
Environment and Transport Commissioning Framework



Loughborough Area LCWIP

Phase 1 Report – Network Planning for Cycling and Walking

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1. Introduction

1.1. Background

1.1.1. Leicestershire County Council Network Data and Intelligence has been commissioned by Assets and Major Projects to provide evidence to inform the preparation of the Loughborough Area Local Cycling and Walking Infrastructure Plan (LCWIP).

1.1.2. Figure 1 shows the extents of the LCWIP study area which was identified prior to this study. The area comprises of Loughborough, Shepshed and Quorn, and covers an area of roughly 12km (east - west) by 7km (north - south).

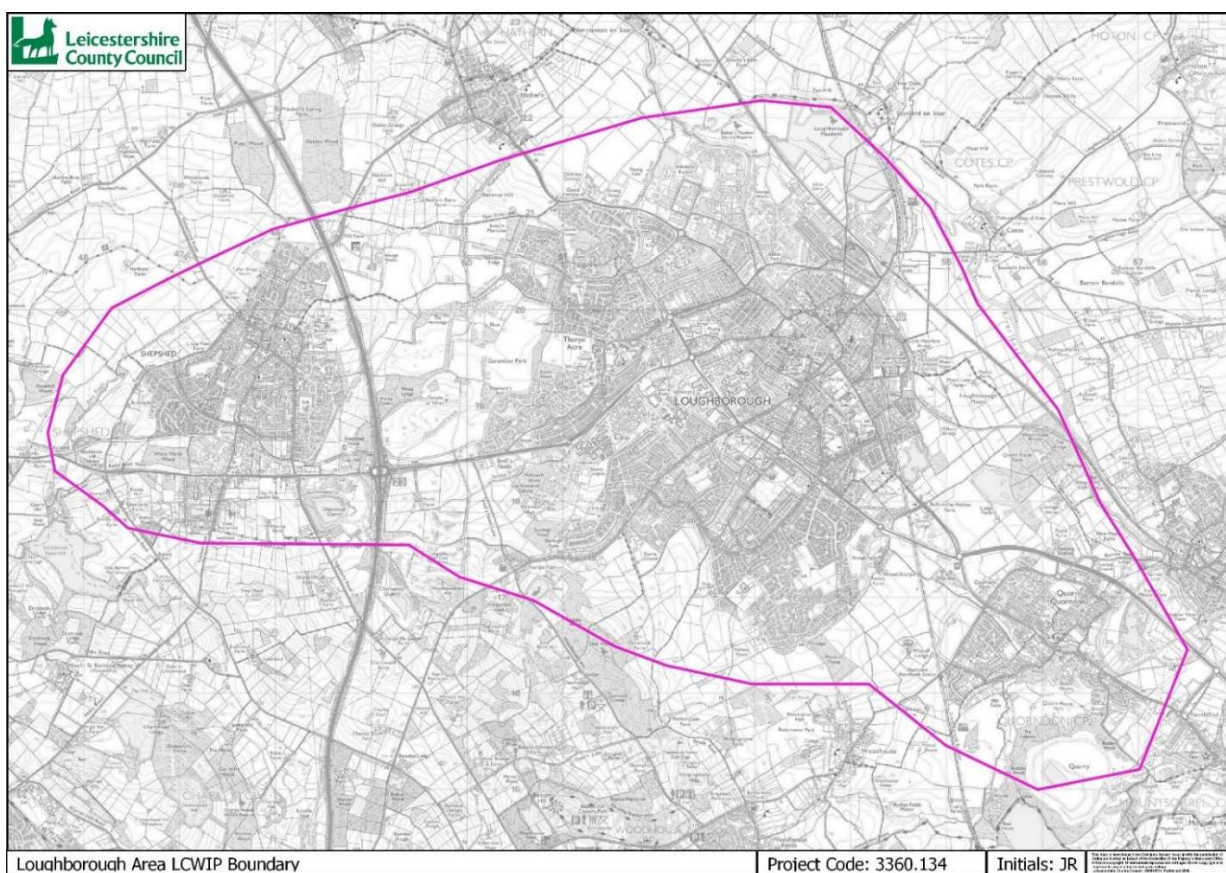


Figure 1. Loughborough Area LCWIP Boundary

1.1.3. The aim of this study is to provide the following 2 sources of information necessary for developing a robust LCWIP submission:

- Phase 1 - to produce cycling and walking network plans which identify where investment in active modes should be targeted.
- Phase 2 - to provide a value for money assessment on each of the proposed schemes and score several factors in a prioritisation table.

1.1.4. This document summarises the work undertaken during Phase 1 of the project, including the methodology adopted, evidence gathered, and network plans produced.

1.2. LCWIP Process

1.2.1. The Department for Transport (DfT) have published the Local Cycling and Walking Infrastructure Plans Technical Guidance¹ which sets out a recommended method for producing LCWIPs. Table 1 outlines the full process, parts of which are addressed in the analysis of this report.

Table 1. LCWIP Process

Stage	Name	Description
1	Determining Score	Establish the geographical extent of the LCWIP, and arrangements for governing and preparing the plan.
2	Gathering Information	Identify existing patterns of walking and cycling and potential new journeys. Review existing conditions and identify barriers to cycling and walking. Review related transport and land use policies and programmes.
3	Network Planning for Cycling	Identify origin and destination points and cycle flows. Convert flows into a network of routes and determine the type of improvements required.
4	Network Planning for Walking	Identify key trip generators, core walking zones and routes, audit existing provision and determine the type of improvements required.
5	Prioritising Improvements	Prioritise improvements to develop a phased programme for future investment.
6	Integration and Application	Integrate outputs into local planning and transport policies, strategies, and delivery plans.

1.2.2. The work of this commission is split into two phases. This report deals with phase 1 and reviews how the evidence gathered has been used to develop the network plans for the study area, contributing towards stages 2 – 4 of the process. The phase 2 report will show the network priorities in the form of a prioritisation table, contributing towards stage 5 of the LCWIP process.

1.3. Policy Context

1.3.1. The DfT's Cycling and Walking Investment Strategy (CWIS)² was published in 2017, covering the period between 2016 and 2021. This was the most up-to-date version of the strategy when the project commenced. The CWIS defines LCWIPs as a strategic approach to identifying cycling and walking improvements required at the local level.

1.3.2. The Second Cycling and Walking Investment Strategy (CWIS2)³ has since been published, covering the period between 2021 and 2025. The principal aims of the CWIS2 are to:

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908535/cycling-walking-infrastructure-technical-guidance-document.pdf

² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/918442/cycling-walking-investment-strategy.pdf

³ <https://www.gov.uk/government/publications/the-second-cycling-and-walking-investment-strategy/the-second-cycling-and-walking-investment-strategy-cwis2>

- increase the percentage of short journeys in towns and cities that are walked or cycled from 41% in 2018 to 2019 to 46% in 2025,
- increase walking activity, where walking activity is measured as the total number of walking stages per person per year, to 365 stages per person per year in 2025,
- double cycling, where cycling activity is measured as the estimated total number of cycling stages made each year, from 0.8 billion stages in 2013 to 1.6 billion stages in 2025
- increase the percentage of children aged 5 to 10 who usually walk to school from 49% in 2014 to 55% in 2025

1.3.3. LCWIPs are a tool which will help to support the delivery of the CWIS2. They enable a long-term approach to developing local cycling and walking networks, ideally over a 10-year timescale, and represent a vital part of the Government's strategy to increase the number of trips made on foot or by cycle.

1.3.4. The key outputs of LCWIPs are:

- a network plan for walking and cycling which identifies preferred routes and core zones for further development,
- a prioritised programme of infrastructure improvements for future investment; and
- a report setting out the underlying analysis carried out with accompanying narrative supporting the identified improvements and network.

2. Evidence Base

2.1. Introduction

2.1.1. This section displays a collection of evidence from national and local databases to support and inform the development of the LCWIP cycling and walking network plans. The evidence identifies the existing geographic, environmental, demographic, and existing and forecasted travel situation in the area.

2.2. Local Geography

Topography

2.2.1. Figure 2 shows the topography of the study area; contour lines that are closer together indicate a steeper slope and contour lines that are further apart show flatter slopes. Steep gradients are an impedence to cycling and are an important factor in the choices that users make when considering route options. Whilst most of the study area has minimal topographical variation there are sections that could present a challenge to cyclists, such as the Loughborough University campus.

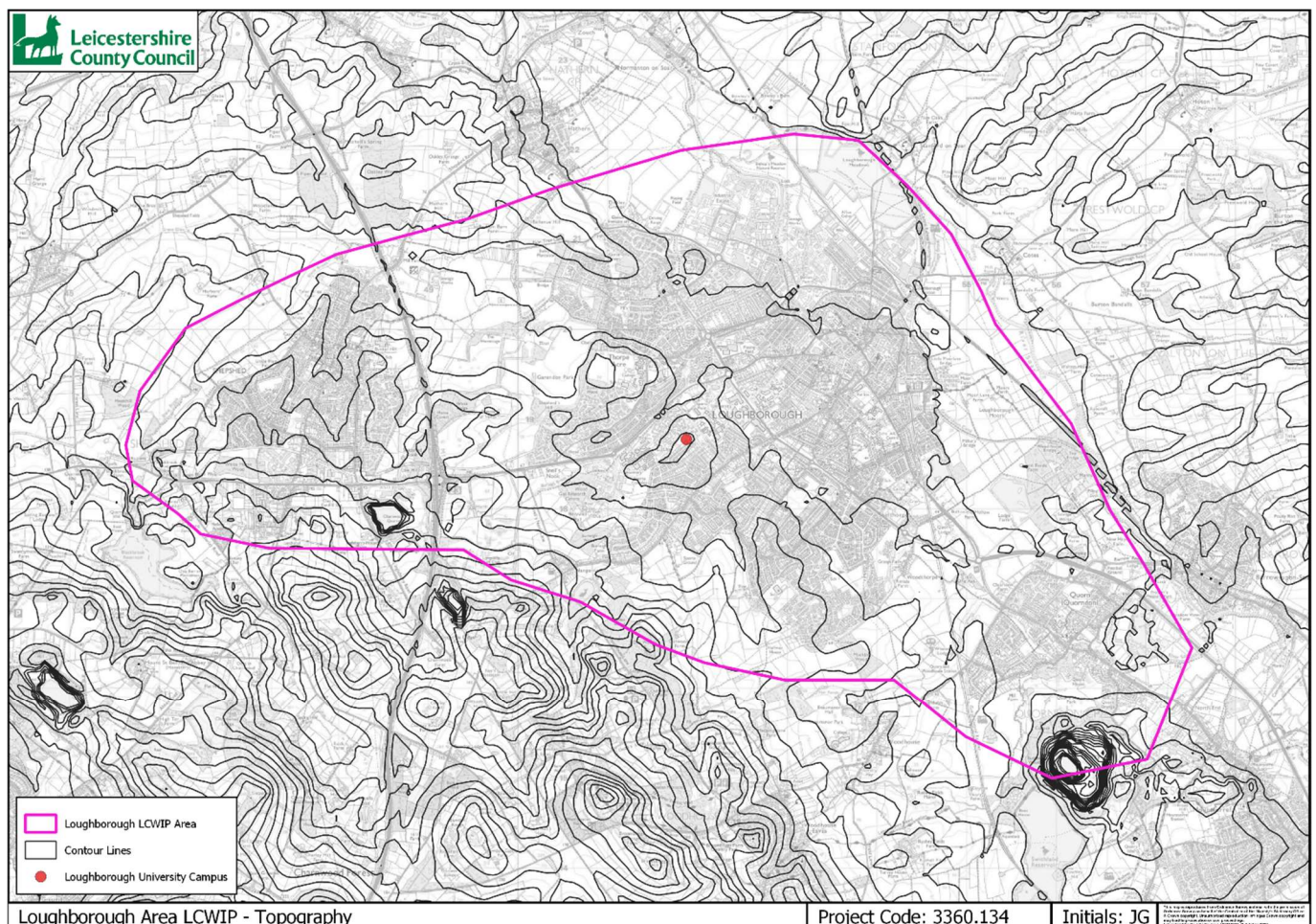


Figure 2. Topographic Map

2.2.2. According to the Department for Transport's Cycling Infrastructure Design (LTN 1/20), cycling routes should avoid steep gradients where possible. People can cycle steep gradients that are fairly short but are not capable of maintaining high levels of effort over longer distances⁴.

Barriers to Movement

2.2.3. A major barrier to active modes is the perception that roads are dangerous and unpleasant. However, there are also several physical barriers to active movements including rivers, canals, railway lines and heavily trafficked roads which have limited crossing points. Figure 3 illustrates where these features are in the study area.

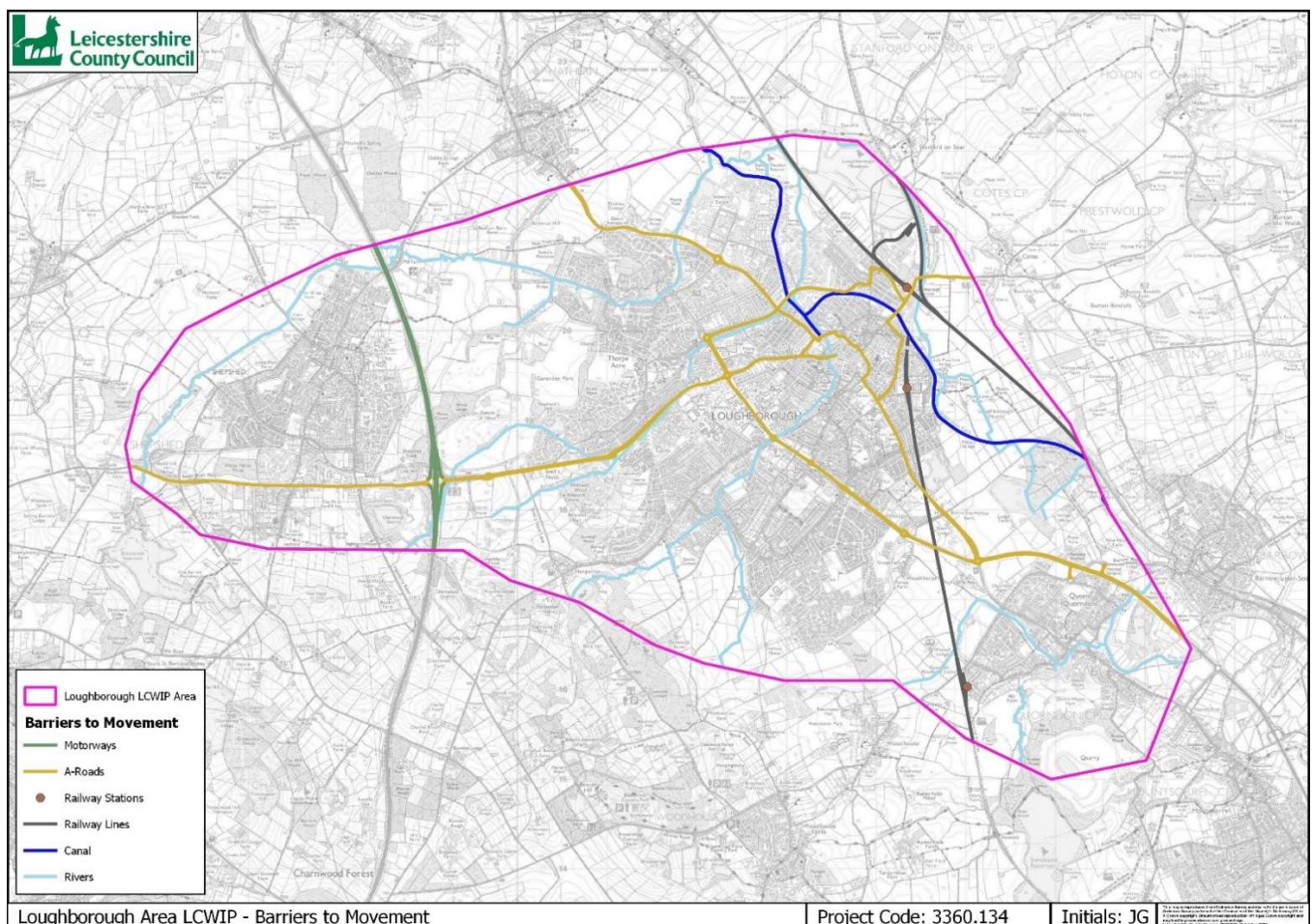


Figure 3. Barriers to Movement

2.2.4. There are also several design and maintenance issues that could act as a barrier to active modes, such as overgrown plants, damaged or unsuitable surfaces, parked cars, chicanes, flights of steps, gates, narrow widths, gaps in the infrastructure, and so on⁵.

⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951074/cycle-infrastructure-design-ltn-1-20.pdf

⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904146/gear-change-a-bold-vision-for-cycling-and-walking.pdf

2.3. Environmental Considerations

Air Quality Management Areas (AQMAs)

2.3.1. An AQMA is an area where the level of air pollutants exceeds the national Air Quality Objective⁶. Figure 4 shows the AQMAs in the Loughborough area, specifically:

- AQMA 1: Loughborough AQMA
- AQMA 2: Great Central Railway AQMA
- AQMA 3: Mountsorrel Air Quality Management Area (in part)

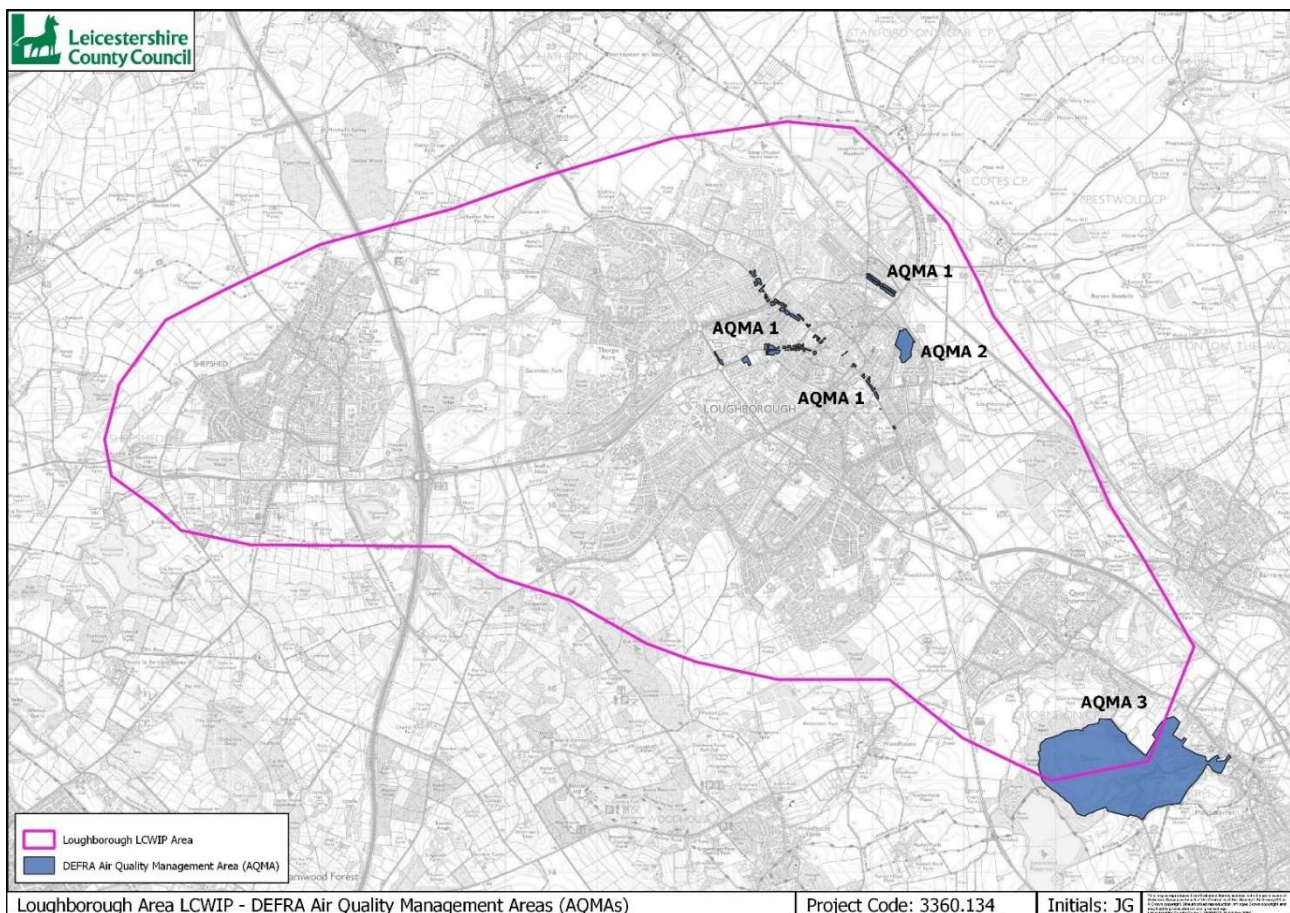


Figure 4. Air Quality Management Areas (AQMAs)

2.3.2. In the 3 areas shown, the major sources of nitrogen dioxide (NO₂), sulphur dioxide (SO₂) and particulate matter (PM₁₀) are transport and local industry. The Charnwood Local Plan Air Quality Study 2020⁷ and 2021 Air Quality Annual Status Report (ASR)⁸ contain several actions intended to improve air quality, including investing in infrastructure for walking and cycling.

⁶ <https://uk-air.defra.gov.uk/air-pollution/uk-eu-limits>

⁷ https://www.charnwood.gov.uk/files/documents/charnwood_local_plan_air_quality_study_2020/Charnwood%20Local%20Plan%20Air%20Quality%20Study%202020.pdf

⁸ https://www.charnwood.gov.uk/files/documents/2021_annual_status_report_asr/Charnwood%20ASR%202021.pdf

Place-Based Carbon Calculator (PBCC)

2.3.3. The PBCC is a tool which estimates the per-person carbon footprint for every Lower Layer Super Output Area (LSOA) in England⁹. The tool uses a consumption-based approach to carbon footprints, meaning that the emissions are counted by the consumer of a good or service not the producer. The tool provides a wide range of layers, but only total emission grade and car emissions grade have been explored for the LCWIP.

2.3.4. The PBCC draws on a wide range of data and research to give an overview of the carbon footprint for an LSOA. This is divided by the population in the LSOA to get an average carbon footprint per person. Each area has a grade from A+ (low emissions) to F- (high emissions) in comparison to the England average.

2.3.5. Figure 5 shows the total emissions grade for each LSOA in the study area, which is the estimated average annual carbon footprint per person. Nanpantan has the worst carbon footprint in the area followed by Quorn, Shepshed and Loughborough, respectively.

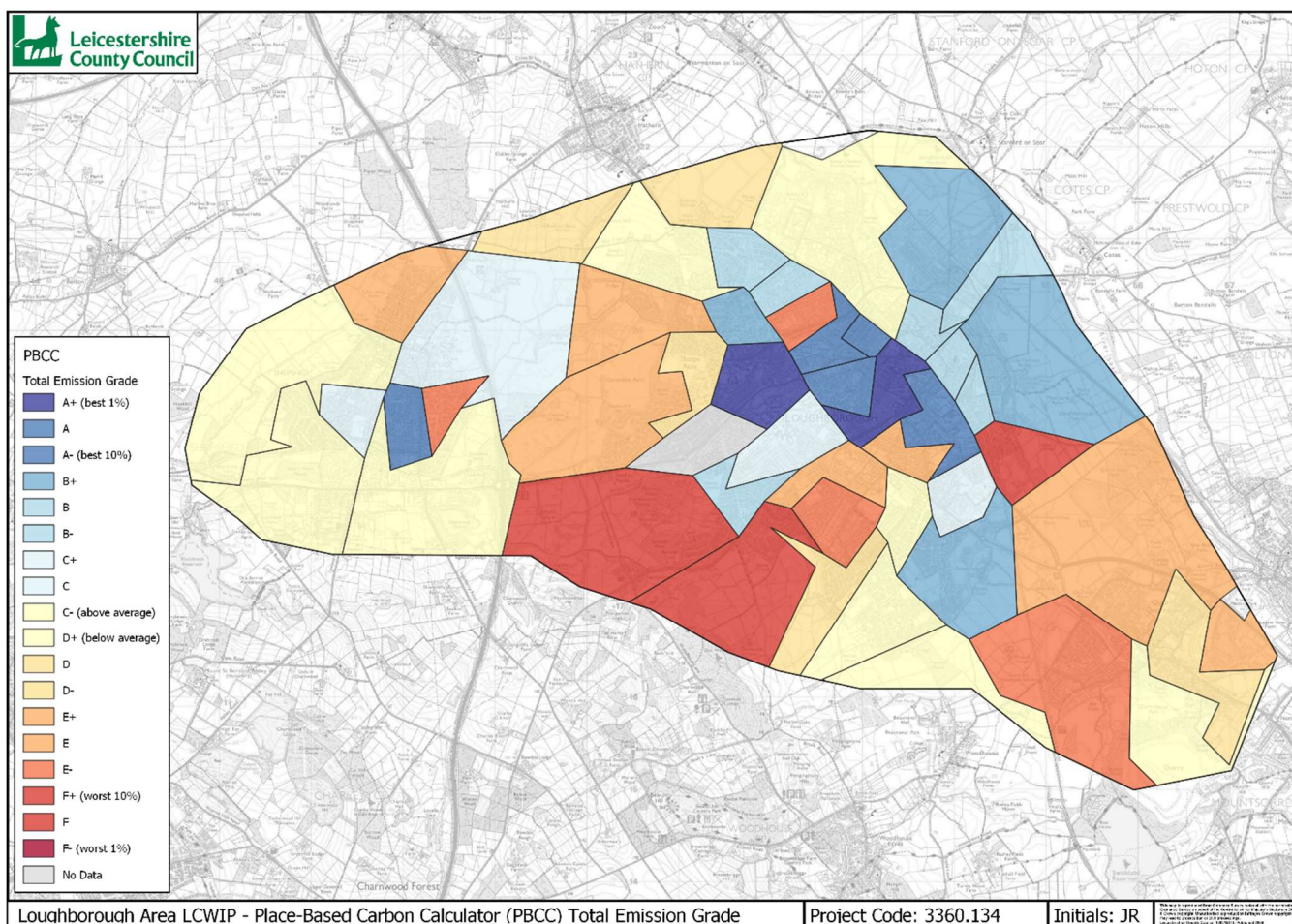


Figure 5. Place Based Carbon Calculator (PBCC) Total Emission Grade

⁹ <https://www.carbon.place/> Morgan, Malcolm, Anable, Jillian, & Lucas, Karen. (2021). A place-based carbon calculator for England. Presented at the 29th Annual GIS Research UK Conference (GISRUK), Cardiff, Wales, UK (Online): Zenodo. <http://doi.org/10.5281/zenodo.4665852>

2.3.6. Out of 50 LSOAs in the study area, 26 are above average for total emissions grade and 23 are below average. Furthermore, there are 7 LSOAs in the best 10% in England and 2 in the worst 1%. There is one LSOA without any data; the PBCC have suppressed the overall carbon footprint grade for this LSOA due to the low certainty of the data¹⁰.

2.3.7. Figure 6 shows the car emissions grade for each LSOA in the study area, which is the estimated average carbon footprint per person from driving cars. The LSOAs in and around Loughborough have the best grades in the study area, likely due to the pedestrianised areas and public transport options available in the town centre.

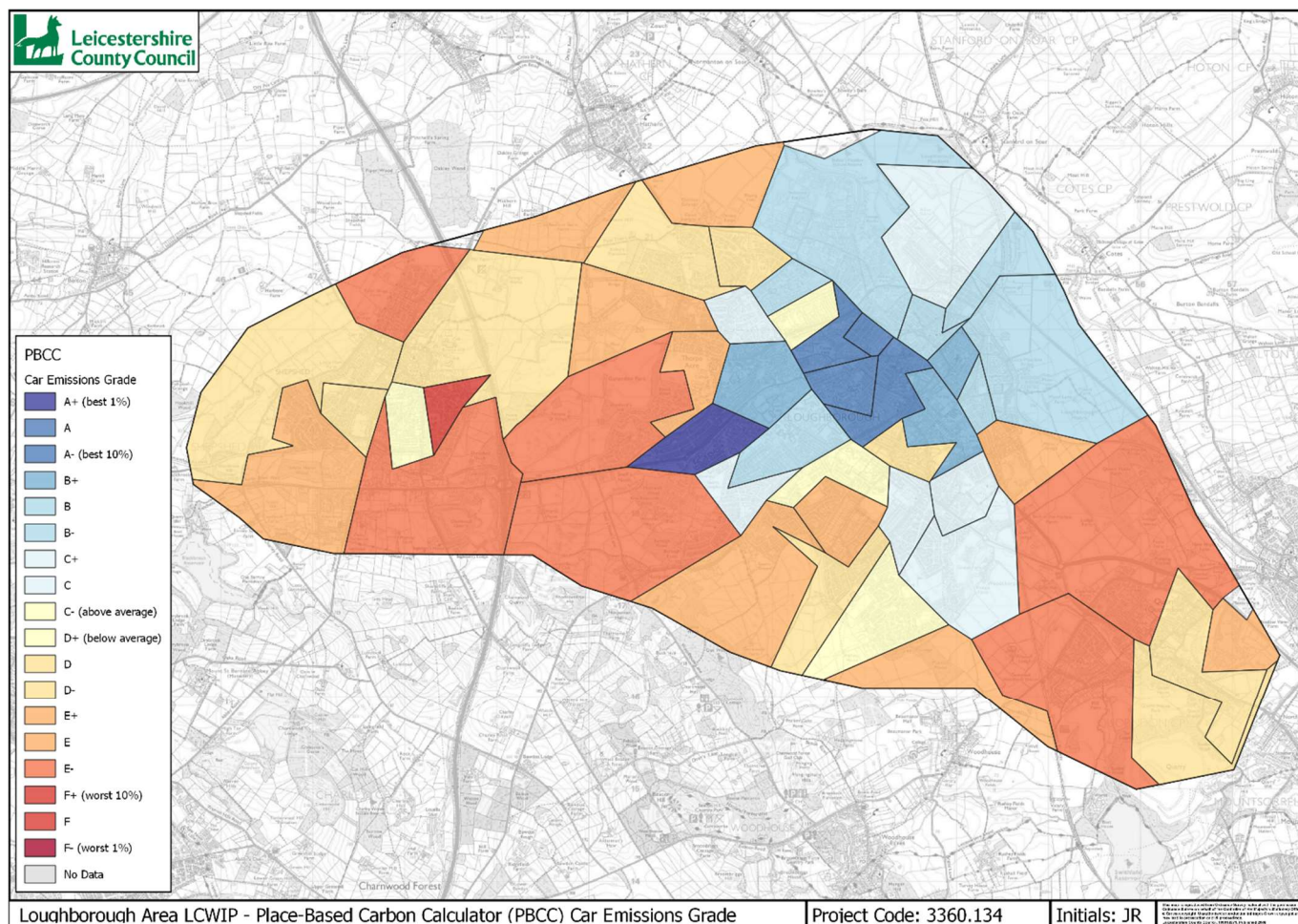


Figure 6. Place Based Carbon Calculator (PBCC) Car Emissions Grade

2.3.8. Out of 50 LSOAs in the study area, 23 are above average for car emission grade and 27 are below average. Furthermore, there are 5 LSOAs in the best 10% in England and 1 in the worst 1%. Those LSOAs with the worst car emission grades may be targeted for behaviour change towards active modes to improve the carbon footprint in those areas.

¹⁰ <https://www.carbon.place/datawarnings/>

Flood Risk Zones

2.3.9. Figure 7 shows the Environment Agency flood zones 2 and 3. The flood zones are based on the likelihood of an area flooding; flood zone 1 areas have a low probability of flooding from rivers and the sea, flood zone 2 areas have a medium probability and flood zone 3 areas have a high probability.

2.3.10. Flooding can have significant impacts on the operation and safety of walking and cycling routes. According to Sustrans¹¹, the inundation of a traffic-free path can serve to:

- Sever a traffic-free route.
- Cause substantial damage to the composition of the path.
- Exclude certain user groups from the path.
- Lead to serious injury where the alignment of the path cannot be determined.

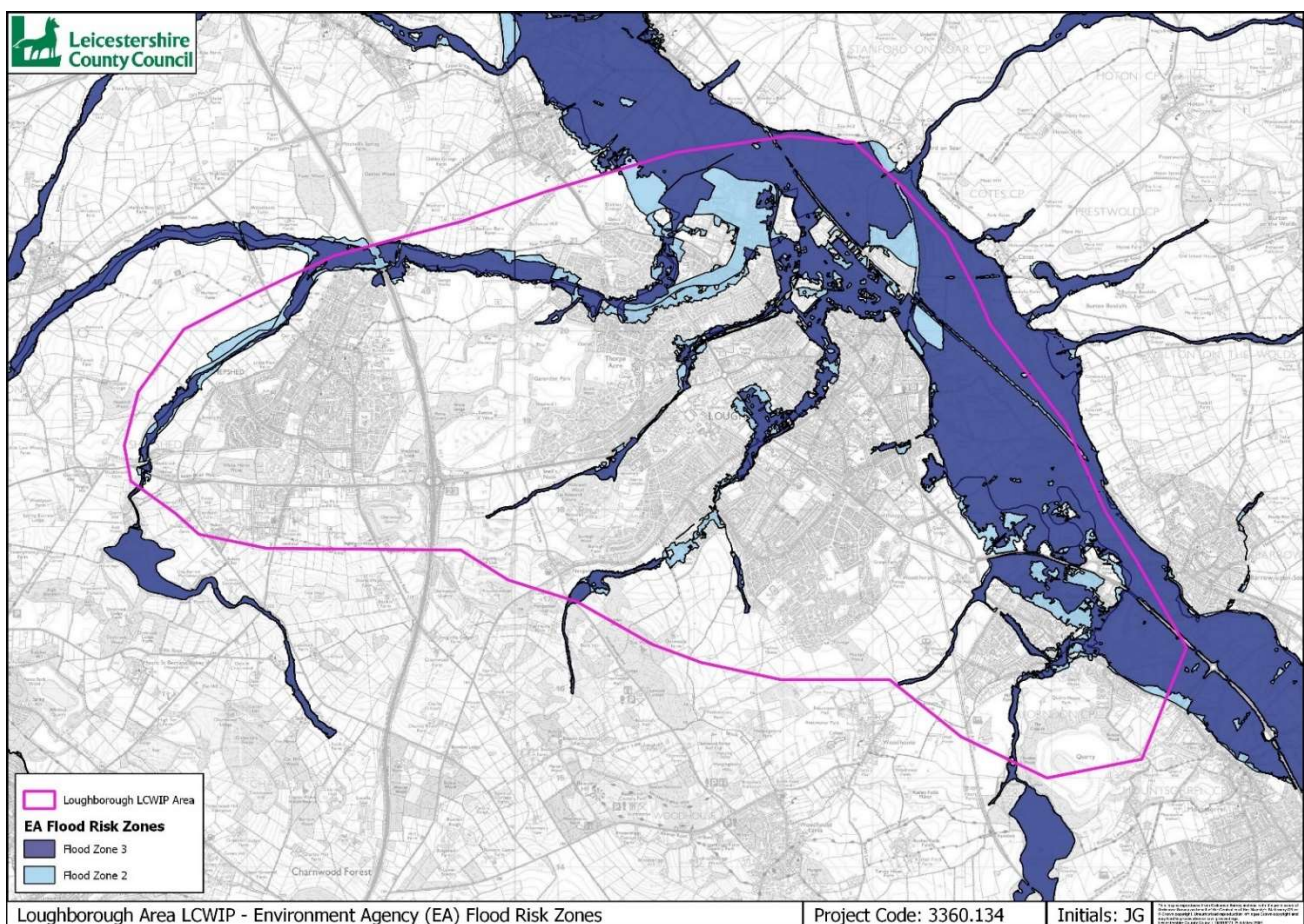


Figure 7. Environment Agency Flood Risk Zones

2.3.11. The risk of flooding should be a significant consideration during the design and
 There are several design recommendations for routes prone to flooding in the LTN 1/20.

¹¹ <https://www.sustrans.org.uk/for-professionals/infrastructure/sustrans-traffic-free-routes-and-greenways-design-guide/>

Nationally Protected Sites

2.3.12. The National Heritage List for England (NHLE)¹², developed by Historic England, is a register of all the listed buildings, scheduled monuments, protected wrecks, registered parks and gardens, and battlefields in England. There are many protected heritage assets in and around Loughborough due to the positive contribution they give to the character and sense of place of the area.

2.3.13. There also several conservation areas within the study area, which are listed on the Charnwood Borough Council website¹³, namely the Ashby Road, Loughborough Cemetery, Church Gate, Emmanuel Church, Leicester Road, Queens Park, Shelthorpe, Victoria Street, Quorn, and Shepshed conservation areas.

2.3.14. Figure 8 shows the heritage assets and conservation areas in the study area. Any cycling or walking interventions proposed should be conscious of these areas and, as a minimum, the preservation of the assets should be sought.

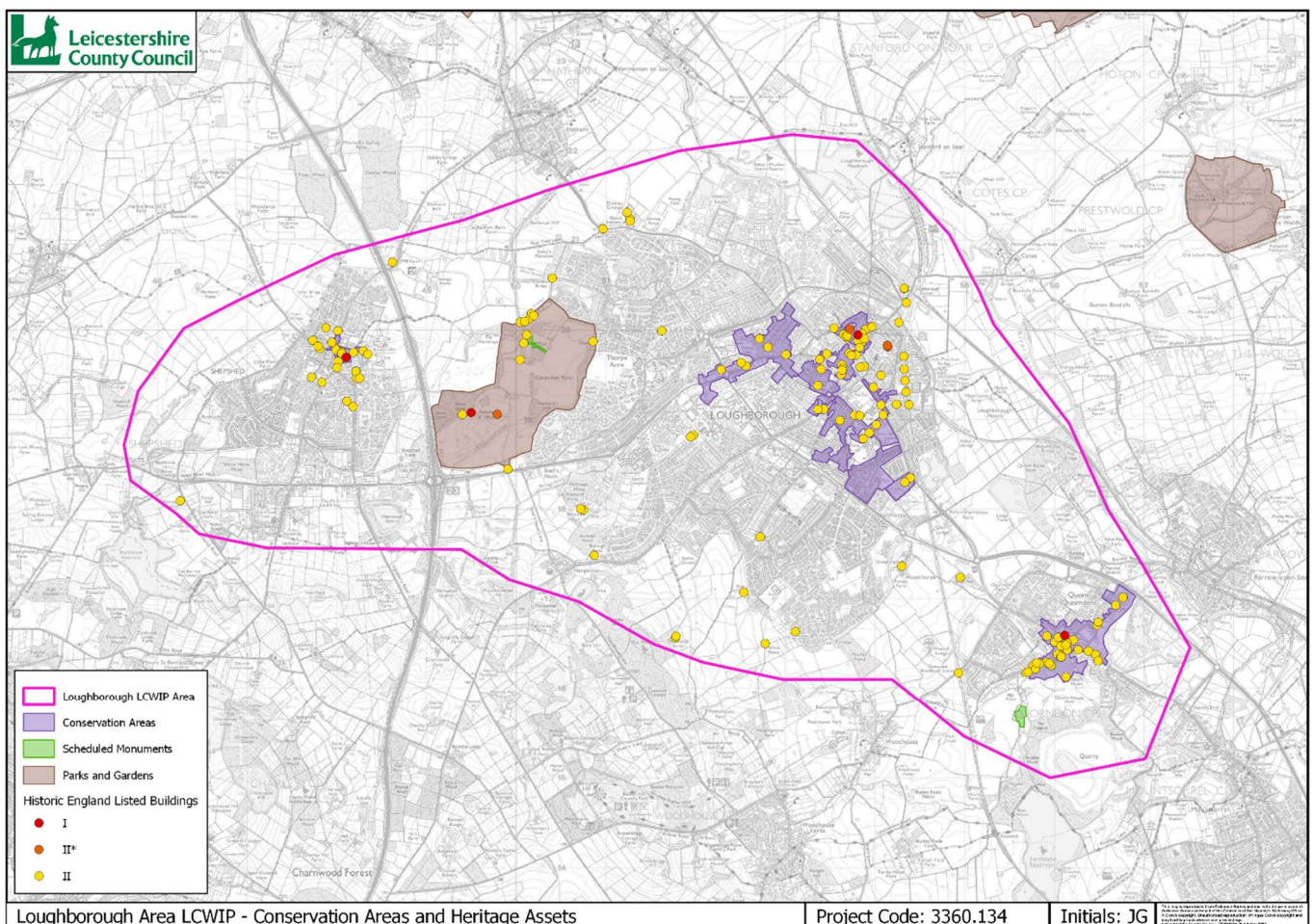


Figure 8. Conservation Areas and Heritage Assets

¹² <https://historicengland.org.uk/listing/the-list/>

¹³ https://www.charnwood.gov.uk/pages/conservation_areas_in_charnwood

2.4. Demographics

Population and Age

- 2.4.1. Census data has been analysed to determine information about the population. 2011 data has been used throughout this report as it was the latest census available when the assessments were undertaken. In 2011, the LSOAs in the study area had an overall population of 95,663, made up of 52% male and 48% female. According to the DfT's National Travel Survey (NTS) in 2019 males of all ages made 3 times more cycle trips than females in England.
- 2.4.2. The NTS also found that the age group most likely to cycle at least once a week for travel were 16-24 year olds. Table 2 shows that 16-24 year olds made up 21.7% of the population in 2011. This suggests that there is a good opportunity to encourage cycling in this age range.
- 2.4.3. The Cycling UK's Cycling Statistics¹⁴ 2019 report identified that full time students were more likely to cycle at least three times a week than other people with occupations. With Loughborough University located in the LCWIP study area and a high proportion of the population in the 20-24 years old age bracket (14%), this again suggests there is scope to increase cycling levels in this category.

Table 2. Age of Population in Loughborough Area LSOAs (Census 2011)

Age	Residents	Proportion
0-4	3,516	4.6%
5-9	3,763	5.0%
10-15	4,343	5.7%
16-19	6,152	7.5%
20-24	12,799	14.2%
25-29	6,518	8.0%
30-34	4,791	6.0%
35-39	4,349	5.8%
40-44	3,927	5.2%
45-49	4,154	5.6%
50-54	4,203	5.8%
55-59	3,945	5.4%
60-64	3,533	4.8%
65-69	3,246	4.5%
70-74	3,014	4.3%
75-79	2,090	3.0%
80-84	1,549	2.1%
85-89	982	1.3%
90+	569	0.8%

¹⁴ https://issuu.com/ctc_cyclists/docs/1911_ca_cyclinguk-statistics_web_-

English Indices of Deprivation 2019

2.4.4. The Index of Multiple Deprivation (IMD) is an overall measure of deprivation that is made by combining seven domains of deprivation¹⁵, namely:

- Income Deprivation,
- Employment Deprivation,
- Education, Skills and Training Deprivation,
- Health Deprivation and Disability,
- Crime,
- Barriers to Housing and Services; and
- Living Environment Deprivation.

2.4.5. The figures below show the levels of deprivation in deciles. These deciles are calculated by ranking all LSOAs in England from most deprived to least deprived and dividing them into 10 equal groups, with 1 being the most deprived 10% of LSOAs nationally to 10 being the least deprived 10% of LSOAs nationally.

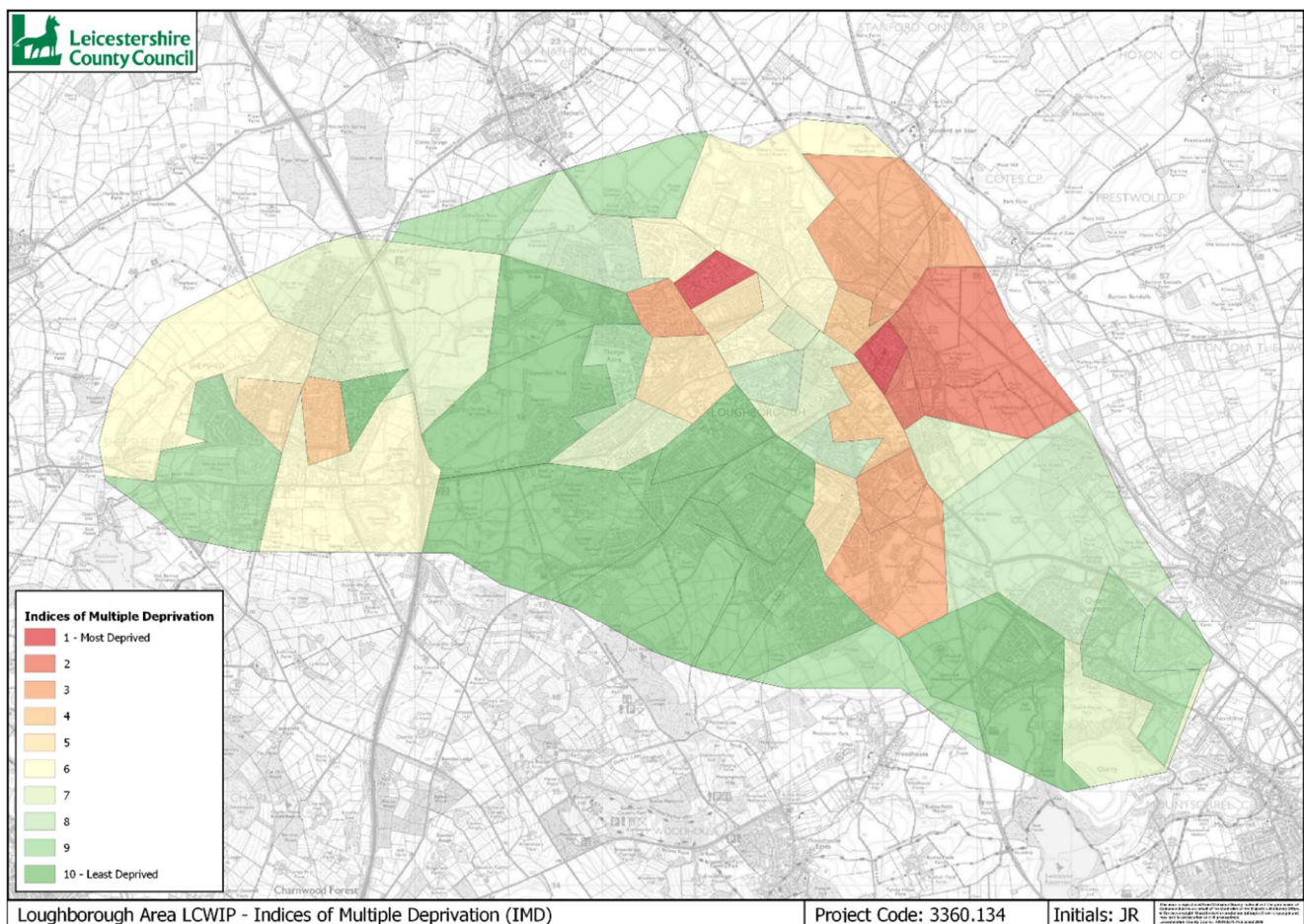


Figure 9. Indices of Multiple Deprivation

¹⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/833973/File_2_-_IoD2019_Domains_of_Deprivation.xlsx

2.4.6. Figure 9 shows the overall IMD for each LSOA in the LCWIP area. Out of the 50 LSOAs, 34 are in the 50% least deprived areas in England (deciles 6-10), 12 are in the 10% least deprived and 2 are in the 10% most deprived. This shows that there is some variation in the levels of deprivation across the area, with the least deprived LSOAs mainly located in the south / west of Loughborough, Quorn and Nanpantan, and the most deprived LSOAs located in and around Loughborough town centre.

2.4.7. The most deprived areas are likely to have lower levels of car ownership, so the use of public transport and active modes is more likely. The NTS cites that people without access to a car walk and cycle more and further than those that have access to a car¹⁶.

Health Deprivation and Disability

2.4.8. The Health Deprivation and Disability Domain measures the risk of premature death and the impairment of quality of life through poor physical or mental health. Health deprivation is an important aspect to consider in terms of walking and cycling as these activities can have a positive impact on both mental and physical health.

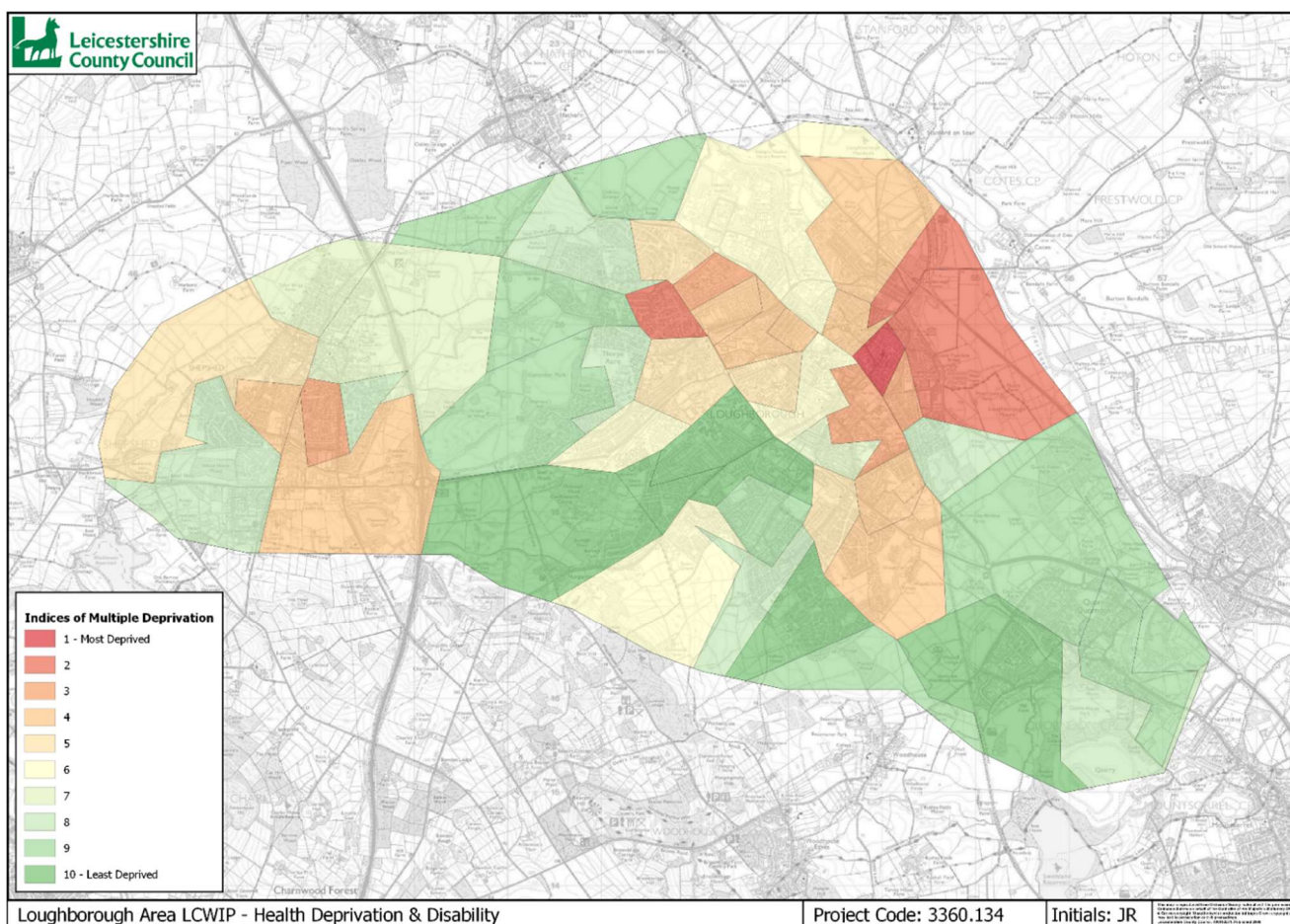


Figure 10. IMD - Health Deprivation & Disability

¹⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/906698/walking-and-cycling-statistics-england-2019.pdf

2.4.9. Figure 10 shows the level of health deprivation and disability in the LCWIP study area. Out of the 50 LSOAs, 28 are in the 50% least deprived areas in England (deciles 6-10), with 6 in the 10% least deprived and 1 in the 10% most deprived. The patterns of deprivation are similar to the overall IMD, with the most deprived LSOAs in and around Loughborough town centre.

Barriers to Housing and Services

2.4.10. The Barriers to Housing and Services Domain measures the physical and financial accessibility of housing and local services. Figure 11 illustrates the levels of deprivation relating to barriers to housing and services across the study area. Out of the 50 LSOAs, 33 are in the 50% least deprived areas in England (deciles 6-10), with none in the 30% most deprived areas in England. This suggests that much of the area has good access to housing and services.

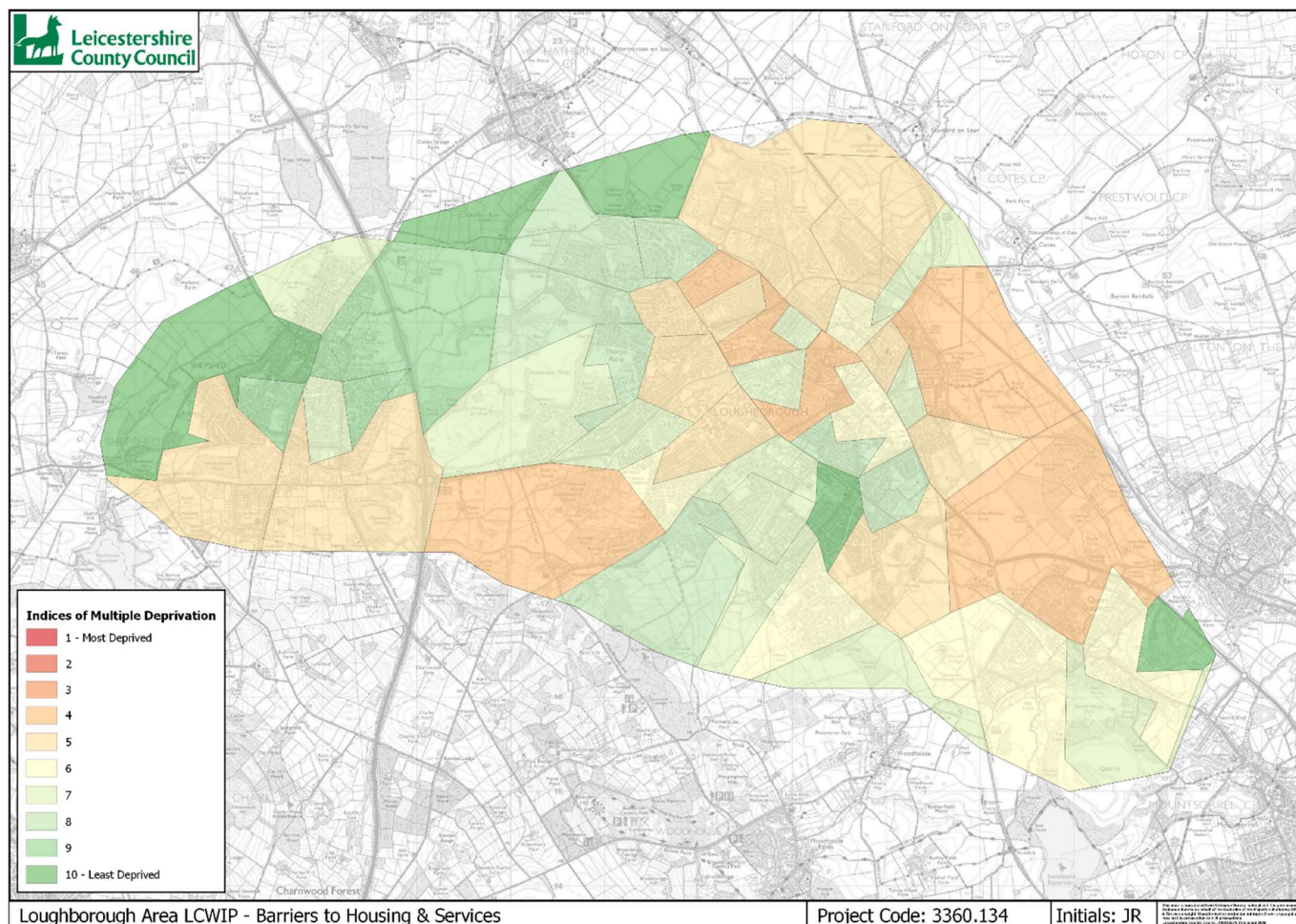


Figure 11. IMD - Barriers to Housing & Services

Living Environment Deprivation

2.4.11. The Living Environment Deprivation Domain measures the quality of the local environment, both indoors (quality of housing) and outdoors (air quality and road traffic

accidents). Figure 12 shows the level of deprivation for the living environment domain in the study area. Out of the 50 LSOAs, 34 are in the 50% least deprived areas in England (deciles 6-10), with only 1 in the 10% most deprived areas in England. Again, the pattern of deprivation is similar to the overall IMD, with the most deprived LSOAs located in and around Loughborough town centre.

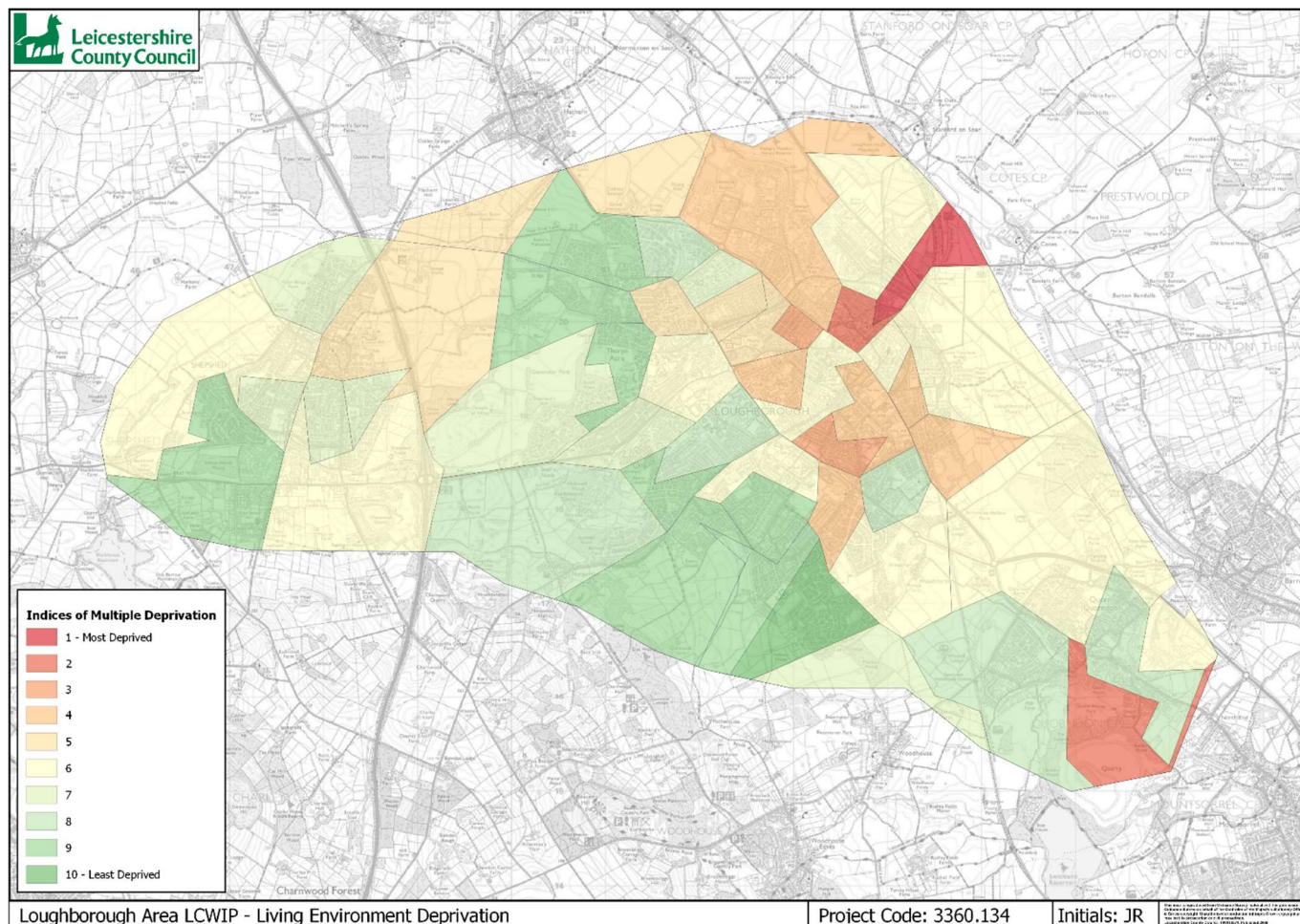


Figure 12. IMD - Living Environment Deprivation

2.4.12. The IMD data presented shows that there are varying levels of deprivation within the study area. There are several LSOAs in the 50% most deprived in England with regards to health which should be addressed. Increasing levels of cycling and walking can help to improve people’s both physical and mental health.

2.5. Journey to Work Travel Patterns

2.5.1. 2011 Census data has been analysed to establish journey to work travel patterns. Table 3 summarises where residents in the study area were travelling for work purposes, based on Middle Layer Super Output Area (MSOA) boundaries. The data illustrates that 67.3% of residents worked within the study area itself in 2011, of which 56.8% worked within Loughborough, 2.6% in Quorn and 8% in Shepshed. Only 26.3% of residents were travelling to areas outside of Charnwood Borough for work purposes.

Table 3. Journey to Work: Travel Patterns from the Study Area

Location	No. in	% of Total
Study Area	17,770	67.3%
<i>(Loughborough)</i>	<i>14,991</i>	<i>56.8%</i>
<i>(Quorn)</i>	<i>680</i>	<i>2.6%</i>
<i>(Shepshed)</i>	<i>2,099</i>	<i>8%</i>
Charnwood Borough (excluding Loughborough, Quorn & Shepshed)	1,692	6.4%
Leicester	2,923	11.1%
Other (elsewhere in Leicestershire)	4,008	15.2%
Total	26,393	100%

2.5.2. Table 4 shows the origins of people who commuted to the study area for work in 2011. The data shows that 60.4% of people who worked in the study area were also residents, meaning that these were internal commuter trips. Moreover, 15.7% of the workplace population commuted into the study area from the wider Charnwood Borough area.

Table 4. Journey to Work: Origin of Trips into the Study Area

Origin Locations	No. in	% of Total
Study Area	17,770	60.4%
Charnwood District (excluding Study Area)	4,609	15.7%
Leicester	1,595	5.4%
Other (elsewhere in Leicestershire)	5,426	18.5%
Total	29,400	100%

2.5.3. The location of travel is important for understanding patterns of commuter trips. However, as the percentage of internal trips is so high, it is also important to look at the modal choice of internal trips to understand how the existing network is used. Table 5 summarises the modal split of internal commuter trips within the study area.

Table 5. Journey to Work: Modal Split of Internal Trips

Mode	% of Travellers		
	Loughborough	Shepshed	Quorn
Car (Driver or Passenger)	53.3%	69.6%	74%
Bus	4.8%	5.9%	5.7%
Walk	30.5%	16.9%	13%
Cycle	10.0%	6.1%	6.4%
Other	1.4%	1.4%	0.9%

2.5.4. This data shows that there was a high number of trips made by car, either as the driver or passenger. 40.5% of internal trips from Loughborough were made by walking or cycling,

23% from Shepshed and 19.4% from Quorn. This suggests that there may be barriers to why more internal trips aren't made by active modes.

2.5.5. Table 6 supports that there is scope to change people's behaviour and encourage more people to make trips by active modes such as walking and cycling, with 50% of people in Loughborough travelling less than 5km and 56.8% travelling less than 10km, etc.

Table 6. Distance Travelled to Work (Census 2011)

Distance Travelled to Work	% of Travellers		
	Loughborough	Shepshed	Quorn
Less than 2km	29.6%	18.5%	8.2%
2km to less than 5km	20.4%	11.3%	16.5%
5km to less than 10km	6.8%	26.8%	17.5%
10km to less than 20km	16.0%	15.4%	23.2%
20km to less than 30km	5.4%	6.6%	5.8%
30km to less than 40km	1.3%	1.4%	2.2%
40km to less than 60km	1.8%	2.0%	2.5%
60km and over	4.0%	2.7%	3.8%
Work mainly at or from home	8.6%	9.2%	13.7%
Other	6.1%	6.1%	6.6%

2.6. Existing Cycling and Walking Networks

2.6.1. Public Rights of Way (PRoW) provide a great opportunity for walking and cycling and are a traffic free alternative to on-road routes. Figure 13 shows the existing Public Footpaths and Bridleways in the Loughborough LCWIP area¹⁷ which are to be used by¹⁸:

- Footpaths – pedestrians, mobility scooters or powered wheelchairs
- Bridleways – pedestrians, horse riders, bicycles, mobility scooters or powered wheelchairs

¹⁷ <https://www.leicestershire.gov.uk/roads-and-travel/cycling-and-walking/where-to-walk-in-leicestershire>

¹⁸ <https://www.gov.uk/right-of-way-open-access-land/use-public-rights-of-way>

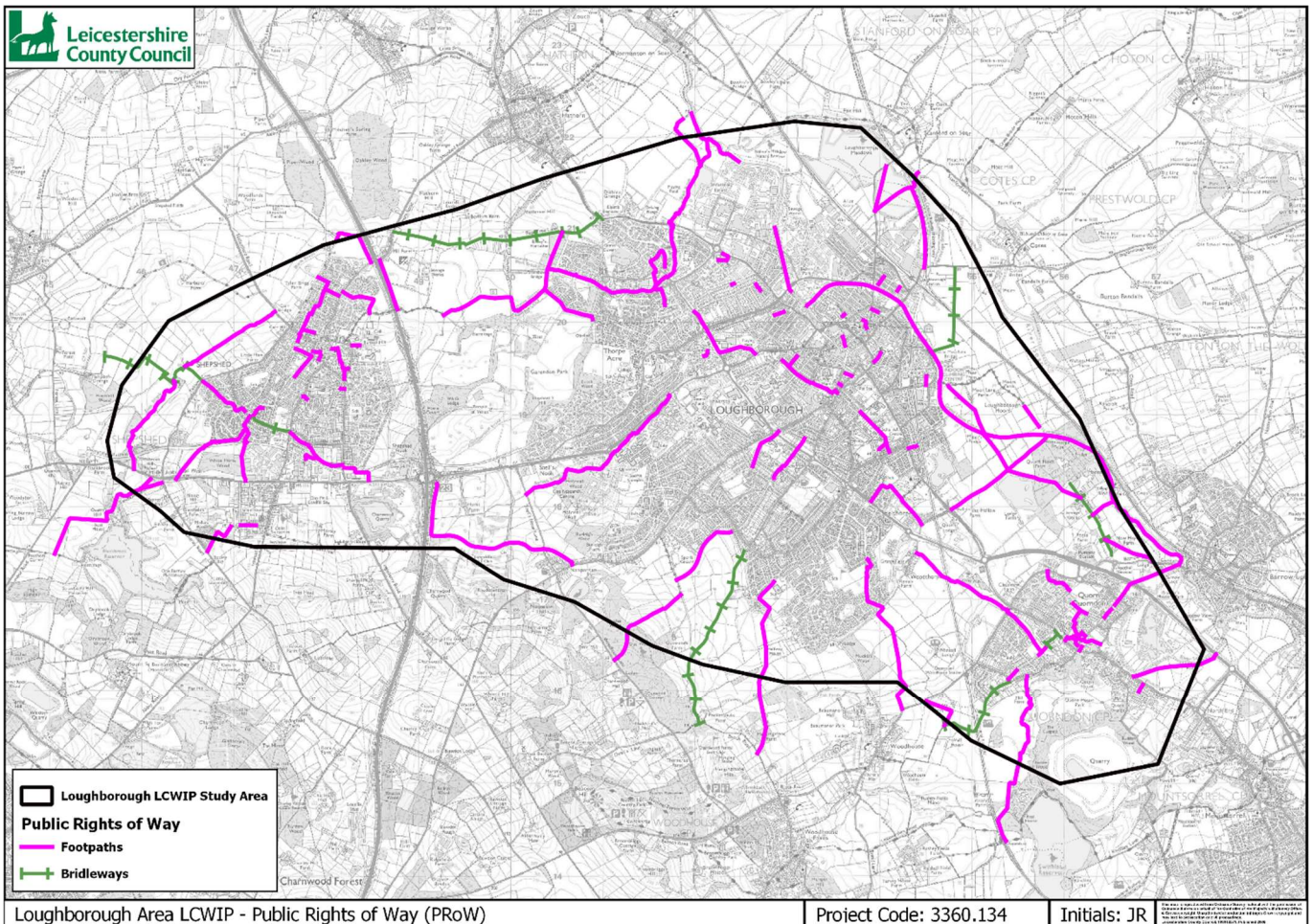


Figure 13. Public Rights of Way

2.6.2. Figure 14 shows the existing cycle network within the study area. It has been split into the DfT's Active Mode Appraisal Toolkit (AMAT) categories of:

- Off-Road Segregated Cycle Track
- On-Road Non-Segregated Cycle Lane
- Shared Bus Lane
- On-Road Segregated Cycle Lane (there are currently no cycle lanes of this nature in the Loughborough LCWIP area)
- Wider Lane (there are currently no roads of this nature in the Loughborough LCWIP area)

2.6.3. The National Cycle Network (NCN) Route 6 has also been identified on the map, running through Quorn, Loughborough and Shepshed. Looking at this in conjunction with the existing infrastructure allows for any gaps in the network to be identified between key attractors.

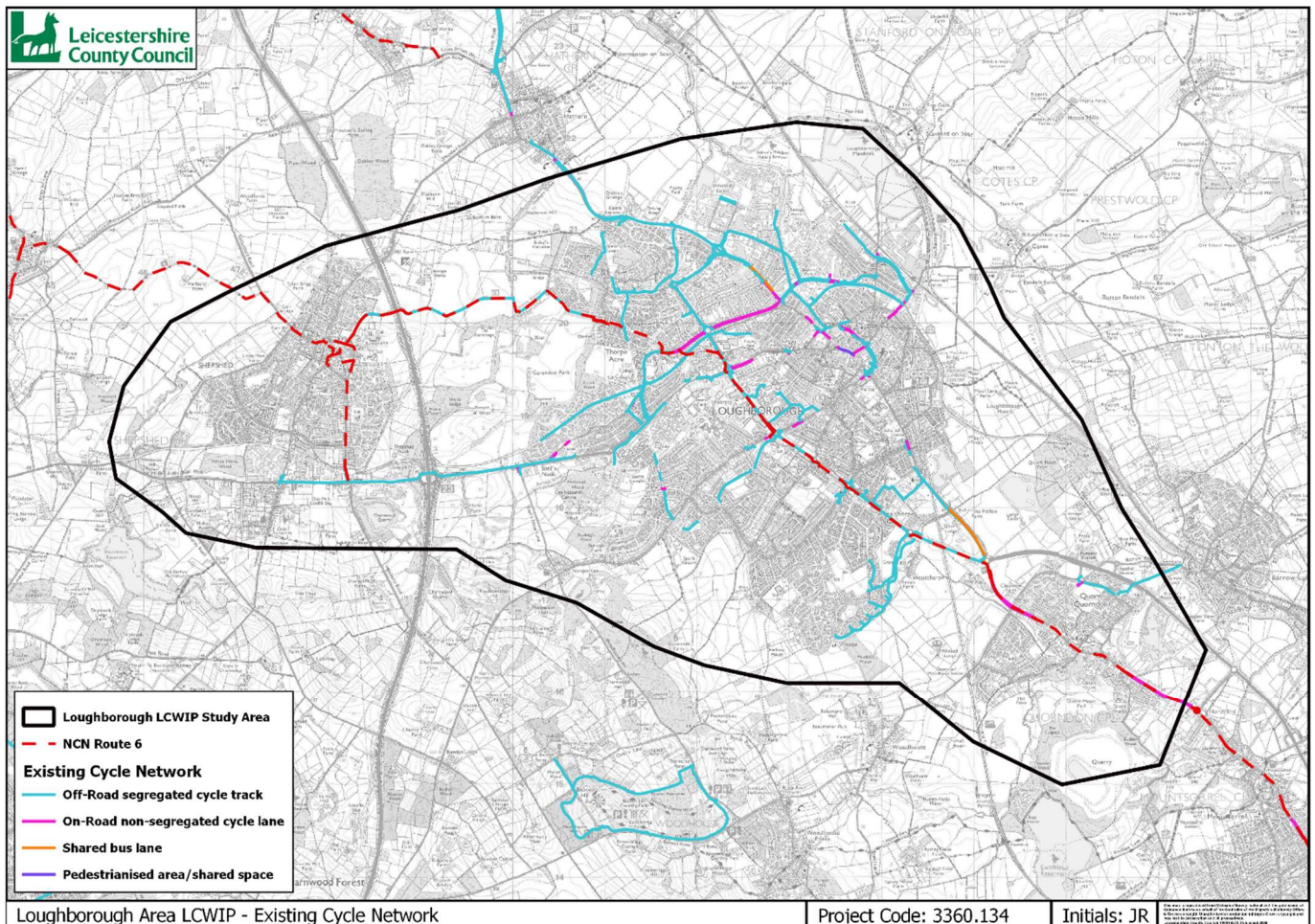


Figure 14. Existing Cycling Network (using AMAT Categories)

Public Suggestions for Improvement

2.6.4. As a result of the Covid-19 Pandemic, the government announced that councils should be creating new cycleways and wider pavements for physical distancing. Cycle Streets¹⁹ created the Widen My Path tool to enable the public to identify where changes are needed on the walking or cycling network in the UK²⁰. The data is available to local authorities to see where changes should be prioritised. Figure 15 shows the location of walking suggestions put forward, categorised into the following:

- Width – where the width of the path should be increased
- Condition – where the condition of the path needs improving
- Parked cars – where parked cars are making path difficult to use / dangerous
- New footway – where a new footway is needed
- Multiple – where more than one of the above has been listed
- Other – includes things that have only been mentioned once, such as changing toucan crossing timings to give more time to pedestrians

¹⁹ www.cyclestreets.net

²⁰ <https://www.widenmypath.com/leicestershire/#10/52.6672/-1.1137>

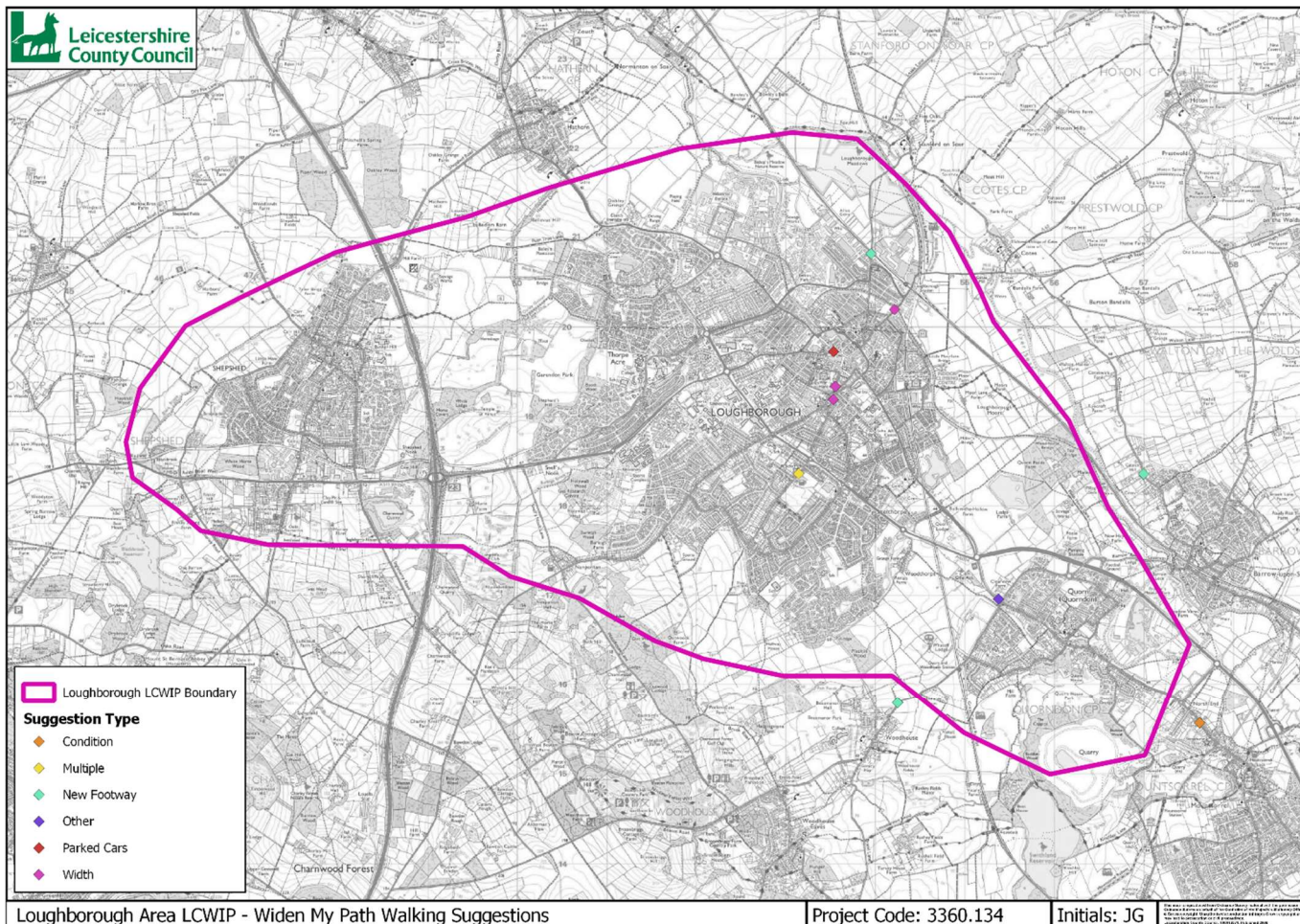


Figure 15. Widen My Path Walking Suggestion (as at Oct 2021)

2.6.5. Figure 16 shows the location of cycling suggestions put forward, categorised into the following:

- Width – same as above
- Condition – same as above
- Parked cars – same as above
- New cycle path – where a new cycleway is needed
- Time restriction – where the time restriction should be extended for cyclists
- Other – includes things that have only been mentioned once, such as struggling to find the entrance to a cycle path

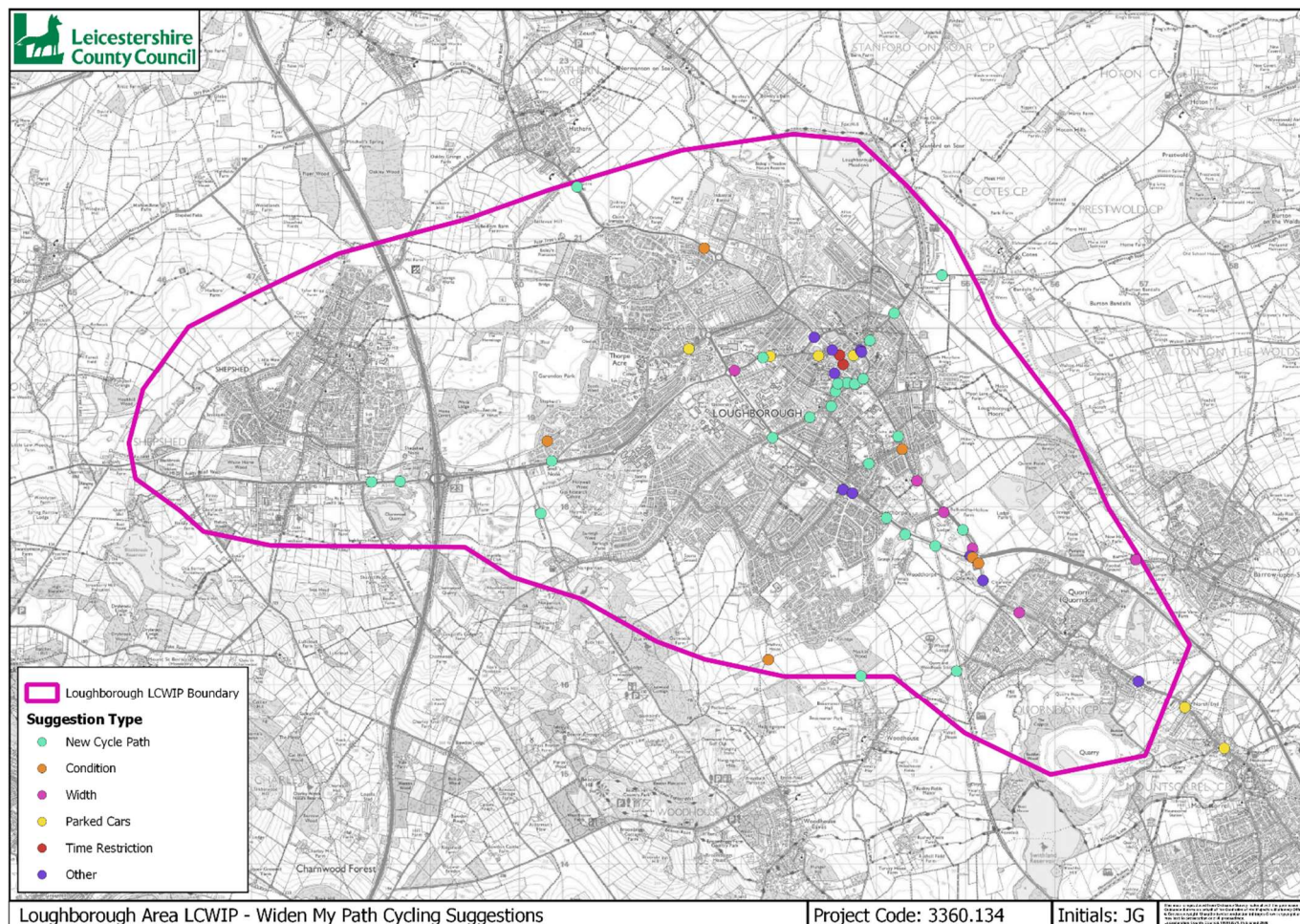


Figure 16. Widen My Path Cycling Suggestion (as at Oct 2021)

Pedestrian and Cyclist Collision Data

2.6.6. Table 7 summarises the collision records for pedestrians and cyclists in the study area for 2015 - 2019. Although data is available for the full year of 2020, this has not been included in the analysis due to the unknown impacts of the Covid-19 pandemic.

Table 7. Pedestrian and Cyclist Collision Data (2015-19)

Severity	Cyclist Collisions					Pedestrian Collisions				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Minor	23	24	15	16	6	14	20	14	10	13
Serious	3	1	5	5	4	4	3	3	10	4
Fatal	0	0	0	0	0	0	0	0	2	1
Total	26	25	20	21	10	18	23	17	22	18

2.6.7. The data shows that there were no fatal cyclist collisions over the 5-year period and 3 fatal pedestrian collisions. There were minor and serious cyclist and pedestrian collisions across all 5 years. Improvements to cycling and walking infrastructure could alleviate the number of collisions by minimising the conflict between active mode users and vehicles.

2.6.8. Figure 17 shows the spatial distribution of the cyclist and pedestrian collisions summarised in Table 7.

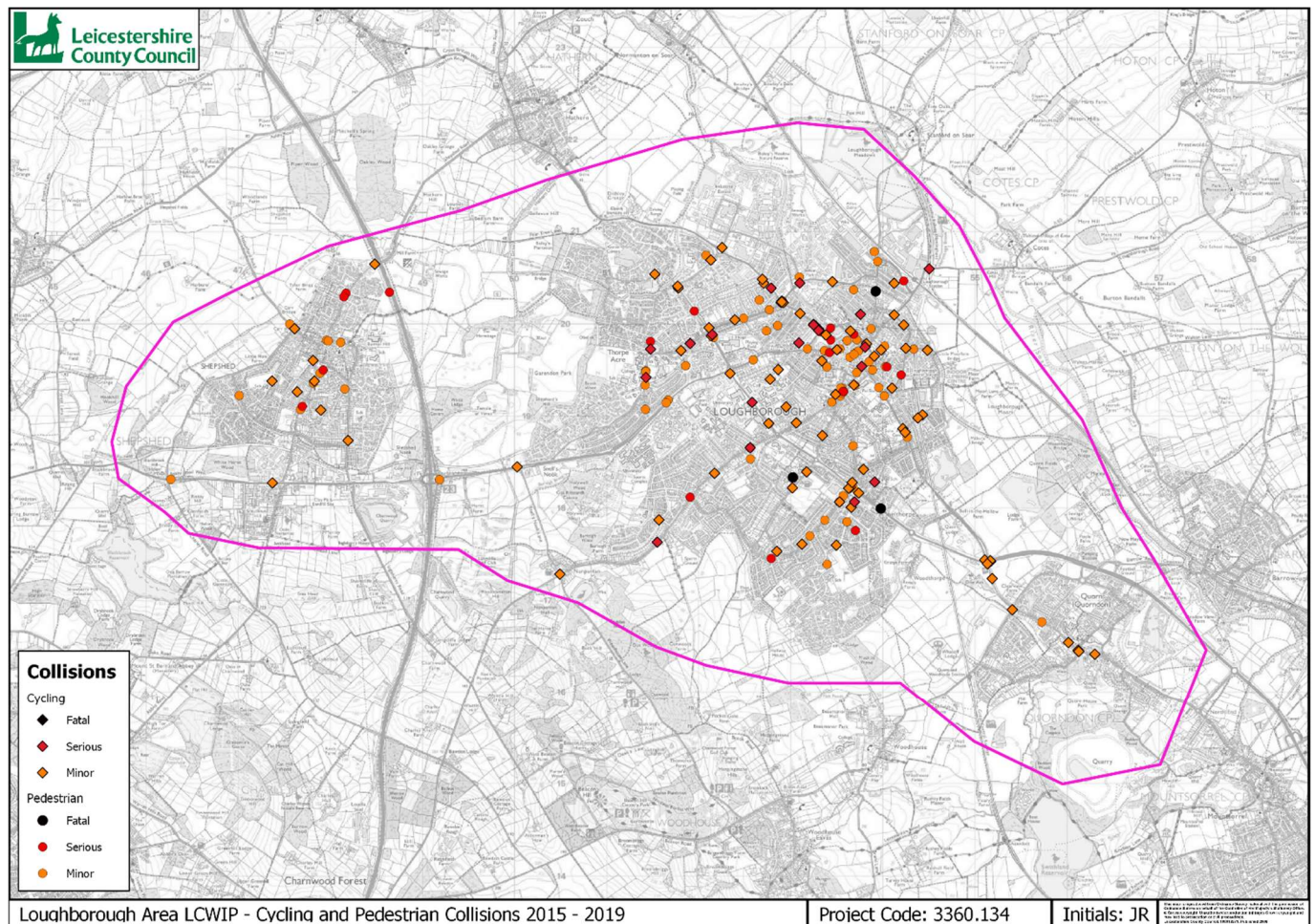


Figure 17. Cycling and Pedestrian Collisions 2015 – 2019

2.6.9. The map shows that collisions have taken place across the whole of the study area, with many pedestrian collisions clustered around Loughborough town centre. The 3 fatal pedestrian collisions all occurred in Loughborough on Holt Drive, Meadow Lane, and A6004 Ling Road. The cycling collisions are located across the whole of the study area, particularly on the arterial routes in and out of Loughborough.

2.6.10. The collision hotspots identified above will be considered when identifying key routes for cycling and walking, especially when they occur on routes close to schools, as reducing the rate of cycling accidents is a principal aim of the CWIS.

Propensity to Cycle Tool (PCT)

2.6.11. The PCT²¹ is an online resource, funded by the DfT, that is available to assist with the strategic planning of cycling networks. It includes 2011 Census (Journey to Work) data which is the most up-to-date source of publicly available Origin-Destination (OD) data for cycling. The LCWIP technical guidance advises that PCT Journey to Work data can assist with the preparation of LCWIPs at several different stages²², including:

- Planning the cycling network
- Defining potential demand for cycling
- Assisting with scheme prioritisation

2.6.12. Figure 18 shows the cycling ODs (>5 trips) at LSOA level which have been derived from the PCT commuting data.

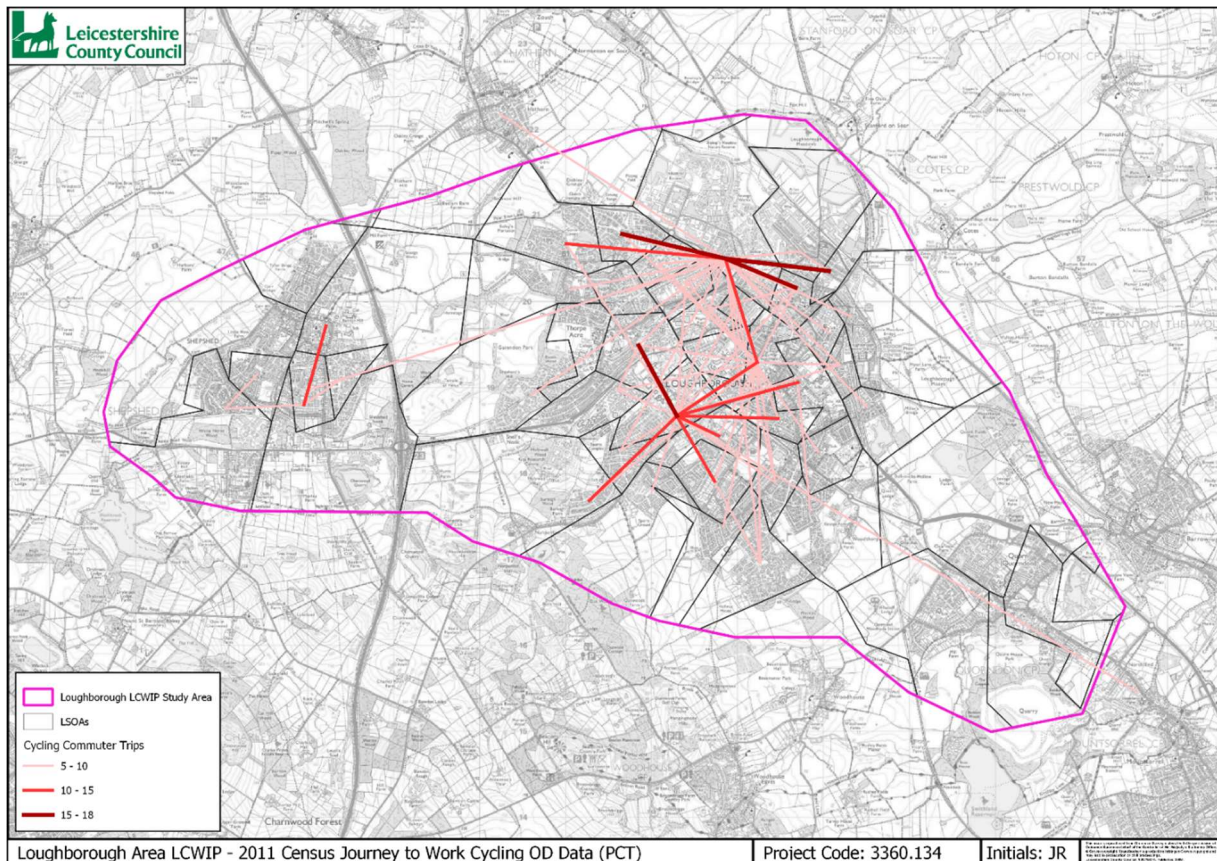


Figure 18. 2011 Census Cycling Journey to Work Origin-Destinations (PCT)

2.6.13. As well as 2011 baseline data, the PCT also includes versions of the future that are represented through the various scenarios of change, including the DfT draft Cycling Delivery Plan target to double cycling in a decade and the more ambitious 'Go Dutch' scenario where Dutch cycling levels are reached in England.

²¹ <https://www.pct.bike/> Lovelace et al. (2017) and/or Goodman et al. (2019)

²² https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908594/cycling-walking-infrastructure-tools-document.pdf

2.6.14. It should be noted that only journey to work data is considered in the PCT tool. Therefore, a limitation of the tool is that other journey purposes are excluded, such as school trips, recreation, and tourism. The PCT outputs are therefore only a starting point for understanding cycling demand.

2.7. Road Transport Network

2.7.1. In order to encourage modal shift towards walking and cycling, it is important to consider both current and prospective future road transport conditions in the area. Several layers have been extracted from Leicestershire's Pan Regional Transport Model (PRTM) to see the forecast road conditions in 2021 and 2036.

2.7.2. The blue bandwidths displayed on Figure 19 show the number of modelled highway trips to/from the LCWIP area under 10km in 2021, for the AM (08:00-09:00) and PM (17:00-18:00) peak hours combined; thinner lines show less trips and thicker lines show more trips. This gives an indication of both the potential for mode shift away from car journeys and the key corridors that could be targeted for active mode trips.

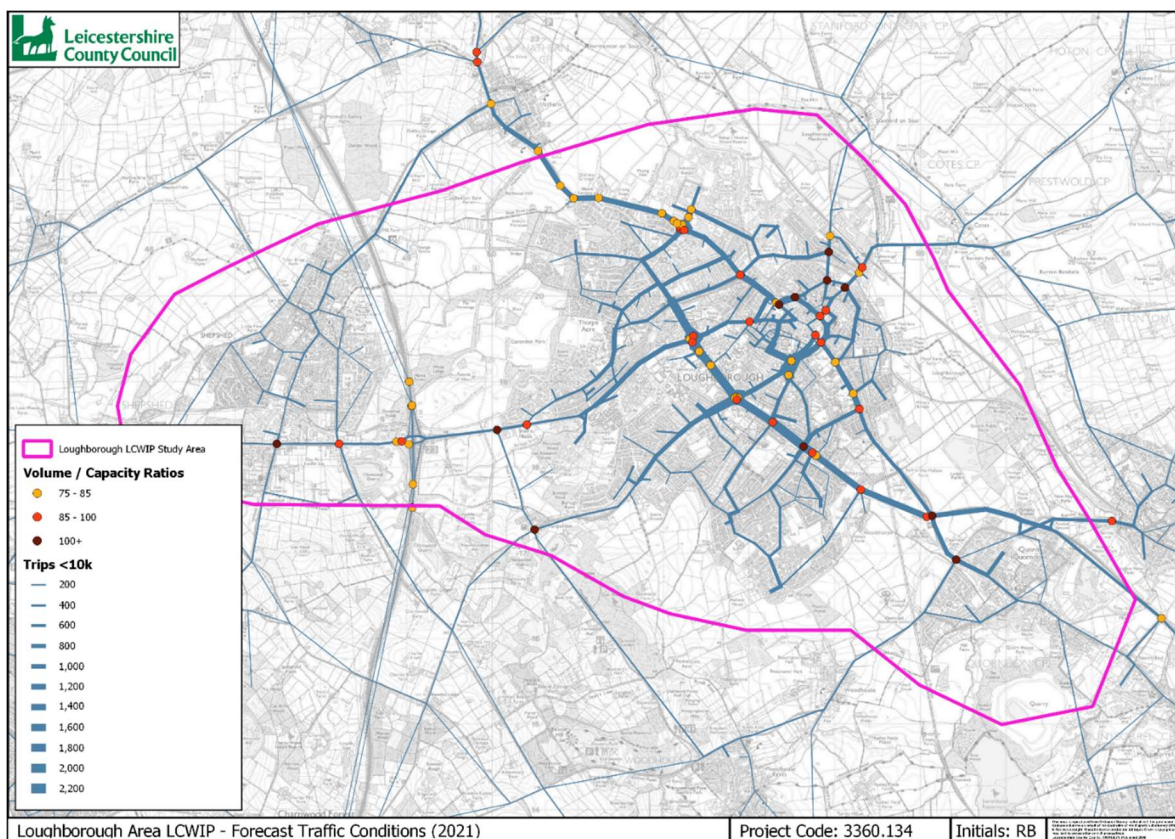


Figure 19. Forecast Traffic Conditions (2021)

2.7.3. The map also shows the volume over capacity (VoC) ratios for junctions, which is a measure of congestion. The junctions have been divided into 4 bands: 0-75% (not shown on the map), 75-85%, 85-100%, and >100%. A junction is considered to be operating under stress if it's VoC ratio exceeds 85%. A VoC ratio of 100% represents a theoretical

capacity limit so these junctions are likely to experience an increased occurrence of queueing and congestion.

2.7.4. Many of the near-capacity and over-capacity junctions are on routes that experience a high number of short distance trips. It is hoped that by improving active mode alternatives, a modal shift away from car trips at these junctions will mitigate congestion in the future.

2.7.5. Figure 20 shows modelled road traffic conditions for 2036, including trips under 10km and VoC ratios for junctions. There is a large amount of short distance trips in Loughborough town centre on routes such as Epinal Way, Ling Rd, Derby Rd, Lemyngton St, Forest Rd, Ashby Rd and Browns Ln, etc.

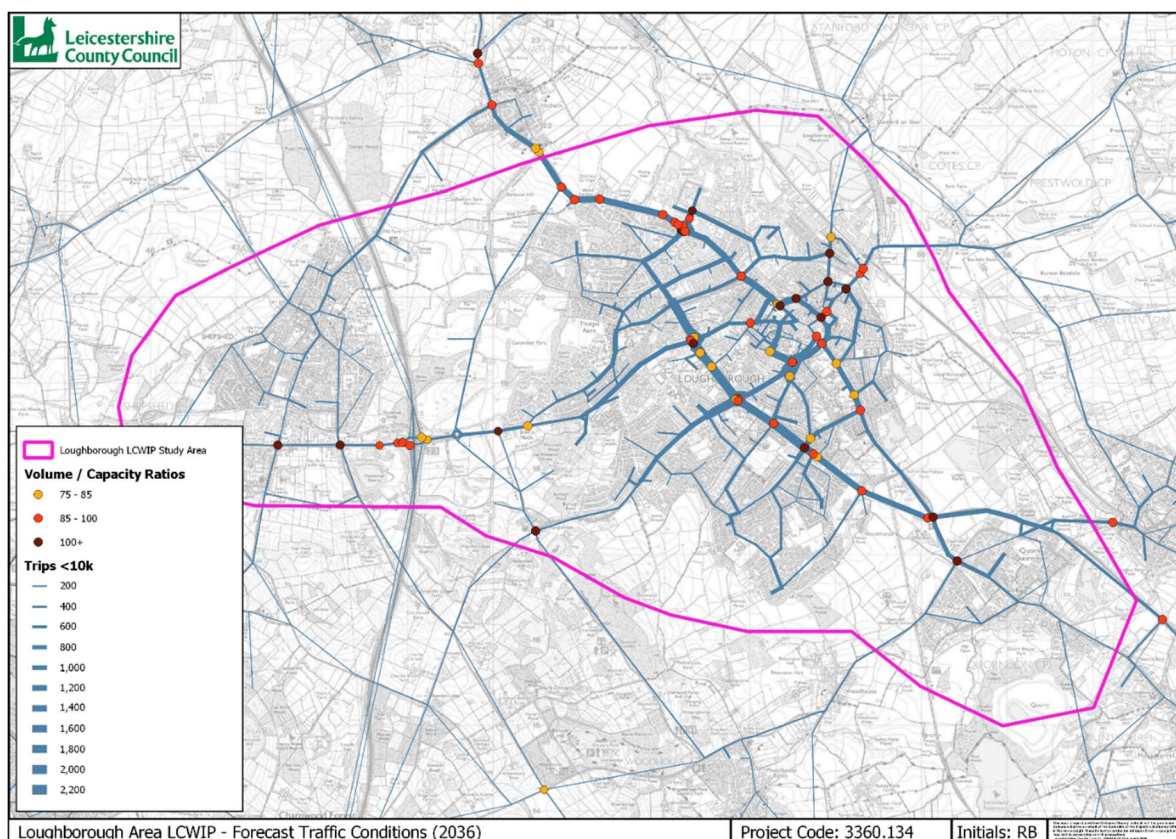


Figure 20. Forecast Traffic Conditions (2036)

2.7.6. Table 8 shows a comparison of junctions with VoC ratios exceeding 75% between 2021 and 2036.

Table 8. Number of Junctions with a VoC Ratio >75% (2021 vs 2036)

Volume to Capacity	2021		2036	
	AM	PM	AM	PM
75 – 85%	19	26	13	17
85 – 100 %	19	17	24	19
> 100%	10	7	13	17
Total	48	50	50	53

3. Cycle Network Map Development

3.1. Overview

3.1.1. The third stage of the LCWIP process is to map a future cycle network which identifies where investment should be targeted.

3.2. Methodology

3.2.1. The following methodology for developing a cycle network map has been derived from the LCWIP technical guidance:

1. Identifying Key Origins and Destinations
2. Clustering of Origins and Destinations
3. Identifying Desire Lines between Origins and Destinations
4. Identifying Routes Serving the Desire Lines
5. Identifying a Route Hierarchy
6. Producing Draft Cycle Network Map

3.2.2. The following sections explain each of these steps in greater detail.

3.3. Identifying Key Origins and Destinations

3.3.1. The first step to identifying demand for a network is mapping the key origin and destination points across the study area using GIS.

Origins

3.3.2. Cycling trips usually start at residential settlements, therefore 2011 Census data has been used to identify key residential origin points for the study area.

3.3.3. A file containing population weighted centroids for Lower Layer Super Output Area (LSOA) boundaries has been downloaded from the Office for National Statistics (ONS)²³ and mapped, see Figure 21. The centroids represent the centre of the population within each output area indicating where there is the greatest potential for trips.

3.3.4. As the data only considers residential properties that were present when the census took place, new development sites built since 2011 and those planned for the future will be mapped separately.

²³ <https://geoportal.statistics.gov.uk/datasets/ons::lower-layer-super-output-areas-december-2011-population-weighted-centroids/explore?location=52.900002%2C-2.000000%2C7.40>

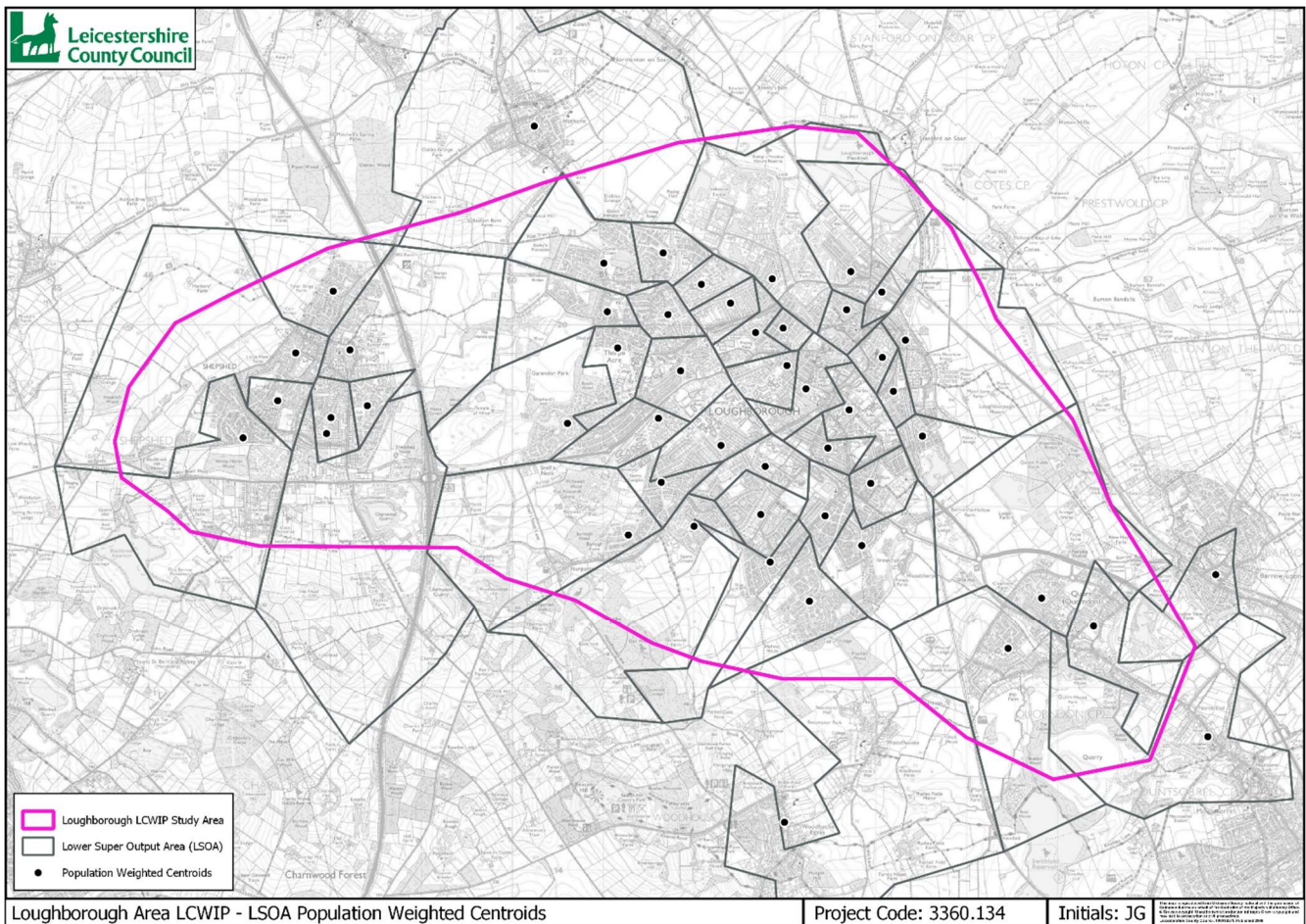


Figure 21. Population Weighted Centroids as of December 2011 (Census 2011)

Destinations

3.3.5. Common journey destinations have been identified to determine where people are likely to travel to on a regular basis. These key destinations include:

- healthcare establishments - including GPs and Hospitals,
- large employment sites,
- large supermarkets,
- pharmacies,
- primary education establishments
- secondary educational establishments – including colleges and universities,
- transport interchanges – including bus and rail stations,
- libraries; and
- leisure sites – including sports stadiums, entertainments venues, visitor attractions, leisure centres, cultural institutions, and parks, etc.

3.3.6. Figure 22 shows the spatial distribution of the key destinations listed above, as well as committed employment developments with over 50 jobs. There are some clusters of destinations in Loughborough and Shepshed town centres.

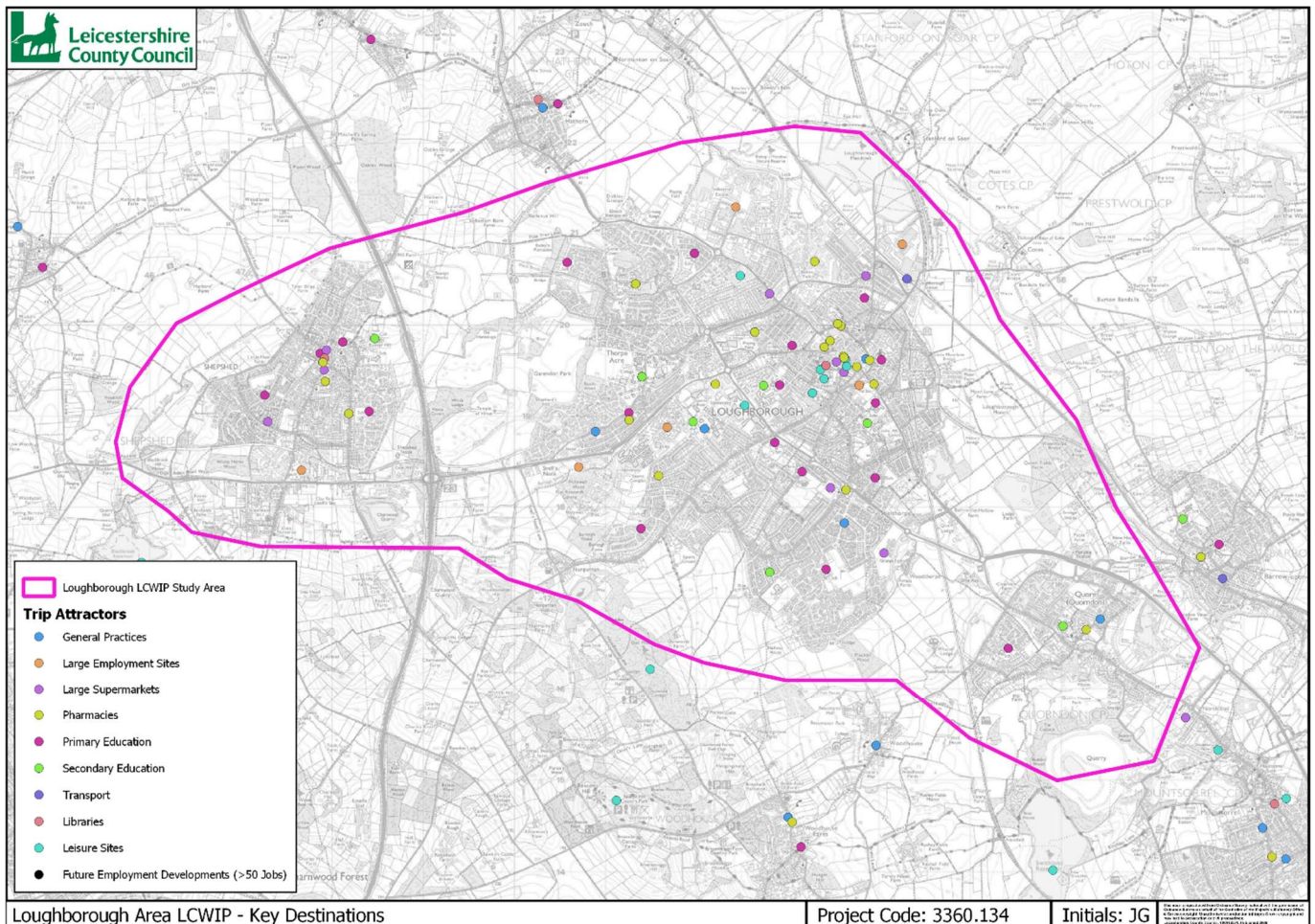


Figure 22. Key Journey Destinations

Key Future Developments

3.3.7. It is important that key future developments are considered when producing the draft cycling network as they may become significant origin or destination points. Depending on the size, location, and influence of the planned developments, it may be necessary to link them to the existing cycling network.

3.3.8. Figure 23 shows the committed housing (>100 dwellings) and employment (>50 jobs) developments in the study area, as well as the key local plan growth areas up to 2036. The largest growth area is the Garendon Park Development (or West of Loughborough SUE) that sits between Loughborough and Shepshed. There are also several key developments on the peripheries of Loughborough and Shepshed. The smallest growth sites are mainly within the built-up part of Loughborough town centre.

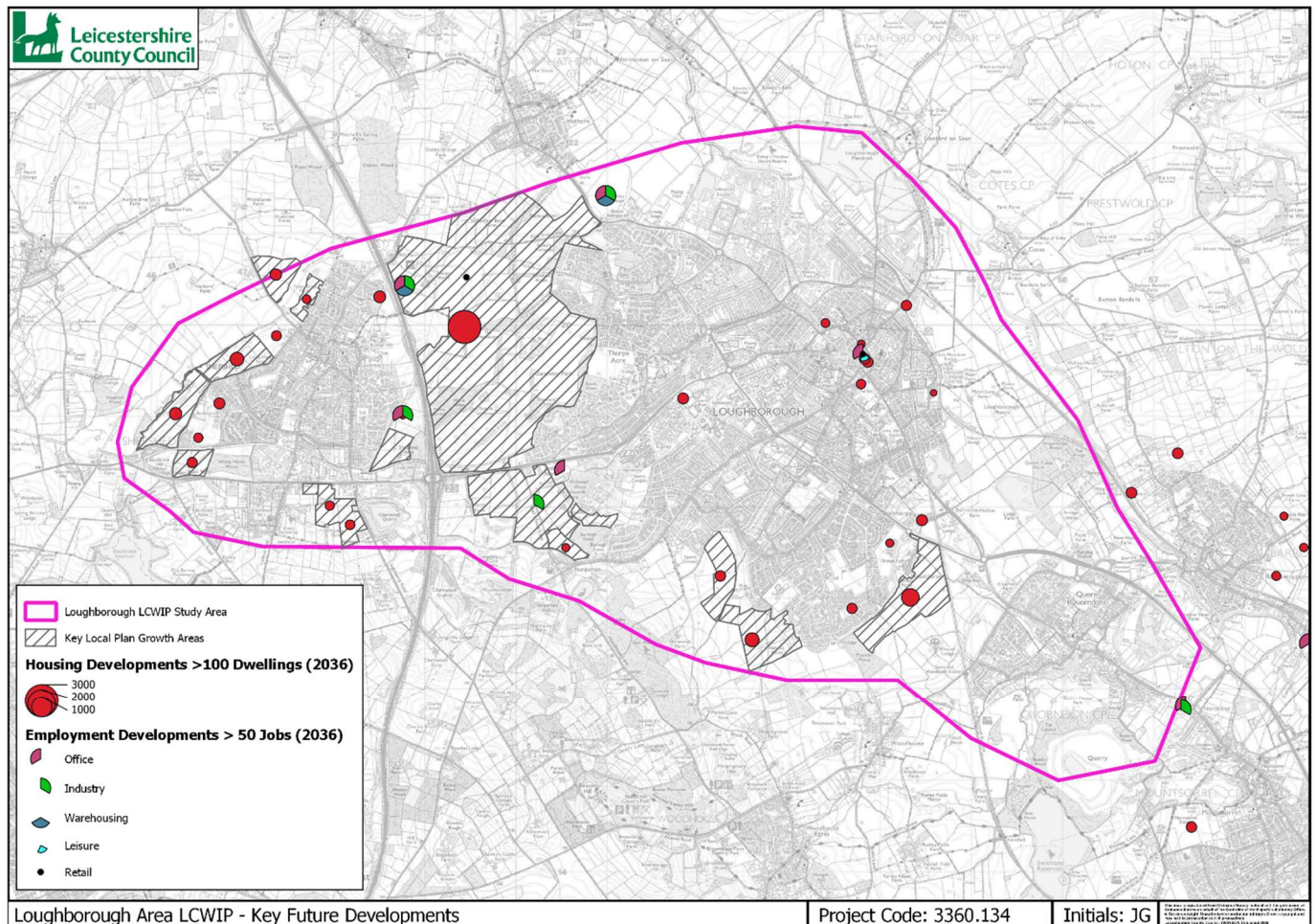


Figure 23. Key Future Developments

3.4. Clustering of Origins and Destinations

- 3.4.1. It is recommended that trip origins and destinations that are nearby to each other should be clustered together to simplify the analysis. The origins have already been clustered together as per the population weighted centroids in Figure 21.
- 3.4.2. To define the destination clusters, an exercise has been undertaken in GIS to create buffers around destinations that are within 400m of each other, representing a 5-minute walking distance. This is the recommended density for a joined-up urban cycle network as users should not have to travel further than 400m to get between routes of a similar quality.
- 3.4.3. The buffers have been drawn to include as many destinations as possible within a 400m radius but are positioned to avoid overlap where possible. In addition, destinations that are separated by a barrier, like a major road or railway line, have not been included in the same cluster as they are unlikely to be served by the same cycle route. Figure 24 shows the clusters of key destinations.

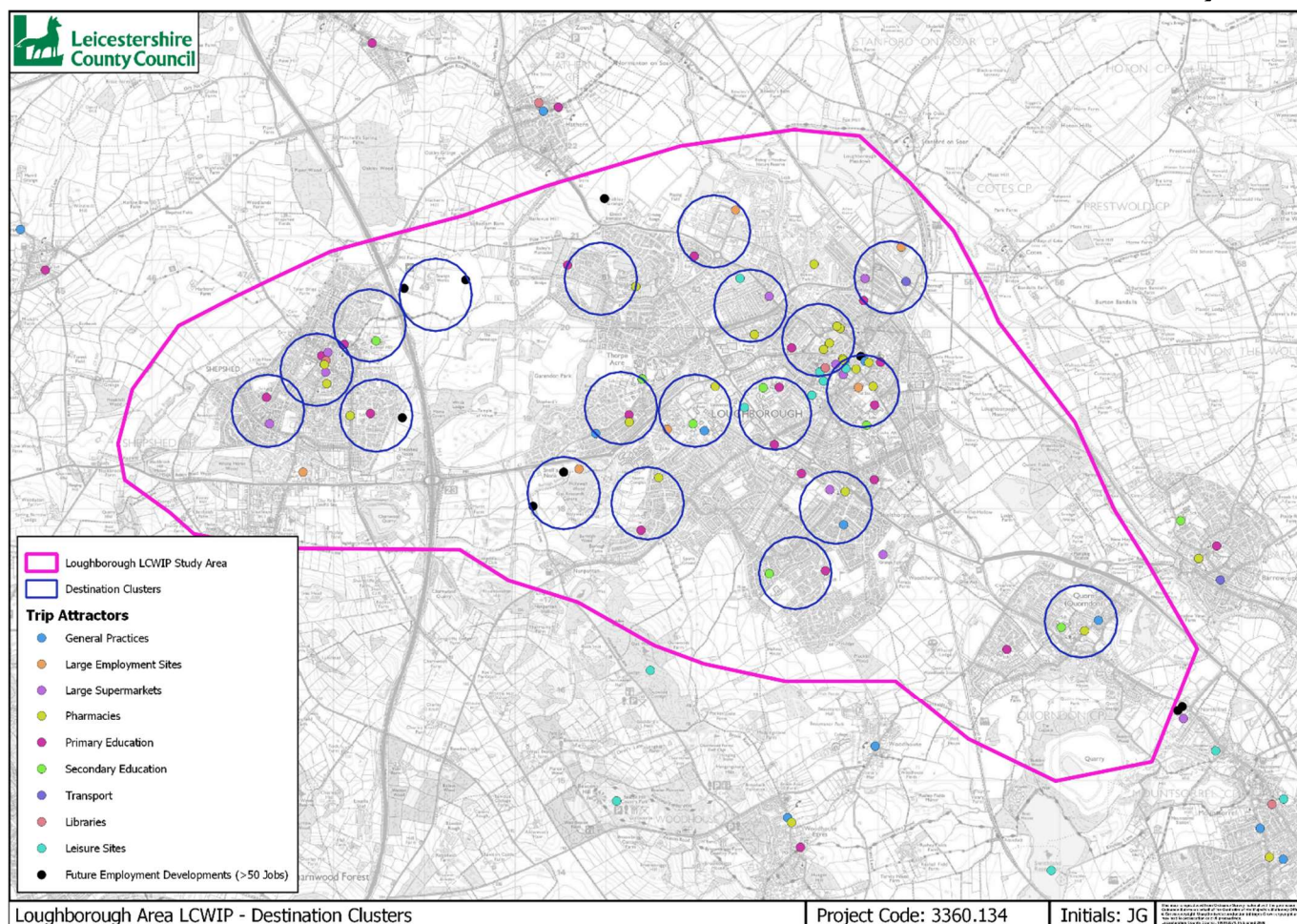


Figure 24. Key Destination Clusters

3.4.4. To determine which of the destination clusters are more desirable, they have been given a weighting based on the number and type of destinations present. The weightings range from 1-10 depending on the number of cyclists the destination is likely to attract, see Table 9. Universities, employment sites, transport interchanges and secondary schools have been given a greater weighting.

Table 9. Destination Desirability Weighting

Destination Type	Weighting
University	10 – more desirable
Existing Large Employment Site	5
Future Large Employment Site	5
Transport Hub	5
Secondary School / College	5
Primary School	3
Large Supermarket	3
Leisure Site	3
General Practice	1
Pharmacy	1
Library	1 – less desirable

3.5. Identifying Desire Lines between Origins and Destinations

3.5.1. Direct desire lines have been drawn between each of the origin and destination points in the study area. These lines show the most direct route between OD pairs but are only indicative and do not follow specific routes on the network.

3.5.2. To identify which lines are most likely to be used by cyclists, the origin clusters have been assigned cycling demand based on the number of commuting trips from that LSOA in the 2011 Census (PCT). This demand has been combined with the weightings given to the destination clusters to give an overall desirability score.

3.5.3. Figure 25 shows the top 25% desire lines; the thicker, darker lines are likely to be more desirable to cyclists and the thinner, lighter lines are likely to be less desirable.

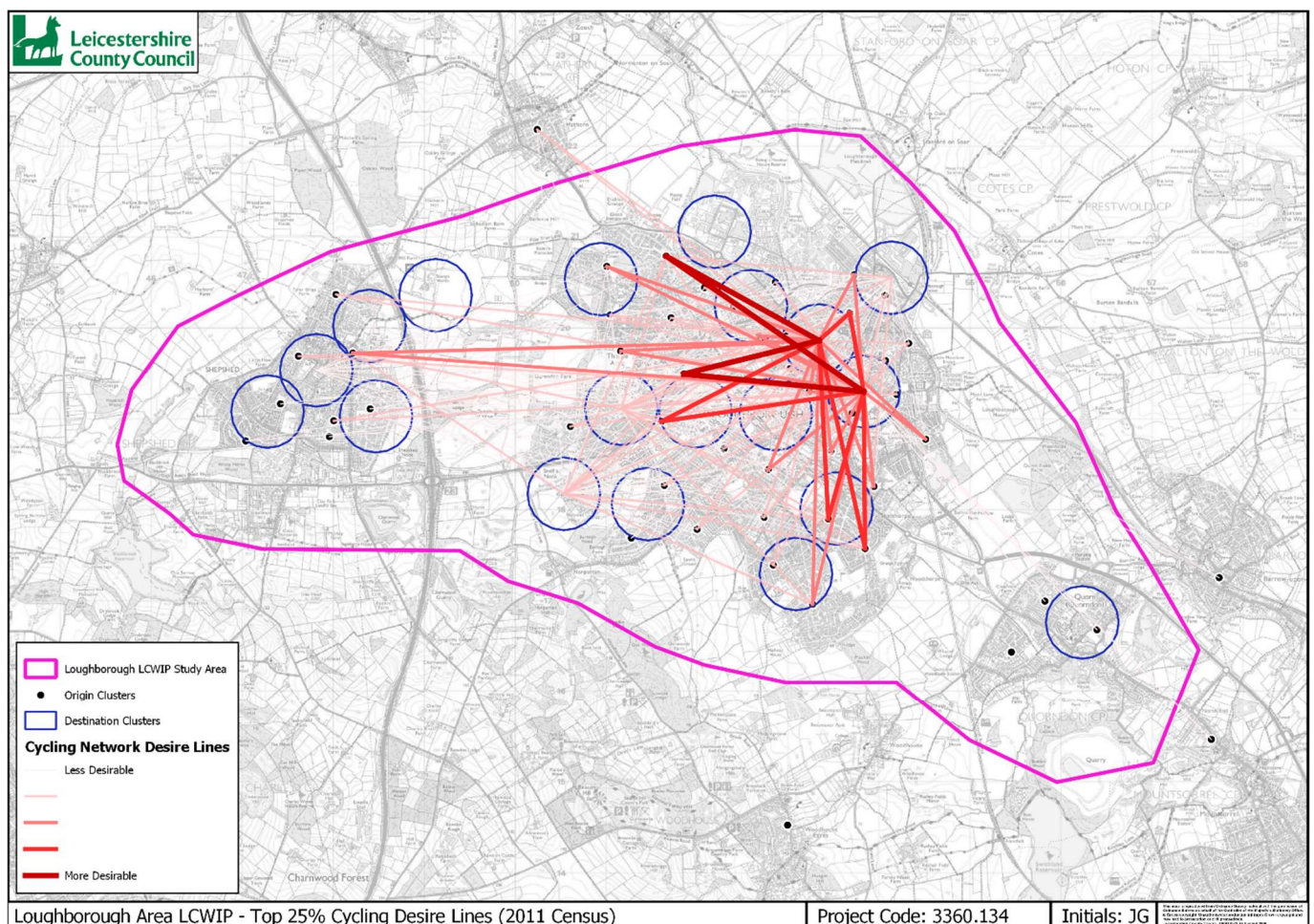


Figure 25. Top 25% Desire Lines between Origins and Destinations

3.5.4. Figure 26 shows similar to the above, however the ODs for Shepshed have been considered independently to highlight the most desirable routes within this settlement.

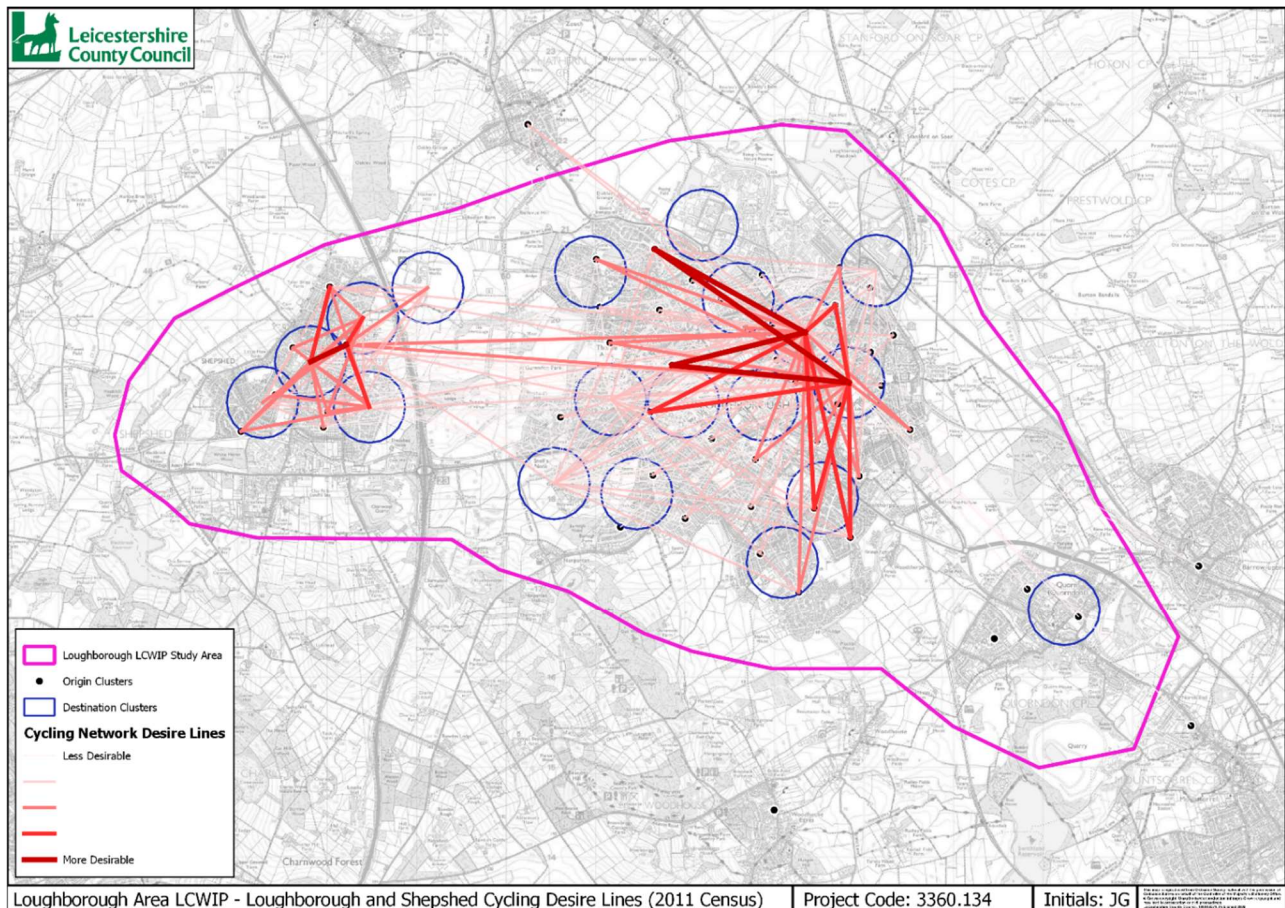


Figure 26. Desire Lines between Origins and Destinations (Loughborough and Shepshed)

3.6. Identifying Routes Serving the Desire Lines

3.6.1. The desire lines indicate where people are most likely to cycle to / from in the study area but do not attribute trips to specific links on the network. There are often multiple routes that can be taken between two points, so several online resources were used to assist with route selection along desire lines, specifically Google Maps and Strava Metro.

Google Maps

3.6.2. Google Maps²⁴ is an online service that provides satellite imagery, aerial photography, street maps,

²⁴ <https://www.google.com/maps>

²⁵ <https://www.google.co.uk/maps/about/#/>

Strava Metro Data

- 3.6.3. Strava²⁶ is a social networking app that allows people to track their human-powered activities such as walking, running, and cycling. The app records information like distance, elevation gain, time, and route, etc. This data has been made available to local government authorities to help them identify opportunities for investment.
- 3.6.4. Not everyone tracks their activities on Strava, however the platform has shown that Strava Metro data is representative of the overall population. Several academic studies have analysed the relationship between Metro data and data recorded by counters and found robust correlations between the two²⁷.
- 3.6.5. The Strava Metro heatmap tool displays the level of cycling activity on routes for a given period. This has been used to inform route selection as it highlights which paths people currently avoid or favour in the study area.

3.7. Identifying a Route Hierarchy

- 3.7.1. The following hierarchy from the LCWIP Technical Guidance has been used to categorise cycling routes:
- **Primary:** High flows of cyclists are forecast along desire lines that link large residential areas to trip attractors such as a town or city centre.
 - **Secondary:** Medium flows of cyclists are forecast along desire lines that link to trip attractors such as schools, colleges, and employment sites.
 - **Local:** Lower flows of cyclists are forecast along desire lines that cater for local cycle trips, often providing links to primary or secondary desire lines.
- 3.7.2. For routes that will serve a key future development, but are not required for the existing cycling network, there is an additional 3 categories named Future Primary (Indicative), Future Secondary (Indicative) and Future Local (Indicative). As many of these sites are yet to go through the planning process and do not have agreed masterplans, these routes should be treated as indicative only.

3.8. Producing Draft Cycle Network Map

- 3.8.1. The data from the previous steps has been brought together to produce a draft cycle network, shown in Figure 27. The creation of the cycling network map is an iterative process and a final map has been produced following engagement with several key stakeholders.

²⁶ <https://metro.strava.com/>

²⁷ <https://medium.com/strava-metro/cdc-finds-strava-metro-data-correlates-strongly-with-census-active-commuting-data-8ab1be0fe130>

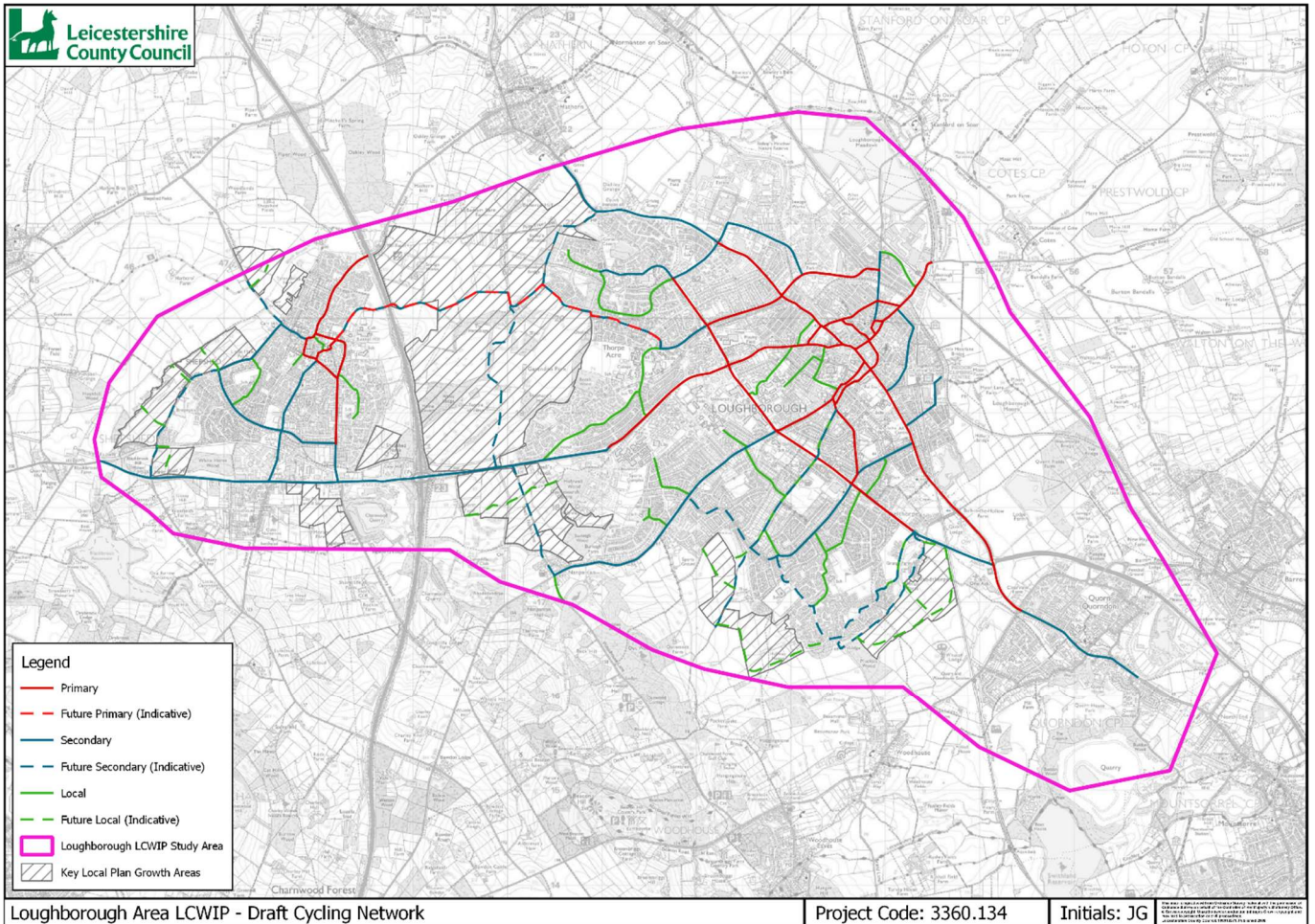


Figure 27. Draft Cycling Network Map

4. Walking Network Map Development

4.1. Overview

4.1.1. The fourth stage of the LCWIP process is to map a future walking network which identifies where investment should be targeted.

4.2. Methodology

4.2.1. The following method for developing a walking network map mirrors the recommended steps in the LCWIP technical guidance:

1. Mapping Walking Trip Generators
2. Identifying Core Walking Zones
3. Identifying Key Walking Routes
4. Identifying a Route Hierarchy
5. Producing Draft Walking Network Map
6. Route Validation (Stakeholder Engagement)

4.2.2. The following sections explain each of these steps in greater detail.

4.3. Mapping Walking Trip Generators

4.3.1. The key journey destinations have previously been plotted to create the cycling network map (figure 24). This layer has been utilised again to determine the walking trip generators; while people are likely to travel further on a bike, the trip generators remain the same for both modes of travel.

4.3.2. As the study area is reasonably large, only the most significant trip generators have been included for walking. These key trip generators are where several destinations are located close together and are likely to attract a large number of pedestrian trips, specifically:

- Loughborough Town Centre
- Shepshed Town Centre
- Loughborough Railway Station
- Loughborough University
- LU Science and Enterprise Park
- Bishop Meadow Industrial Estate
- Cluster of Schools, i.e. Thorpe Acre School, Booth Wood School, De Lisle College & Charnwood College

4.3.3. Figure 28 shows the spatial distribution of the walking trip generators listed above.

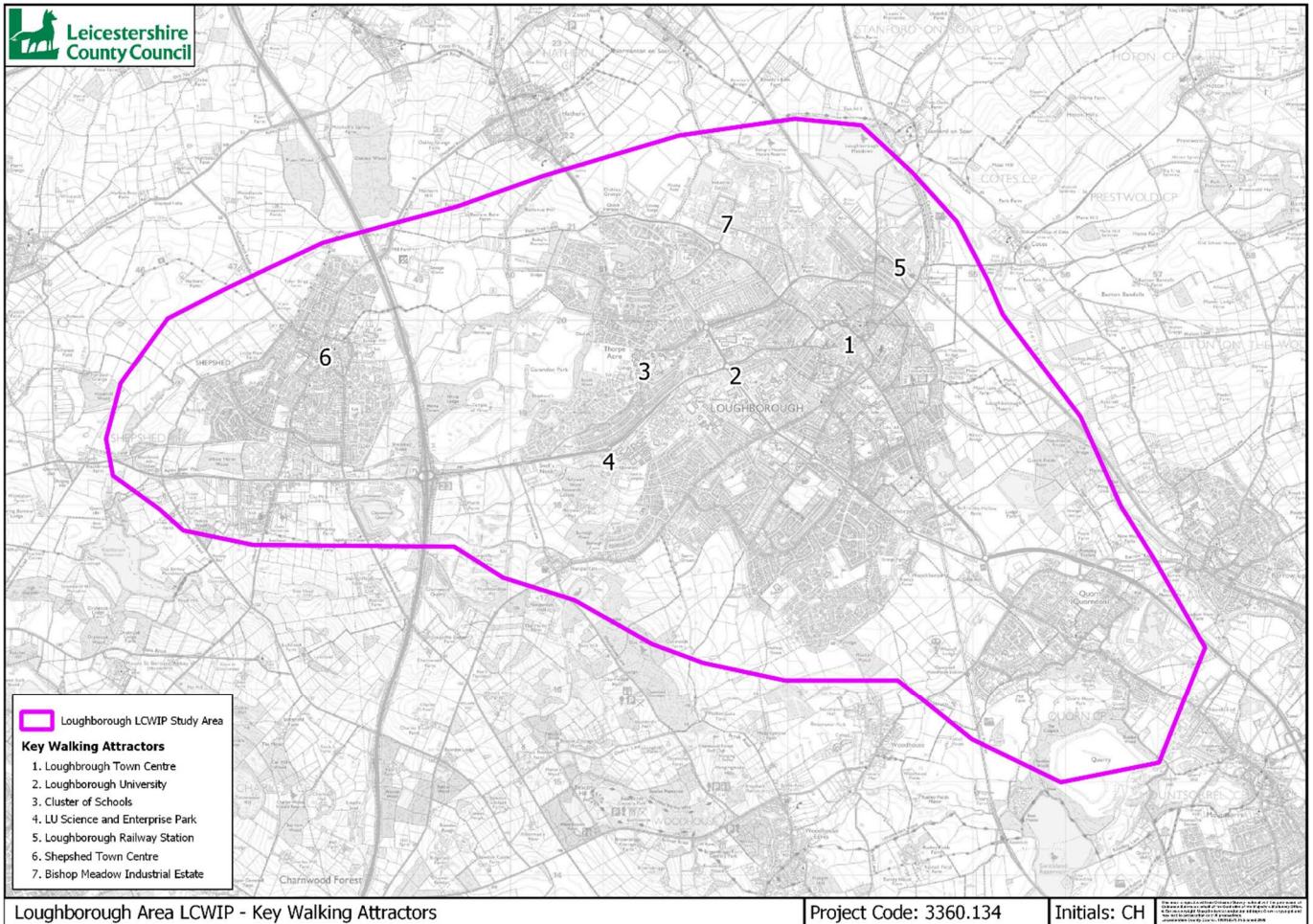


Figure 28. Key Walking Trip Generators

4.4. Identifying Core Walking Zones

4.4.1. Following on from identifying the key trip generators, the next step was to map core walking zones (CWZ). CWZs consist of several key trip generators in close proximity where there is potential for high footfall.

4.4.2. Figure 29 shows 400m CWZs from each of the key trip generators, which has been mapped via the shortest route along the road network in GIS. 400m represents approximately a 5-minute walking distance and is recommended in the LCWIP technical guidance as the minimum extents of a CWZ.

4.4.3. In addition, a 2km buffer has also been mapped to help identify the key routes that serve the CWZs. 2km is the maximum distance that people are likely to travel when walking.

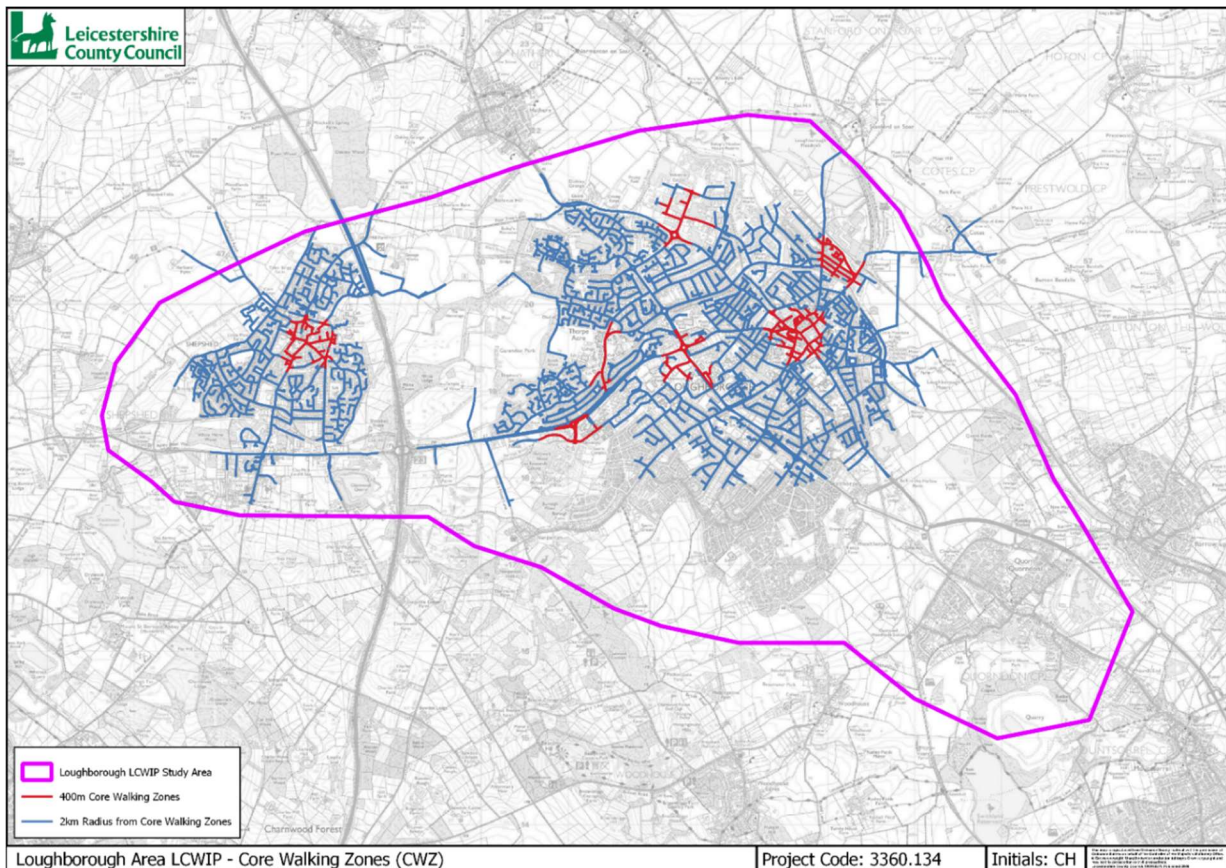


Figure 29. Core Walking Zones (CWZ)

4.5. Identifying Key Walking Routes

4.5.1. As with cycling, there is often more than one route between an origin and destination, so Google Maps, Strava Metro and Betterpoints were used to assist with route selection in the 400m and 2km zones.

4.6. Identifying a Route Hierarchy

4.6.1. The LCWIP Technical Guidance advises that the highest category footways from the Footway Maintenance Classification²⁸ can be used to define key walking routes. This classification is shown in Table 10.

4.6.2. Categories 1(a), 1, 2 and 3 have been used as the hierarchy for classifying walking routes; local access footways are not on the map as every footway would need to be included making the map unreadable. There is an additional category named town centre zone which will largely encompass the pedestrianised public realm in Loughborough town centre. As with the cycling hierarchy, there will be an additional 3 categories for routes that are likely to serve key future developments named Future Primary (Indicative), Future Secondary (Indicative) and Future Links (Indicative).

²⁸ Well-maintained Highways: Code of Practice for Highway Maintenance Management 2005 Edition, updated September 2013, Roads Liaison Group – London: TSO

Table 10. Footway Hierarchy

Category	Name	Description
1(a)	Prestige walking zones	Very busy areas of towns and cities, with high public space and street scene contribution.
1	Primary walking routes	Busy urban shopping and business areas, and main pedestrian routes.
2	Secondary walking routes	Medium usage routes through local areas feeding into primary routes, local shopping centres, etc.
3	Link footways	Linking local access footways through urban areas and busy rural footways.
4	Local access footways	Footways associated with low usage, short estate roads to the main roads and cul-de-sacs.

4.7. Produce Draft Walking Network

4.7.1. The data from the previous steps has been brought together to produce a draft walking network, shown in Figure 30. The creation of the walking network map is an iterative process and a final map has been produced following engagement with several key stakeholders.

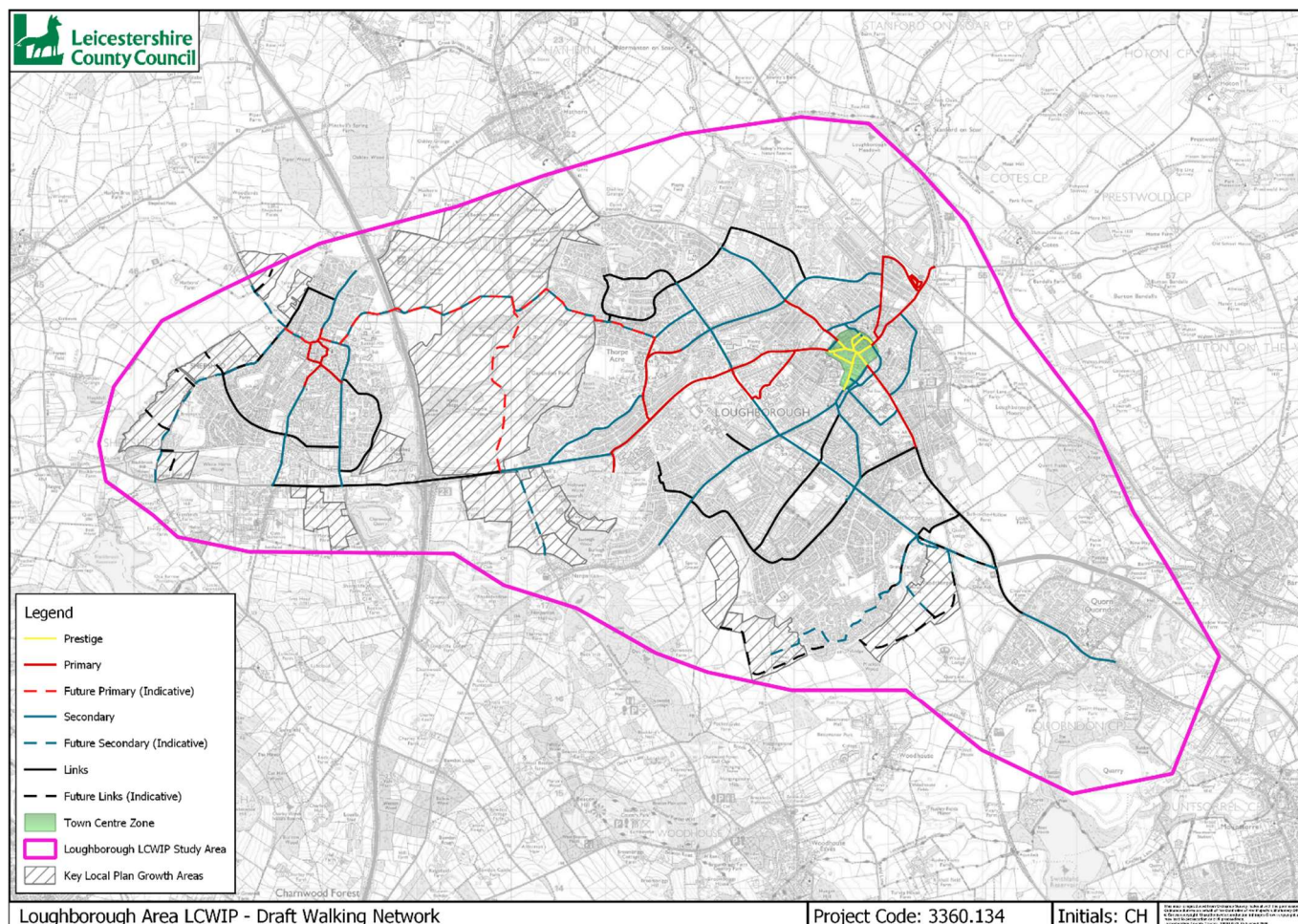


Figure 30. Draft Walking Network Map

5. Stakeholder Engagement

5.1. Overview

5.1.1. The validation of the draft network maps was informed by engagement with stakeholders, including councillors, local planning authorities and the public. Engagement responses were considered to help inform the final priority network routes.

5.1.2. It should be noted that many of the suggested routes have not been added to the network maps as they are not considered to be part of the core network that serve desire lines. However, these routes will likely still be used for walking and cycling and may be improved in the future.

Internal Stakeholder Engagement

5.1.3. Local councillors were given the opportunity to provide feedback on the network plans as they are aware of what is important to constituents in their areas. LCC officers across various specialisms gave feedback on the network plans to ensure internal schemes and wider work was considered.

External Stakeholder Engagement

5.1.4. A public consultation was held for 4-weeks which allowed people to submit their views on the draft networks. Consultees were encouraged to say which of the routes they supported and / or opposed, and to highlight any other links that should be included on the maps.

Local Planning Authority Workshop

5.1.5. A workshop was held with Charnwood Borough Council (CBC) to discuss the draft network maps and any local priorities.

5.2. Changes to the Network Plans

5.2.1. Tables 11 and 12 list the amendments to the draft network maps that have been agreed in conjunction with stakeholders. The references include the letter 'C' or 'W' to indicate whether the comments refer to cycling or walking, and a number.

Table 11. Agreed Changes to the Draft Cycling Network Map

Ref	Request	Resulting Action
C1	Permission has been obtained to create an off-road cycleway between the crossroads and Chaveney Drive.	To be included as a local link.
C2	PRoW L10n in Shepshed is a footpath so legal status will need to be changed.	Link to be shortened so that it only goes to the school entrance.
C3	PRoW K105 is already used as a cycleway, well used as alternative to on-road.	Move local link from Maxwell Drive to this route.
C4	The dismantled railway line through Loughborough is a well-used traffic free multi-user route which has been omitted from the plans.	To be included as a future secondary (indicative) link from east of the cricket ground to Schofield Road.
C5	Footpath L13 is being provided with a tarmac surface as part of the development through to Tamworth Close, Shepshed.	To be included as a local link. Indicative local link into the key growth area to branch off this route, and the one to the west to be removed.
C6	Route through Market Place hasn't been identified as a priority but links to cycle hoops need consideration.	To be included as a primary link.
C7	Links with Loughborough Town Masterplan.	Biggin Street between Swan St and Fennel St to be included as a primary link. Ward's End between Devonshire Square and Bedford Square to be included as a primary link.
C8	Market Street is a key route for students.	To be included as a primary link.
C9	Aspiration to link up canal towpaths as this links the North to employment areas in the South.	Canal Bank to be included as a local link between Bridge St and the Canal. The canal to be included up to Moor Ln as a local link. The PRoW from Canal Bank to Swingbridge Rd to be included as a local link.
C10	Link Belton Road to the North to employment such as Astrazeneca.	Jubilee Drive to be included as a local link.
C11	Link between the station, town centre & employment areas.	Weldon Rd, Bakewell Rd and Bishop Meadow Rd to be included local links, connecting to the secondary link on Belton Rd W.
C12	Need to ensure link to Public Realm Improvements on Nottingham Road & Bedford Square.	Bedford Square (NE link) to be included as a local link.
C13	Misses potential use of existing surfaced routes along Pear Tree Lane and Hathern Drive	Pear Tree Ln to be included as a future local (indicative) link and Hathern Dr to be included as a future secondary (indicative) link.
C14	Misses potential link north towards Hathern, the route of which is shown on the parameters plan and landscaping details approved for the same.	To be included as a future secondary (indicative) link.
C15	Proposes use of existing footpath K105 as cycleway – this is currently an unsurfaced footpath with gates off Pear Tree Lane. An alternative and similar route via Pear Tree Lane and Hathern Drive would make use of existing surfaced routes, avoid existing gates, be in line with intentions for the SUE and would retain K105 as an unsurfaced footpath through pleasant woodland.	Link to be removed.
C16	There is also an existing bridleway from linking from Hathern Road (east of Shepshed / M1 overpass) to Pear Tree Lane – there is potential that this could be an additional cycle route (as well as bridleway) to support another link between the SUE (including employment areas) and Shepshed and allowing circular loops from Shepshed through Garendon Park (route shown with dotted blue line in attached annotate plan).	To be included as a future local (indicative) link.
C17	The SLR is also proposed to have a shared footpath / cycleway along it (except for potentially the part of the SLR running through the registered park and garden) but this is not shown on the LCC proposals and would link with the district centre and employment in the future.	To be included as a future secondary (indicative) link.
C18	The section of secondary cycle route on the edge of the town centre from the east end of Meadow Lane along Sparrow Hill to the intersection of Church Gate is on a one-way street. Is a contraflow cycle route planned in order to make the link.	The classification of Sparrow Hill / Nottingham, to the junction with The Coneries, to be changed to secondary.
C19	Shepshed Public Realm Project.	Market Place and Cheapside to be included as local links.
C20	Requesting a link from Nanpantan crossroads up to the Outwoods carpark, along Woodhouse Ln.	To be included as a local link. The LCWIP boundary to be extended to reflect this.

Ref	Request	Resulting Action
C21	Woodbrook is a high-quality off-road route which isn't shown on the map. This could serve the Moat Farm allocation.	Two sections of Wood Brook to be included as local links: <ul style="list-style-type: none"> • Browns Ln to Forest Rd • Epinal Way to Valley Rd, via Woodbrook Way, Outwoods Drive, Brookfield Ave, Woodbrook Way and Woodbrook Rd.
C22	A new link between Buckingham Drive and the bridleway to Shepshed.	Althorpe Dr to be included as a future local (indicative) link.
C23	The cycling scheme needs to be extended past Quorn and onto Mountsorrel so that pupils can access safe journeys and routes on cycles thereby reducing car & bus traffic.	The remainder of Leicester Rd, between Wood Ln and the boundary of the study area, to be included as a future secondary (indicative) link.
C24	New route - to incorporate the bridge underneath the Motorway and along the old Coach Road.	To be included as a future local (indicative) link.
C25	Development of a suitable route between the villages (Barrow upon Soar and Quorn) with supporting infrastructure. The existing routes are not fit for purpose.	Farley Way, between Loughborough Rd and the Farley Way/Barrow Rd/Meynell Rd roundabout to be included as a local link.

5.2.2. Figure 31 shows the spatial distribution of the cycling map amendments summarised in Table 11.

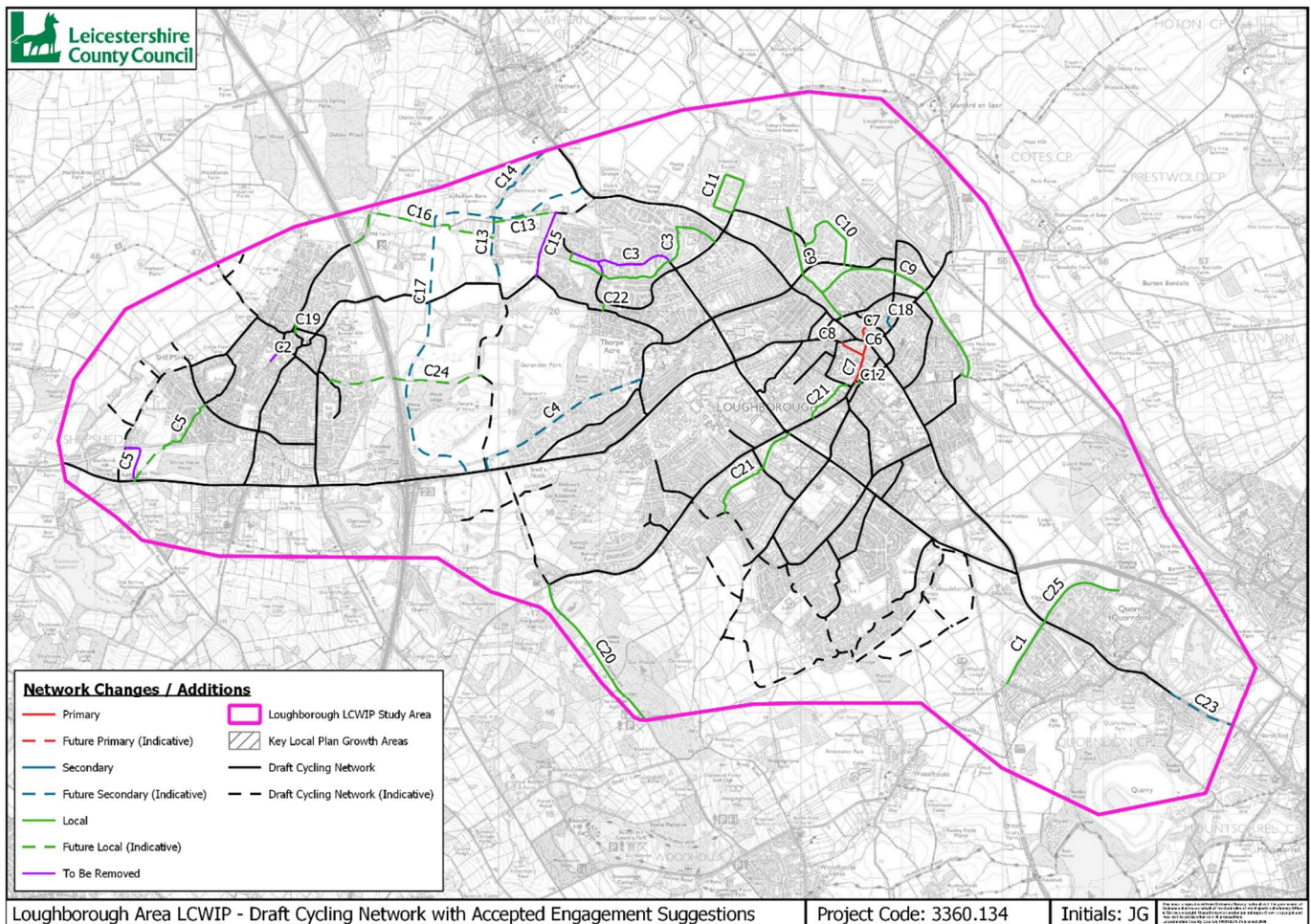


Figure 31. Draft Cycling Network Map with Agreed Engagement Suggestions

Table 12. Agreed Changes to the Draft Walking Network Map

Ref	Request	Resulting Action
W1	Footpath L13 is being provided with a tarmac surface as part of the development through to Tamworth Close, Shepshed.	To be included as a link. Future link (indicative) into the key growth area to branch off this route, and the one to the west to be removed.
W2	The dismantled railway line through Shepshed and Loughborough is a key walking route in the area, it's been missed off the plans.	To be included as a future secondary (indicative) route from east of the cricket ground to Schofield Road.
W3	Footpath I27 from Nottingham Road to Canal Bank and Canal Bank and I27 to Swingbridge Road is fully surfaced and heavily used by the public as an alternative to walking beside the roads.	Canal Bank to be included as a link between Bridge St and the Canal. The canal to be included up to Moor Ln as a link. The PRow from Canal Bank to Swingbridge Rd to be included as a link.
W4	The proposed link from Leicester Road to Public Footpath K55 is not a Public Highway and it is unlikely that Loughborough Endowed Schools would agree to the link.	Link to be removed.
W5	Inclusion of Queens Park as it is a key part of the town centre and links to the leisure centre, museum, and library	Granby Street and Frederick Street to be included as prestige routes. Town centre zone to be extended to include the park and Loughborough Leisure Centre.
W6	Blackbrook footpath is a popular walking route to schools.	Move link from Maxwell Drive to this route.
W7	Woodbrook is a high-quality off-road route which isn't shown on the map. This could serve the Moat Farm allocation.	Two sections of Wood Brook to be included as links: <ul style="list-style-type: none"> • Browns Ln to Forest Rd • Epinal Way to Valley Rd, via Woodbrook Way, Outwoods Drive, Brookfield Ave, Woodbrook Way and Woodbrook Rd.
W8	Recommendation that the route near to Nanpantan and the Moat Farm housing allocation should be extended to the boundary to help with leisure trips to Beacon Hill Country Park.	To be included as a future link (indicative) from Beacon Rd to the edge of the Moat Farm growth area.
W9	Bedford Square Gateway Project.	Bedford Square (SW link) to be included as a link.
W10	Lanes and Links, part of Loughborough Town Deal.	The following routes to be included: <ul style="list-style-type: none"> • Town Hall Passage as link • Connection between Cattle Market and Woodgate as a link • Connection between Woodgate and Southfield Rd as a link • Church Gate as a secondary route • Clay Pipe Jitty as a prestige route
W11	Nottingham Road Public Realm Improvement Project, part of the Town Centre Masterplan.	Nottingham Rd between Sparrow Hill and The Coneries to be included as a secondary route.
W12	The LCC plans seem to miss opportunities to link north towards Hathern via Hathern Drive and west to Shepshed which are proposed as part of the SUE.	The following routes to be included as future links (indicative): <ul style="list-style-type: none"> • Pear Tree Ln • Hathern Dr • Bridleway from Hathern Rd to Hathern Dr • Footpath K105 Derby Rd, from Bishop Meadow Roundabout to the proposed SLR through the SUE, to be included as a secondary route.
W13	There are also additional links intended by condition on the outline permission to link into the registered park and garden from Ravensthorpe Drive, near Booth Wood.	Obelisk Way, to the north of Booth Wood, to be included as a future link (indicative).
W14	Further public access routes are also intended to be made available through the registered park and gardens as part of the SUE. Details are currently being worked on based on s106 requirements and may have been finalised by the time that LCC progress to adoption so there could be further achievable routes becoming available in the near future that could contribute to LCC's aims.	To be included as a future link (indicative).
W15	The walking plan doesn't pick up improving walking/ access from Nanpantan Crossroads to Nanpantan Reservoir/Jubilee Woods/The Outwoods along Woodhouse Ln. The Outwoods is just outside of the	The secondary links on Nanpantan Rd and Snell's Nook Ln to be extended to Nanpantan Crossroads.

Ref	Request	Resulting Action
	LCWIP area, however this is an important destination so should be included (& similarly for the cycling map).	
W16	Requesting a link between Nanpantan crossroads up to the Outwoods carpark, along Woodhouse Ln.	To be included as a link. The LCWIP boundary to be extended to reflect this.
W17	Link Belton Road to the North to employment such as Astrazeneca.	Jubilee Drive to be included as a link.
W18	Link between the station, town centre & employment areas.	Weldon Rd, Bakewell Rd and Bishop Meadow Rd to be included links, connecting to the secondary route on Belton Rd W.
W19	There are planned towpath improvements in Loughborough this Autumn.	The canal to be included up to Moor Ln as a link.
W20	A new link between Buckingham Drive and the bridleway to Shephed.	Althorpe Dr to be included as a future link (indicative).
W21	There needs to be a safe cycleway right to Woodhouse Eaves. This is a busy crossroads and there should be good routes into and out of Loughborough, not just within Loughborough.	Woodhouse Rd, between the crossroads and Chaveney Drive, to be included as a link.
W22	Development of a suitable route between the villages (Barrow upon Soar and Quorn) with supporting infrastructure. The existing routes are not fit for purpose.	Farley Way, between Loughborough Rd and the Farley Way/Barrow Rd/Meynell Rd roundabout to be included as a local link.

5.2.3. Figure 32 shows the spatial distribution of the walking map amendments summarised in Table 12.

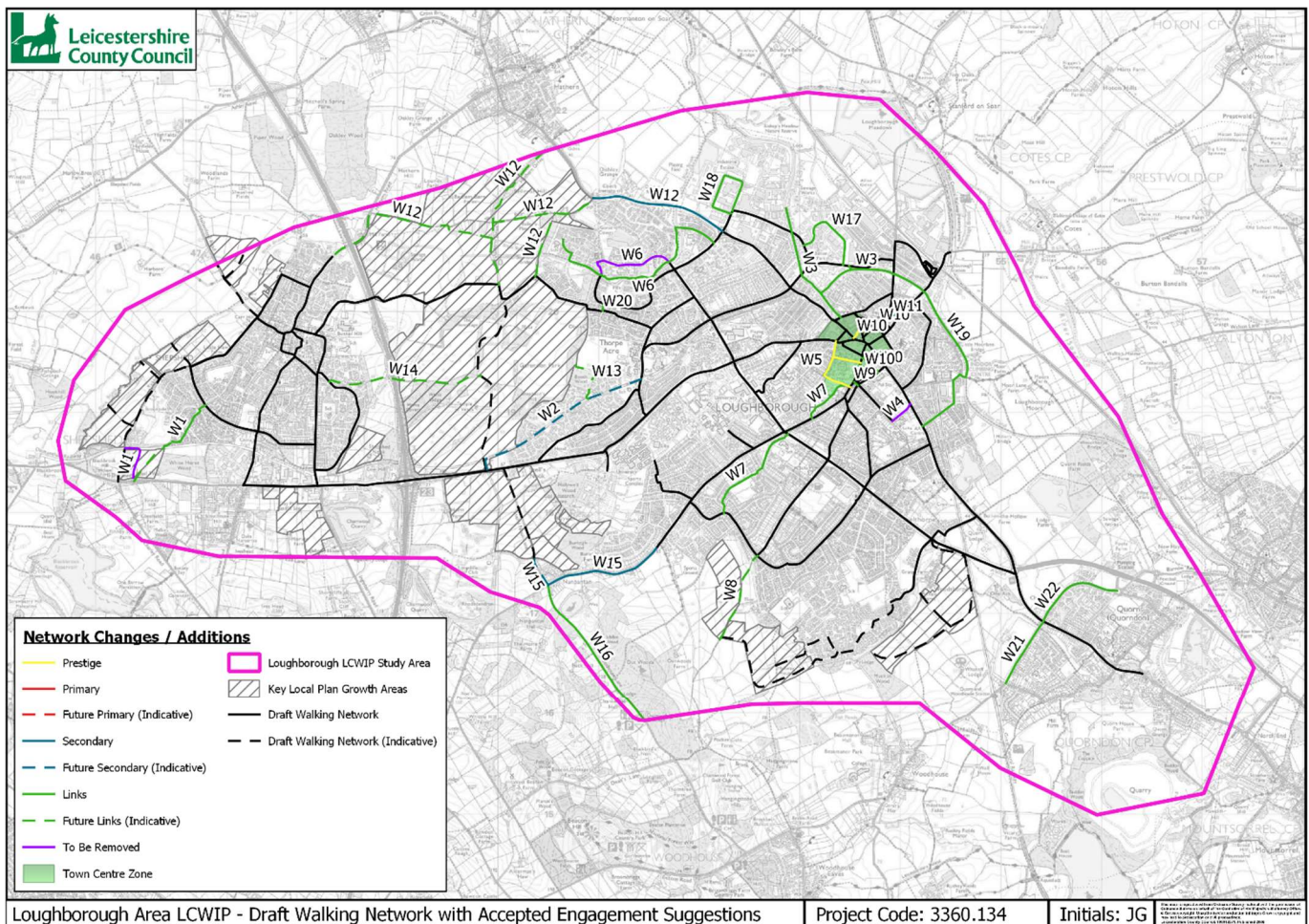


Figure 32. Draft Walking Network Map with Agreed Engagement Suggestions

6. Final Network Plans and Next Steps

6.1.1. This section of the report shows the final recommended cycling and walking network plans to be taken forward to the next phase of the Loughborough Area LCWIP.

6.2. Cycling and Walking Network Plans

6.2.1. Figures 33 and 34 show the final cycling and walking network plans, respectively. The plans highlight several priority areas / corridors that have emerged in relation to the Loughborough LCWIP study area, including:

- Loughborough Town Centre
- Shepshed Town Centre
- Loughborough Train Station to Loughborough University
- The Grand Union Canal
- The A6
- Epinal Way

6.3. Next Steps

6.3.1. The cycling and walking network plans will be passed to consultants, ITP, who will audit the existing cycling and walking networks and design concept schemes where infrastructure improvements are needed.

6.3.2. The long-term aspiration is to deliver these cycling and walking networks in their entirety as funding becomes available. Once concept schemes have been developed, the next step will involve prioritising the cycling and walking infrastructure improvements into three categories:

- Short term – improvements which can be implemented quickly or are under development
- Medium term – improvements where there is a clear intention to act, but delivery is dependent on further funding availability or other issues
- Long term – more aspirational improvements or those awaiting a defined solution

6.3.3. Scheme prioritisation will be undertaken using a scoring table, such as the example in the LCWIP technical guidance, based on 5 principal areas: effectiveness, attractiveness, policy, economic and deliverability. This will include undertaking an economic appraisal of proposed cycling and walking schemes using the Government's Active Mode Appraisal Toolkit (AMAT)²⁹. An economic appraisal will help to identify which improvements are more likely than others to provide high value for money.

²⁹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1078489/active-model-appraisal-toolkit-user_guidance.pdf

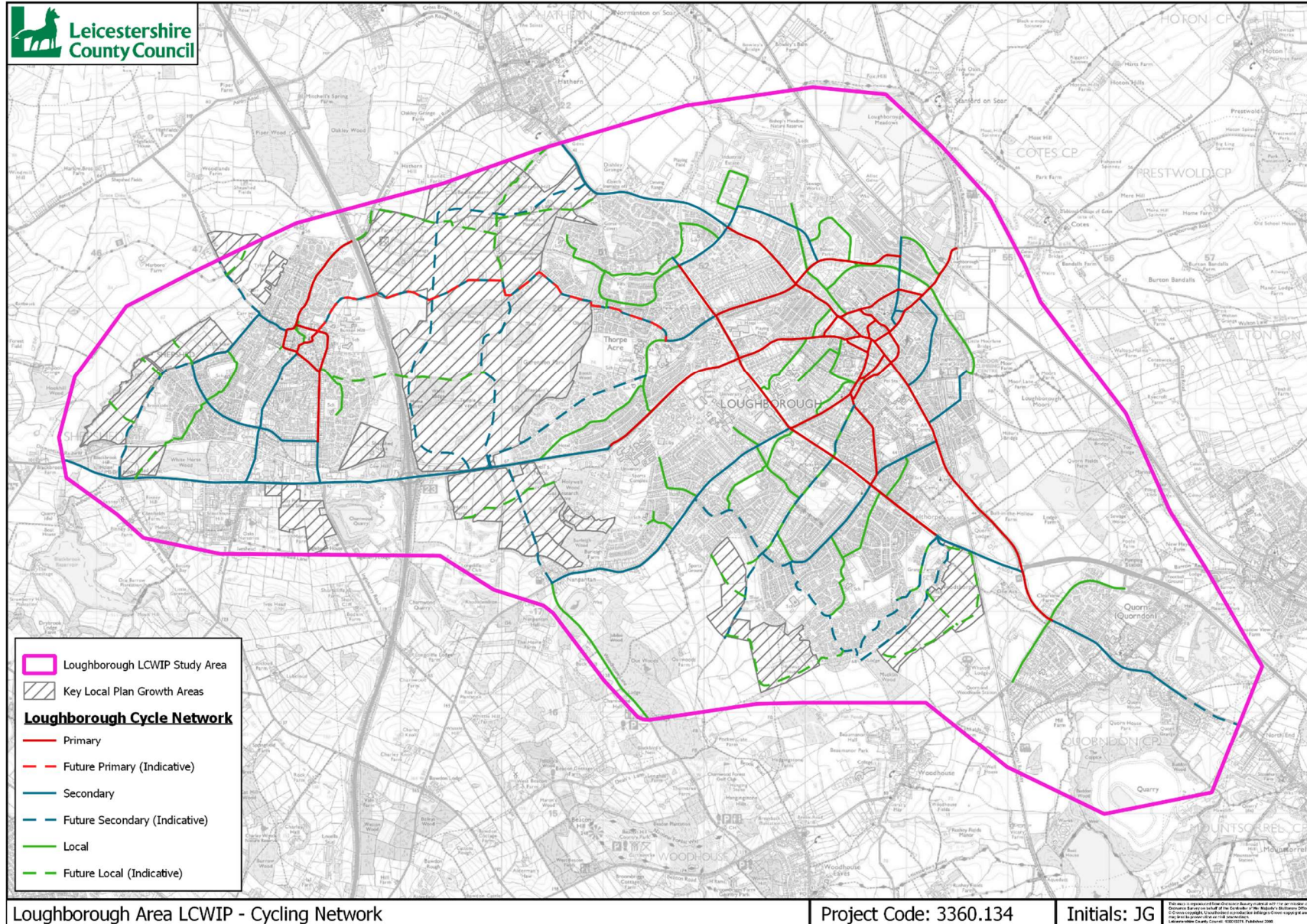


Figure 33. Cycling Network Plan

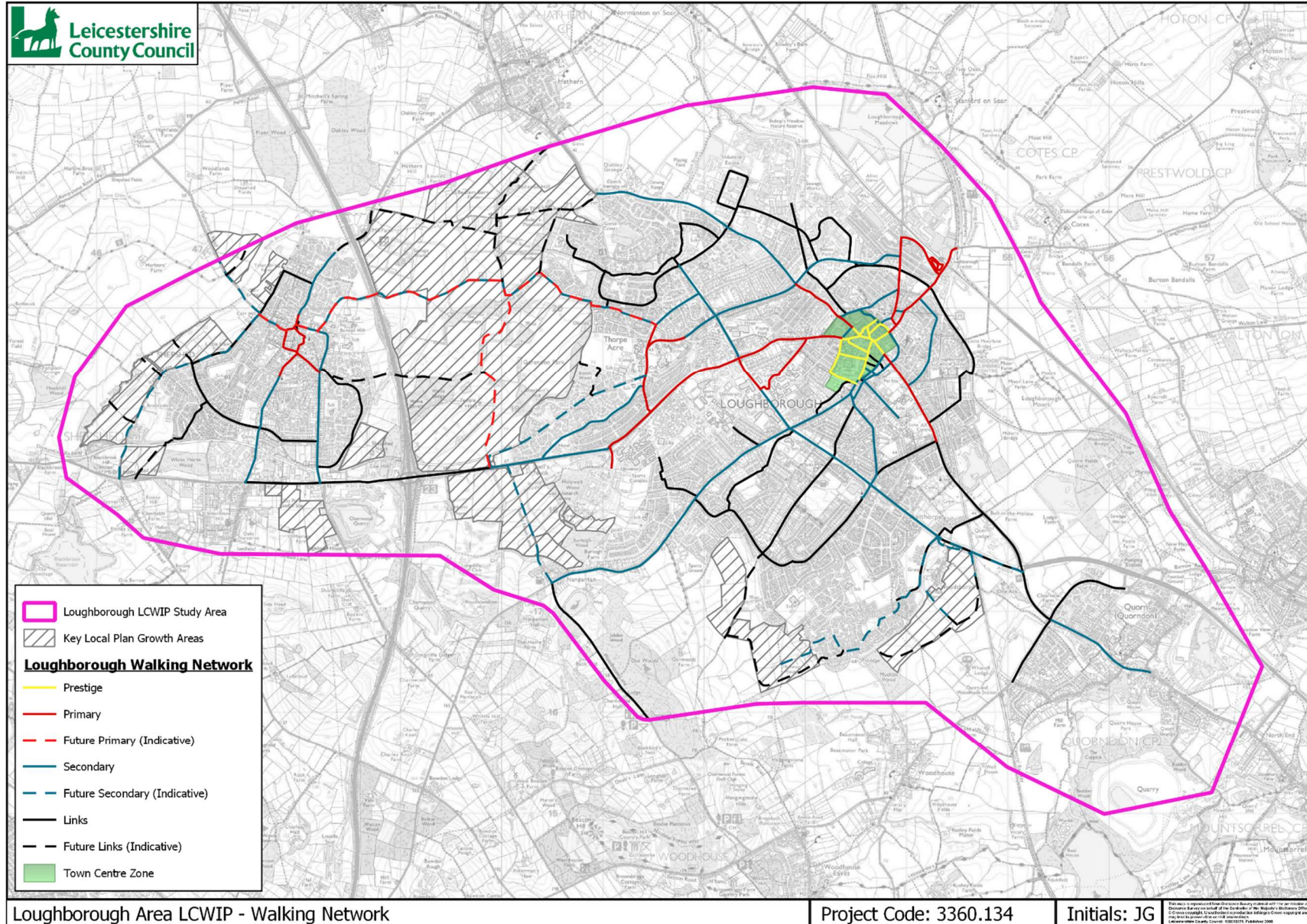


Figure 34. Walking Network Plan

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