor	29.07	5
25	444	Belvoir Street/Rutland Street Link	28.98	6
5	2839	Melton Road Corridor	27.06	7
17	645	Duns Lane/Braunstone Gate Link	26.74	8
3	1137	City Centre Through Link	25.97	9
16	771	Inner Ring Road Eastern Segment	23.84	10
43	2124	Outer London Road Corridor	23.55	11
22	590	Kent Street Link	22.67	12
12	2407	Saffron Lane Corridor	22.60	13
9	1135	Inner Ring Road SE Segment	22.41	14
13	1310	Upperton Road/Walnut Street Link	21.47	15
6	3774	Welford Road Corridor	21.36	16
4	2040	LRI Inbound Link	21.25	17
41	447	Oakland Road/Kingley Street Link	20.97	18
48	466	Checketts Road Link	20.57	19
8	3094	Catherine Street/Barkby Road Corridor	20.40	20
19	728	King Power Link	20.39	21
71	303	New Park Street Connector	19.47	22
20	1392	Uppingham Road Midsection Link	18.63	23
14	1225	Parker Drive	18.45	24
15	1121	Dysart Way	18.09	25
29	2385	Narborough Road	17.63	26
11	1254	Nedham Street/Melbourne Road Link	17.41	27
34	1119	Abbey Park Road	16.64	28
32	1101	Fosse Road North Corridor	16.32	29
50	1713	Red Hill Way	16.16	30
21	2937	Aylestone Road	16.08	31
52	898	Knighton Fields East	16.00	32
61	642	City Centre Rail Link	15.91	33
86	263	New Parks Way Link	15.76	34

Table 5 - Primary Cycle Routes

Whilst the ultimate purpose of the LCWIP will be to audit and develop a citywide network, resources constrain the level of investigation that can be undertaken over such a large sample. To this end, routes have been categorised as primary or secondary based on their position in the table. Primary routes are the top 34 routes, with a combined route length of just over 48km.

The city centre continues to attract most of the route termini, and demand continues to be found along corridors rather than radials in most cases, but the scoring has served to

distinguish primary corridors and reduce the dominance of denser areas of the city in route selection.

All primary routes are listed in Table 5. Route names are at this point indicative, and are as much a tool for classification as identification. Locations are determined by junction points, lengths are assigned by road networks derived from GIS mapping. The rank is, at this point, independent of the audit process and is not representative of final route scoring or priority.

Audit Process

Approach

The audit approach makes use of two tools – the Route Audit tool (RAT) and the Junction Assessment Tool (JAT) – to collate relevant information regarding a route and present them in a format that allos for comparative analysis and scoring, in order to develop appropriate priority.

The RAT accounts for each of the key principles of Leicester LCWIP, by scoring routes based on such measures such as ongoing connectivity, separation from motor traffic, material palette, and the management of vehicles and parking (if appropriate).

The JAT scores junctions based on geometric alignment and traffic volume, identifying junctions that are inherent barriers to cycling and particular arms or aspects where detailed design and change is necessary, whilst also providing a means of measuring the ebb and flow of traffic along majoir routes.

In addition to allowing for prioritisation based on unique characteristics, the audit provides a means to highlight areas where infrastructure improvements are needed along a route, providing a framework for future concept design and a level of detail to develop overall costings.

Methodology

Audits using the RAT were undertaken in winter 2024.

For stage one, auditors cycled along all routes in both directions, following any infrastructure or facility currently in place. At the completion of both journeys, auditors completed a RAT. On the occasion of a severe difference in provision, score, or quality the higher of the two scores was used.

Four auditors were assigned to the project, one serving as lead and moderating the overall results to ensure consistency across routes and auditors. Safety data was added only after all audits were completed, in part to ensure that there was no bias introduced during the audit process. The outcome of these audits are shown in Table 6.

Route	Cohesion	Directness	Safety	Comfort	Attractiveness	Total Score
7	0	2	39	4	3	48
31	5	7	18	7	5	42

1	5	8	16	11	8	48
18	6	5	31	10	3	55
2	4	8	22	12	10	56
25	4	7	23	9	2	45
5	6	8	26	10	6	56
17	7	7	19	8	3	44
3	2	9	16	5	2	34
16	4	6	23	5	9	47
43	3	7	20	7	6	43
22	7	7	25	9	7	55
12	3	6	14	12	5	40
9	8	6	8	7	5	34
13	5	8	14	8	5	40
6	5	8	15	15	8	51
4	4	8	15	7	6	40
41	6	7	10	9	9	41
48	6	7	26	9	6	54
8	7	8	17	14	6	52
19	6	7	17	8	7	45
71	5	8	35	7	7	62
20	6	7	19	11	9	52
14	3	8	12	11	4	38
15	5	7	12	5	8	37
29	5	7	27	13	10	62
11	6	6	26	13	6	57
34	4	4	9	5	0	22
32	7	8	20	10	8	53
50	7	11	10	12	7	47
21	4	7	17	13	6	47
52	4	9	18	11	7	49
61	1	5	26	4	1	37
86	6	7	30	6	6	55

Table 6 - RAT results

After route audits were completed and moderated, a total of 498 junctions along the routes were assessed using the JAT.

The outcome of these were normalised - to ensure that longer routes that possess more junctions do not inherently score higher than routes with a smaller number of busier junctions, and ensure that the weighting is given to where junctions have the most detrimental impact on cycling – and combined with the safety score along the route, to allow for both route by route comparison and to judge the areas and aspects of routes that require certain and specific intervention.

Final Route Priority

Route prioritisation has been determined by deriving the quotient of the RAT score by the original, route ranking score.

The result is that routes that have the most need for improvement, and that are the most supportive of trip generation, are awarded a higher priority. The outcome of this process is shown in Table 7

Many of the routes identified as part of this process have good quality infrastructure provision already, either as part of the city centre PPZ or through investment under the Transforming

Inherited Data		Resultant Priority	
Route Number	Route Name	Weighted Scoring	Priority
29	Narborough Road	3.52	1
86	New Parks Way Link	3.49	2
11	Nedham Street/Melbourne Road Link	3.27	3
32	Fosse Road North Corridor	3.25	4
71	New Park Street Connector	3.18	5
52	Knighton Fields East	3.06	6
21	Aylestone Road	2.92	7
50	Red Hill Way	2.91	8
20	Uppingham Road Midsection Link	2.79	9
48	Checketts Road Link	2.63	10
8	Catherine Street/Barkby Road Corridor	2.55	11
22	Kent Street Link	2.43	12
6	Welford Road Corridor	2.39	13
61	City Centre Rail Link	2.33	14
19	King Power Link	2.21	15
5	Melton Road Corridor	2.07	16
14	Parker Drive	2.06	17
15	Dysart Way	2.05	18
16	Inner Ring Road Eastern Segment	1.97	19
41	Oakland Road/Kingley Street Link	1.96	20
2	Humberstone Road Corridor	1.93	21
4	LRI Inbound Link	1.88	22
13	Upperton Road/Walnut Street Link	1.86	23
43	Outer London Road Corridor	1.83	24
18	Inner London Road Corridor	1.77	25
12	Saffron Lane Corridor	1.77	26
17	Duns Lane/Braunstone Gate Link	1.65	27
25	Belvoir Street/Rutland Street Link	1.55	28
9	Inner Ring Road SE Segment	1.52	29
1	Hinckley Road Corridor	1.49	30
34	Abbey Park Road	1.32	31
3	City Centre Through Link	1.31	32
31	Church Gate	1.28	33
7	Belgrave Gate	1.27	34

Table 7 - Route prioritisation results

Cities or Connecting Leicester Programmes. We have removed these from the priority list, resulting in the final 26 priority routes, below:

Route Number	Route Name	Priority
29	Narborough Road	1
86	New Parks Way Link	2
11	Nedham Street/Melbourne Road Link	3
32	Fosse Road North Corridor	4
71	New Park Street Connector	5
52	Knighton Fields East	6
21	Aylestone Road	7
50	Red Hill Way	8
20	Uppingham Road Midsection Link	9
48	Checketts Road Link	10
8	Catherine Street/Barkby Road Corridor	11
22	Kent Street Link	12
6	Welford Road Corridor	13
19	King Power Link	14
5	Melton Road Corridor	15
14	Parker Drive	16
15	Dysart Way	17
16	Inner Ring Road Eastern Segment	18
41	Oakland Road/Kingley Street Link	19
2	Humberstone Road Corridor	20
4	LRI Inbound Link	21
13	Upperton Road/Walnut Street Link	22
43	Outer London Road Corridor	23
12	Saffron Lane Corridor	24
9	Inner Ring Road SE Segment	25
1	Hinckley Road Corridor	26

Table 8 - Final priority cycle routes

At this stage, the purpose of priority is to identify the schemes that will be taken to detailed design, assessment, and consultation. It is not a commitment to install, nor is it a prescriptive sequencing of schemes.

Engagement and Consultation

Stakeholder engagement has been undertaken as a live process during development with the LCWIP, with key milestone review sessions after:

- Walking zone identification
- Walking route identification
- Walking route prioritisation
- Cycle route identification
- Cycle route prioritisation

Stakeholders were identified via the Cycle City Action Group, Walk Leicester Group and the Business Engagement forum – collectively, this has included representatives from not only cycle and walking campaigns and action groups, but also the city's two universities, colleges, NHS trust, and some of the largest employers within the city.

Internal teams responsible for education, planning, public health, and social care were also engaged in parallel processes.

Engagement took place primarily using a digital map platform, Felt, that allows users to mark locations on the map where they felt there was a need for improvement or alteration. Once available, stakeholders were asked to provide comment specifically against identified routes, against priority routes, and in general at areas of the city.

This document represents the final draft, and has been prepared for public consultation on the following:

- The overall view and approach of the document, including:
    - The methodology used to identify appropriate walking, wheeling, and cycling infrastructure
    - The principles that underpin the LCWIP
    - The reason for investment.
- The plans for the walking network,
    - The areas identified as key walking zones,
    - The routes identified as key walking routes,
    - The infrastructure requirements identified to support walking routes
- The plans for the cycling network,
    - The routes identified as primary cycle routes,
    - The routes identified as secondary cycle routes,
    - The infrastructure requirements identified to support walking routes
- Any areas, locations, or points of concern not included within the LCWIP.

THIS SECTION OF THE DOCUMENT WILL BE UPDATED, AND INCLUDE CHANGES MADE FOLLOWING CONSULTATION AND SERVE AS A SUMMARY OF THE POST CONSULTATION REPORT.

Infrastructure Improvements

Identifying Walking Improvements

As has been noted previously, the city has a developed network of footways alongside most routes, and therefore there is already a reasonable level of infrastructure available across the city to support walking. Specific improvements are therefore targeted at what will make walking more attractive – via increased amenity, conflict reduction, or beautification – or viable, via the provision of appropriate crossing points or connectors.

Improvements that fall within these categories have been identified by the Active Travel (Neighbourhoods) team for the ten highest priority walking routes, based on assessing the lowest scoring areas of each route audit.

Clusters of improvements along a given route – or, sections of a route for longer or denser routes – have been collated to form Street Templates. These templates represent a vision for a street should all improvements be made, though at this stage should be considered indicative only. Consultation and engagement with residents, businesses, and other stakeholders will shape future projects and may substantially change infrastructure locations or designs in the future.

The street templates include an indicative high-level design, which shows the location for some identified features. Some parts of the template, such as traffic calming or pavement parking bans, are considered to be whole route options and are not shown as specific locations. Those that are shown as a location, such as cycle parking or crossing points, will need refinement as part of scheme delivery.

The intention behind each route would be for a future project to deliver these improvements – or equivalents – and upgrade the available surface, if necessary. This may include widening the footways to appropriate widths and ensuring the surface is of the appropriate quality and material.

Fosse Road South

Ward:

Westcotes

Walking zone:

Narborough/Hinckley

Walking route rank:

1

Street type:

Neighbourhood connector/Neighbourhood high street / Neighbourhood residential

Length:

597m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	No	Yes	6

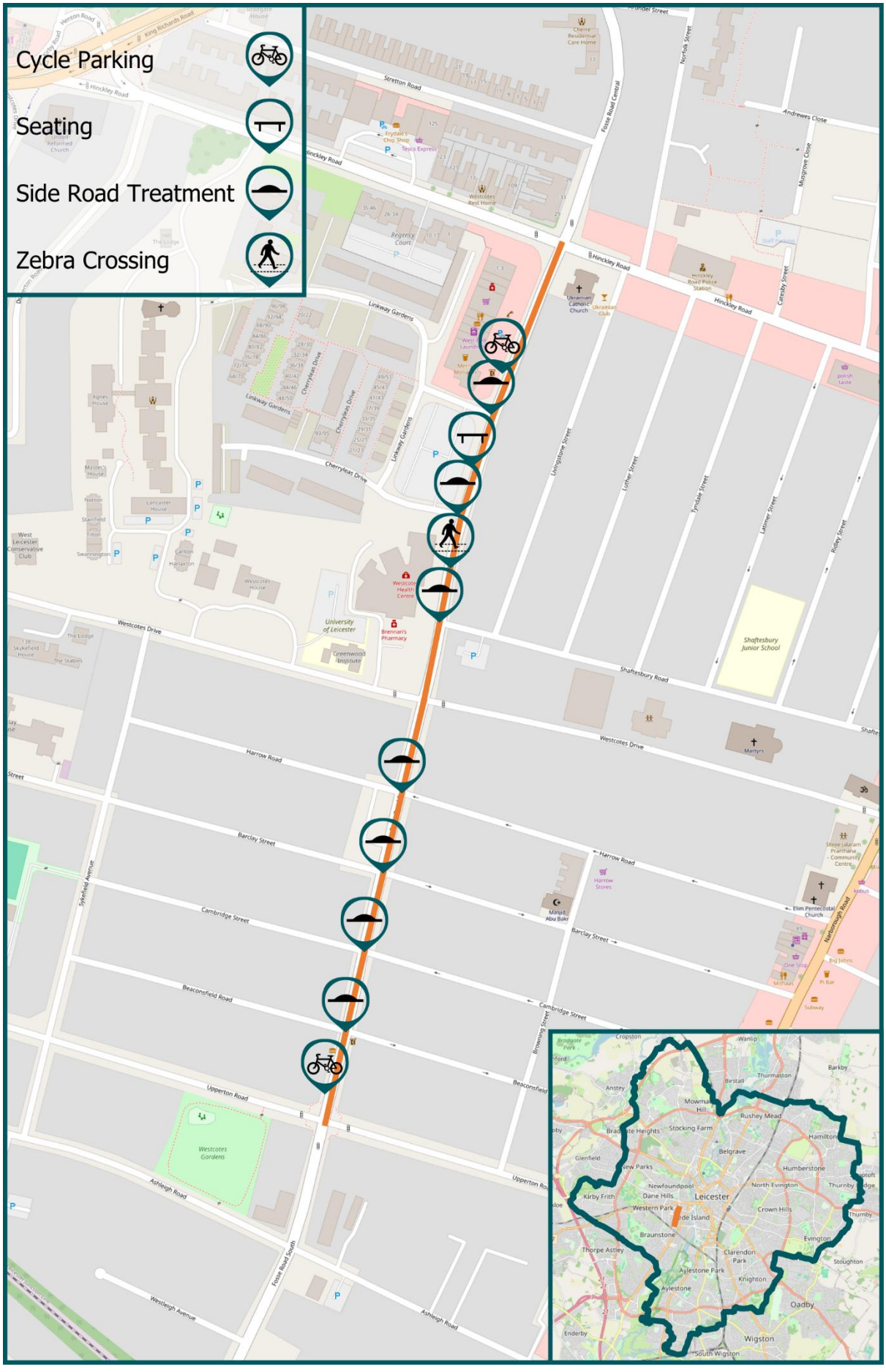
Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
0	1	0	0

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
6	No	0	0

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
0	13	0	1

Street Description:

Fosse Road South runs from Hinckley Road in the north to Hallam Crescent in the South. It runs parallel to the distributor road and local centre; Narborough. The northern and central section is wide single carriageway, with no cycling facilities, fronted by large 3 storey Victorian terraced houses with no off-street parking on its eastern side and mainly local facilities (shops, pub, health centre)


Cycle Parking
Seating
Side Road Treatment
Zebra Crossing
Hinckley Road
Stretton Road
Linkway Gardens
Cherryleas Drive
Westcotes Drive
Shaftesbury Road
Harrow Road
Barclay Street
Cambridge Street
Beaconsfield Road
Upperton Road
Ashleigh Road
Westcotes Gardens
Shaftesbury Junior School
Leicester

Upperton Road

Ward:

Westcotes

Walking zone:

Narborough/Hinckley

Walking route rank:

2

Street type:

Neighbourhood connector/ Centre Link

Length:

1,123m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	No	Yes	8

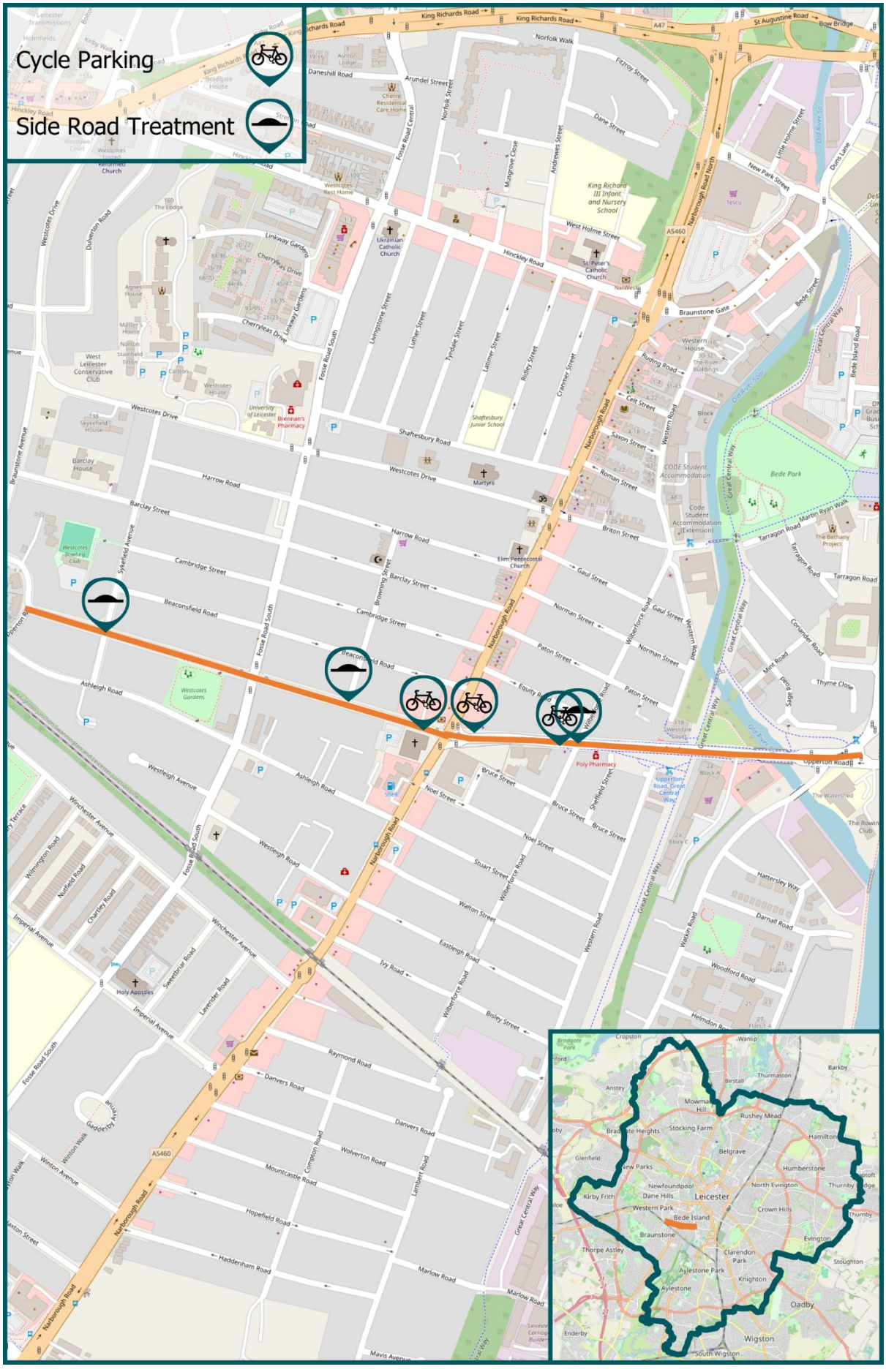
Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
0	0	0	0

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
8	No	30	0

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
2	5	0	6

Street Description:

Upperton Road is a single lane carriageway which contains a mixture of residential properties, small businesses, and community assets such as a church. Side roads predominantly lead to residential streets. There are no cycle facilities for most of the route, though some sections do have a segregated cycle lane on the pavement. There are bus stops present on the road, and limited off street parking available to shops or businesses.


Cycle Parking
Side Road Treatment

Dysart Way

Ward:

Belgrave

Walking zone:

Melton/Belgrave

Walking route rank:

3

Street type:

Arterial Connector

Length:

750m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	No	No	0

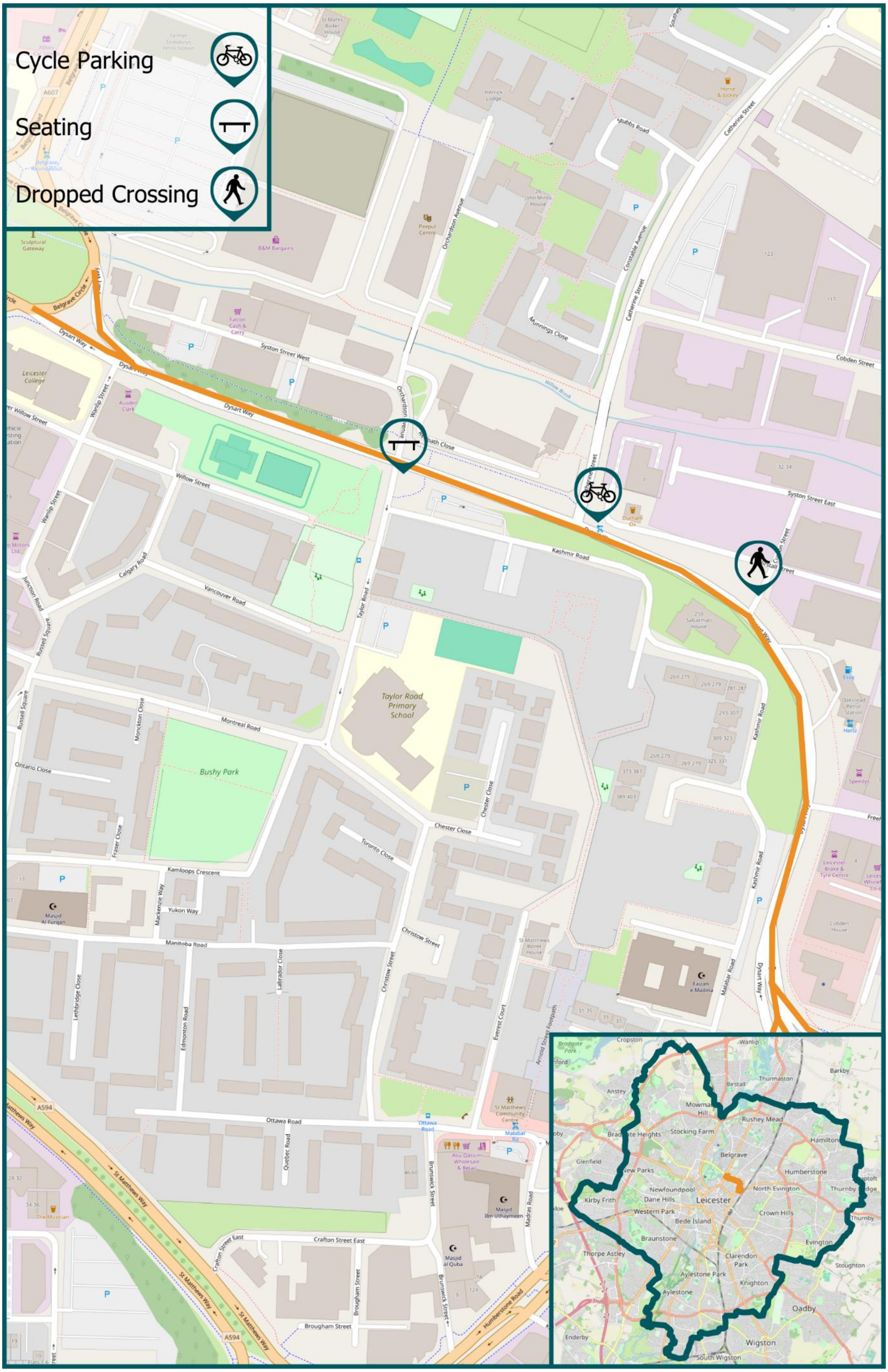
Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
0	0	0	1

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
1	No	0	0

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
2	0	0	1

Street Description:

Dysart Way connects Humberstone Road to Belgrave Circle and is situated North East of the city centre in the Belgrave ward. It is a majority single carriageway road in the east and west directions. There is a small portion of cycle lane at the junction adjoining Dysart Way and Humberstone Road. The East-moving side of the road has a small amount of cycle lane from just before Freehold Lane to the junction. The West-moving side has an abrupt ending of the cycle lane which has been flagged as dangerous. There is a housing estate to the West of the road with Kashmir road separating the two- there is no direct access from Dysart Way. To the East side of the road there are business and industries, set back from Dysart Way with green spaces between them.


Cycle Parking
Seating
Dropped Crossing
Dysart Way
Syston Street West
Syston Street East
Willow Street
Kashmir Road
Taylor Road
Taylor Road Primary School
Vancouver Road
Montreal Road
Bushy Park
Chester Close
Toronto Close
Kamloops Crescent
Manitoba Road
Christow Street
Ottawa Road
Catherine Street
Cobden Street
Belgrave Circle
Leicester College
Leicester
Belgrave
Humberstone
North Evington
Evington
Braunstone
Aylestone
Knighton
Oadby
Wigston

Infirmary Road

Ward:

Castle

Walking zone:

Narborough/Hinckley

Walking route rank:

4

Street type:

Arterial Connector

Length:

240m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	No	No	0

Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
3	0	0	2

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
2	No	0	20

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
0	0	4	3

Street Description:

Infirmary Road runs past Leicester Royal Infirmary in the South-West region of the city centre. It is a one-way road with three lanes of traffic and, for most of the length, a bus lane. There are pavements either side of the road, but no cycling facilities. There are no residential properties or businesses on either side of the street, but there is a busy multi-story car park to one side and the hospital to the other, alongside a number of busy bus stops. A pedestrian bridge crosses above the road linking the hospital with the car park.


Cycle Parking
Seating
Dropped Crossing
Carlton Street
Welford Road
Grange Lane
Pelham Way
Jarrom Street
Infirmary Square
Infirmary Close
A594
Pelham Street
Tower Street
Domino's
Victoria Building
Covid Admision Unit
Accident & Emergency
Ambulance Surge Hub, Block 31
Sub Station
Knighton Street Outpatients
Welford Rd - Royal Infirmary A&E
Leicester
Oadby
Wigston

Narborough Road (South)

Ward:

Braunstone Park and Rowley Fields

Walking zone:

Narborough/Hinckley

Walking route rank:

5

Street type:

Main Arterial

Length:

1,380m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	No	No	0

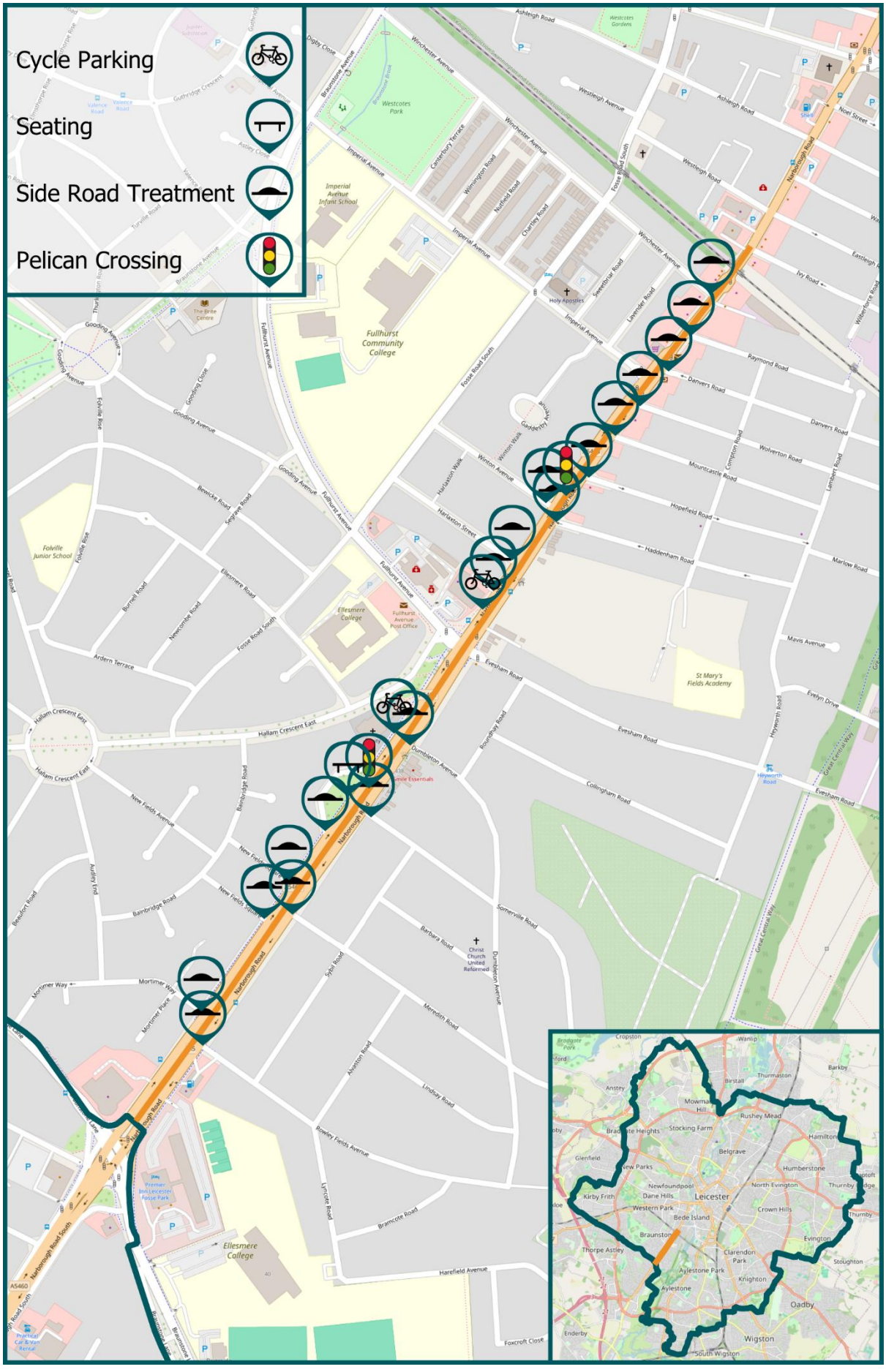
Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
2	0	0	0

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
4	No	0	0

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
0	18	0	3

Street Description:

Narborough Road is the primary route into the city centre from the South, and for much of its length is a 4+ lane carriageway, with dedicated bus lanes and parking areas. The southern section includes a number of small commercial locations, mostly offering food options, and has several major junctions to account for the high traffic volume. The vast majority of the route has active residential frontages, with some properties to the north of the section having off road parking but most relying on the inset parking areas.


Cycle Parking
Seating
Side Road Treatment
Pelican Crossing
Fullhurst Community College
Ellesmere College
Imperial Avenue Infant School
Fosse Road South
Narborough Road
Narborough Road South
Hallam Crescent East
Evesham Road
Leicester
Oadby
Wigston

Catherine Street

Ward:

Belgrave

Walking zone:

Belgrave/Melton Road

Walking route rank:

6

Street type:

Neighbourhood connector/Neighbourhood high street / Neighbourhood residential

Length:

840m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
Yes	No	No	0

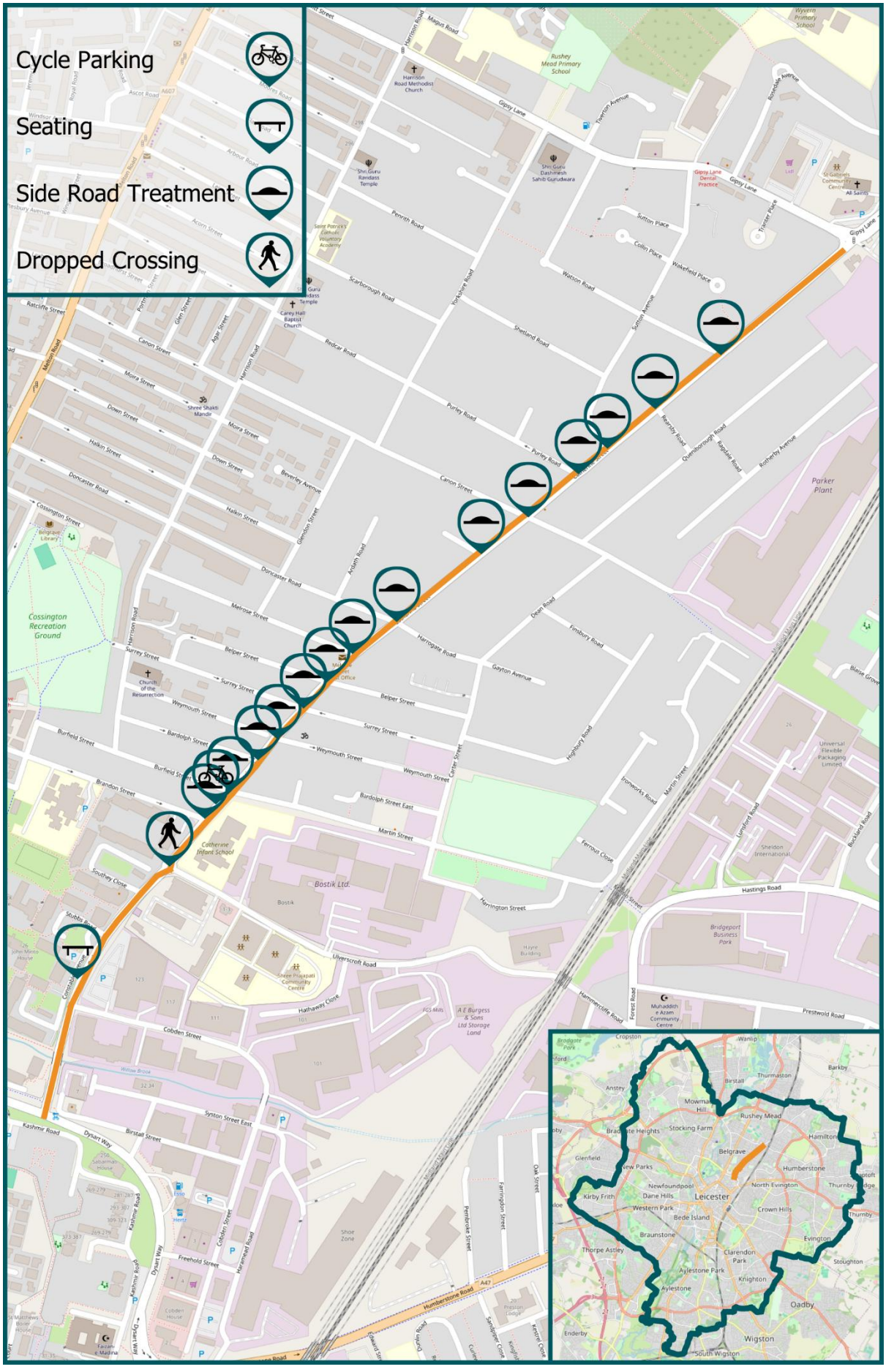
Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
0	0	1	6

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
4	No	0	0

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
10	18	0	1

Street Description:

Catherine Street runs from Dysart Way in the South to Gipsy Lane in the north. The priority route finishes at Doncaster Road. It runs parallel to Belgrave Road. It carries a high volume of traffic. The southern section is dominated by industry , the northern is terraced streets. It is narrow, with no much needed cycling facilities.


Cycle Parking
Seating
Side Road Treatment
Dropped Crossing

Nedham Street

Ward:

Wycliffe

Walking zone:

Belgrave/Melton Road

Walking route rank:

7

Street type:

Main Arterial

Length:

440m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	Yes	Yes	10

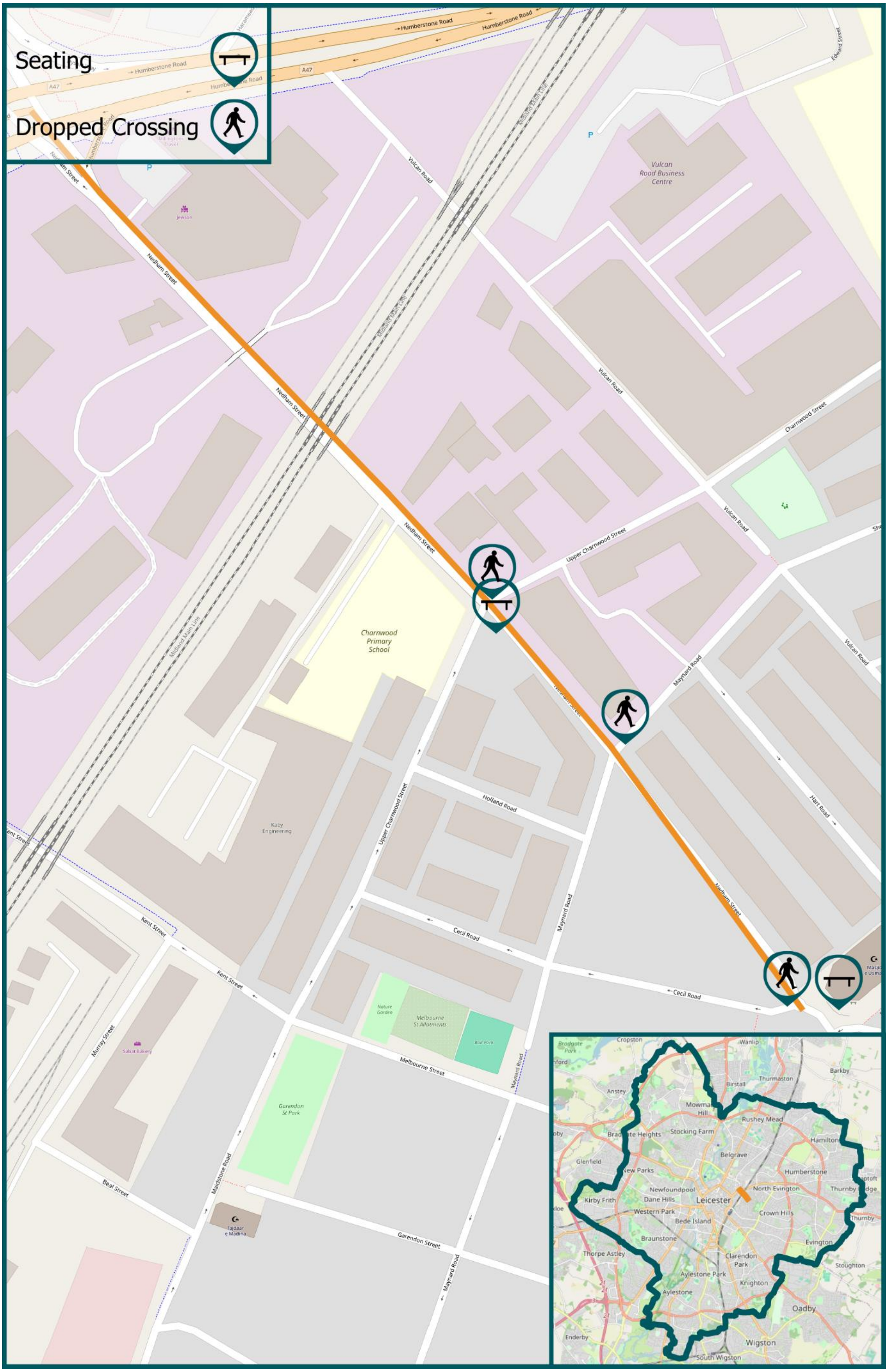
Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
0	0	0	0

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
0	Yes	100	0

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
6	0	2	2

Street Description:

Nedham Street provides an important connection for North Highfields with Humberstone Road and beyond. It is mostly industry at the NW end and residential flush fronted terrace houses at the SE end. South of the railway bridge Nedham Street is within a 20mph zone which includes all the side streets. A school, mosque, and filling station can be found in close proximity. There is a pelican crossing to the south of the school and a pedestrian refuge crossing to the north of the school. There is a signal-controlled pedestrian crossing facility at northern Junction with Humberstone Road and a further pelican crossing on Melbourne Road just south of its junction with Hartington Road. There are some traffic calming features at the SE end of the road including road humps, road narrowing and speed cushions.



Seating
Dropped Crossing
Humberstone Road
Needham Street
Vulcan Road
Vulcan Road Business Centre
Charnwood Street
Upper Charnwood Street
Charnwood Primary School
Maynard Road
Holland Road
Hart Road
Cecil Road
Kent Street
Melbourne Street
Maidstone Road
Garendon Street
Beal Street
Murray Street
Midland Main Line
Gorendon St Park
Melbourne St Allotments
Leicester

Hinckley Road

Ward:

Western

Walking zone:

Belgrave/Melton Road

Walking route rank:

8

Street type:

Arterial Connector/Neighbourhood Connector

Length:

1.24km

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	No	No	0

Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
1	0	0	0

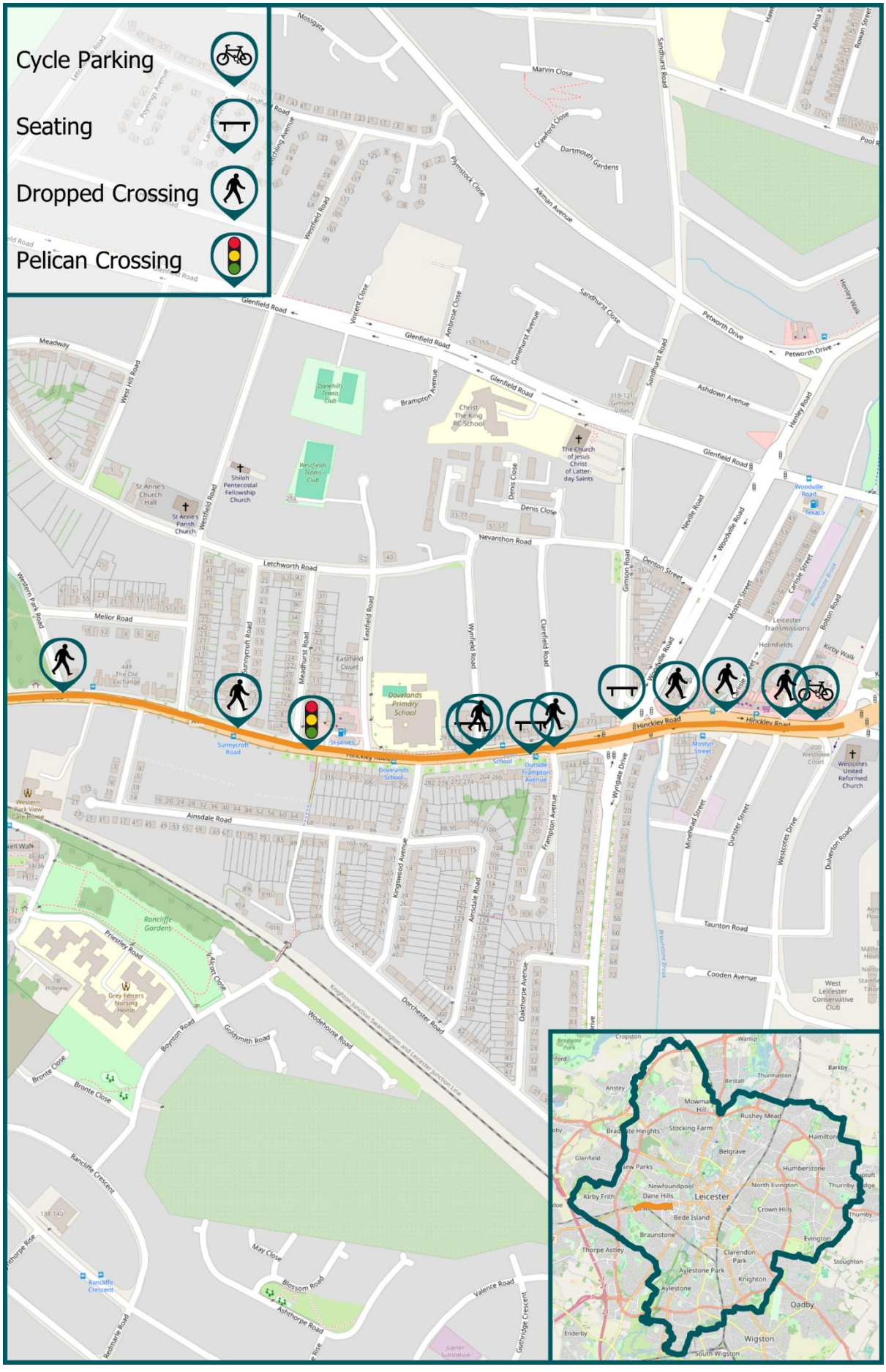
Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
6	No	0	20

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
34	1	4	10

Street Description:

A busy tree lined Arterial Road with sections of bus lane and dual carriageway. A shopping parade, petrol station, and school are along the route. There is a large park to the north, mainly 1950s semi-detached residential properties on the south side and some on the north, many with driveways. There are pedestrian guard rails in front of 2 school pedestrian gates and around the Woodville Road and Henton Road junctions. Double yellow line restrictions on both sides for the entire length. Parking only permitted in laybys between Woodville and Henton Roads. There are 5 crossing places on a 1.24km route.

There are railings in the central reserve of the dual carriageway section to prevent pedestrian crossing between Clarefield Road and Henton Road except at the 3 crossing places.


Cycle Parking
Seating
Dropped Crossing
Pelican Crossing
Glenfield Road
Hinckley Road
Ainsdale Road
Taunton Road
Cooden Avenue
Leicester
Oadby
Wigston

Narborough Road (north)

Ward:

Westcotes

Walking zone:

Narborough/Hinckley

Walking route rank:

9

Street type:

Main Arterial

Length:

900m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	No	No	0

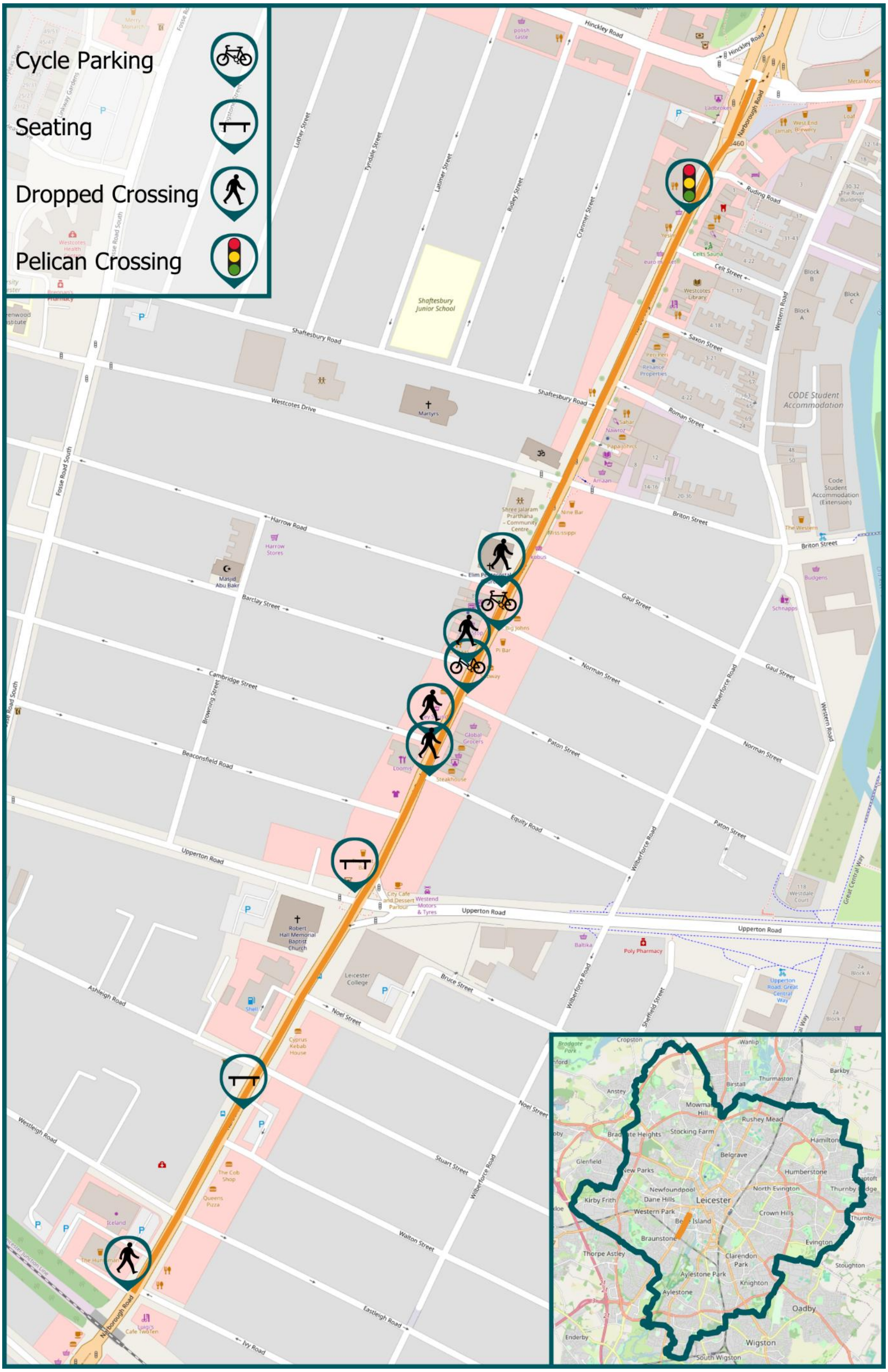
Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
1	0	0	0

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
6	Yes	0	0

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
16	0	23	6

Street Description:

A busy tree lined arterial rad with many businesses along the route, alongside frequent bus services. The road has a 2+1 arrangement in sections, and parking laybys. There are a number of cycle parking facilities at various locations. Braunstone Gate and Briton Str connect to De Montfort University. There is a large student accommodation block on Western Road between these two streets. There is an infant school near the junction with Hinckley Road and a junior school on Shaftesbury Road. There are 26 side residential roads along this length, 21 junctions in total.


Cycle Parking
Seating
Dropped Crossing
Pelican Crossing
Narborough Road
Hinckley Road
Shaftesbury Road
Westcotes Drive
Harrow Road
Barclay Street
Cambridge Street
Beaconsfield Road
Upperton Road
Ashleigh Road
Noel Street
Westleigh Road
Stuart Street
Walton Street
Eastleigh Road
Ivy Road
Wilberforce Road
Western Road
Fosse Road South
Luther Street
Tyndale Street
Latimer Street
Ridley Street
Cranmer Street
Ruding Road
Celt Street
Saxon Street
Roman Street
Briton Street
Gaul Street
Norman Street
Paton Street
Equity Road
Bruce Street
Shaftesbury Junior School
Leicester
Leicester College

Checketts Road

Ward:

Belgrave

Walking zone:

Melton/Belgrave

Walking route rank:

10

Street type:

Arterial Connector

Length:

900m

Street Requirements:

Traffic Calming	Traffic Management	Pavement Parking Ban	Bollards (number)
No	Yes	Yes	4

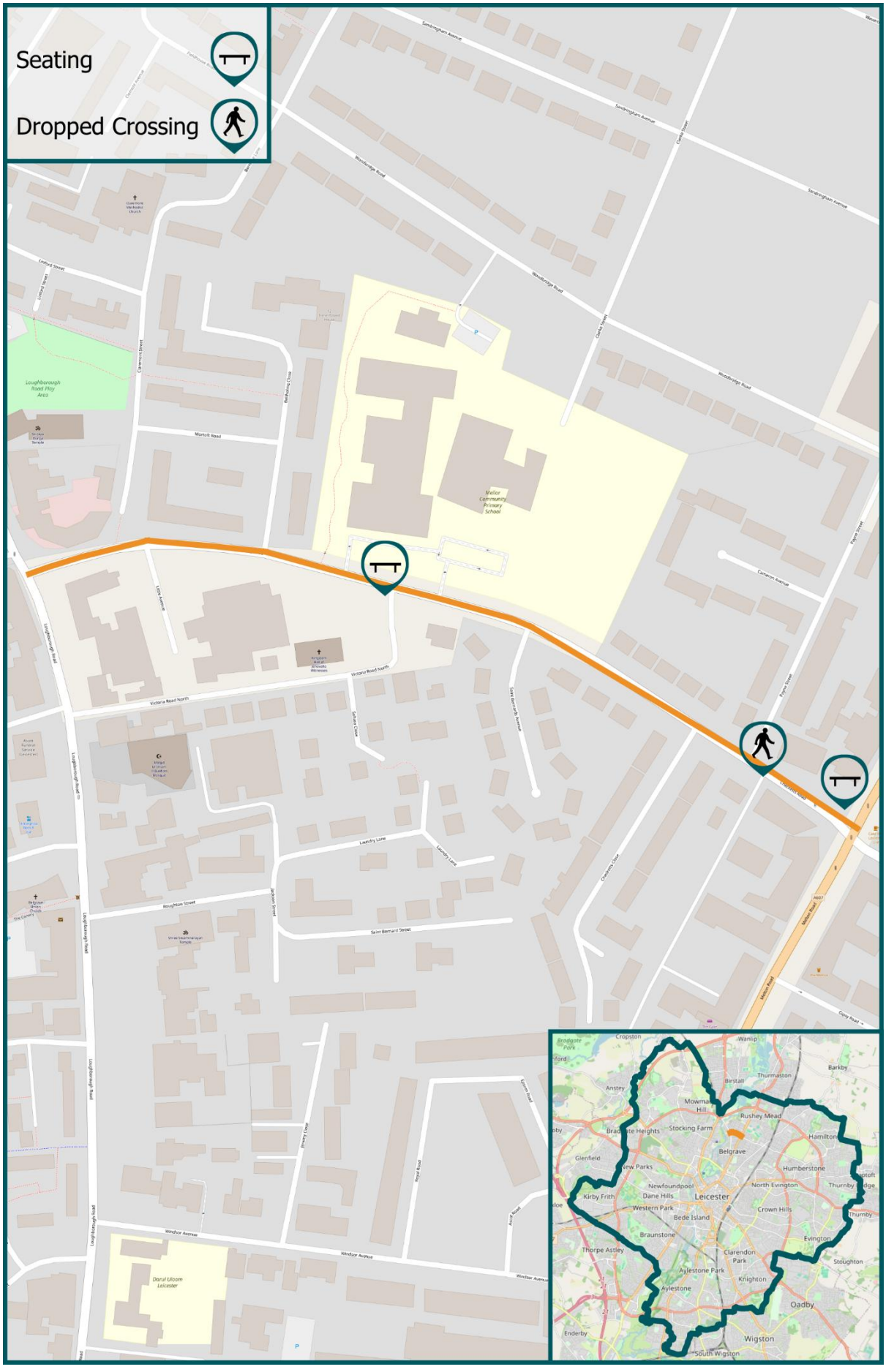
Pelican Crossing (number)	Zebra Crossing (number)	Pedestrian Refuge (number)	Dropped Crossings (number)
0	0	0	0

Cycle Racks (number)	Additional Streetlighting	Footway resurfacing (m)	Footway widening (m)
0	No	100	0

Tactile Paving (number)	Side Road Treatments (number)	Trees/Planting (number)	Seats (number)
2	0	4	4

Street Description:

Checketts Road is a connector road from Loughborough Rd to Melton Road with a large primary school and shops, with a combination of . The side roads to the south are within a 20mph zone. Checketts Road and the residential area to the north are within a proposed 20mph zone. The highway including footway is at least 15 metres wide with a 9-metre carriageway. There is an advanced stop line for cyclists at the Melton Road junction. There are a limited number of vehicle parking opportunities with marked parking bays and yellow lines to enable unhindered two-way traffic flow. There are 3 bus stops on Checketts Road with circular 40 bus service passing this way. There are seven residential side roads along the length, one of which is blocked to motor traffic.


Seating
Dropped Crossing
Mellor Community Primary School
Victoria Road North
Laundry Lane
Saint Bernard Street
Windsor Avenue
Leicester
Oadby
Wigston

Pedestrian Crossings

The authority often receives requests for pedestrian crossing facilities across the city. As has been noted, these are captured and recorded, then routinely assessed to determine whether sites should be taken forward for consideration, design, and delivery.

It has previously been the case that pedestrian flow and vehicle volume has been a deciding factor in crossing installation and upgrades using a calculation known as PV^2. Though withdrawn from official guidance nearly thirty years ago, this calculation has continued to be used by a number of highway authorities as a means of providing an objective method to ranking requests for crossing facilities and deploying limited resources.

There are a number of issues with this approach. Fundamentally, the score is derived from the number of people that are currently crossing – a PV^2 analysis does not take into account areas of latent demand where it may be too dangerous, inconvenient, or otherwise impossible for people to cross.

The city council have therefore developed a tool – the Crossing Assessment Tool (CAT) – that is intended to be compliant with guidance as per the Traffic Signs Manual, chapter 6. Crossing site assessments are undertaken in such a way that combines local geographical features alongside usage, data, and demand to identify where crossings could best be suited.

Crossing requests within walking zones receive a score increase, reflecting the benefit to permeability for pedestrians within the zone.

The list is reviewed annually, with any new additions scored and priorities given. The list is not included within the LCWIP, and instead operates as a parallel programme of constant assessment, design, and delivery as resources allows.

High priority crossing points, or those identified as needing specific route-level enhancements, may be added to future iterations of the LCWIP for consideration as part of wider delivery strategies.

Identifying Cycling Improvements

There is an inherent difficulty in installing cycle infrastructure within a confined urban space, given the need to rebalance existing usage that may include parking, vehicle lanes, bus lanes, or footway. This demands a level of detailed design and engagement before any scheme may progress.

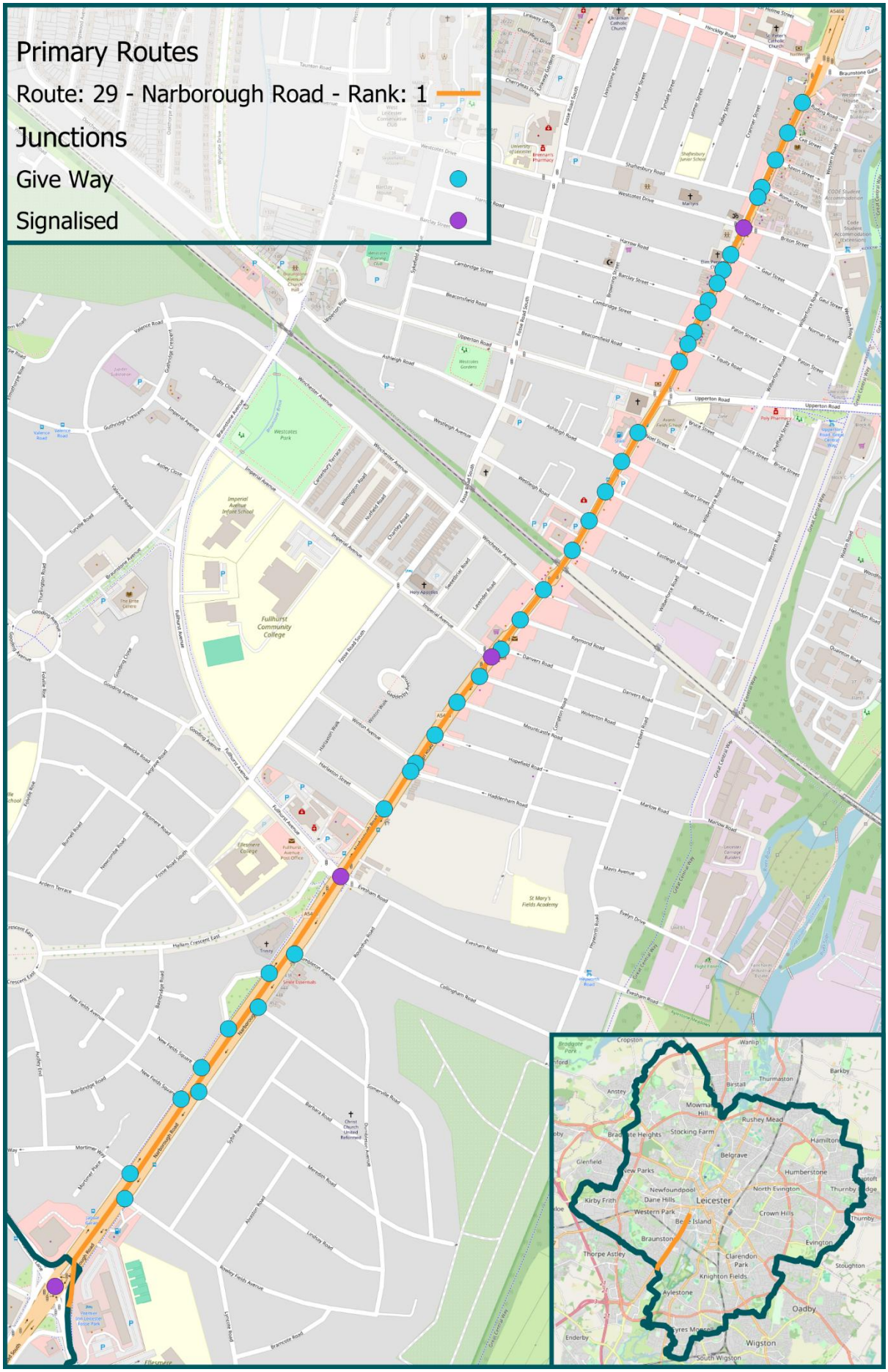
The Route Audit Tool has identified areas of need and concern that will need to be considered as part of detailed design, but in all cases the principal requirement for a cycle route is that it must offer an uninterrupted route that provides complete protection from motor traffic at all times, including at junctions and other points of potential conflict, and in doing so should avoid creating conflict points with pedestrians, be legible and easily understood, and logically connect with the wider city and regional network.

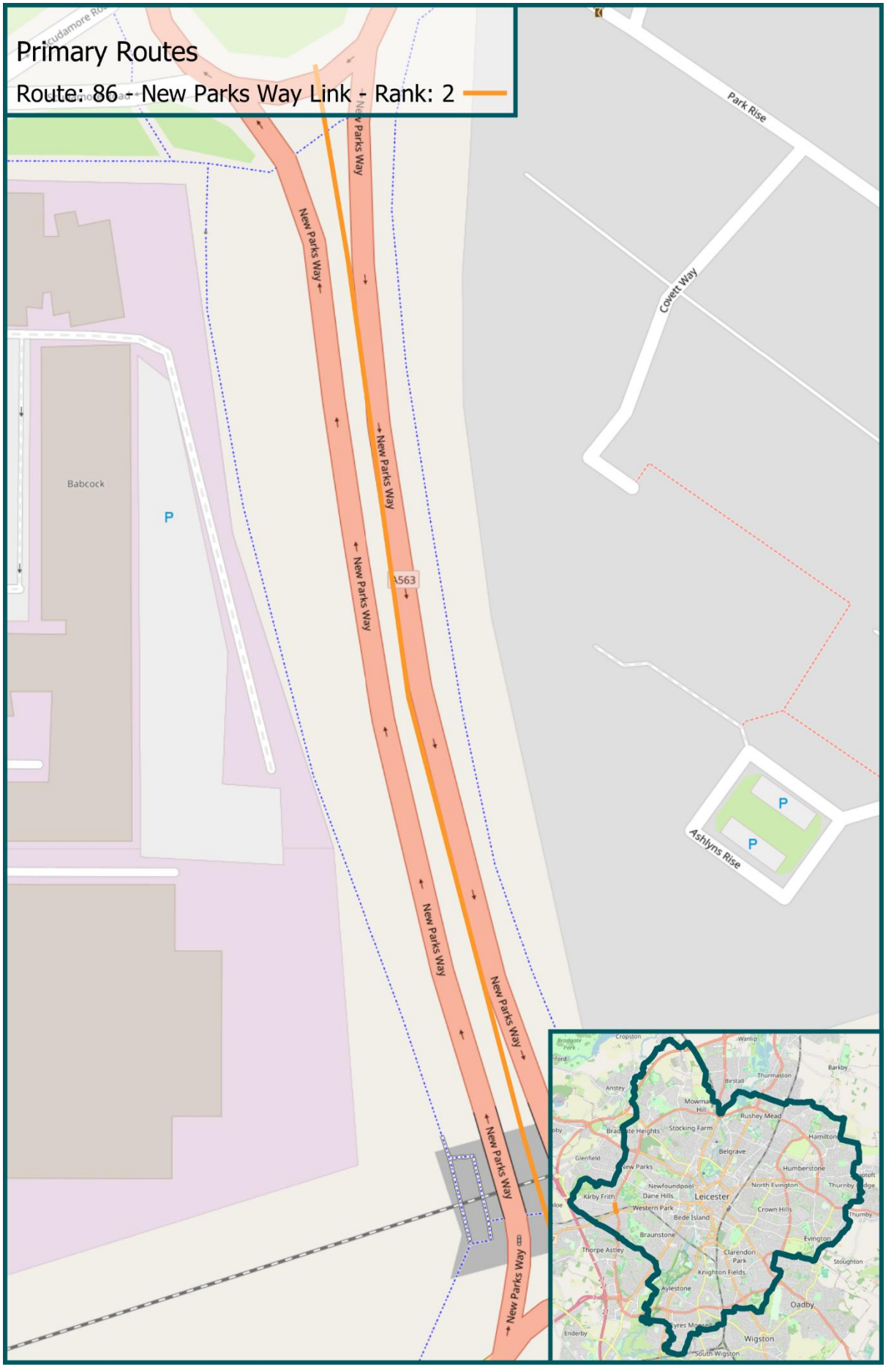
Given the requirements, extensive design work is needed for each cycle scheme and this must be undertaken alongside the local community. The audit process is invaluable in identifying

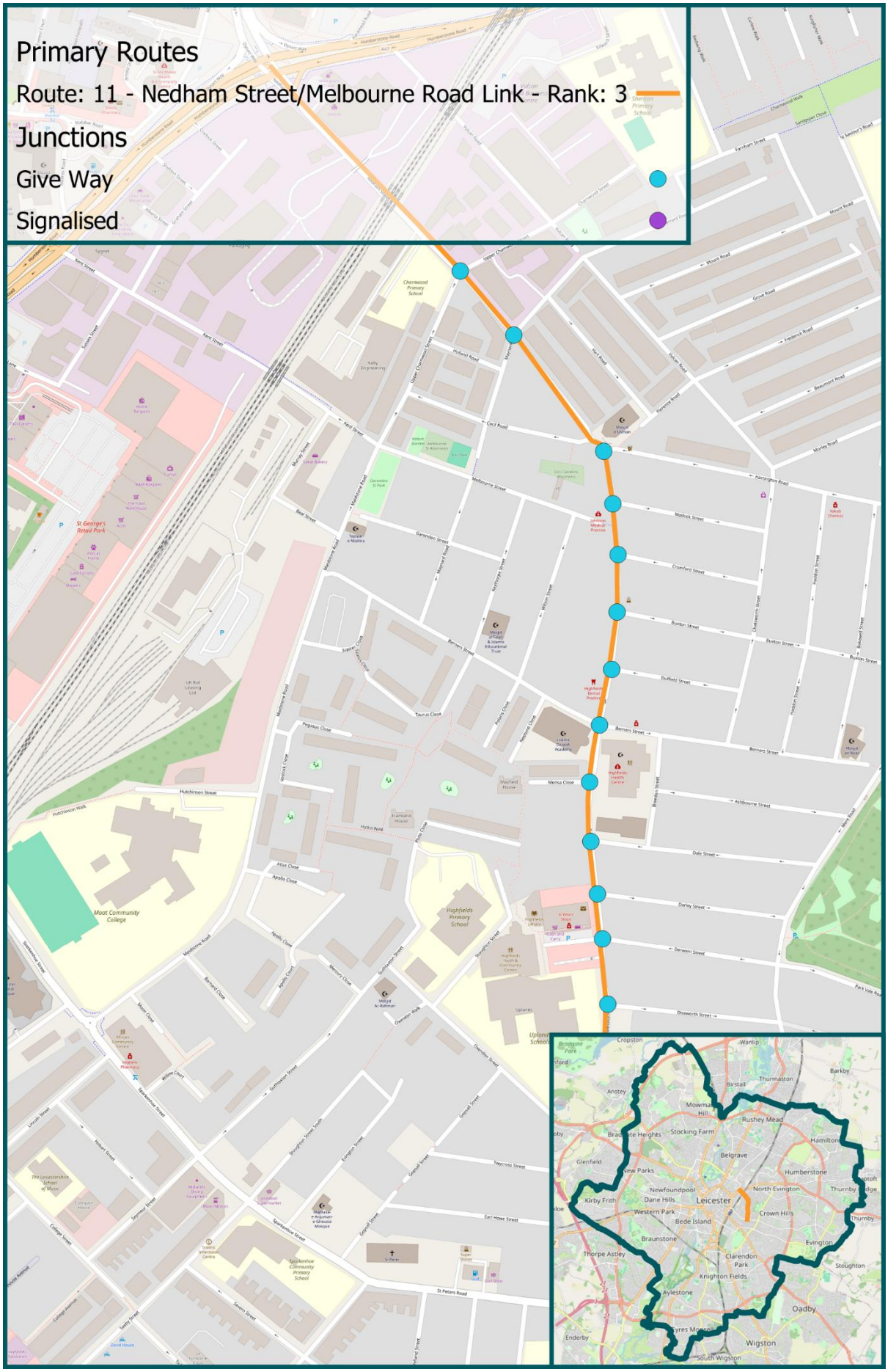
individual elements of concern, as well as highlighting potential issues and conflict points that will require specialist care and attention.

In recognition of the above, and in readiness, an initial assessment has been done on all primary cycle routes to identify the number and type of junctions along the route, so as to assess the level of intervention that may be required.

Detailed design work on cycle schemes from the priority list will continue in the coming years, and this section will be updated with completed designs once available.

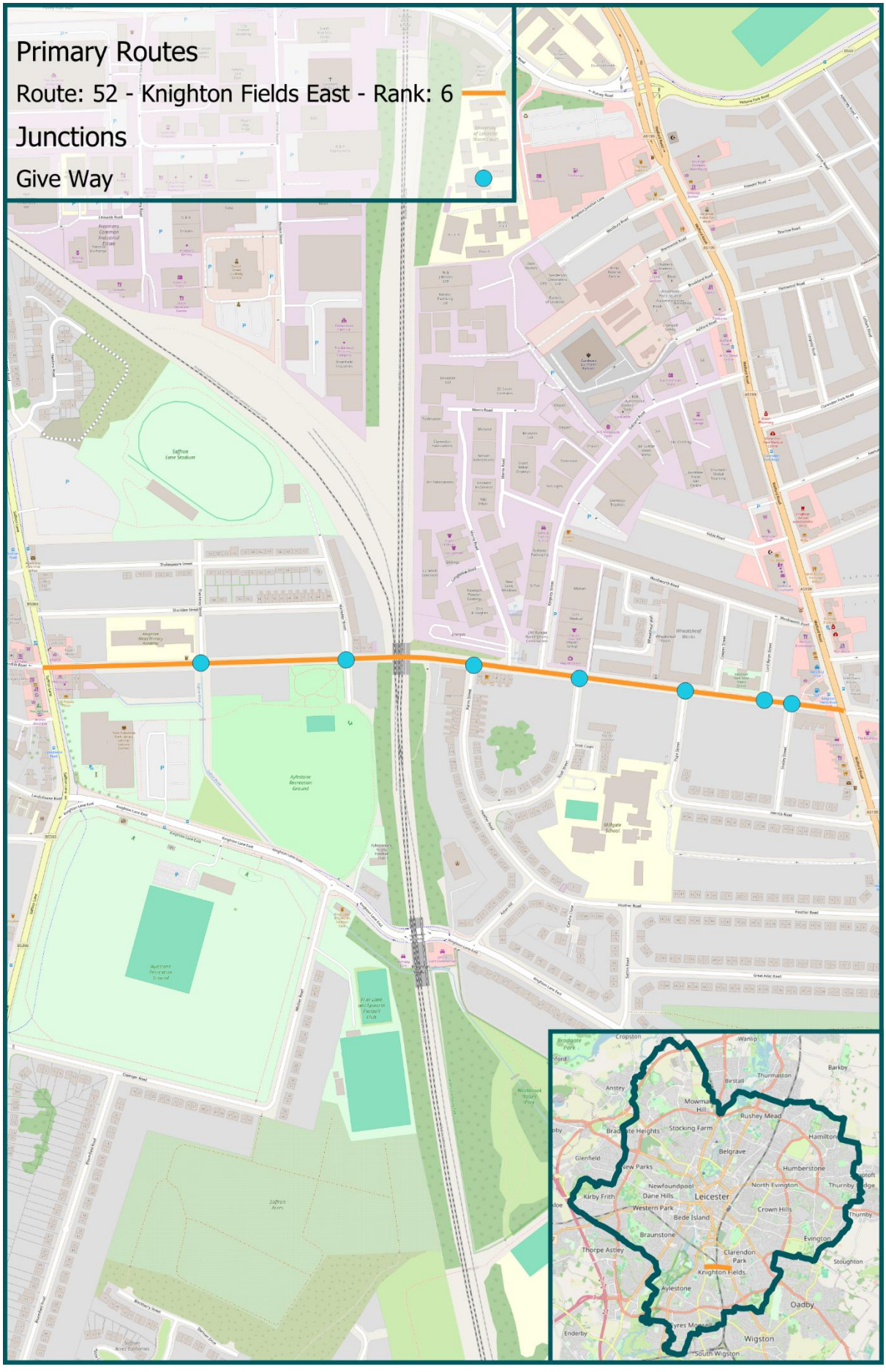

Primary Routes
Route: 29 - Narborough Road - Rank: 1
Junctions
Give Way
Signalised
Fullhurst Community College
Leicester


Primary Routes
Route: 86 - New Parks Way Link - Rank: 2
New Parks Way
Park Rise
Covett Way
Babcock
P
A563
Ashlyns Rise
Leicester


Primary Routes
Route: 11 - Nedham Street/Melbourne Road Link - Rank: 3
Junctions
Give Way
Signalised


Primary Routes
Route: 32 - Fosse Road North Corridor - Rank: 4
Junctions
Give Way
Signalised
Fosse Recreation Ground
Fosse Road North
Henley Road
Pool Road
Tetuan Road
Paget Road
Batternberg Road
Empire Road
Nugent Street
Vernon Street
Warren Street
Vaughan Street
Tewkesbury Street
Warwick Street
Bosworth Street
Wentworth Road
Noble Street
Glenfield Road
Glenfield Road East
King Richards Road
A47
Kirby Road
Leicester
Oadby
Wigston

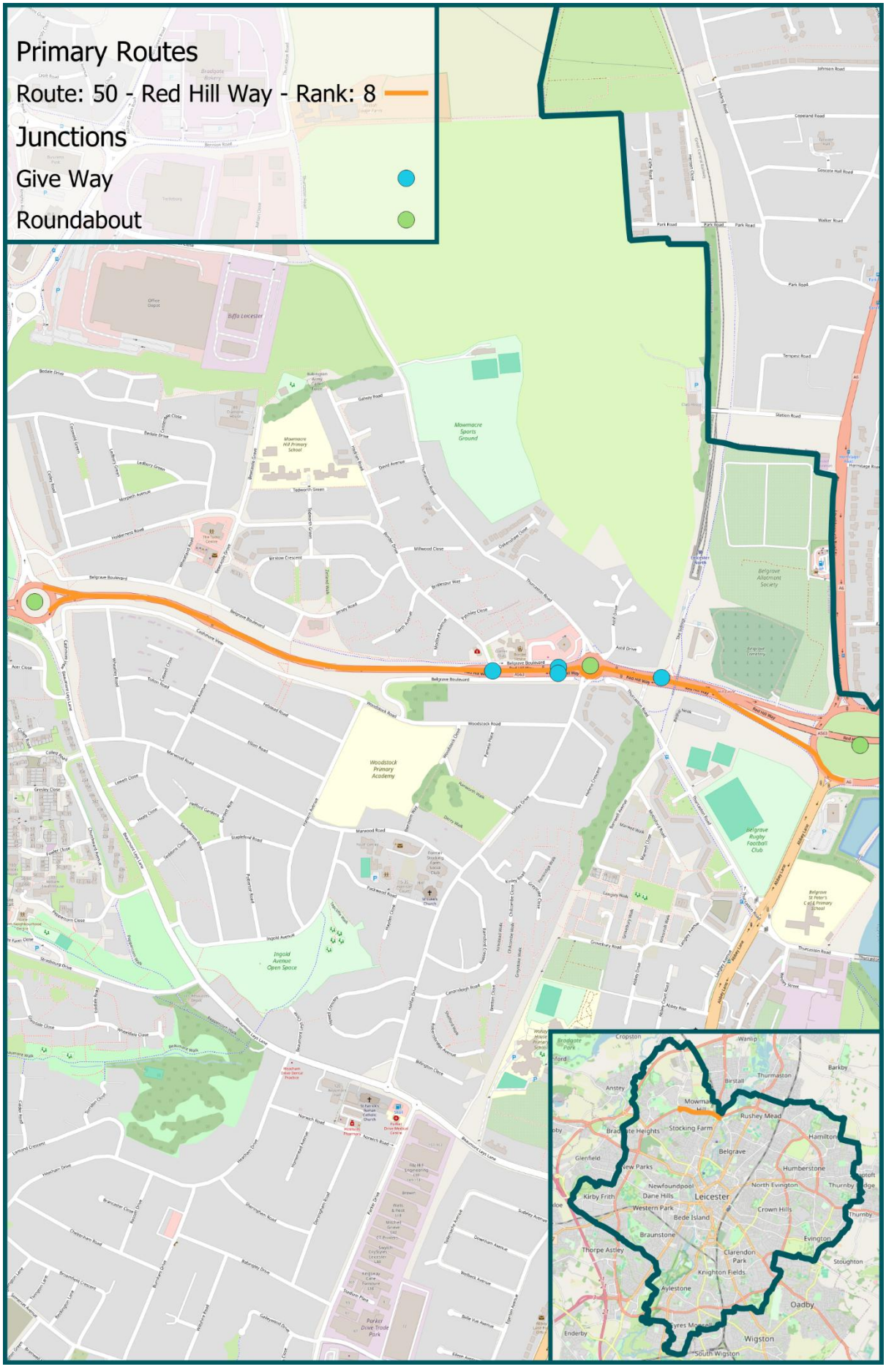

Primary Routes
Route: 71 - New Park Street Connector - Rank: 5
Junctions
Give Way
Roundabout
Signalised
A5460
St Augustine Road
Narborough Road North
Little Holme Street
Old River Soar
Gill Knitwear
New Park Street
Tesco
Leicester
Oadby
Wigston

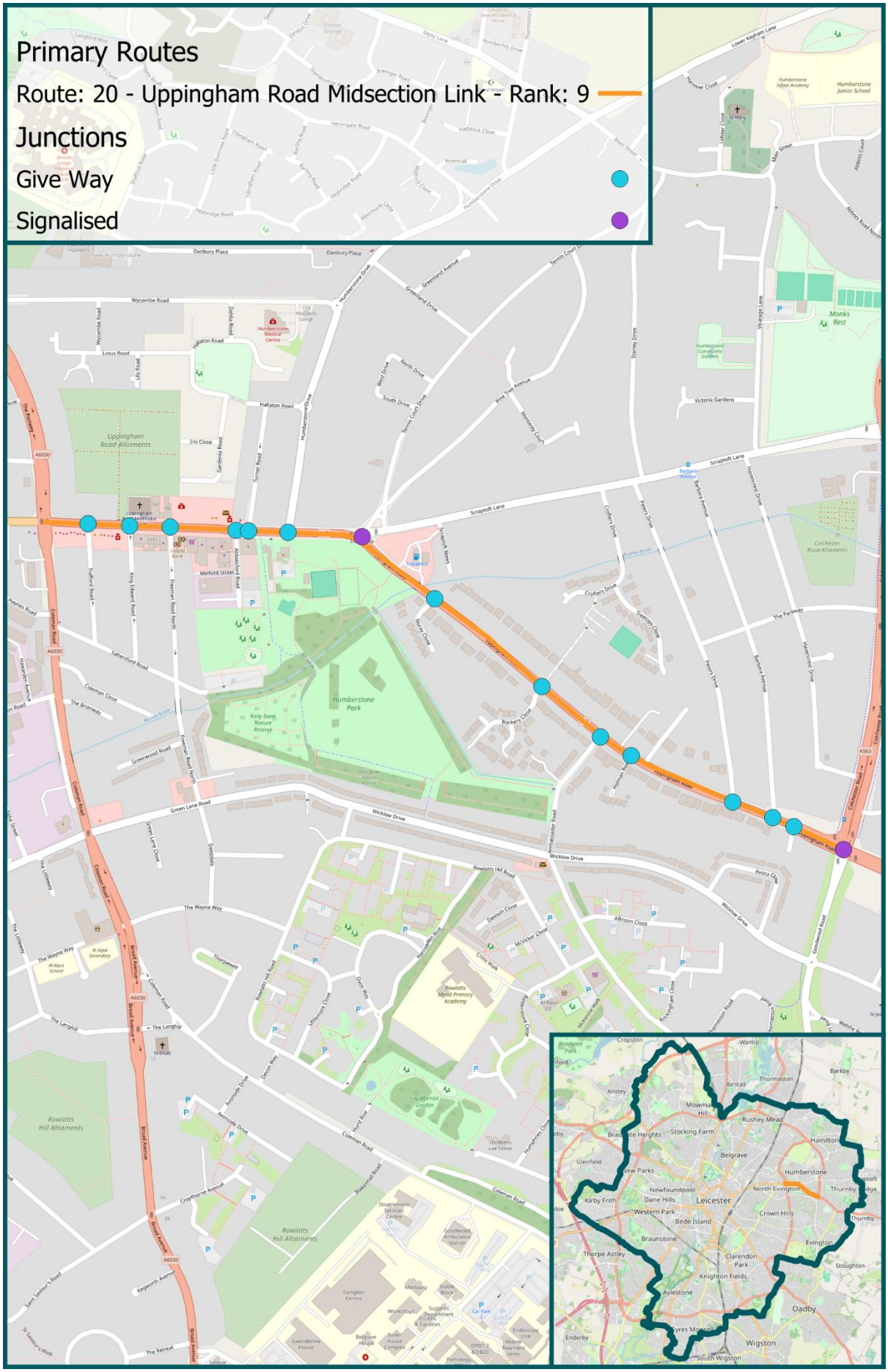

Primary Routes
Route: 52 - Knighton Fields East - Rank: 6
Junctions
Give Way
Saffron Lane Stadium
Aylestone Recreation Ground
Saffron Acres
Cropston
Anstey
Birstall
Thurmaston
Barkby
Rushey Mead
Stocking Farm
Belgrave
Hamilton
Glenfield
New Parks
Humberstone
Newfoundpool
Leicester
North Evington
Kirby Frith
Dane Hills
Western Park
Crown Hills
Bede Island
Braunstone
Evington
Thorpe Astley
Clarendon Park
Knighton Fields
Aylestone
Oadby
Enderby
Wigston
South Wigston

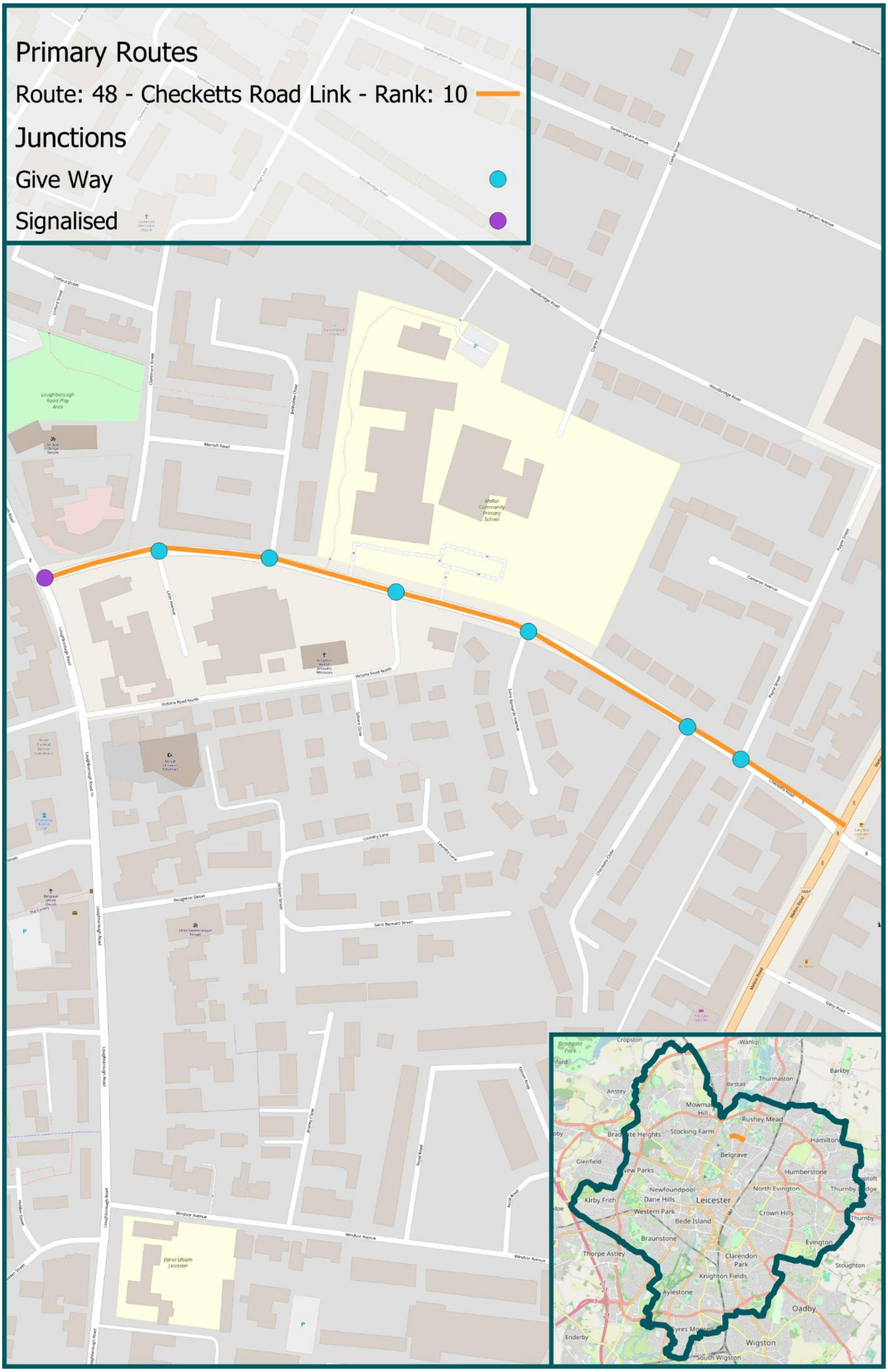

Primary Routes
Route: 21 - Aylestone Road - Rank: 7
Junctions
Give Way
Aylestone Hall Gardens
Old Church Street
Aylestone Road
Hall Lane
Church Road
Russell Street
Belvoir Drive
Paigle Road
Wigston Lane
Leicester
Oadby
Wigston

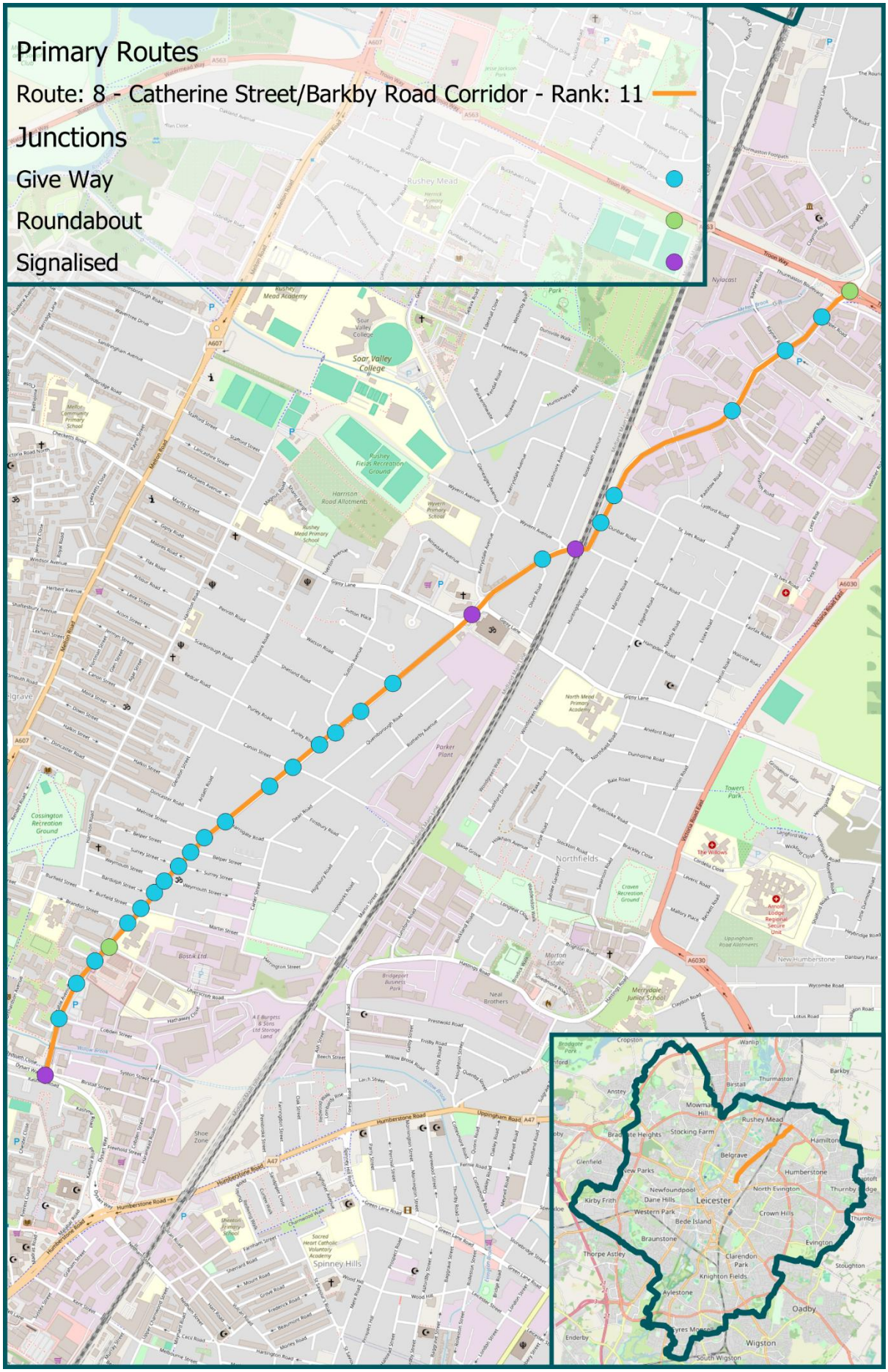

Primary Routes
Route: 21 - Aylestone Road - Rank: 7
Junctions
Give Way
Leicester
Oadby
Wigston
Braunstone
Thorpe Astley
Knighton Fields
Clarendon Park
Western Park
Crown Hills
Humberstone
Belgrave
Rushey Mead
Stocking Farm
Thurmaston
Evington
Stoughton

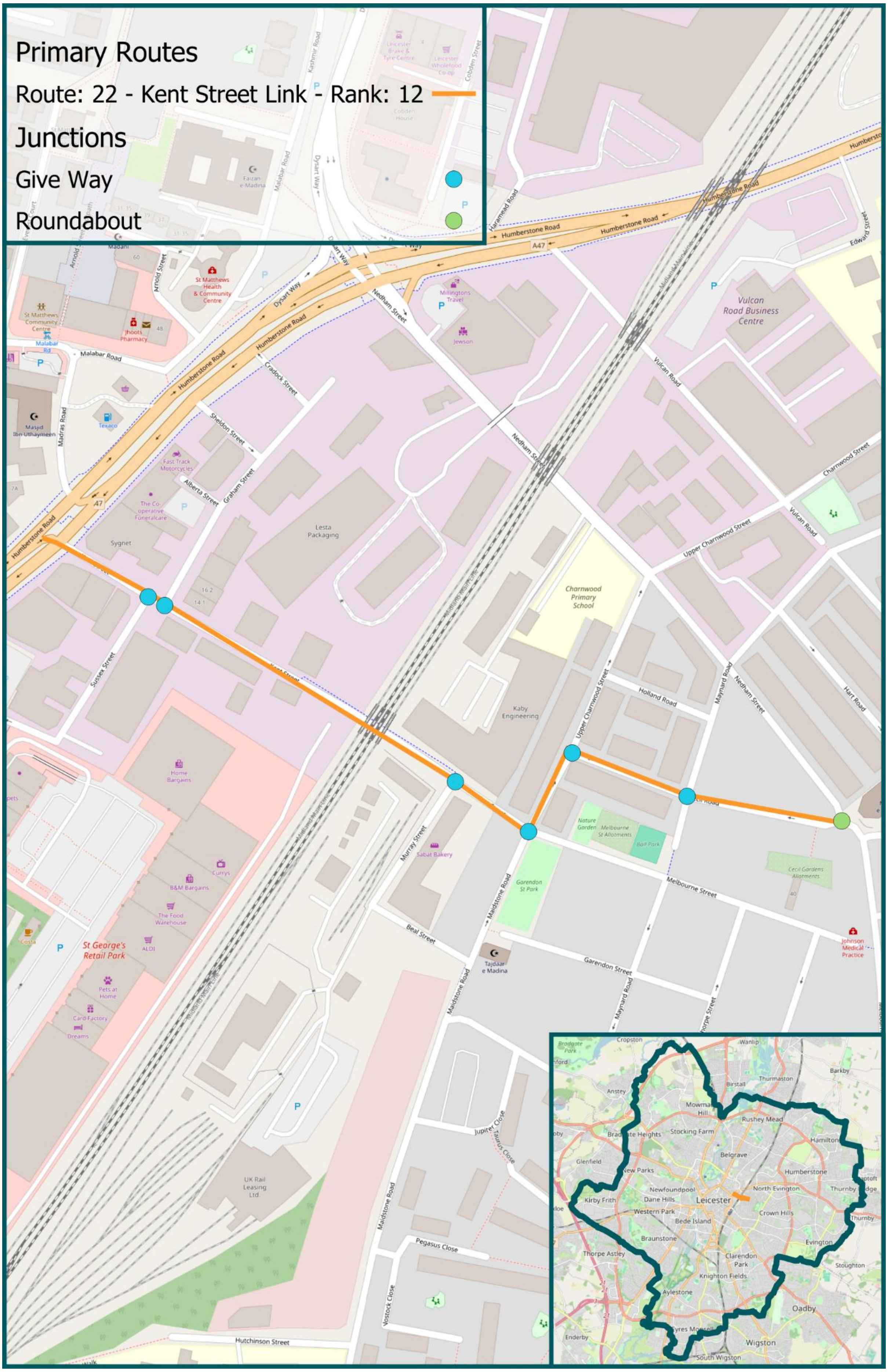

Primary Routes
Route: 21 - Aylestone Road - Rank: 7
Junctions
Give Way
Signalised

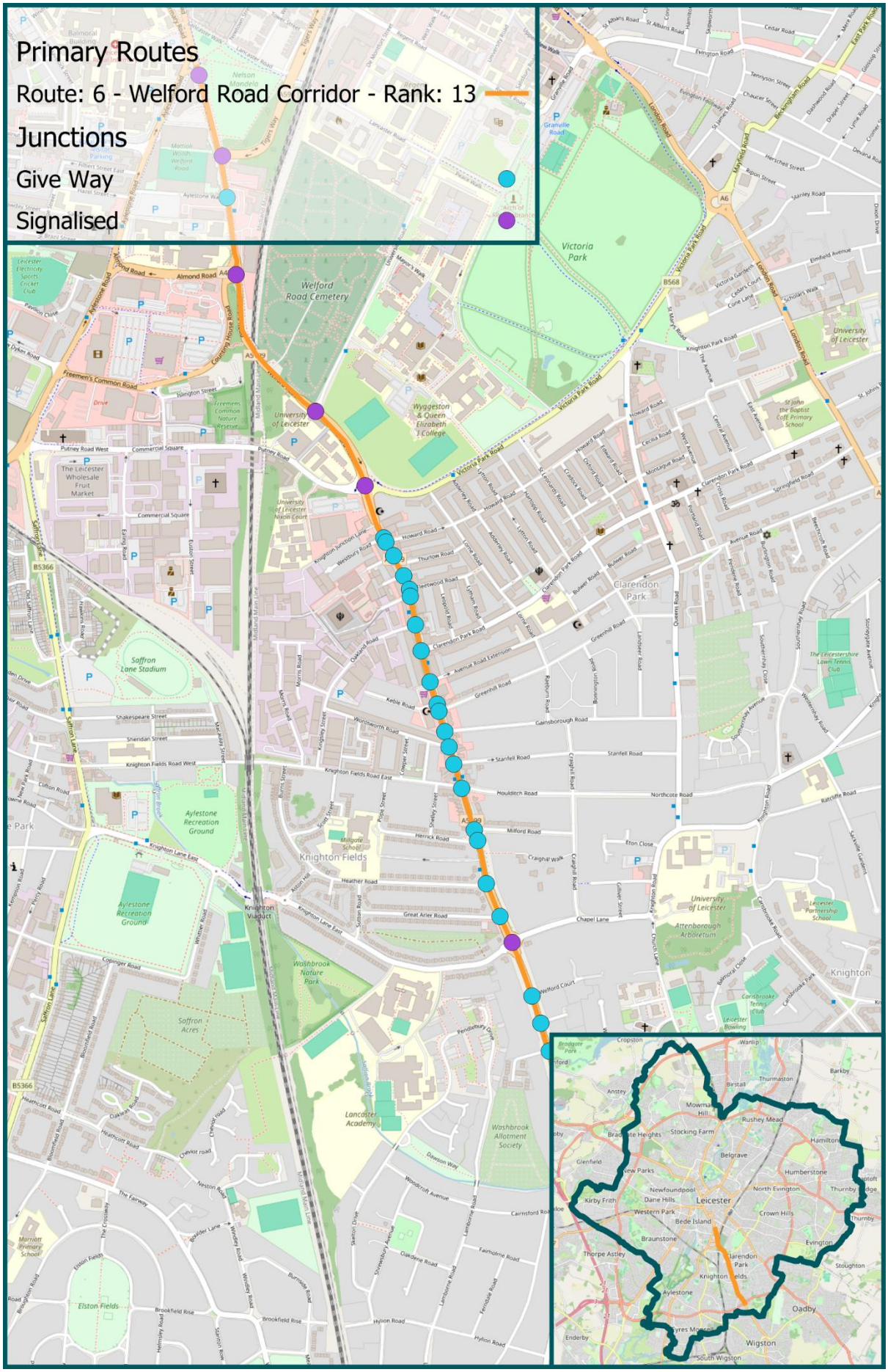

Primary Routes
Route: 50 - Red Hill Way - Rank: 8
Junctions
Give Way
Roundabout

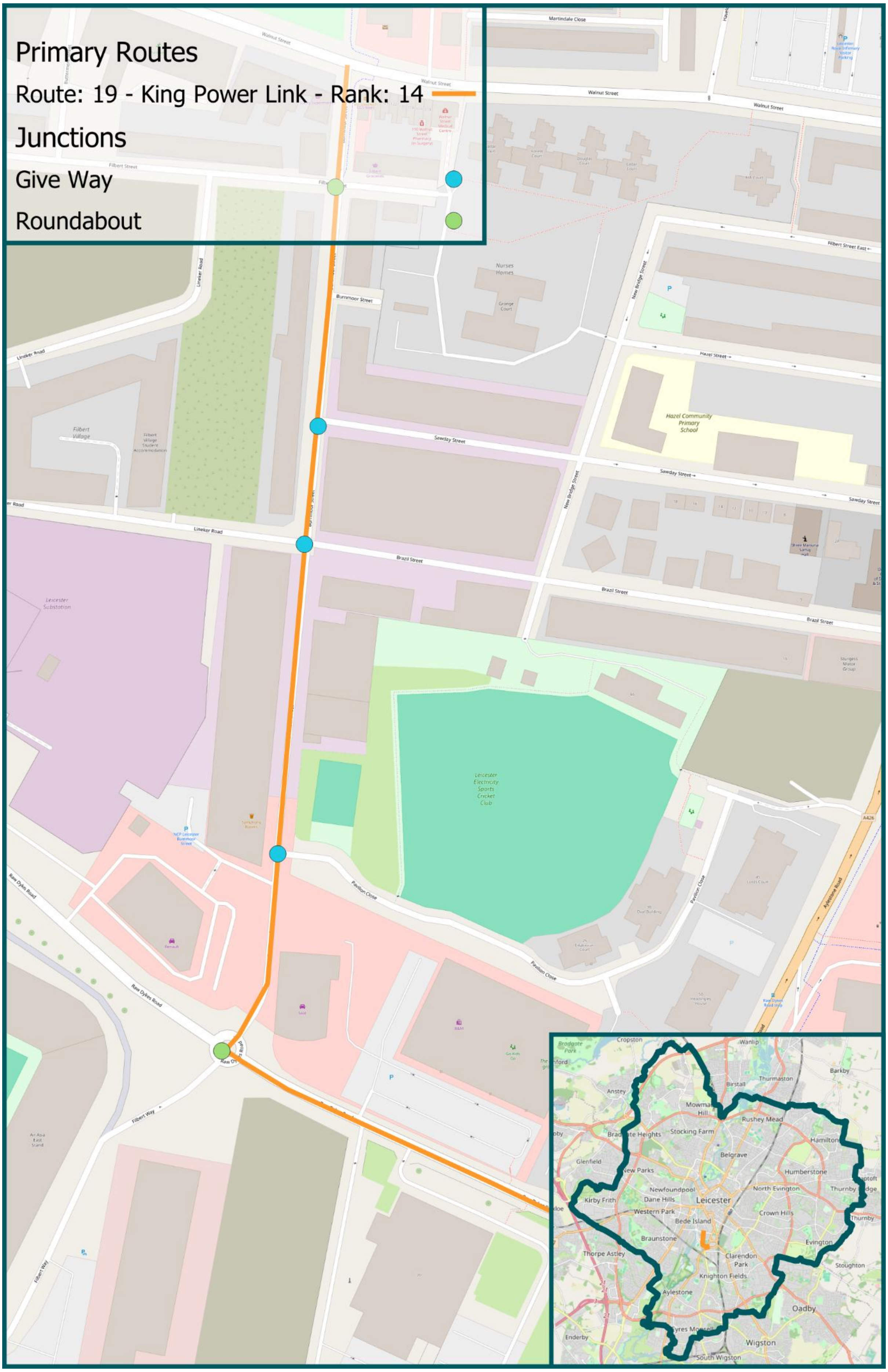

Primary Routes
Route: 20 - Uppingham Road Midsection Link - Rank: 9
Junctions
Give Way
Signalised

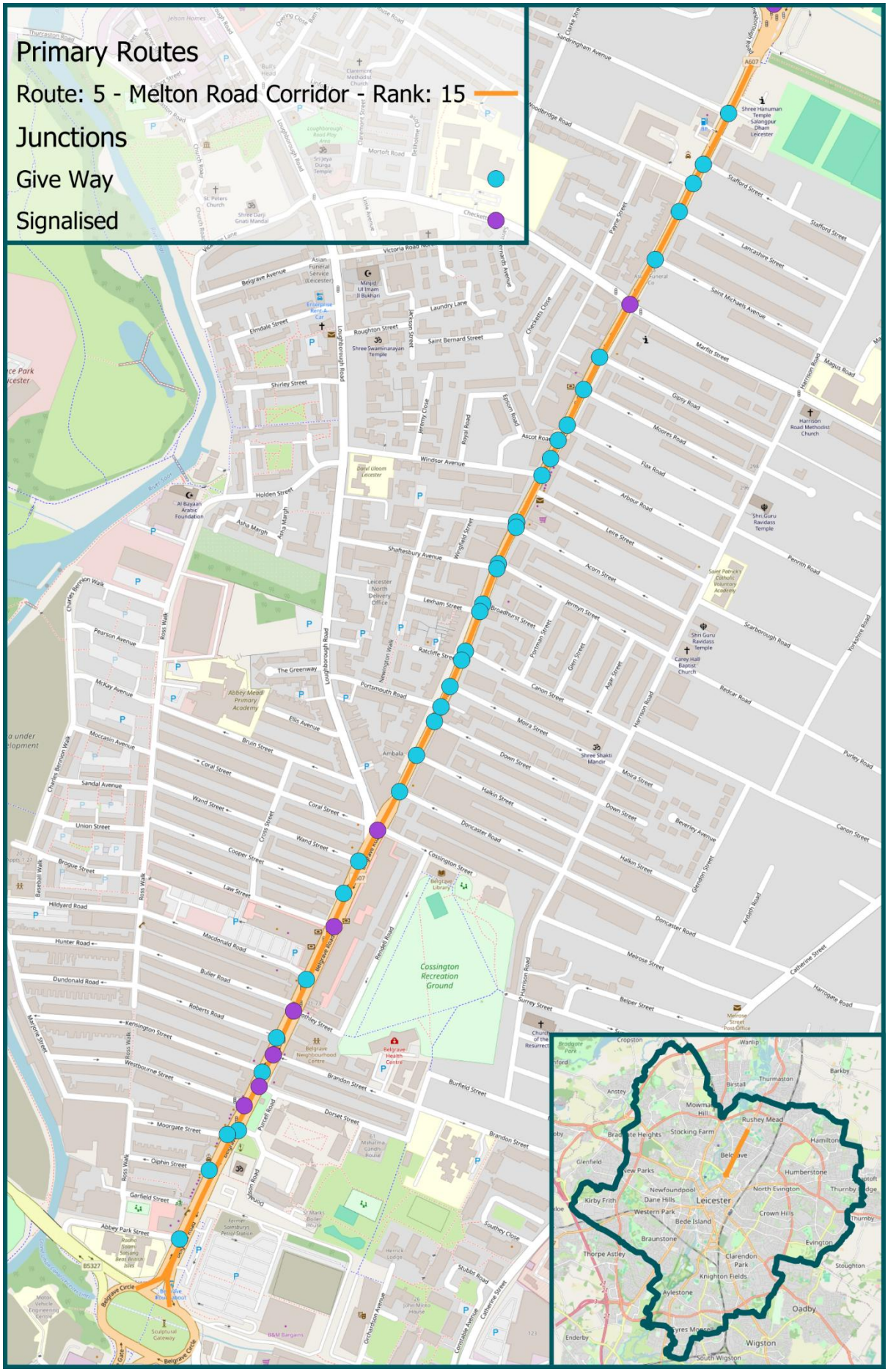

Primary Routes
Route: 48 - Checketts Road Link - Rank: 10
Junctions
Give Way
Signalised
Loughborough Road
Victoria Road North
Mellor Community Primary School
Checketts Road
Windsor Avenue
Darul Uloom Leicester
Melton Road
Leicester
Belgrave
Rushey Mead
Humberstone
Wigston
Oadby

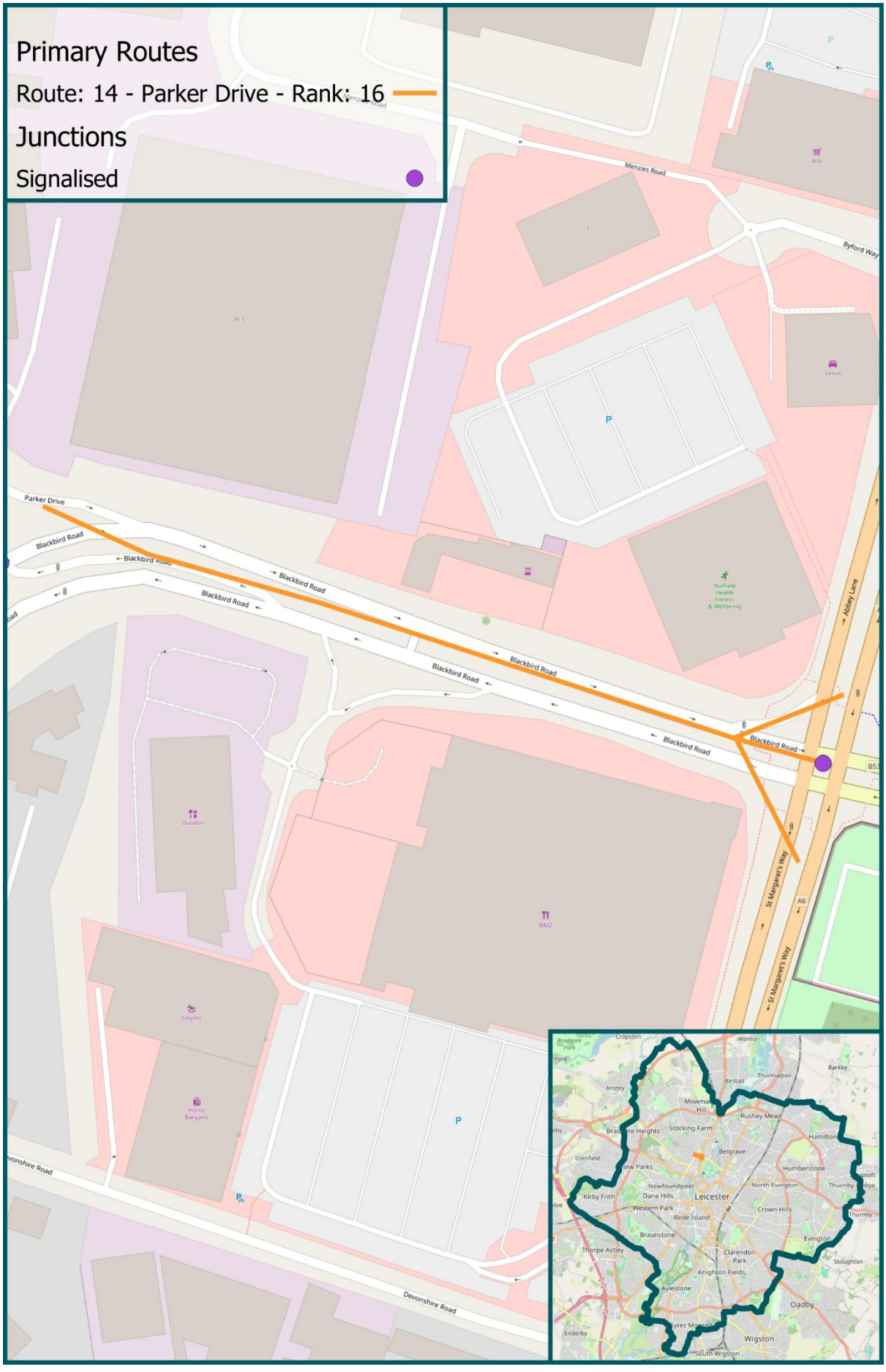

Primary Routes
Route: 8 - Catherine Street/Barkby Road Corridor - Rank: 11
Junctions
Give Way
Roundabout
Signalised

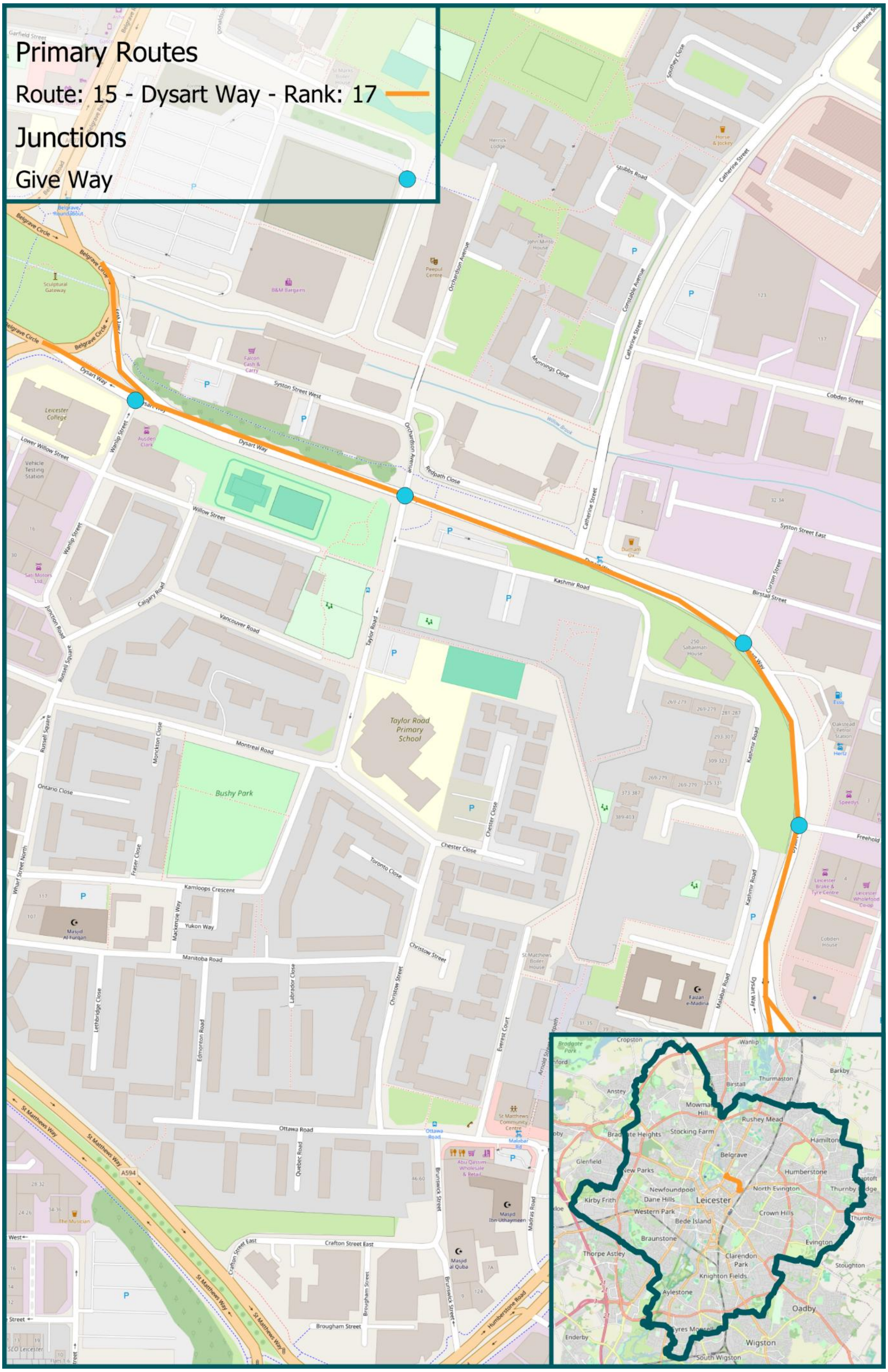

Primary Routes
Route: 22 - Kent Street Link - Rank: 12
Junctions
Give Way
Roundabout

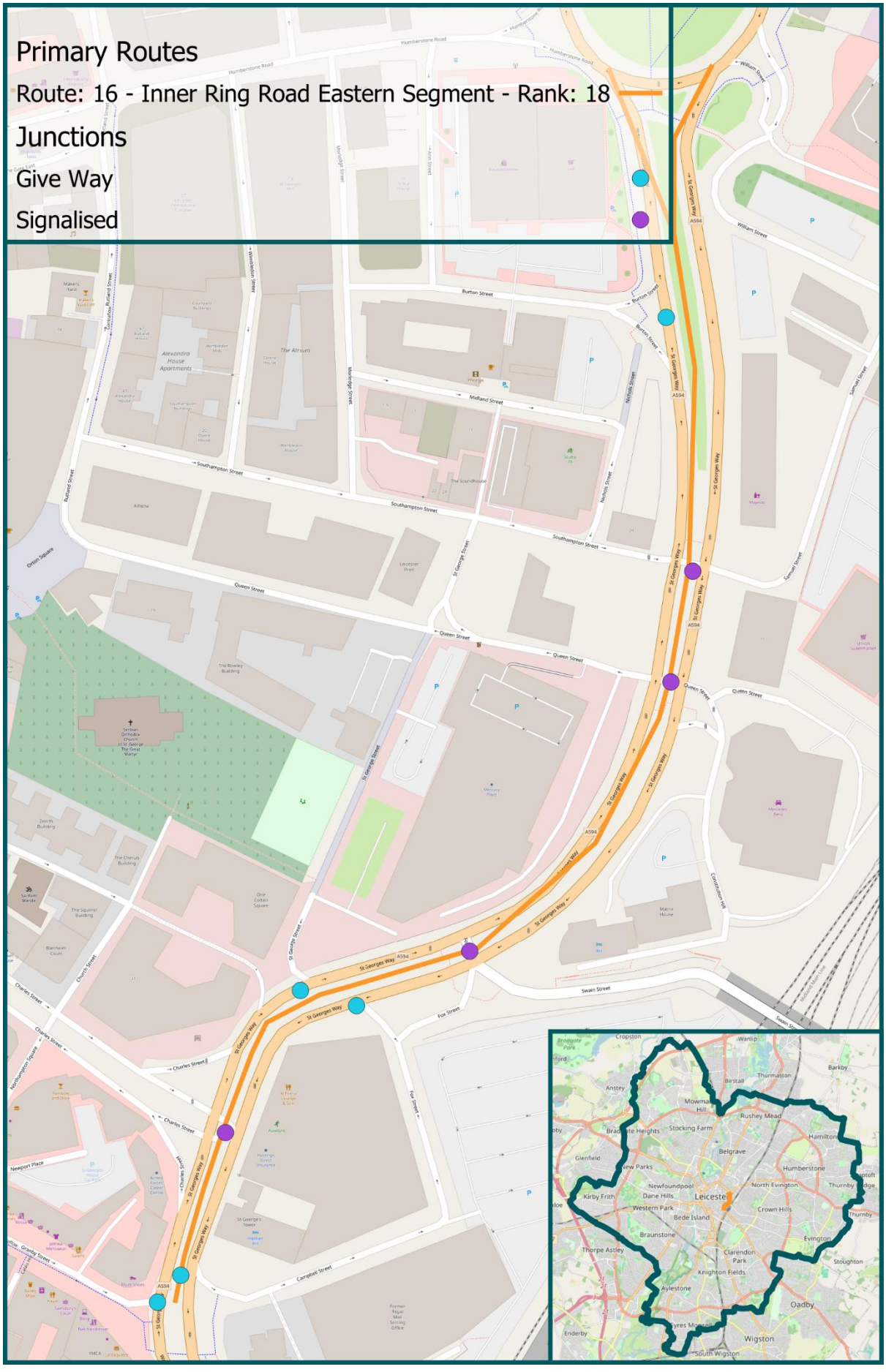

Primary Routes
Route: 6 - Welford Road Corridor - Rank: 13
Junctions
Give Way
Signalised

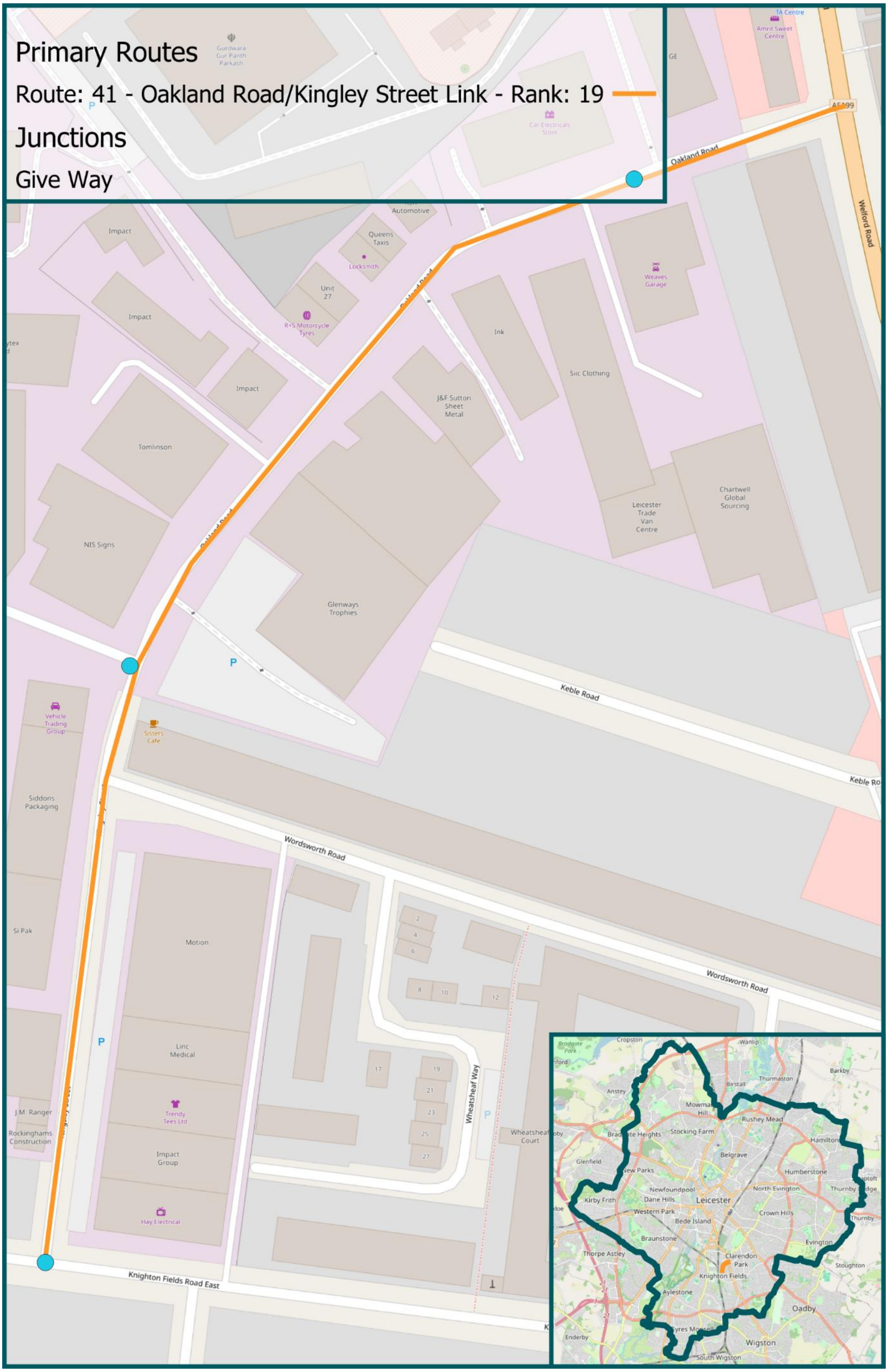

Primary Routes
Route: 19 - King Power Link - Rank: 14
Junctions
Give Way
Roundabout
Hazel Community Primary School
Leicester Electricity Sports Cricket Club
Leicester Substation
Filbert Village
Nurses Homes
Walnut Street
Filbert Street
Lineker Road
Sawday Street
Brazil Street
Hazel Street
New Bridge Street
Burnmoor Street
Pavilion Close
Raw Dykes Road
Filbert Way
Aylestone Road
Leicester
Belgrave
Humberstone
North Evington
Crown Hills
Evington
Clarendon Park
Knighton Fields
Aylestone
Braunstone
Western Park
Newfoundpool
Dane Hills
Bede Island
Kirby Frith
Glenfield
Anstey
Birstall
Thurmaston
Rushey Mead
Hamilton
Thurnby
Stoughton
Oadby
Wigston
South Wigston
Enderby
Thorpe Astley
Stocking Farm
Mowmacre Hill
New Parks
Cropston
Wanlip
Barkby


Primary Routes
Route: 5 - Melton Road Corridor - Rank: 15
Junctions
Give Way
Signalised
Cossington Recreation Ground

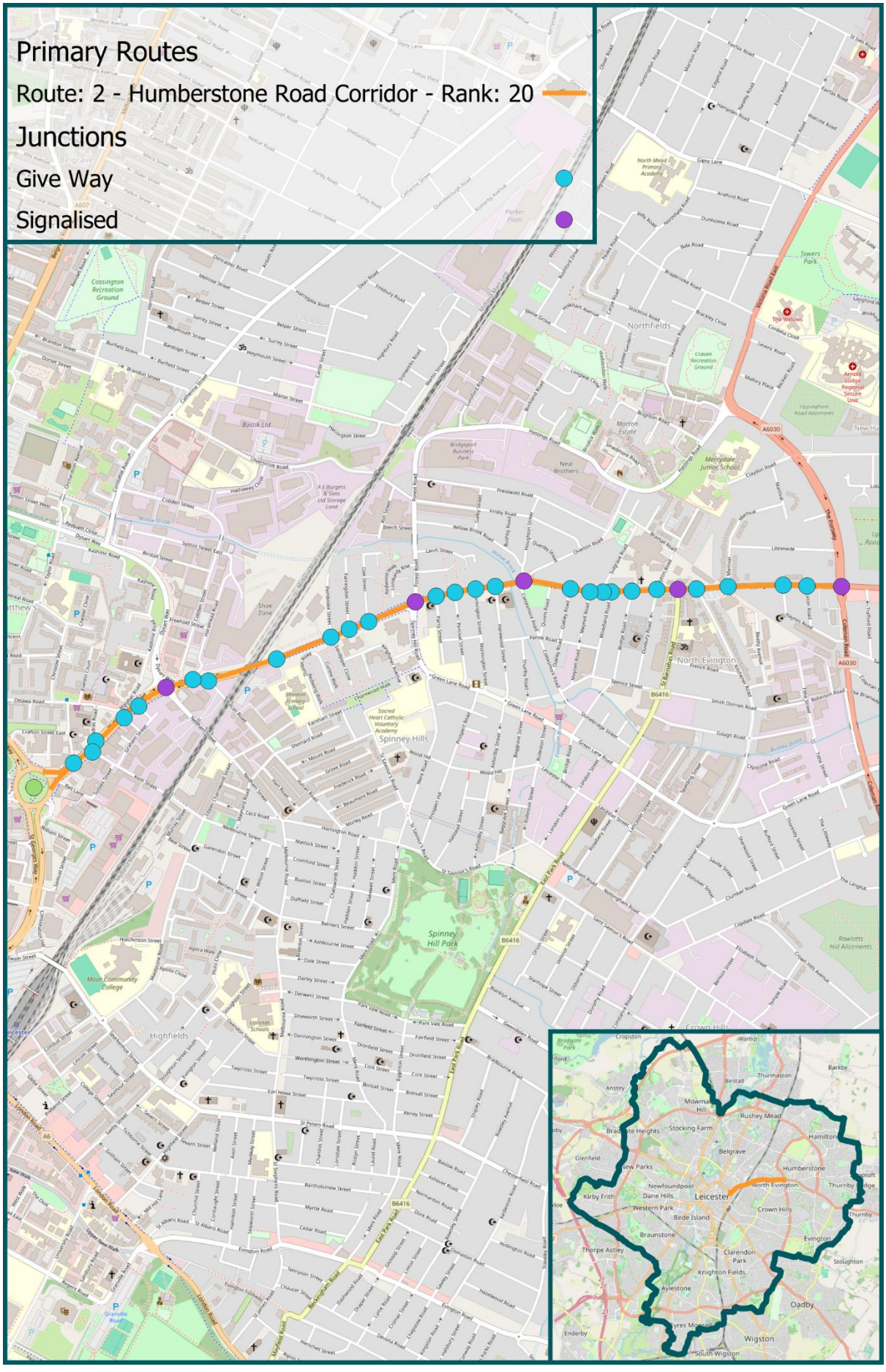

Primary Routes
Route: 14 - Parker Drive - Rank: 16
Junctions
Signalised
Parker Drive
Blackbird Road
Menzies Road
Byford Way
Abbey Lane
St Margaret's Way
Devonshire Road
Leicester

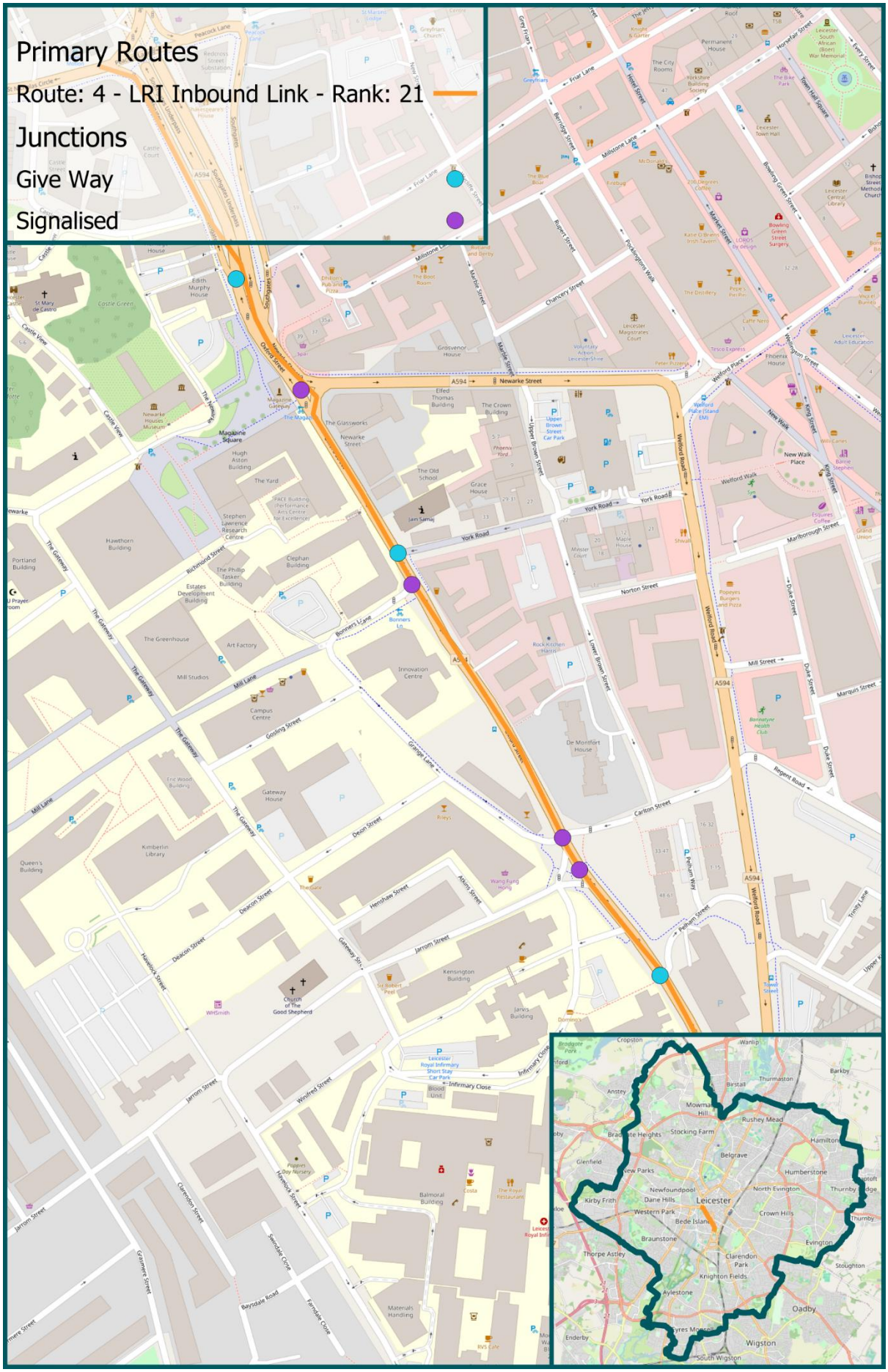

Primary Routes
Route: 15 - Dysart Way - Rank: 17
Junctions
Give Way
Dysart Way
Belgrave Circle
Syston Street West
Syston Street East
Catherine Street
Orchardson Avenue
Willow Street
Vancouver Road
Taylor Road
Kashmir Road
Montreal Road
Bushy Park
Taylor Road Primary School
Leicester College
Manitoba Road
Ottawa Road
St Matthews Way
Cobden Street
Birstall Street
Wanlip
Birstall
Thurmaston
Anstey
Belgrave
Leicester
Humberstone
Evington
Aylestone
Oadby
Wigston

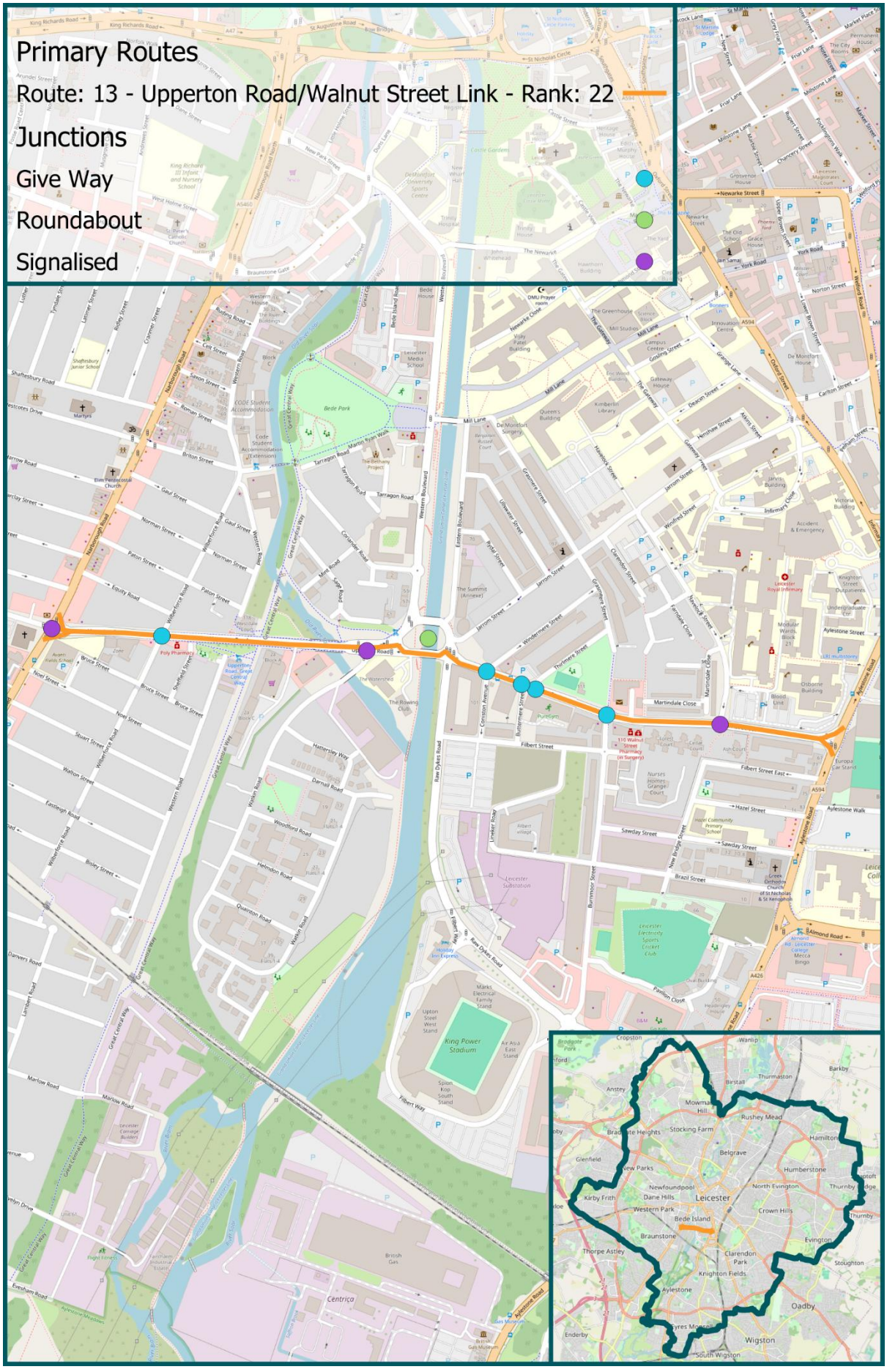

Primary Routes
Route: 16 - Inner Ring Road Eastern Segment - Rank: 18
Junctions
Give Way
Signalised

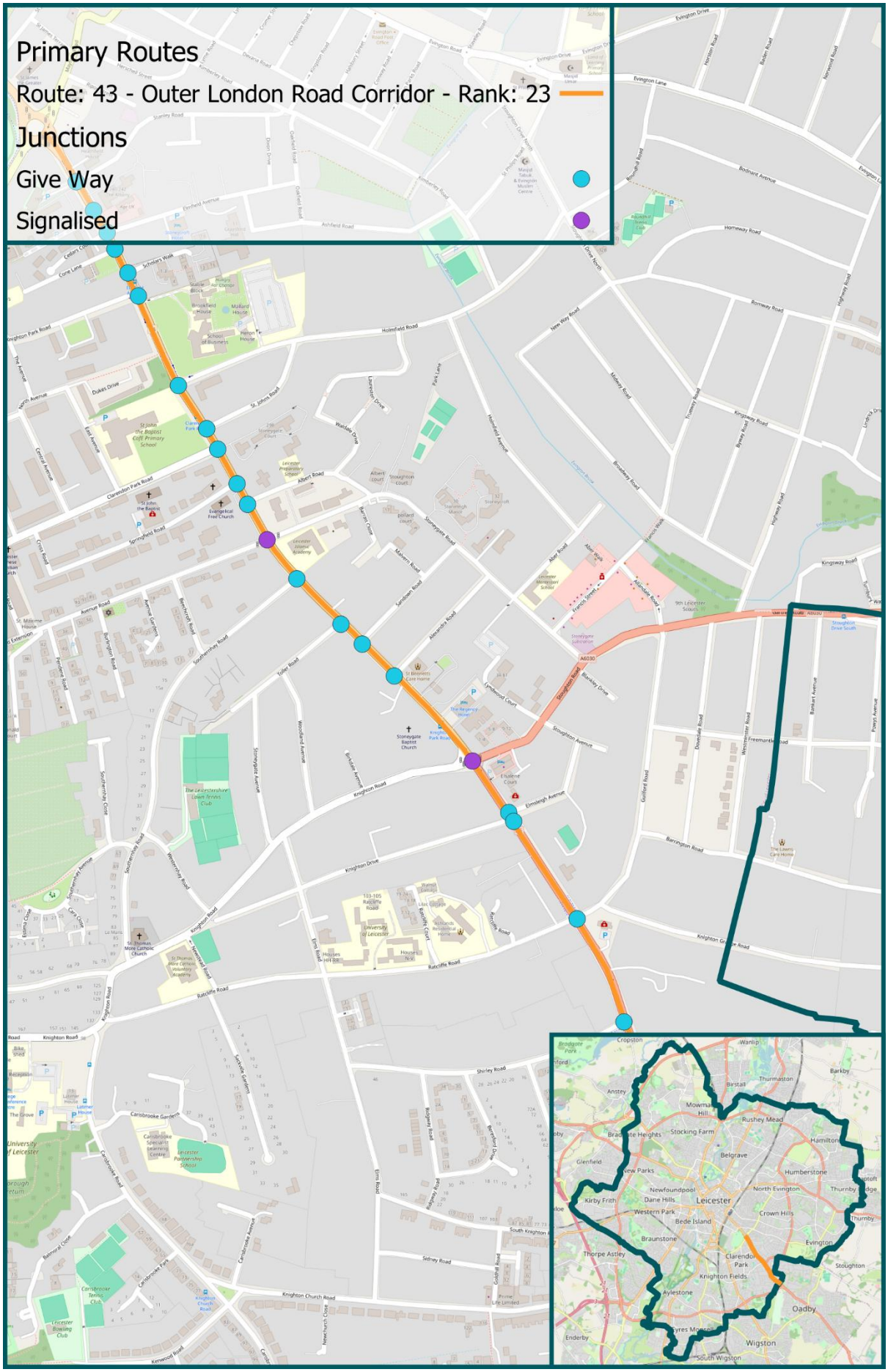


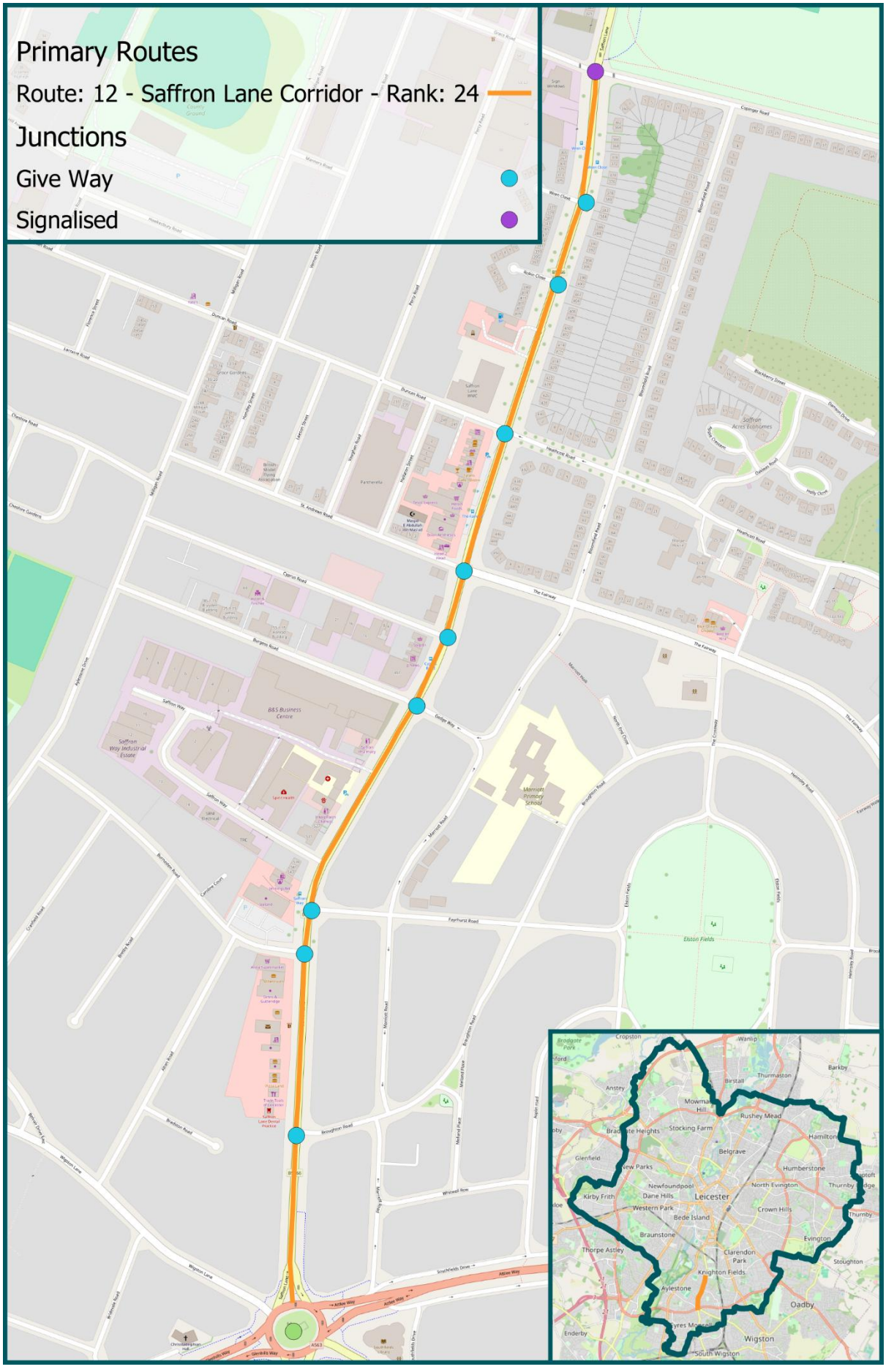
Primary Routes
Route: 41 - Oakland Road/Kingley Street Link - Rank: 19
Junctions
Give Way
Oakland Road
Welford Road
Keble Road
Wordsworth Road
Knighton Fields Road East
Wheatsheaf Way
Impact
Queens Taxis
Locksmith
Unit 27
R+S Motorcycle Tyres
Ink
Siic Clothing
Weaves Garage
J&F Sutton Sheet Metal
Tomlinson
NIS Signs
Glenways Trophies
Leicester Trade Van Centre
Chartwell Global Sourcing
Vehicle Trading Group
Sisters Cafe
Siddons Packaging
Si Pak
Motion
Linc Medical
Trendy Tees Ltd
Impact Group
Hay Electrical
J.M. Ranger
Rockinghams Construction
Wheatsheaf Court
Leicester
Knighton Fields
Clarendon Park
Aylestone
Wigston
Oadby
Evington
Belgrave
Humberstone
Braunstone

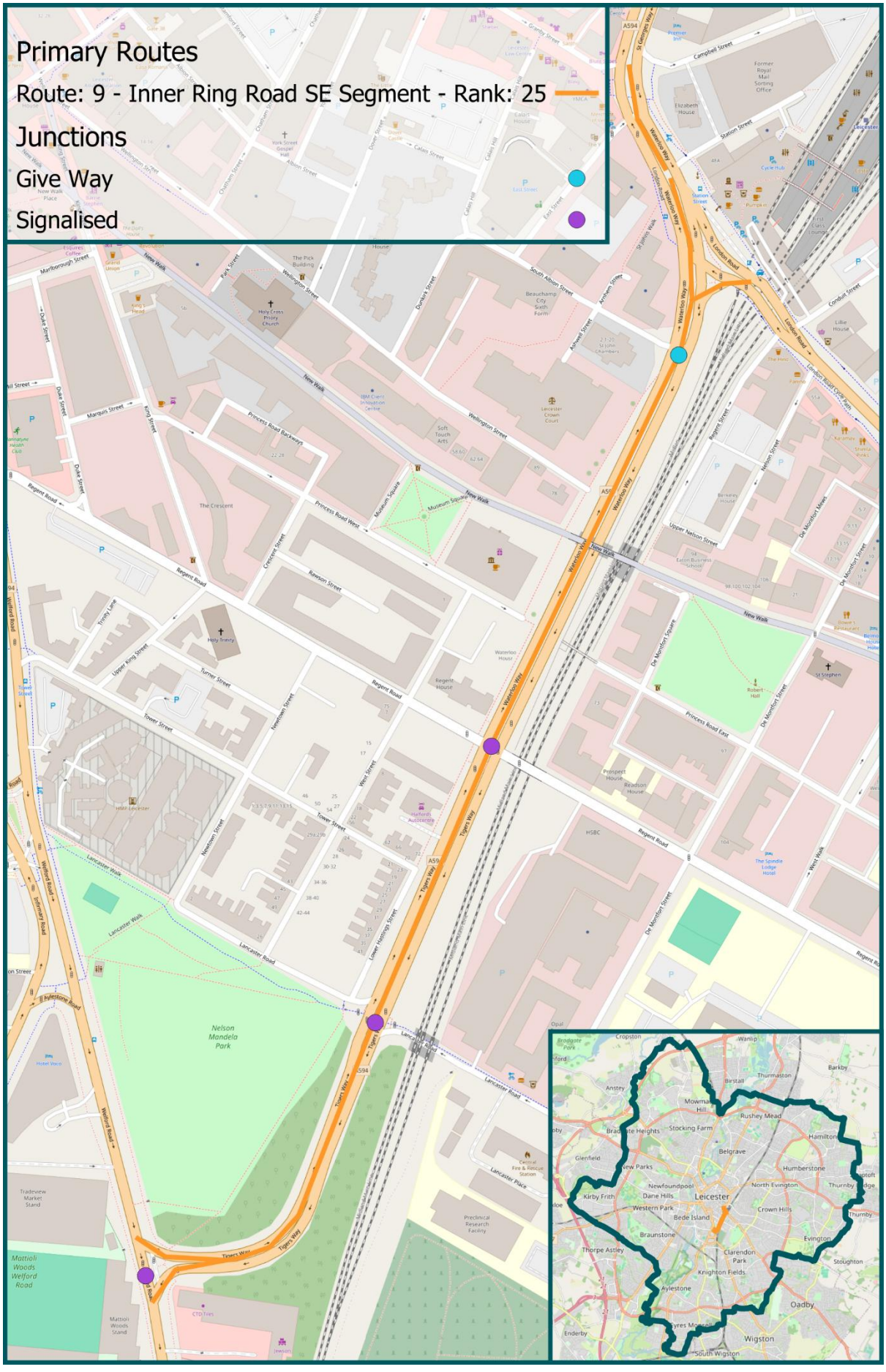

Primary Routes
Route: 2 - Humberstone Road Corridor - Rank: 20
Junctions
Give Way
Signalised

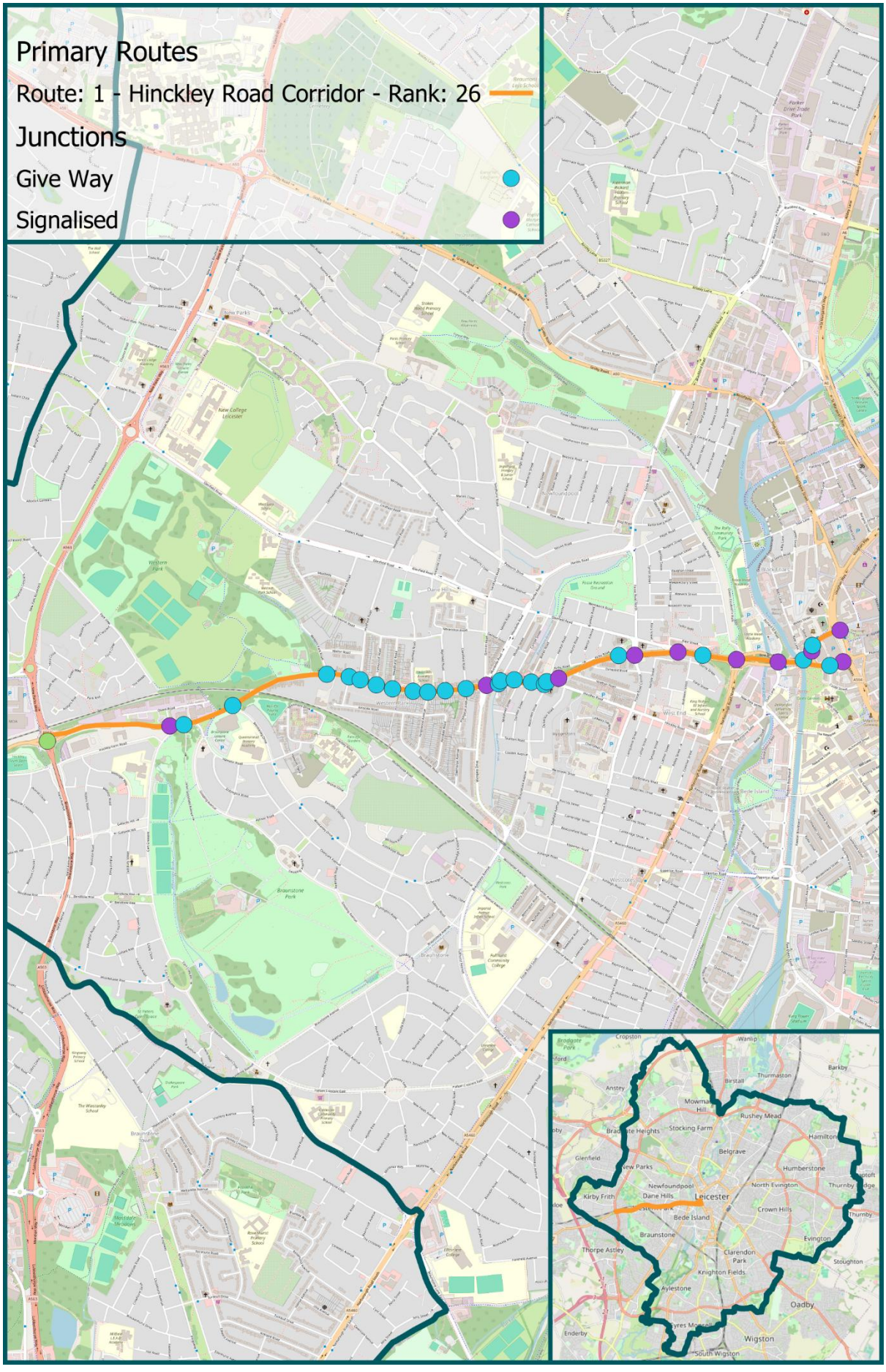

Primary Routes
Route: 4 - LRI Inbound Link - Rank: 21
Junctions
Give Way
Signalised


Primary Routes
Route: 13 - Upperton Road/Walnut Street Link - Rank: 22
Junctions
Give Way
Roundabout
Signalised


Primary Routes
Route: 43 - Outer London Road Corridor - Rank: 23
Junctions
Give Way
Signalised


Primary Routes
Route: 12 - Saffron Lane Corridor - Rank: 24
Junctions
Give Way
Signalised


Primary Routes
Route: 9 - Inner Ring Road SE Segment - Rank: 25
Junctions
Give Way
Signalised


Primary Routes
Route: 1 - Hinckley Road Corridor - Rank: 26
Junctions
Give Way
Signalised
Leicester
Oadby
Wigston
Braunstone
Thorpe Astley
Aylestone
Knighton Fields
Clarendon Park
Evington
Stoughton
Crown Hills
Bede Island
Dane Hills
Kirby Frith
Newfoundpool
North Evington
Humberstone
Belgrave
Hamilton
Rushey Mead
Stocking Farm
Glenfield
New Parks
Anstey
Thurmaston
Barkby
Birstall
Wanlip
Cropston
Enderby
South Wigston

Cycle Parking

Alongside the provision of infrastructure there is, as part of an effective cycle network, a need to provide cycle parking facilities.

Proximity analysis of destination clusters can be used to determine what local cycle parking provision is available, and whether there is a need to increase or relocate provision. This will be compared with cycle theft data from the Police open data platform, to identify where the provision of cycle parking may increase confidence or require additional security measures to ensure safety and compliance.

Areas that form nodes within the cycle network may prove good candidates for additional cycle hubs and will be considered as part of wider programmes.

The city council is currently developing a cycle parking plan and strategy, that will make use of secure cycling hubs that can be accessed via a universal membership system alongside short term offerings – such as Sheffield stands – that provide a level of security and confidence. The strategy will also review existing cycle provision, engagement with third parties to ensure consistency and quality, and solutions for cycle parking in dense terraced or residential areas.

This strategy is due for publication in 2026, and a summary version will be appended to the LCWIP once available.

The city council has developed specific cycle storage guidance for landowners, residents, and developers to help navigate the planning system and ensure we are promoting best practice. The guidance was published in 2023, and may be found on the Leicester City Council website here: Cycle storage design guidance for applicants

Integration and Delivery

Integration

The LCWIP is a key strategic document for the management of Leicester's transport network, sitting along the BSIP as a daughter document to the Local Transport Plan. All projects and decisions made by the city council should give consideration to the document, and ensure that opportunities to progress with the delivery of the required infrastructure are taken.

This is particularly relevant when delivering projects along the key walking or cycling routes identified within the LCWIP, where there is the chance that interim projects may disrupt or adversely impact the overall programme. There are robust processes currently operated by both the Transport and Highways services to ensure information and advanced plans are shared, with strong collaboration at scheduling and conceptual levels. Continuing these processes is key to both ensuring no conflicts and seizing opportunities.

In addition, the LCWIP has been completed as a phase one and it is recognised that routes and zones – and therefore infrastructure – was not able to be audited or identified at this stage. In recognition of this, the prioritisation of projects moving forward will account for location and if they are found within identified routes and zones. Those within areas of the phase one LCWIP will receive a higher priority still, but the result is increased project delivery in areas of high need, which will help realise scores and benefits.

Delivery

The primary mechanism to support delivery of the LCWIP is the development and implementation of an appropriate programme and the prioritisation of resources accordingly.

The authority has strong experience in the field, having successfully delivered the Connecting Leicester and Transforming Cities Fund programmes over the past twelve years across many key routes and junctions in the city, however current financial pressures and the high cost for many of the improvements found within the LCWIP are a substantial barrier.

At time of writing, the government position on Transport funding remains unclear though promising. The introduction of the Local Transport Grant, and expansion of the Active Travel Fund to the Consolidated Active Travel Fund, has provided authorities with a level of certainty over capital delivery resource for the coming years, which is vital when delivering projects that require intensive design, engagement, and consultation.

This section will be updated on the anniversary of the adoption of the LCWIP with projects commissioned, completed, or otherwise progressed during the interim period.

Table of Figures