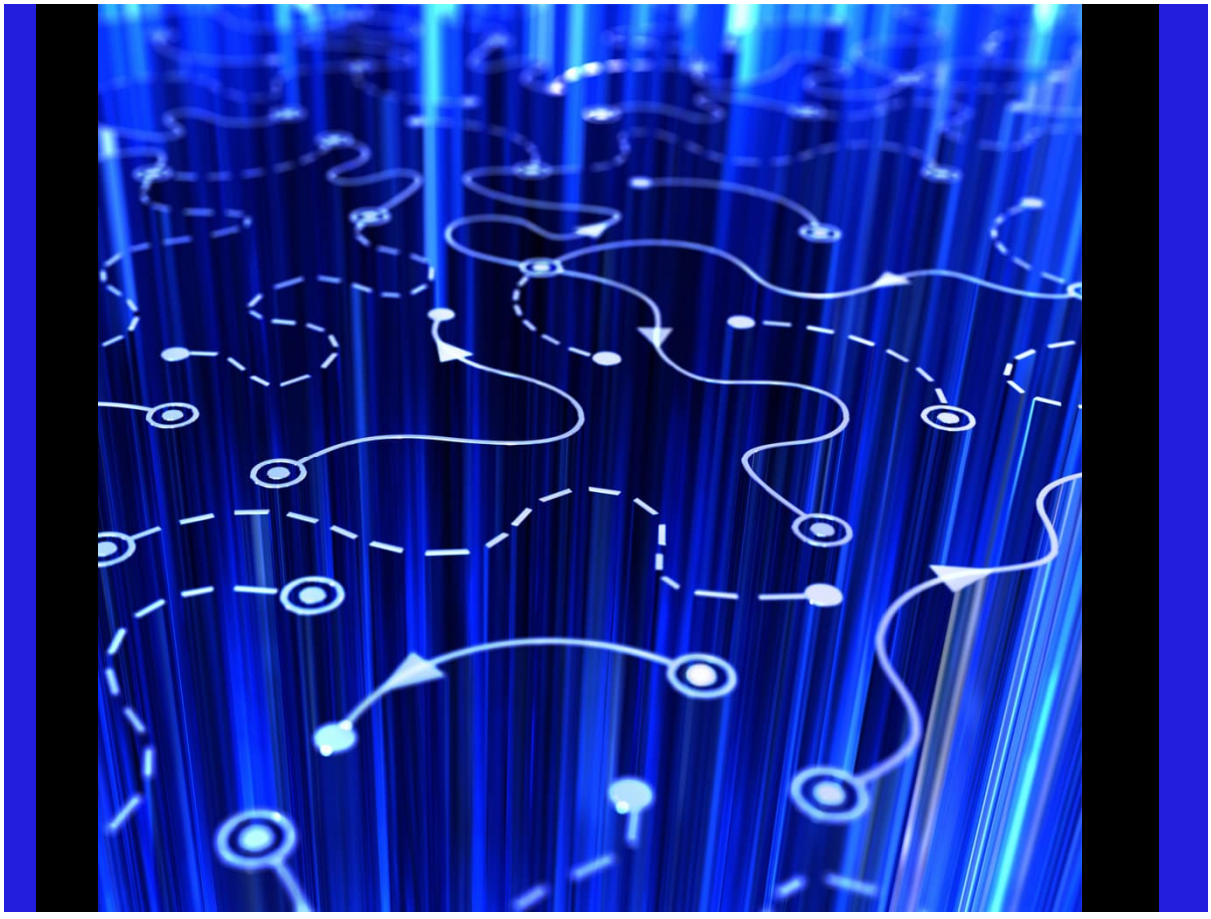
Central Lancashire Local Plan
Stage 0: Preliminary Transport Assessment

Version: 01

Lancashire County Council

Central Lancashire Local Plan



Central Lancashire Local Plan
Stage 0: Preliminary Transport Assessment

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1. Introduction

1.1. Background

1.1.1. Central Lancashire, encompassing the areas of Preston, Chorley, and South Ribble, operates as a unified local economy and commuting zone. The three Central Lancashire Planning Authorities - Preston City Council, South Ribble Borough Council, and Chorley Council - have decided to review the Joint Core Strategy and individual local plans and have formally agreed to work together to create a unified plan. Jacobs has been appointed by Lancashire County Council (LCC) to provide transport planning consultancy support to the Local Plan process.

1.1.2. In July 2012, the three councils adopted the existing Core Strategy, a crucial document in the statutory development plan for the area, which outlines the strategic planning policies for Central Lancashire. This strategy is supported by individual local plans developed by each council in 2015.

1.1.3. In 2018, the review of the Core Strategy and individual local plans commenced with the aim of creating a single Central Lancashire Core Strategy that reflects both shared strategic policy objectives and more detailed non-strategic policies.

1.1.4. Once adopted, the new Core Strategy will replace the extant Central Lancashire Core Strategy (2012). The new Core Strategy will address local housing needs, economic factors, environmental considerations including the climate emergency, community infrastructure, and strategic infrastructure needs, in a sustainable way.

1.1.5. The Preferred Options Consultation (Part One) for the new Core Strategy in Central Lancashire was completed in February 2023. The next stage, known as the Publication Stage, is anticipated to occur in late 2024, followed by the submission of the final Core Strategy to the Secretary of State for examination in June 2025. The adoption of the new Core Strategy is expected by late 2026.

1.1.6. The Core Strategy will also make site-specific strategic allocations to meet the identified development needs. Once the Core Strategy has completed all its formal statutory stages, it will be adopted as the development plan for all three councils and used to assess planning applications.

1.1.7. As part of the Core Strategy update, transport evidence needs to be developed by assessing the transport impacts and needs of the spatial growth options being considered. The proposed methodology is based on the guidance included in the National Planning policy Framework and DfT's guidance on Transport evidence bases in plan making and decision taking. It also takes into account National Highways feedback on the Central Lancashire Core Strategy (CLLP) Preferred Options – Part One Consultation (December 2022). The assessment will be undertaken in following three stages:

- Stage 0: This stage involves assessment of the site allocations to assist the Core Strategy team in evaluating the identified sites from a transportation perspective. Assessment criterion to assess each site or development area with regards to current and future transport connectivity has been defined. This report contains the assessment criteria and results of Stage 0.
- Stage 1: This stage involves the preparation of a Transport Evidence Base (TEB) which draws together all available evidence on existing transport provision and movement within the three districts, the transport issues, and the infrastructure measures necessary to mitigate the unacceptable impacts. The TEB has a focused spatial remit, looking at transport connections within the three districts and to neighbouring settlements to

provide a deeper analysis and understanding of the mobility trends, opportunities, and network constraints.

- Stage 2: This stage will involve more detailed analysis and transport modelling of development scenarios, including sites, access and movement parameters, and mitigation options. This will inform the final Transport Assessment for Local Plan publication for examination, which will present proposed site allocations and a comprehensive mitigation strategy.

1.2. Scope of Transport Evidence Base

1.2.1. Transport considerations play a critical role in ensuring the effectiveness and sustainability of local plans. Integrating transport-based evidence into local plan testing allows for a comprehensive assessment of transportation needs, impacts, and compatibility with existing infrastructure.

1.2.2. The guidance note on Transport evidence bases in plan making and decision taking' (2015) – Ministry of Housing, Communities and Local Government' sets out how strategic Transport Assessments should be undertaken to support Local Plans. The note states that the key issues the transport evidence bases should seek to consider are:

- assess the existing situation and likely generation of trips over time by all modes and the impact on the locality in economic, social and environmental terms
- assess the opportunities to support a pattern of development that, where reasonable to do so, facilitates the use of sustainable modes of transport
- highlight and promote opportunities to reduce the need for travel where appropriate
- identify opportunities to prioritise the use of alternative modes in both existing and new development locations if appropriate
- consider the cumulative impacts of existing and proposed development on transport networks
- assess the quality and capacity of transport infrastructure and its ability to meet forecast demands
- identify the short, medium and long-term transport proposals across all modes

1.2.3. An essential step towards achieving these objectives is to shift from the traditional "predict and provide" method in transport planning to a "decide and provide" approach. The traditional approach to development planning and transport assessment has been based on the Predict and Provide (P&P) paradigm, which relies on forecasts which assume an extrapolation of historic travel behaviours. Regrettably, this method often results in an overprovision for car usage and an under provision for sustainable modes. This leads to a tendency to replicate and reinforce existing travel behaviours without adequately considering changing circumstances and transport policy direction.

1.2.4. The decide and provide approach to transport planning involves identifying a preferred future vision and then identifying the necessary resources and infrastructure to achieve that vision. This approach recognizes and accommodates future uncertainties while aiming to achieve the desired outcomes. By adopting the decide and provide approach, we can promote more sustainable transport planning and effectively implement the transport user hierarchy by prioritizing walking, cycling, and public transport from the beginning.

1.2.5. Starting with a well-defined vision supported by an evidence-based approach is of paramount importance and serves as a vital initial step. This first step forms the basis for the planning process, ensuring alignment and informed decision-making throughout. It's crucial for this vision to not only incorporate sustainable transport goals but also consider the interplay with health, climate change, and environmental concerns from the beginning.

1.3 Stakeholder Collaboration

1.3.0. An active engagement and consultation with relevant stakeholders and consultees are being undertaken throughout the process to gather valuable insights and feedback. A Transport Strategy Working Group (TSWG) has been established specifically for this purpose, to address and manage the strategic transport issues and opportunities within the LP area.

1.3.1. The TSWG provides strategic management at project and work stream level. It provides assurance to the project that the key objectives are being met and that the project is performing within the boundaries set by the TSWG. The TSWG primarily consists of representatives from LCC and National Highways but also includes representatives from various organizations, including the three local authorities, Active Travel England, bus operators, and rail operators. Initially, only the Active Travel England representative is involved, with other consultees likely to join at later stages.

1.3.2. The remit of the TSWG is to oversee the development of a robust transport evidence base to support the LP, including transport modelling work and the development of an informed transport strategy to support the LP which satisfies the requirements of National Planning Policy Framework (NPPF), DfT Circular 01/2022 The Strategic Road Network, Town and Country Planning Development Management (Procedure) Order (England) 2015 (DMPO) and the Delivery of Sustainable Development ("the Circular) and National Planning Practice Guidance (NPPG). The TSWG also has the remit to address strategic cross-boundary transport issues and opportunities in the LP area.

1.3.3. Monthly meetings with the TSWG are ongoing and are proposed for the full duration of the project.

2. Site Options Transport Accessibility Analysis – Stage 0

2.1. Introduction

2.1.1. The site assessment methodology that is employed to evaluate and compare potential development sites in transport terms is designed to guide site selection by adhering to the Government's national planning guidelines for transport, mirror the local context, and thereby generate sustainable transport alternatives for fulfilling the district's needs.

2.1.2. While this evaluation currently examines the transport elements of allocations independently, preliminary works have indicated that due to considerations from other fields (like flooding, ecology, etc.), some sites may not progress further. Consequently, these sites are unlikely to be allocated. Updates will be made in the next stage once the preferred option is determined.

2.1.3. The initial stage of the task entailed creating a list of sites earmarked for assessment. Smaller sites were either grouped together or incorporated into larger sites based on their type and location, streamlining the assessment process. Once the site list was compiled, the criteria for a multi-criteria analysis related to transportation were established and agreed upon with the TSWG. This analysis aims to evaluate both existing and potential transport connections to and from the assessment areas.

2.1.4. Each identified site allocation has been evaluated against specific criteria for scoring. Overall, a RAG (Red-Amber-Green) system is used to score the criteria, with red indicating a negative impact from the candidate site and green indicating a positive impact.

2.1.5. The rating of each site against the metric has been driven by available data sources and sense checked against local knowledge of the area and stakeholder information. Where external datasets have been used, these are clearly referenced within this report.

2.1.6. It is acknowledged that as part of the preliminary site assessment, the Local Planning Authorities has already appraised each site's sustainability concerning its proximity to bus stops, rail stations, and cycle routes. Consequently, this aspect is excluded from the proposed scope.

2.2 Metric 1: Average commuter travel mode split

2.2.0. This metric serves as a proxy for the relative sustainability of existing commuter patterns. Assessment is based on the Census 2011 'QS701EW - Method of travel to work' data. Acknowledging the data's age, Census 2021 data is analysed to take into consideration the impact of the COVID-19 pandemic have on travel patterns.

2.2.1. An analysis of the 2021 census data is conducted to evaluate its potential applicability for this metric assessment. The analysis revealed a significant increase in people working from home, reflecting the pandemic's impact on work patterns. When excluding the work-from-home category, the results indicated a slight rise in car mode share and a decline in public transportation mode share compared to the 2011 census data. The method of commuting to work for the three districts using 2011 and 2021 Census data is presented in Figure 2-1 through Figure 2-3.

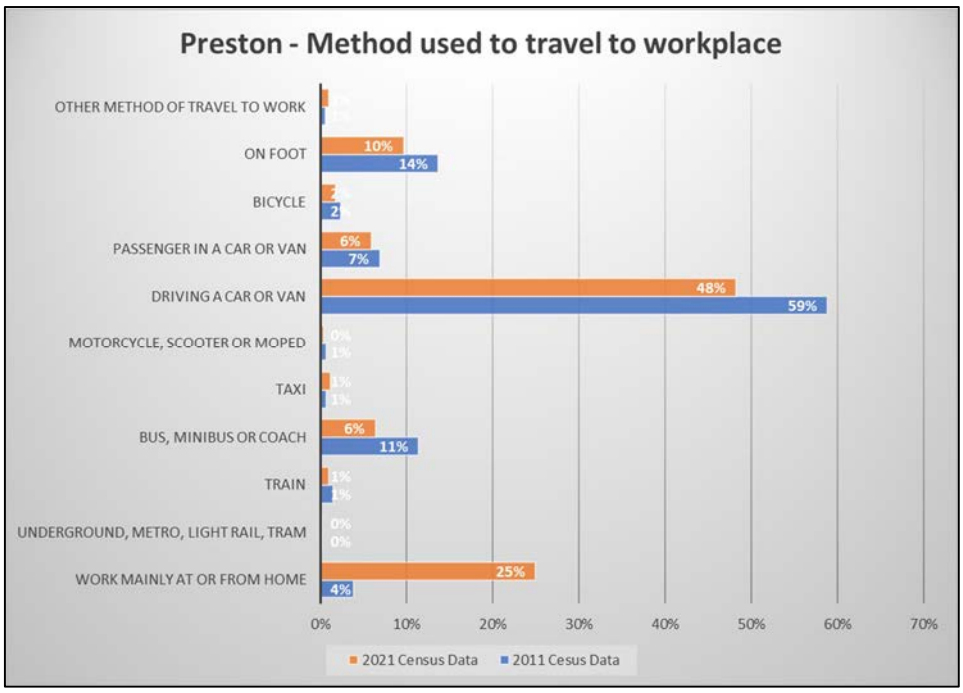


Figure 2-1 Preston – Method of Travel to Work

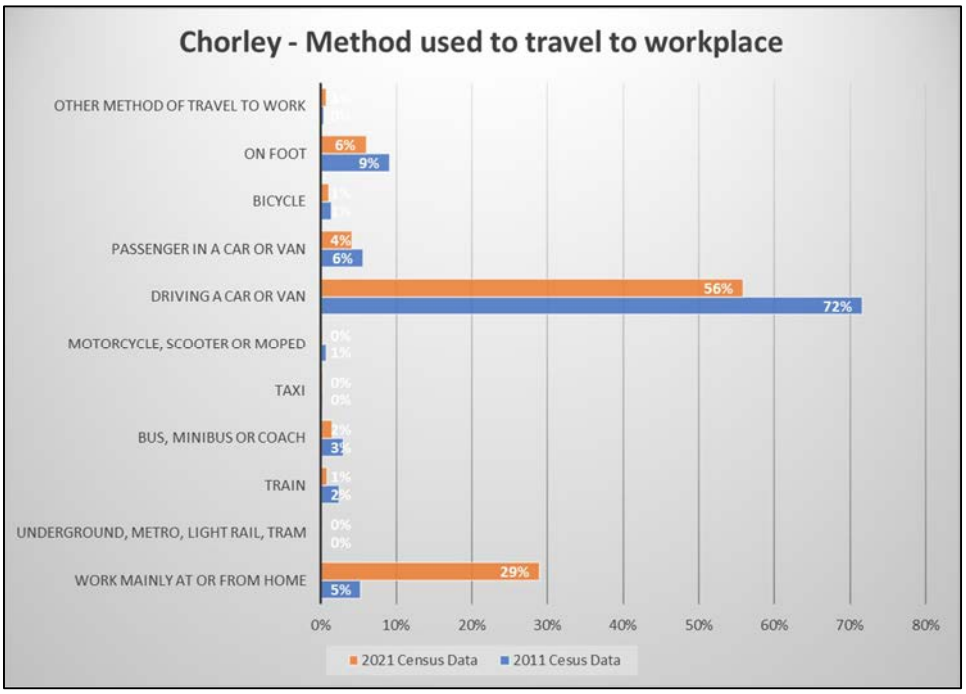


Figure 2-2 Chorley – Method of Travel to Work

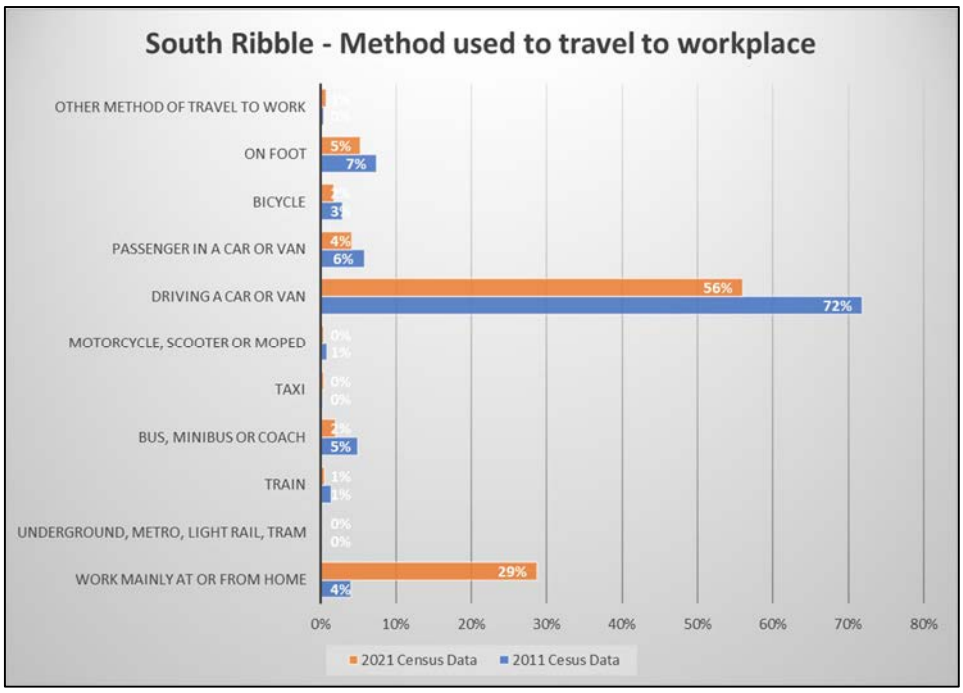


Figure 2-3 South Ribble – Method of Travel to Work

2.2.2. Further, the Department for Transport's (DfT) National Travel Survey 2022 was also referenced to understand mode share. The National Travel Survey (NTS) is a household survey of personal travel by residents of England travelling within Great Britain, from data collected via interviews and a 7-day travel diary, which enables analysis of patterns and trends. The latest release covers the main findings of travel behaviour during 2022.

2.2.3. The NTS survey indicated that there were increases in trip rates amongst all transport modes in 2022 compared to 2021. Trip rates for all transport modes were however still lower than 2019 (pre-pandemic) apart from walking trips. All the selected modes of public transport had shown a sharp decline in trip rates in 2020 which is likely due to the coronavirus (COVID-19) pandemic. Since then, in 2022 trip rates have increased slightly for all the selected modes of public transport but remain below pre-pandemic (2019) levels.

2.2.4. While acknowledging that travel patterns have not fully returned to pre-pandemic levels, it is important to consider that the Census 2021 took place during the covid pandemic, a period of unparalleled and rapid change; the national lockdown, associated guidance and furlough measures will have affected the travel to work. This data comes with a caveat due to these constraints and includes a warning to be cautious when using it for planning and policy purposes. Due to these limitations, it was decided that the 2021 data did not accurately represent current travel patterns, leading to the decision to utilise the 2011 data for this assessment.

2.2.5. Using the Census 2011 'QS701EW - Method of travel to work' data, the proportion of those driving a car or van to work has been calculated for each Census output area within the three Central Lancashire Planning Authorities. Those 'not in employment' and those who 'work mainly at or from home' have been removed from the total population.

2.2.6. Thresholds have been established through benchmarking analysis, comparing the Census data for the local authority district and neighboring districts. The upper threshold for a green rating has been set to represent an aspirational proportion of driving to work, aligning with the lower proportions observed in other Lancashire local authorities.

Thresholds

2.2.7. The metric 1 thresholds were determined through a benchmarking analysis, which looked at the Census 2011 data for the Local Authority district and neighbouring districts. Consequently, the average drive-to-work proportion in the three Central Lancashire authorities and the neighbouring districts suggested using thresholds of 70% and 88%. This was used as a benchmark to represent the baseline situation, whereby all output areas below 88% are considered below average, with fewer people driving to work than the local average. The upper threshold, to define a green rating, has been selected to represent an aspirational proportion of driving to work.

2.2.8. Table 2-2 shows the thresholds adopted for the RAG assessment.

2.2.9. Private car is the predominant mode of transport and the main method of commuting in all three districts and has a significantly higher mode share than all public transport alternatives. As shown in Figure 2-4 through Figure 2-6, the percentage of people driving to work by car or as a passenger is significantly larger than public transport and walking or cycling. Preston's values (Driving a car or van) are consistent with the regional average for the North West (63%), but Chorley and South Ribble shows a higher mode share for car driving (72%) and lower mode share for public transport (6% vs 12%) and walking and cycling (10% vs 13%) than the regional average.

2.2.10. The dependence of the population on automobiles is evident in the high rates of car ownership. Table 2-1 shows that 83% of households in Chorley and 84% of households in South Ribble have at least one car or van, significantly higher than the rate for Preston (69%) or the North West region (72%). Furthermore, two or more cars are owned by 40% of households in South Ribble and 41% in Chorley. In contrast, across England, 74% of households own at least one car or van, and 30% have two or more.

Table 2-1 Car Ownership (Census 2011)

No. of cars in the household	Preston	South Ribble	Chorley	North West	England
No cars or vans in household	31%	16%	17%	28%	26%
1 car or van in household	42%	44%	41%	43%	42%
2 cars or vans in household	21%	31%	33%	24%	25%
3 cars or vans in household	4%	7%	7%	5%	5%
4 or more cars or vans in household	1%	2%	2%	1%	2%
Total Car Ownership	**69%**	**84%**	**83%**	**72%**	**74%**

2.2.11. It's important to note that most of the sites classified as red or amber are undeveloped greenfield sites. These sites may not have had sufficient population samples in the Census data to accurately predict the potential mode to work share. As a result, the mode to work share of nearby developed land parcels was also examined to verify the appropriateness of the rating.

Table 2-2 . RAG Thresholds for metric 1

Green	Amber	Red
Less than or equal to 70% travel to work driving a car or van	70% to 88% drive to work in a car or van	More than 88% drive to work in a car or van

Assessment Results

Preston City Council

2.2.12. The average drive to work proportion of output areas within Preston is 68%, this is the lowest percentage among the three Central Lancashire Authorities. Figure 2-4 shows the RAG rating for the sites in Preston.

2.2.13. The findings indicate that locations within or near Preston City Centre are less dependent on cars, attributed to Preston's characteristics as a city center and the provision of public transport in the vicinity. However, locations further from the City Centre are classified as either amber or red, based on the work commute mode share derived from the census data for that particular area.

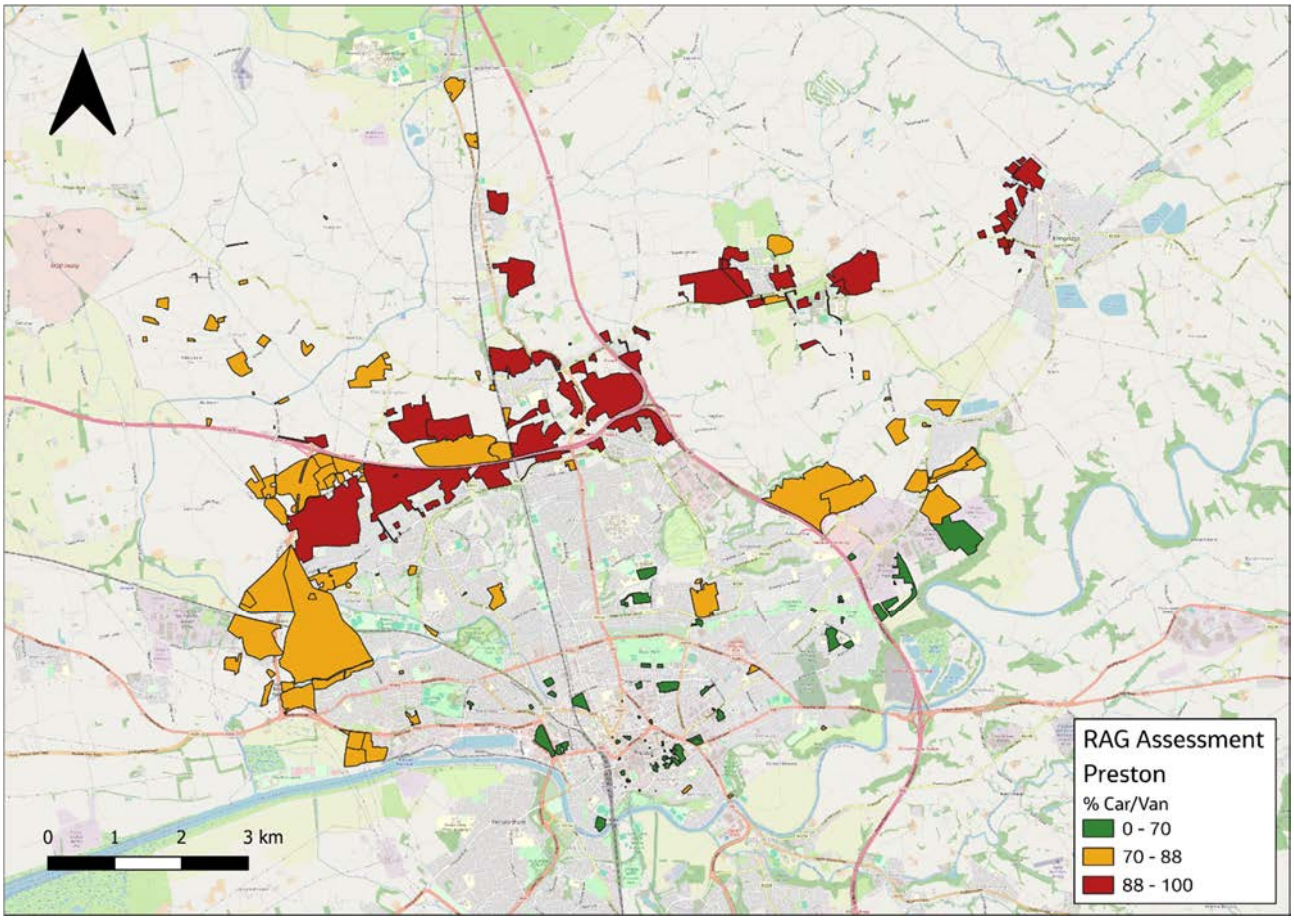


Figure 2-4 Metric 1 RAG assessment of Preston

South Ribble Borough Council

2.2.14. Based on the census data, on average, 81% of the population in South Ribble's output areas commute to work by car. The RAG rating for the sites in South Ribble is depicted in Figure 2-5 . A significant number of sites have been assigned a red or amber rating, indicating that more than 70% of the district's commuters drive to work. This is a reflection of the district's geography, which is primarily defined by rural areas surrounding the major road network.

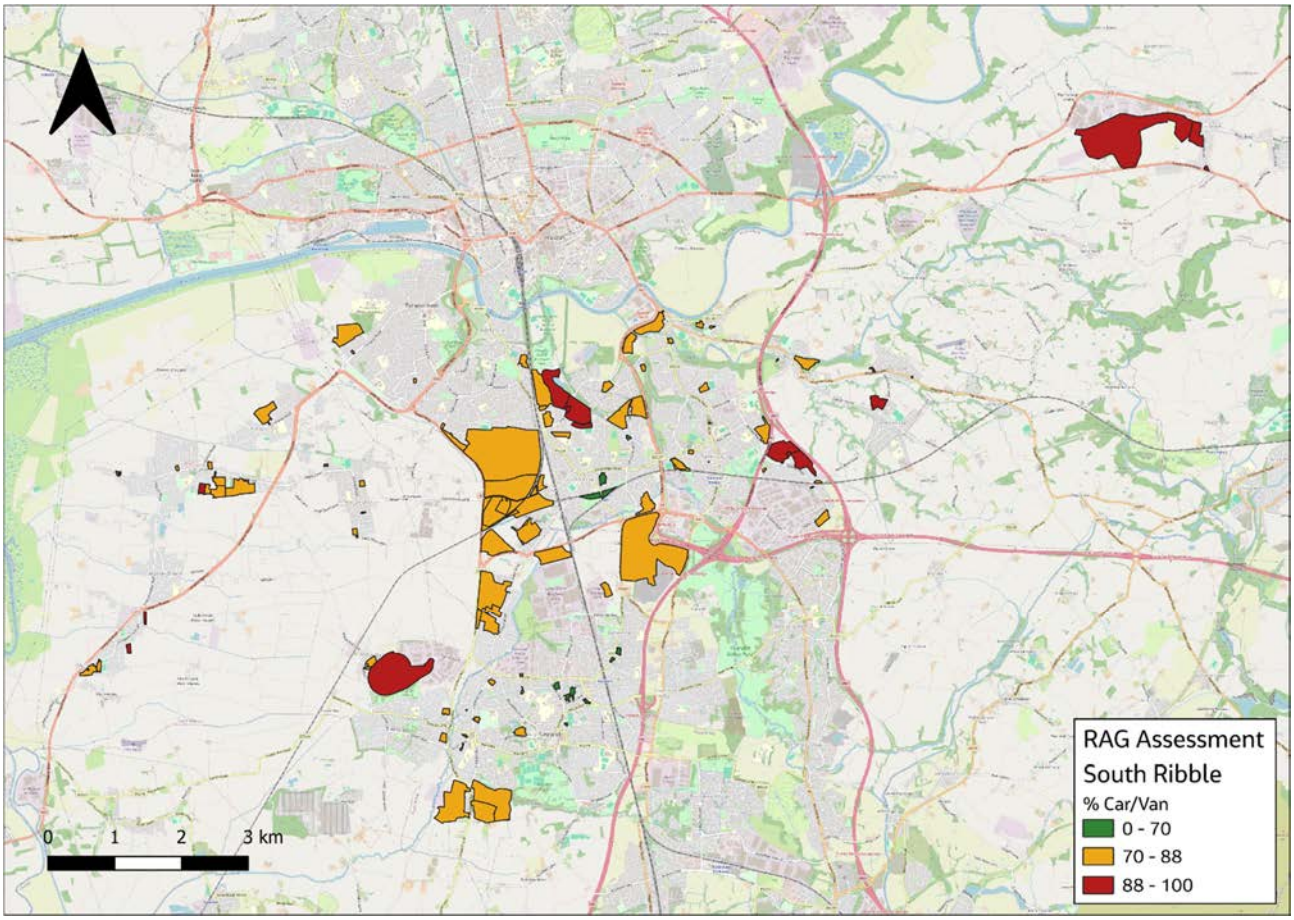


Figure 2-5 Metric 1 RAG assessment of South Ribble

Chorley Council

2.2.15. In Chorley, the average percentage of output areas where people commute to work by car is 81%. Figure 2-6 illustrates the RAG rating for the sites in Chorley. Much like the South Ribble district, the majority of sites in Chorley are assigned a red or amber rating, indicating that over 70% of the district's commuters are predicted to drive to work.

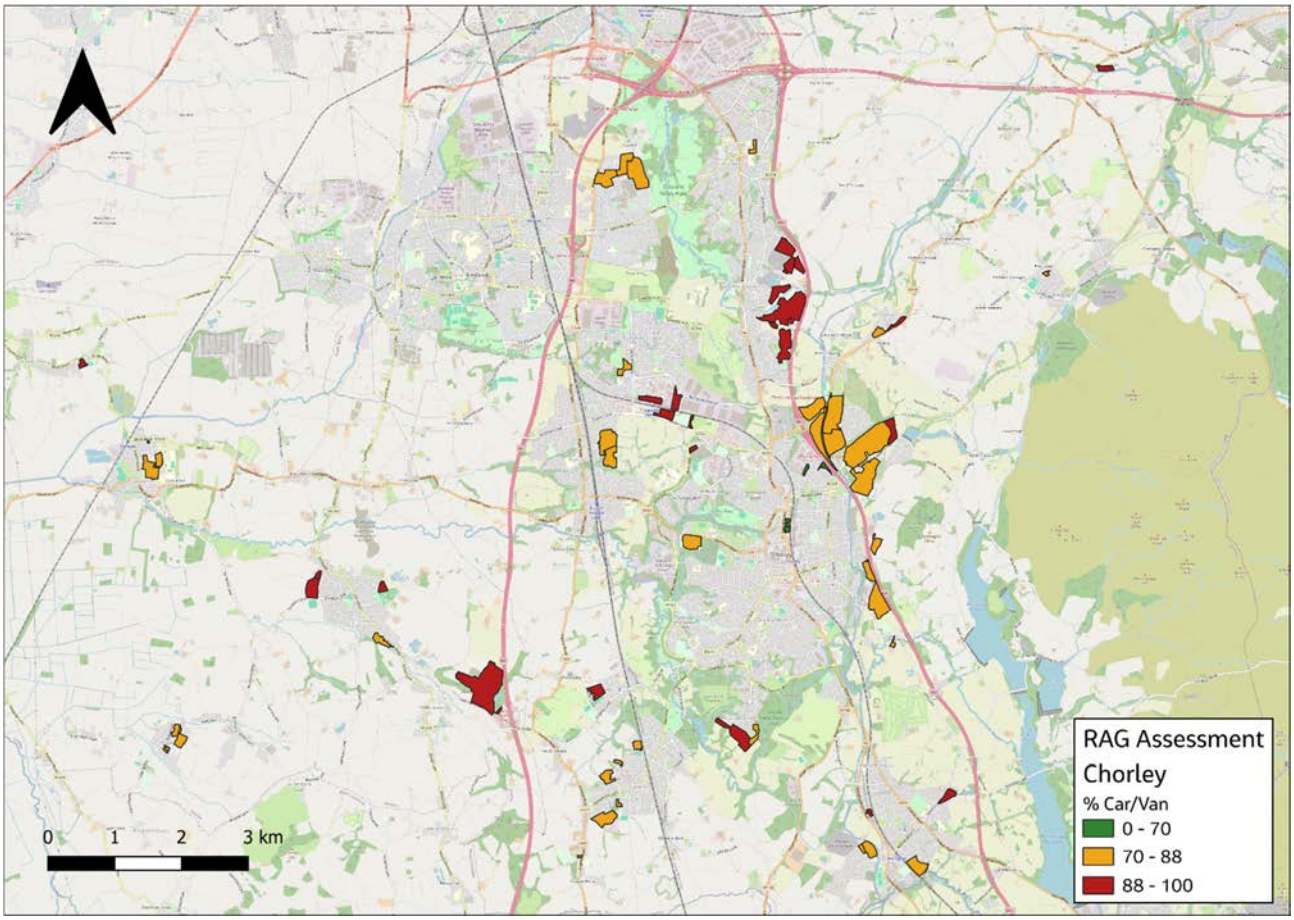


Figure 2-6 Metric 1 RAG assessment of Chorley

2.3 Metric 2: Proximity to current sustainable transport services

2.3.0. As part of this assessment, each site was RAG assessed based on existing accessibility by public transport and active travel by bicycle. This included an assessment of:

- Quality and frequency of bus and rail services
- Type and availability of cycle connections
- Quality of cycle connections

2.3.1. The first step was to identify the key attractors in the study area, which would broadly fall into the following 6 categories:

- Major/Local Centre
- Education
- Health care facilities
- Employment
- Retail

2.3.2. Using 2023 public transport (PT) timetables and location of bus stops, public transport access isochrones were produced for each attractor. For assessment purposes, four time-bands were defined to score the accessibility to each attractor: 15, 30, 45, and 60 minutes. Subsequently each site was assigned scores by the time bands, e.g., if a proposed site is within the 15-minute boundary, a score of 4 points is assigned. Similarly, sites in the 30-minutes, 45-minutes, and 60-minutes bands were assigned 3, 2, and 1 point respectively. As an example, Figure 2-7 shows the areas that can be reached in different time bands from Preston city centre. Remaining figures are included in Appendix A.

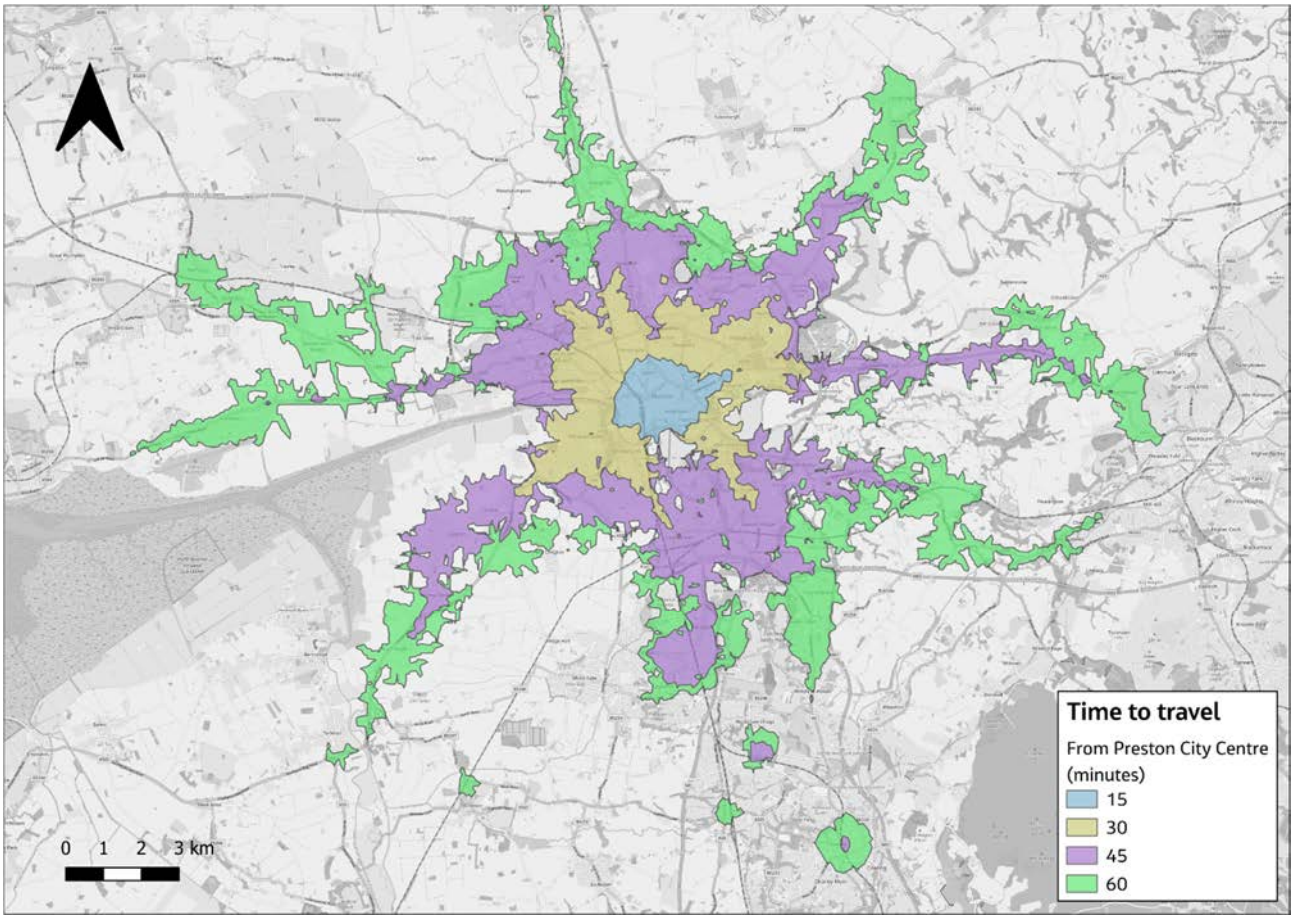


Figure 2-7. Isochrones for Preston city centre

2.3.3. Since it is possible the location of a proposed site is within the catchment of multiple attractors, the maximum score was extracted for each category for each individual site. Finally, the scores for the six categories were added to obtain the total score.

2.3.4. In addition to the PT accessibility, the quality of cycle infrastructure available for each site was also assessed based on the quietness score from the CycleStreets API[1]. Bicycle routes were programmatically extracted from each site to the nearest key attractor in each category. Figure 2-8 show some of the routes extracted for this analysis.

1.1.

[1] https://www.cyclestreets.net/api/

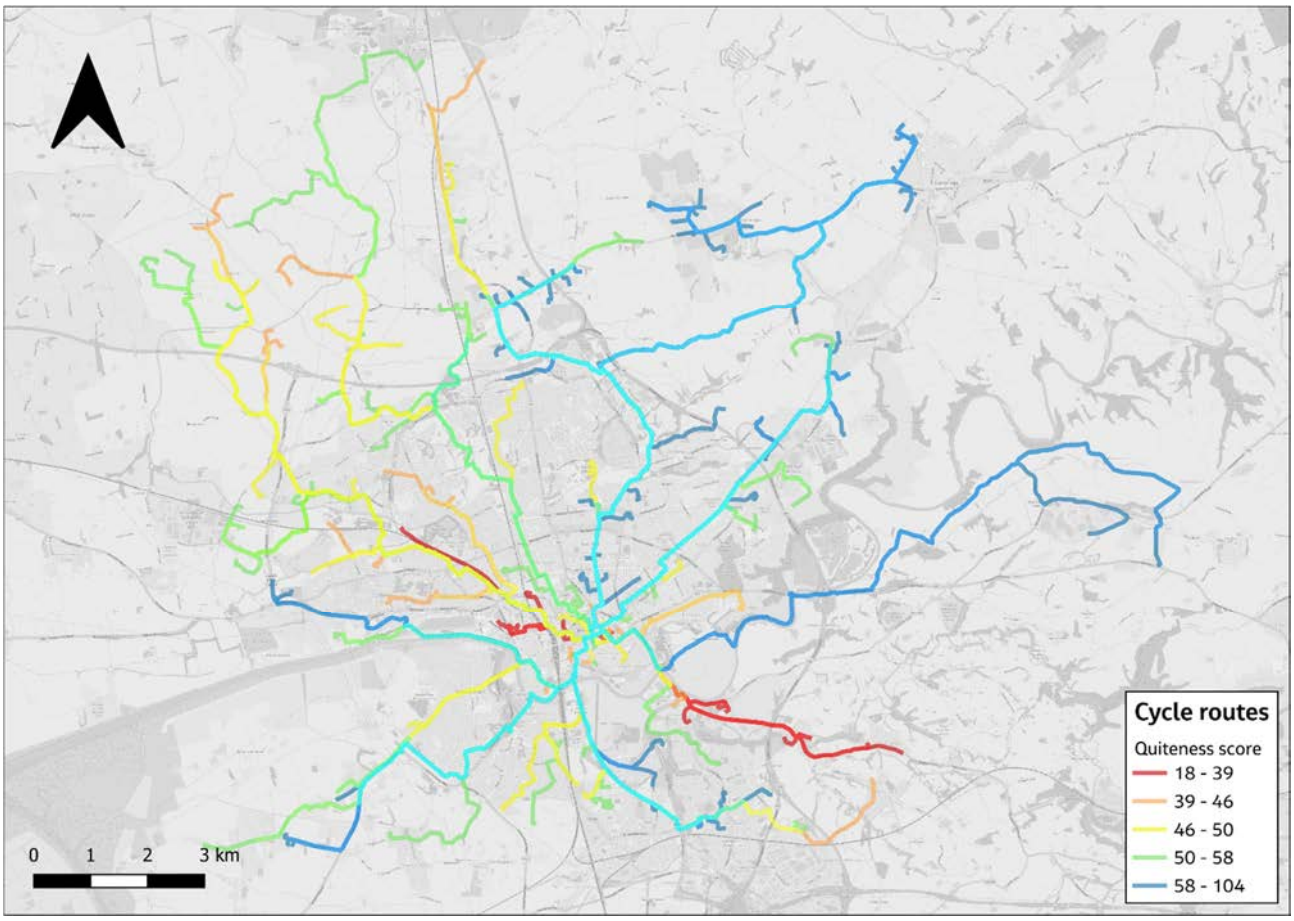


Figure 2-8. Cycling routes from proposed sites to Preston City Centre

2.3.5. For this analysis, the busyness score was used as a proxy for the quality and availability of cycling infrastructure along the route; the busyness score reported by CycleStreets was converted into a 1 to 4 scale as follow:

- Busyness < 4000: 4 points
- Busyness < 8000: 3 points
- Busyness < 16000: 2 points
- Busyness < 24000: 1 point

2.3.6. As per the previous component of the analysis, the total score was calculated adding up the scores of each category for each site.

Thresholds

2.3.7. Table 2-3 gives the thresholds adopted for metric 2.

Table 2-3 RAG thresholds for Metric 2

	Green	Amber	Red
Public transport	Total score above 18	Total score between 8 and 18	Total score below 8
Bicycle	Total score above 15	Total score between 10 and 15	Total score below 10

Assessment Results

Preston City Council

2.3.8. Figure 2-9 and Figure 2-10 shows the RAG rating for the sites in Preston for Public transport and bicycle, respectively.

2.3.9. Sites located close to the city centre have been given a green rating, indicative of their location in the district, with abundant bus links and Preston railway station offering extensive connections to other key sites.

2.3.10. Preston has numerous traffic-free cycling paths, including the Guild Wheel, which is predominantly off-road and free from traffic, offering a picturesque and secure route for cycling and walking. The Old Tramroad connects the Lancaster Canal in the north of Preston with the canal system in the south. The Grimsargh Cycle Route links Preston with Red Scar and Grimsargh. However, despite having good cycle connectivity, very few sites achieve a green rating due to the absence of segregated routes or the use of congested routes, resulting in a lower quality score.

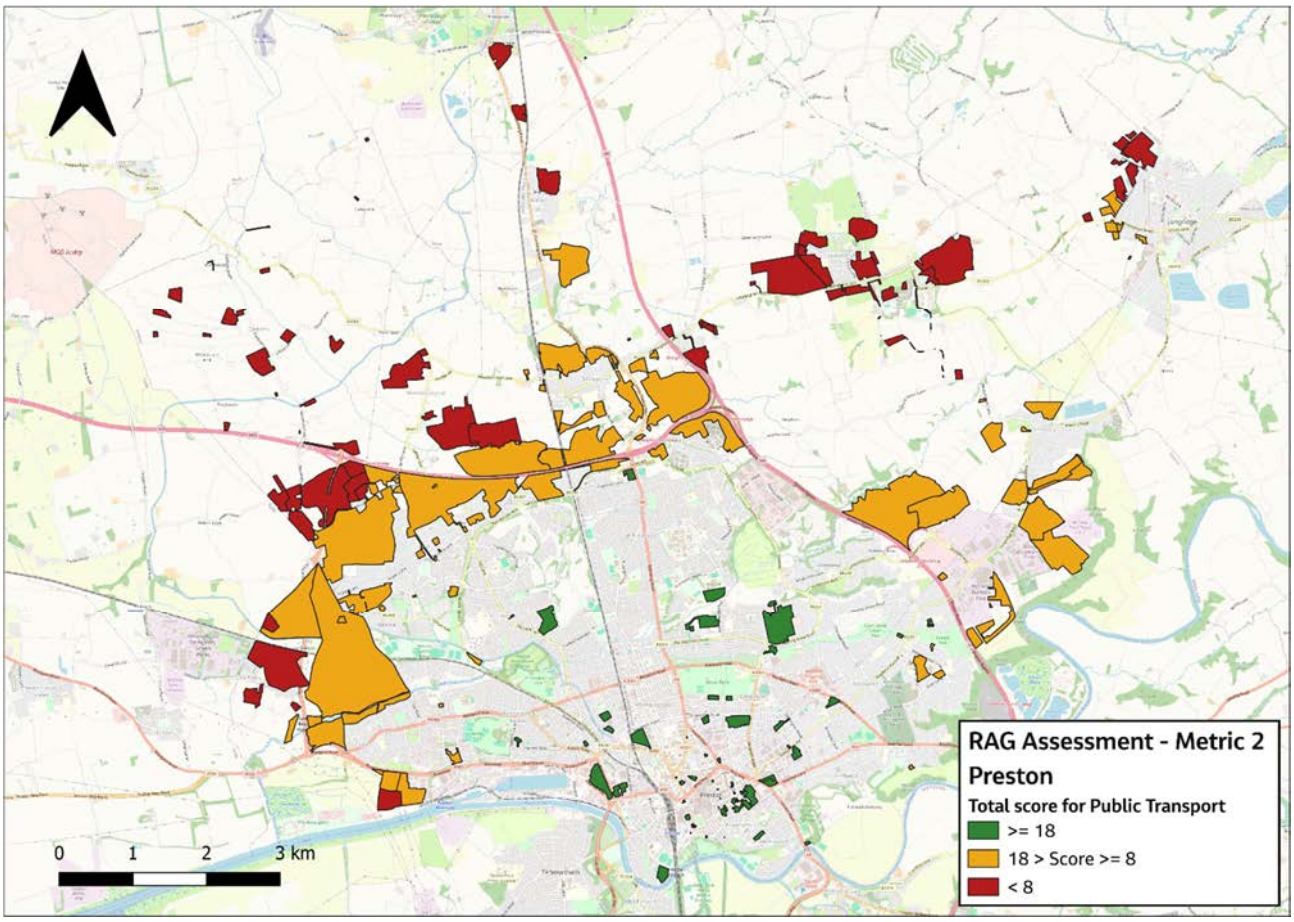


Figure 2-9 Metric 2 RAG assessment for Preston in public transport

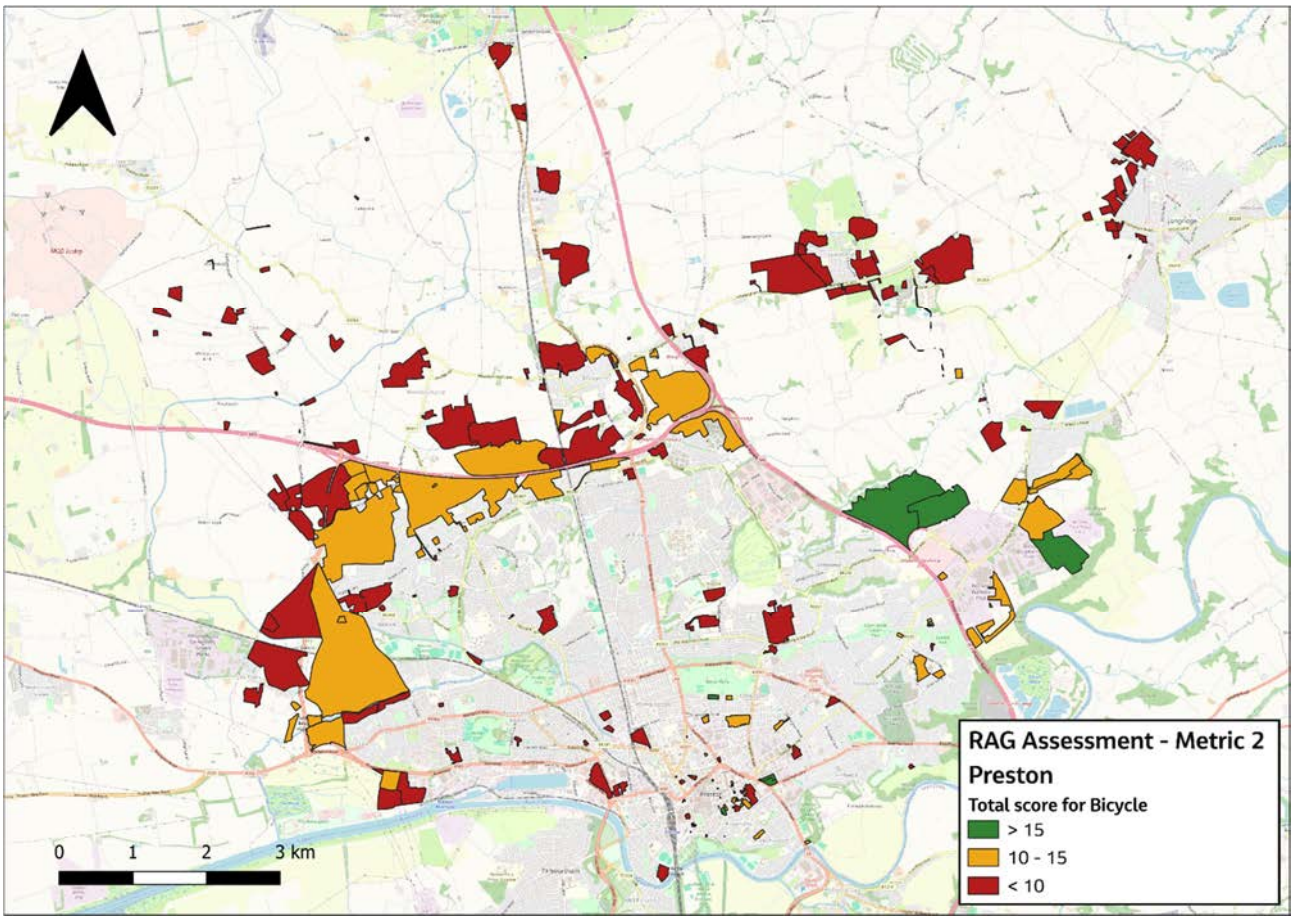


Figure 2-10 Metric 2 RAG assessment for Preston in bicycle

South Ribble Borough Council

2.3.11. Figure 2-11 and Figure 2-12 shows the RAG rating for the sites in South Ribble for Public transport and bicycle, respectively. Most of the sites in South Ribble have got amber rating due to limited public transport coverage in those sites.

2.3.12. South Ribble is connected to Preston by two rail lines with Leyland station on the West Coast Main Line and Lostock Hall and Bamber Bridge on the Preston – Blackburn line. There are three trains per hour between Leyland and Preston, and one train per hour from Lostock Hall and Bamber Bridge to Preston increasing to two trains per hour during peak times. All services in South Ribble are run by the Northern Rail franchise.

2.3.13. Cycling facilities across the district are highly varied in terms of level of provision, with urban areas having some on-carriageway cycle lanes and off-carriageway shared use pedestrian and cycle paths, while rural areas have limited or no provision for cyclists or pedestrians. The Old Tramway Cycle Route, is a key cycling path in South Ribble, traces an old railway line across the River Ribble, offering a traffic-free corridor from Preston to Bamber Bridge and Lostock Hall. Nonetheless, the majority of the sites receive a red rating for the cycle connectivity measure due to the insufficient number of dedicated cycling paths and routes.

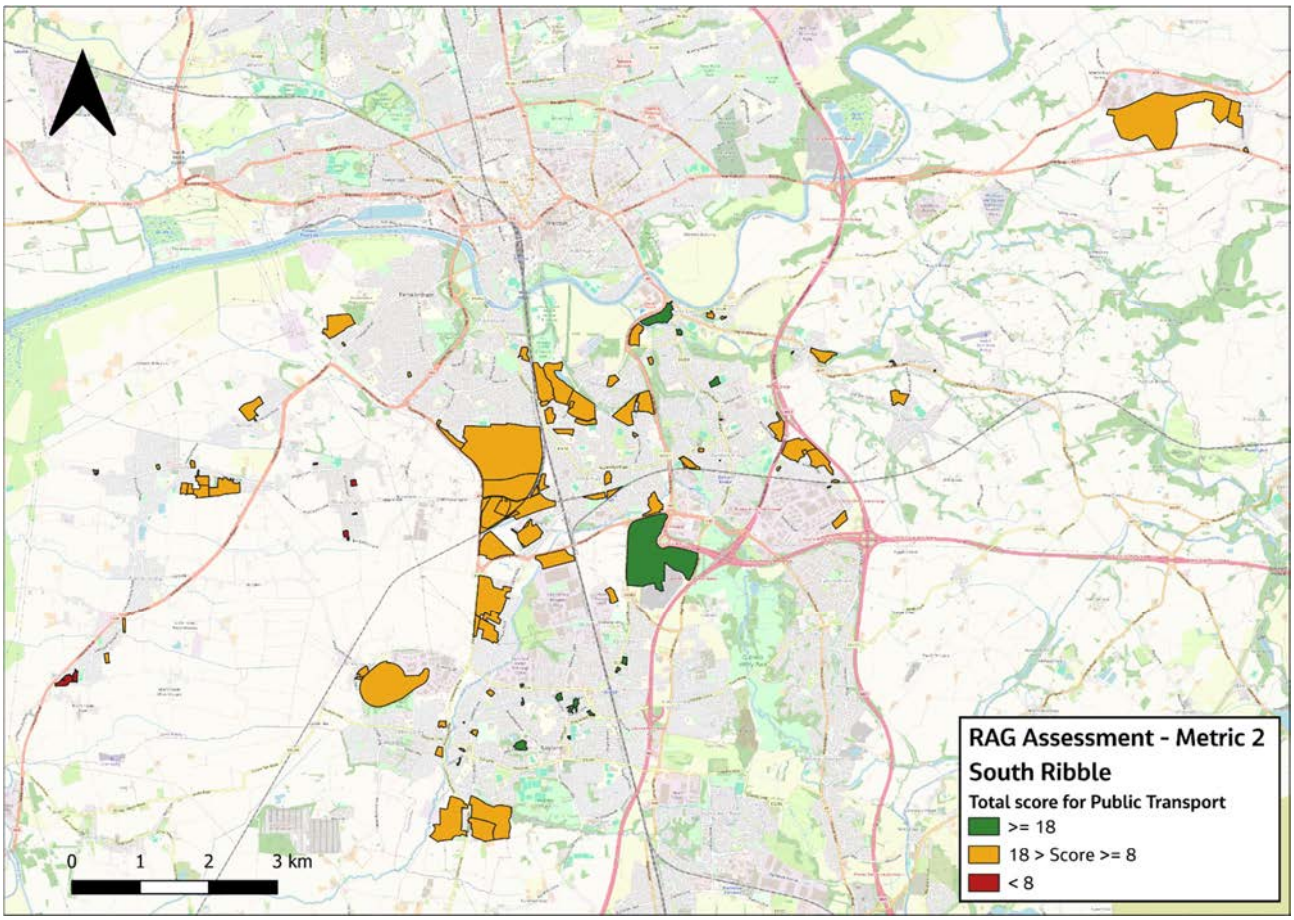


Figure 2-11 Metric 2 RAG assessment for South Ribble in public transport

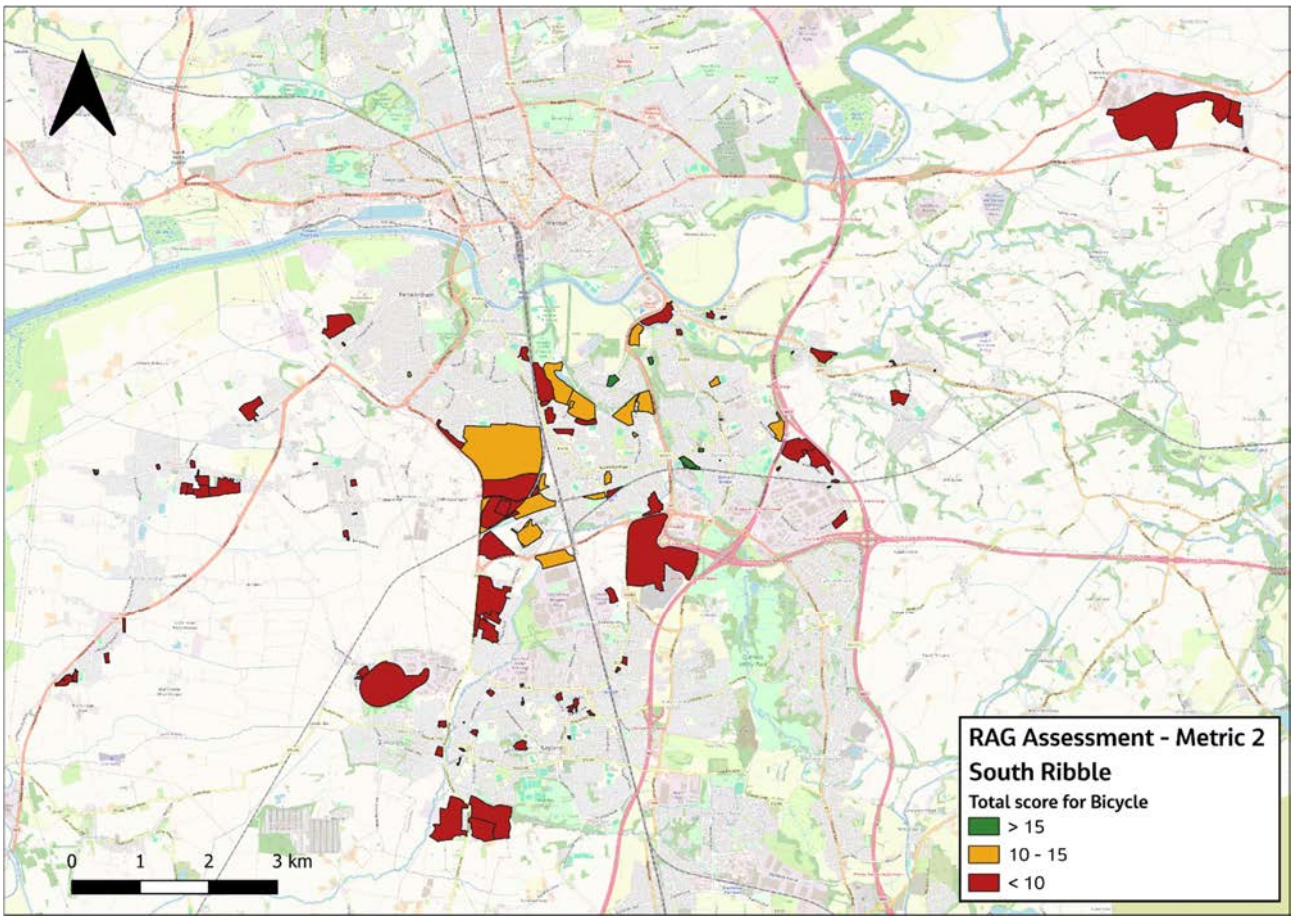


Figure 2-12 Metric 2 RAG assessment for South Ribble in bicycle

Chorley Council

2.3.14. Figure 2-13 and Figure 2-14 shows the RAG rating for the sites in Chorley for Public transport and bicycle, respectively.

2.3.15. Chorley boasts an extensive bus network with direct connections to Bolton, Preston, Blackburn, and Wigan. The Chorley Interchange station, situated on Clifford Street, is just a short walk from the town centre. Most of the sites in Chorley have an amber rating for public transport links, attributed to the good bus and rail connections to Preston and Manchester.

2.3.16. Chorley has got several traffic-free cycle paths that traverse parks such as Cuerden Valley Park, Astley Park, and Yarrow Valley Park. The cycle network extends to areas like Buckshaw Village and along A6 in Whittle-le-Woods, where dedicated cycle facilities are available. These existing provisions offer reasonable connectivity to sites near these routes. However, sites further from Chorley Centre, while having bike-friendly roads, lack dedicated routes.

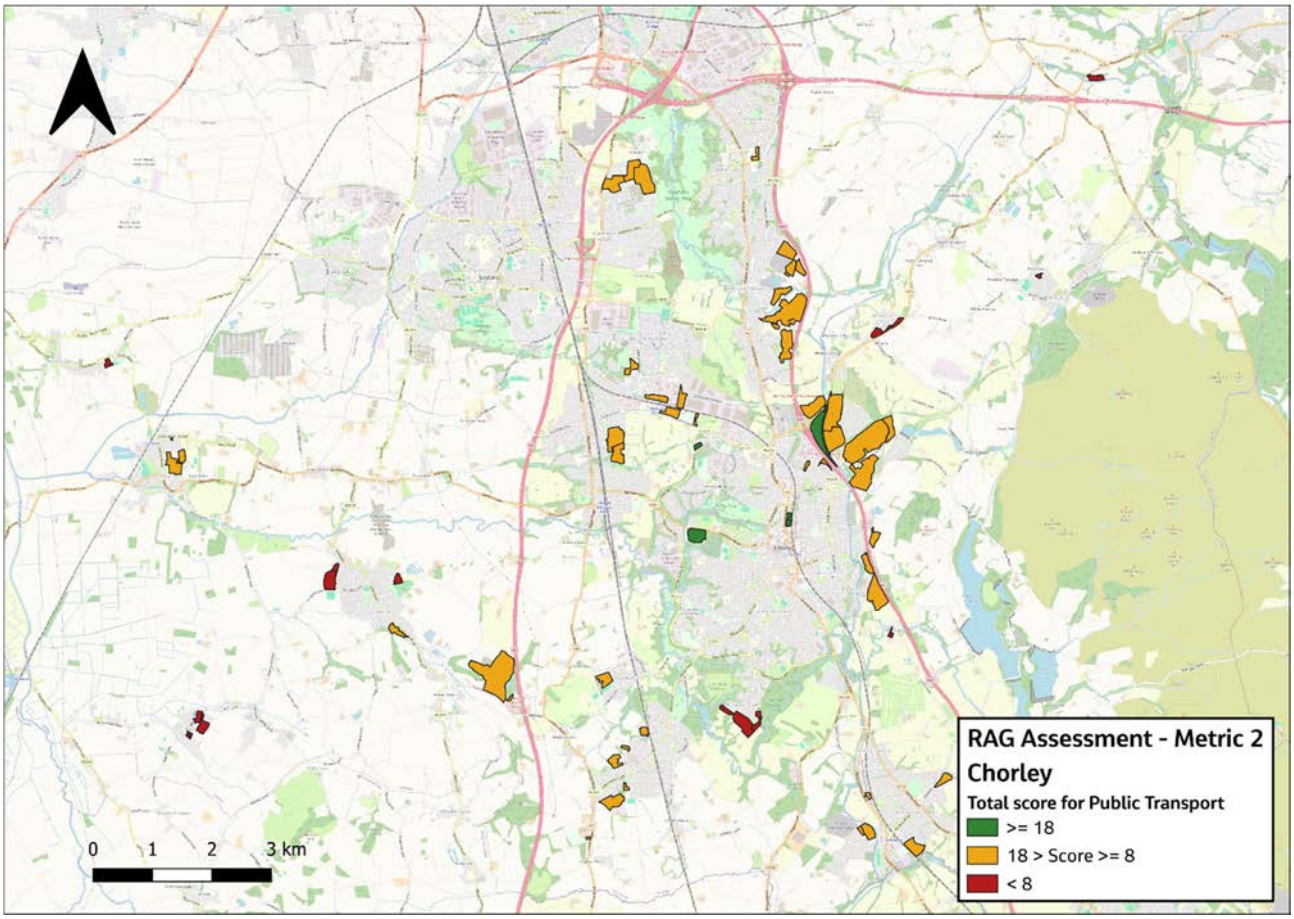


Figure 2-13 Metric 2 RAG assessment for Chorley in public transport

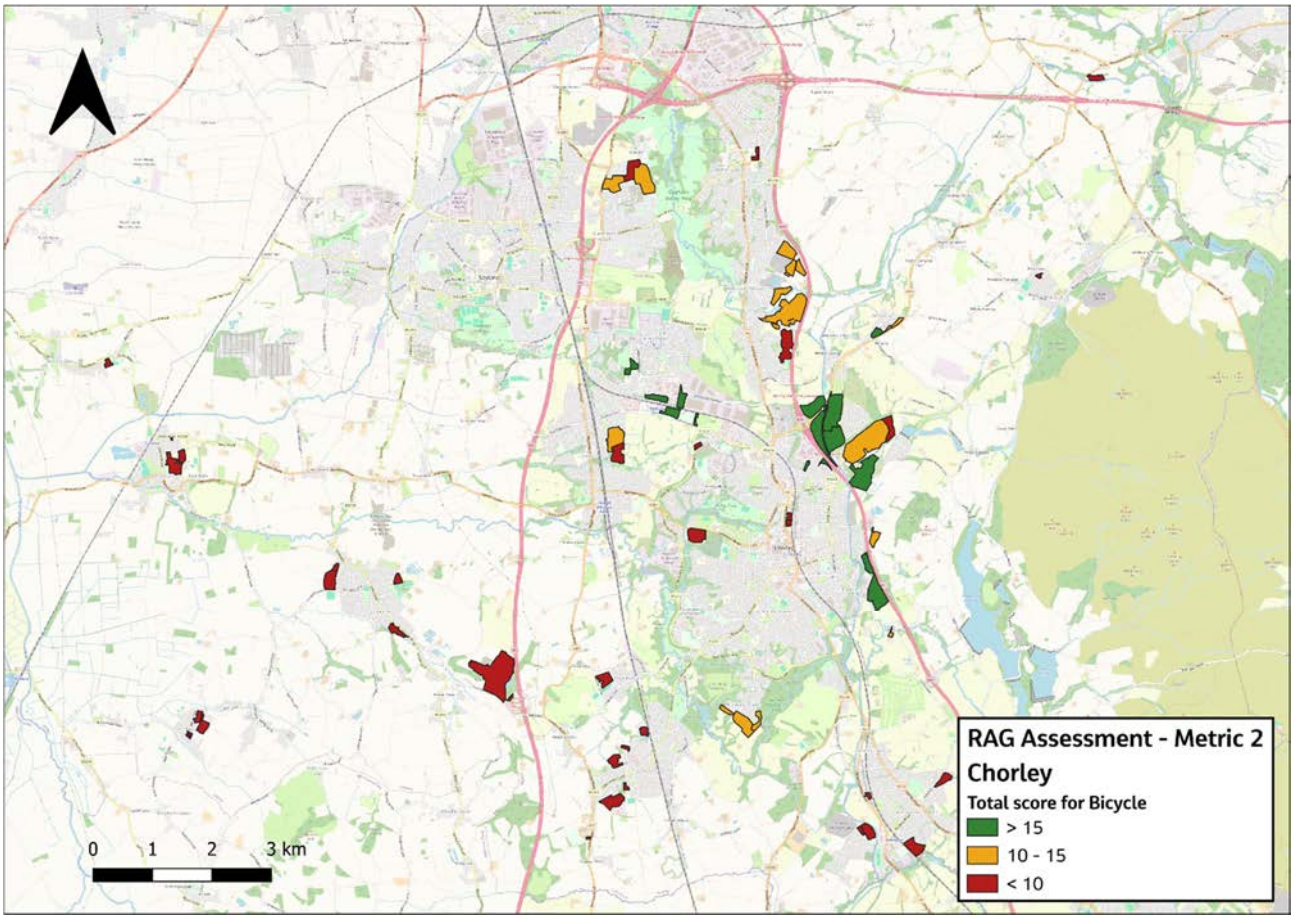


Figure 2-14 Metric 2 RAG assessment for Chorley in bicycle

2.4 Metric 3: Access to proposed local transport schemes

2.4.0. This metric evaluates the plans for future and recently finished (since 2019) transportation projects throughout the district and nearby regions. The aim is to determine whether any significant transportation enhancements will influence traffic. These include strategic schemes as agreed with the project team and is shown in Figure 2-18. Table 2-4 lists the different schemes corresponding to their reference number in the map.

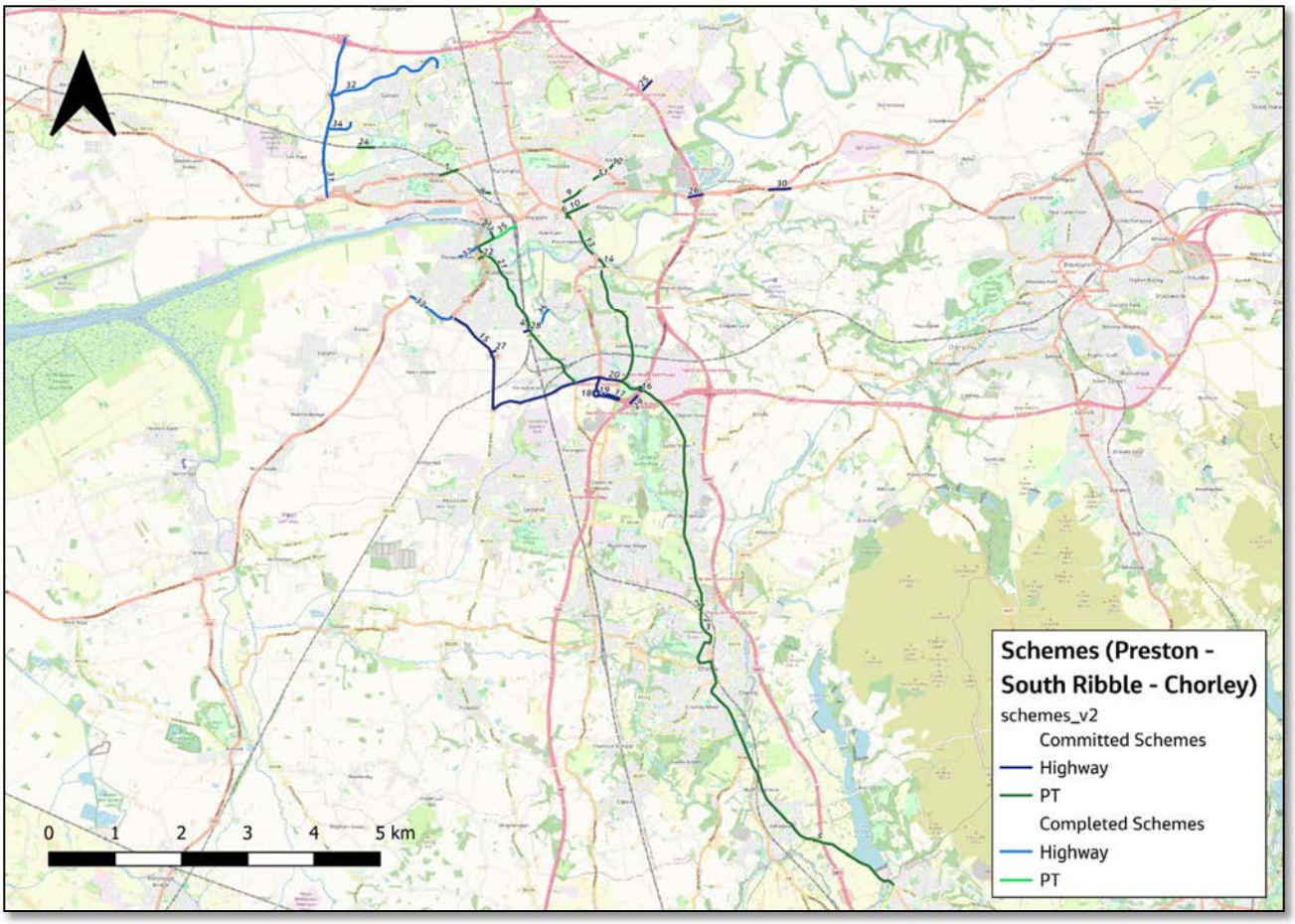


Figure 2-15 Proposed local transport schemes

Table 2-4 Proposed local transport schemes

Reference number	Description	Road Type	Stage
1	Northbound bus lane on Preston Road	PT	Committed
2	A6 SB bus lane from Harwood Rbt to Euxton Rbt	PT	Committed
3	Bus Gate and/or Traffic signals at Park Road/Preston Road	PT	Committed
4	Parking and waiting restrictions	PT	Committed
5	A6/ Service 125 corridor bus stop review and bus priority	PT	Committed
6	A59 New Hall Lane and junction of New Hall Lane/ Stanley Street/ London Road, Preston	PT	Committed
7	Bus Service Improvement Plan Blackpool Road	PT	Committed
8	Bus Service Improvement Plan Fylde Rd/Turketh Brow	PT	Committed
9	Bus Service Improvement Plan Ribbleton Lane	PT	Committed
10	Bus Service Improvement Plan New Hall Lane	PT	Committed
11	Bus Service Improvement Plan Ribbleton Lane	PT	Committed
12	Bus Service Improvement Plan Ribbleton Lane	PT	Committed

13	Bus Service Improvement Plan London Road	PT	Committed
14	Bus Service Improvement Plan Victoria Road	PT	Committed
15	A582 improvements and Tech pack	Highway	Committed
16	Lancashire Central Improvements	Highway	Committed
17	Lancashire Central Improvements	Highway	Committed
18	Lancashire Central Improvements	Highway	Committed
19	Lancashire Central Improvements	Highway	Committed
20	Lancashire Central Improvements	Highway	Committed
21	B5254 Improvements	PT	Committed
22	Penwortham Triangle Signals	PT	Committed
23	Fishergate Hill Active Travel Components	PT	Committed
24	Cottam Parkway Station	PT	Committed
25	Roman Farm mitigation scheme at M6 J31a	Highway	Committed
26	Samlesbury LDO mitigation schemes	Highway	Committed
27	Pickerings Farm access to A582	Highway	Committed
28	Pickerings Farm access to Leyland Road	Highway	Committed
29	The southern part of M6 J29	Highway	Committed
30	Samlesbury LDO mitigation schemes	Highway	Committed
31	Preston Western Distributor Road	Highway	Completed
32	East West Link Road	Highway	Completed
33	John Horrocks Way	Highway	Completed
34	Cottam Link Road	Highway	Completed
35	Fishergate Hill Active Travel Components	PT	Completed
36	The Cawsey	Highway	Completed
37	Penwortham cycle way and Cop Lane junction improvements	Highway	Completed

Thresholds

2.4.1. The ratings were determined by counting proposed transport schemes within 400 meters of a development location. The schemes were categorised into committed and completed schemes, and the type of scheme whether its highway or public transport scheme. The majority of the PT schemes are Bus Service Improvement Plan (BSIP) schemes. As such, they are believed to have a comparable impact and were not additionally weighted based on the extent of their impact.

2.4.2. Table 2-5 shows the weightages used for each type of scheme.

Table 2-5 Transport schemes weightage

Type of Scheme	Weightage
Completed	0.6
Committed	0.4
Public Transport	0.6
Highway	0.4

2.4.3. The thresholds adopted for the RAG assessment are shown in Table 3-2-6

Table 3-2-6 RAG thresholds for Metric 3

Green	Amber	Red
Index obtained based on the type of scheme is greater than 0.45	Index obtained based on the type of scheme is between 0 and 0.45	Index obtained based on the type of scheme is equal to 0

Assessment Results

Preston City Council

2.4.4. Figure 2-16 below shows the RAG classification of the sites in Preston based on their proximity to proposed local transport schemes.

2.4.5. In 2023, Preston city launched a major highway project that included the Preston Western Distributor Road and the East West Link Road. This project is segmented into three main parts, with Edith Rigby Way being the most substantial. This vital road, a part of the Preston Western Distributor project, links the A583 Blackpool Road and Riversway to a new junction on the M55. The project also includes two smaller link roads: William Young Way and Avice Pimblett Way. These roads establish connections to both new and existing residential areas in North West Preston and Cottam.

2.4.6. These three new roads act as essential connectors within the city, aiming to reduce traffic congestion, ease transportation, and create new economic opportunities for both Preston and Lancashire. They provide direct routes to new residential areas and are anticipated to support future developments. Besides improving motorway access, these roads are designed to encourage walking and cycling activities. They will also play a pivotal role in supporting the proposed railway station at Cottam.

2.4.7. Furthermore, significant enhancements to bus services in Lancashire are being proposed over the next few years with the objective of motivating people to opt for bus travel instead of using their cars. These schemes aim to make services more frequent, reliable, and affordable, with improved passenger information and simpler, easier-to-understand fares. The BSIP includes a variety of measures including simpler, cheaper fares and bus priority measures such as bus lanes and modifications to traffic junctions.

2.4.8. Under the Transforming Cities Funding initiative, enhancements are planned in and around the city to encourage the use of public transport, walking, and cycling. This includes the introduction of dedicated cycle paths, pedestrian amenities, and the beautification of public open spaces near the Ringway and Friargate junction.

2.4.9. A redesign of Bluebell Way, approaching junction 31a of the motorway – the Preston East and Longridge exit, is also proposed to accommodate the traffic expected from the expansion of a nearby industrial estate. New traffic lights will also be installed on another route nearby. The proposal includes a dozen warehouse-style units and a new spine road for access – on land at Roman Road Farm, off Longridge Road.

2.4.10. Plans are underway for a new 'Parkway' railway station in Cottam. This station is strategically positioned to serve the North West Preston housing area. It aims to offer Park and Ride services via rail to Preston, Manchester, Liverpool, and Blackpool.

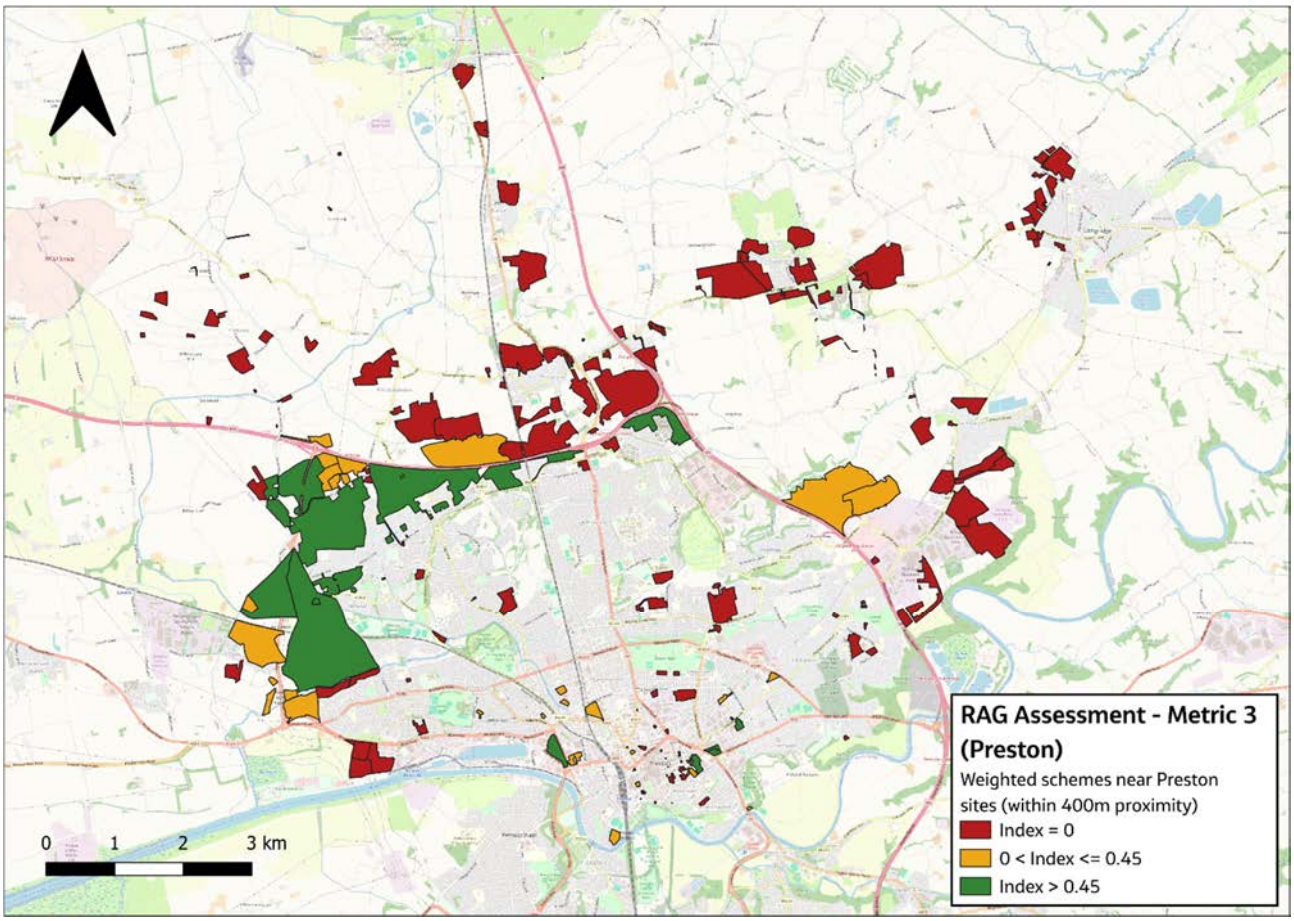


Figure 2-16 Metric 3 RAG assessment for Preston

South Ribble Borough Council

2.4.11. The RAG categorization of the sites in South Ribble, based on their proximity to proposed local transport schemes, is depicted in Figure 2-17.

2.4.12. South Ribble have following recently completed schemes between 2019 and 2023:

- Penwortham By-Pass- The new bypass is one of the major road schemes built as part of the Preston, South Ribble, and Lancashire City Deal. The aim of the new bypass is to remove traffic through the centre of Penwortham by providing a new route from the A59 Liverpool Road at Howick to the A582 at Broad Oak Roundabout. Following the opening of John Horrocks Way bypass, the slip road onto Guild Way was closed. Access to the flyover is possible via the roundabouts at the junctions of Leyland Road and Golden Way.
- The Cawsey Link Road – This Cross Borough Link Road serves as a vital connection between Penwortham and Walton-le-Dale, facilitating quicker travel between these areas

while providing a viable alternative route for local residents. Additionally, it's anticipated to relieve traffic congestion, particularly at Tardy Gate, enhancing overall traffic flow in the region.

- Broadgate cyclops (Cycle Optimised Protected Signals) - This junction is a key part of the Penwortham to Preston Cycleway, and also forms part of the Preston Guild Wheel route. The improvements implemented at this junction prioritize safety by segregating cycling lanes from pedestrian pathways and general vehicular traffic. This segregation minimizes potential conflicts between different modes of transport, ensuring safer passage for cyclists and pedestrians while reducing congestion for motor vehicles.
- The last segment of the cycle path on Liverpool Road in Penwortham, stretching from Cop Lane to Broadgate, was finished in December 2021. The design of this project prioritized the safety of pedestrians and cyclists, featuring a parallel crossing on a speed bump and a central refuge island for safer transit across Kingsway.

2.4.13. Additionally, Lancashire County Council is planning to upgrade A582 South Ribble Western Distributor and the B5253 Flensburg Way to improve capacity between Moss Side, Cuerden and Preston City Centre, and support delivery of housing along this corridor. Improvements include junction upgrade along the existing single carriageway sections of A582 corridor including Technological enhancements at already improved junctions along with a Sustainable Travel Corridor (STC). The A582 is part of the indicative Major Road Network published by the Department for Transport in December 2017 and the A582 intervention is one of the schemes included in the TfN final Investment Programme.

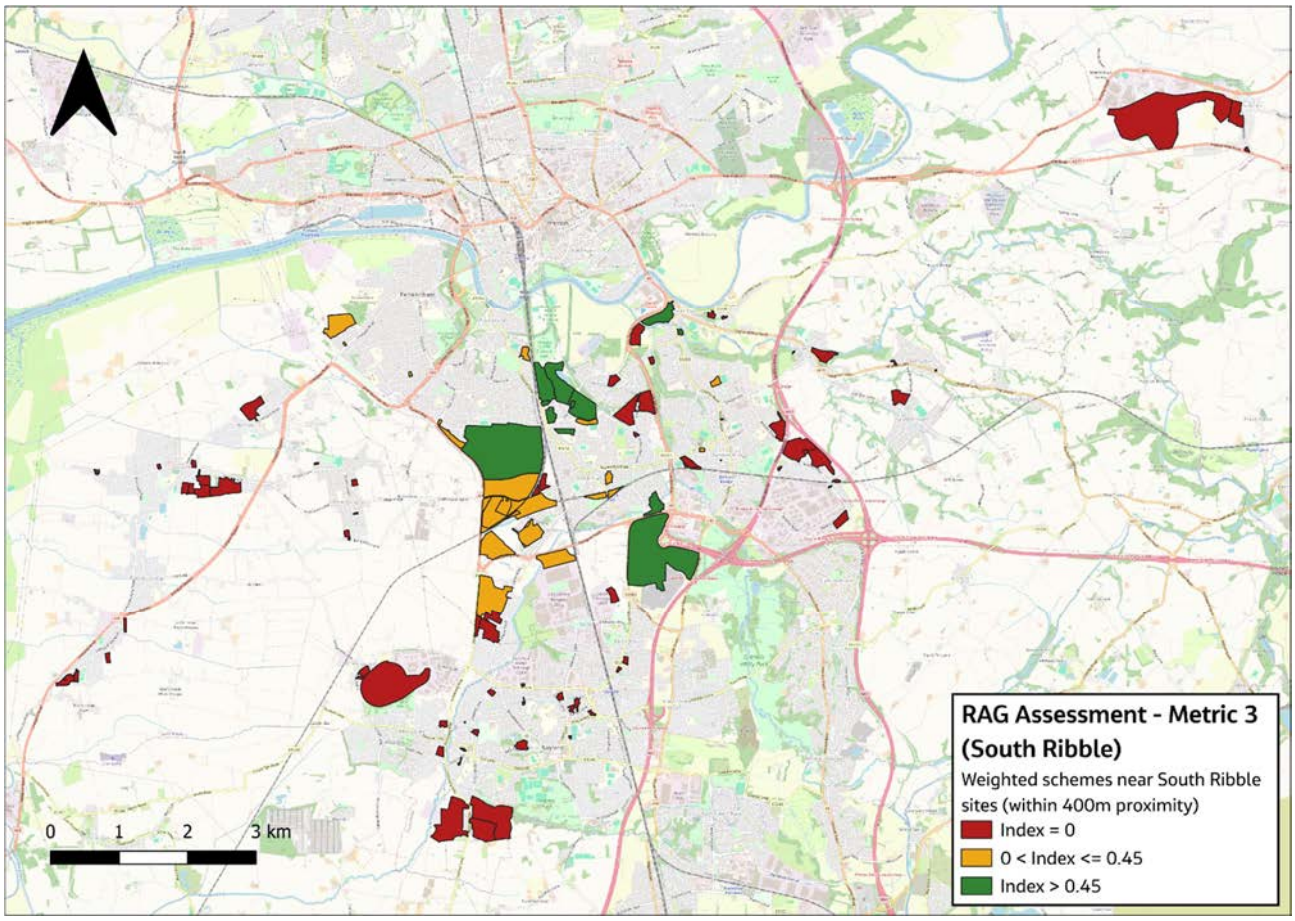


Figure 2-17 Metric 3 RAG assessment for South Ribble

Chorley Council

2.4.14. Figure 2-18 below shows the RAG classification of the sites in Chorley based on their proximity to proposed local transport schemes. There is only one committed scheme in the Chorley area and therefore most sites get red rating. Chorley is different to Preston and South Ribble as its not been part of the recent City Deal investments and therefore this assessment may be bit skewed from Chorley perspective and reader should take that into consideration when making a comparative assessment between the other districts.

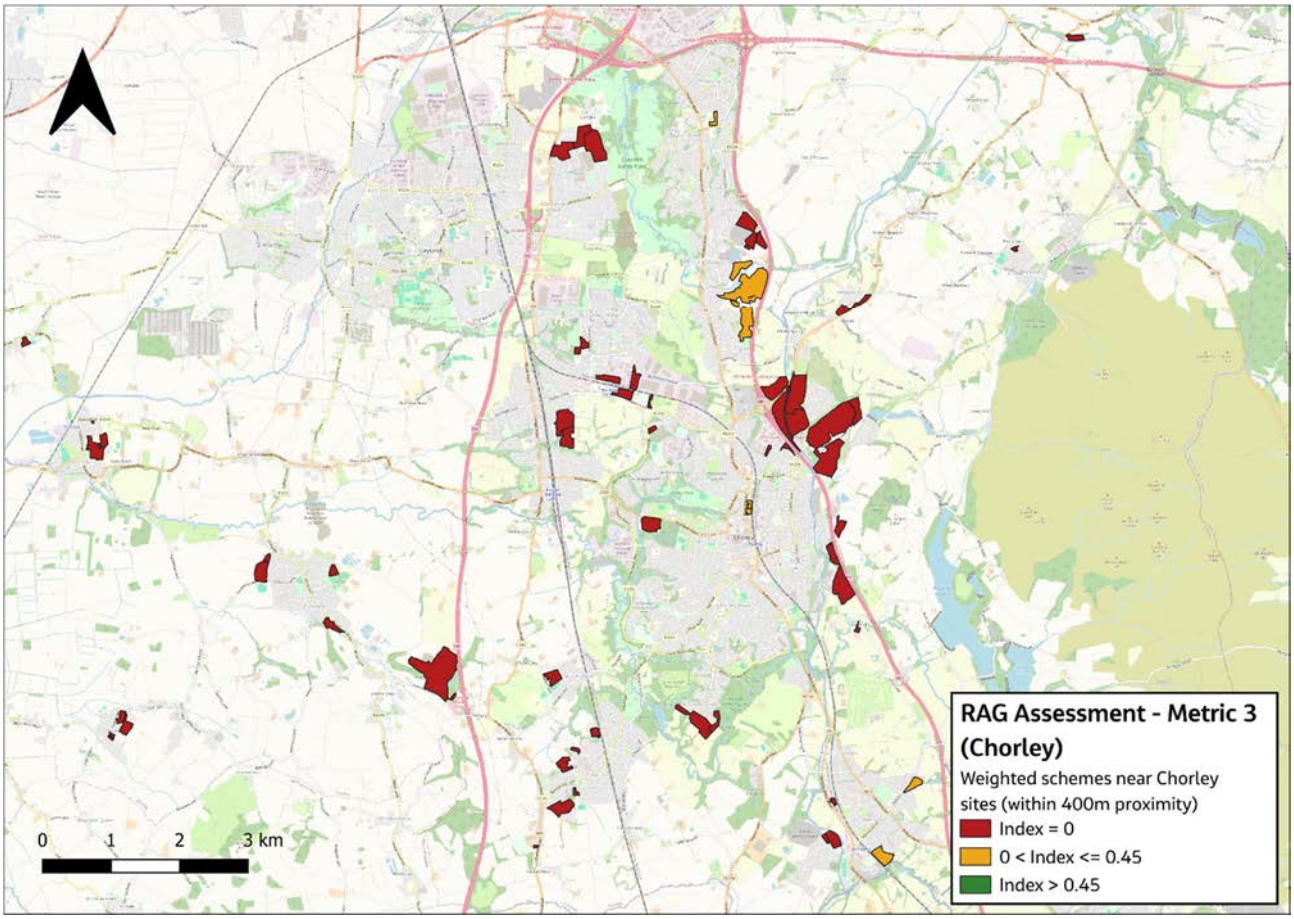


Figure 2-18 Metric 3 RAG assessment for Chorley

2.5 Metric 4: Existing high-volume movement flows/ capacity hot spots

2.5.0. Utilising CLTM traffic model outputs for 2019 such as volume-to-capacity ratio and delays, this analysis identifies potential pinch points in the base year near the site areas. This was supplemented with INRIX 2022 journey time data to ensure post covid traffic levels were accounted for in the assessment.

2.5.1. The evaluation suggests that most greenfield sites, particularly those on the outskirts, receive a green rating, while sites near Preston city/A582 corridor are rated either red or amber. Most of the sites in Chorley are located outside the district center, which is why they receive a green rating.

2.5.2. It's important to note that this evaluation only considers the current levels of traffic congestion, which is why previously developed areas tend to have higher congestion than greenfield areas. The red rating assigned to certain sites does not necessarily imply that these sites will lead to increased congestion once developed. However, it's crucial to consider any existing committed schemes in these areas. For instance, the north-west Preston sites, despite their red rating, could have additional capacity due to the recently opened Preston Western Distributor project. Likewise, sites near M6 Junction 31a stand to gain from proposed junction improvements. In South Ribble, sites along the A582 and M65 terminus will benefit from the committed A582 scheme.

2.5.3. Sites that have received red or amber ratings require further examination, considering any committed schemes already in place. If necessary, measures should be taken to mitigate any residual congestion. These assessments will be conducted in more detail in the subsequent stages.

Thresholds

2.5.4. The assessment is carried out separately with the delay and volume-to-capacity ratio from the 2019 model outputs and the AM peak period delay data obtained for the year 2022 from INRIX. More information about the delay observed in the ITN links can be found in Appendix B.

2.5.5. The sites near links with delays greater than 100 seconds and volume-to-capacity ratios above 100% are rated as red; the sites with delays between 50 and 100 seconds and volume-to-capacity ratios between 90 and 100% are rated as amber; and those sites with delays less than 50 seconds and volume-to-capacity ratios below 90% are rated as green. Table 2-7 shows the thresholds considered for the RAG assessment.

Table 2-7 RAG Thresholds for metric 4

Green	Amber	Red
Delay less than 50 seconds and volume-to-capacity ratios below 90%	Delay between 50 and 100 seconds and volume-to-capacity ratios between 90 and 100%	Delay greater than 100 seconds and volume-to-capacity ratios above 100%

Assessment Results

Preston City Council

2.5.6. Figure 2-19 shows the RAG classification of the sites in Preston, based on the delay observed in the ITN links for the 2022 AM peak period.

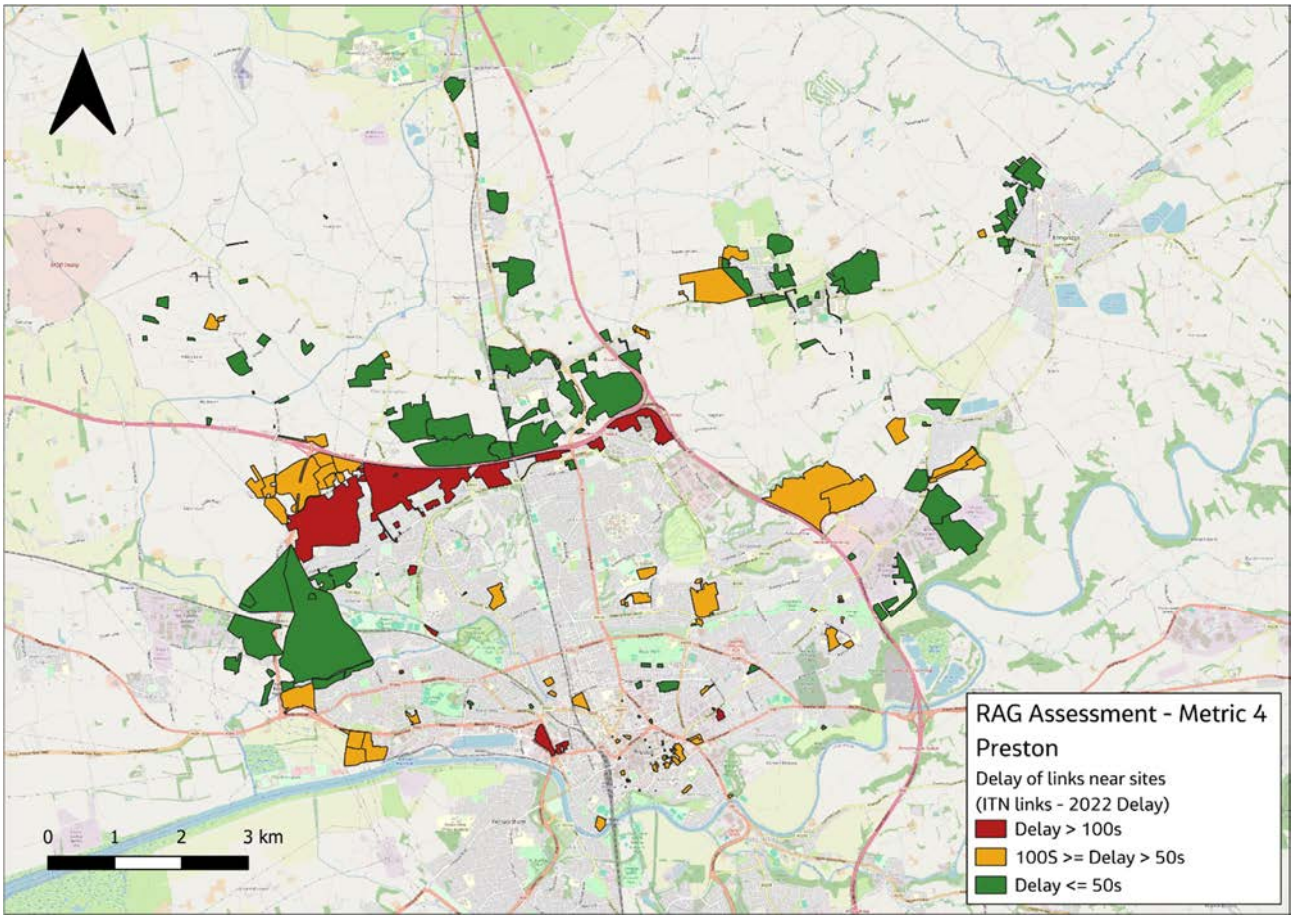


Figure 2-19 Metric 4 RAG assessment for Preston with 2022 data

South Ribble Borough Council

2.5.7. Figure 2-20 shows the RAG classification of the sites in South Ribble, based on the delay observed in the ITN links for the 2022 AM peak period.

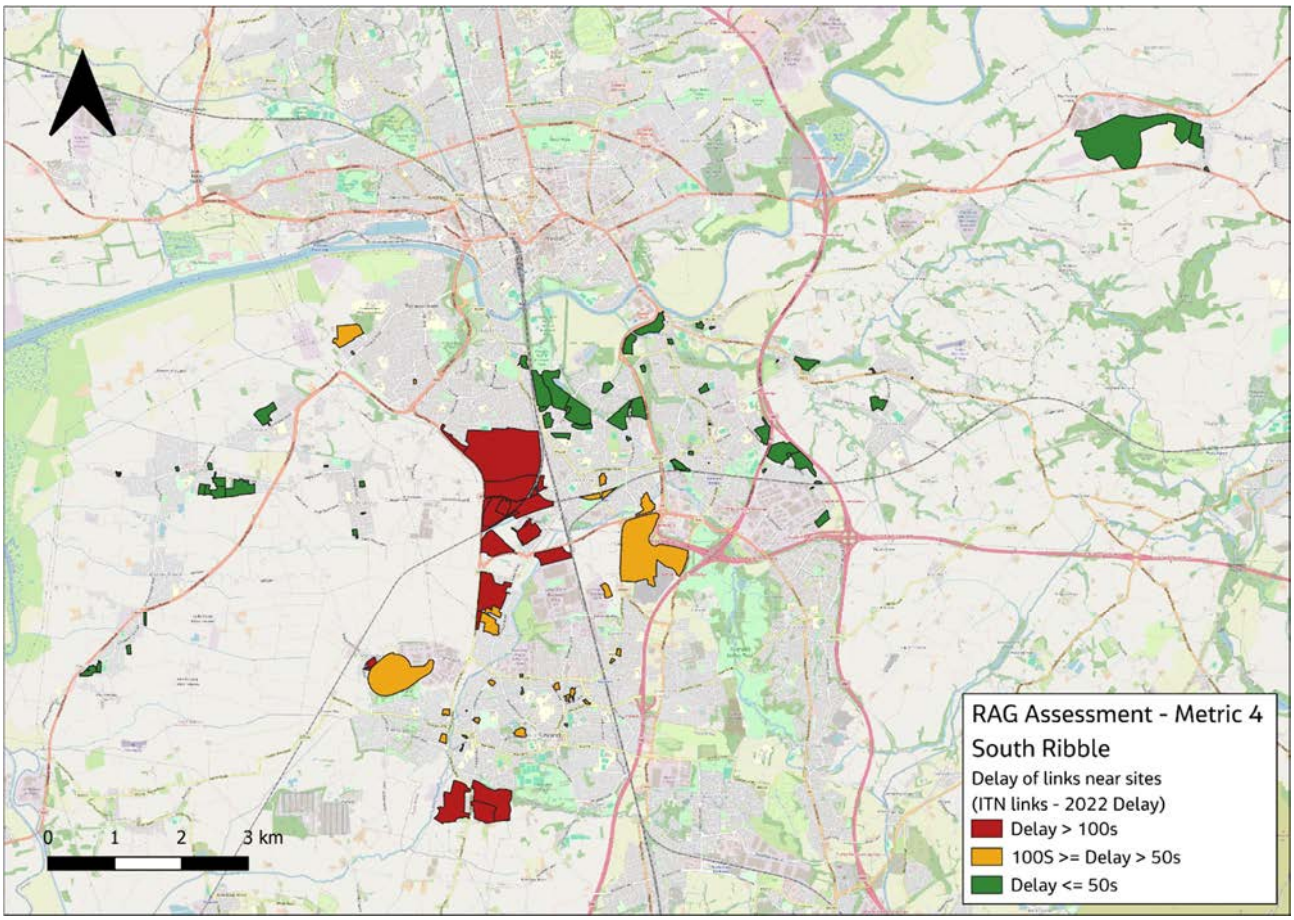


Figure 2-20 Metric 4 RAG assessment for South Ribble with 2022 data

Chorley Council

2.5.8. Figure 2-21 shows the RAG classification of the sites in Chorley, based on the delay observed in the ITN links for the 2022 AM peak period.

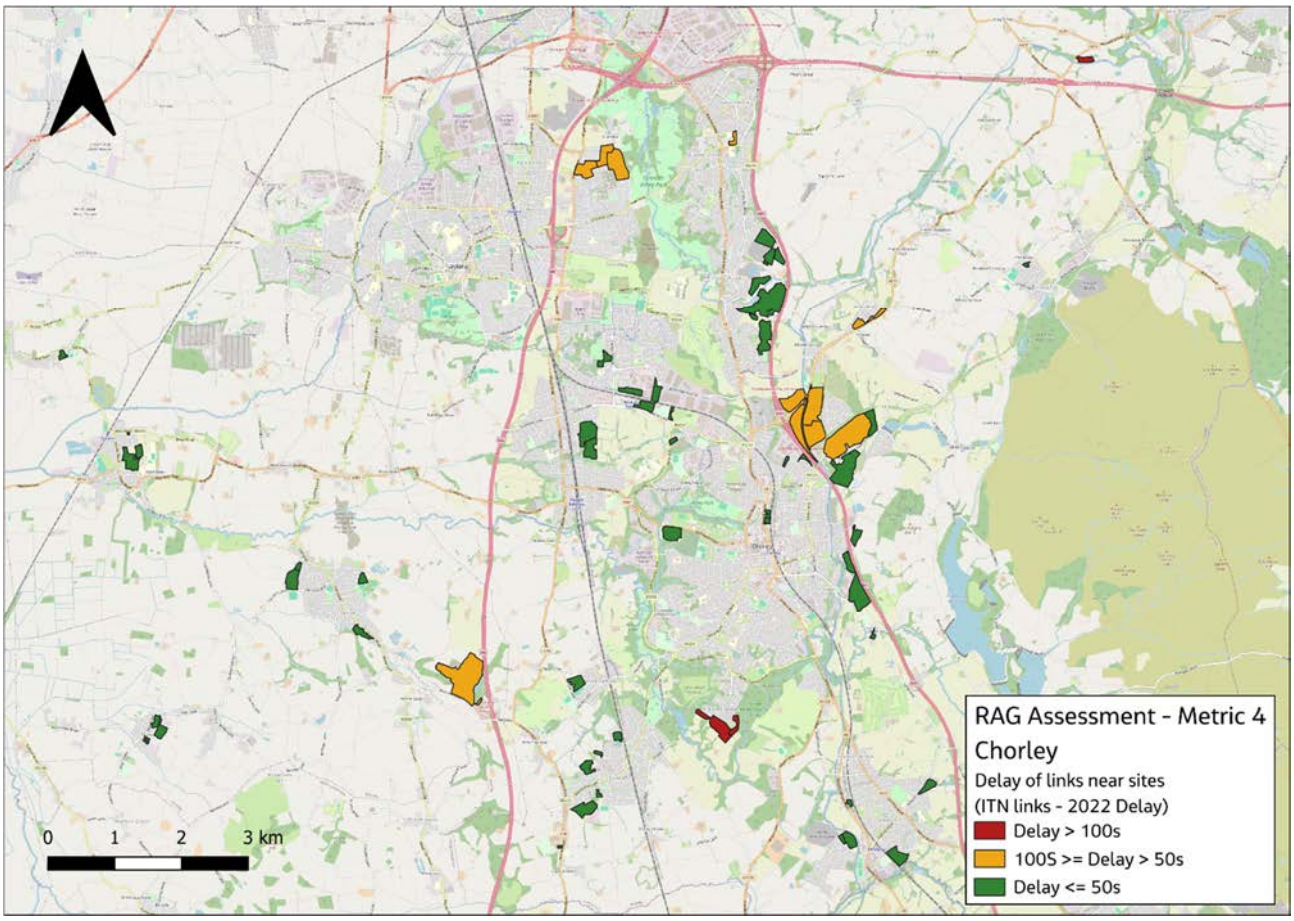


Figure 2-21 Metric 4 RAG assessment for Chorley with 2022 data

2.5.9. The RAG classification of the sites in Preston, South Ribble and Chorley based on the delay and VoC obtained from the Saturn Base model for the 2019 AM peak period are included in Appendix .

2.6 Metric 5: High level analysis of trip rates

2.6.0. This analysis estimates the site trip rates to gauge the sustainability of sites. The trip rates from TRICS (Version 7.10.4) and National Trip End Model (NTEM 8.0) were used for this metric analysis. The residential sites that are proposed for the Core Strategy are classified by location to obtain the corresponding trip rates from TRICS.

2.6.1. A comparative analysis of peak period passenger O-D trip rates from NTEM 8.0 and TRICS was also conducted to evaluate the trip rates from both sources, with the details provided in Appendix C. The analysis revealed that TRICS trip rates were generally higher for all modes, except for PT (bus/rail). It's important to note that while NTEM trip rates are more preferrable for updating the strategic model to align with NTEM projections and constraints, TRICS trip rates are better suited for local plan testing purpose. This is because TRICS trip rates offer a more accurate representation of local trip patterns, particularly since TRICS provides trip rates by location. It was agreed with TSWG, that for this assessment purpose TRICS rate will be utilised.

2.6.2. The sites are classified into four main location classes: Edge of Town centre, Suburban area, Edge of Town, and Neighbourhood Centre (village). The classification is carried out based on TRICS guidance[1], a detailed description of which is provided in Appendix C.

2.6.3. Trip rates from TRICS were filtered by location type and were not filtered by region. This approach aligns with the TRICS Good Practice Guide[1] (2024), which found no significant correlation between the region and trip rates. The guide states: '*Therefore, our vehicular study revealed that there is a significantly higher correlation between location type and vehicular trip rates than there is between region and vehicular trip rates, with location type clearly showing a greater level of consistency and a clear, emerging pattern, compared to the apparent randomness of fluctuations when trip rates are split by region. Our subsequent multi-modal study, following the same structure of analysis as the vehicular study, found similar conclusions. Therefore, our current guidance is that regional selection should not be a major consideration when applying trip rate calculation filtering criteria, whilst TRICS location type appears to be one of the most influential factors in terms of trip generation, and therefore should be one of the main filtering considerations.*'

2.6.4. For this evaluation, multimodal 12-hour vehicular trip rates from TRICS are extracted for the periods 2005-2010, 2010-2015, 2015-2020, and 2020-2023, rather than focusing on peak hour trips. This approach allows us to capture daily trip patterns and is proportionate for the assessment purpose. In the next stage of detailed assessment, peak hour trip rates will be utilised. From NTEM, all- purposes trip rates are extracted for 2023 and the forecast year for all modes in the Core scenario. Trip rate trends for both the TRICS and NTEM datasets are calculated to be used for further analysis.

2.6.5. In line with TRICS guidance for the D&P approach[2], three scenarios are prepared for each site based on the site classification, and the accessibility results from Metric 2.

2.6.6. For scenario 1, the 2015–2023 TRICS trip rates are extrapolated to the forecast year using the observed trends since 2005.

2.6.7. For scenario 2, the 2015–2023 TRICS trip rates are factored using the NTEM trend to reflect the expected trip generation per household in the forecast year. Trip rates calculated for both scenarios are summarised in Table 2-8.The comparison of trip rates from TRICS and NTEM for the different modes and locations for the AM and PM peak periods is detailed in Appendix C.

Table 2-8. Trip rates for Scenarios 1 and 2

Mode	Location Category	TRICS (2023)	Scenario 1 (TRICS + TRICS trend)	Scenario 2 (TRICS + NTEM Trend)
Bus users	Edge of Town	0.15	0.19	0.14
	Edge of Town Centre	0.06	0.04	0.06
	Neighbourhood Centre	0.16	0.22	0.14
	Suburban	0.08	0.09	0.07
Cyclists	Edge of Town	0.13	0.06	0.12
	Edge of Town Centre	0.13	0.07	0.12
	Neighbourhood Centre	0.10	0.13	0.09
	Suburban	0.38	0.48	0.37

1.1.

[1] TRICS Good Practice Guide 2024
[2] trics dp guidance_web.pdf

Pedestrians	Edge of Town	0.85	0.30	0.80
	Edge of Town Centre	1.36	0.80	1.28
	Neighbourhood Centre	1.28	1.72	1.21
	Suburban	2.27	2.40	2.15
Rail passengers	Edge of Town	0.03	0.04	0.03
	Edge of Town Centre	0.02	0.01	0.01
	Neighbourhood Centre	0.08	0.12	0.08
	Suburban	0.01	0.01	0.01
Private Vehicle Occupants	Edge of Town	5.84	5.00	5.88
	Edge of Town Centre	4.91	4.34	4.94
	Neighbourhood Centre	5.70	5.44	5.74
	Suburban	6.09	5.95	6.14
Total people-Combined modes	Edge of Town	7.01	5.60	6.91
	Edge of Town Centre	6.45	5.19	6.36
	Neighbourhood Centre	7.30	7.62	7.20
	Suburban	9.02	9.12	8.89

2.6.8. Finally, scenario 3 trip rates are produced using scenario 1. The total trip rate for every site for all the modes combined is maintained the same for scenarios 1 and 3. It is assumed that proposed sites with higher accessibility by sustainable modes, i.e. public transport and active modes, will have higher trip rates for these modes; and, therefore, a lower use of private car. Using the results from metric 2 for each site, bicycle trips and PT are adjusted to reflect the higher accessibility. It is assumed that the sites with green and amber ratings in metric 2 have a 15% and 10% increase, respectively, in their PT and bicycle trip rates. This increase in trip rates for sustainable modes will decrease the trip rate for cars. The final RAG score is calculated using the absolute change in car trip rates between scenarios 1 and 3.

Thresholds

2.6.9. The potential reduction in trip rates for cars is considered for the RAG assessment. The sites that have a reduction in car trip rate greater than 0.04 are rated green; those with a reduction between 0.01 and 0.04 are rated amber; and those with a trip reduction rate less than 0.01 are rated red. Table 2-9 shows the thresholds considered for the RAG assessment.

Table 2-9. RAG Thresholds for metric 5

Green	Amber	Red
Potential reduction in car trip rate is greater than 0.04	Potential reduction in car trip rate is between 0.01 and 0.04	Potential reduction in car trip rate is less than 0.01

Assessment Results

2.6.10. This section summarises the RAG evaluation related to the possible reduction in car journeys for the three districts. Sites with a green rating are likely to be closer to sustainable transport services and may exhibit higher usage rates for public transport and bicycles. However, sites rated as red, or amber need not necessarily lack access to sustainable transport services. Instead, they might have lower TRICS trip rate, which doesn't necessarily translate into decreased car usage.

Preston City Council

2.6.11. Figure 2-22 shows the RAG classification for the sites in Preston, based on the potential reduction in trip rates for car.

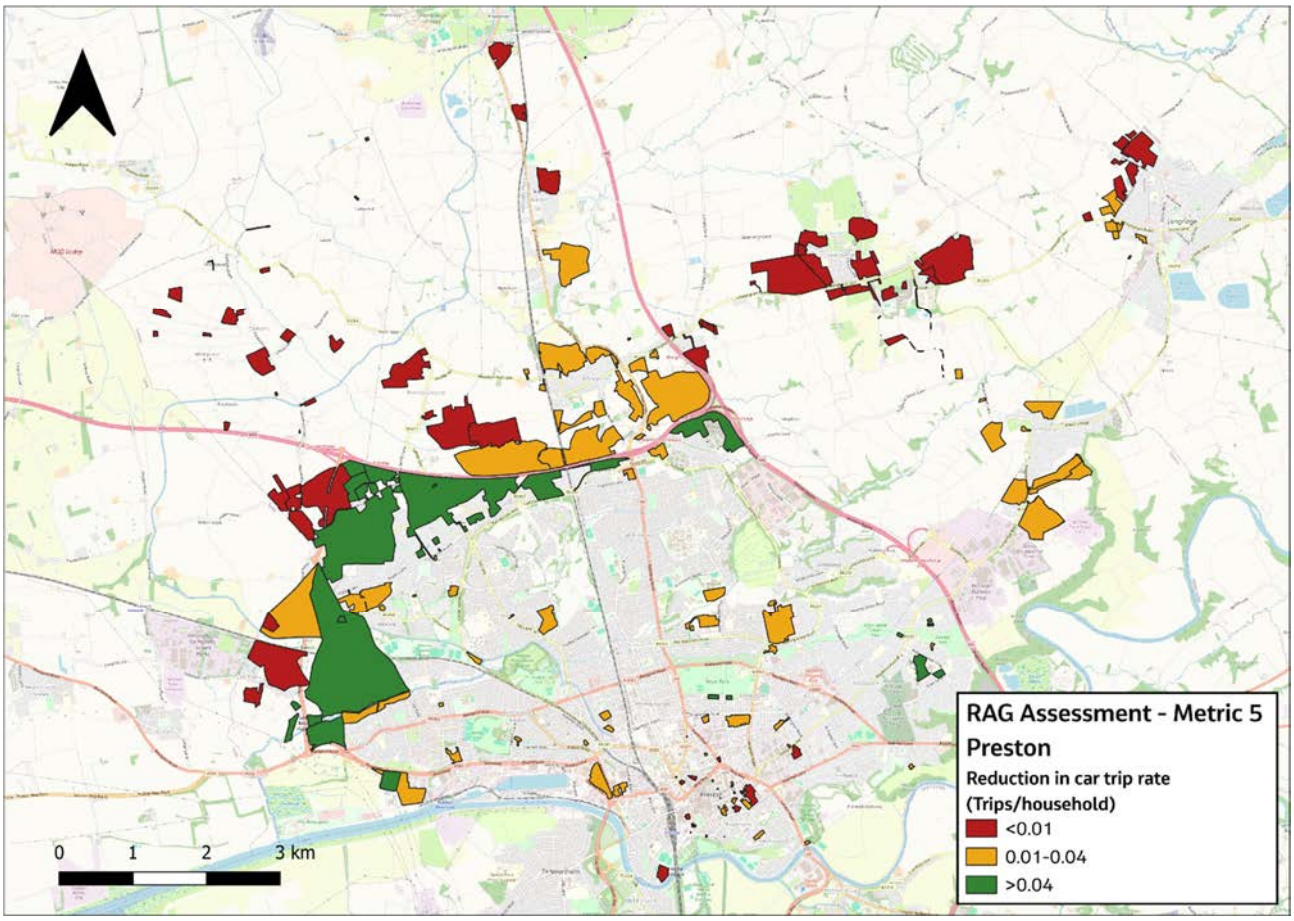


Figure 2-22 Metric 5 RAG assessment for Preston

South Ribble Borough Council

2.6.12. Figure 2-23 shows the RAG classification for the sites in South Ribble, based on the potential reduction in trip rates for car.

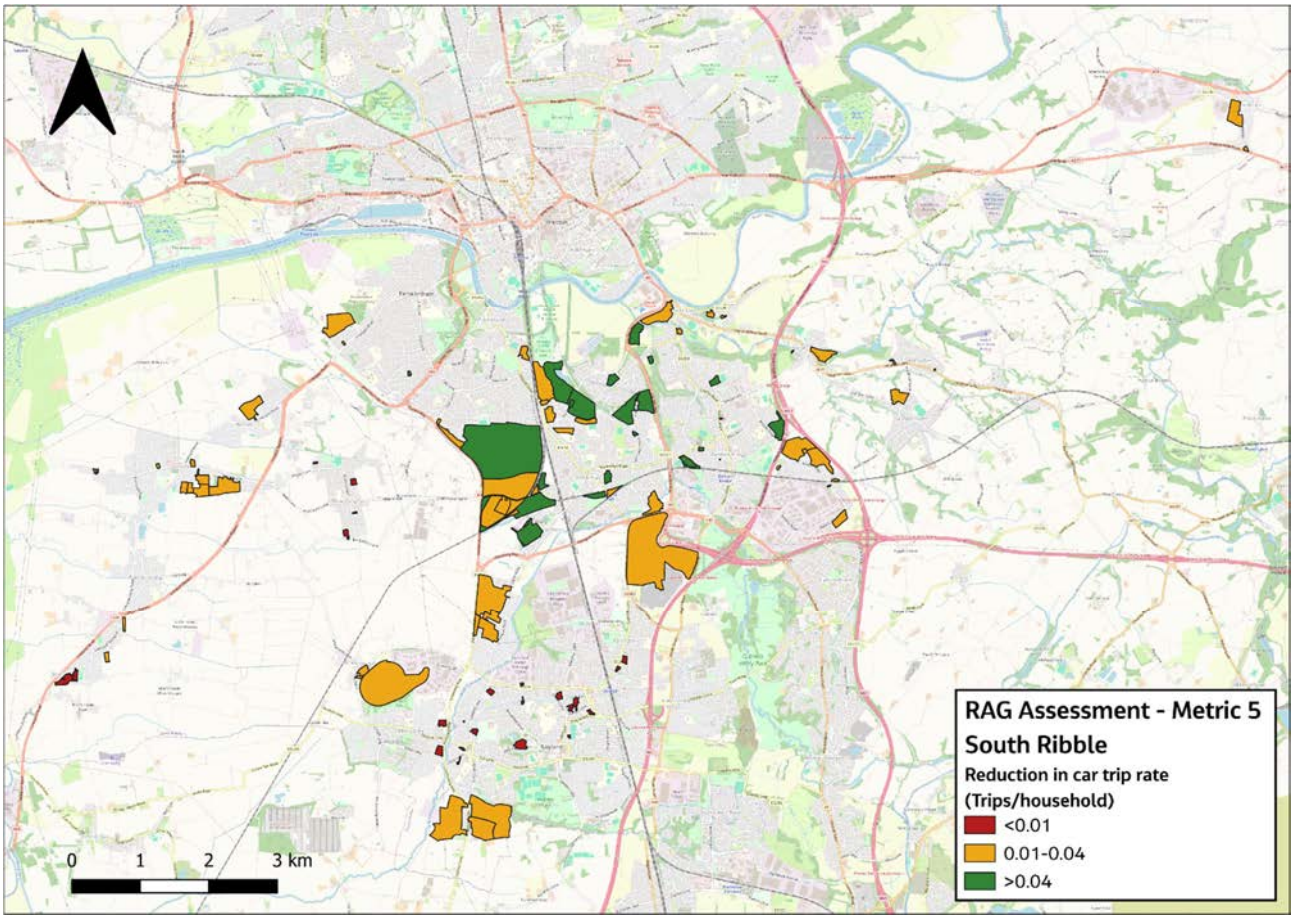


Figure 2-23 Metric 5 RAG assessment for South Ribble

Chorley Council

2.6.13. Figure 2-24 shows the RAG classification for the sites in Chorley, based on the potential reduction in trip rates for car.

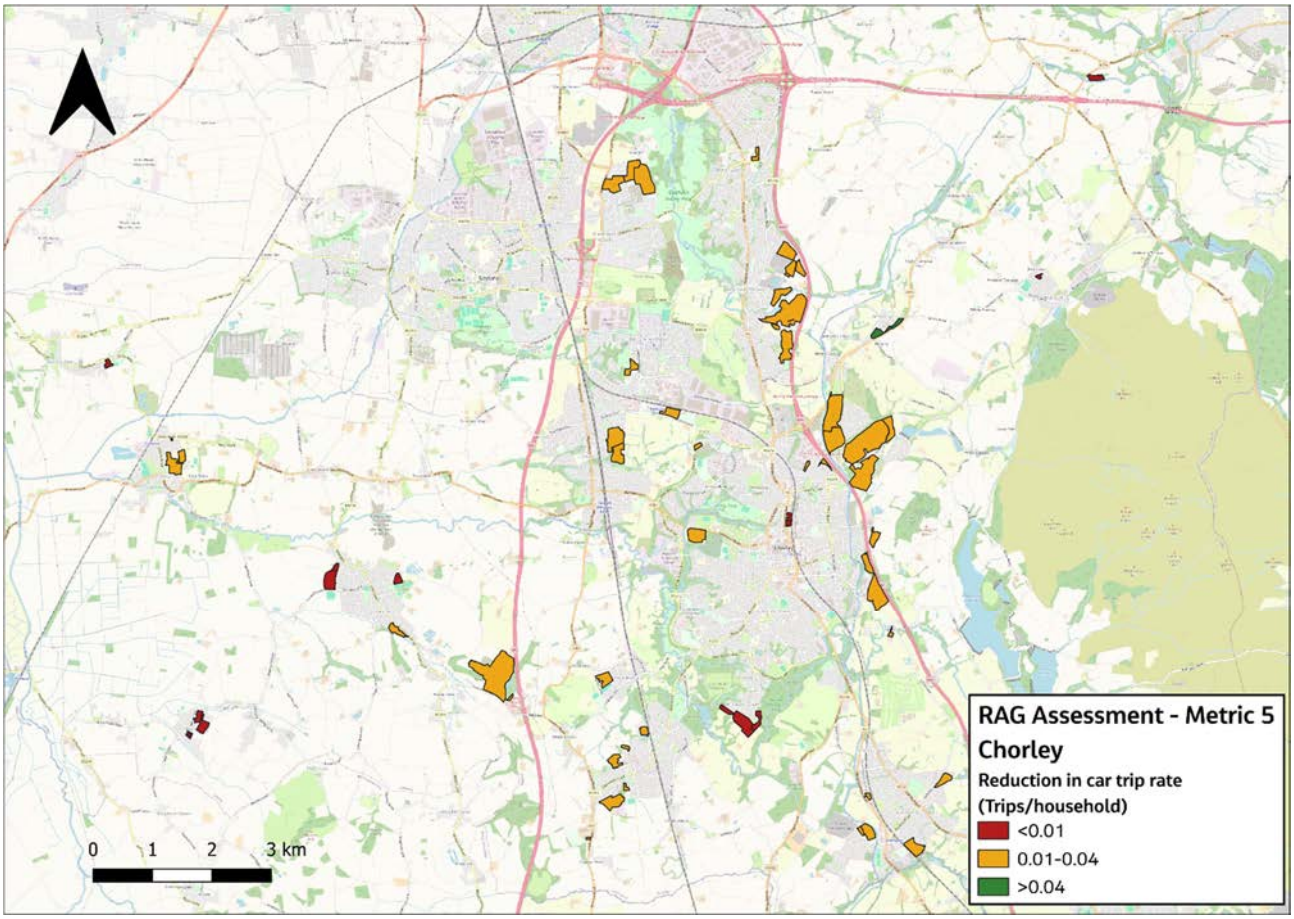


Figure 2-24 Metric 5 RAG assessment for Chorley

2.7 Metric 6: Proximity to key attractors

2.7.0. This metric considers the proximity of key attractors to each site area, and the scale of these settlements. This reflects the existing facilities surrounding an area, assessing the potential for supporting shorter distance trips, which are more likely to be made by sustainable modes. The key attractors identified as part of Metric 2 are used for this assessment. Figure 2-25 shows the key attractors in and around the three Central Lancashire Authorities.

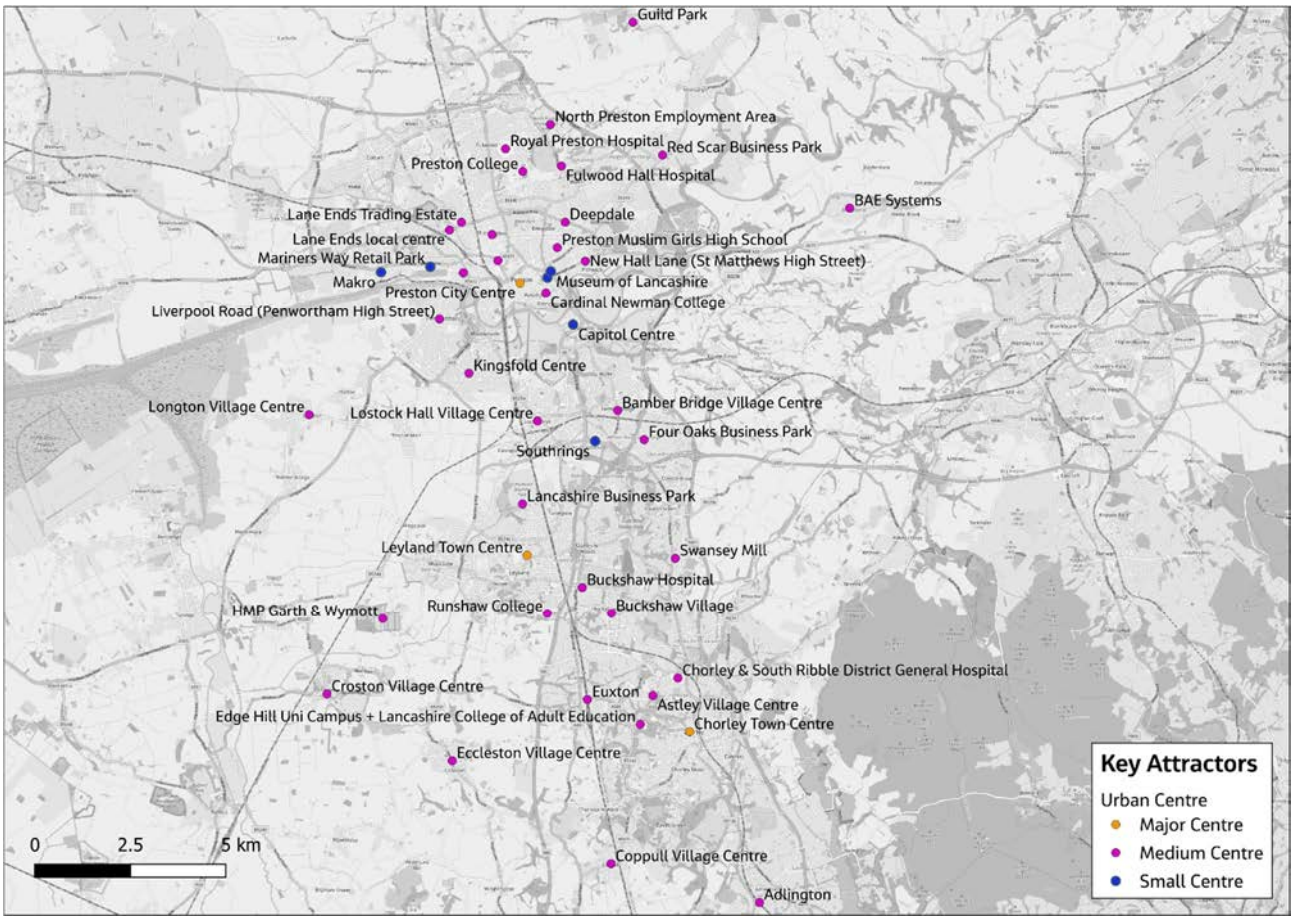


Figure 2-25 Key attractors

Thresholds

2.7.1. The thresholds for the assessment include site's proximity to a large urban centre higher than those that are near a medium urban centre or where the option area isn't close to an urban centre. A buffer zone of 1 km is considered around each site to determine whether there are any key attractors coming within the buffer. The sites that have large urban centers coming within the buffer region are rated as green; those that have medium or small urban centers within are rated as amber; and those that do not have any key attractors within the buffer are rated as red. Table 2-10 provides the thresholds adopted for the RAG assessment.

Table 2-10 RAG Thresholds for Metric 6

Green	Amber	Red
Sites that have large urban centres within the buffer	Sites that have medium or small urban centres within the buffer	Sites that do not have any urban centres within the buffer

Assessment Results

Preston City Council

2.7.2. Figure 2-26 shows the RAG classification of the sites in Preston, based on their proximity to key attractors.

2.7.3. Preston serves as the main office for various organisations in both the private and public sectors. It boasts a diverse economy, and service industries, manufacturing sectors and a substantial public sector. Prominent service sectors encompass wholesale and retail, transport, storage and communication, financial and insurance services, real estate, public administration, and healthcare.

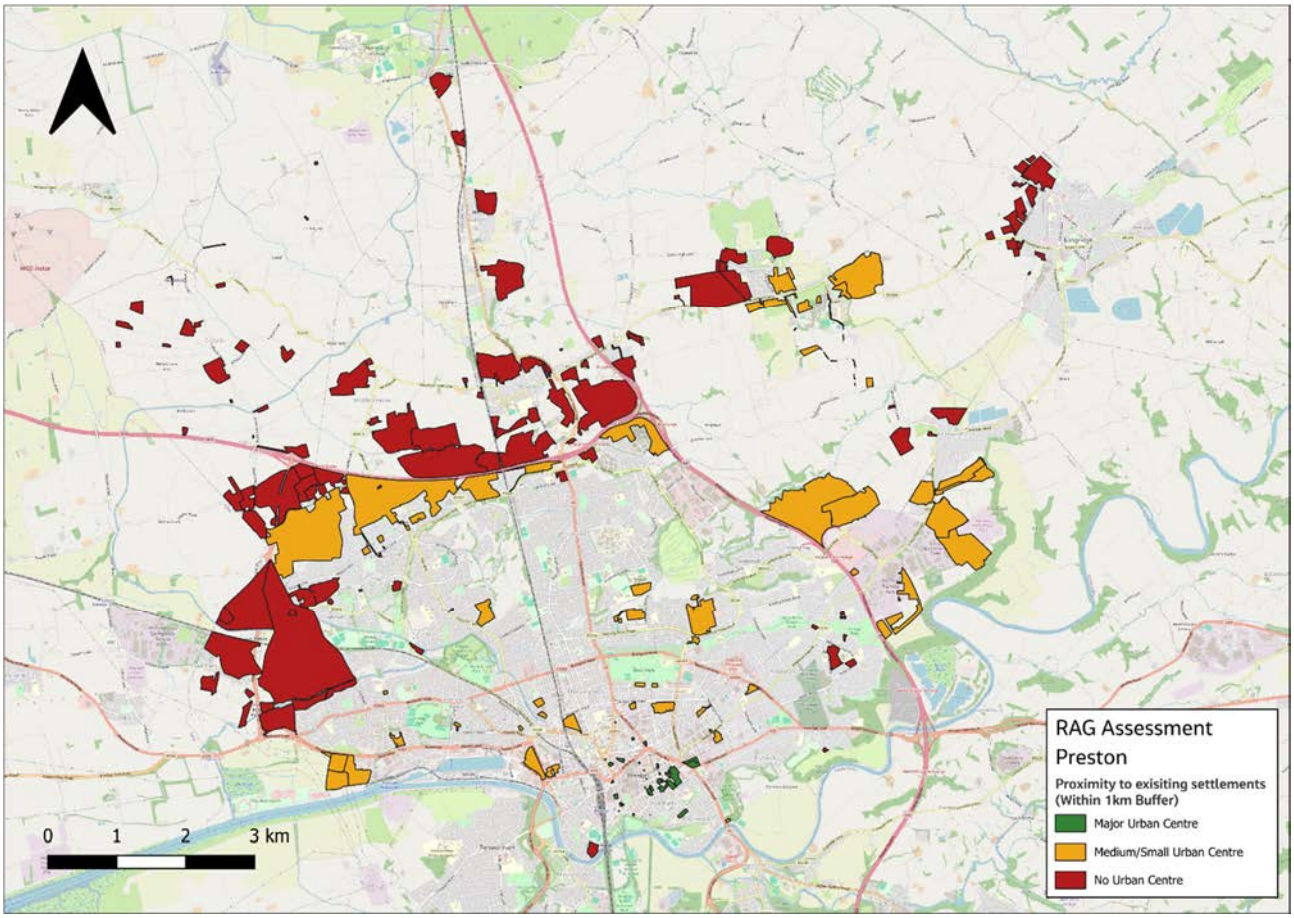


Figure 2-26 Metric 6 RAG assessment for Preston

South Ribble Borough Council

2.7.4. Figure 2-27 shows the RAG classification of the sites in South Ribble, based on their proximity to key attractors.

2.7.5. Situated south of Preston, a significant number of residents travel from places like Penwortham and Bamber Bridge for work in Preston. The district encompasses major settlements like Bamber Bridge, Lostock Hall, and Penwortham, which are near Preston's northern boundary and essentially merge into a single urban area with the city. Leyland, serving as the district's administrative hub, is positioned at the southern extremity.

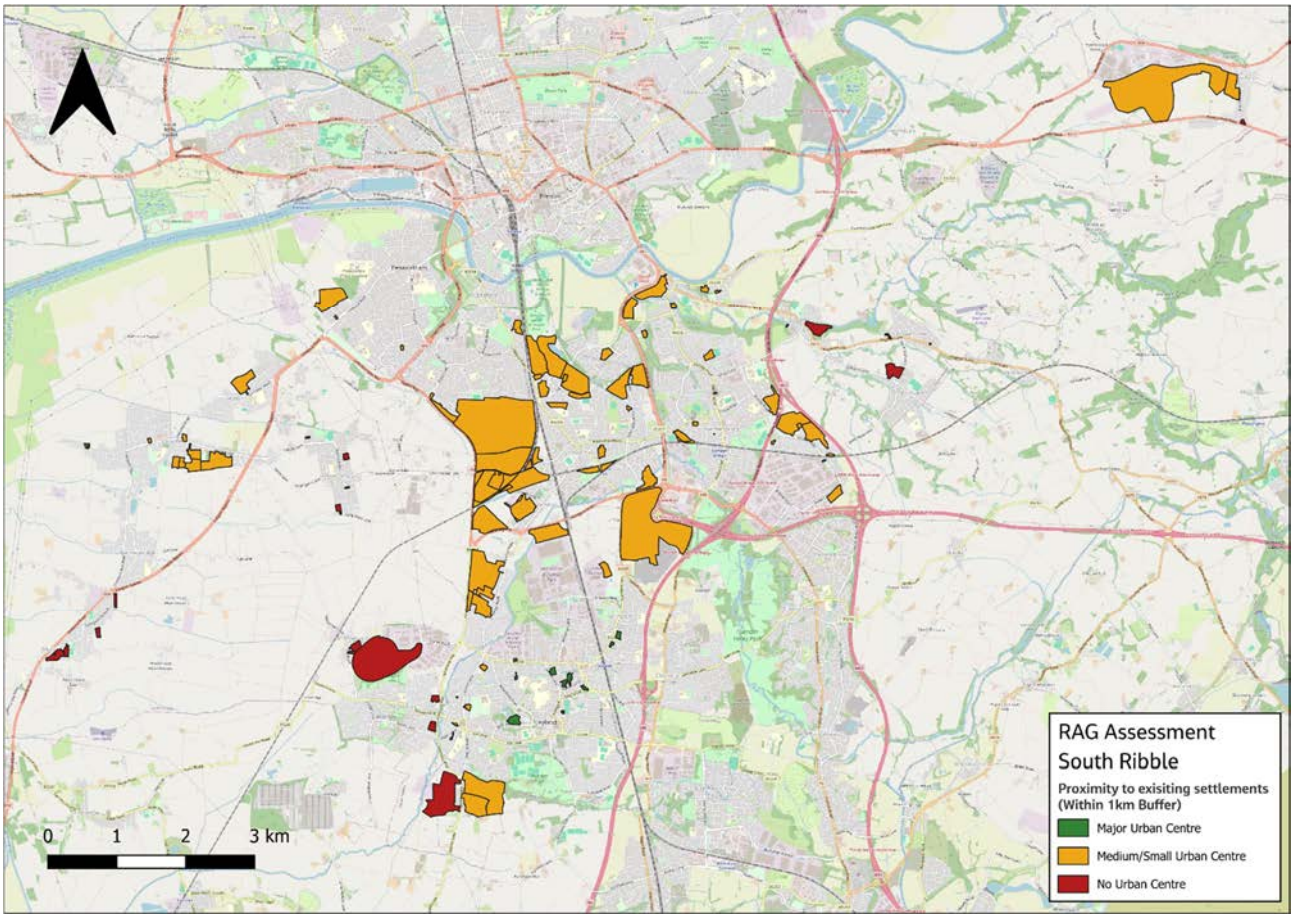


Figure 2-27 Metric 6 RAG assessment for South Ribble

Chorley Council

2.7.6. Figure 2-28 shows the RAG classification of the sites in Chorley, based on their proximity to key attractors.

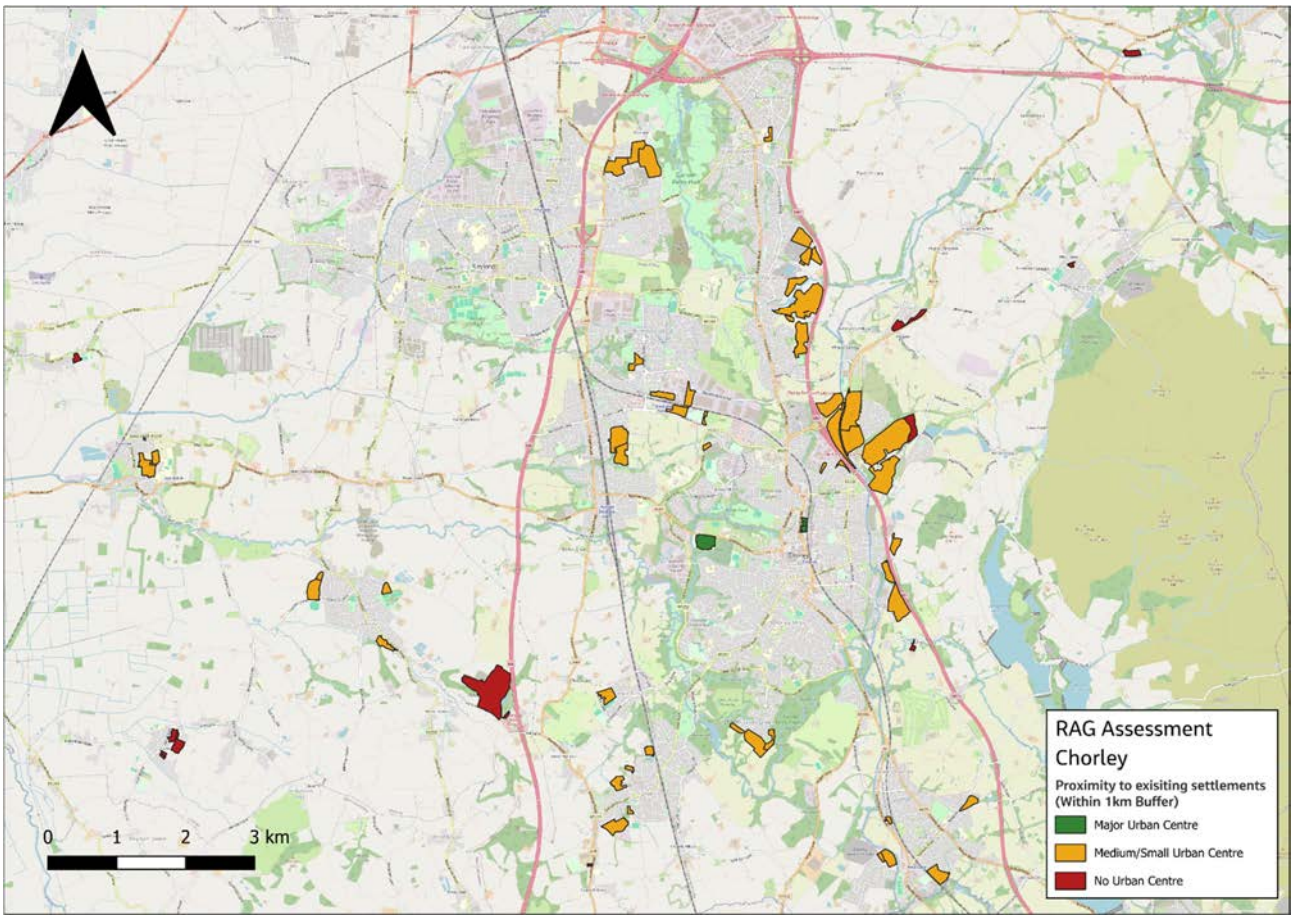


Figure 2-28 Metric 6 RAG assessment for Chorley

2.8 Metric 7: Site vehicular accessibility

2.8.0. This metric assesses the sites by identifying critical locations on the road network with poor accident records. This is to understand if the proposed land allocations will exacerbate existing problems and whether highway mitigation works, or traffic management measures will be required to alleviate such problems.

2.8.1. The analysis utilizes the STATS19 accident data, encompassing the years 2016 to 2022. The count of accidents near each site during this period is ascertained, and a weightage is assigned to each site based on the severity of the accidents that took place in its vicinity. However, accidents on the Strategic Road Network are excluded for sites in close proximity to it. The study only considers accidents that happened on roads providing direct access to the sites.

2.8.2. Typically, greenfield sites receive a green rating due to lower levels of traffic demand. However, sites located in developed areas like city centres, district centres, and major traffic routes tend to have poorer ratings.

Thresholds

2.8.3. Each site's total accident score is computed by attributing a weightage of 40% each to fatal and serious accidents, and 20% to minor accidents. Sites with a cumulative score below 5 are classified as green; those with scores ranging from 5 to 10 are categorized as amber; and those with scores exceeding 10 are designated as red. Table 2-11 provides the thresholds adopted for the RAG assessment.

Table 2-11 RAG Thresholds for Metric 7

Green	Amber	Red
Sites with accident score less than or equal to 5	Sites with accident score between 5 and 10	Sites with accident score greater than 10

Assessment Results

Preston City Council

2.8.4. Figure 2-29 shows the RAG classification of the sites in Preston, based on the accident weightage obtained for each site.

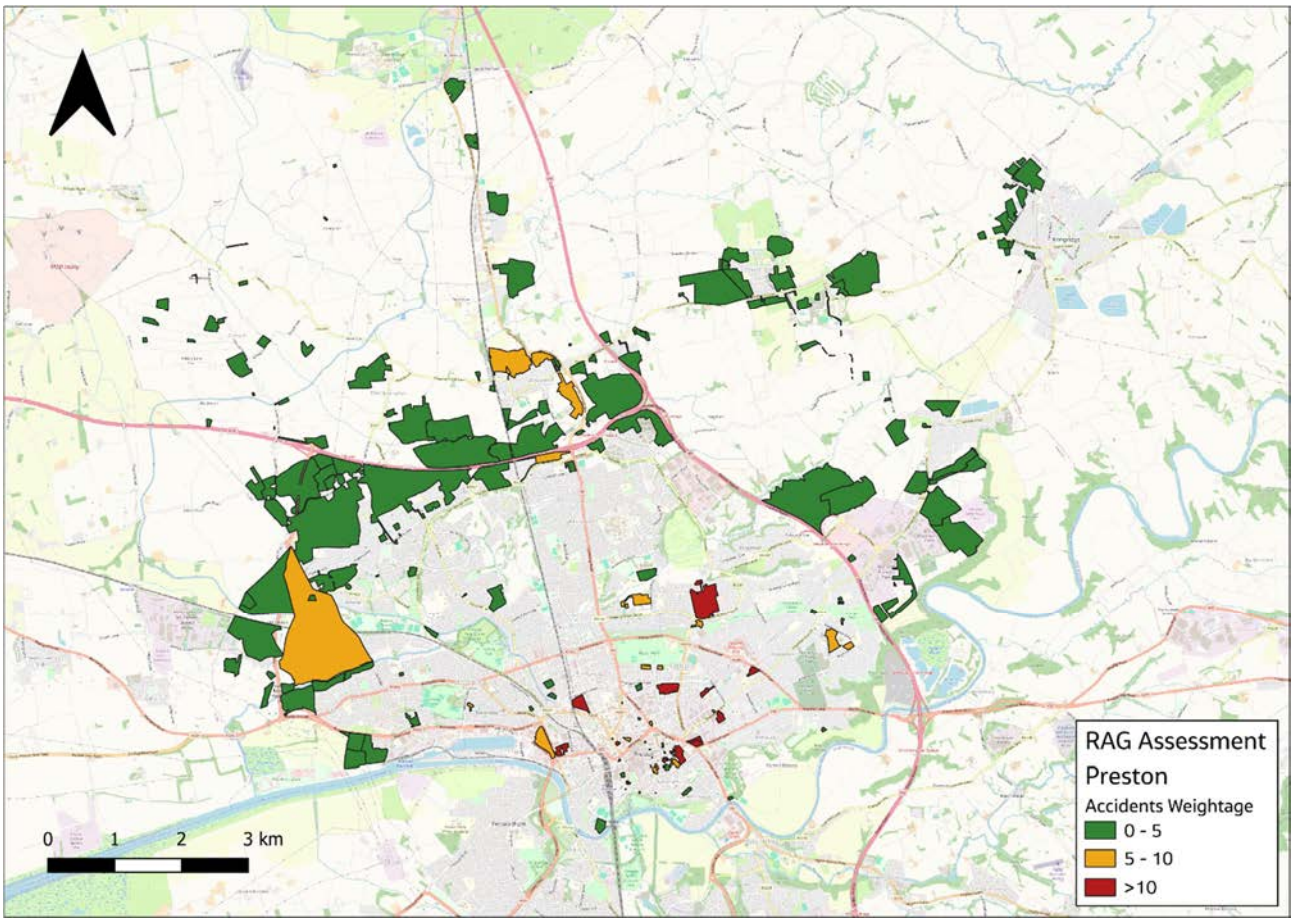


Figure 2-29 Metric 7 RAG assessment for Preston

2.8.5. The regions in Preston where there have been more accidents are shown on the accident heat map below Figure 2-30.

Figure 2-30 Accident heat map for Preston

South Ribble Borough Council

2.8.6. Figure 2-31 shows the RAG classification of the sites in South Ribble, based on the accident weightage obtained for each site.

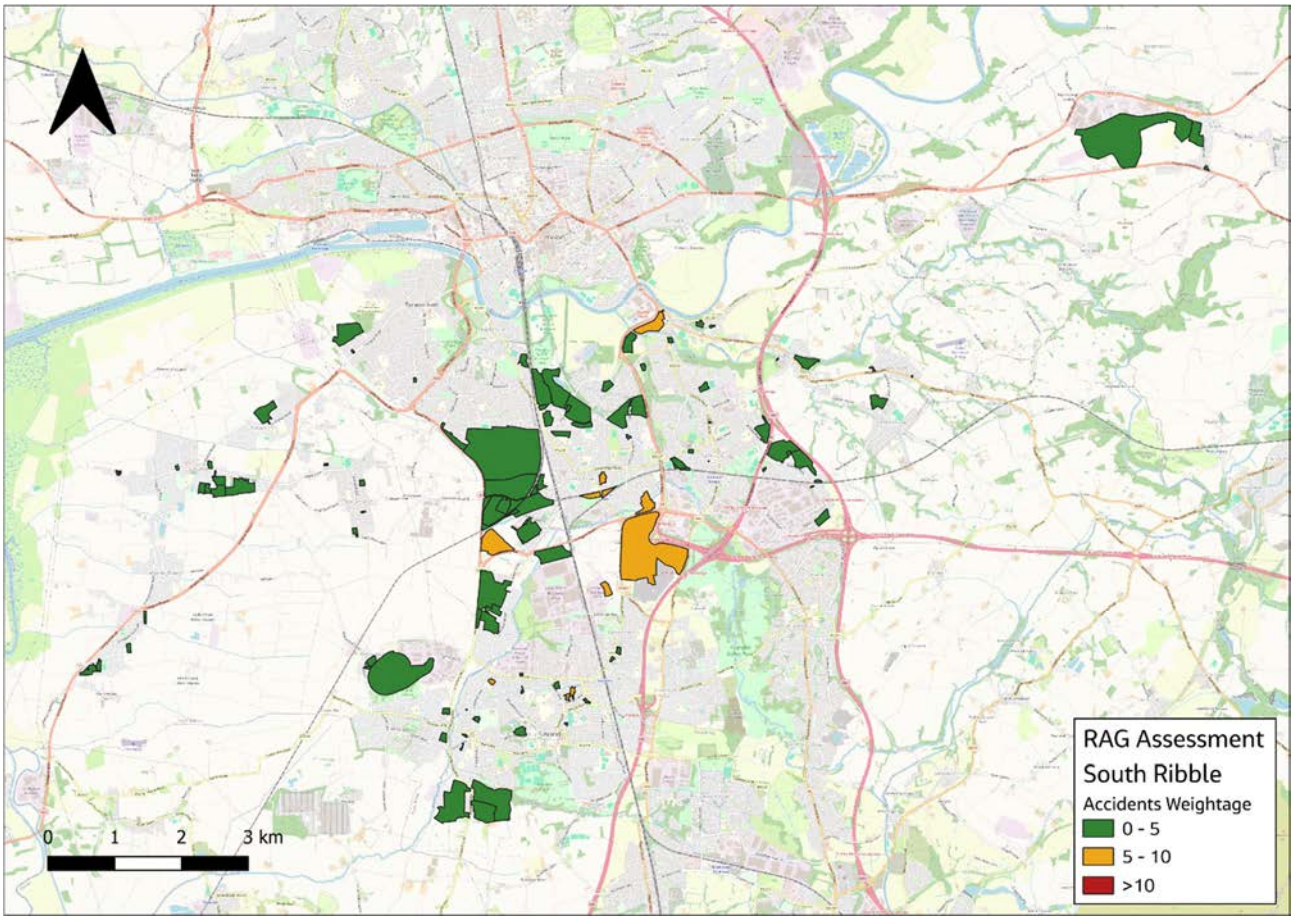


Figure 2-31 Metric 7 RAG assessment for South Ribble

2.8.7. The regions in South Ribble where there have been more accidents are shown on the accident heat map below Figure 2-32.

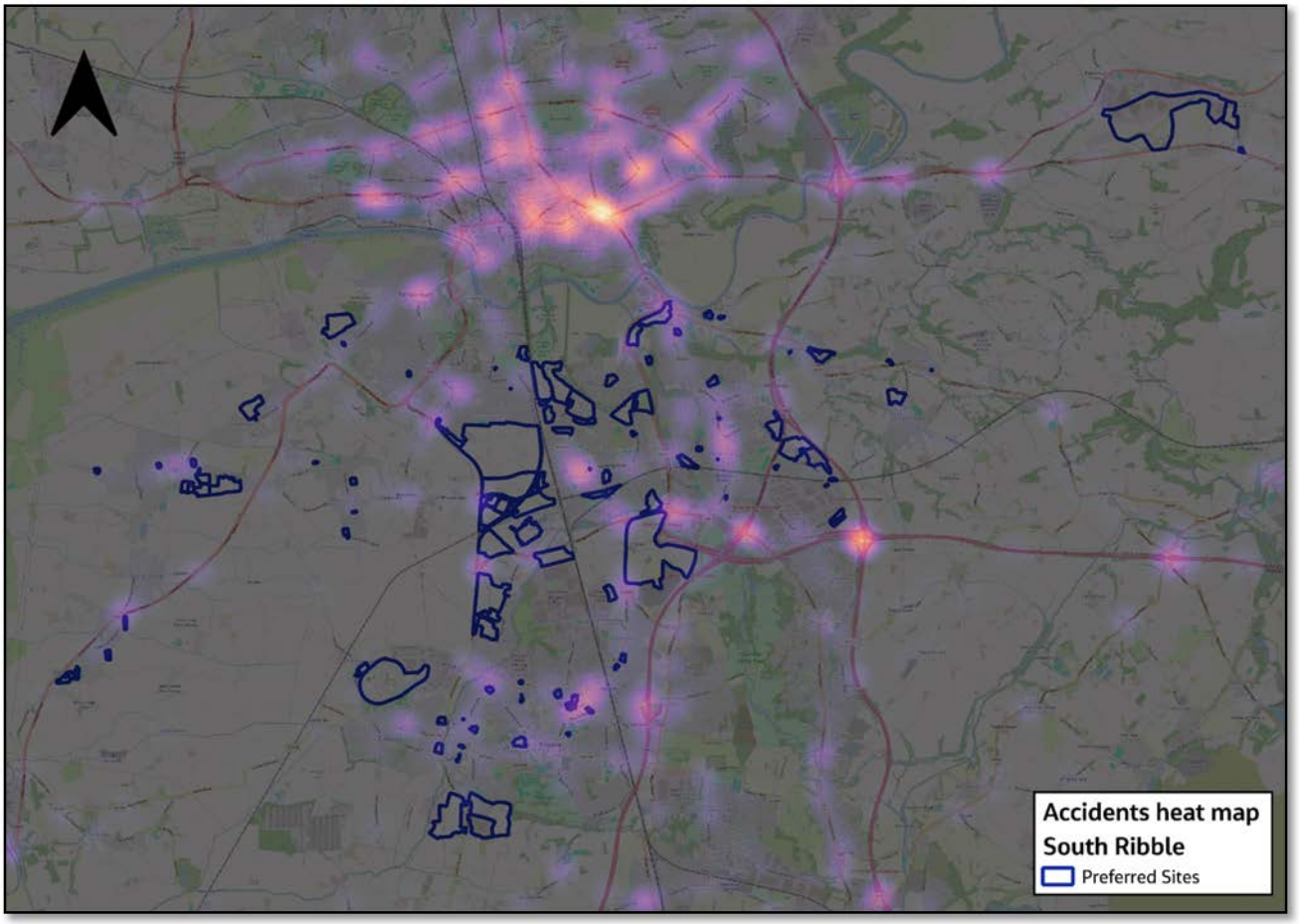


Figure 2-32 Accident heat map for South Ribble

Chorley Council

2.8.8. Figure 2-33 shows the RAG classification of the sites in Chorley, based on the accident weightage obtained for each site.

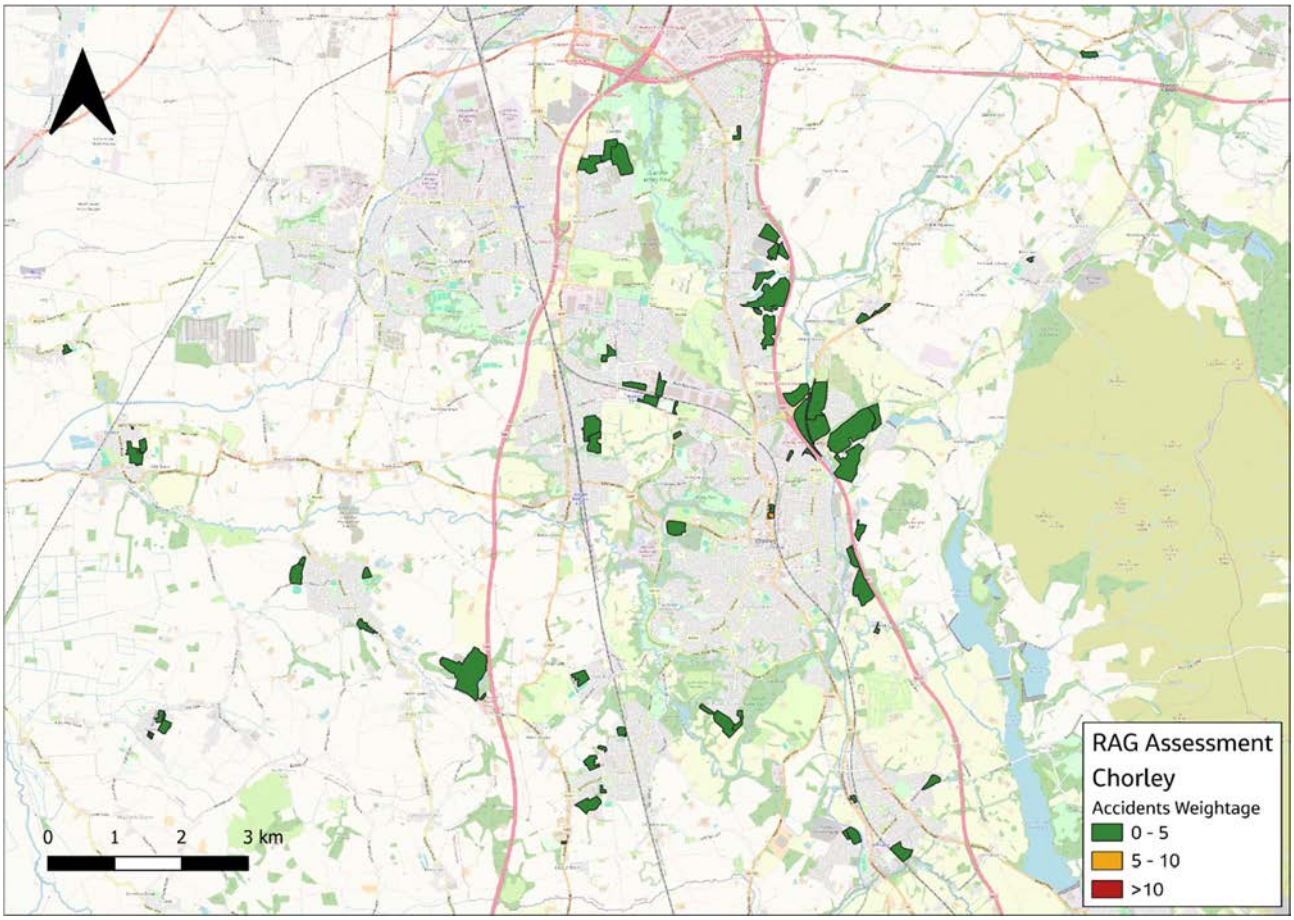


Figure 2-33 Metric 7 RAG assessment for Chorley

2.8.9. The regions in Chorley where there have been more accidents are shown on the accident heat map below Figure 2-34.

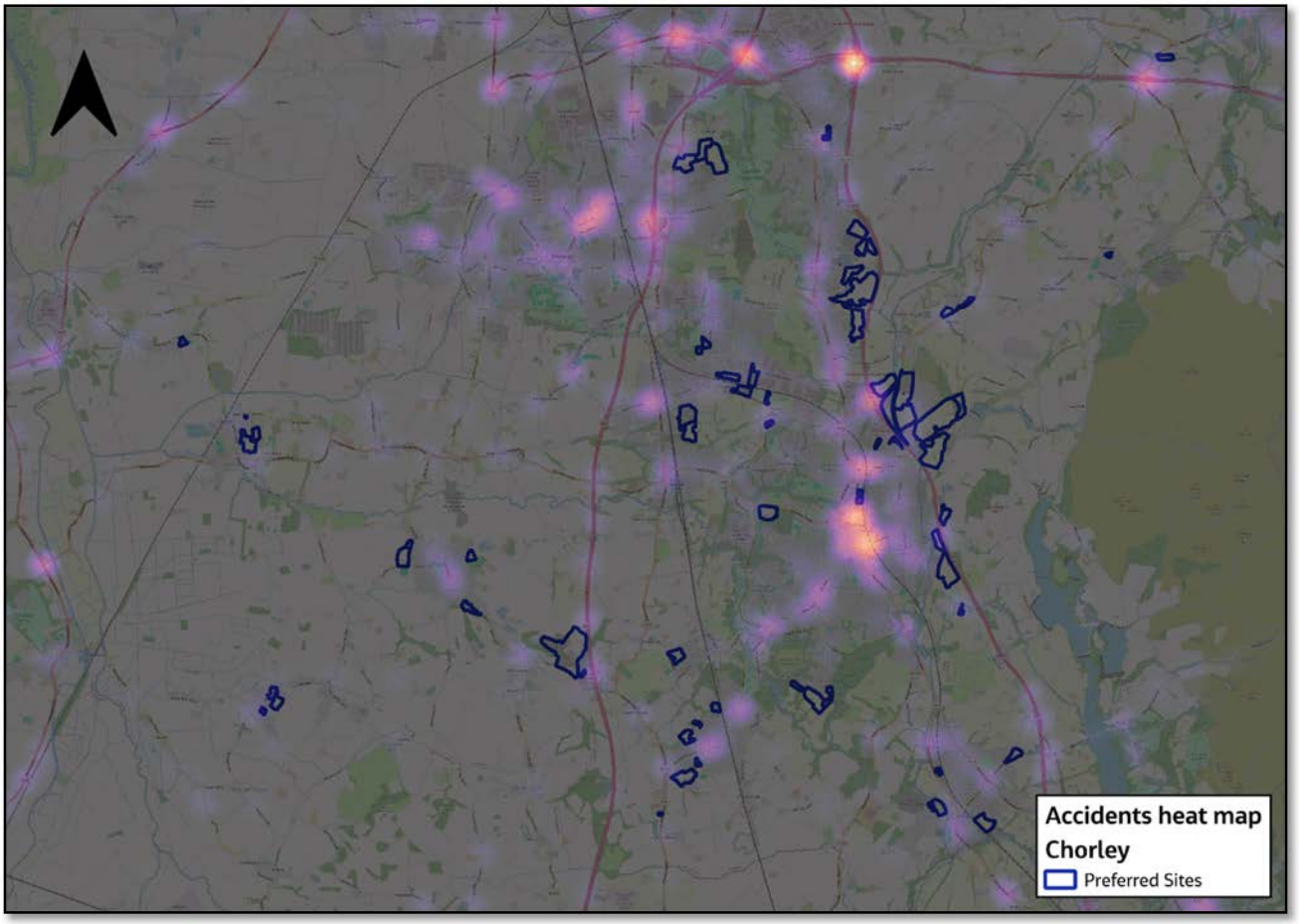


Figure 2-34 Accident heat map for Chorley

3. Summary

3.1.1. Many parts of the highway network in Central Lancashire are already operating close to or at capacity, particularly during peak commuter periods. Urban areas already boast an extensive public transportation system, and the infrastructure for cycling and walking is on the rise. Despite these options, the reality is that most commuters currently still prefer to drive.

3.1.2. In South Ribble and Chorley, cars are used for approximately 72% of journeys, with public transport and walking or cycling accounting for around 5% and 10% respectively. In Preston, where there is a higher concentration of jobs and retail, car usage drops to about 65%, with increased usage of buses (10%) and walking or cycling (15%). The census data from 2021, gathered during the COVID-19 pandemic, showed an increased reliance on cars and a decrease in the use of public transport compared to 2011, a trend directly attributed to the pandemic. However, the 2022 National Travel Survey indicates a rise in all types of trips, including those made by public transport, since then.

3.1.3. Travel patterns in Central Lancashire, like in many other parts of England, have significantly changed due to the COVID-19 pandemic. People's travel behaviour and choices have been influenced by the pandemic, the rising cost of living, and attitudes towards climate change and sustainable travel. There was a substantial decrease in traffic flow between 2019 and 2020 due to major travel restrictions implemented to prevent the spread of the virus. The long-term effects on travel behaviour resulting from the COVID-19 pandemic are still unknown. While there has been much speculation about a potential shift towards more homeworking for office-based jobs, it is still too early to make any meaningful or quantifiable judgements about how shifts in travel behaviour are likely to be impacted in the mid to long term.

3.1.4. This report has examined each site and metric individually, providing the reasoning for each high, medium, and low rating. It offers a high level perspective of a specific site's attributes and highlights areas where further investment may be crucial for fostering sustainability, particularly in terms of transport and travel trends, in the future.

3.1.5. The evaluation from Metric 1, derived from census data, suggests that the proposed sites generally exhibit a high dependence on cars for commuting. Sites located further from the city or district centre have a poorer rating. This is because commuters in these areas are likely to rely more heavily on private transportation, such as cars or vans. On the other hand, sites that are closer to city centres, which offer better public and active transportation options, lessen the dependency on private vehicles.

3.1.6. The findings from metric 2, which assesses the sites' accessibility to major attractions via existing sustainable transport services, reveal that a substantial number of sites have been provided a green rating. This rating reflects their strategic location with good bus connections and closeness to railway stations that provide extensive links to other important employment locations. However, despite the presence of good cycling connectivity, only a handful of sites receive a green rating for active mode due to the lack of segregated routes or the utilisation of crowded routes, leading to a diminished quality score.

3.1.7. Metric 3 considers the upcoming and recently concluded transport projects across the district and surrounding areas. The objective is to ascertain if any major transport improvements will impact traffic flow. The evaluation indicates that sites located near proposed and completed schemes are better positioned to tackle any potential future transport challenges. Sites that have received a red rating do not necessarily imply that they will certainly require additional infrastructure support in the future once the sites are developed. These will be subject to further examination during subsequent stages where a comprehensive assessment will be conducted.

3.1.8. Metric 4 evaluates current traffic demand and capacity to identify potential hotspots near proposed site allocations. It reveals that most greenfield sites, especially those on the outskirts, and sites in Chorley, located outside the district center, receive a green rating. In contrast, sites near the Preston city/A582 corridor are rated either red or amber. This evaluation, based on current congestion levels, indicates that previously developed areas have higher congestion than greenfield areas. However, a red rating doesn't necessarily predict increased congestion post-development. Existing committed schemes in these areas, such as the forthcoming Preston Western Distributor project for north-west Preston sites and proposed junction improvements near M6 Junction 31a, could provide additional capacity. Similarly, sites along the A582 and M65 terminus in South Ribble stand to benefit from the committed A582 scheme. Sites with red or amber ratings will undergo further examination, considering any committed schemes, and if required, measures will be implemented to mitigate any residual issues. These assessments will be conducted in more detail in subsequent stages.

3.1.9. Metric 5 calculates the trip rates at various sites to determine their sustainability. This method is derived from the 'Guidance Note on the Practical Implementation of the Decide & Provide Approach' produced by TRICS (2021). After categorizing the sites based on their location, three scenarios are developed for each site, considering the site's classification and the accessibility results from Metric 2. Sites with a green rating are likely to be nearer to sustainable transport services, potentially leading to a rise in public transport and bicycle usage. However, sites with red or amber ratings may not necessarily be devoid of sustainable transport services. They might simply have lower trip rates for these modes, which doesn't necessarily translate into reduced car usage. These aspects will be explored in more depth in subsequent stages.

3.1.10. Metric 6 evaluates the closeness of current settlements or key points of interest to each site area, as well as the size of these settlements. This metric considers the existing amenities around an area, gauging the capacity to facilitate trips of shorter distances, which are more inclined to be undertaken via sustainable modes of transport. The evaluation indicates that the sites given a green rating are those situated near city centers, which are anticipated to be the locations of significant urban hubs.

3.1.11. Metric 7 evaluates the sites by identifying key areas in the road network with a history of significant accidents. The aim is to determine if the proposed land allocations could worsen existing issues. Generally, greenfield sites have got a better rating due to their lower traffic demand. However, sites situated in developed areas like city centres, district centres, and major traffic routes usually receive poorer ratings.

3.1.12. It is recognised that performance against the identified metrics will vary by relative importance and be weighted differently by decision-makers. Consequently, a consolidated RAG evaluation has not been conducted, aiming instead to provide a high-level overview of the transport features of each potential site. This facilitates comparison, but a deliberate decision has been made not to present a ranking of sites to prevent any potential bias this could cause.

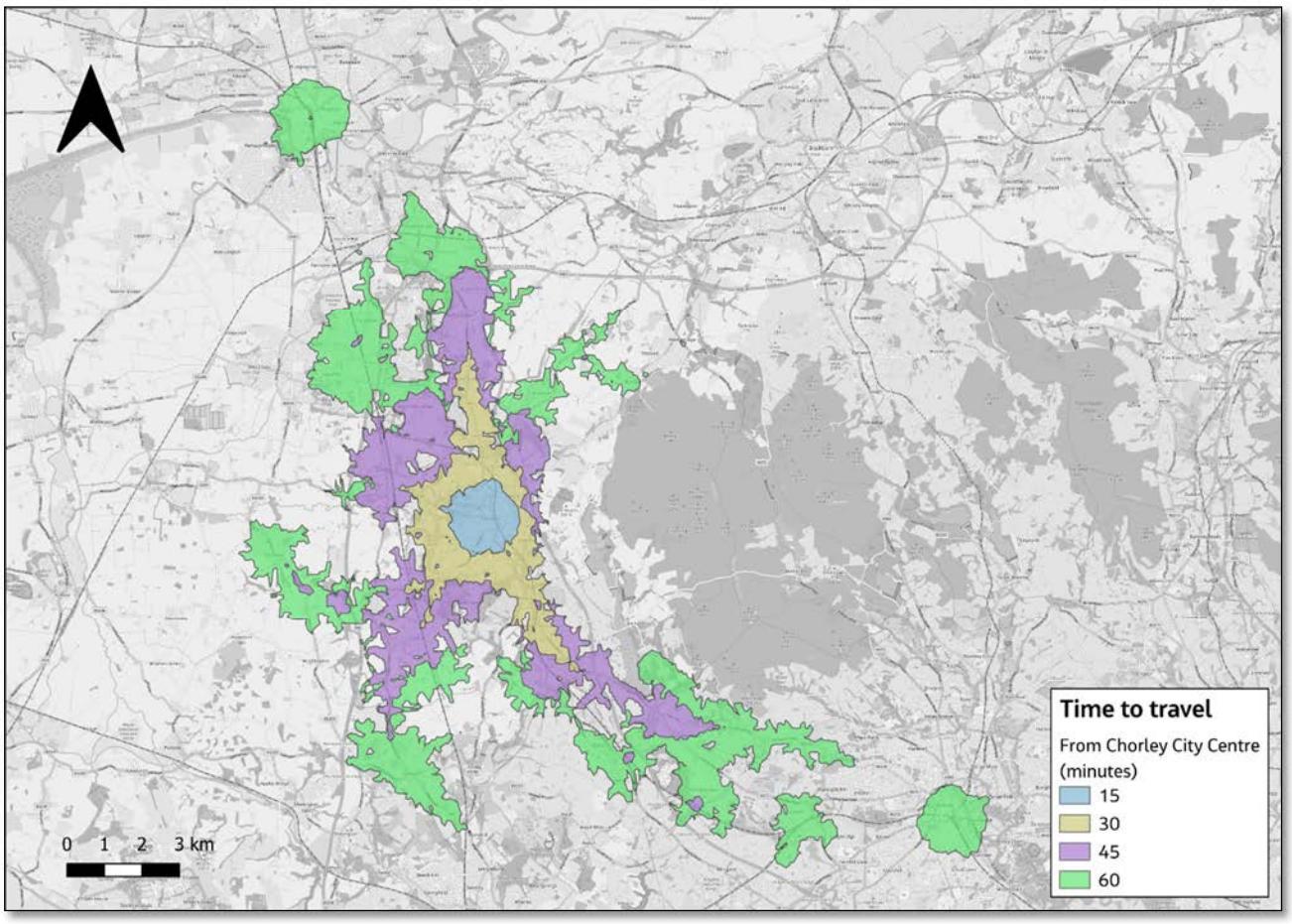
3.1.13. The assessment reveals that some sites have poorer rating from transport perspective and in effect, the development would see high volumes of additional traffic on the already busy roads. To resolve this, the new transport strategy will adopt a more holistic approach and recognise the broad range of factors affected by transport such as the environment, the economy, public health and place shaping. This approach aims to deliver a plan that not only creates an efficient transport network but also a better place to live in. To achieve this, it is necessary to move away from the traditional "predict and provide" method in transport planning and embrace a "decide and provide" approach.

3.1.14. The findings from the transport-based evidence will support the formulation of policy recommendations for integrating sustainable transportation principles into the Core Strategy. The new transport plan needs to present a sustainable, affordable, achievable, and deliverable framework of improvements. This includes improving the choice of modes by transforming and widening the use of walking, cycling and public transport as alternatives to private car use. It recognises that cars will remain important but also that addressing the outcomes above ultimately means reducing traffic levels. It is also pragmatic and recognises that at the same time we will still need to increase road capacity where there is a strong case for doing so. It would also establish mechanisms for monitoring and reviewing the implementation and effectiveness of the transport-related policies outlined in the Core Strategy.

Additional information

Appendix A

Figures below shows the areas that can be reached in different time bands from the key attractors.



Time to travel
From Adlington
(minutes)
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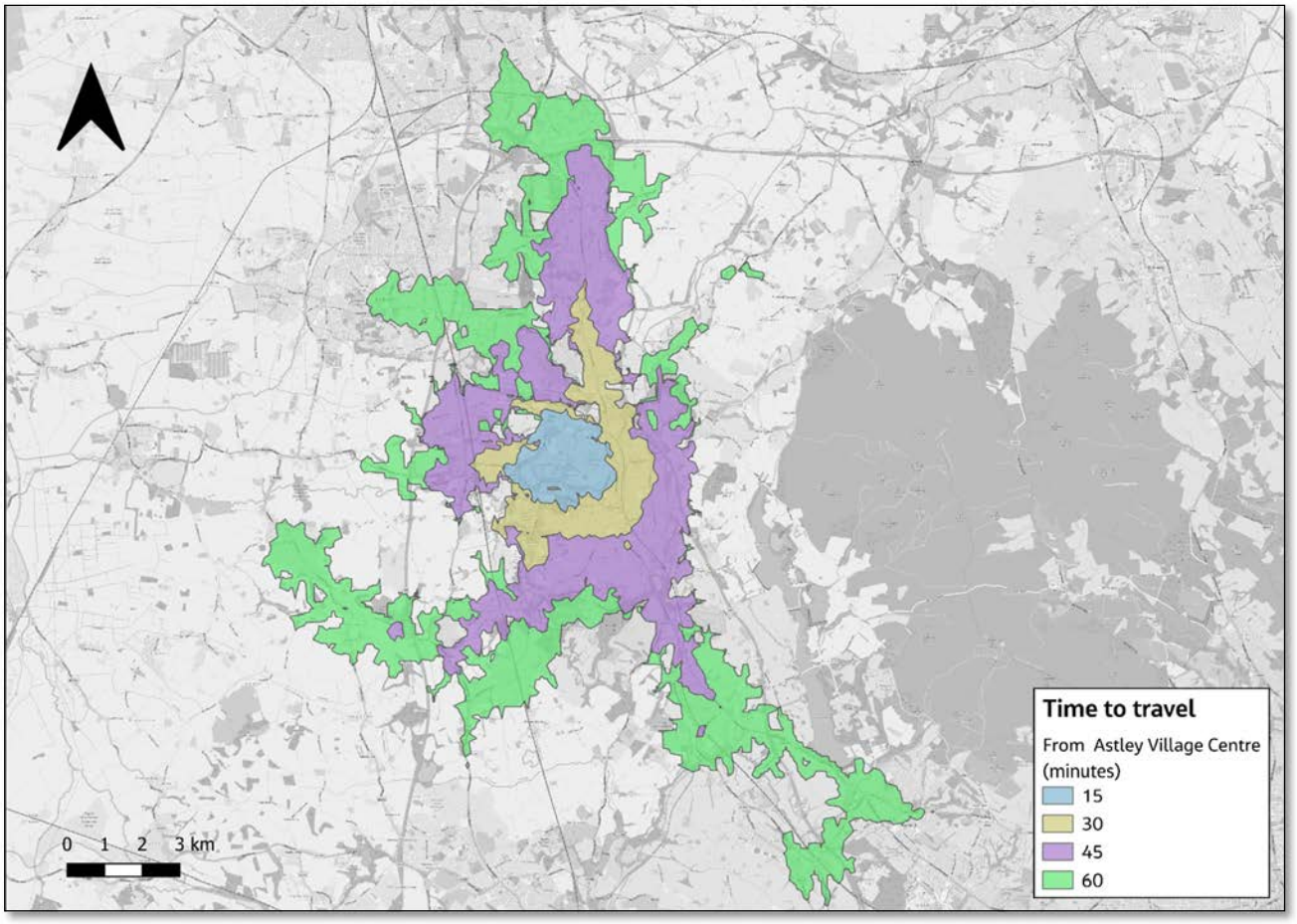
0 1 2 3 km


Time to travel
From Astley Village Centre
(minutes)
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0 1 2 3 km

Time to travel
From BAE Systems
(minutes)
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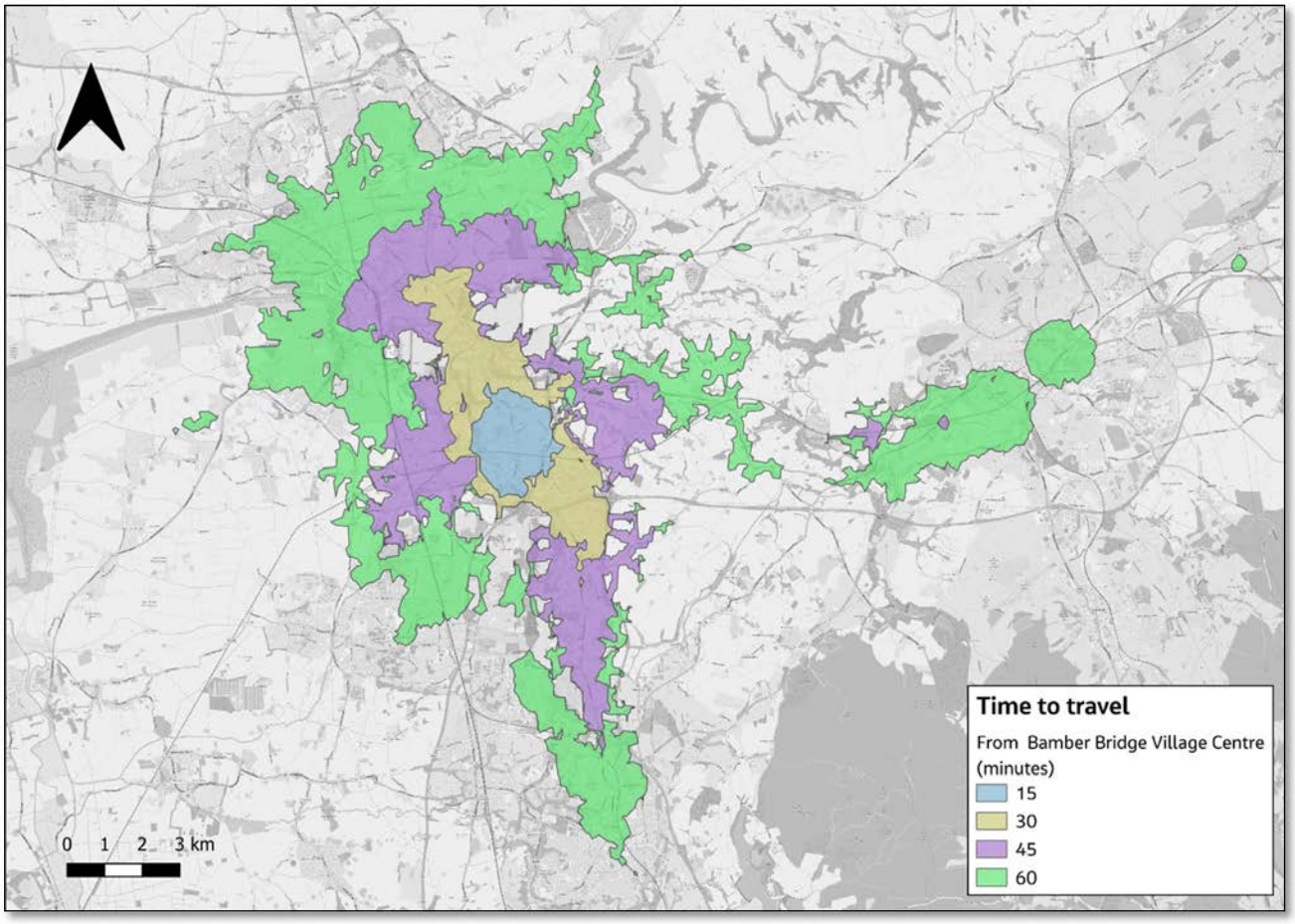
0 1 2 3 km


Time to travel
From Bamber Bridge Village Centre
(minutes)
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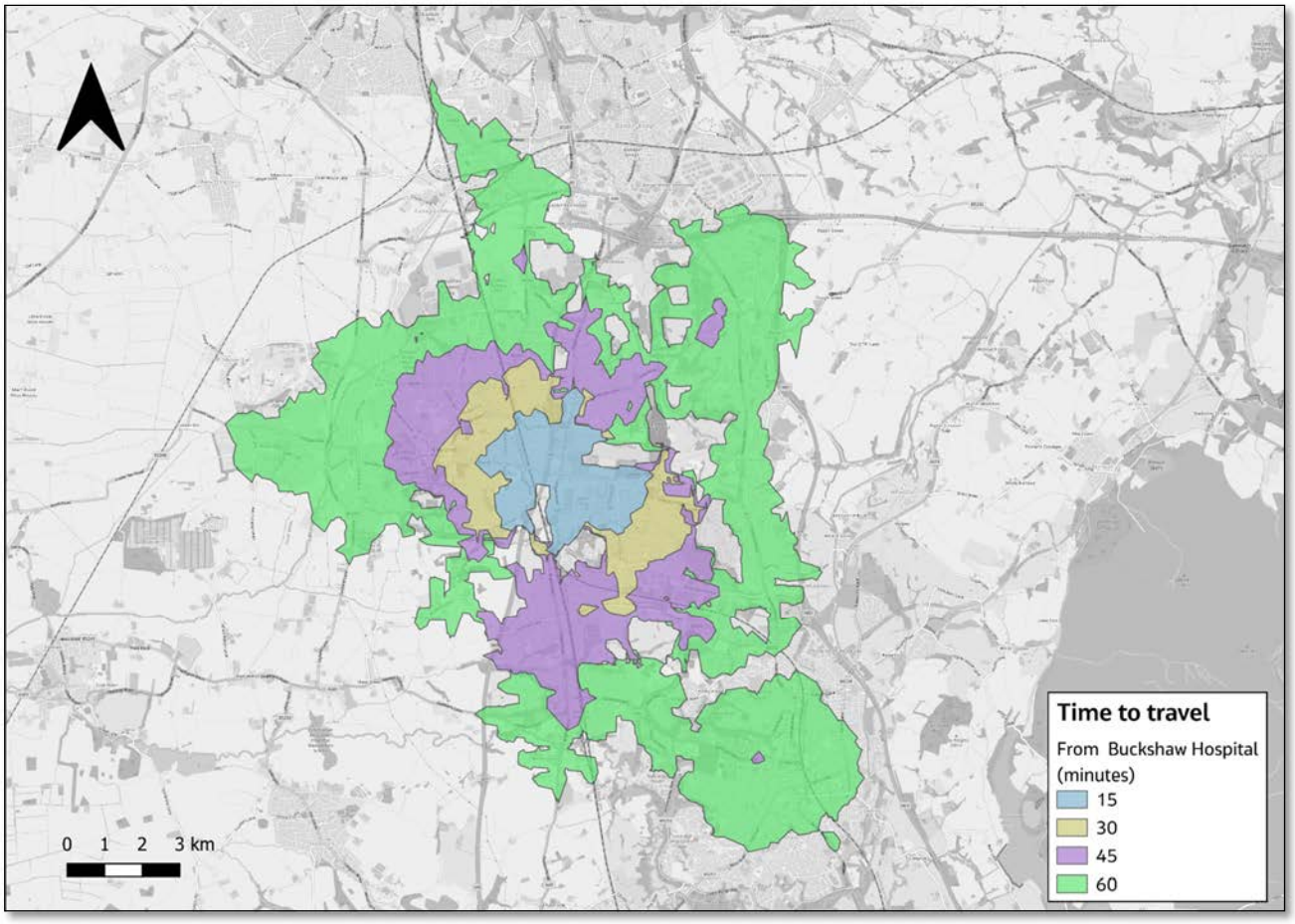
0 1 2 3 km


Time to travel
From Buckshaw Hospital
(minutes)
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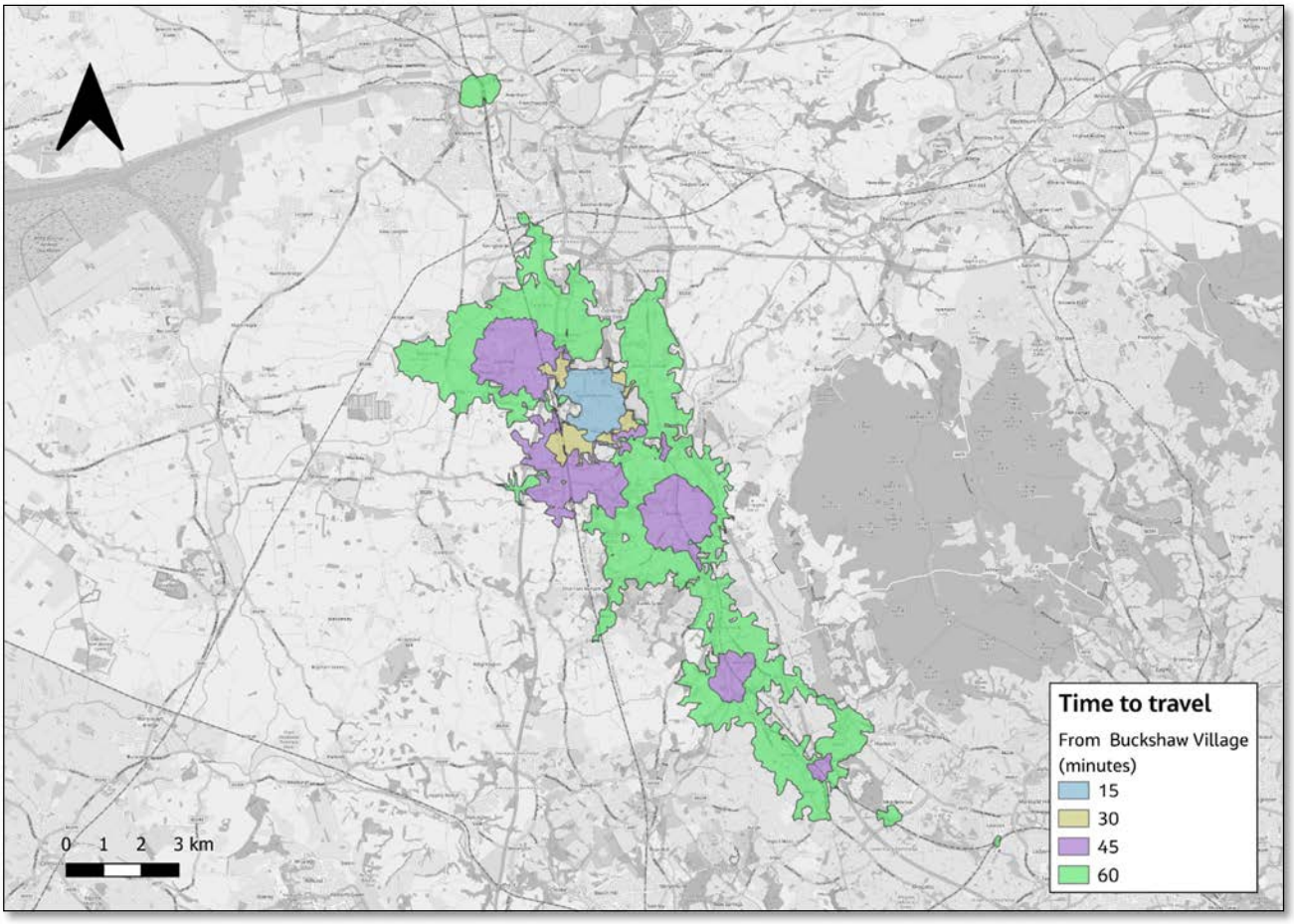
Time to travel
From Buckshaw Village
(minutes)
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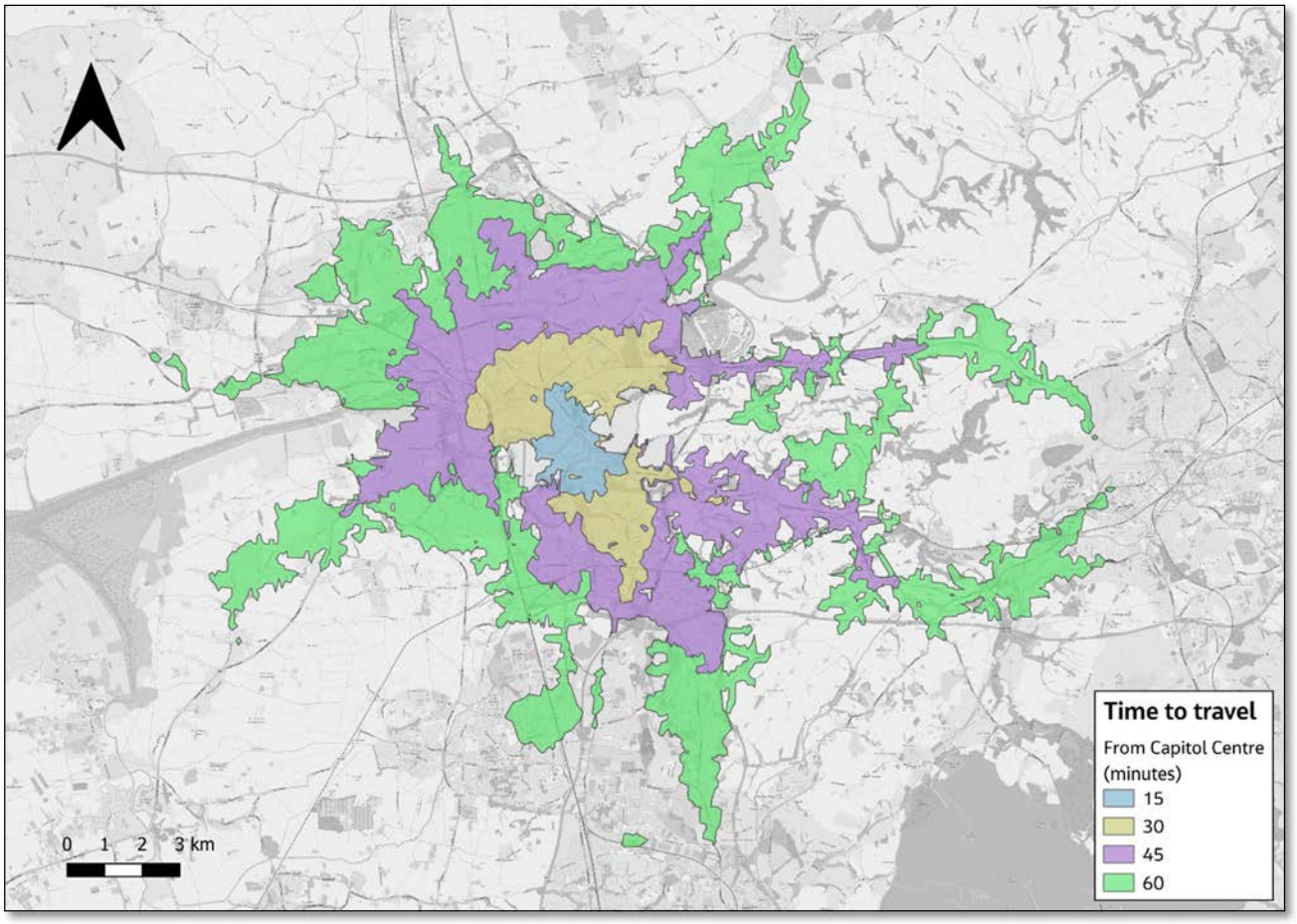
Time to travel
From Capitol Centre
(minutes)
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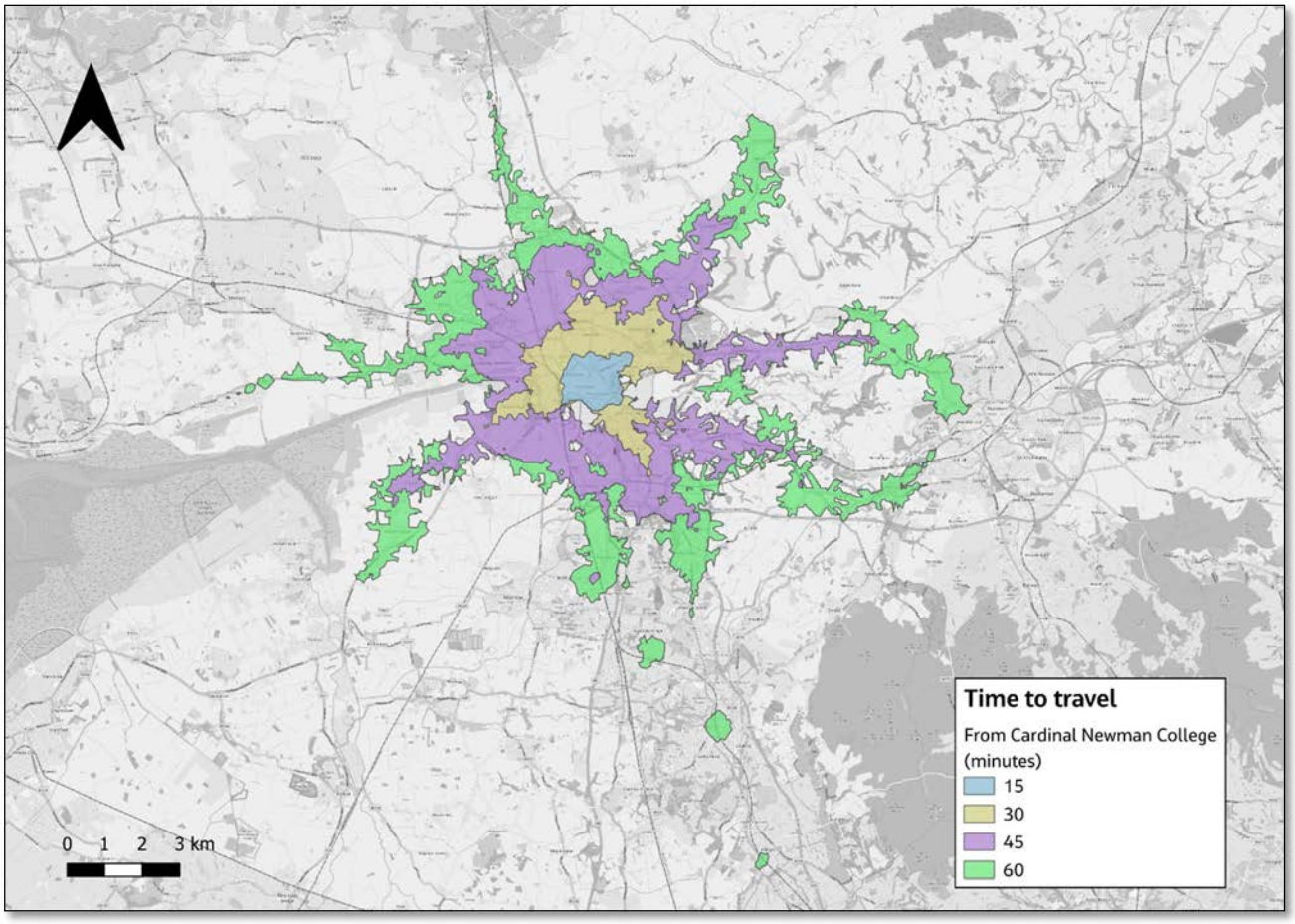
0 1 2 3 km


Time to travel
From Cardinal Newman College (minutes)
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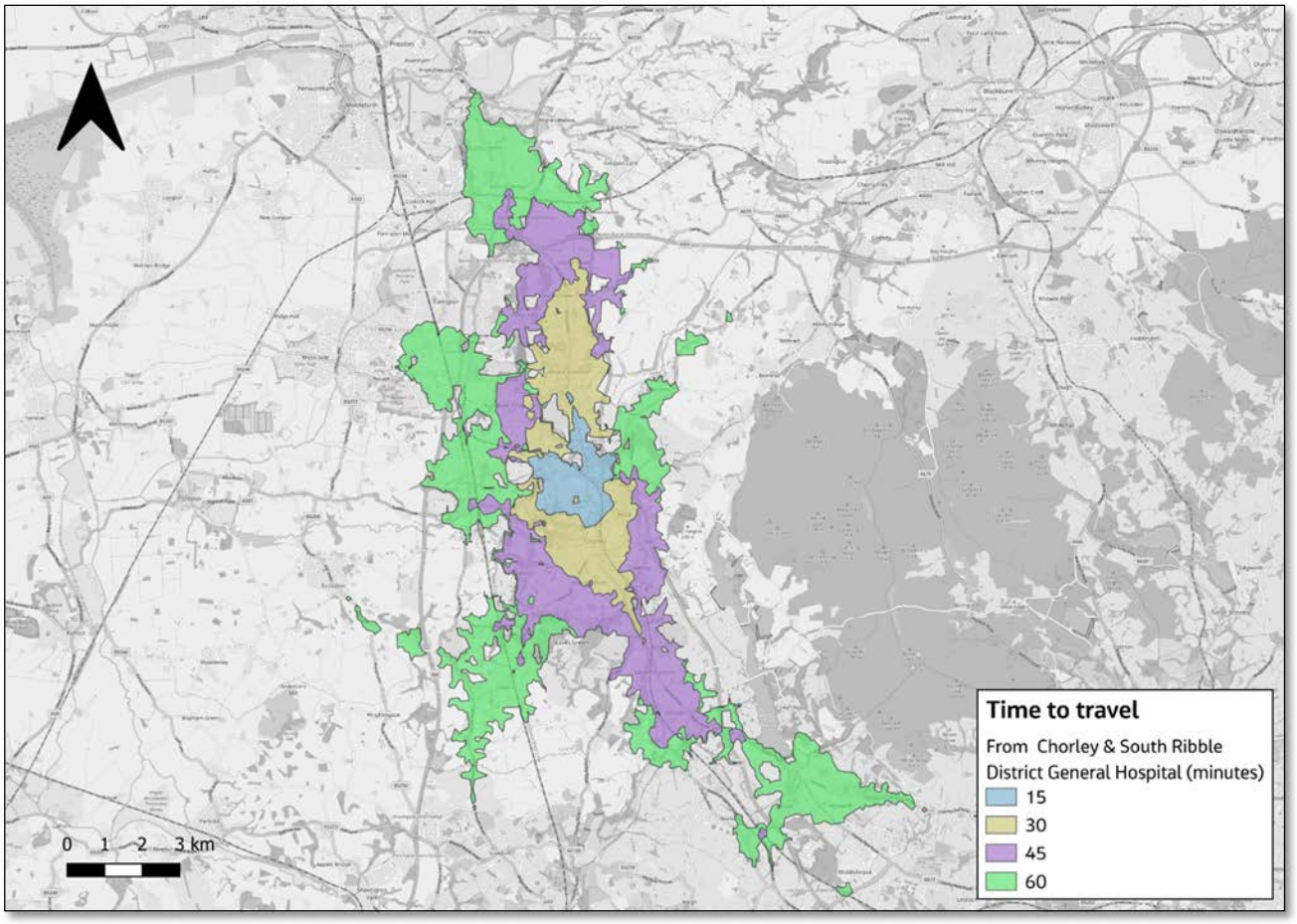
0 1 2 3 km


Time to travel
From Chorley & South Ribble District General Hospital (minutes)
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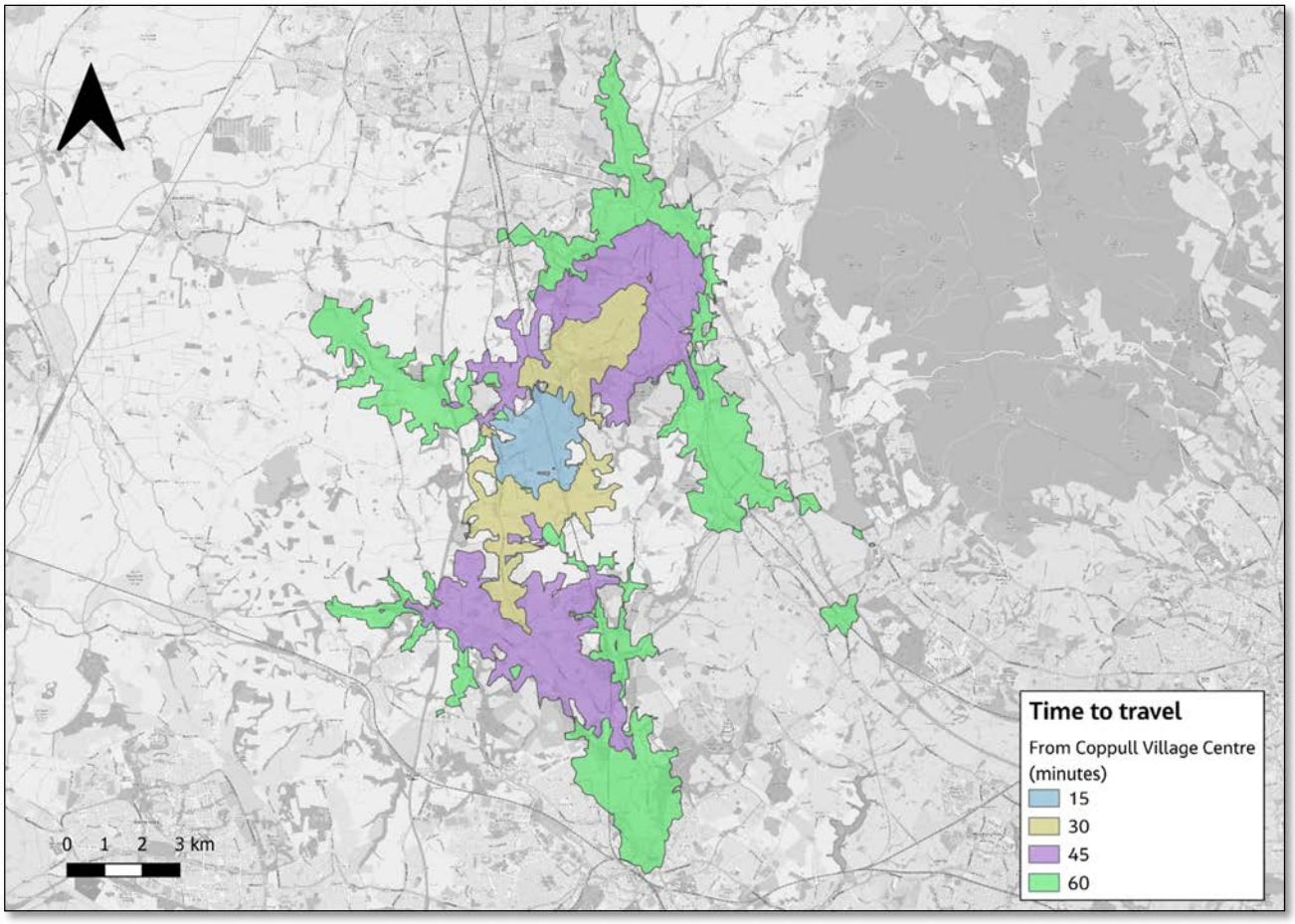
Time to travel
From Coppull Village Centre
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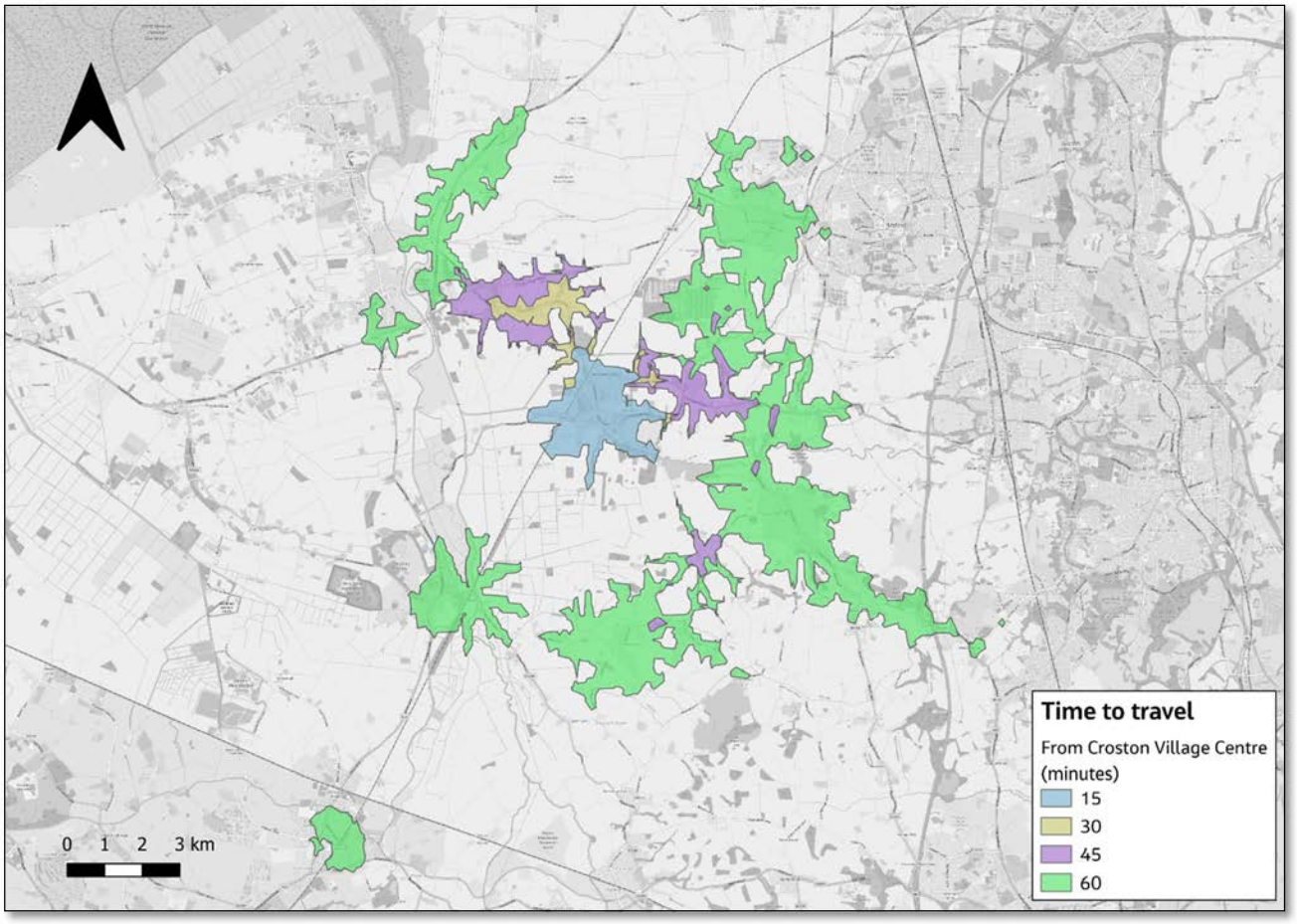
Time to travel
From Croston Village Centre
(minutes)
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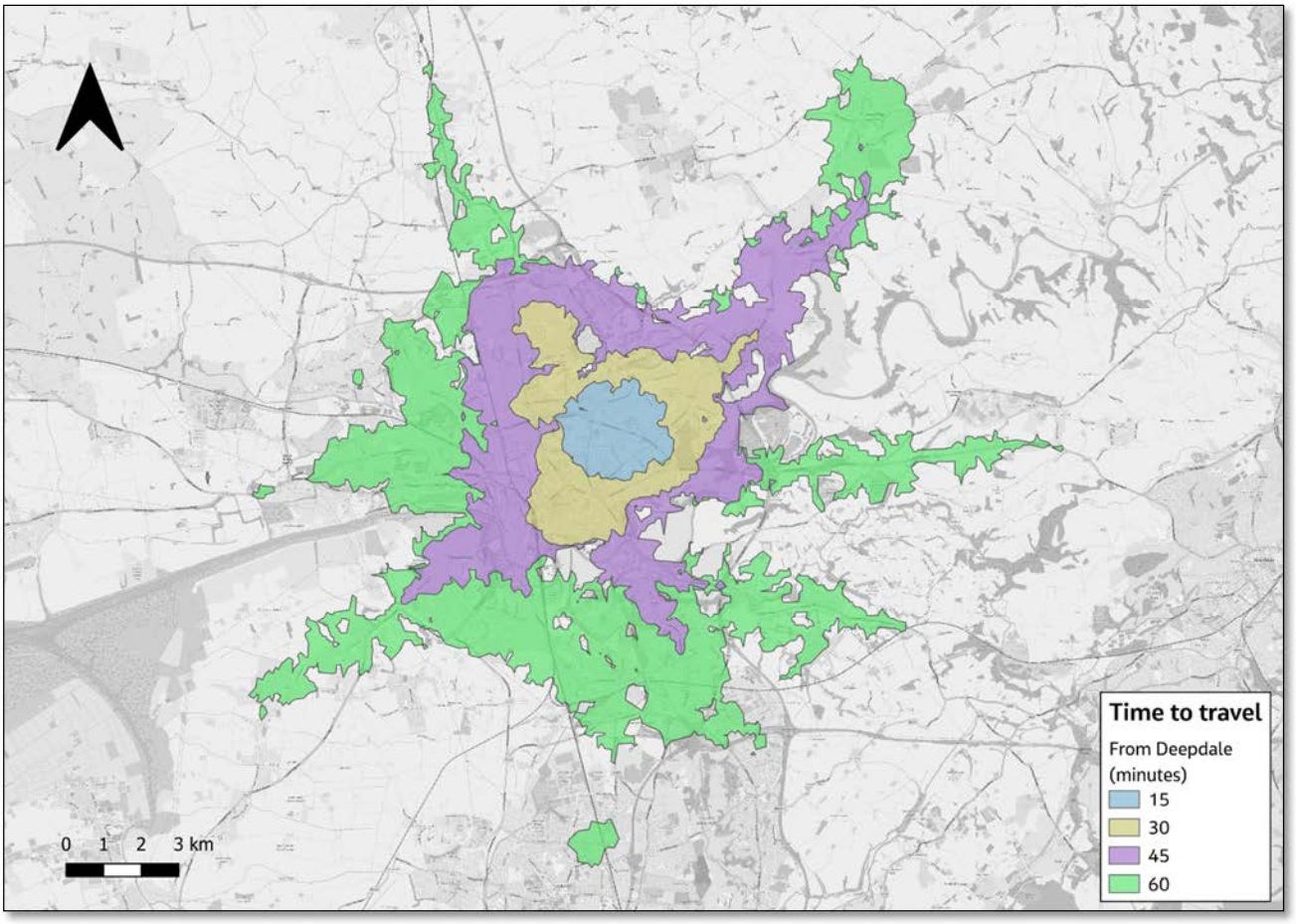
Time to travel
From Deepdale
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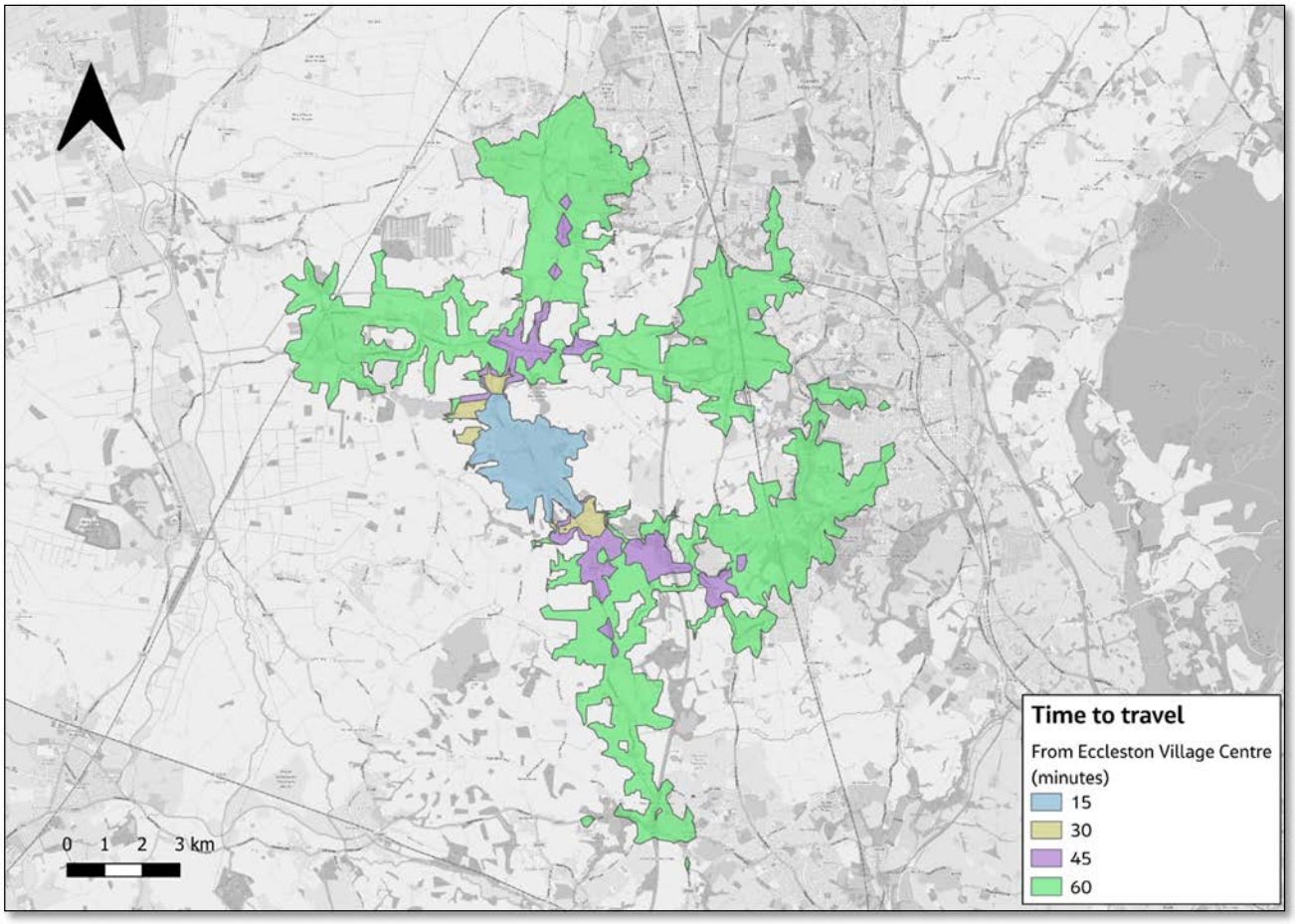
Time to travel
From Eccleston Village Centre
(minutes)
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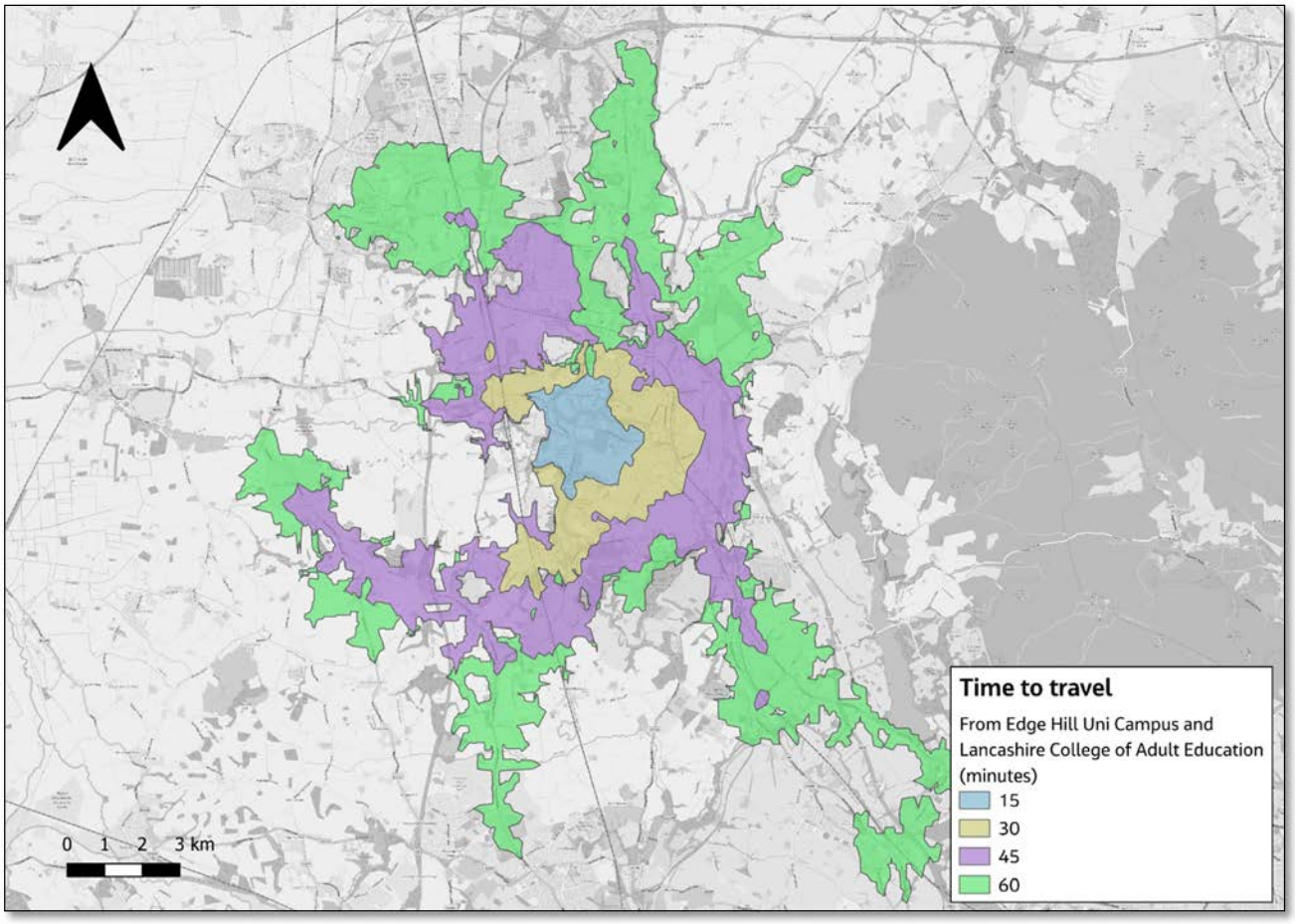
Time to travel
From Edge Hill Uni Campus and Lancashire College of Adult Education (minutes)
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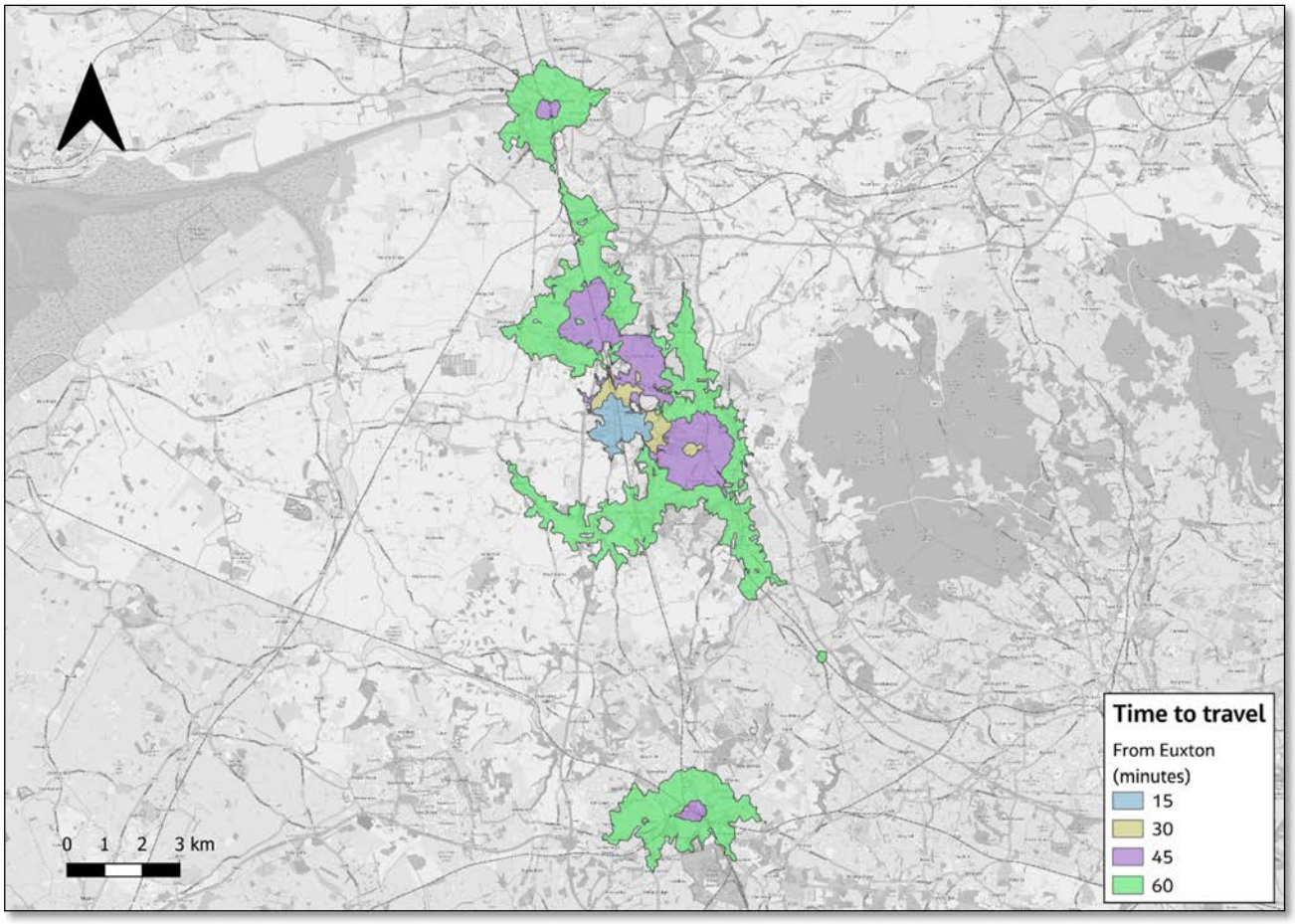
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Time to travel
From Euxton
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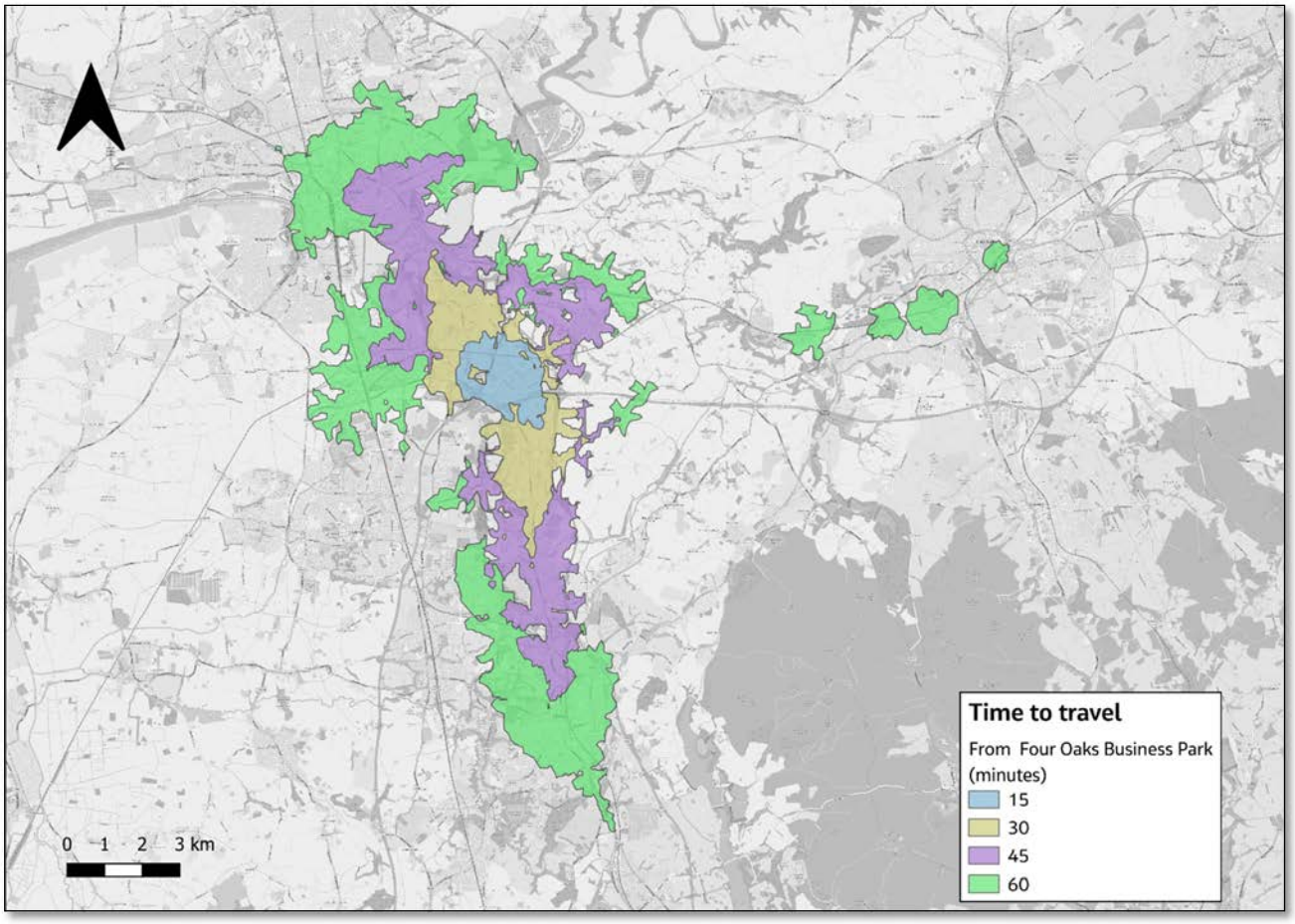
Time to travel
From Four Oaks Business Park
(minutes)
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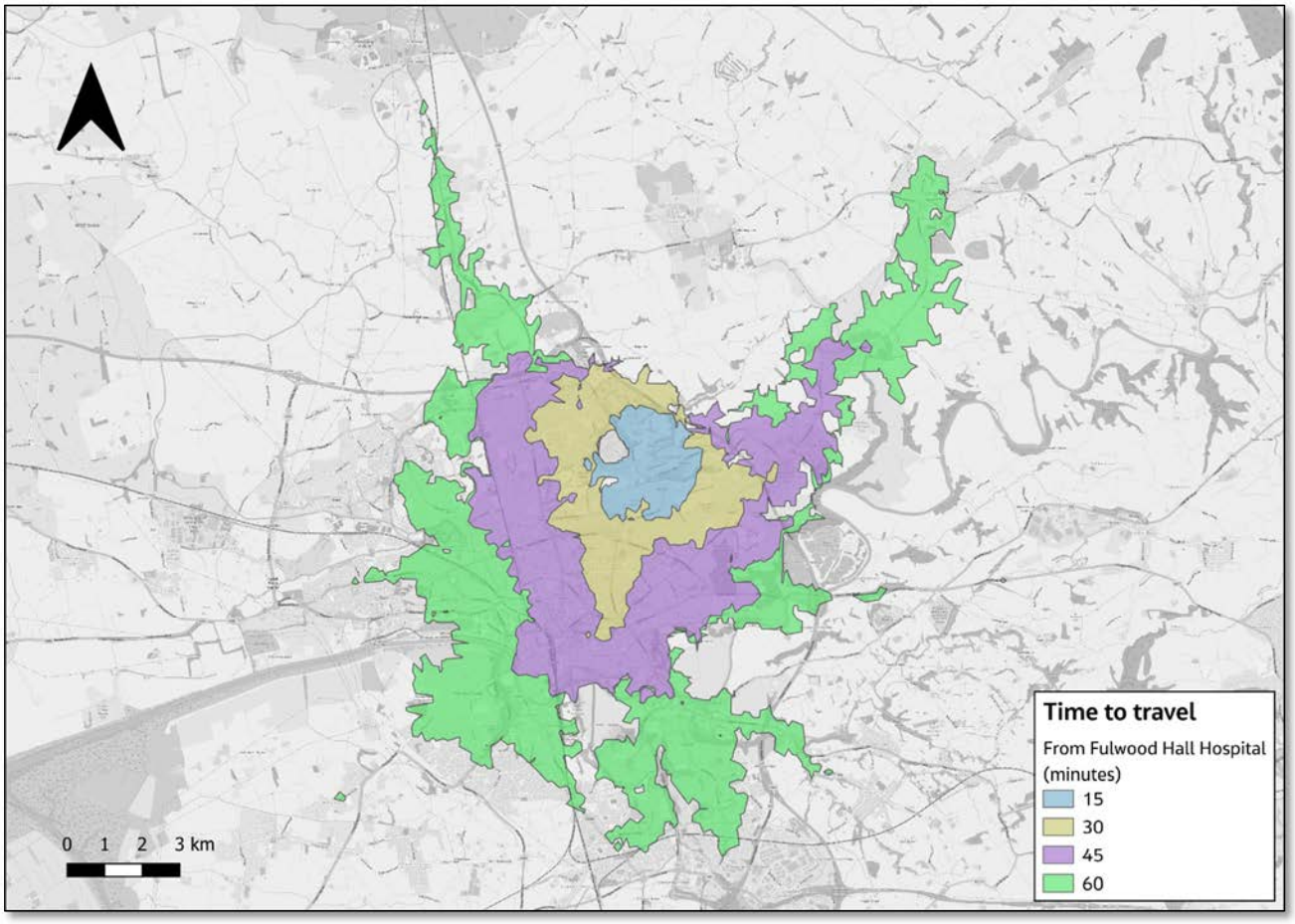
0 1 2 3 km


0 1 2 3 km
Time to travel
From Fulwood Hall Hospital
(minutes)
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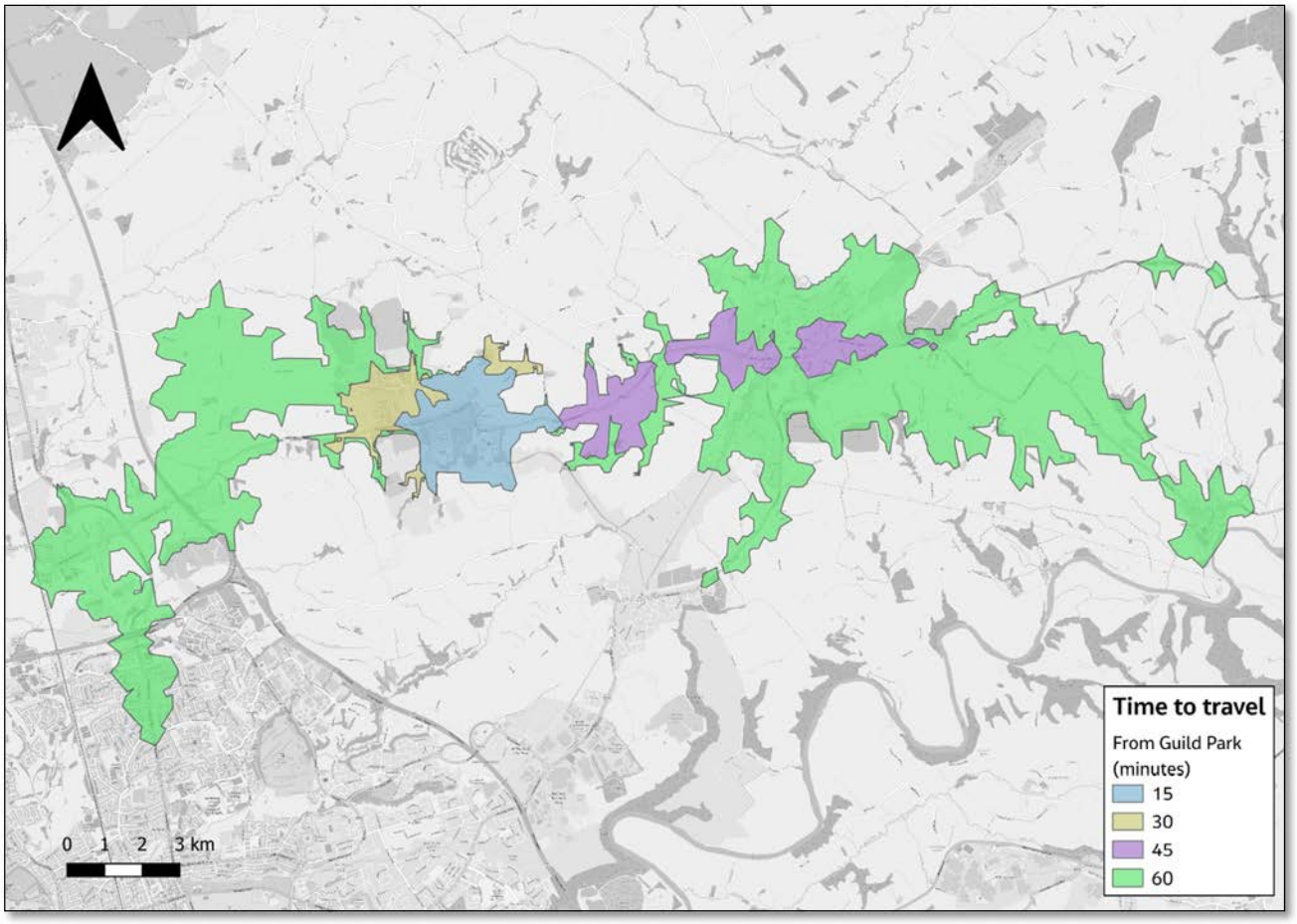
Time to travel
From Guild Park
(minutes)
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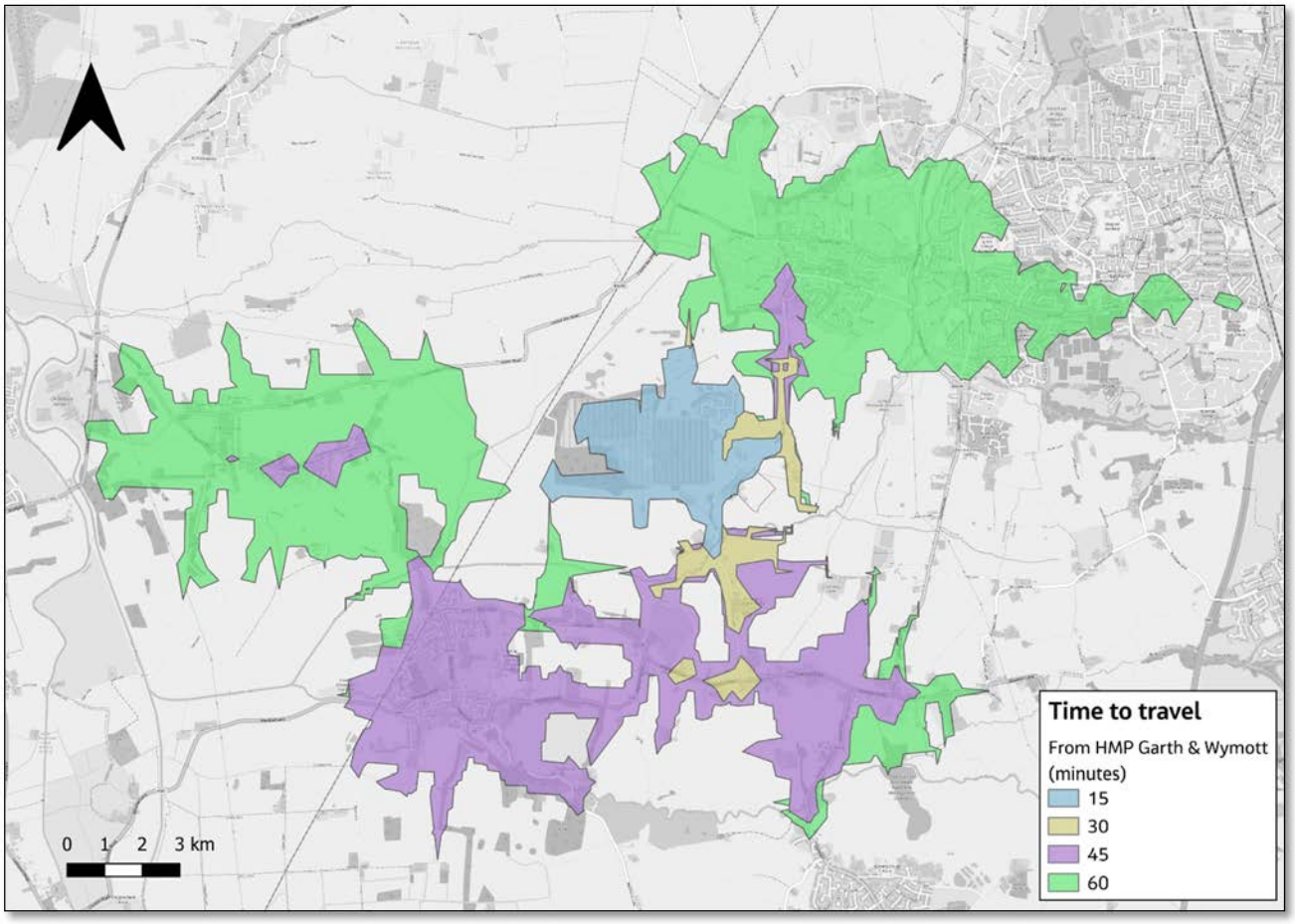
Time to travel
From HMP Garth & Wymott
(minutes)
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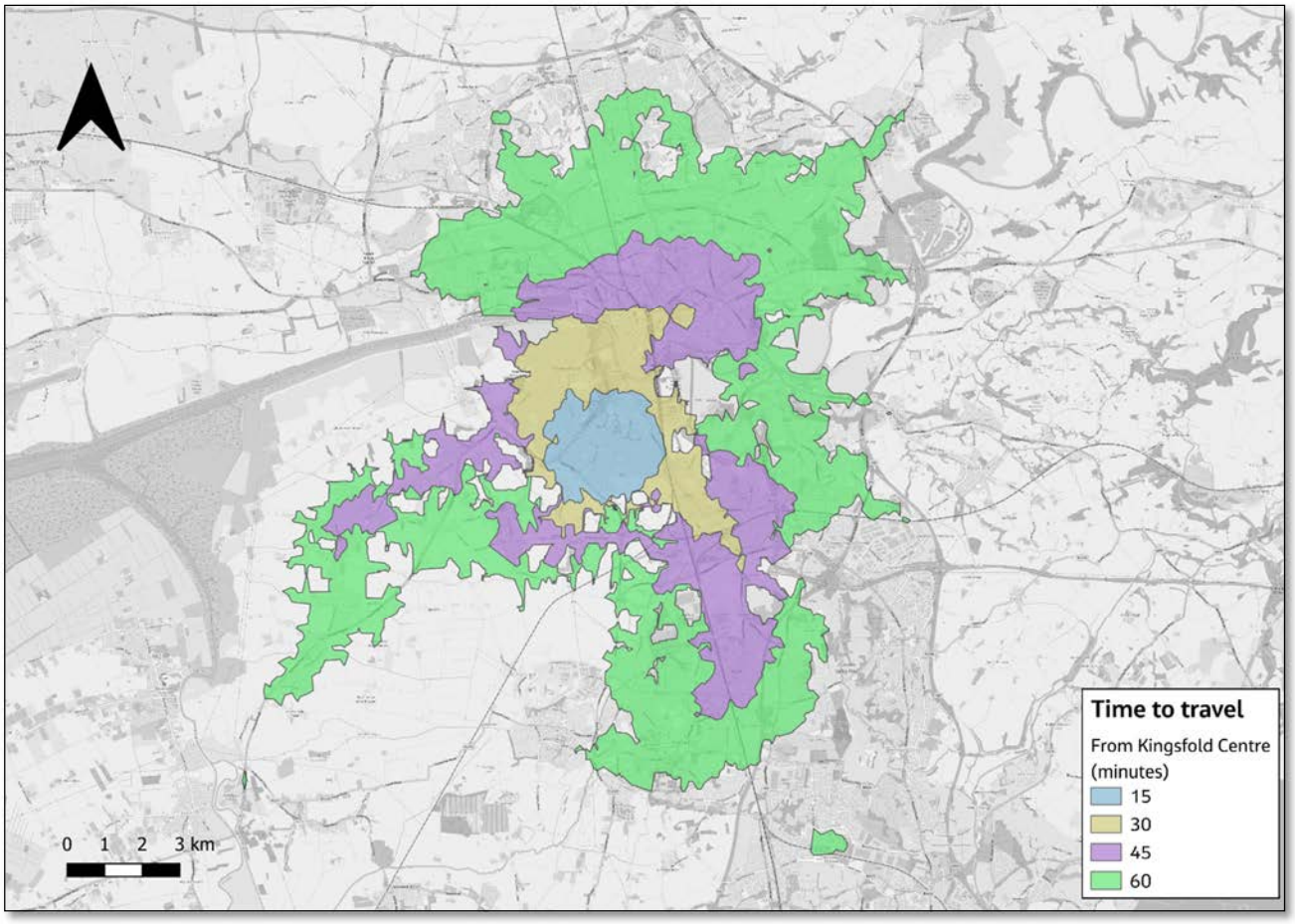
Time to travel
From Kingsfold Centre
(minutes)
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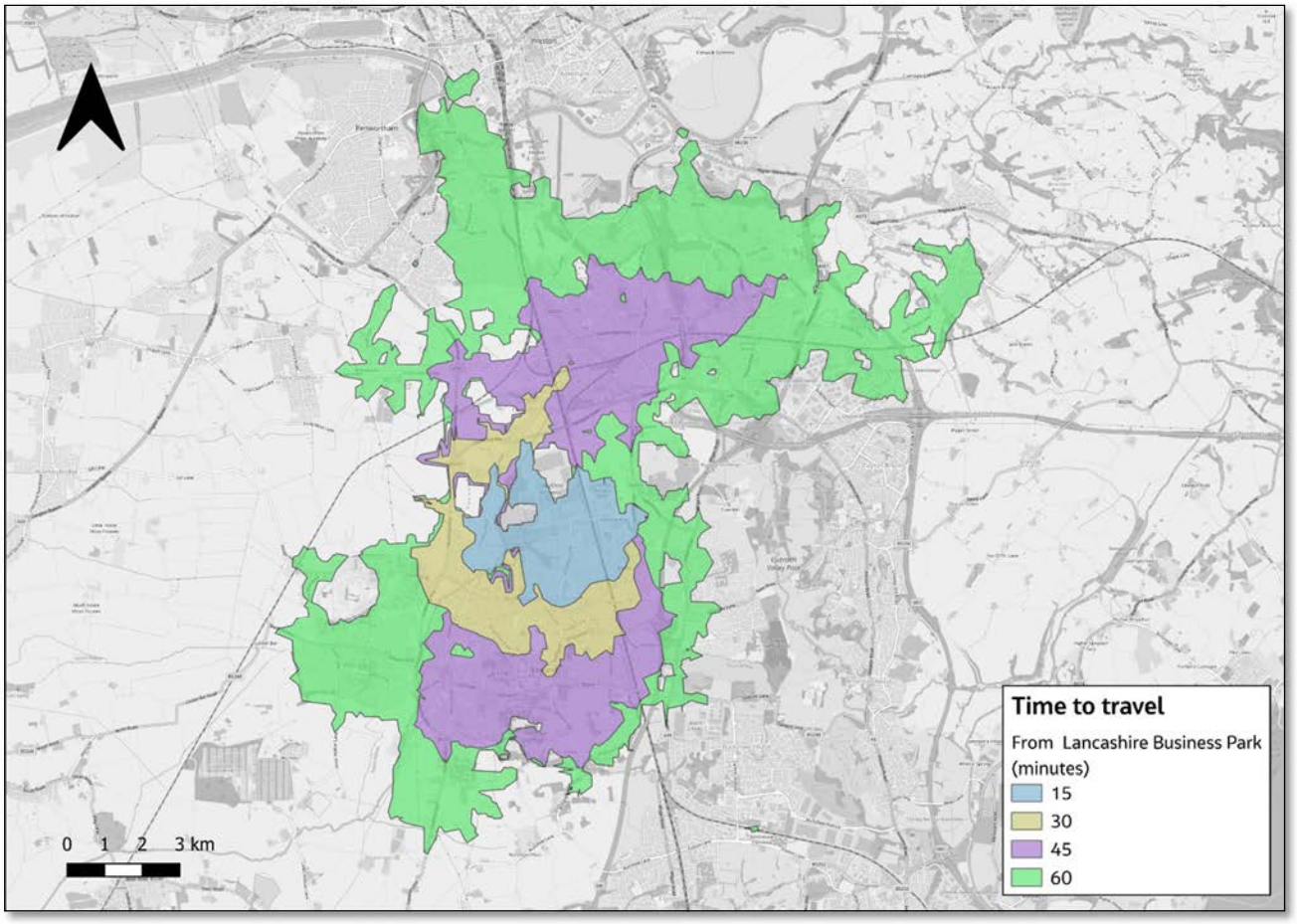
Time to travel
From Lancashire Business Park
(minutes)
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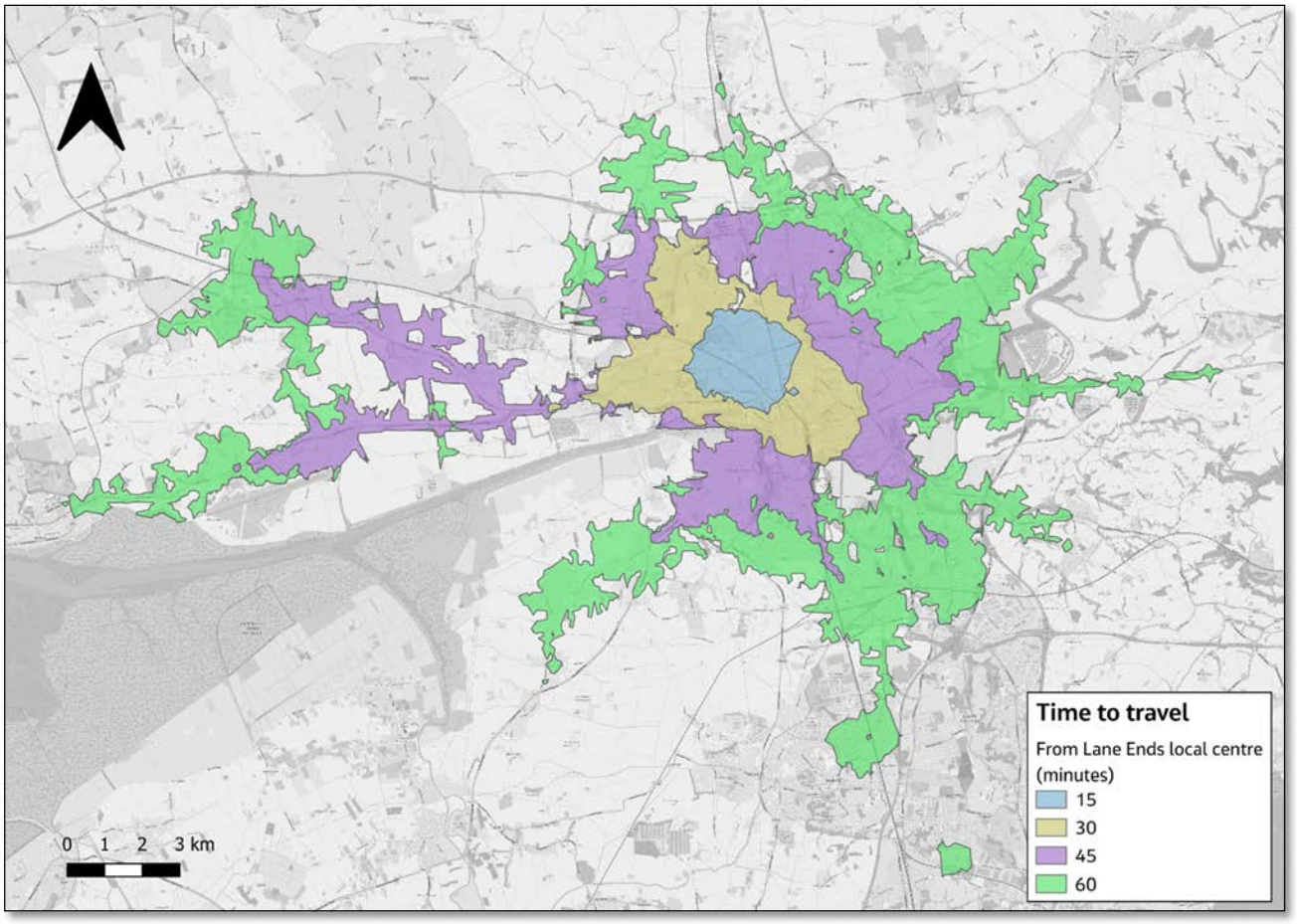
Time to travel
From Lane Ends local centre (minutes)
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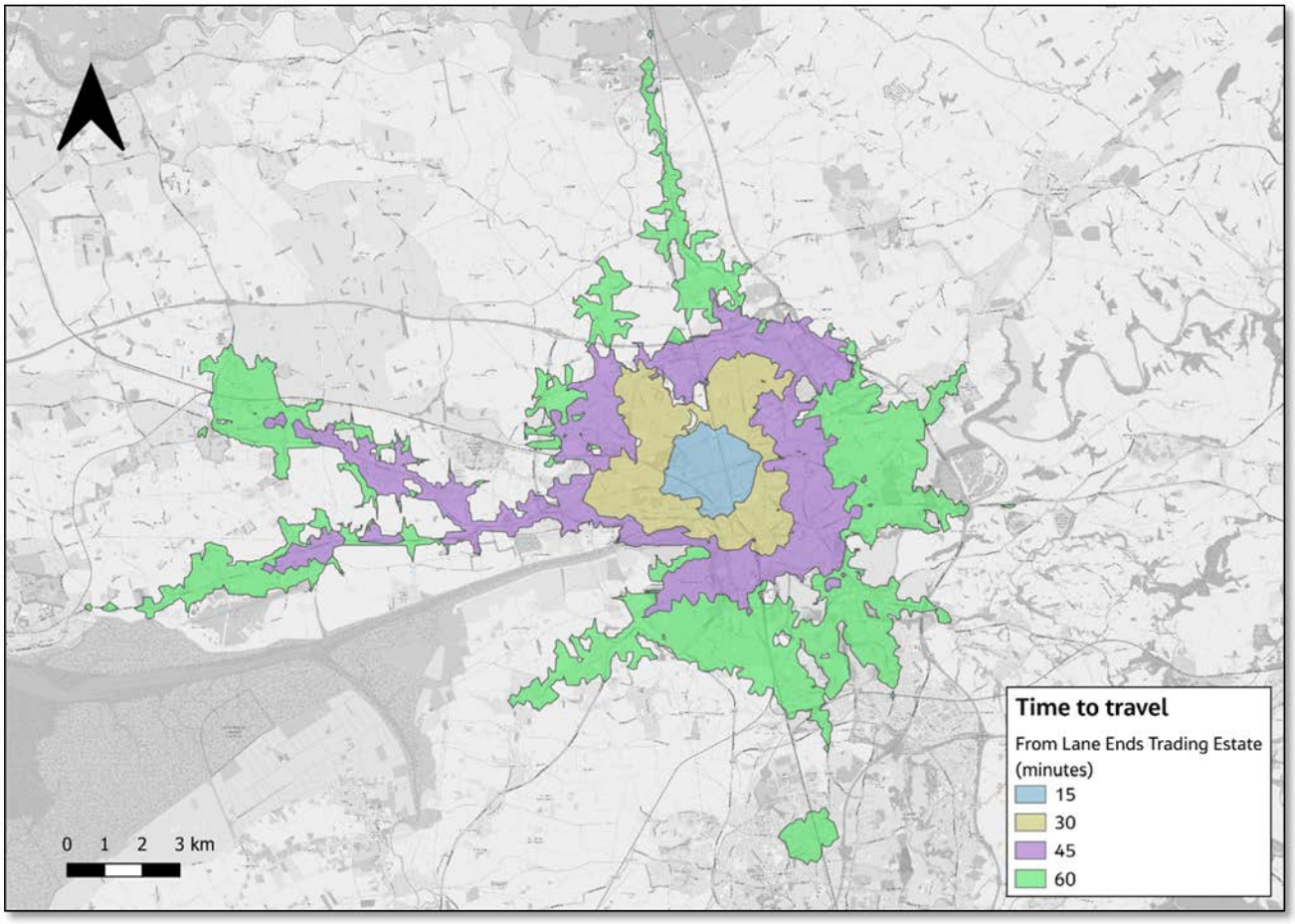
Time to travel
From Lane Ends Trading Estate
(minutes)
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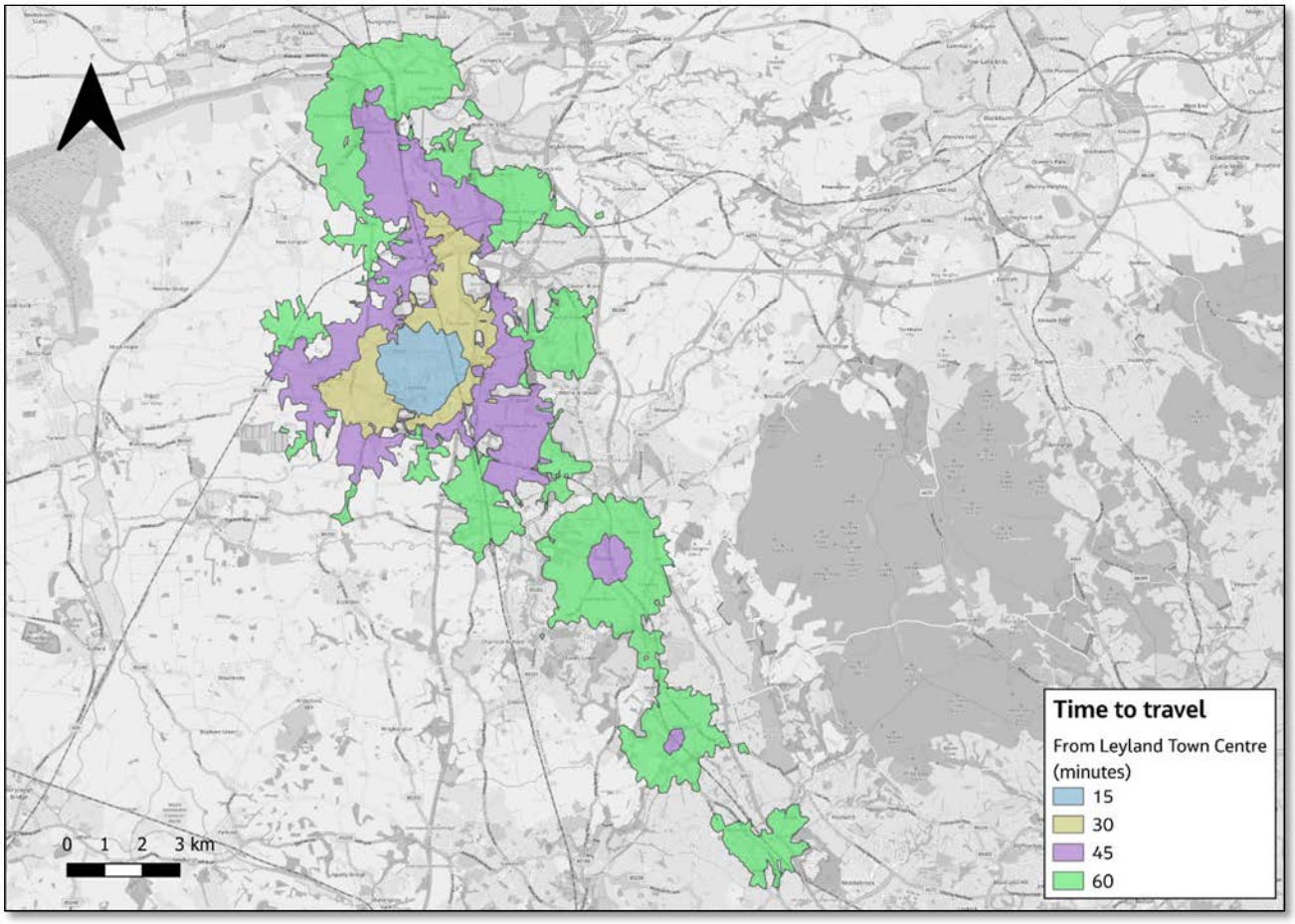
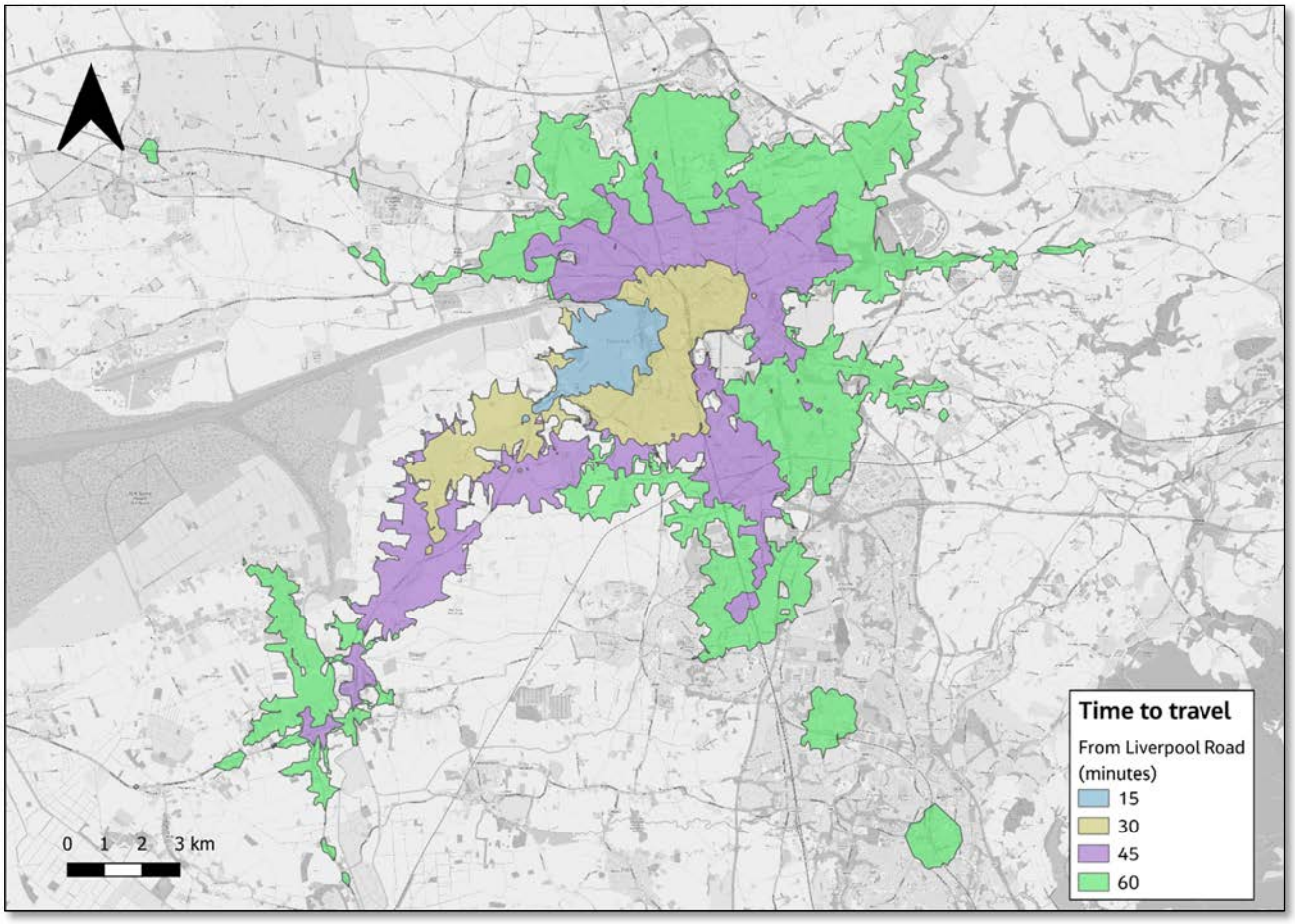
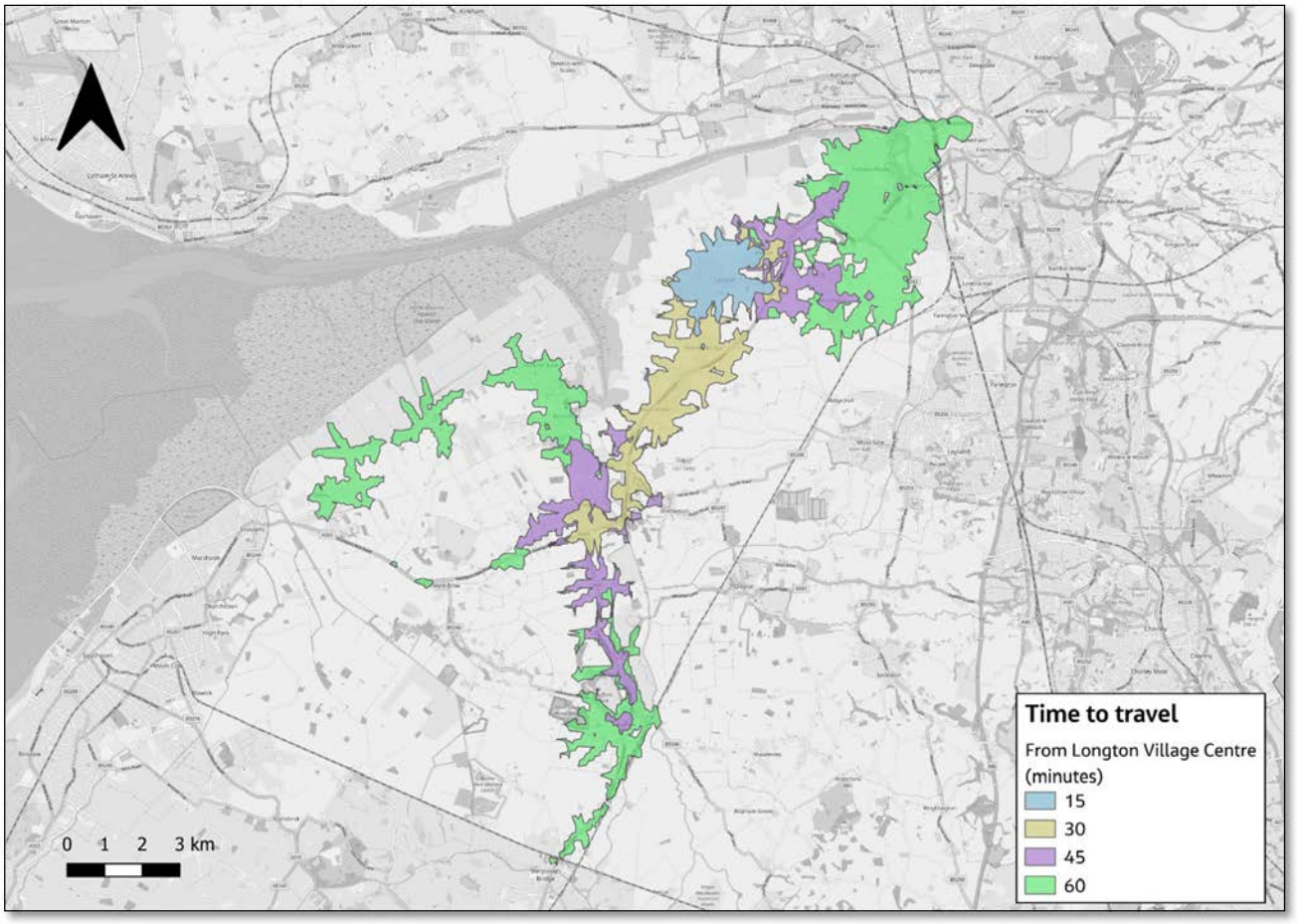
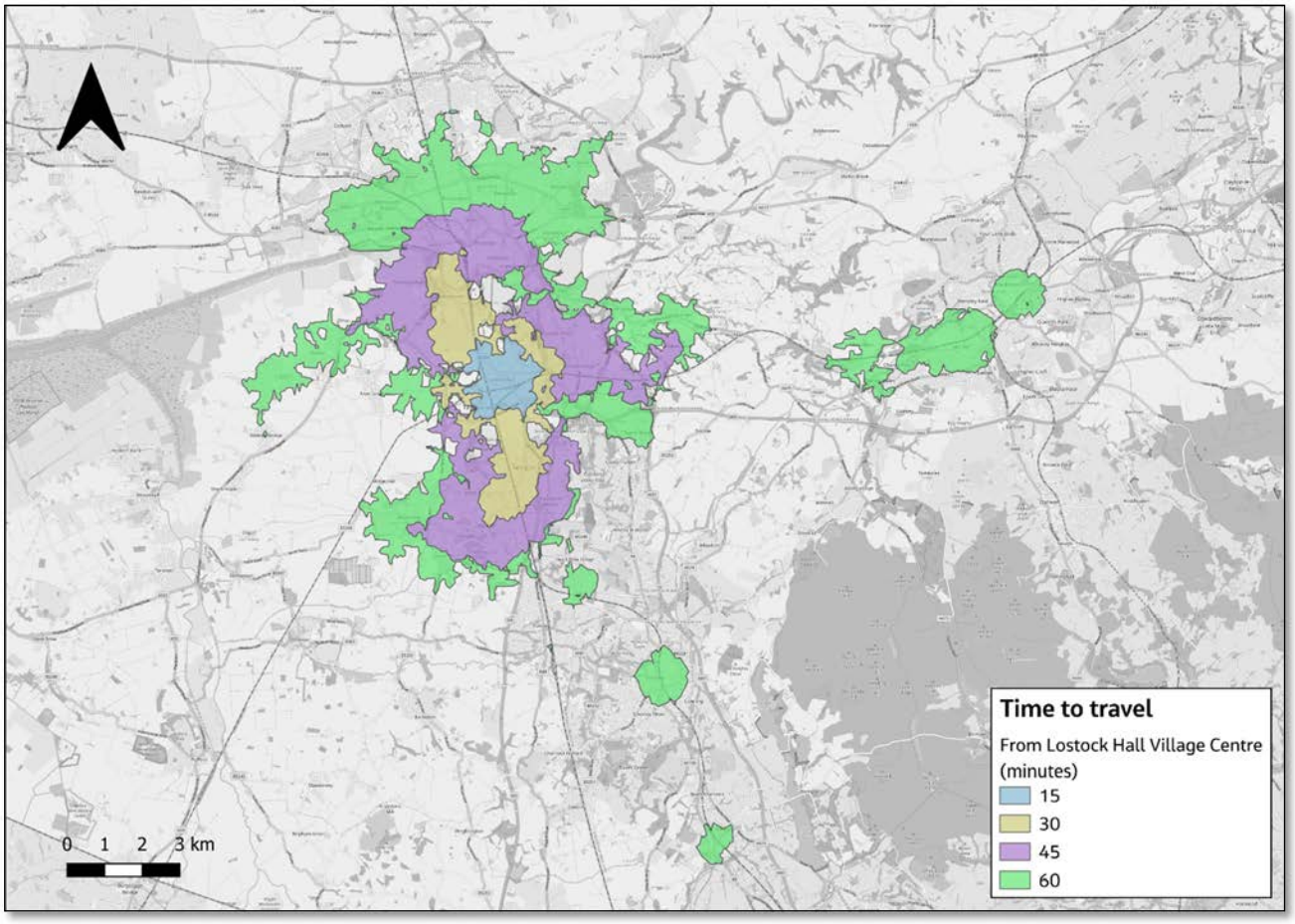
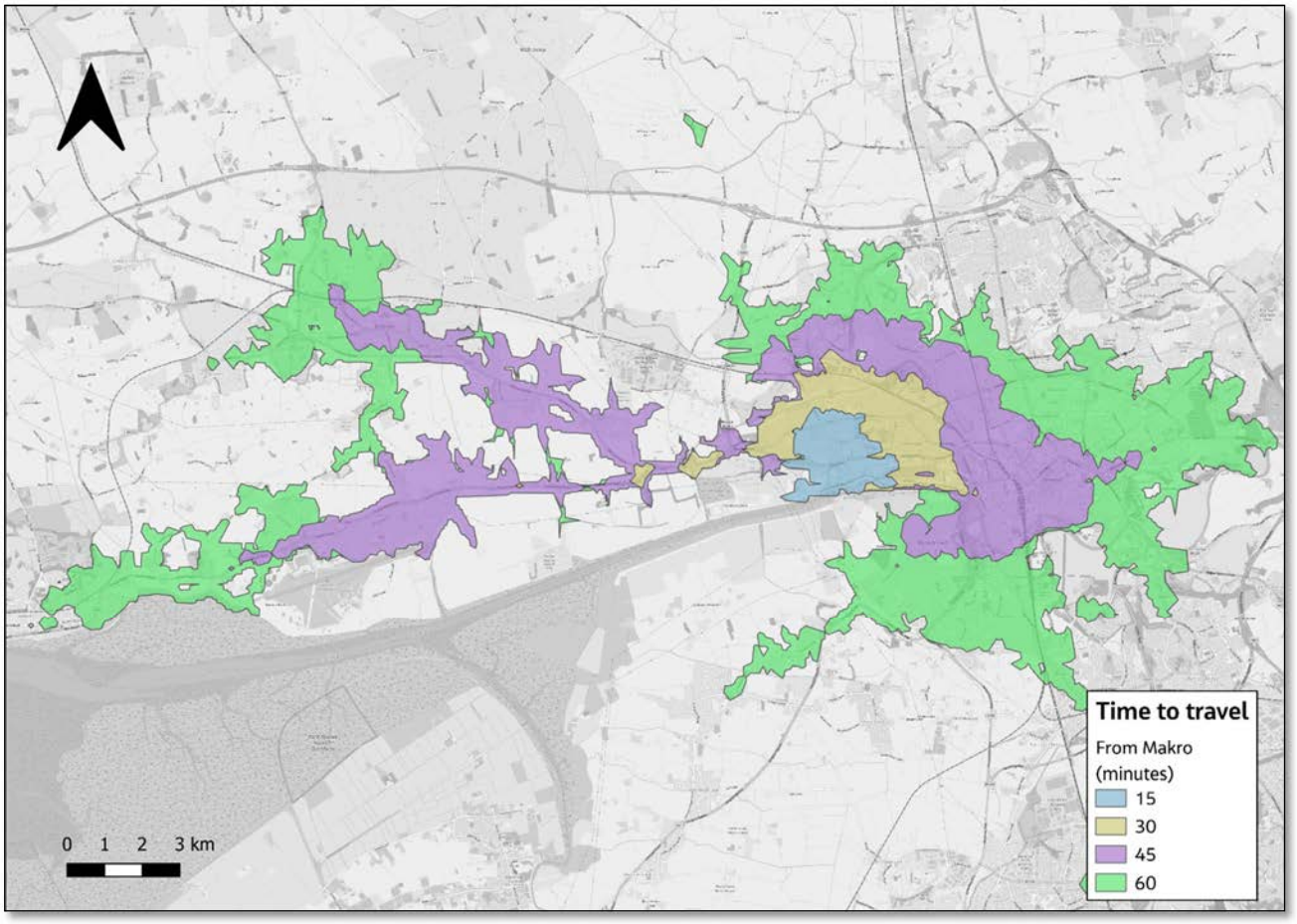
0 1 2 3 km

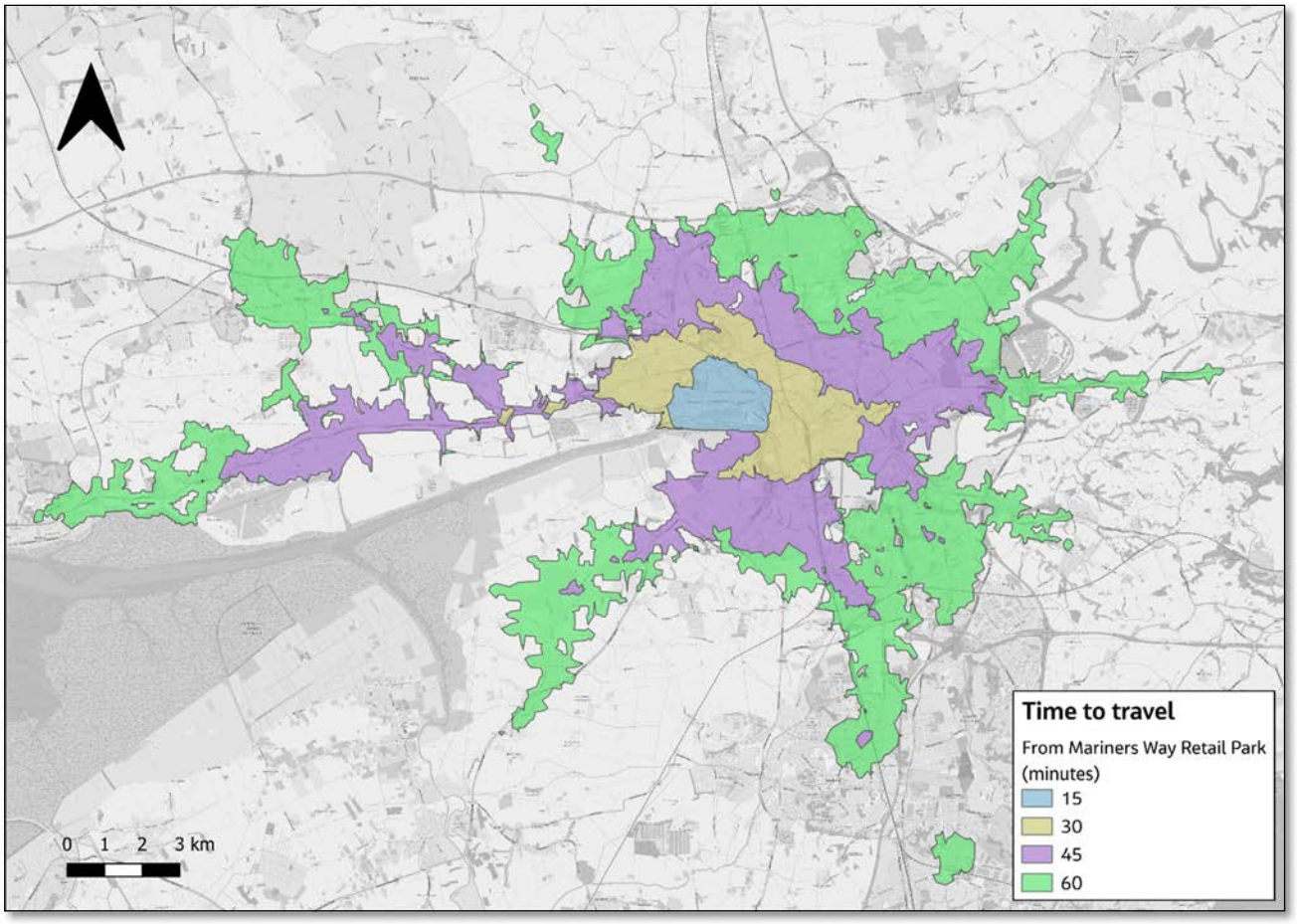

Time to travel
From Leyland Town Centre
(minutes)
15
30
45
60
0 1 2 3 km

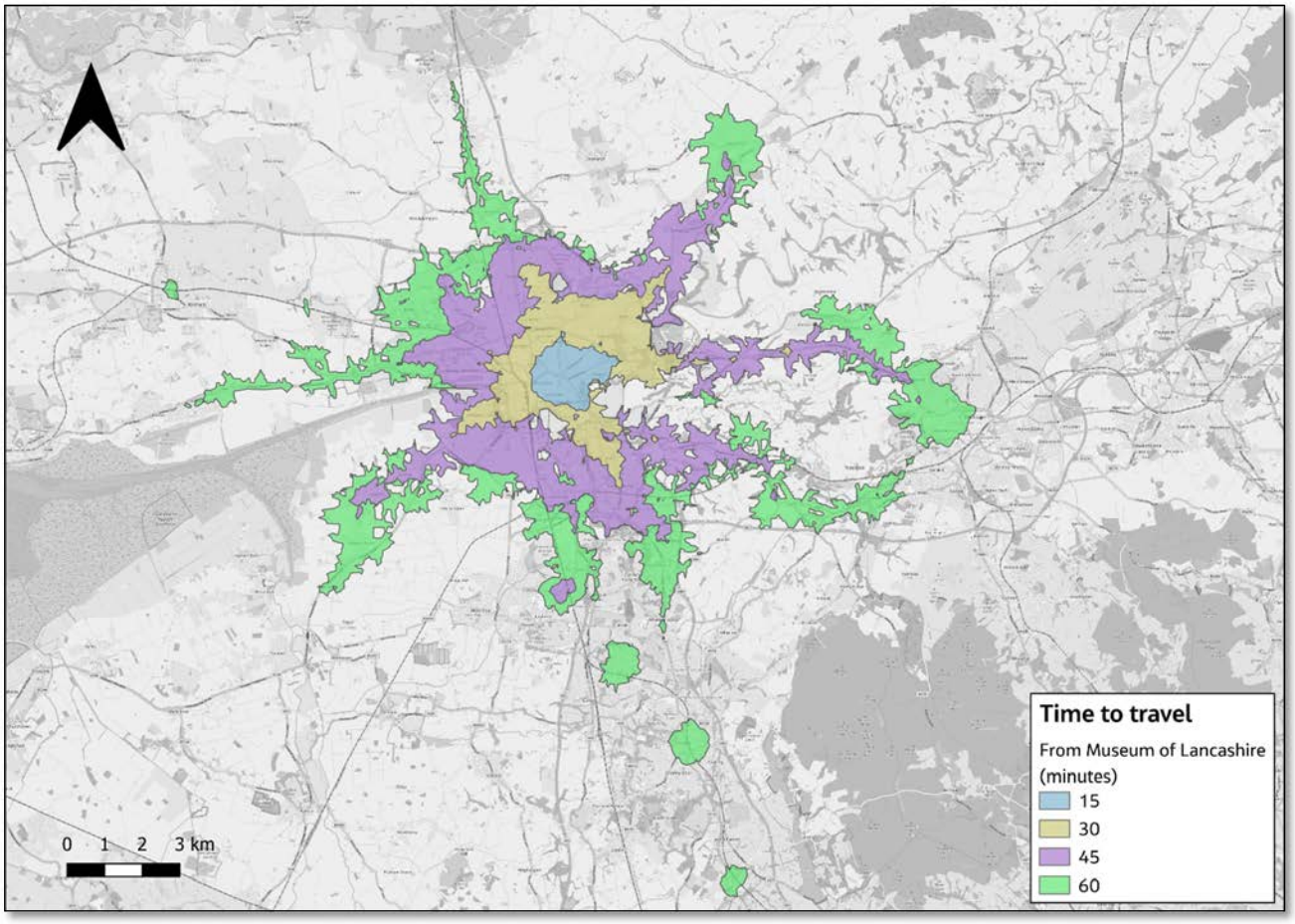

Time to travel
From Liverpool Road
(minutes)
15
30
45
60
0 1 2 3 km

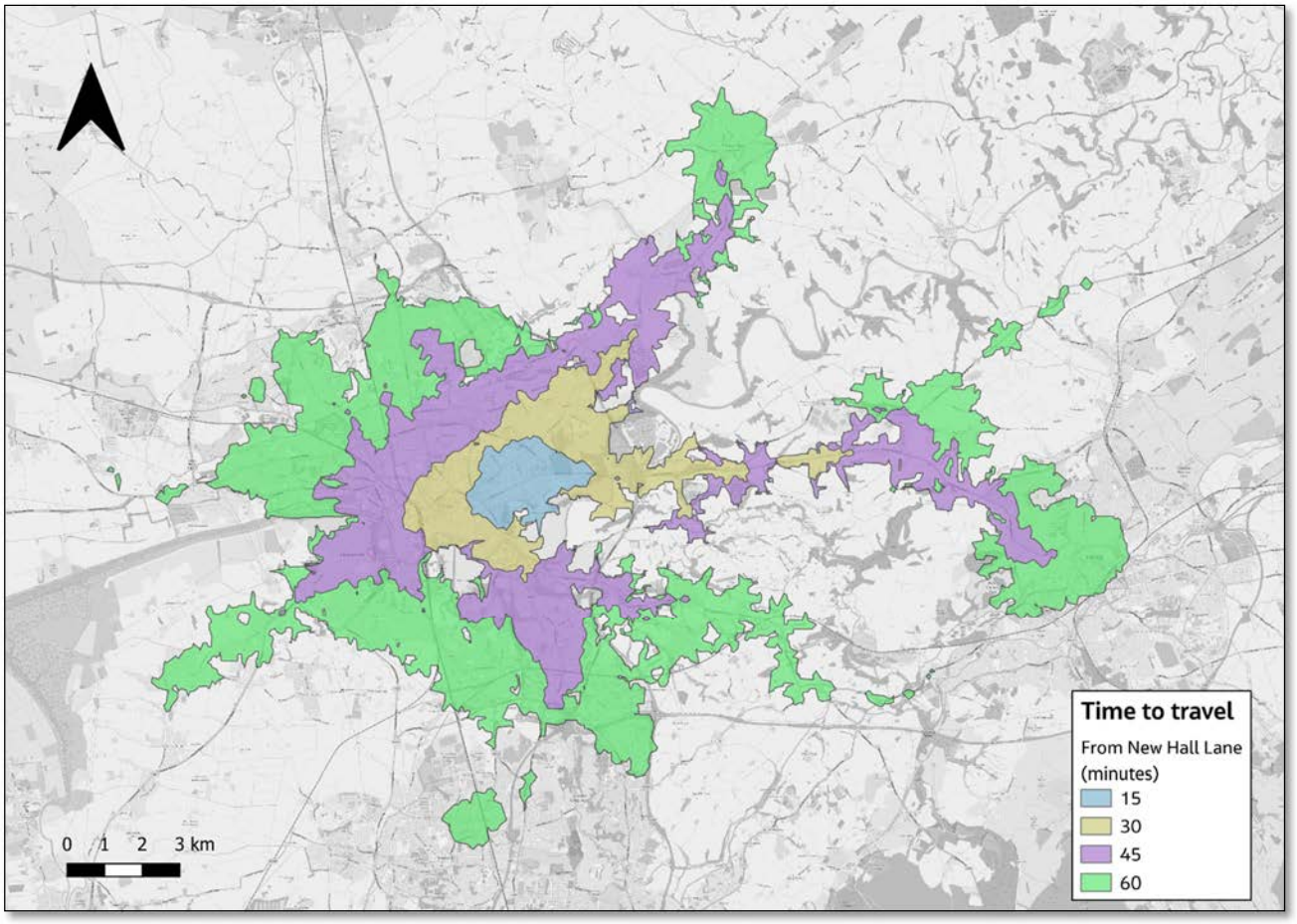

Time to travel
From Longton Village Centre
(minutes)
15
30
45
60
0 1 2 3 km

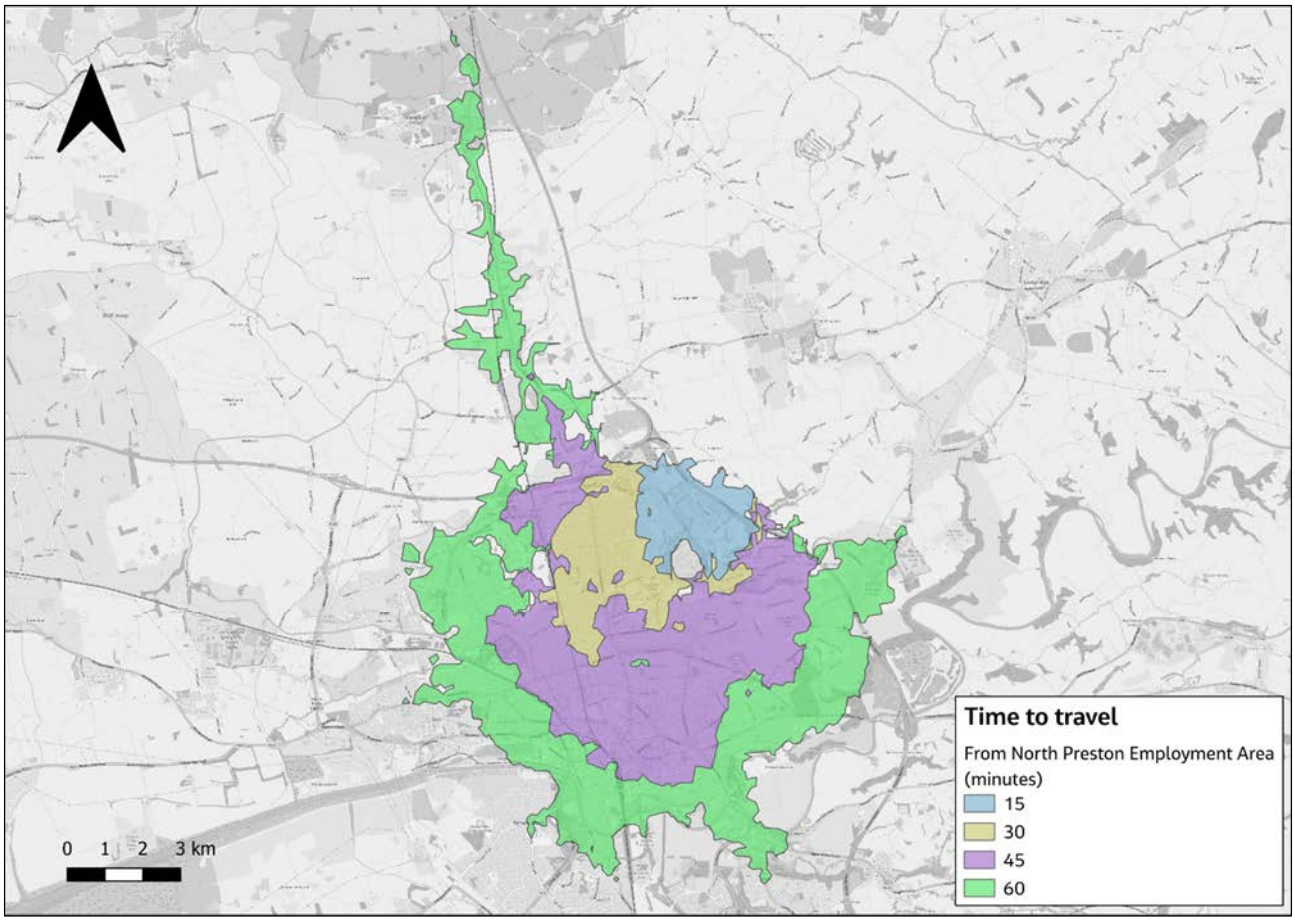

Time to travel
From Lostock Hall Village Centre
(minutes)
15
30
45
60
0 1 2 3 km

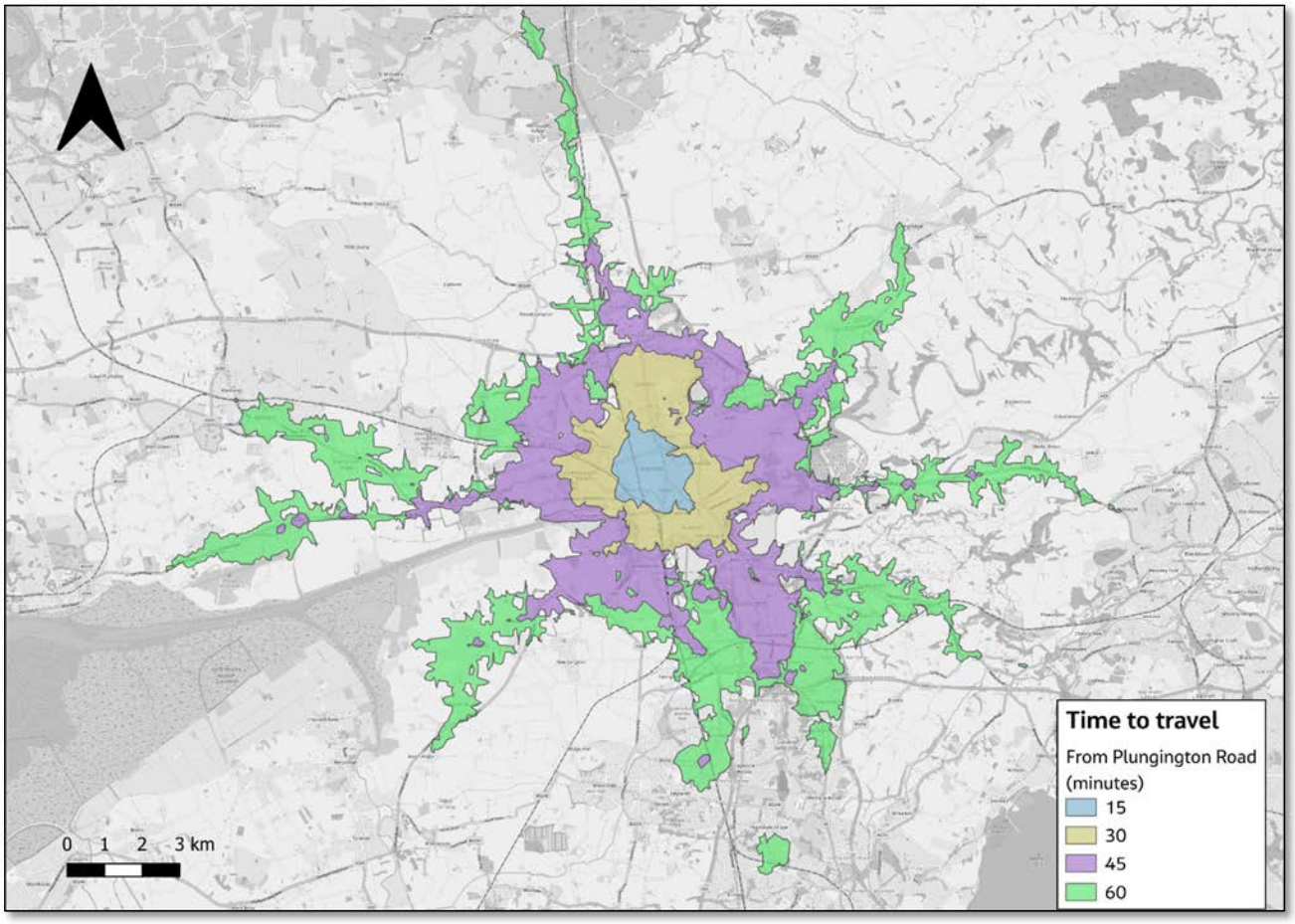

0 1 2 3 km
Time to travel
From Makro
(minutes)
15
30
45
60

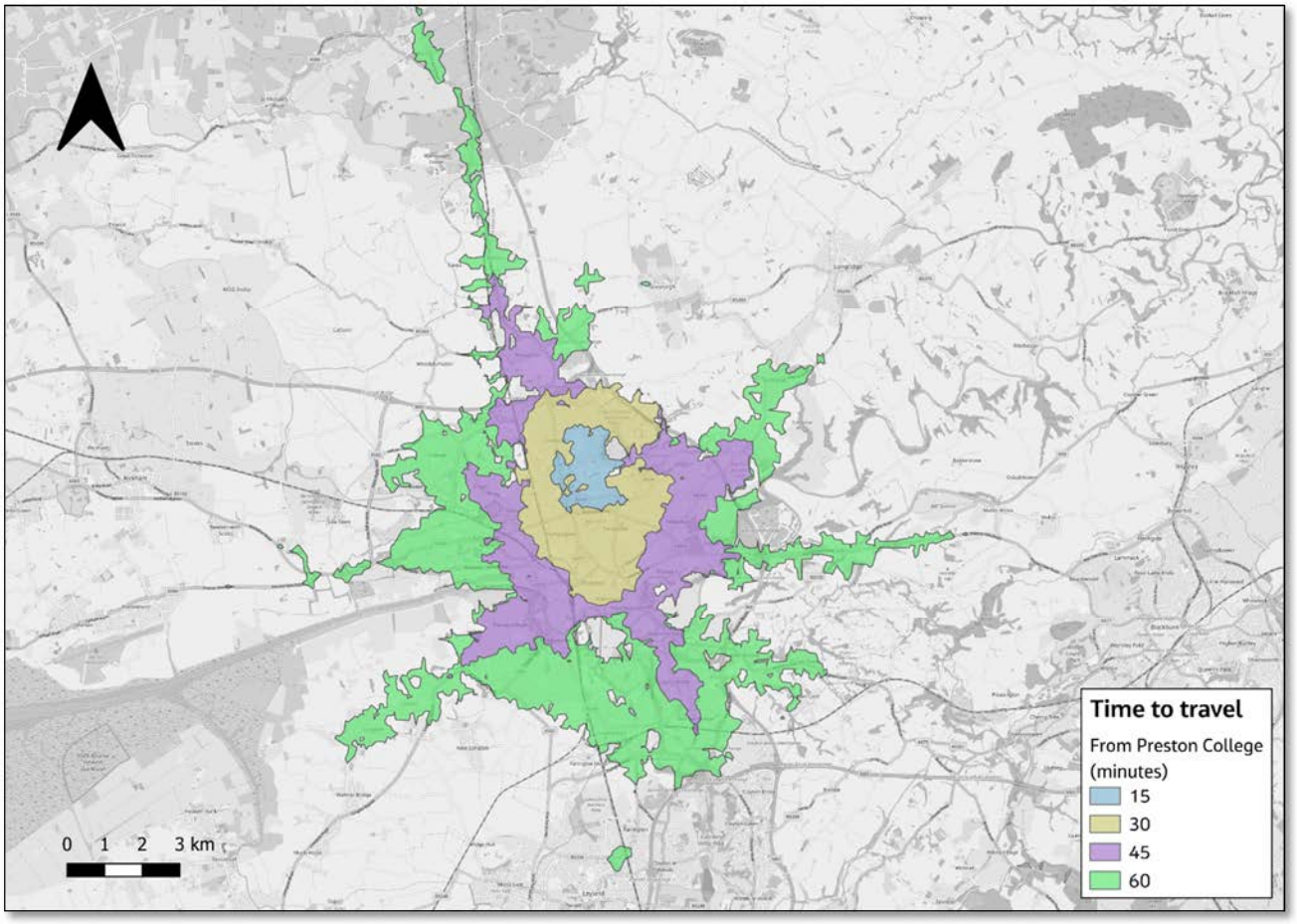

Time to travel
From Mariners Way Retail Park
(minutes)
15
30
45
60
0 1 2 3 km

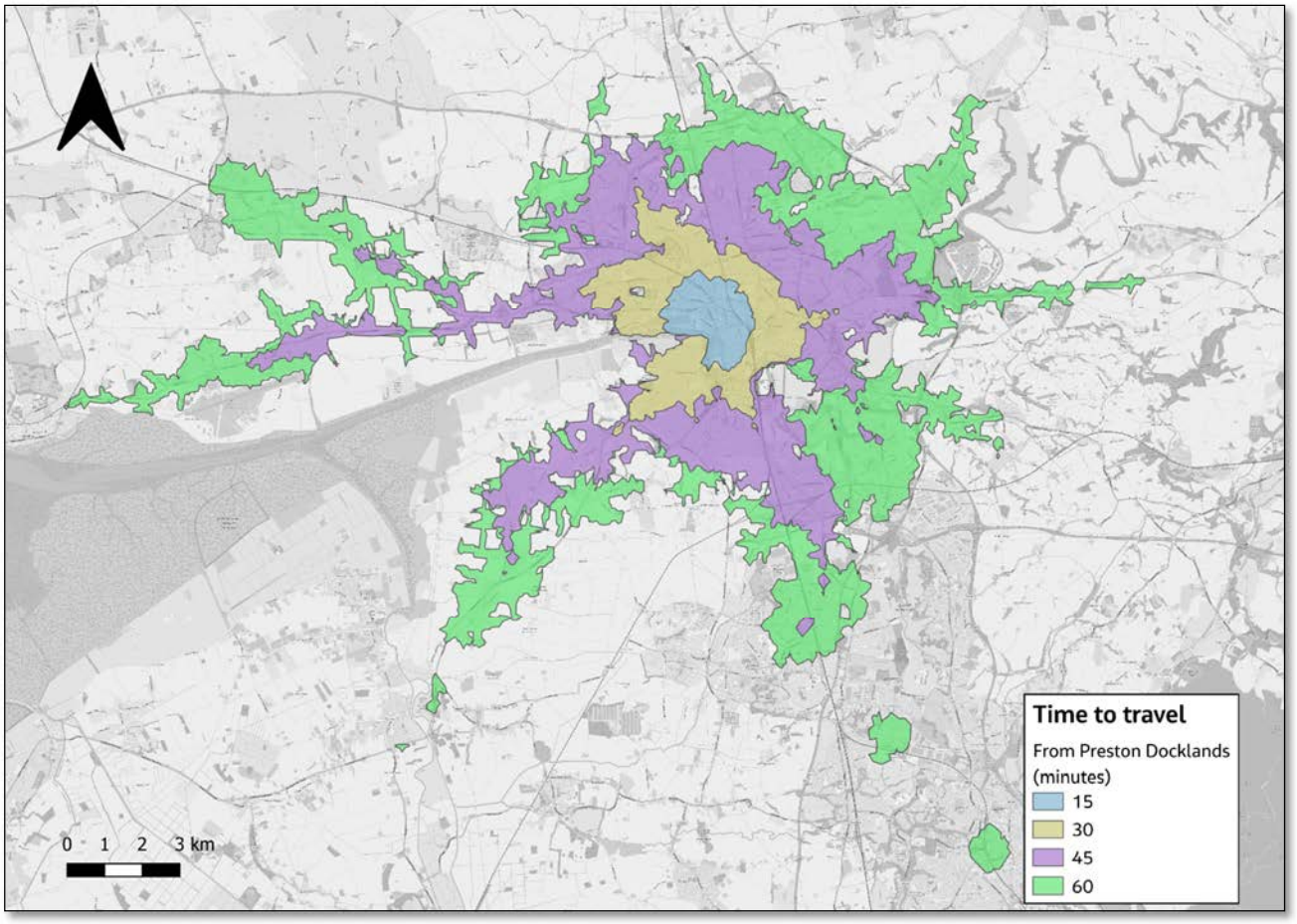

Time to travel
From Museum of Lancashire
(minutes)
15
30
45
60
0 1 2 3 km

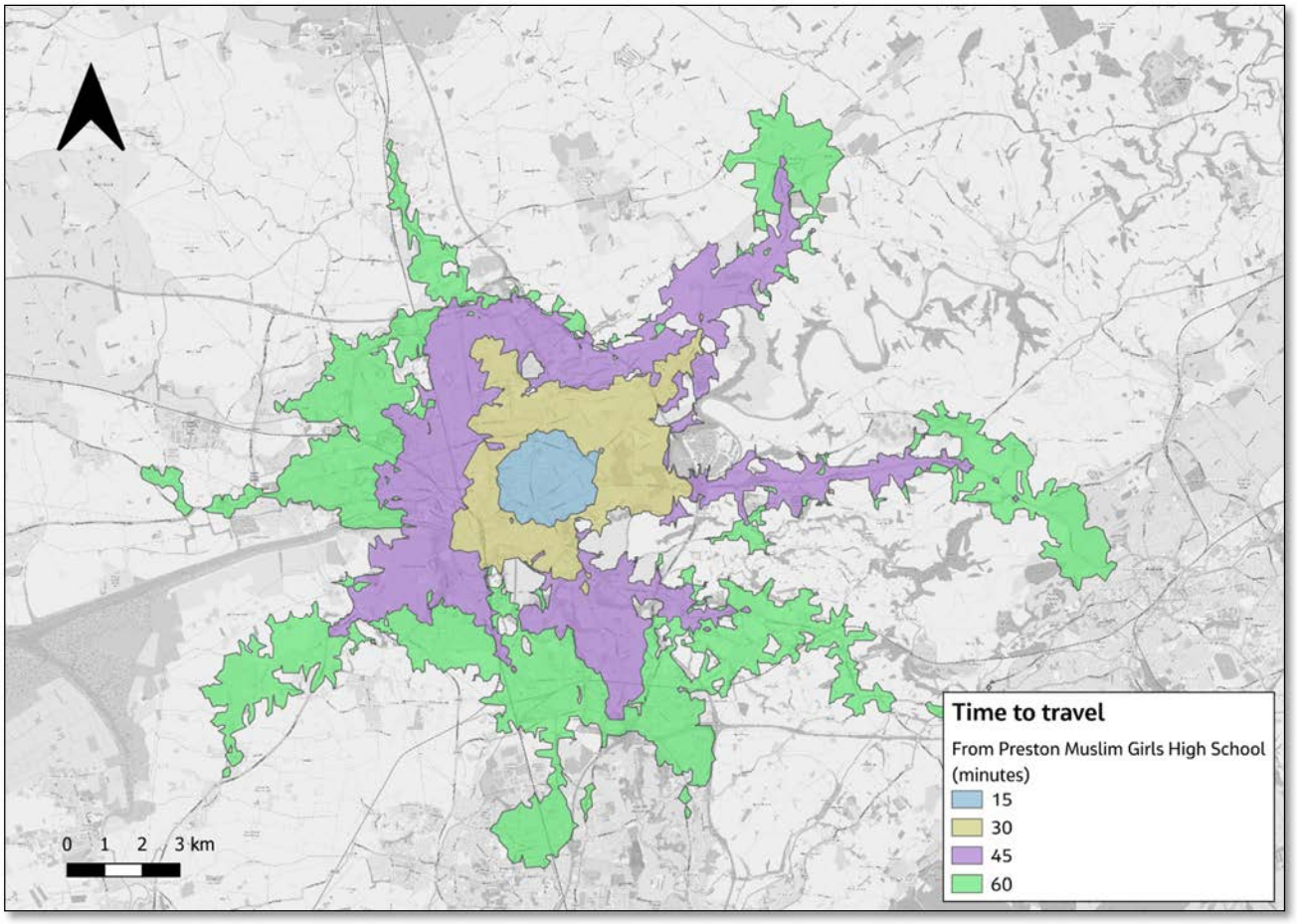

Time to travel
From New Hall Lane
(minutes)
15
30
45
60
0 1 2 3 km

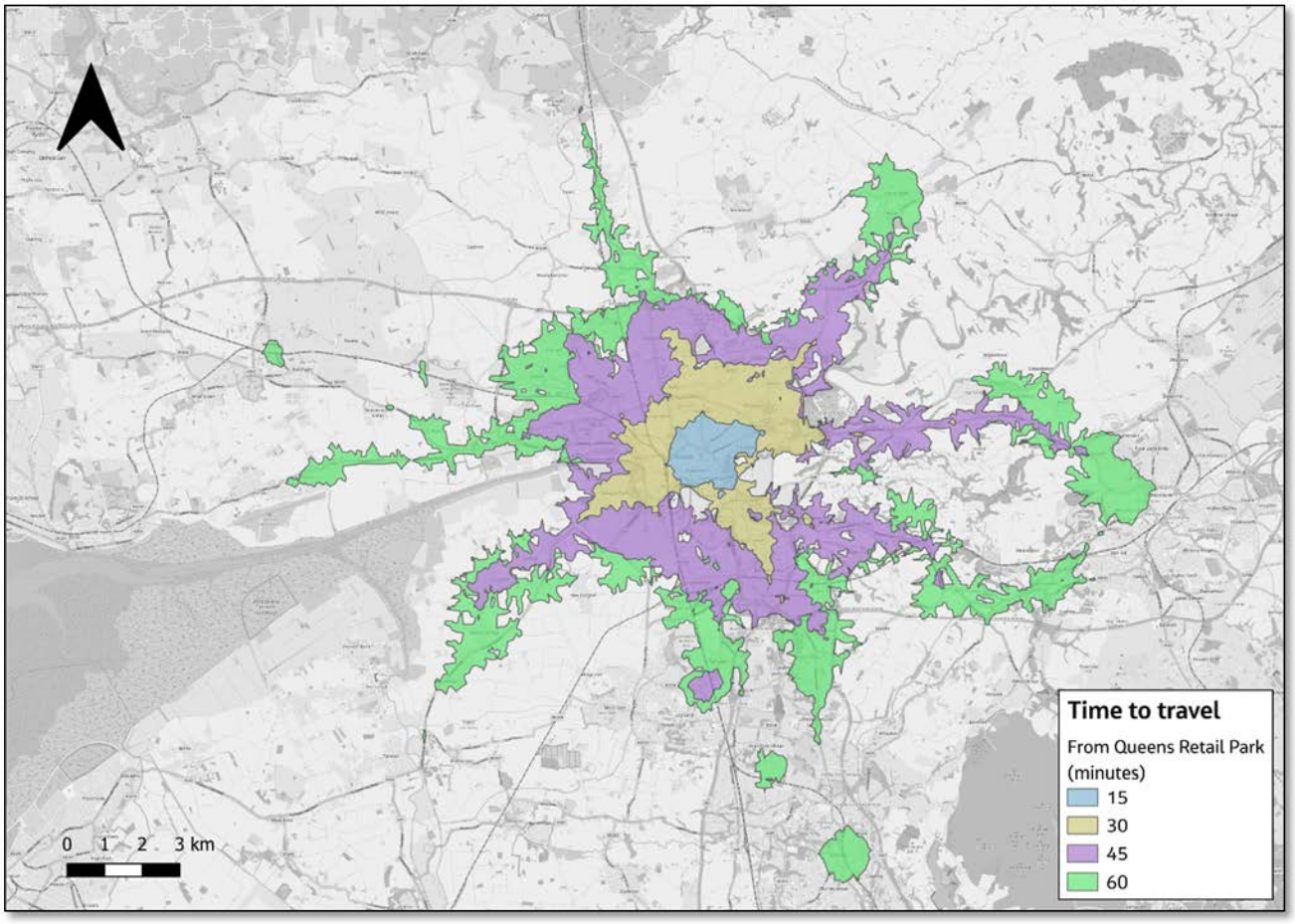

Time to travel
From North Preston Employment Area
(minutes)
15
30
45
60
0 1 2 3 km

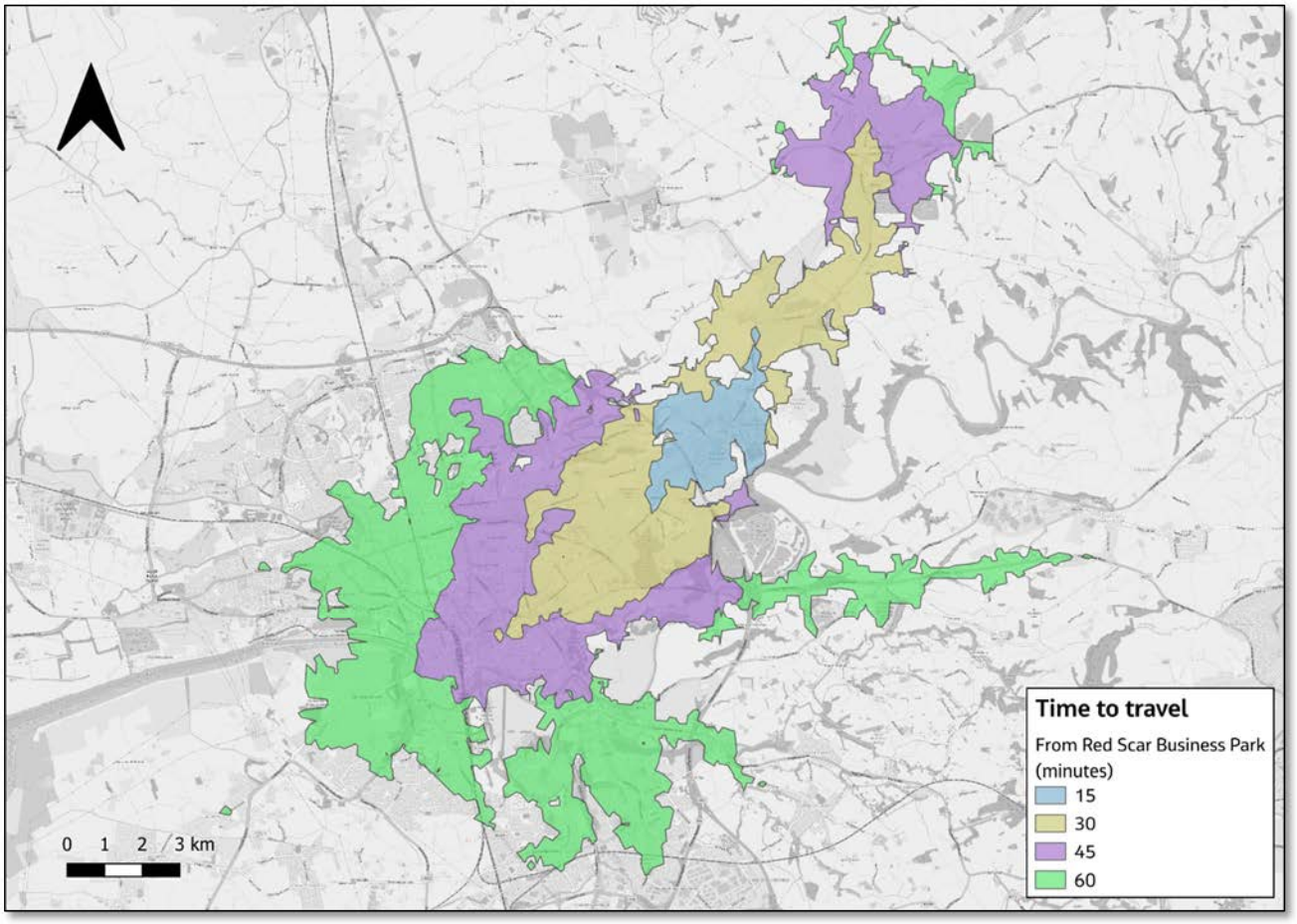

Time to travel
From Plungington Road
(minutes)
15
30
45
60
0 1 2 3 km

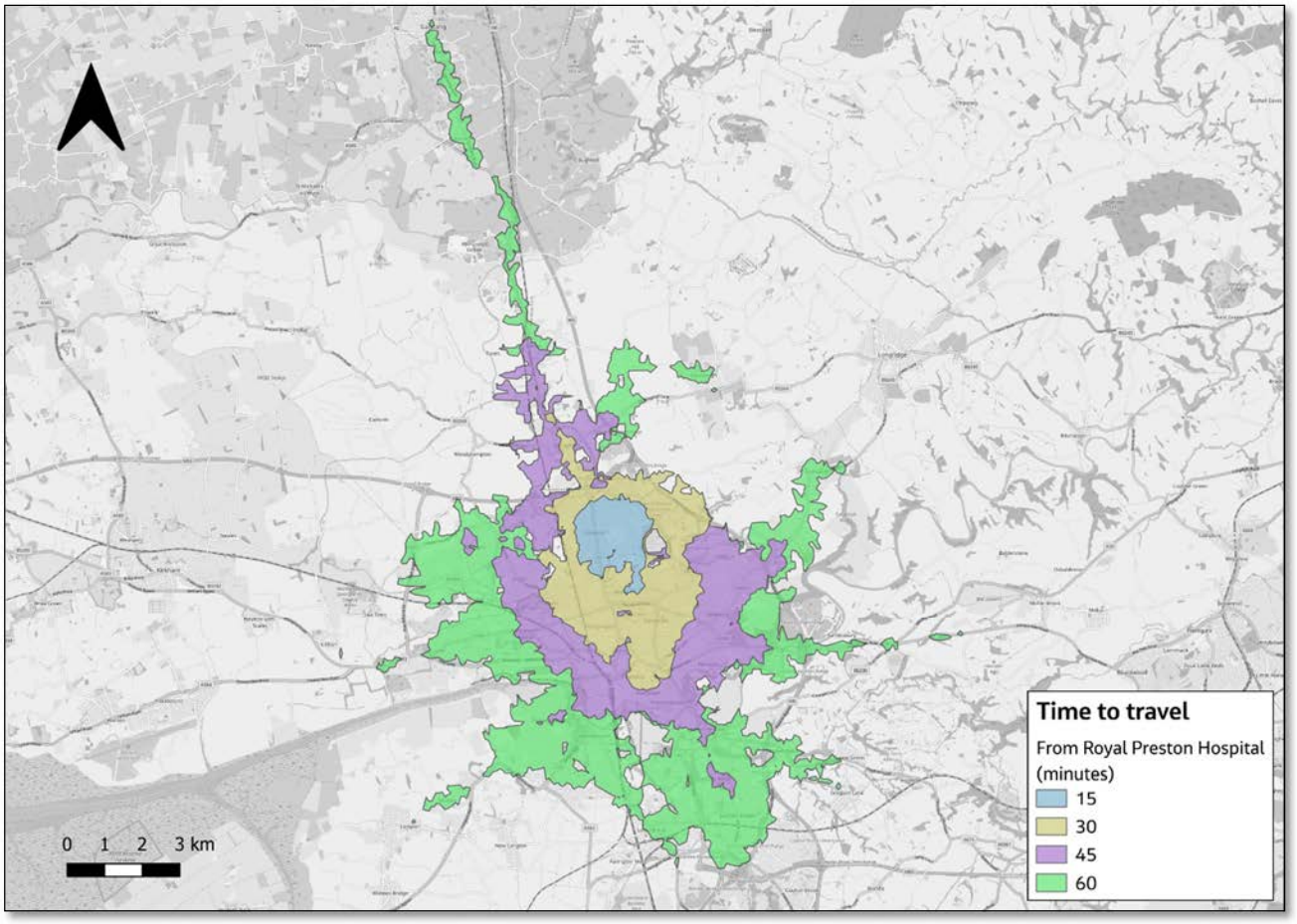

0 1 2 3 km
Time to travel
From Preston College
(minutes)
15
30
45
60

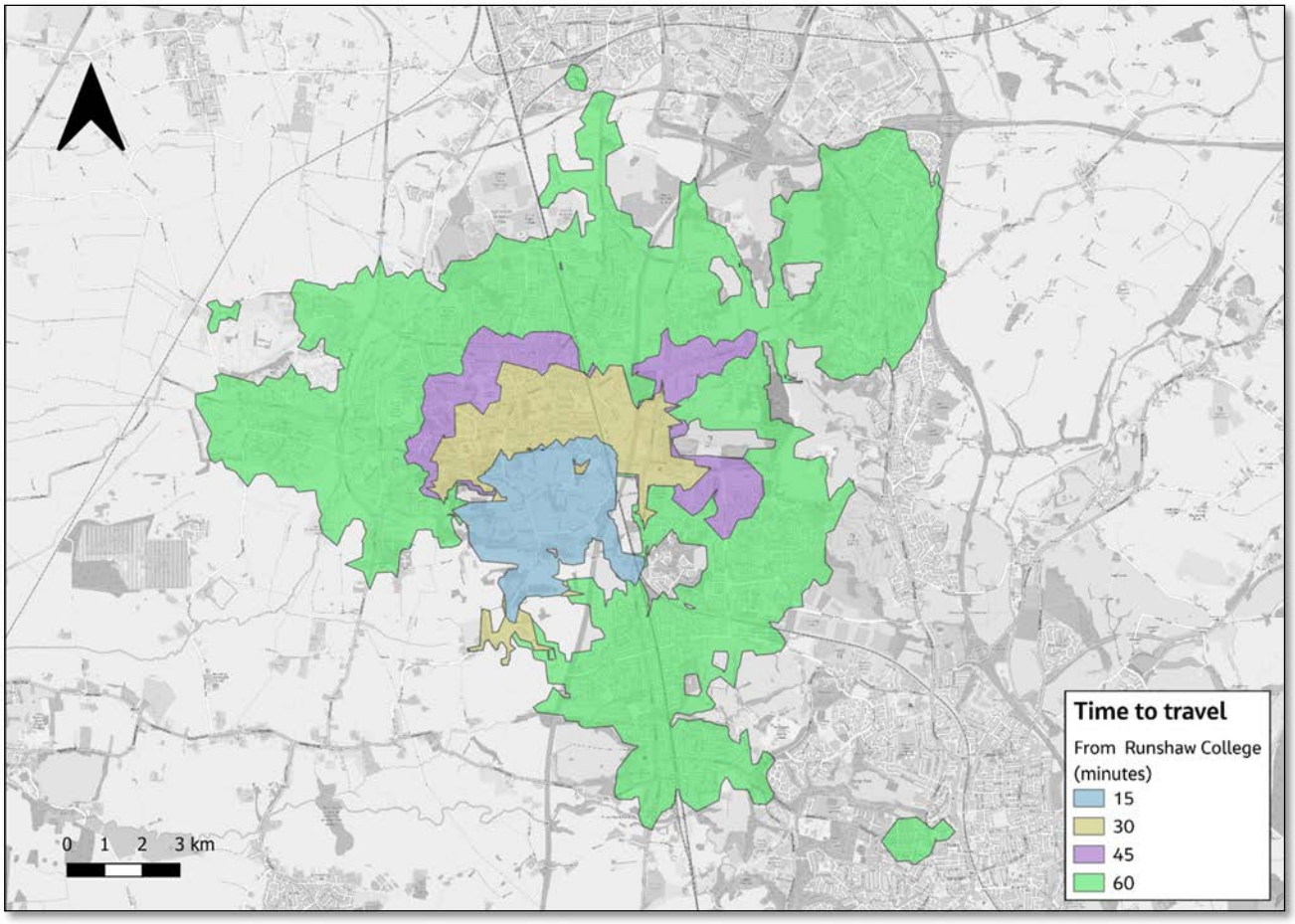

Time to travel
From Preston Docklands
(minutes)
15
30
45
60
0 1 2 3 km

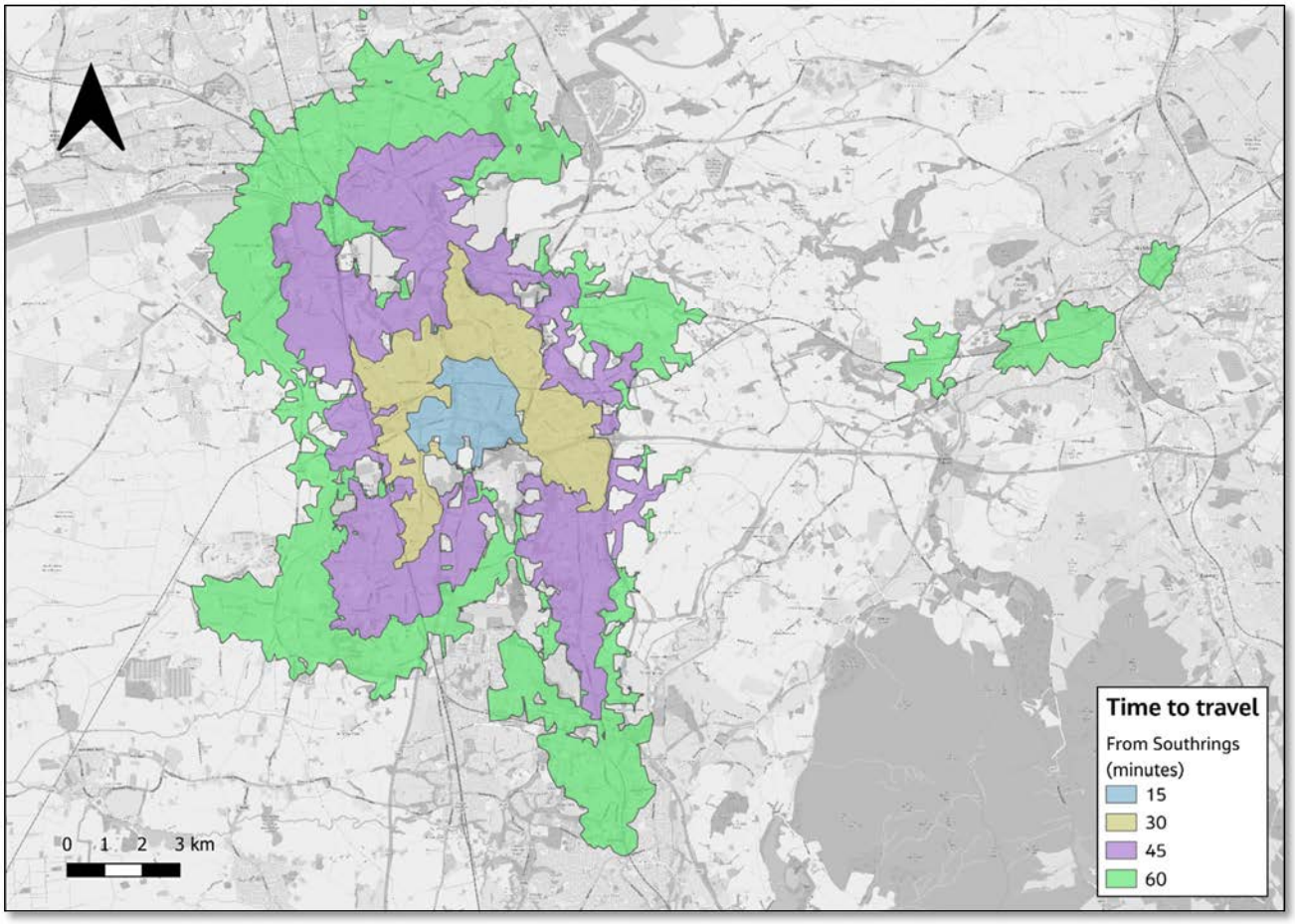

Time to travel
From Preston Muslim Girls High School
(minutes)
15
30
45
60
0 1 2 3 km

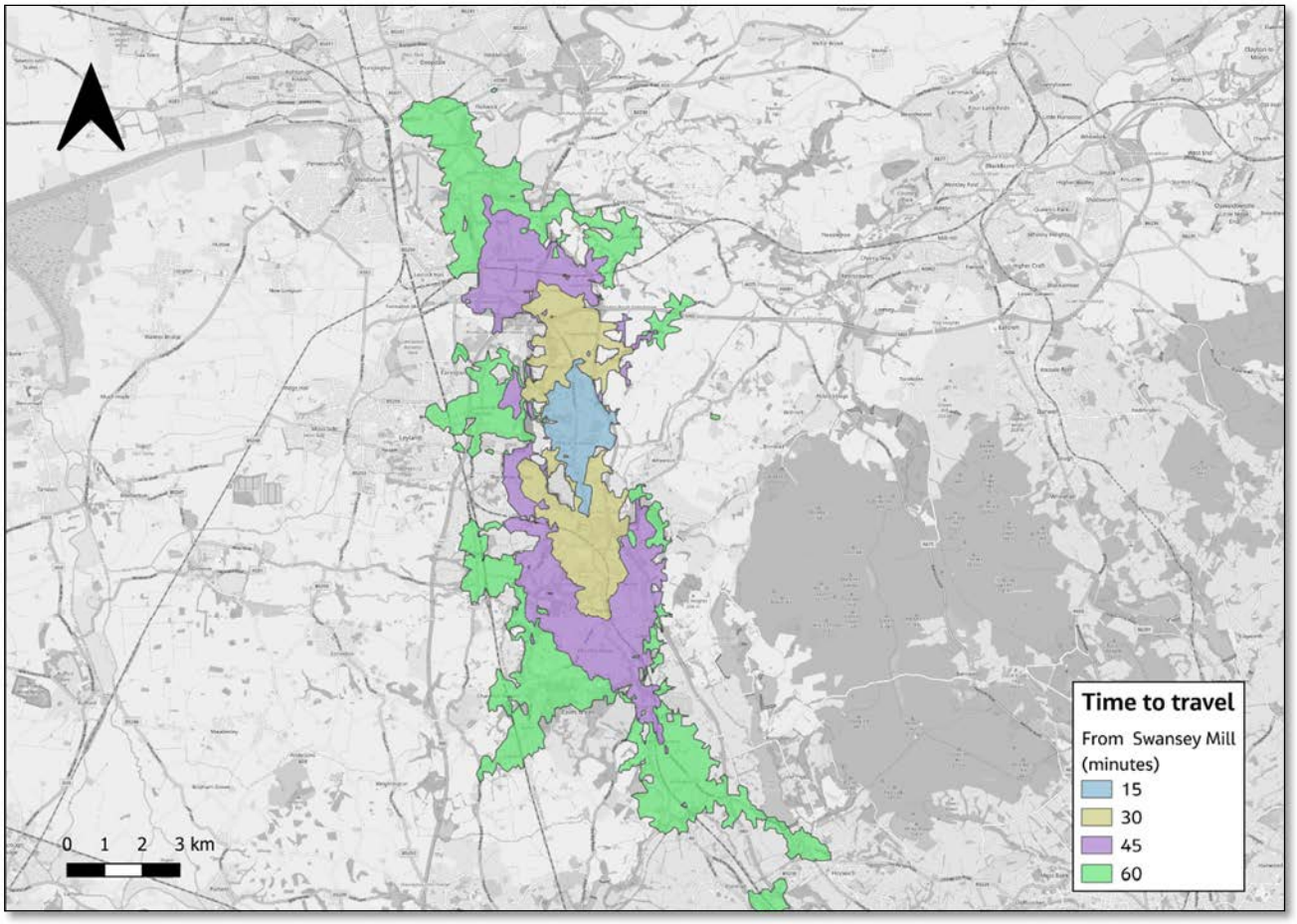

Time to travel
From Queens Retail Park
(minutes)
15
30
45
60
0 1 2 3 km


Time to travel
From Red Scar Business Park
(minutes)
15
30
45
60
0 1 2 3 km


Time to travel
From Royal Preston Hospital (minutes)
15
30
45
60
0 1 2 3 km


0 1 2 3 km
Time to travel
From Runshaw College
(minutes)
15
30
45
60


Time to travel
From Southrings
(minutes)
15
30
45
60
0 1 2 3 km


Time to travel
From Swansey Mill
(minutes)
15
30
45
60
0 1 2 3 km

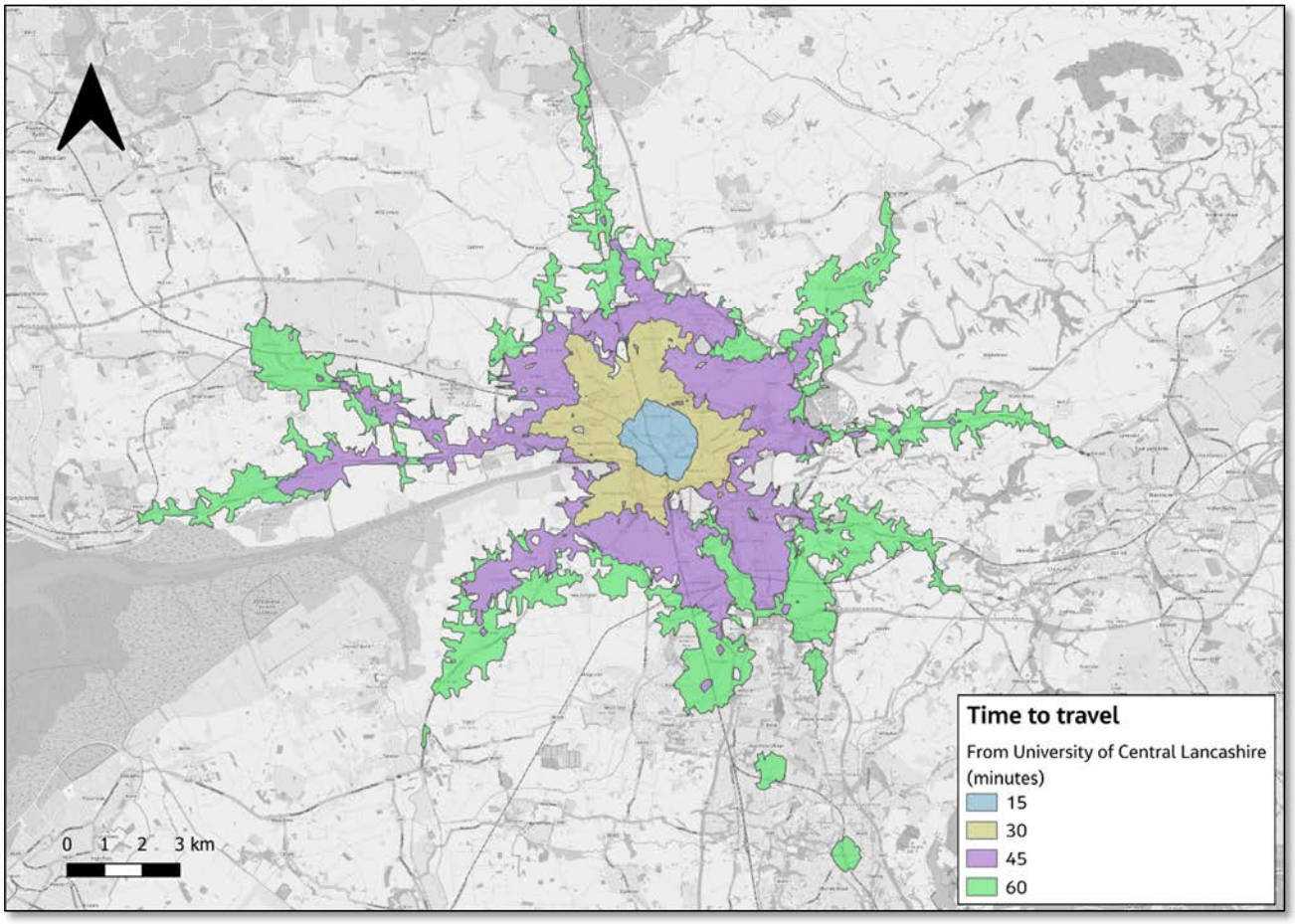
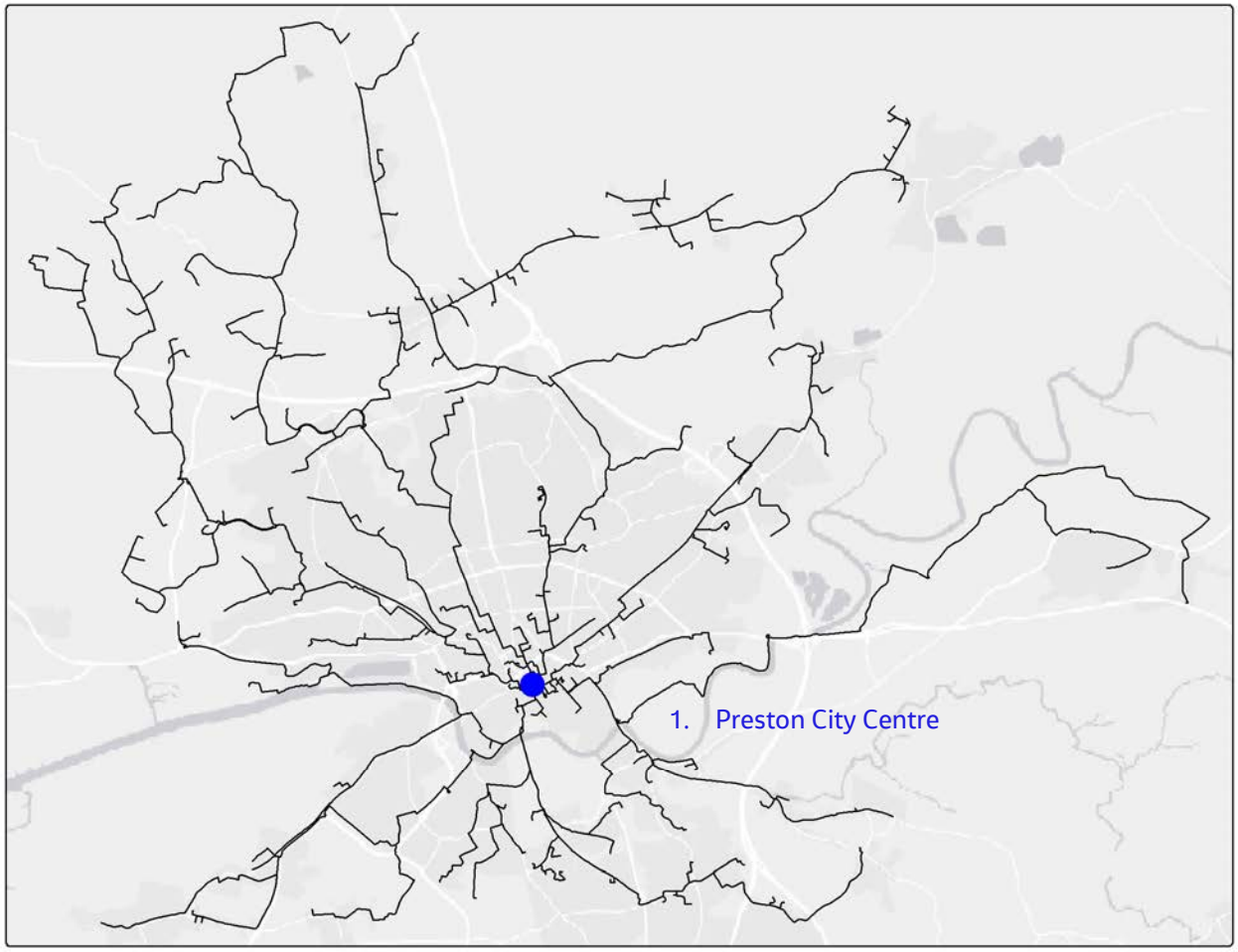

Time to travel
From University of Central Lancashire
(minutes)
15
30
45
60
0 1 2 3 km

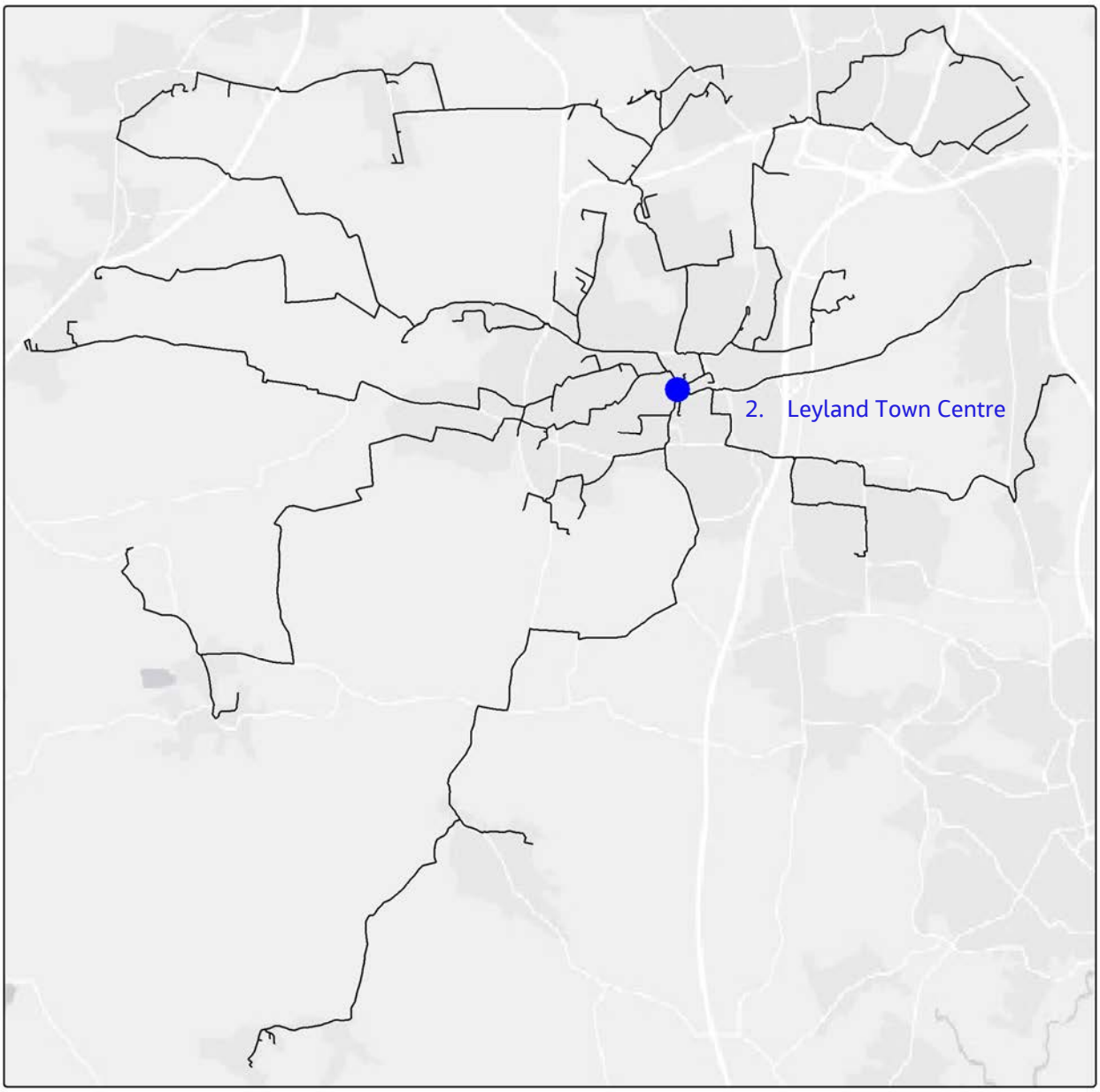
Table A-1 Key attractors below lists the key attractors in and around the three Central Lancashire Authorities.

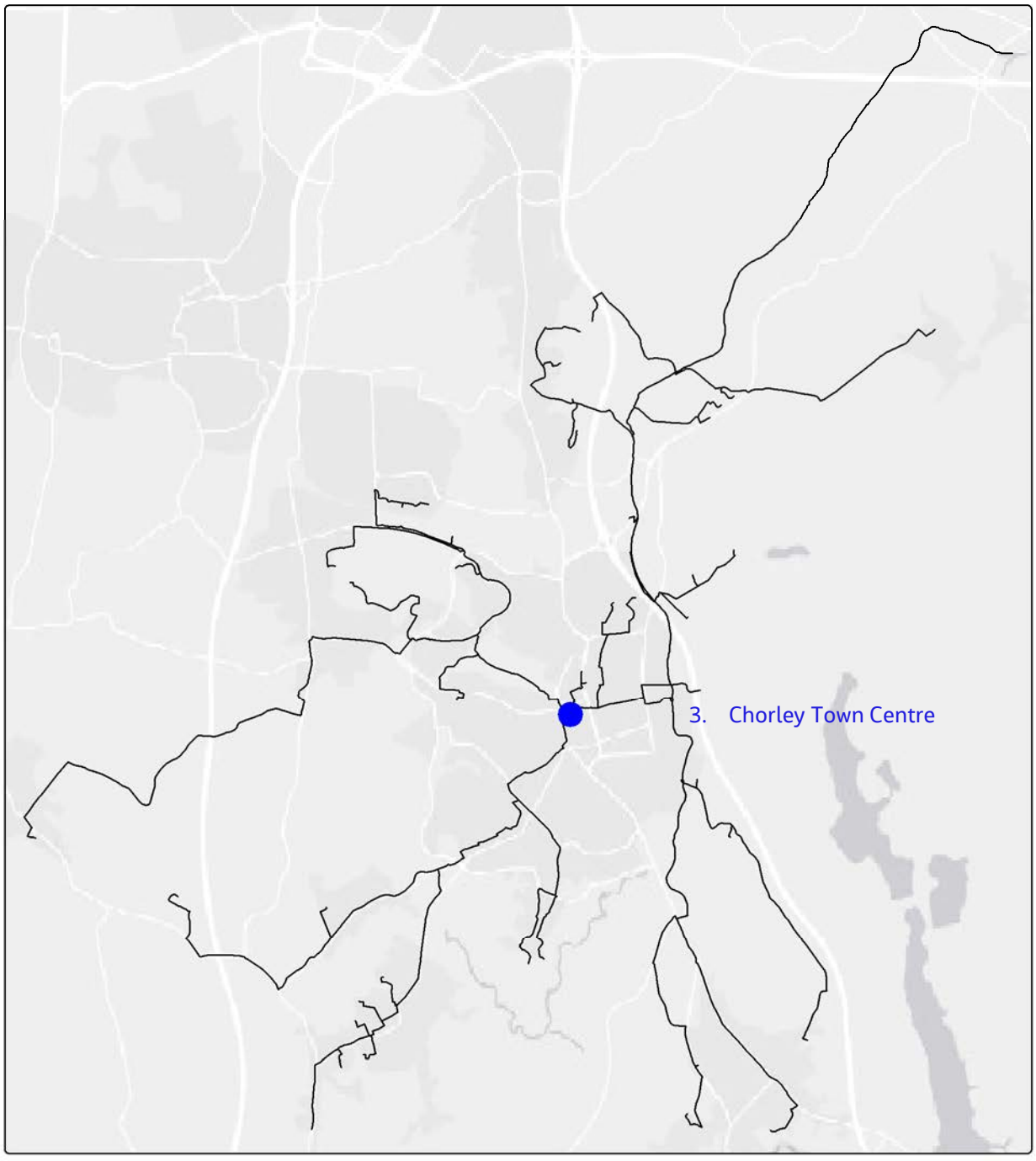
Table A-1 Key attractors

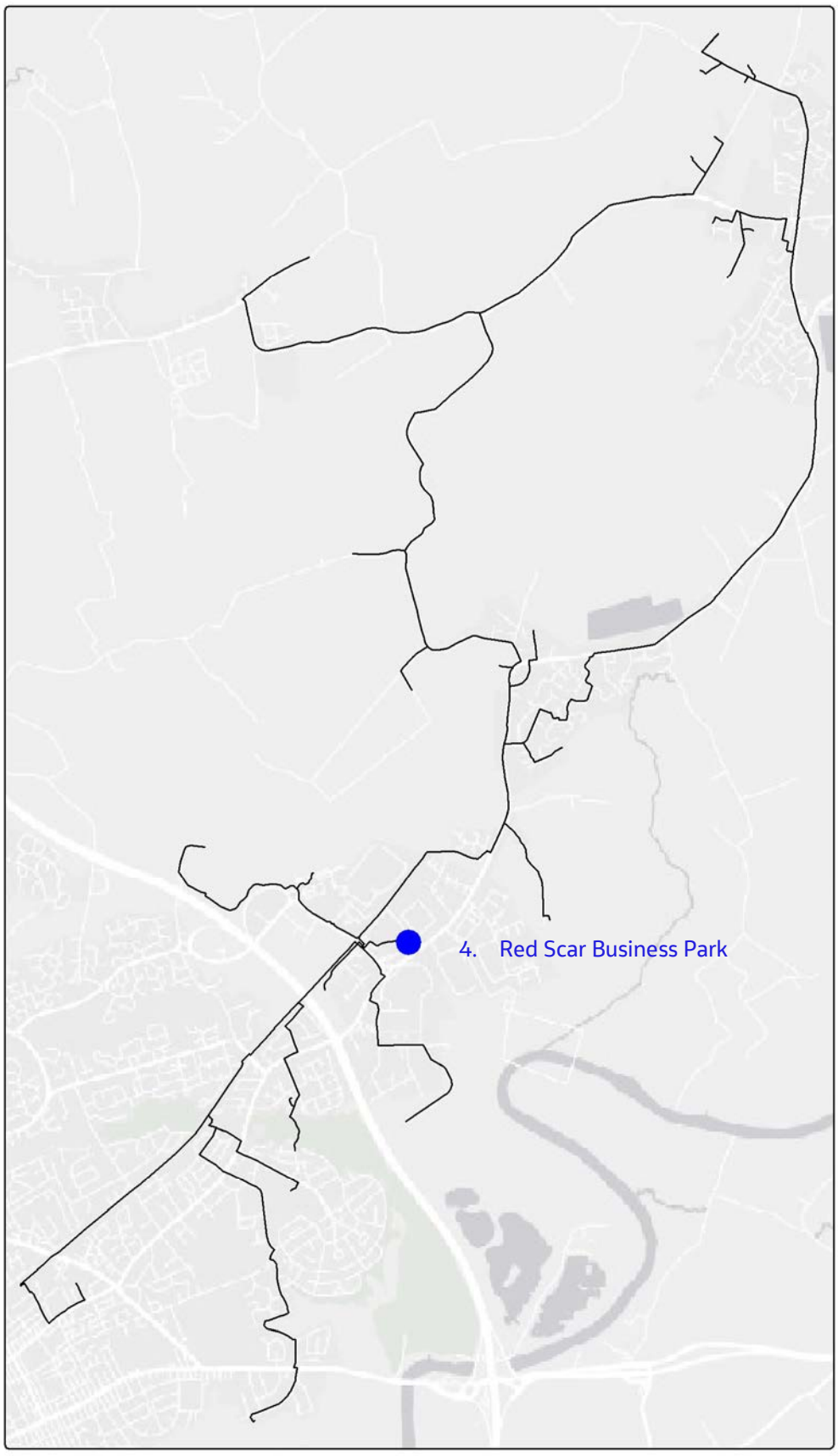
Reference number	Name	Urban centre
1	Preston City Centre	Major Centre
2	Leyland Town Centre	Major Centre
3	Chorley Town Centre	Major Centre
4	Red Scar Business Park	Medium
5	BAE Systems	Medium
6	Royal Preston Hospital	Medium
7	North Preston Employment Area	Medium
8	University of Central Lancashire	Medium
9	Queens Retail Park	Small
10	Liverpool Road (Penwortham High Street)	Medium
11	Preston College	Medium
12	Fulwood Hall Hospital	Medium
13	Museum of Lancashire	Small
14	New Hall Lane (St Matthews High Street)	Medium
15	Preston Muslim Girls High School	Medium
16	Plungington Road (Plungington High Street)	Medium
17	Lane Ends Trading Estate	Medium
18	Lane Ends local centre	Medium
19	Mariners Way Retail Park	Small
20	Makro	Small
21	Capitol Centre	Small
22	Lostock Hall Village Centre	Medium

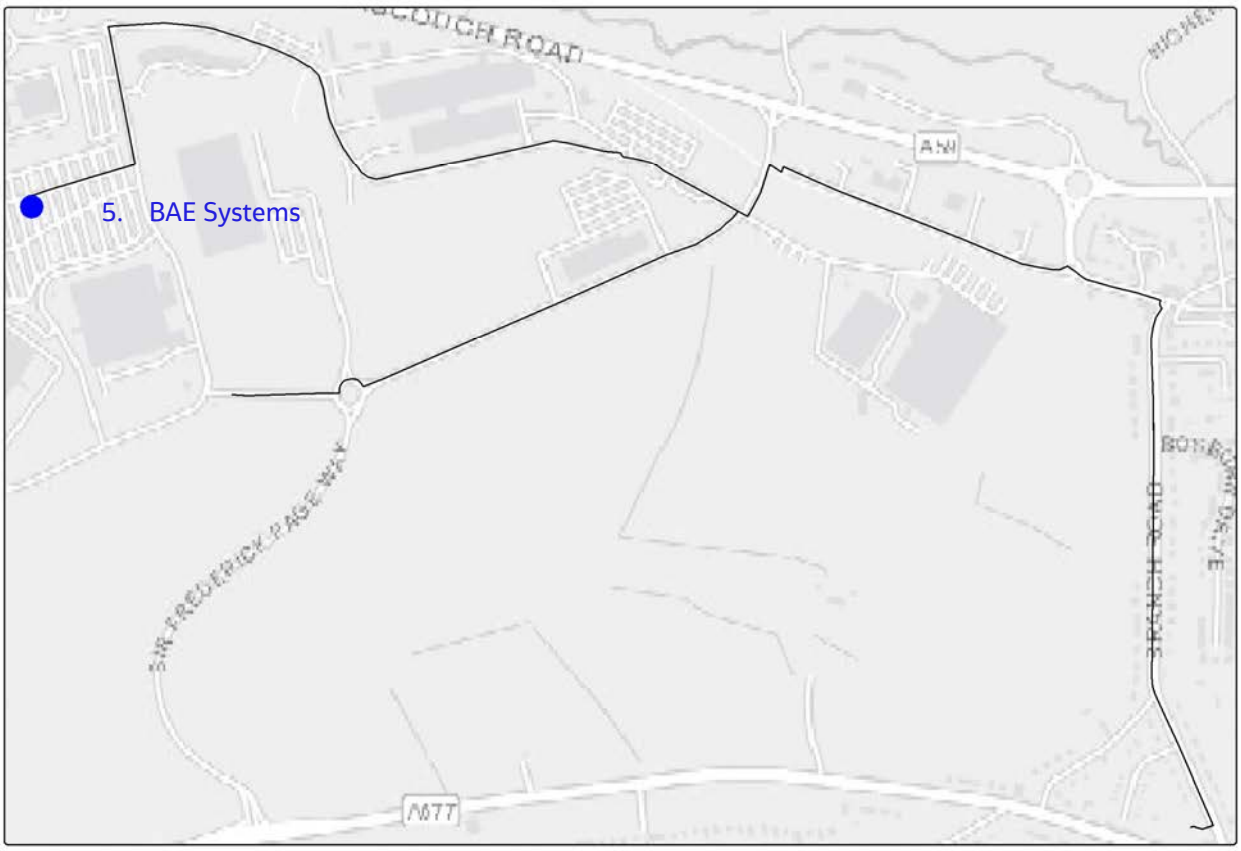
23	Southrings	Small
24	Bamber Bridge Village Centre	Medium
25	Four Oaks Business Park	Medium
26	Swansey Mill	Medium
27	Lancashire Business Park	Medium
28	Buckshaw Hospital	Medium
29	Buckshaw Village	Medium
30	Runshaw College	Medium
31	Astley Village Centre	Medium
32	Chorley & South Ribble District General Hospital	Medium
33	Coppull Village Centre	Medium
34	Edge Hill Uni Campus + Lancashire College of Adult Education	Medium
35	Cardinal Newman College	Medium
36	Guild Park	Medium
37	Kingsfold Centre	Medium
38	HMP Garth & Wymott	Medium
39	Croston Village Centre	Medium
40	Eccleston Village Centre	Medium
41	Longton Village Centre	Medium
42	Preston Docklands	Medium
43	Deepdale	Medium
44	Euxton	Medium
45	Adlington	Medium

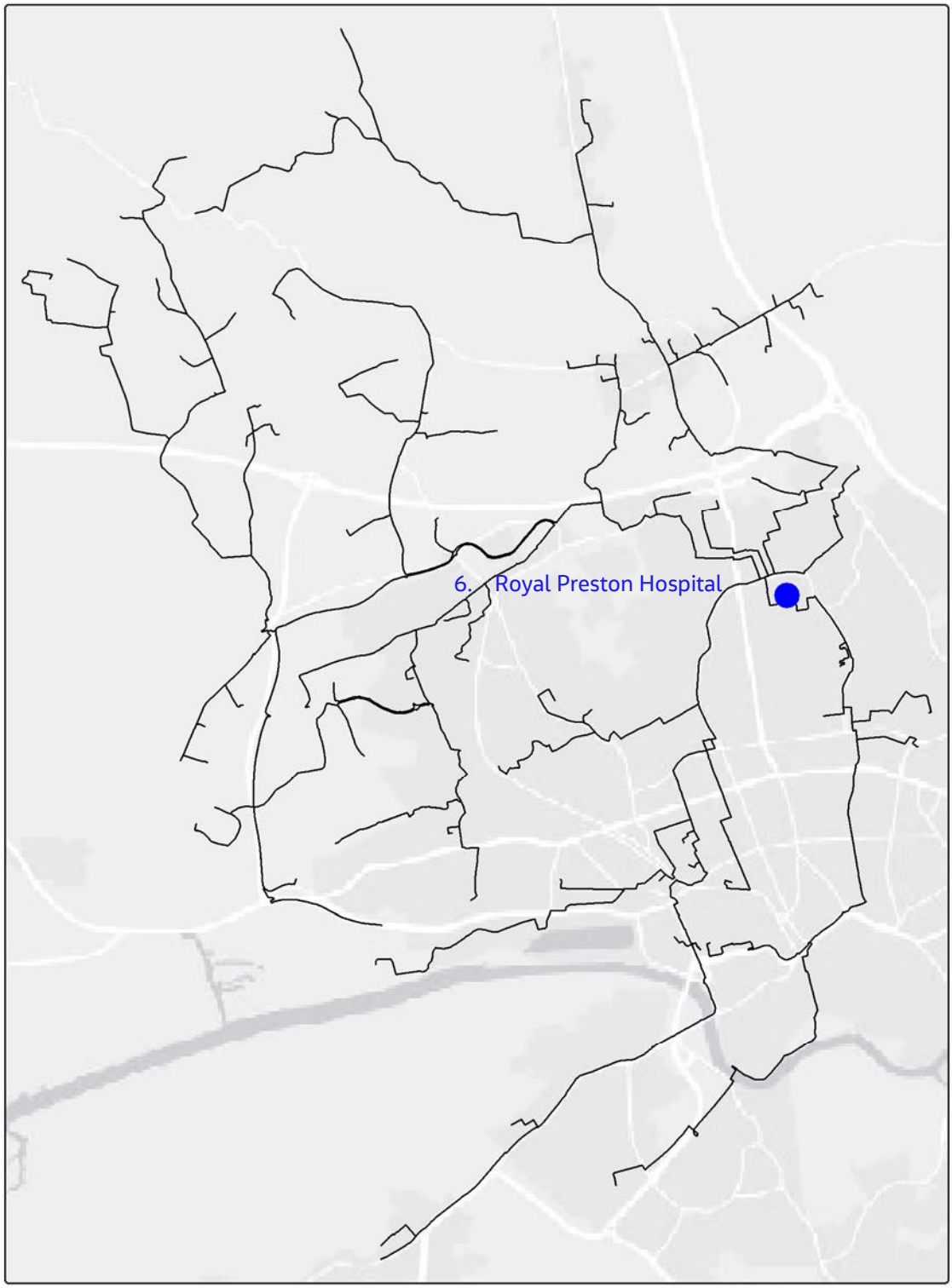

1. Preston City Centre

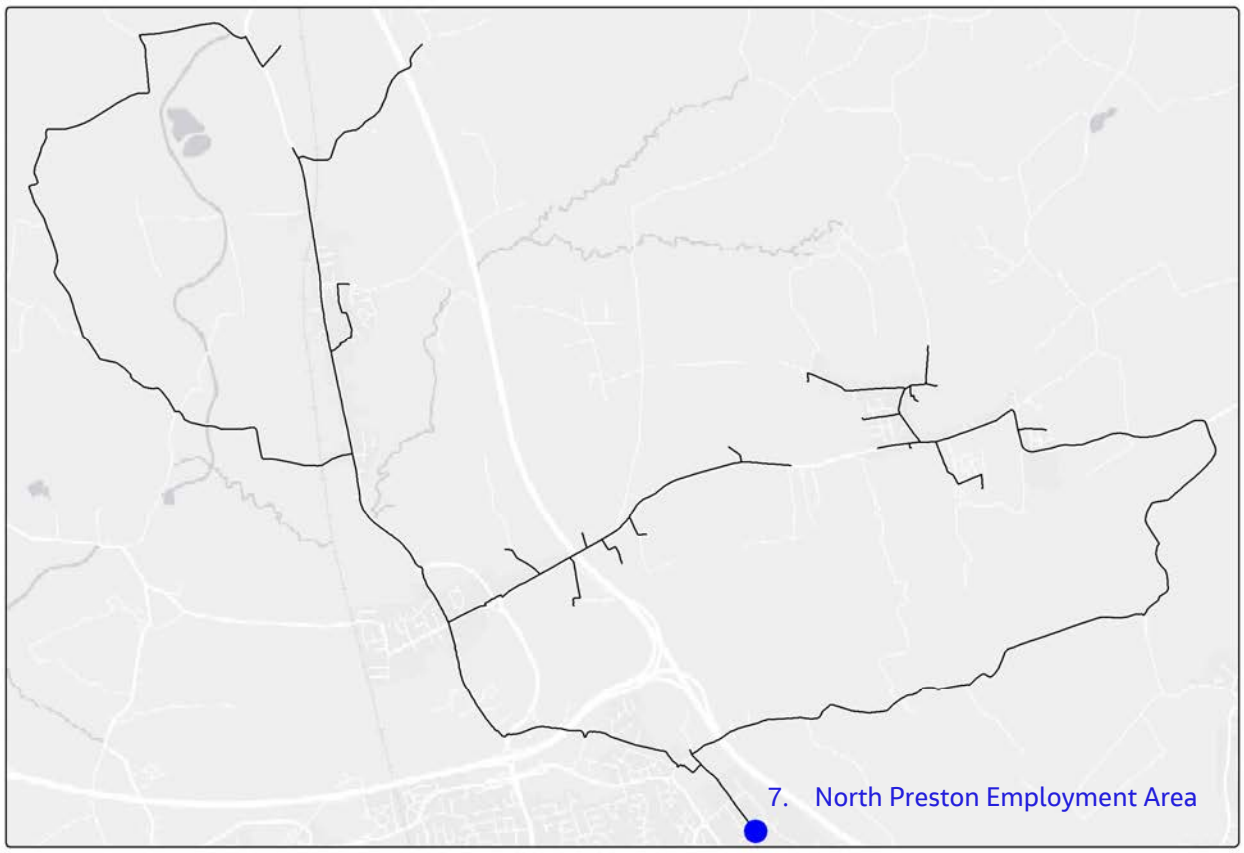

2. Leyland Town Centre

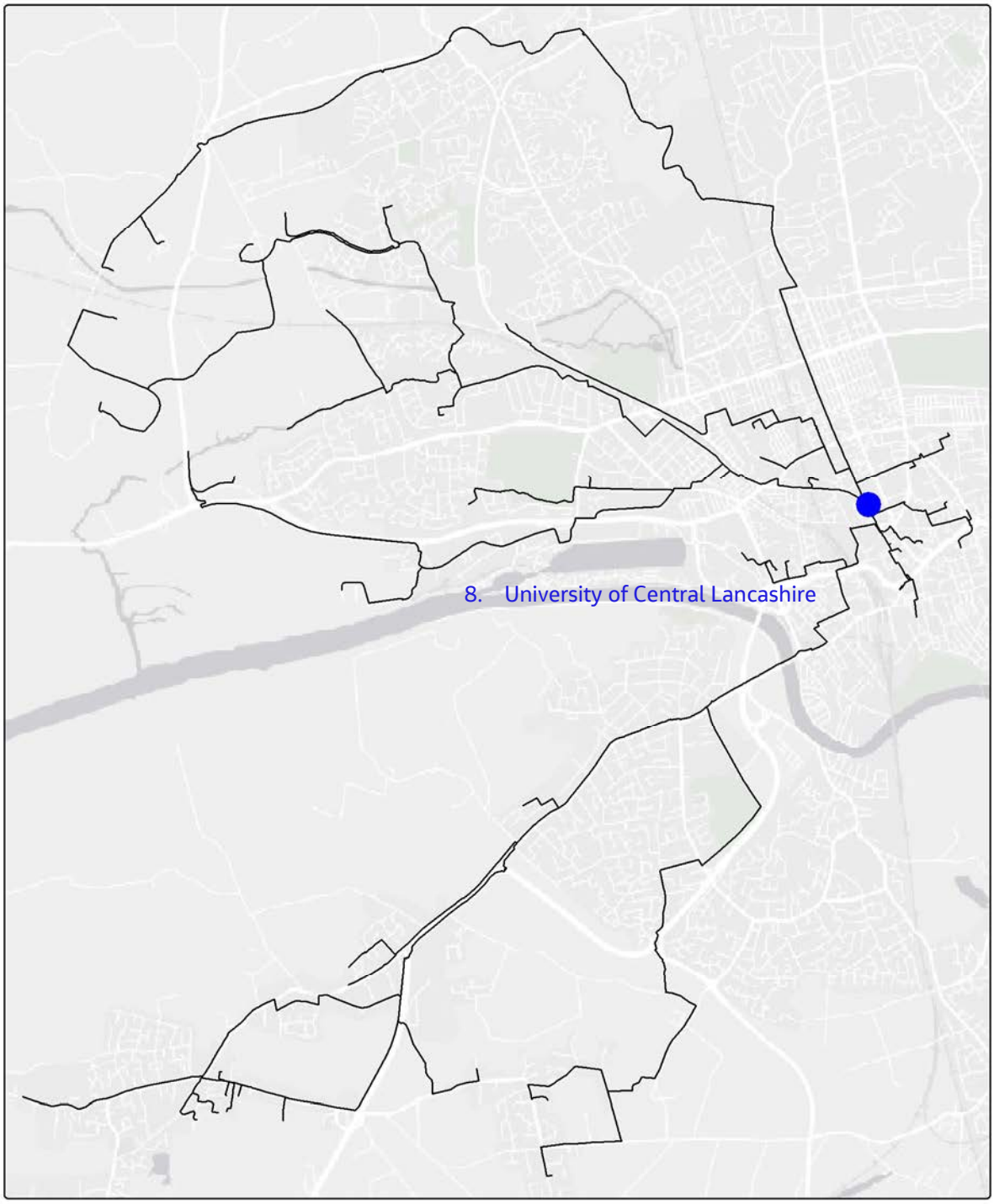

3. Chorley Town Centre


4. Red Scar Business Park

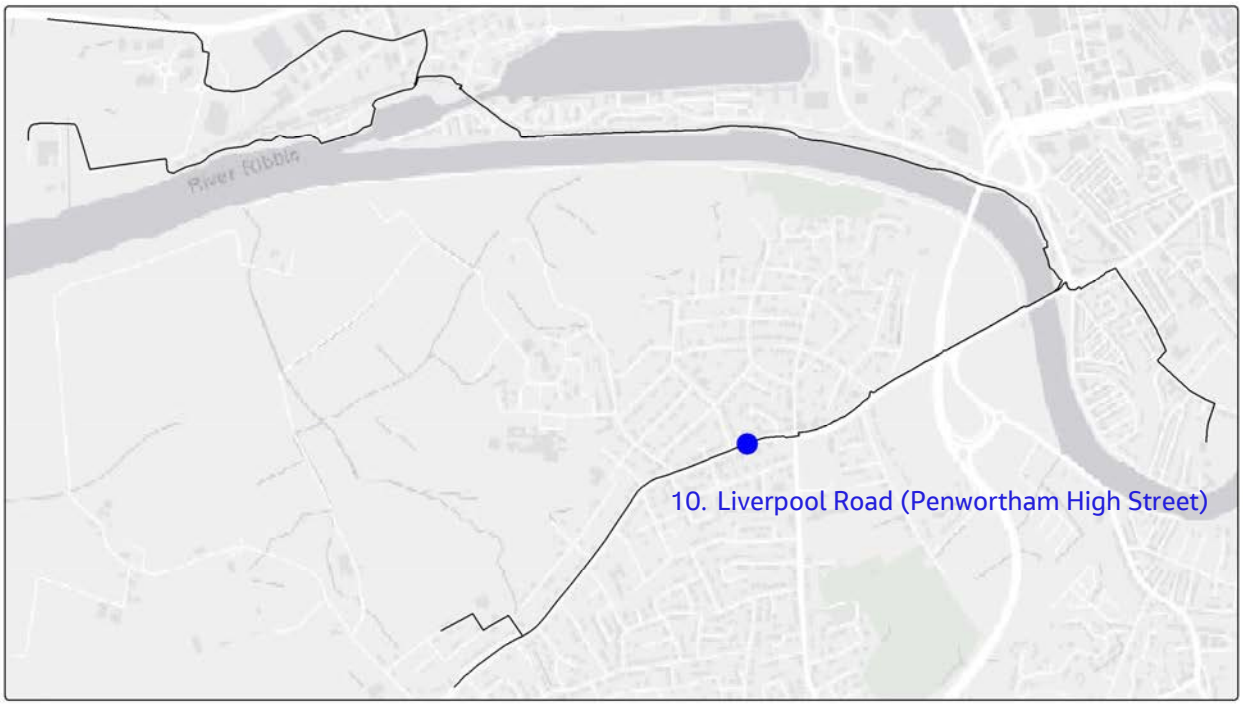

5. BAE Systems
A49
A677

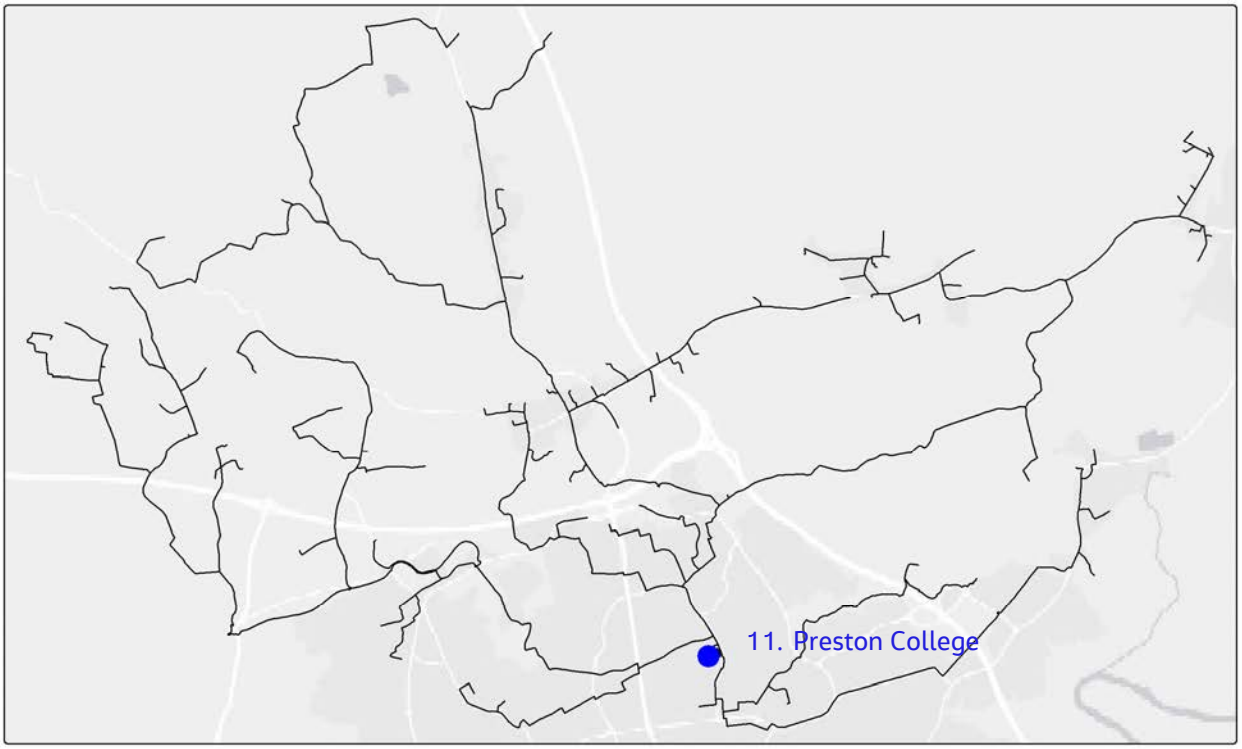

6. Royal Preston Hospital

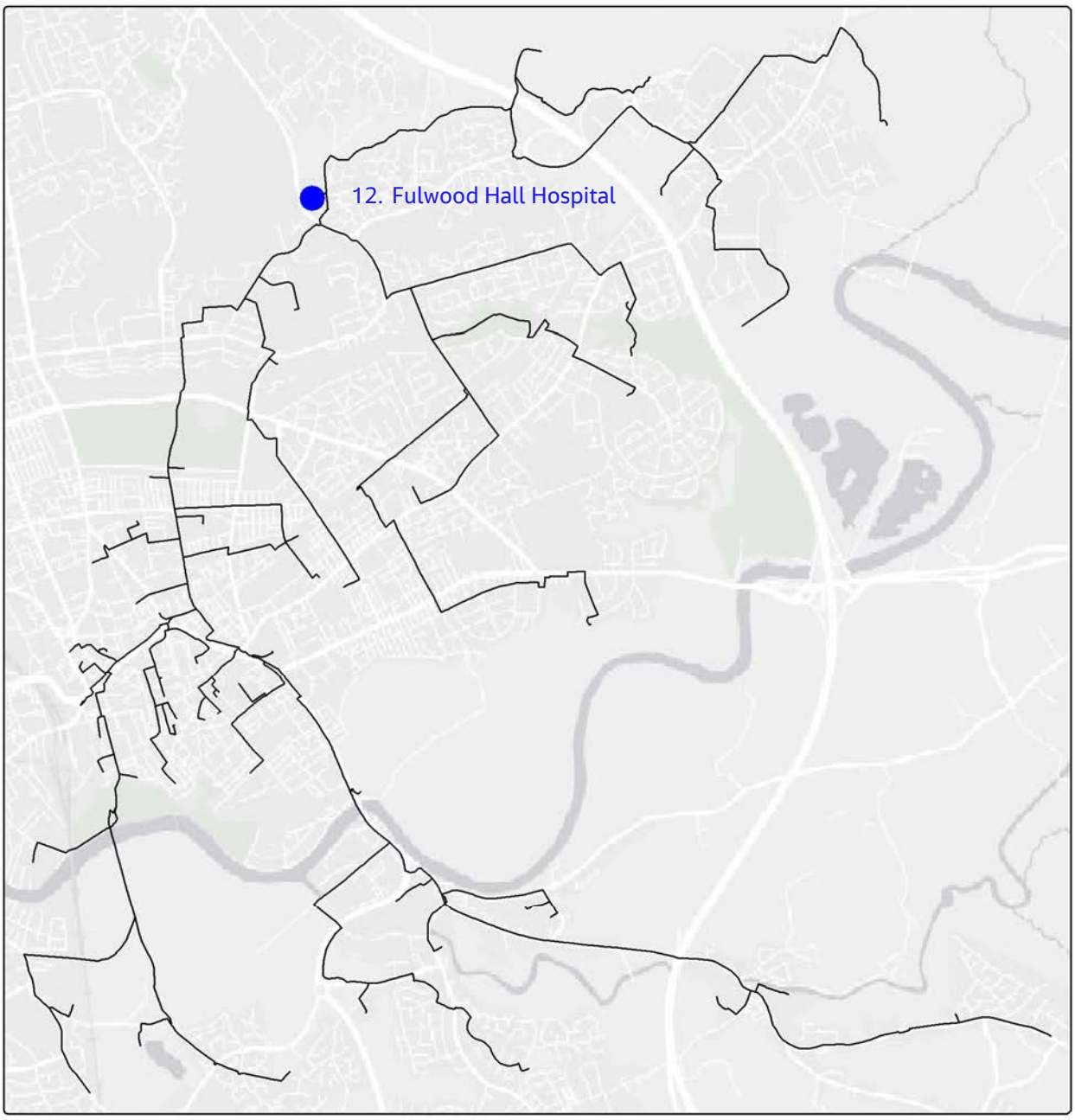

7. North Preston Employment Area


8. University of Central Lancashire

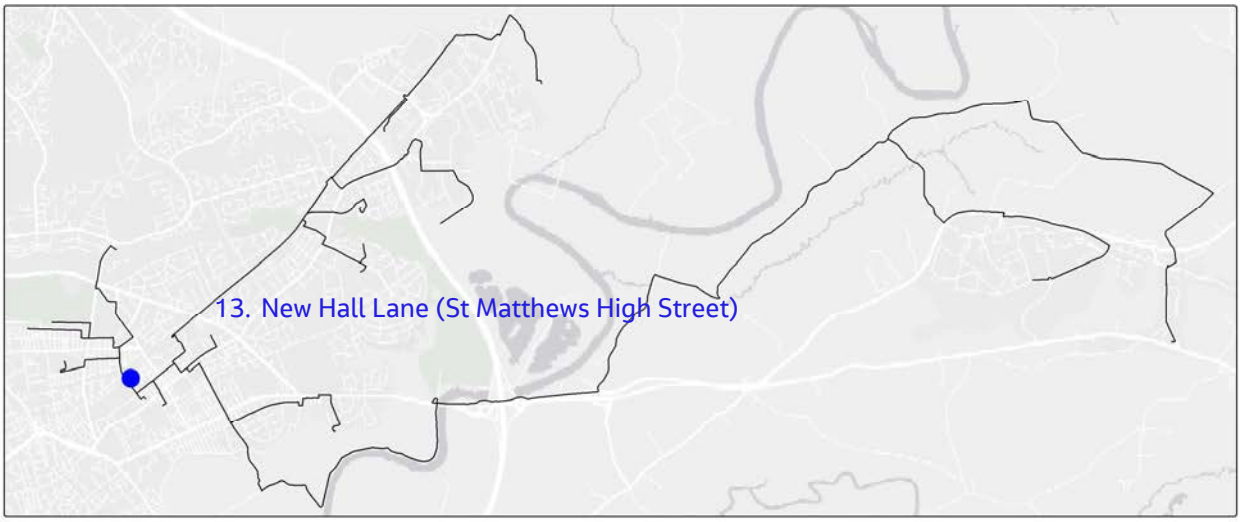
9. Queens Retail Park

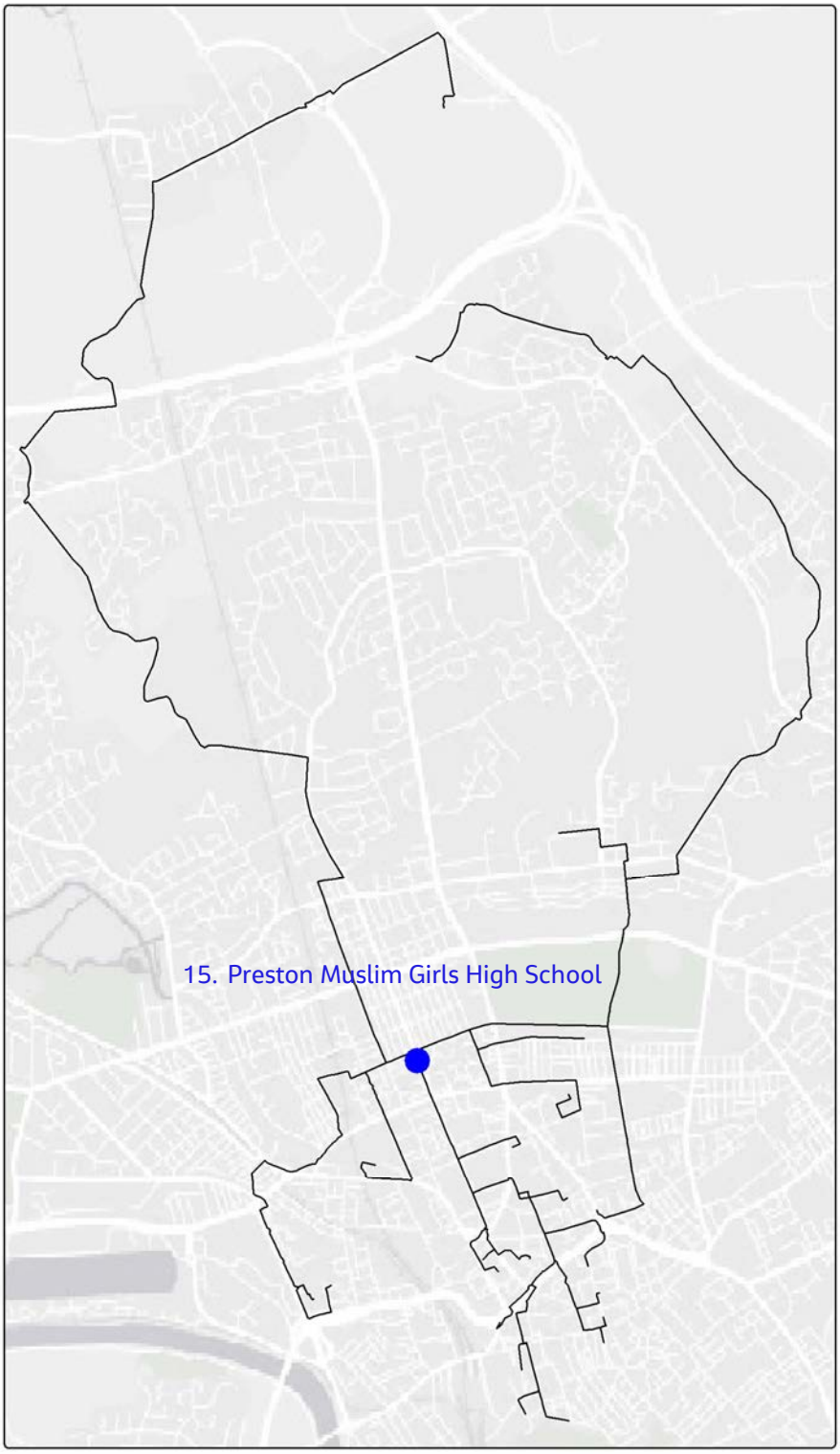

River Ribble
10. Liverpool Road (Penwortham High Street)

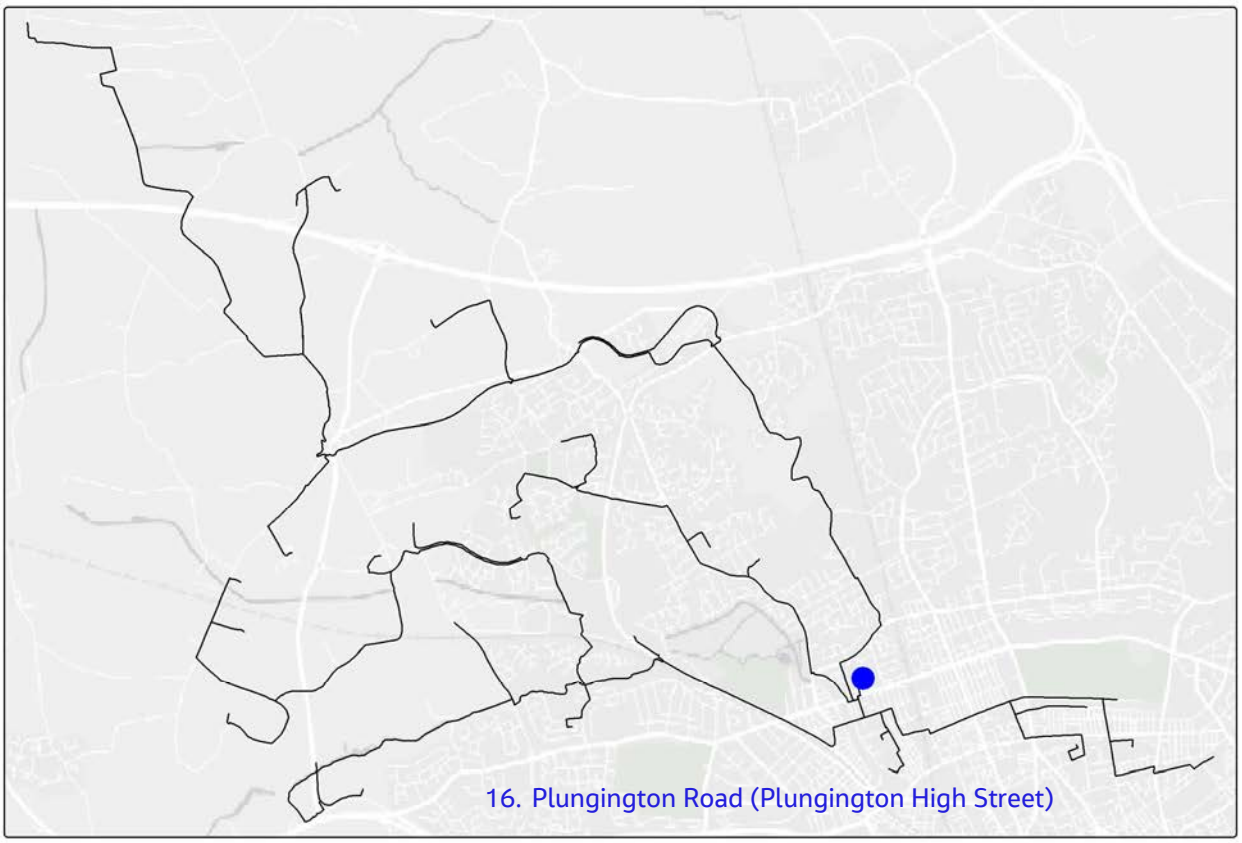

11. Preston College

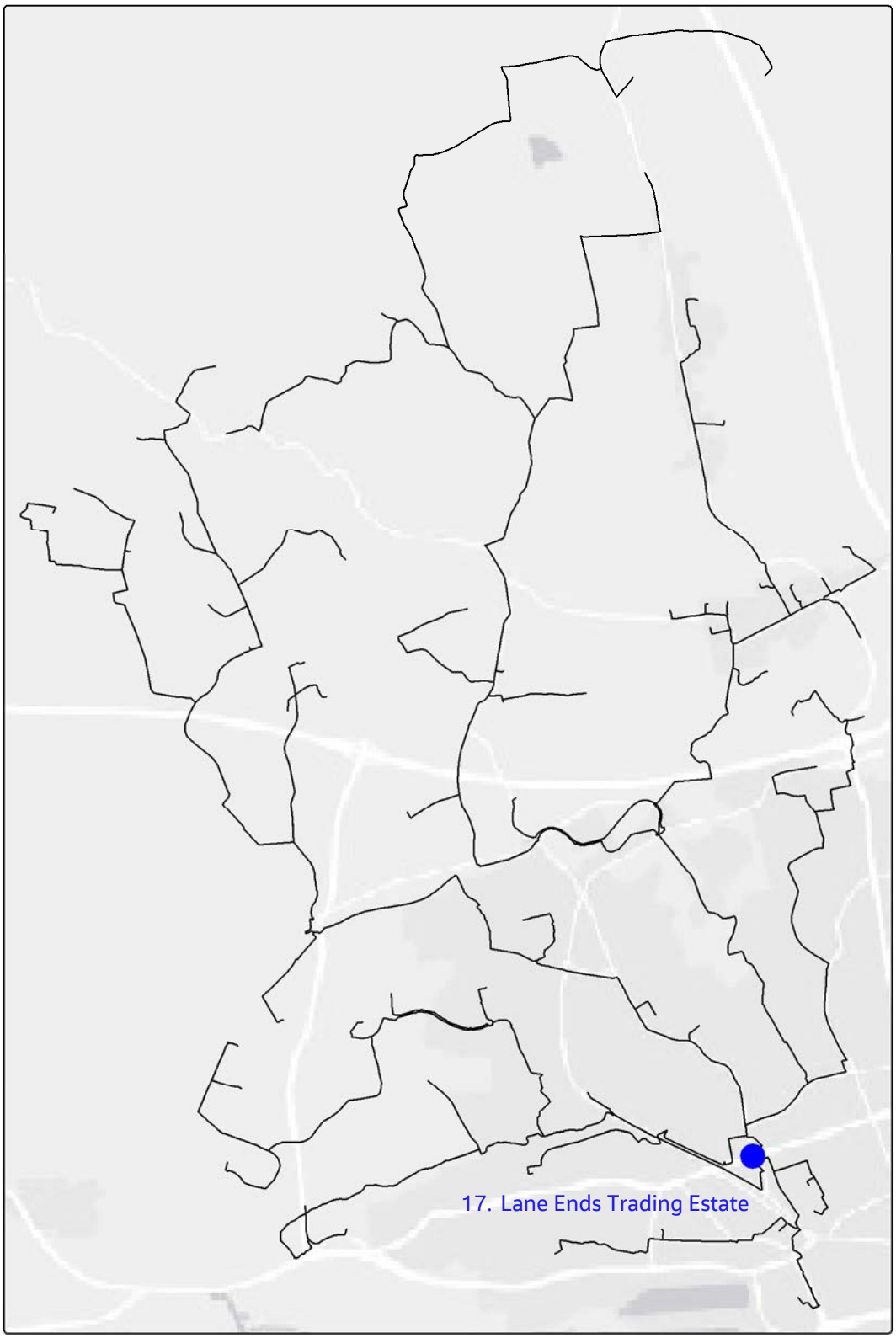

12. Fulwood Hall Hospital

14. Museum of Lancashire

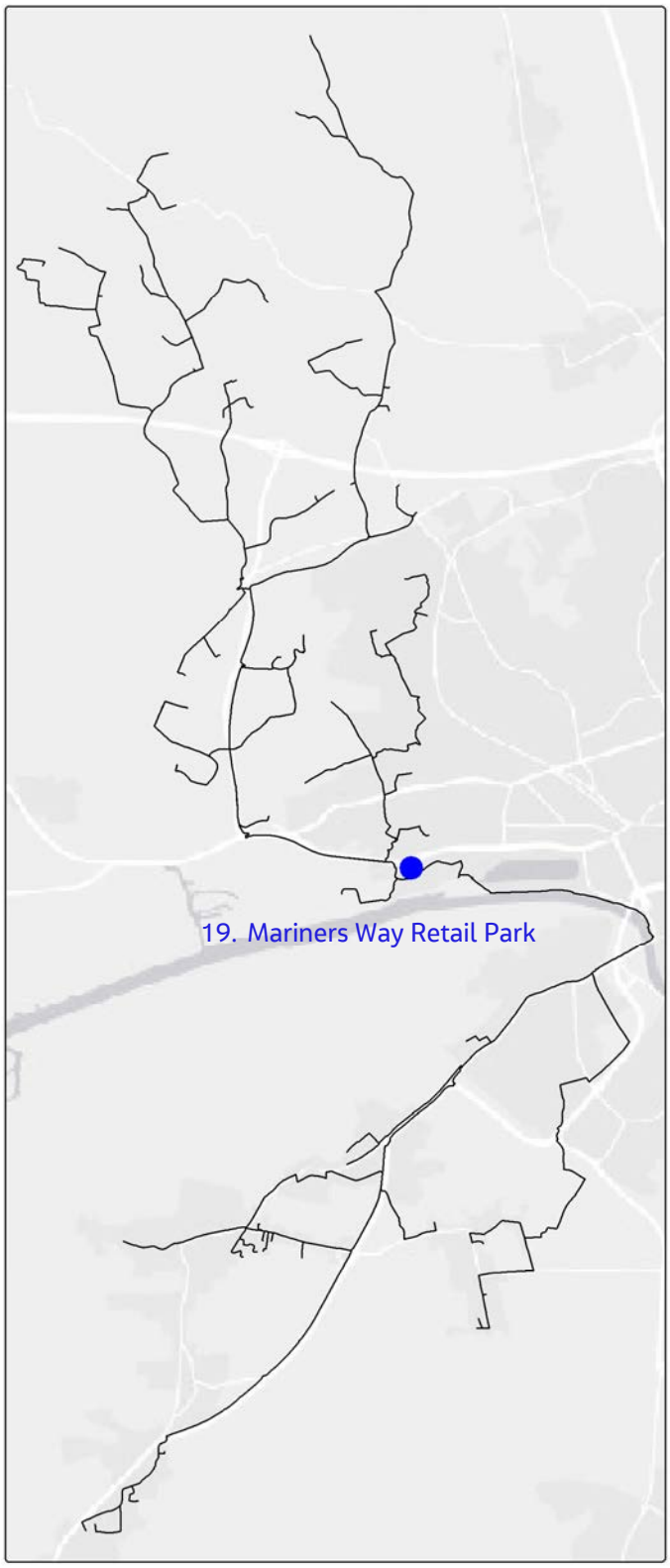

13. New Hall Lane (St Matthews High Street)

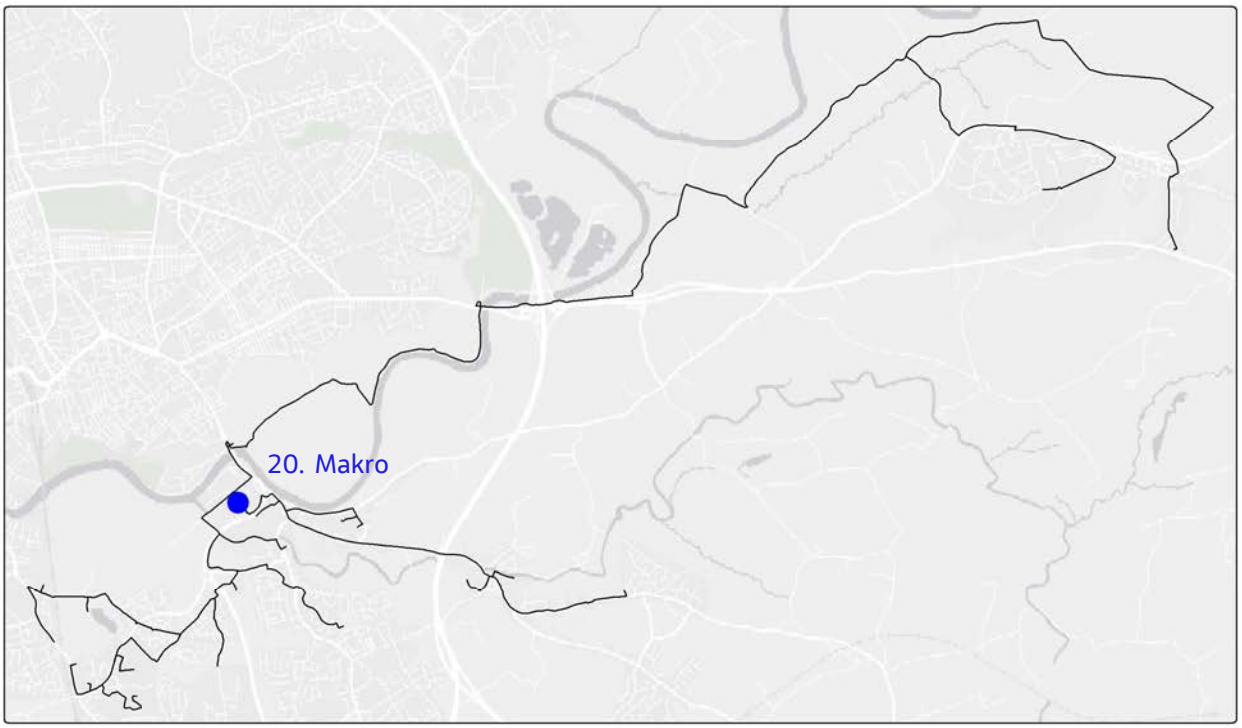

15. Preston Muslim Girls High School

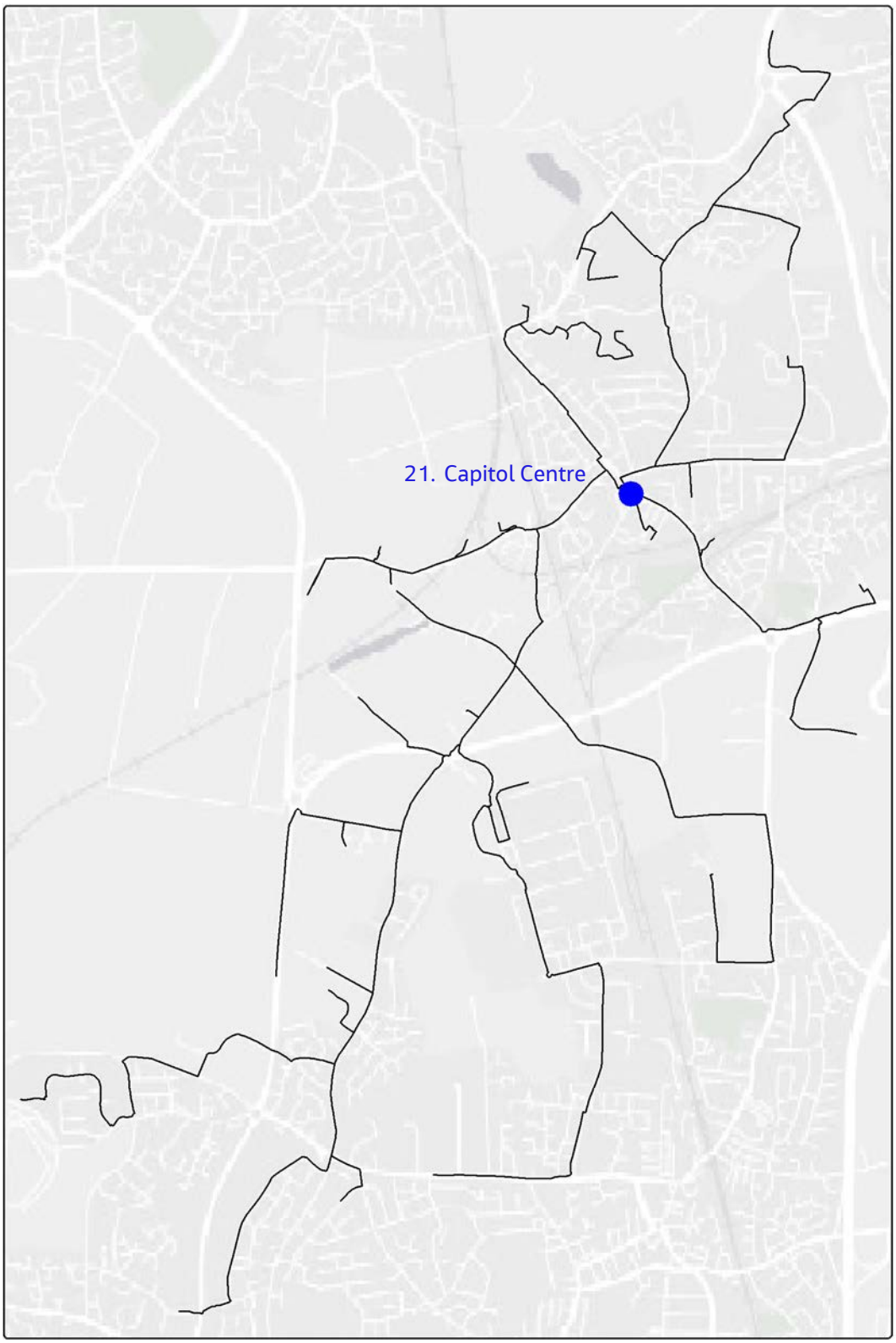

16. Plungington Road (Plungington High Street)

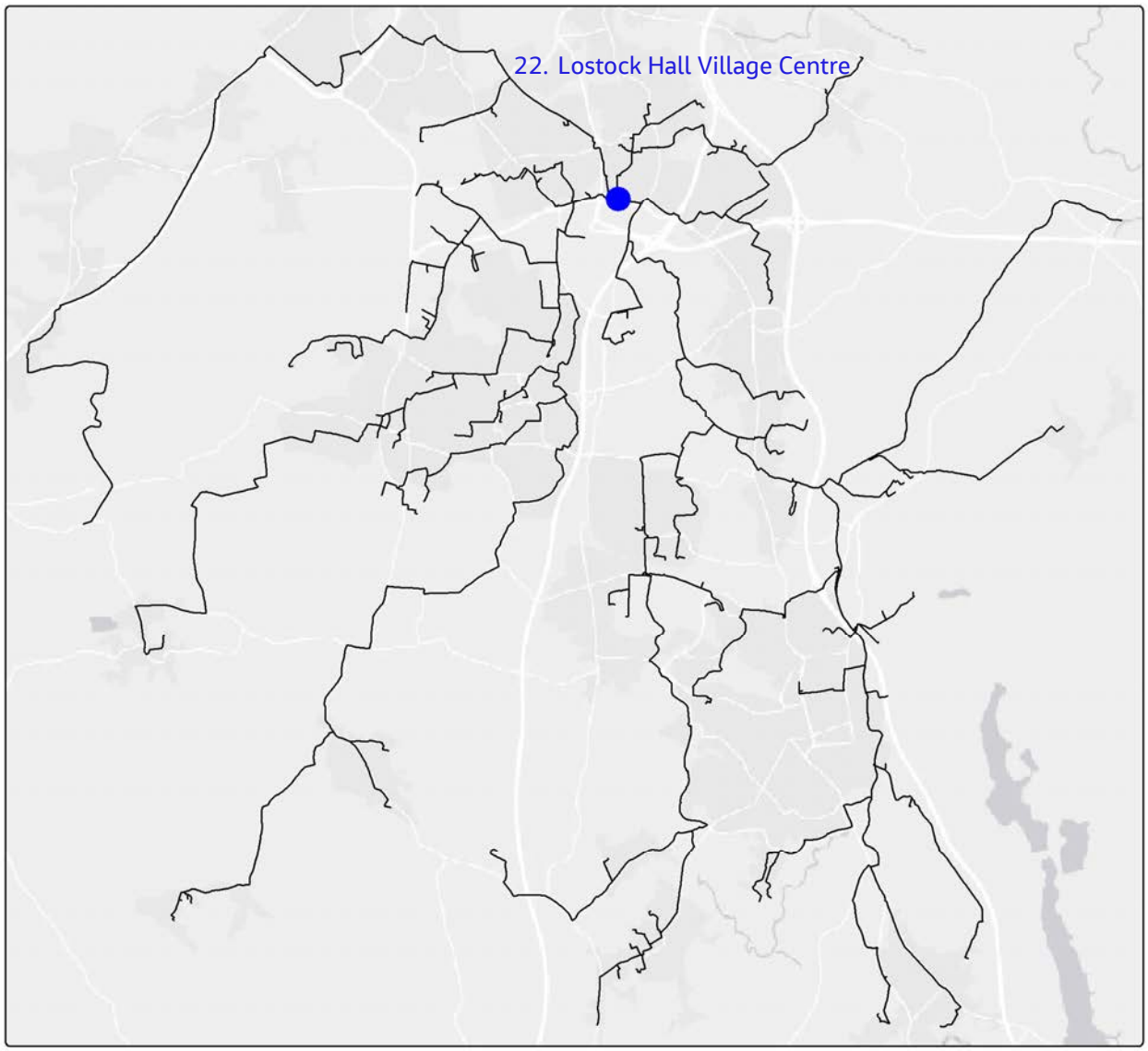

17. Lane Ends Trading Estate

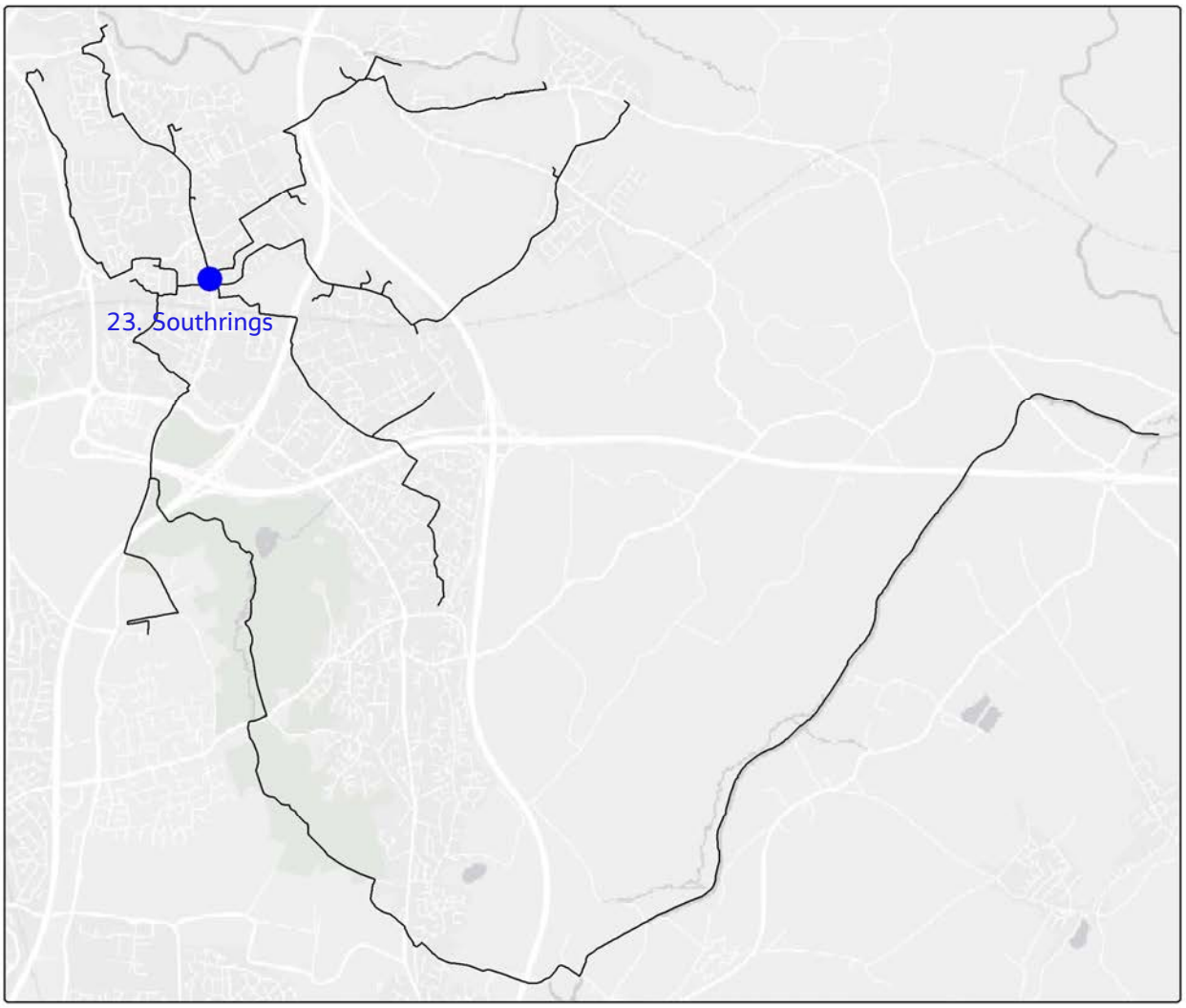
18. Lane Ends local centre

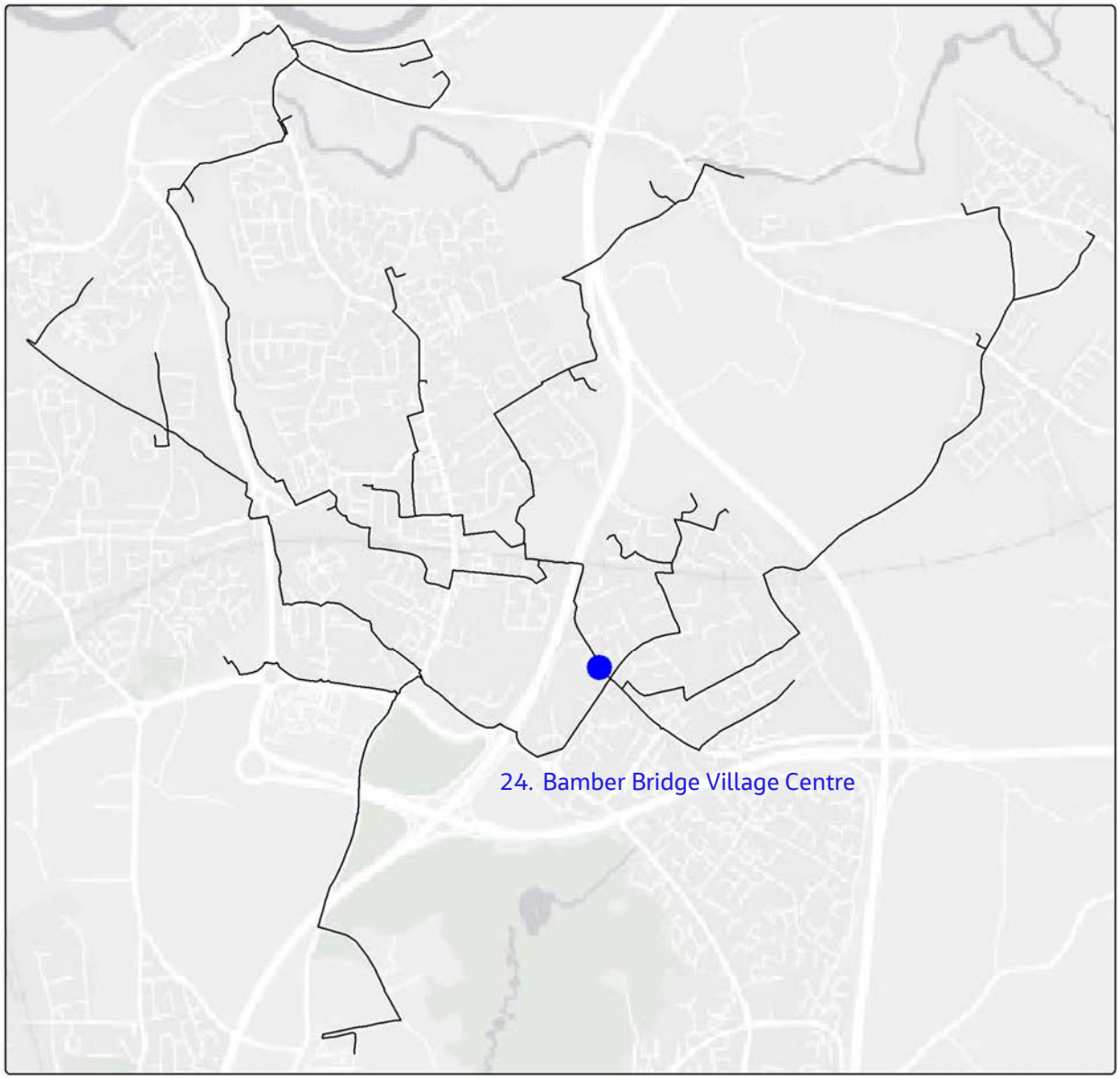

19. Mariners Way Retail Park

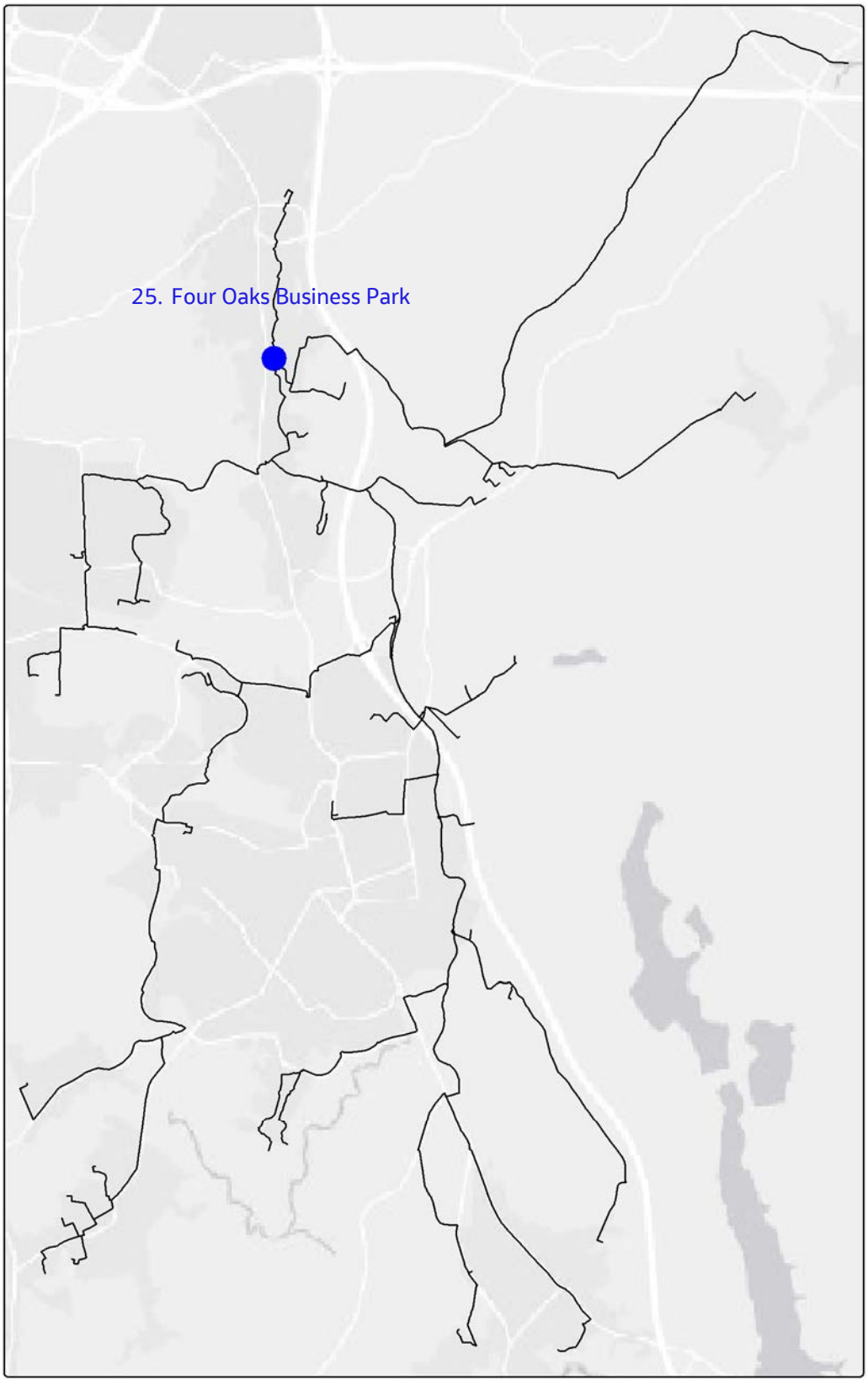

20. Makro

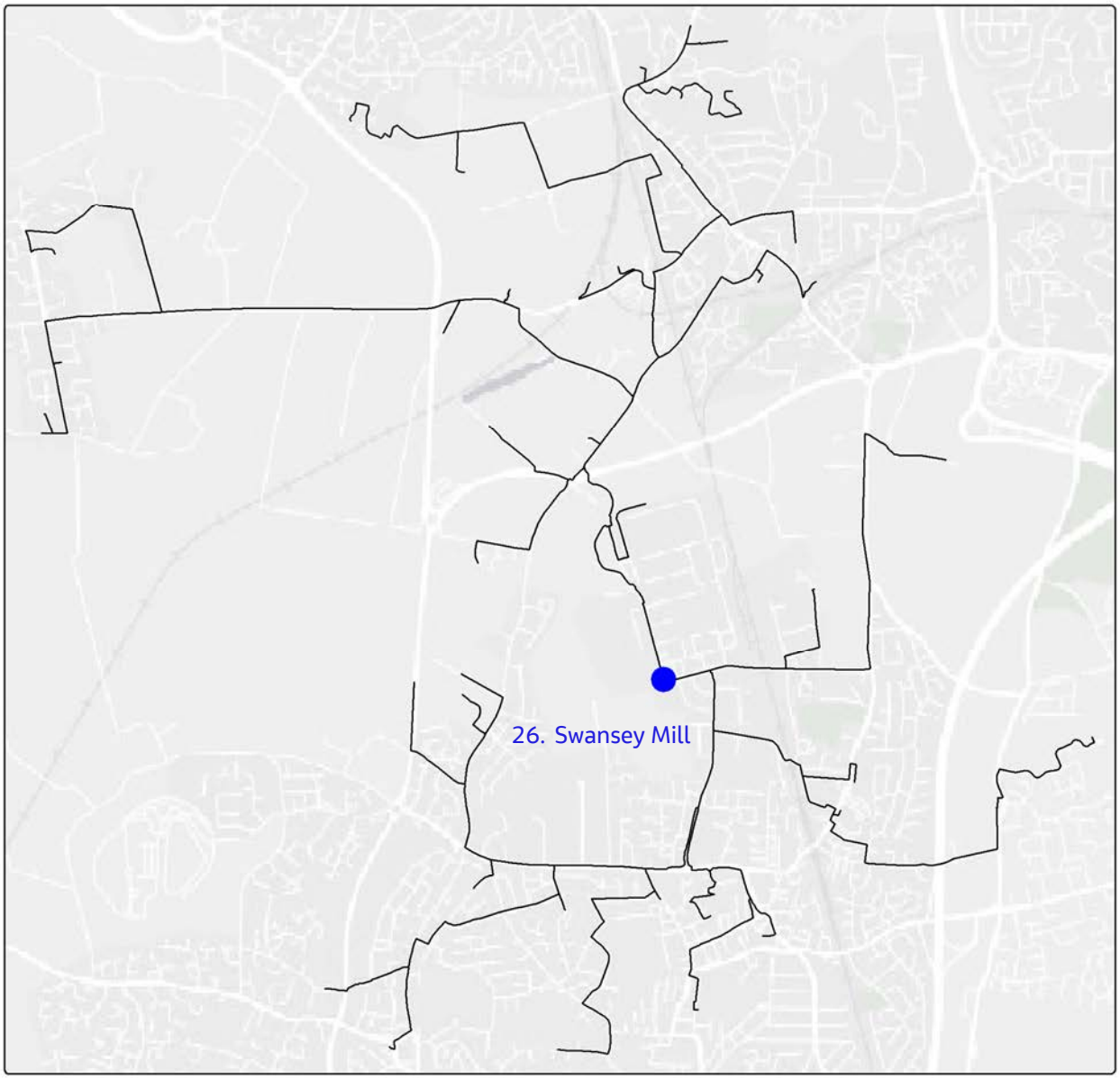

21. Capitol Centre

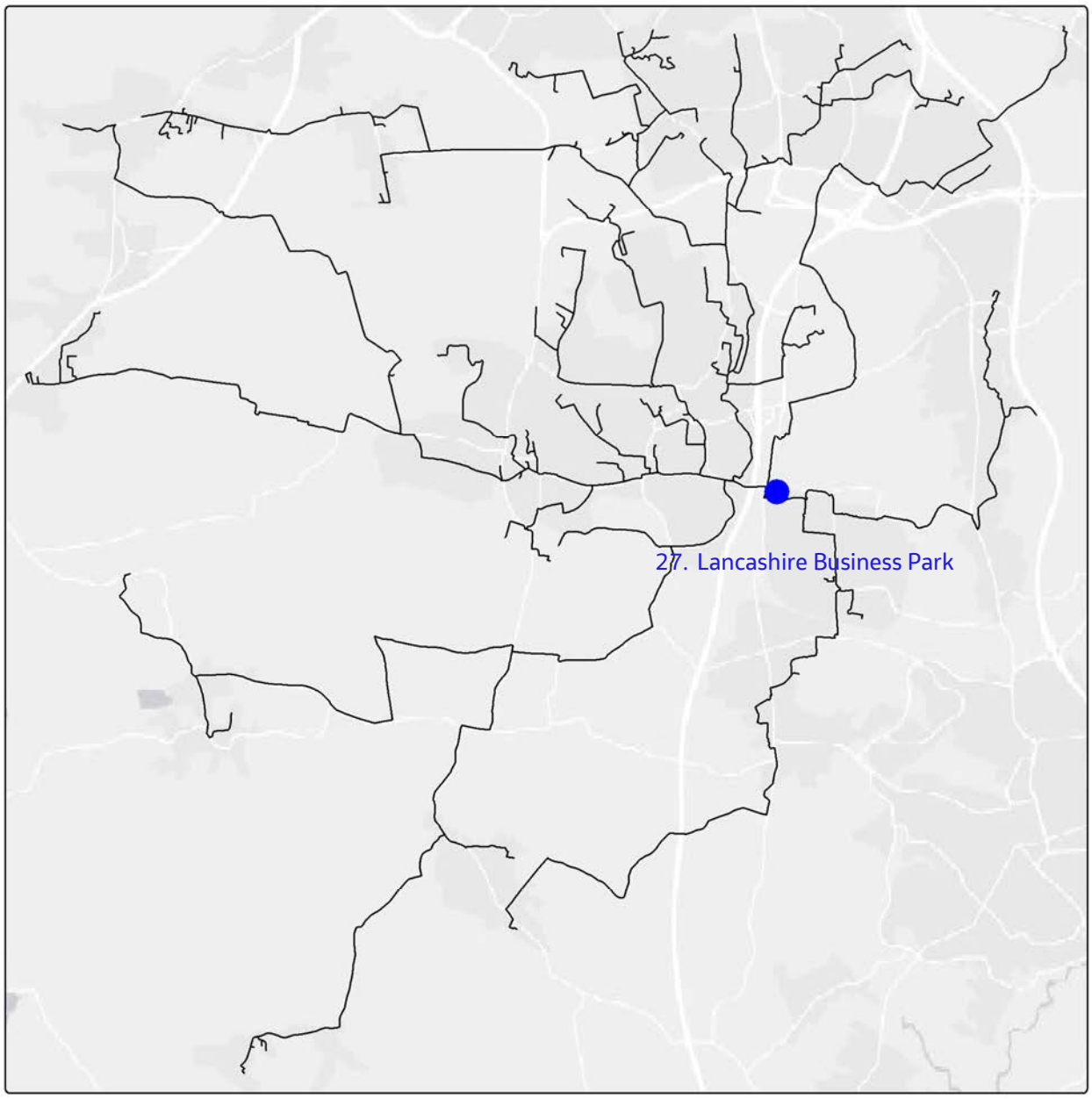

22. Lostock Hall Village Centre

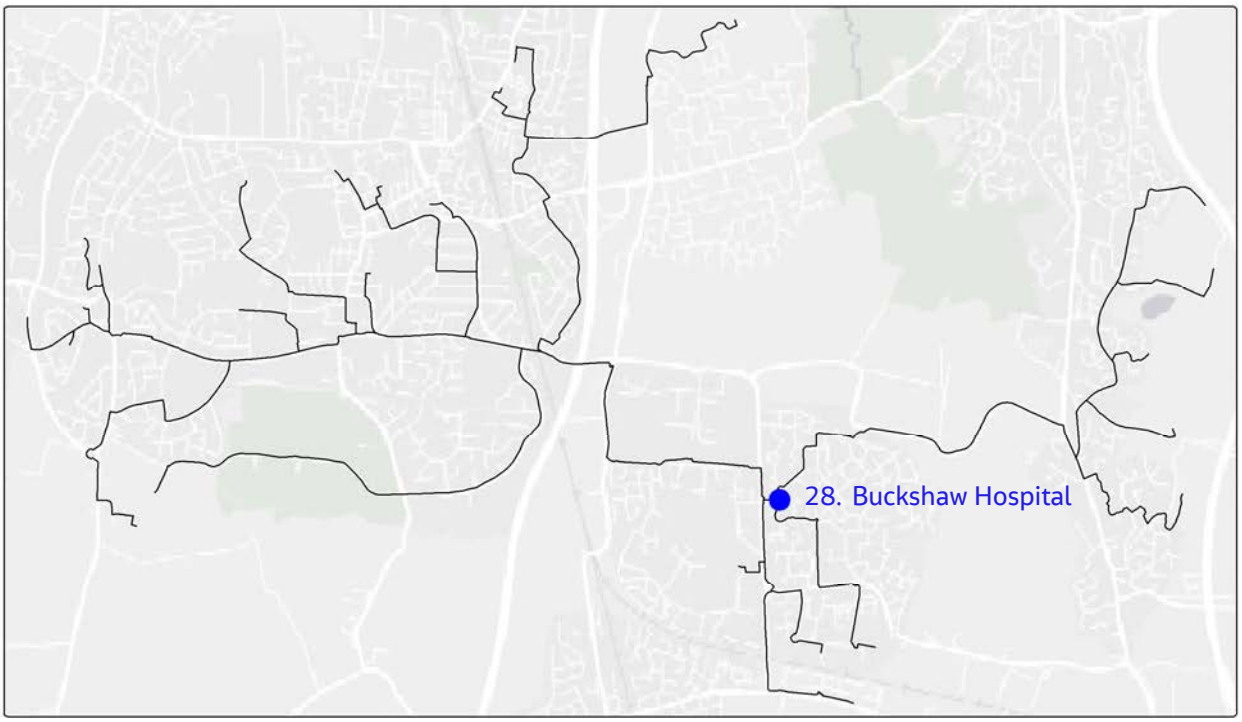

23. Southrings

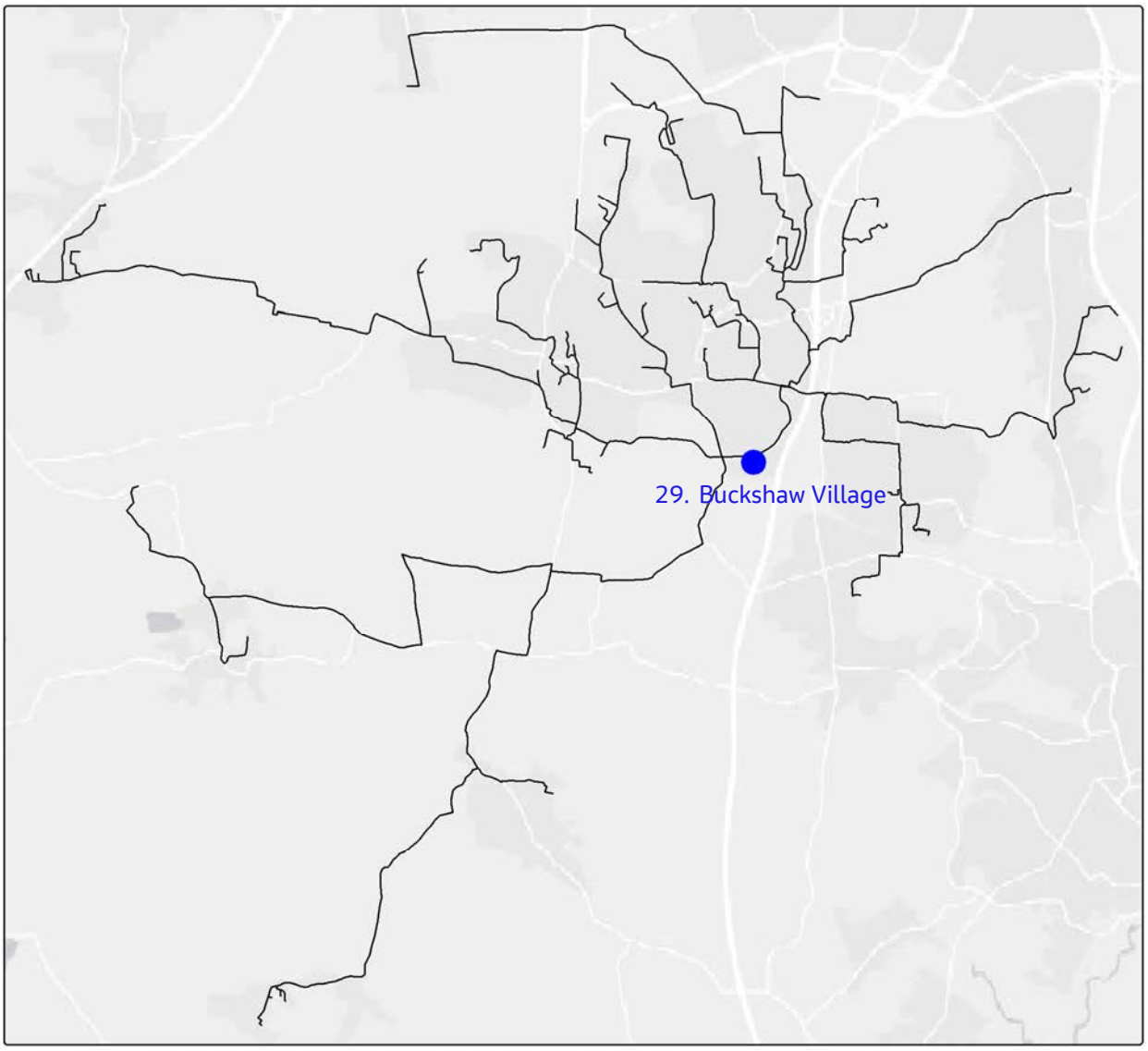

24. Bamber Bridge Village Centre

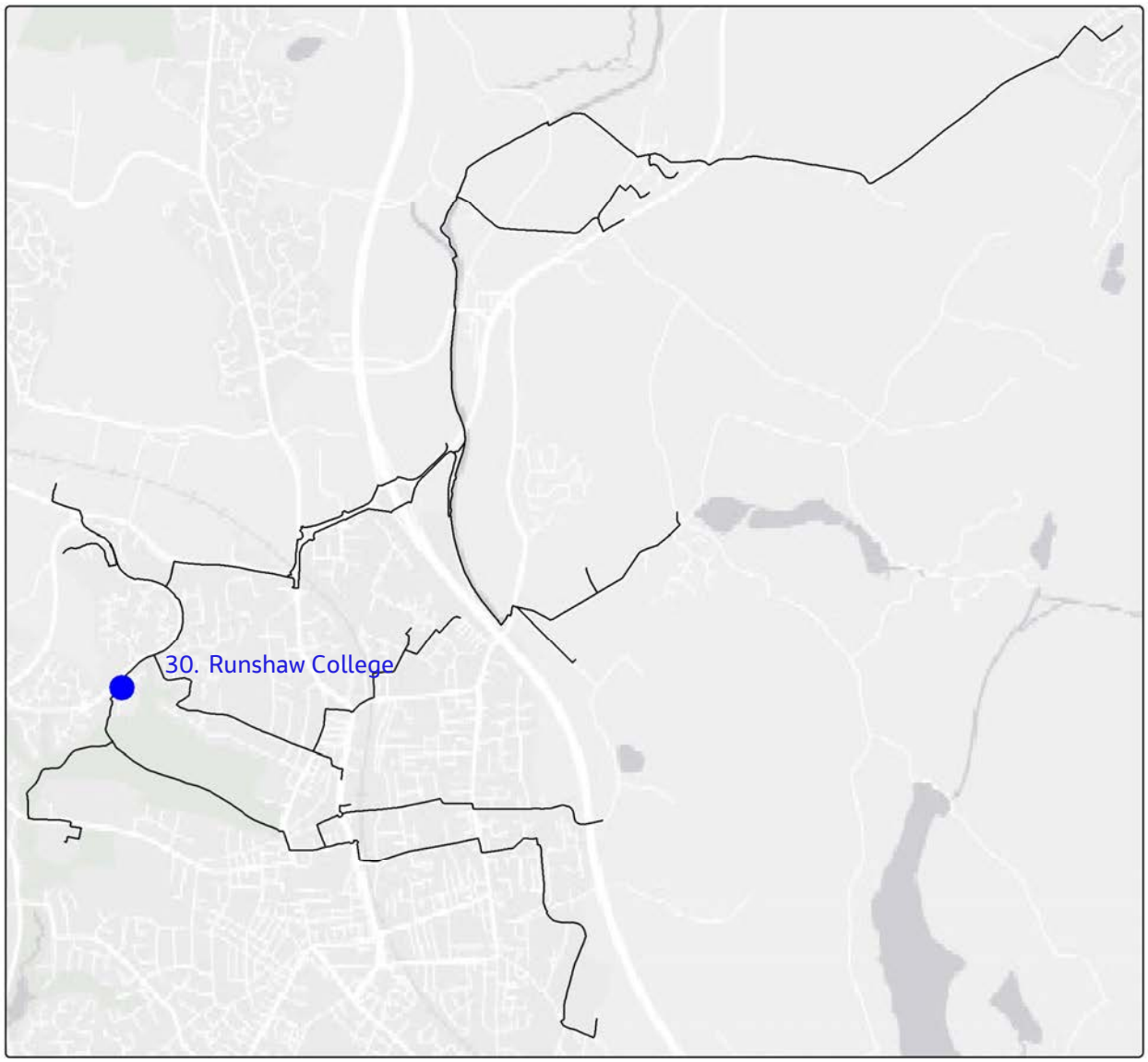

25. Four Oaks Business Park

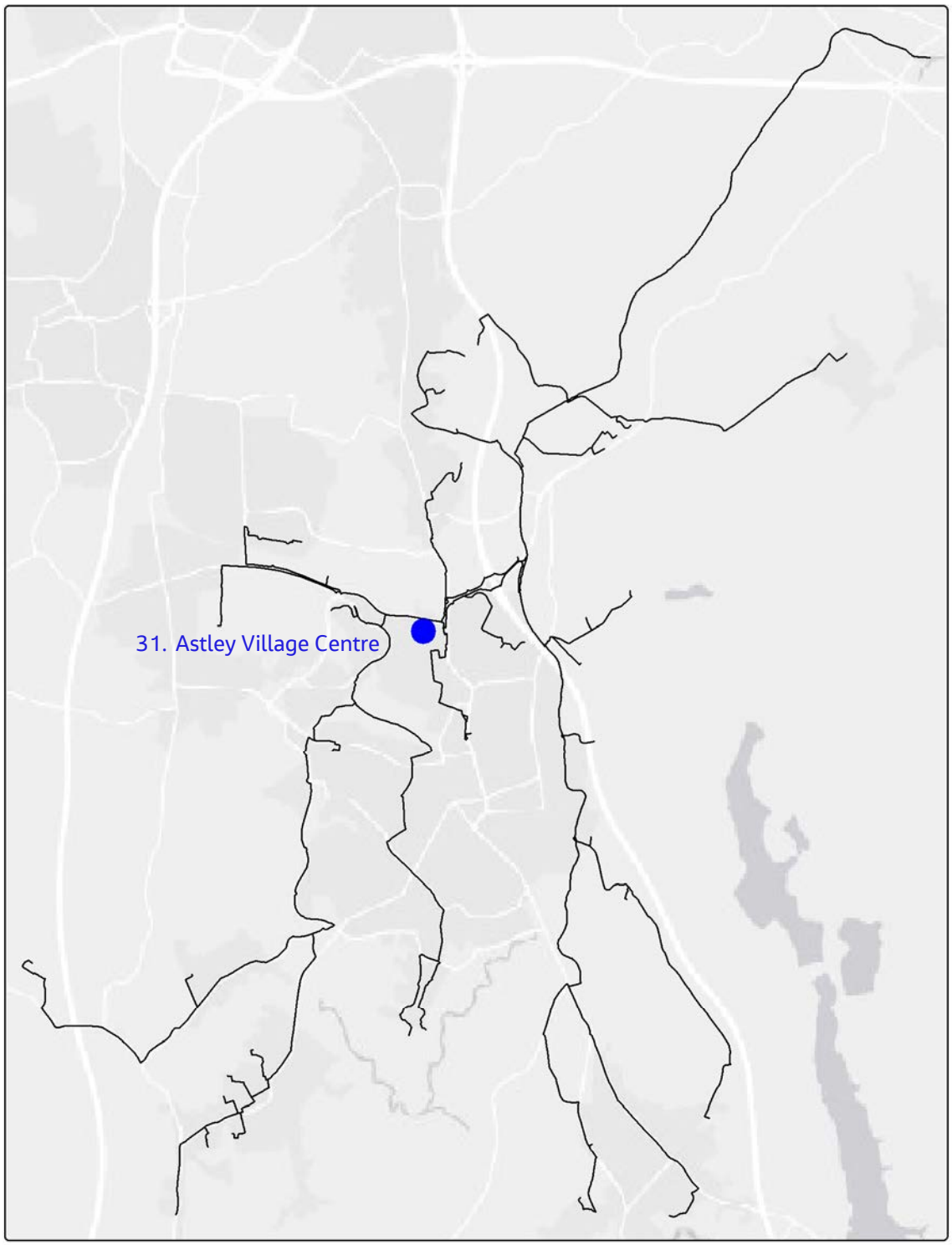

26. Swansey Mill

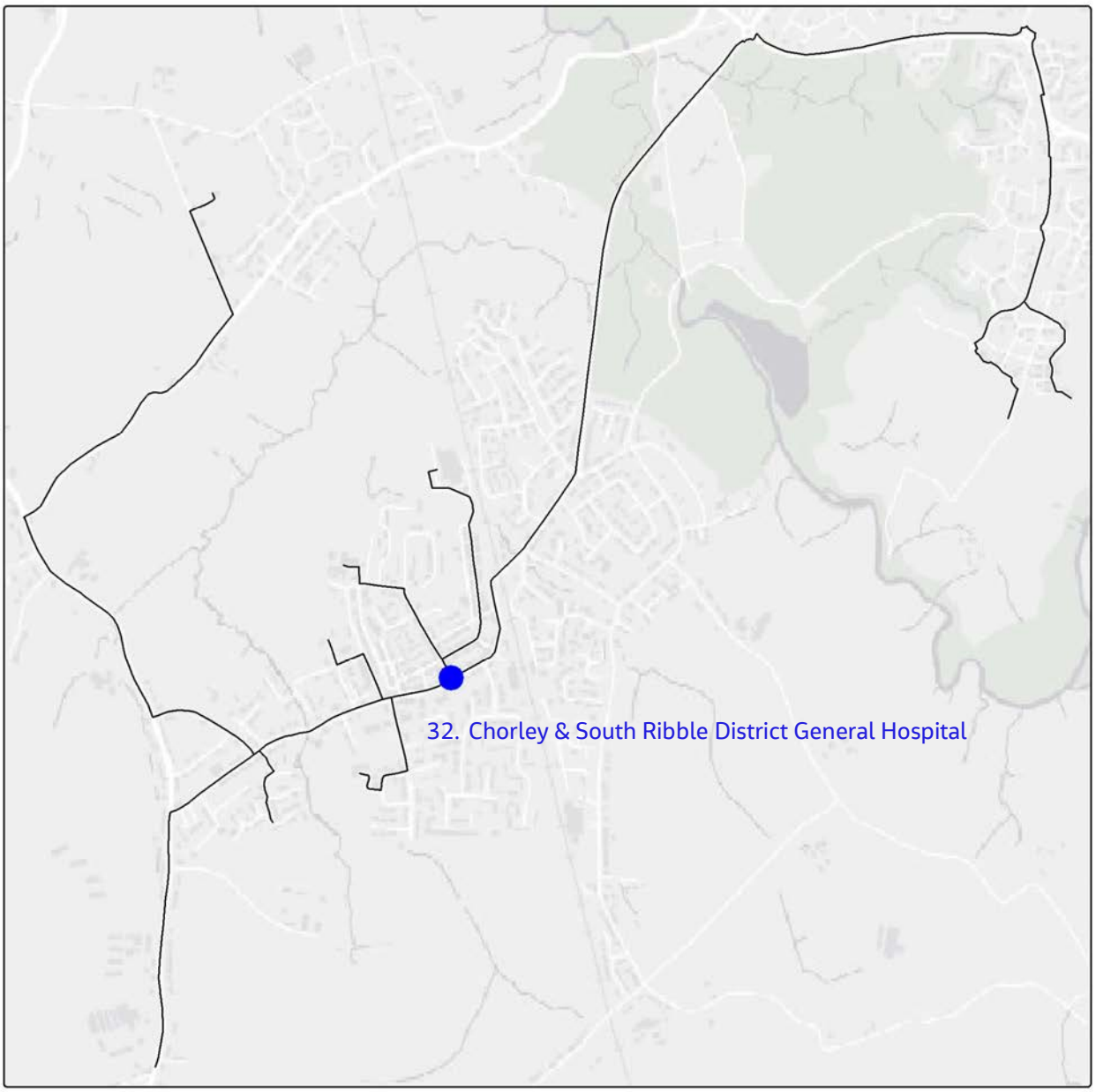

27. Lancashire Business Park

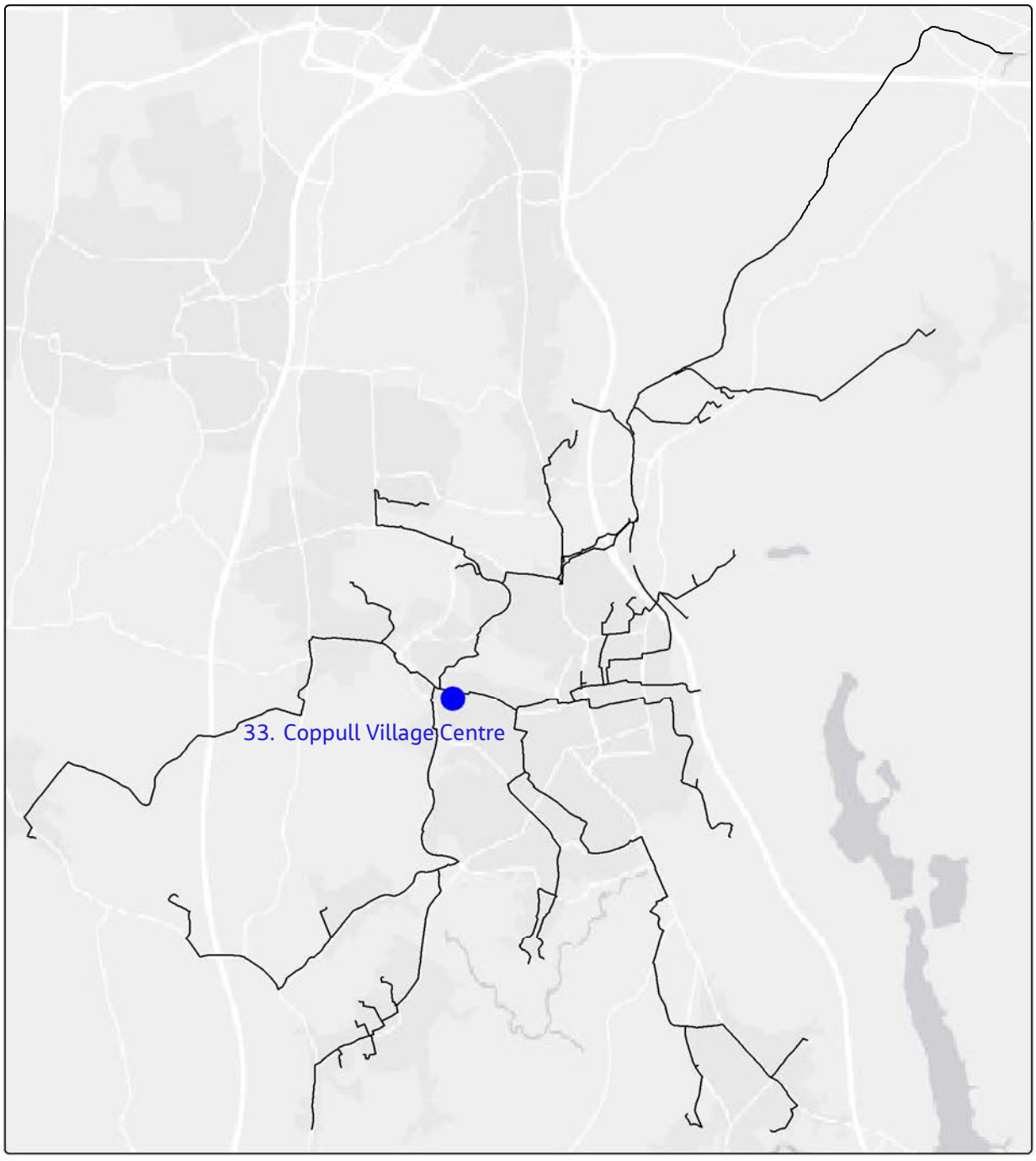

28. Buckshaw Hospital

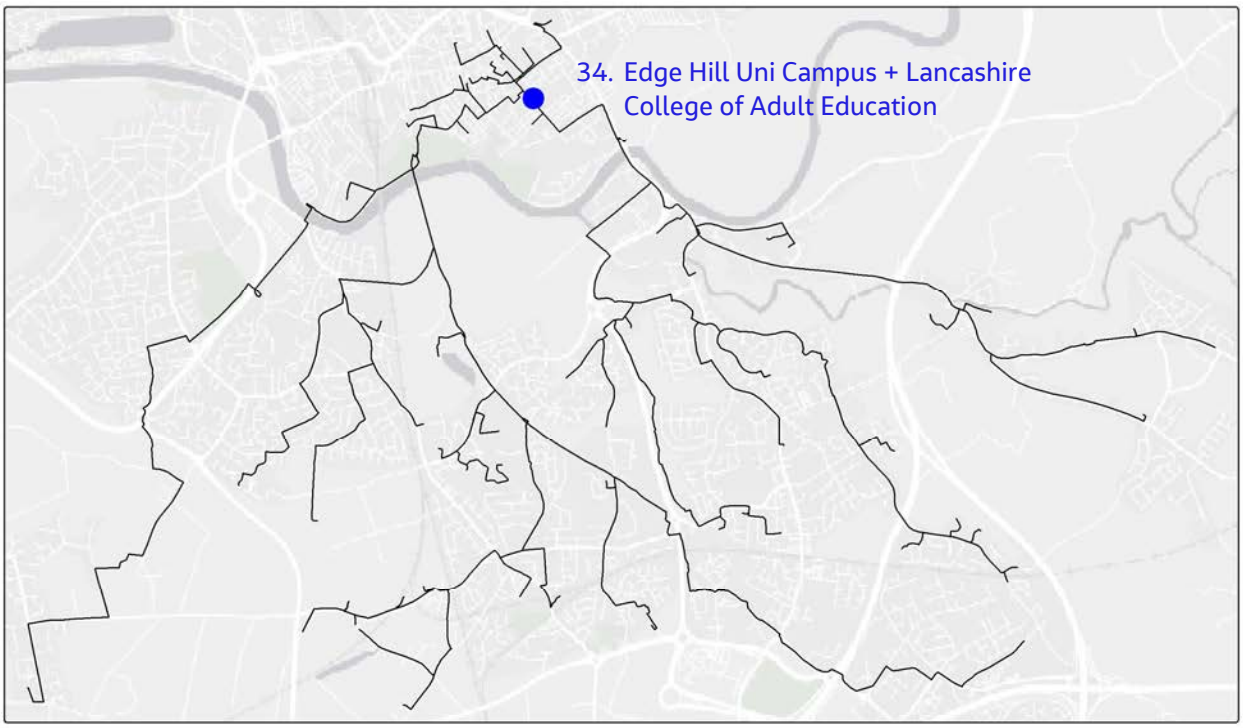

29. Buckshaw Village

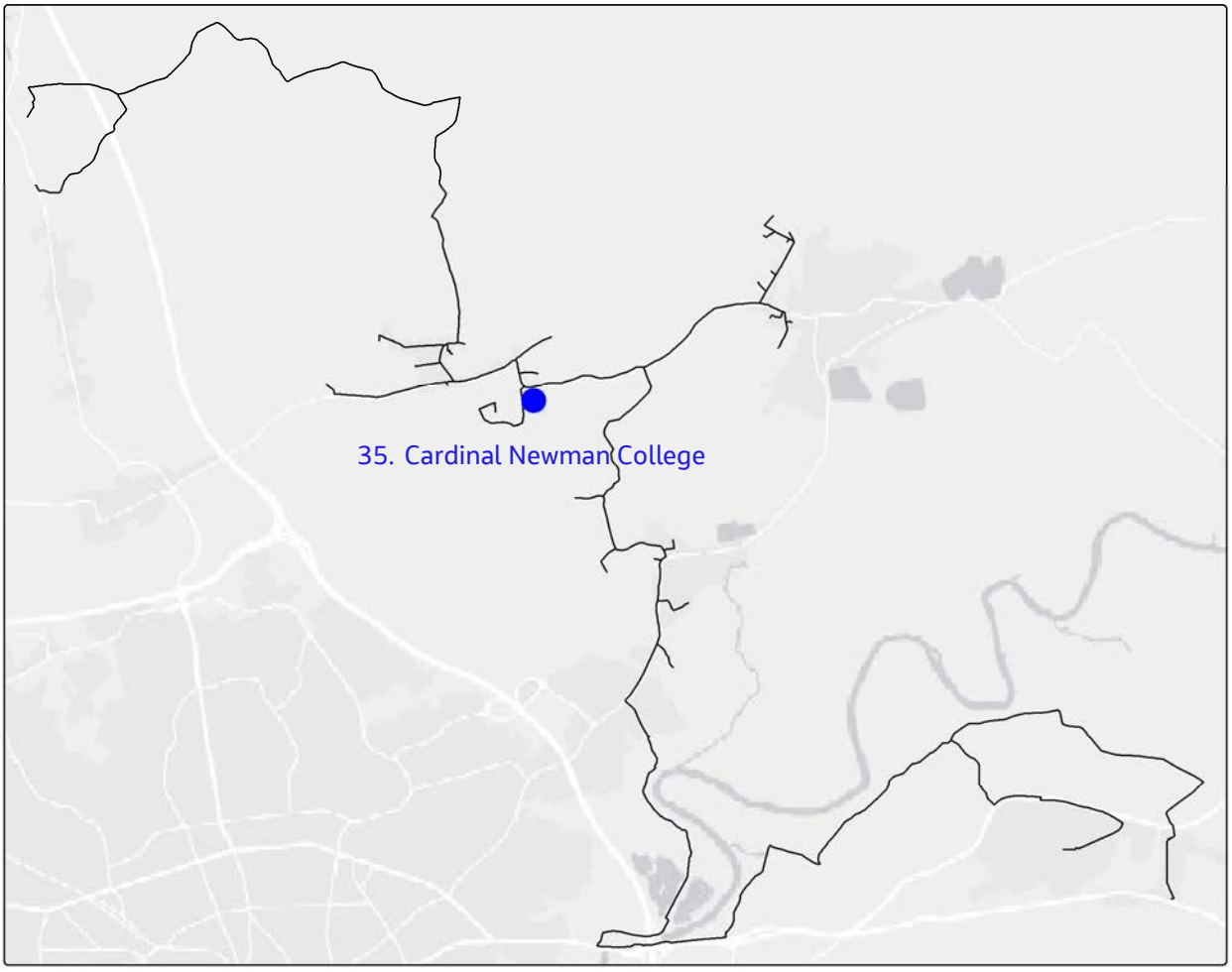

30. Runshaw College

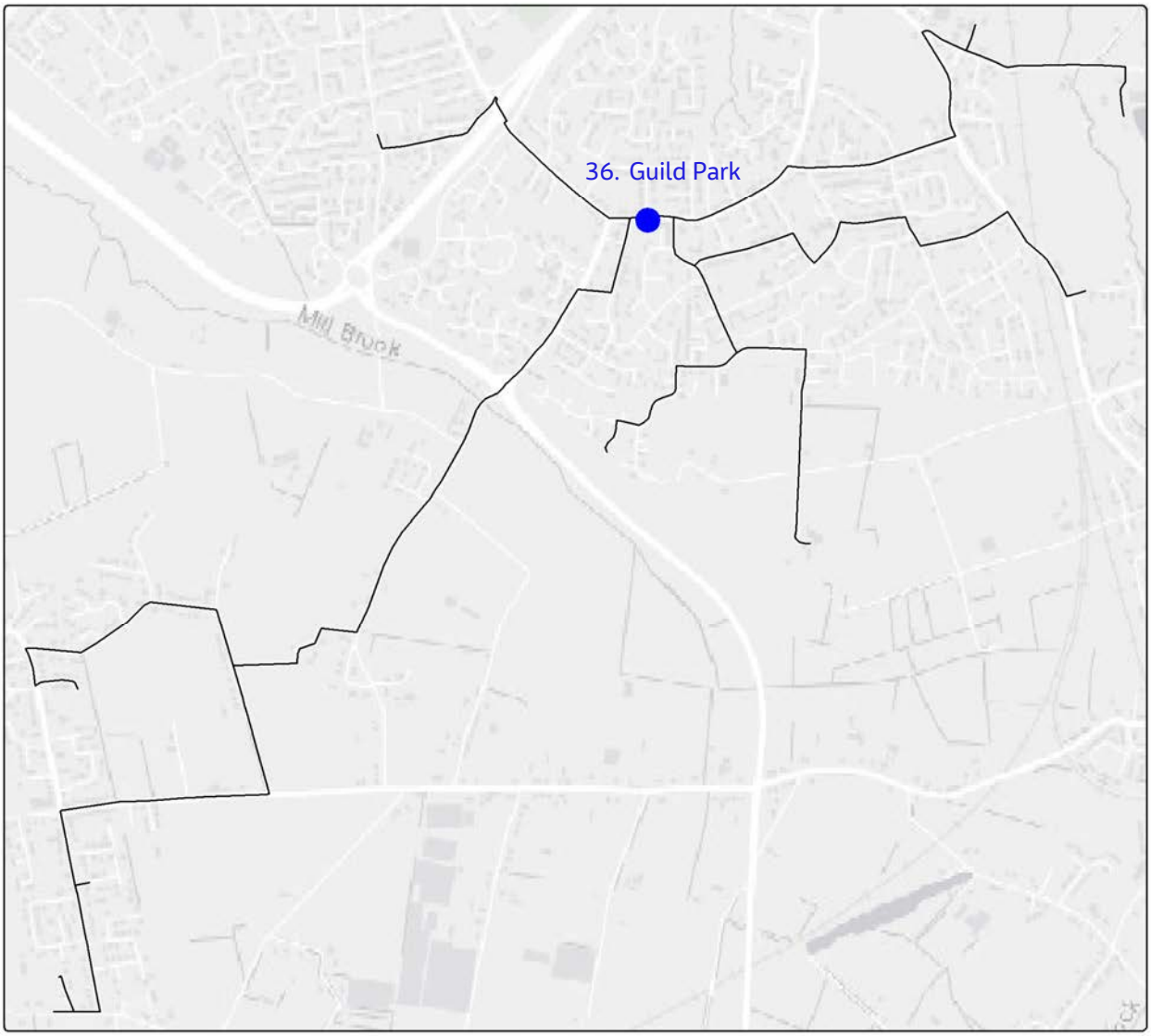

31. Astley Village Centre

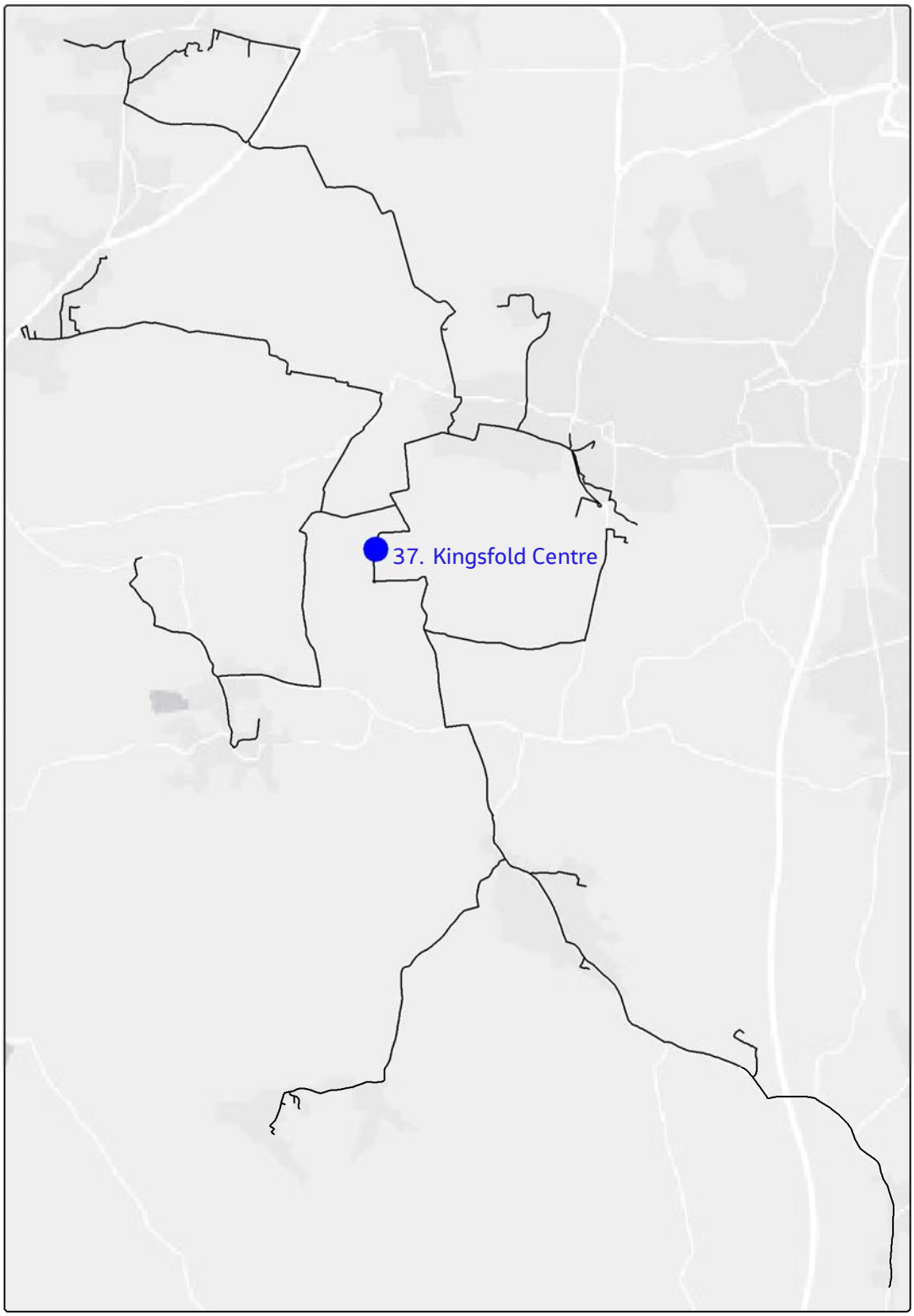

32. Chorley & South Ribble District General Hospital

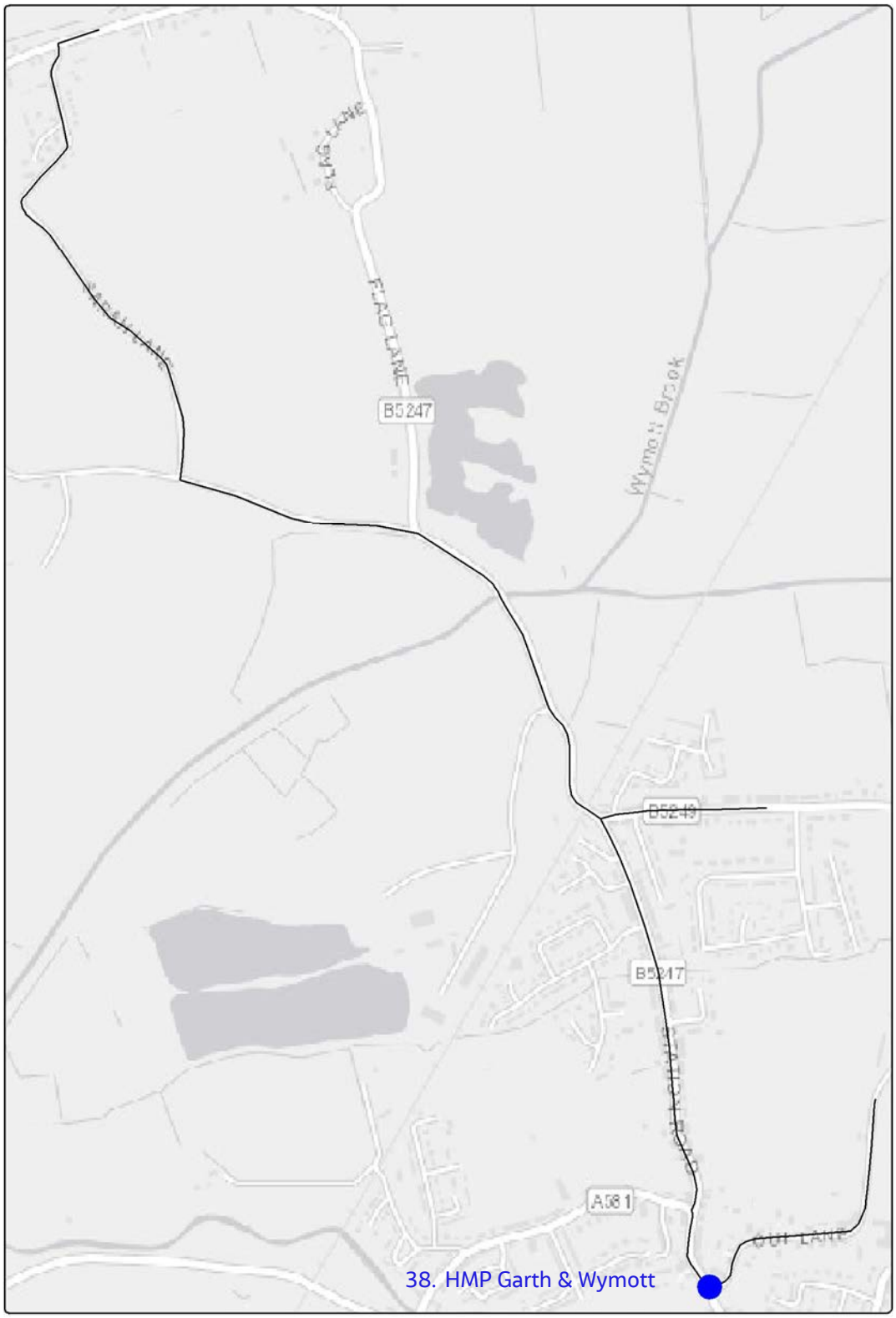

33. Coppull Village Centre

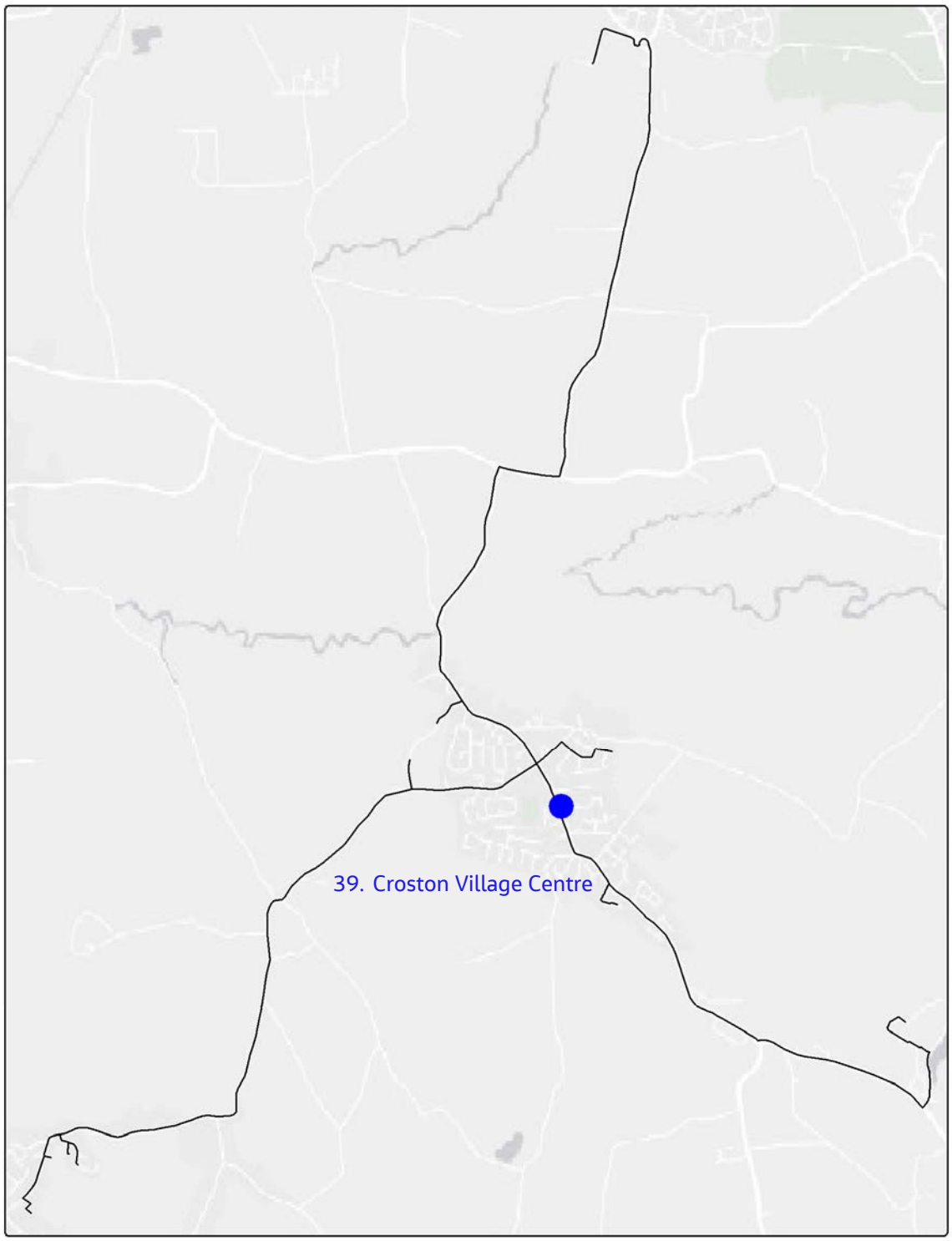

34. Edge Hill Uni Campus + Lancashire College of Adult Education

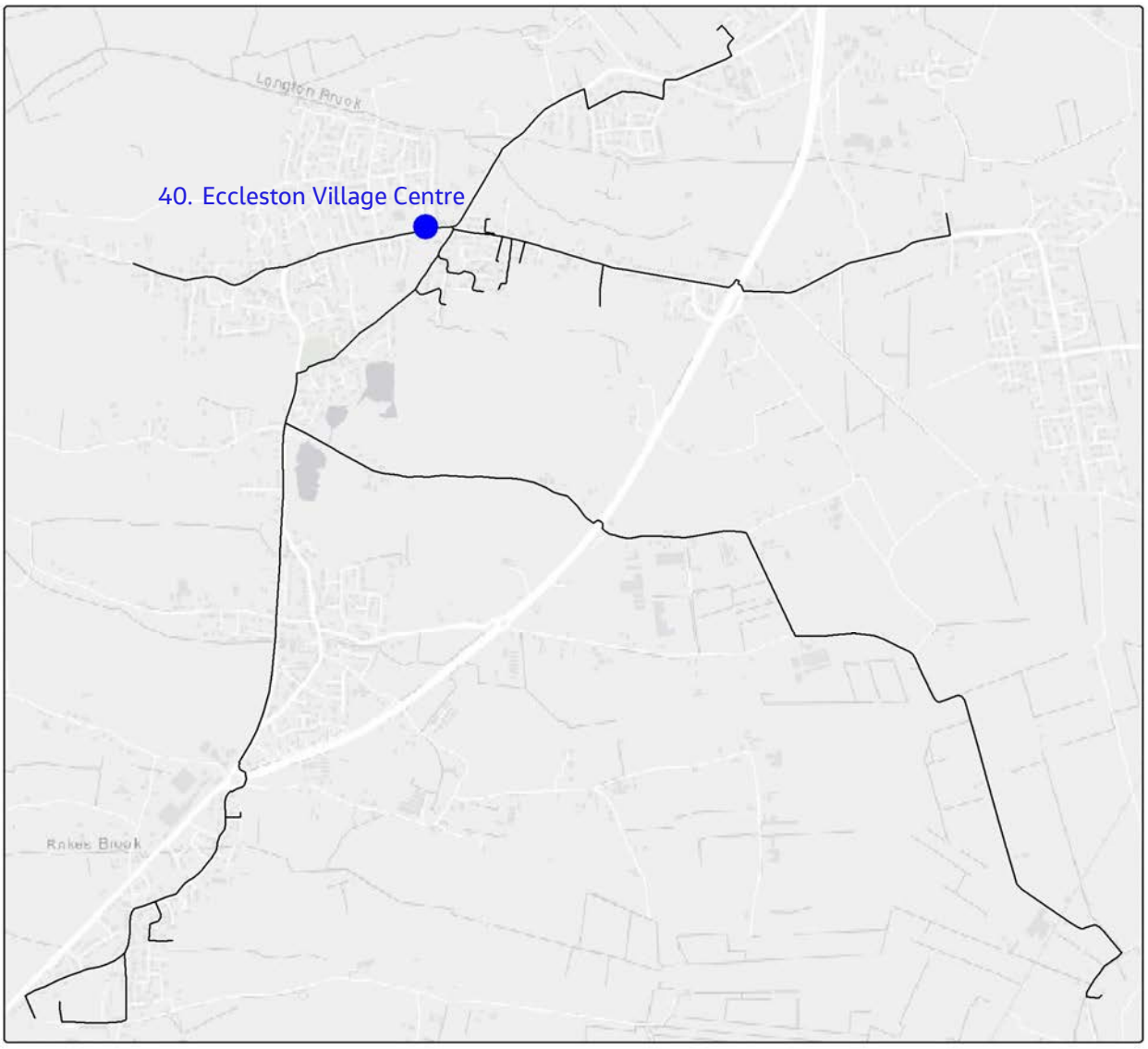

35. Cardinal Newman College

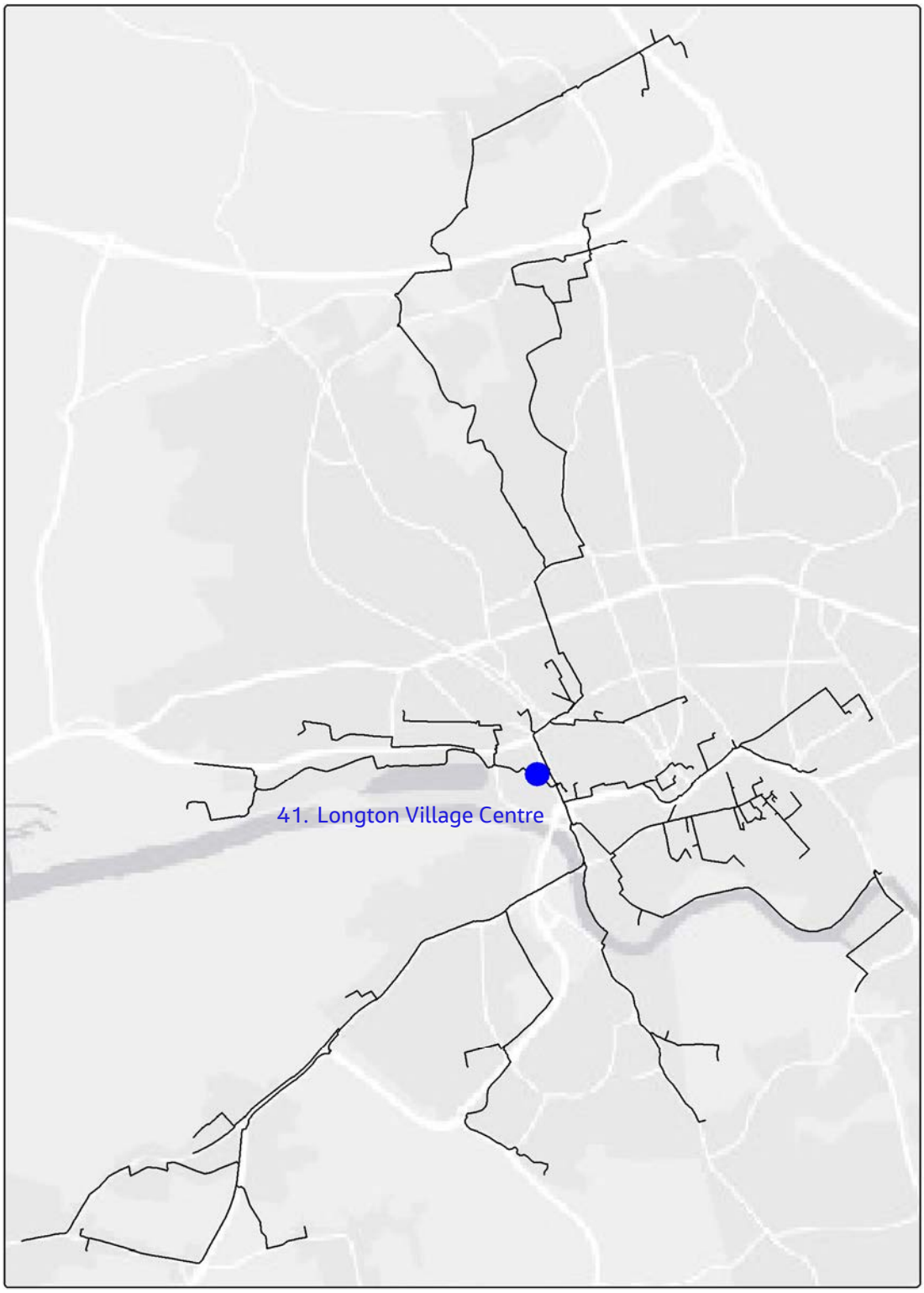

36. Guild Park
Mill Brook

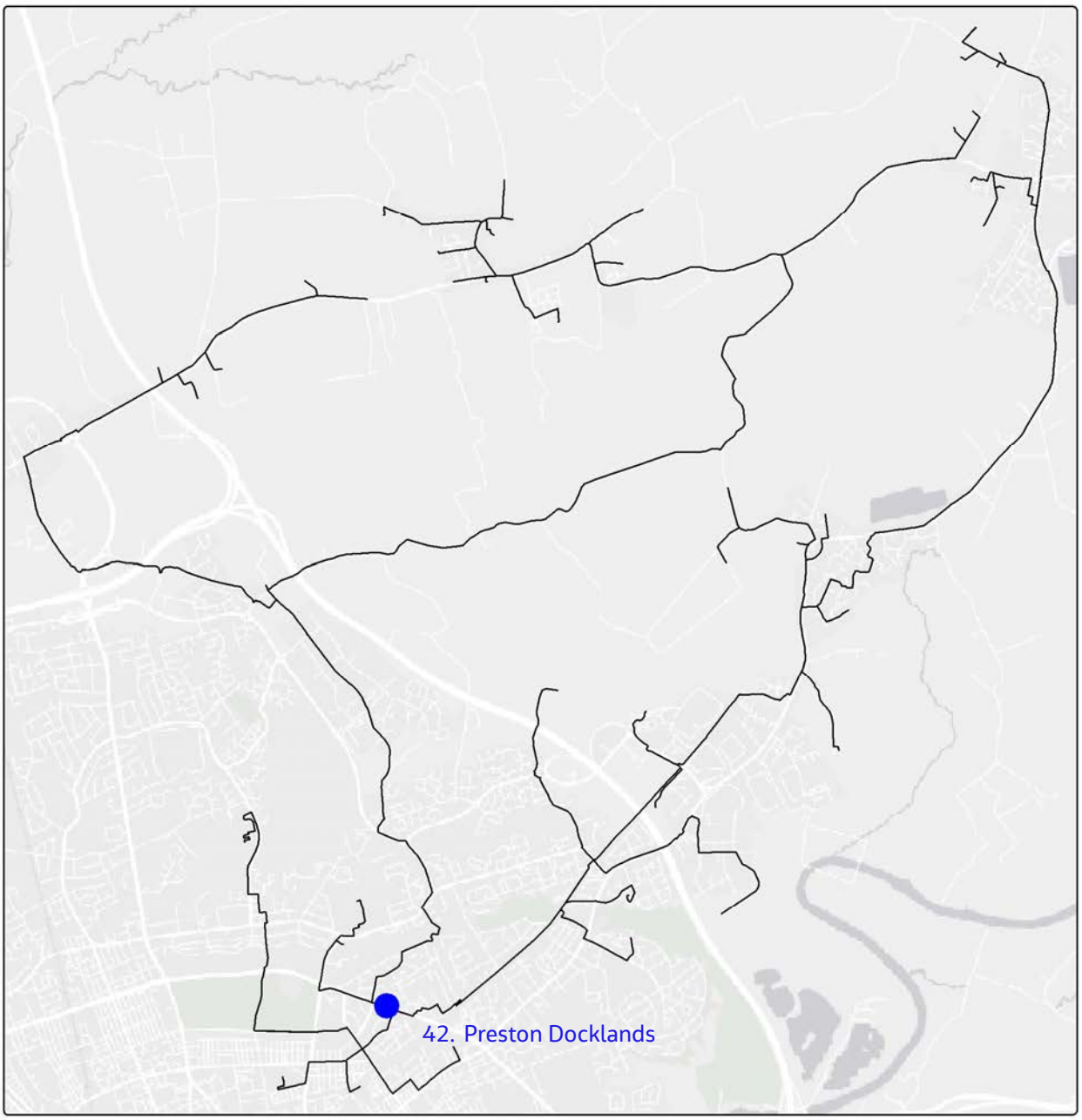

37. Kingsfold Centre

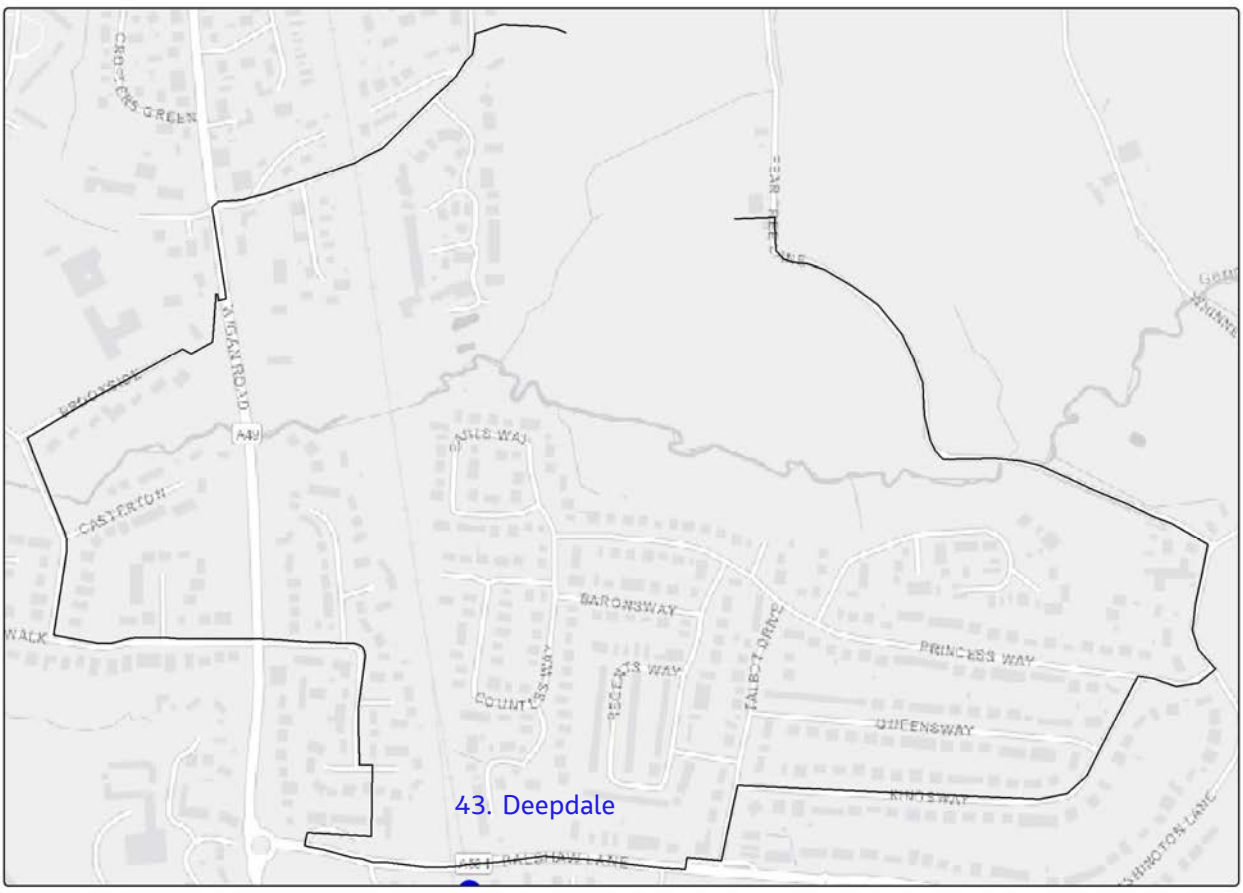

FLAG LANE
B5247
B5249
B5247
A581
38. HMP Garth & Wymott

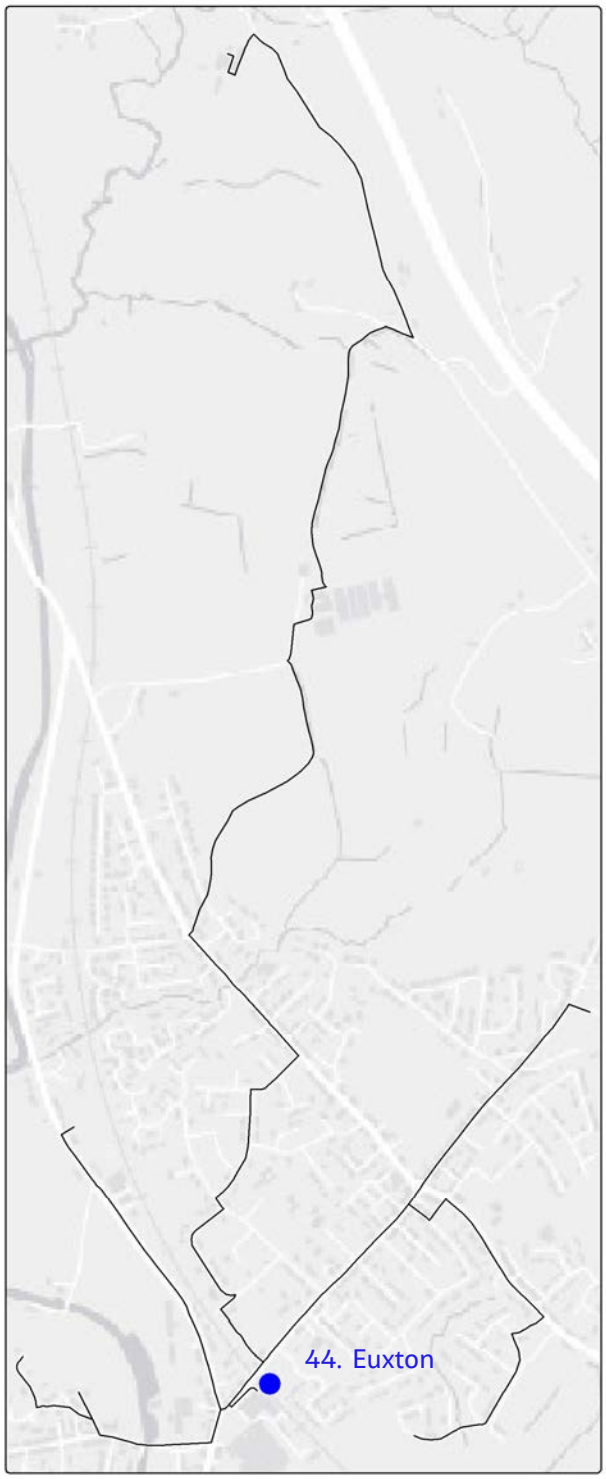

39. Croston Village Centre


40. Eccleston Village Centre
Longton Brook
Rakes Brook


41. Longton Village Centre


42. Preston Docklands


43. Deepdale


44. Euxton

Appendix B

Figure A-3-1 shows the RAG classification of the sites in Preston, based on the delay and VoC obtained from the Saturn Base model for the 2019 AM peak period.

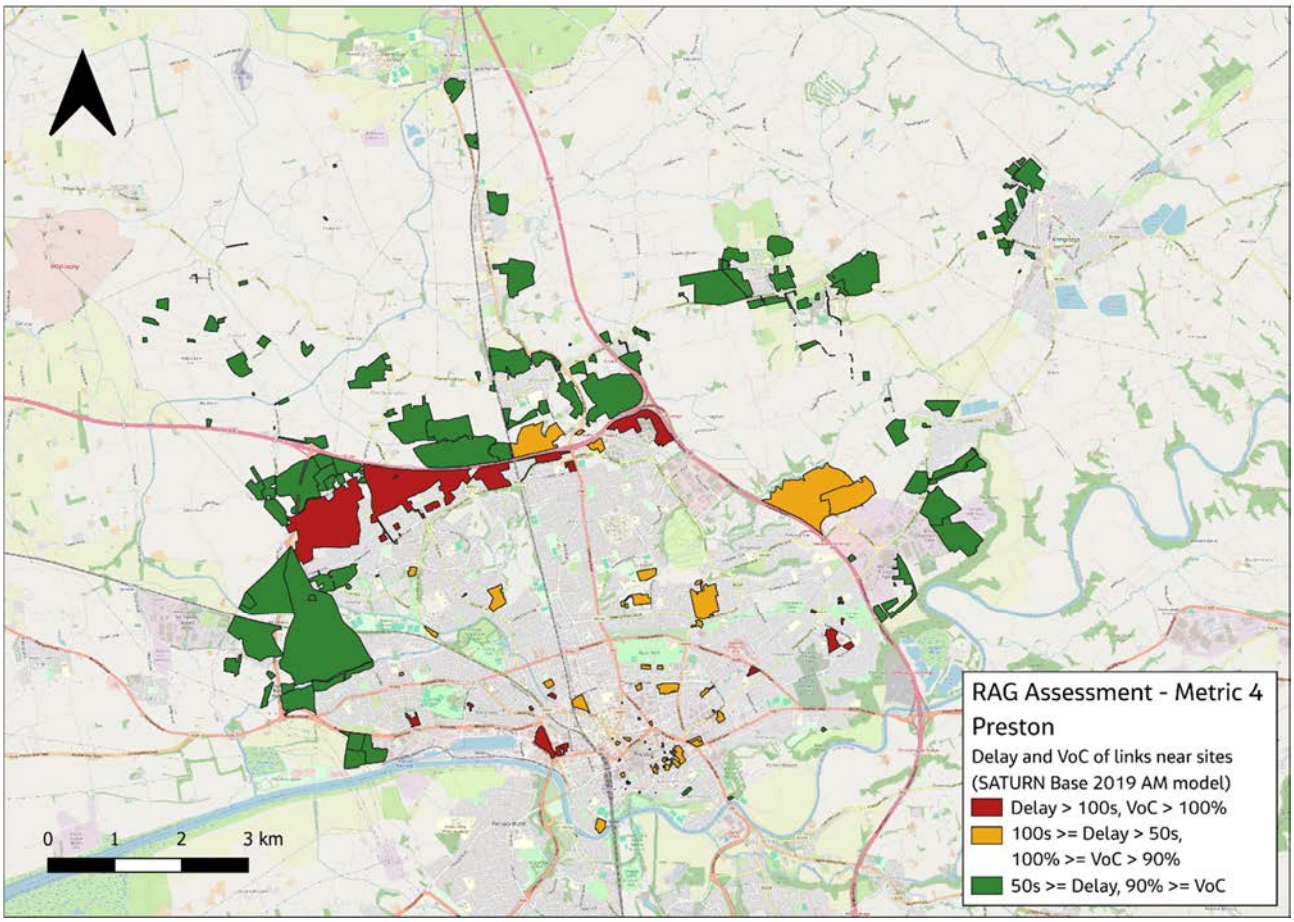


Figure A-3-1 Metric 4 RAG assessment for Preston with 2019 data

Figure A-3-2 shows the RAG classification of the sites in South Ribble, based on the delay and VoC obtained from the Saturn Base model for the 2019 AM peak period.

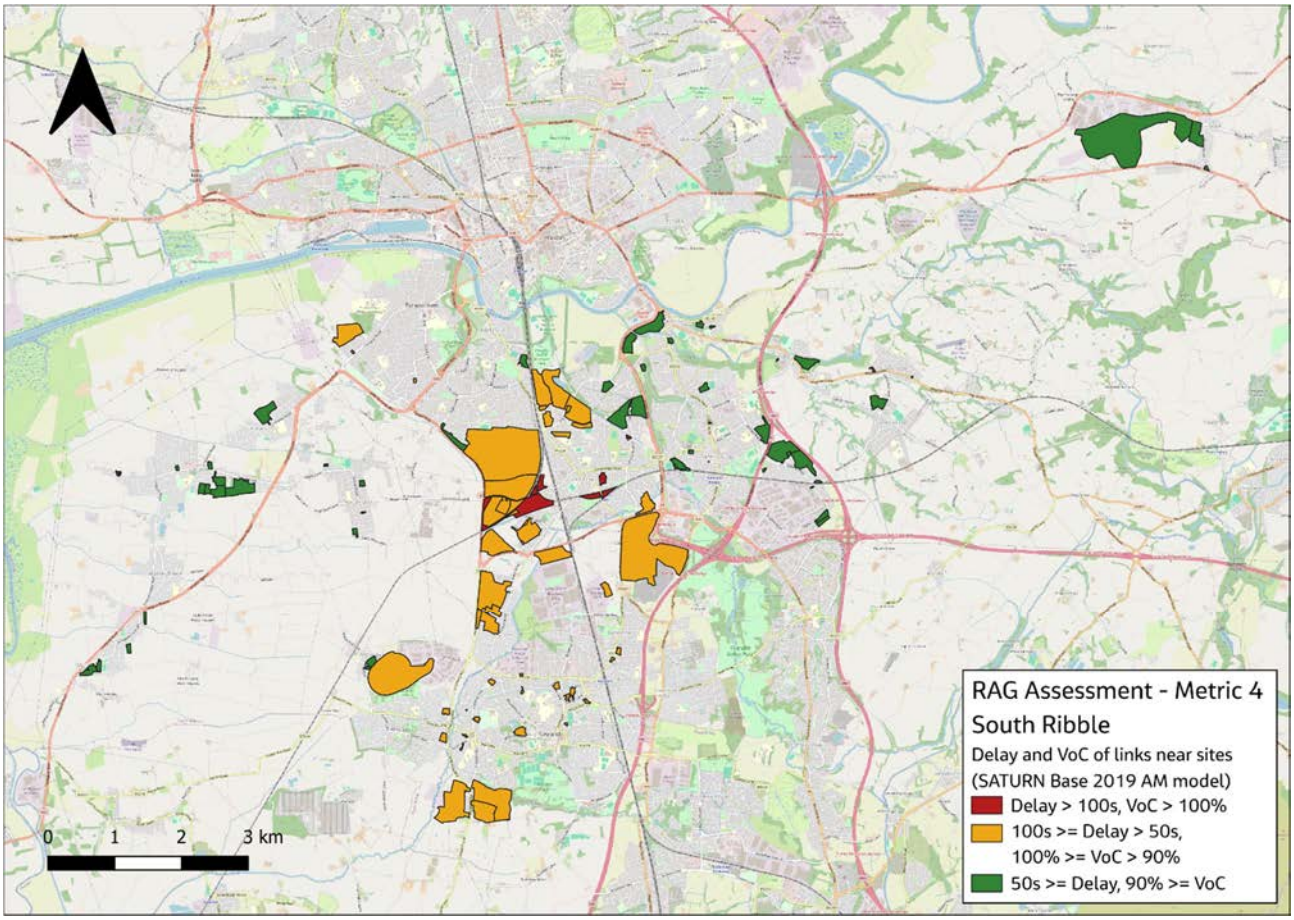


Figure A-3-2 Metric 4 RAG assessment for South Ribble with 2019 data

Figure A-3-3 shows the RAG classification of the sites in Chorley, based on the delay and VoC obtained from the Saturn Base model for the 2019 AM peak period.

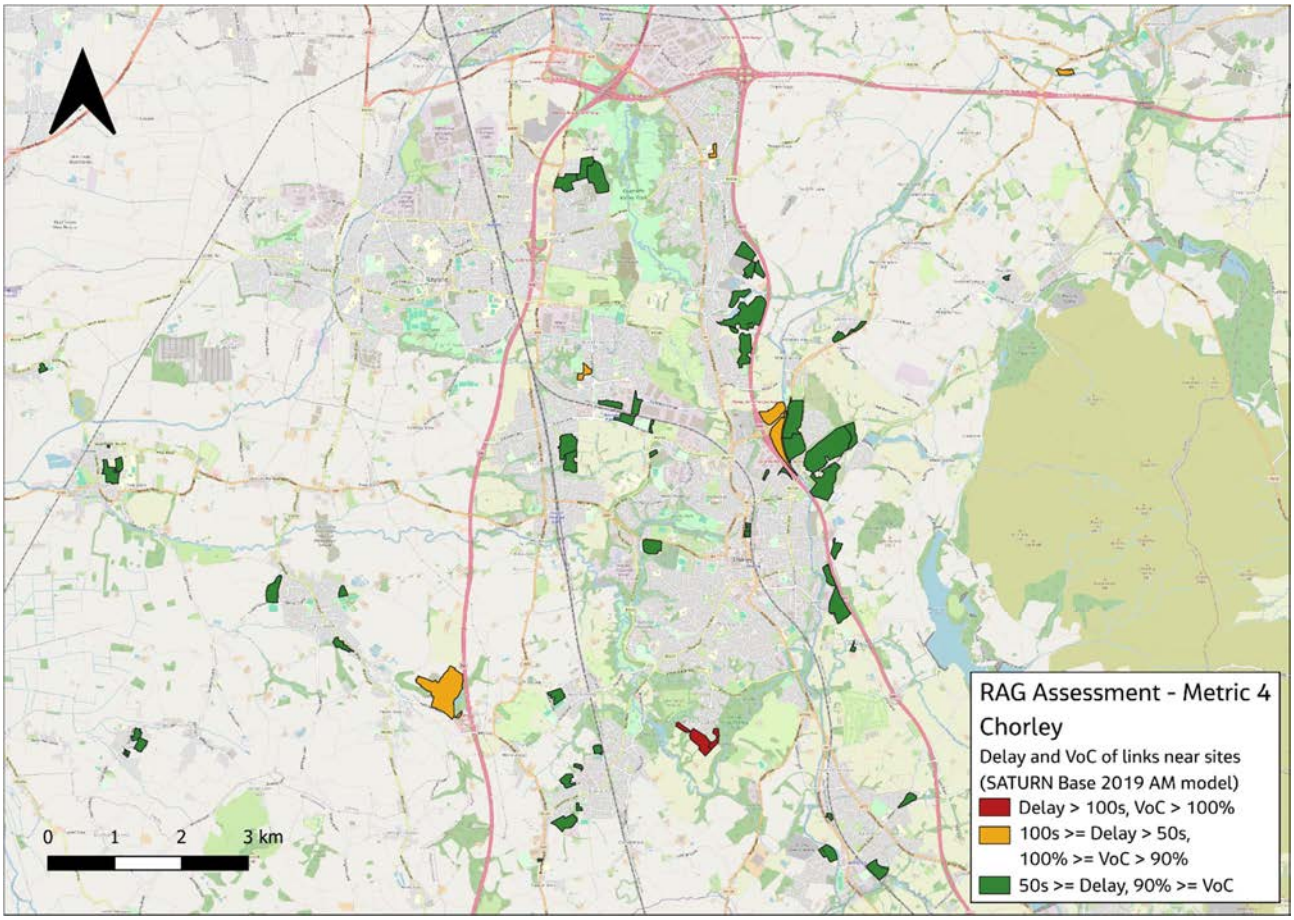


Figure A-3-3 Metric 4 RAG assessment for Chorley with 2019 data

Figure A-3-4, Figure A-3-5 and Figure A-3-6 shows the delay observed in the ITN links in Preston, South Ribble and Chorley, respectively.

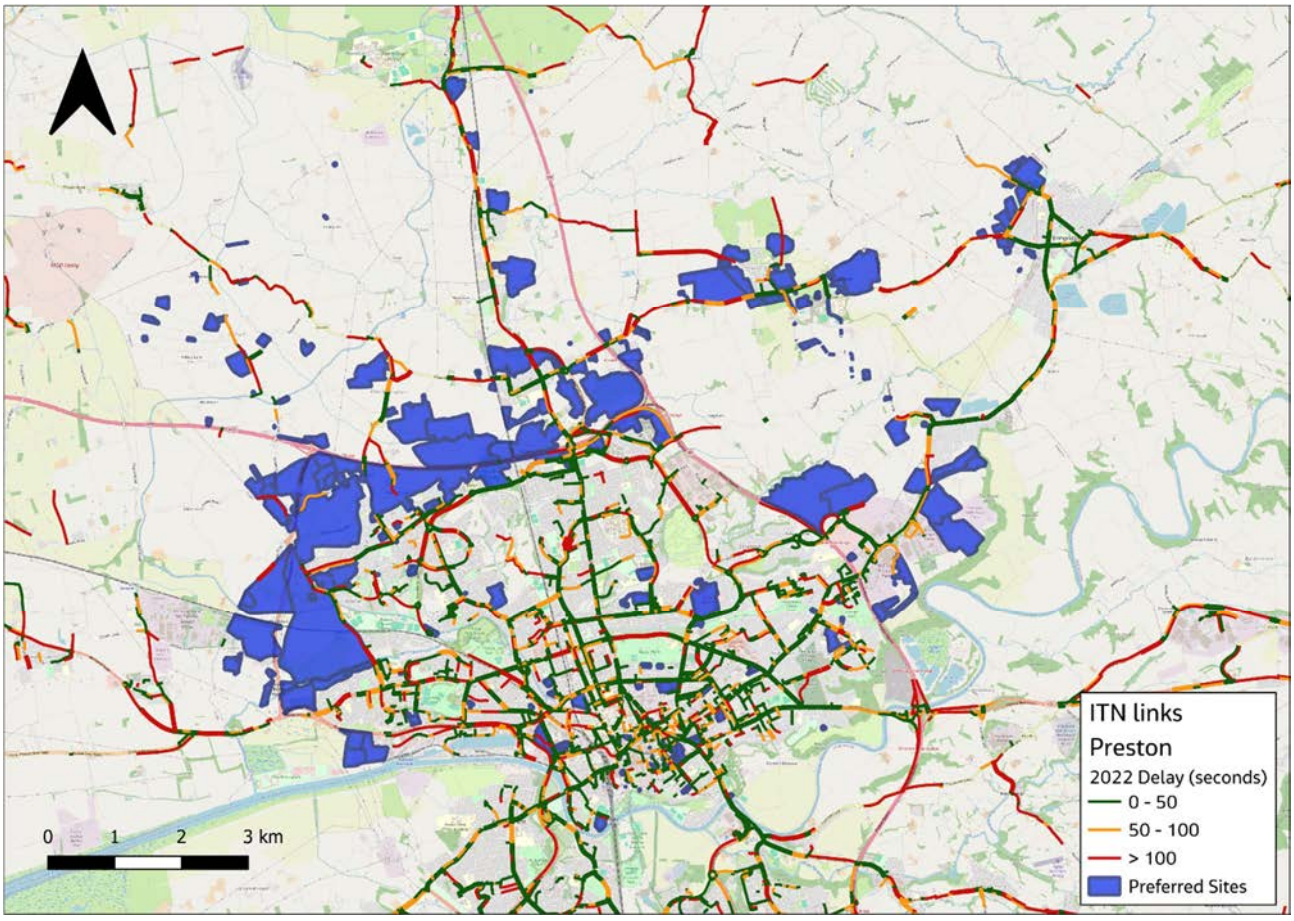


Figure A-3-4 Delay in ITN links for Preston

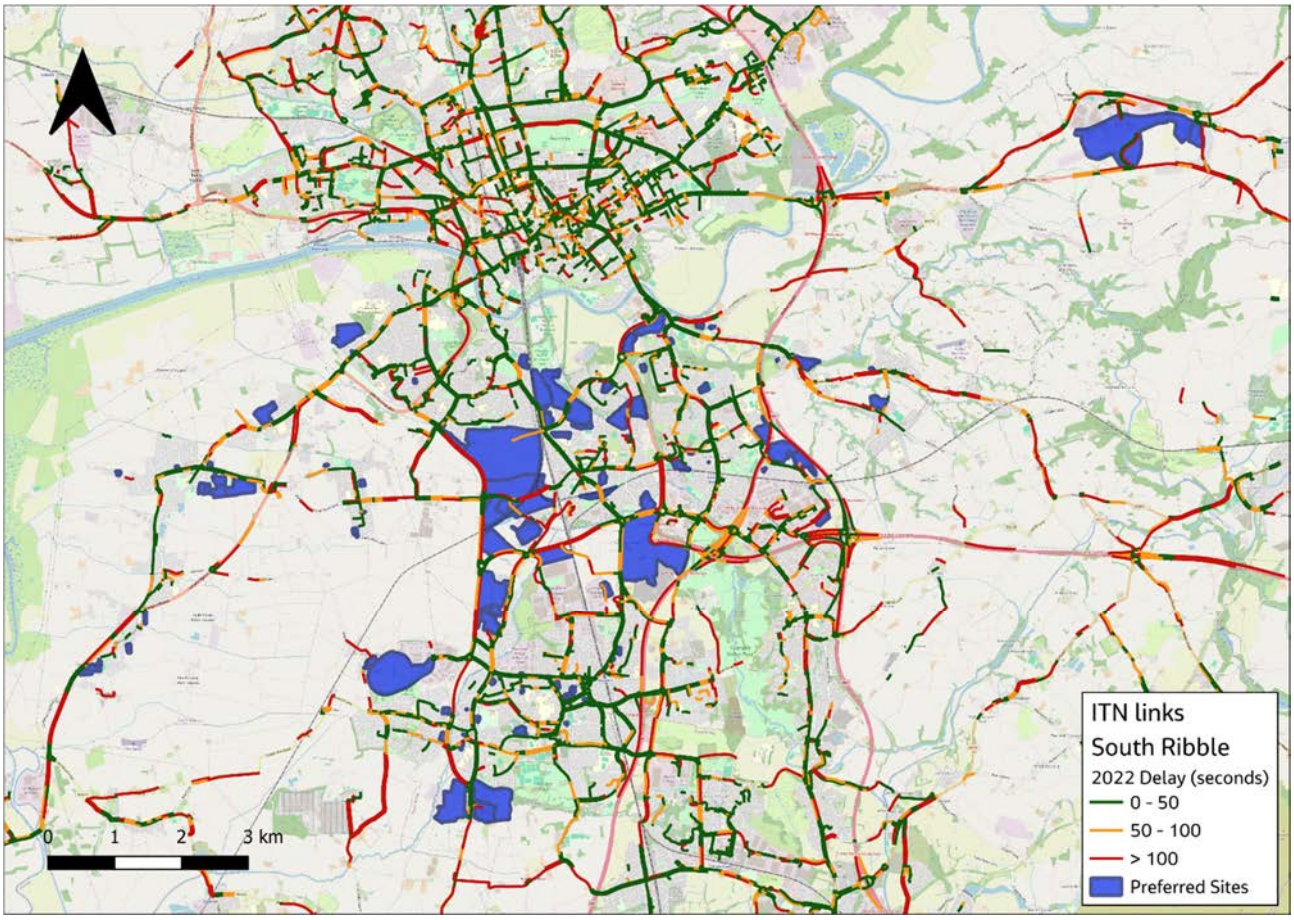


Figure A-3-5 Delay in ITN links for South Ribble

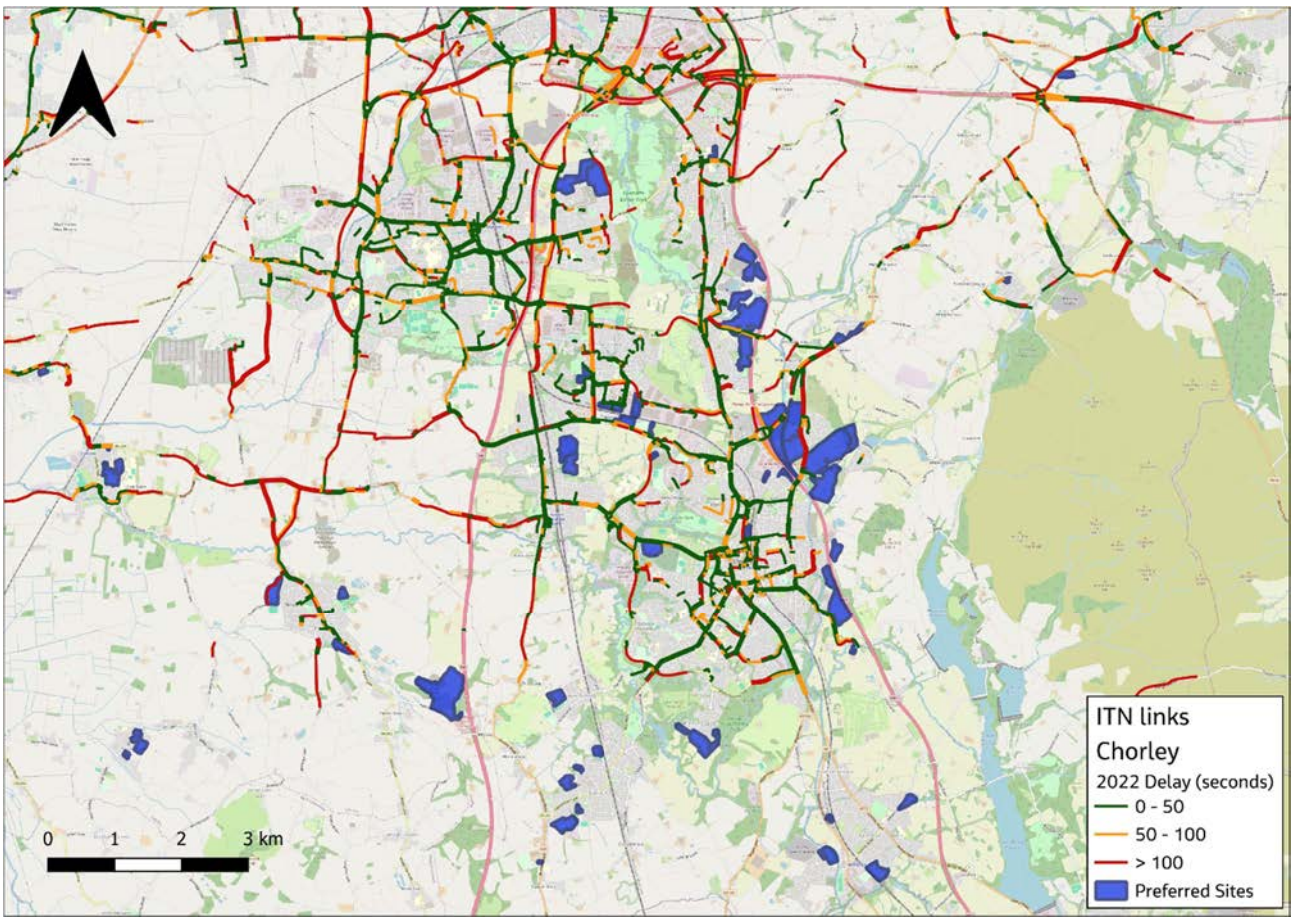
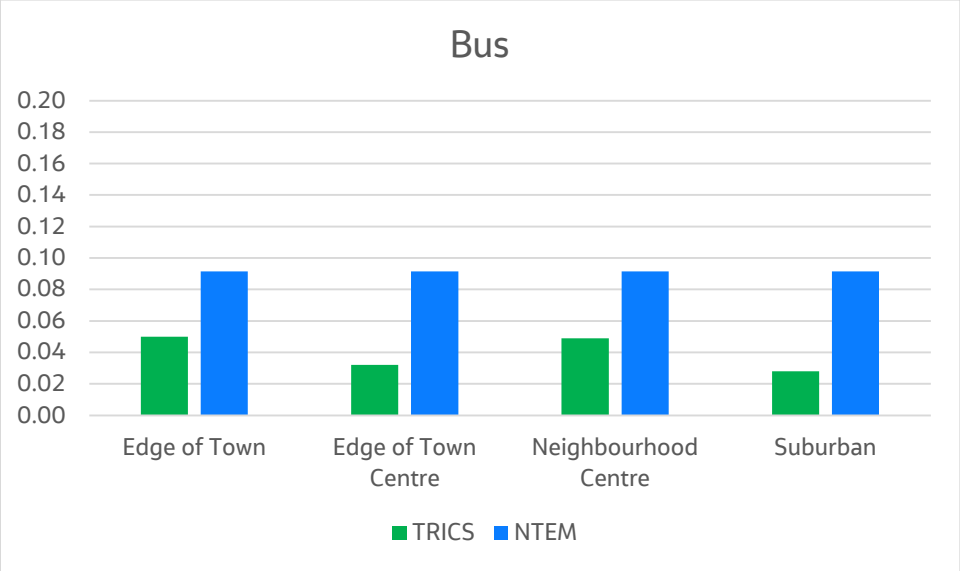
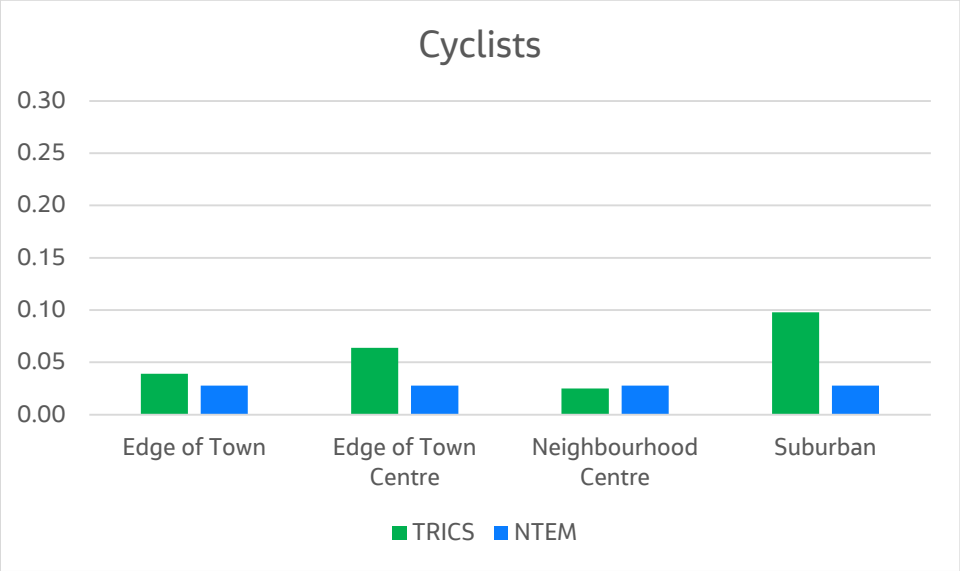


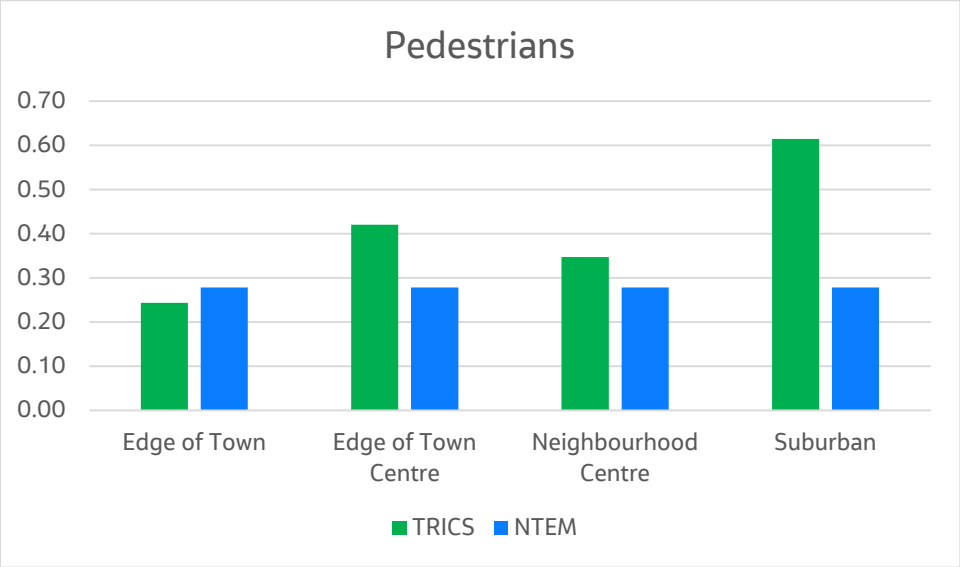
Figure A-3-6 Delay in ITN links for Chorley

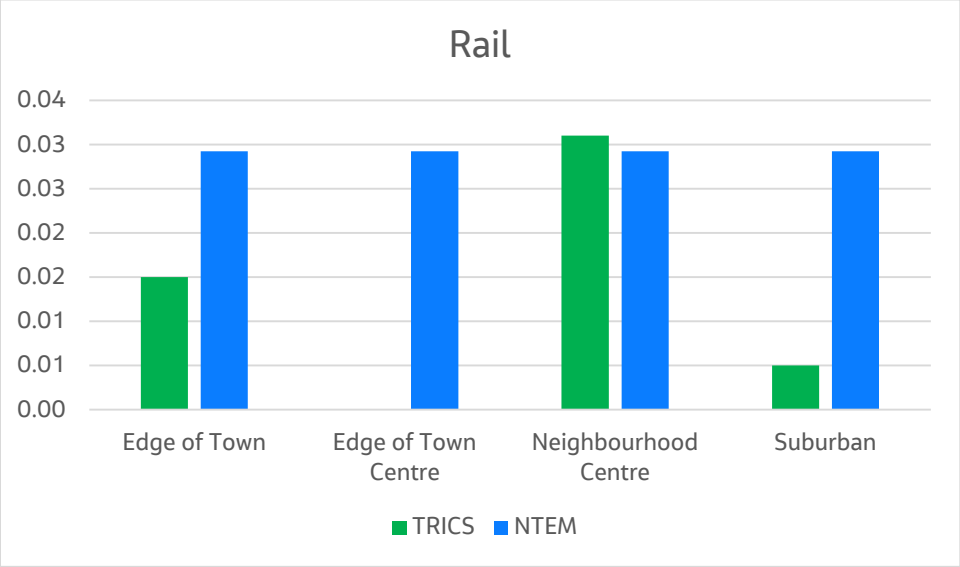
Appendix C

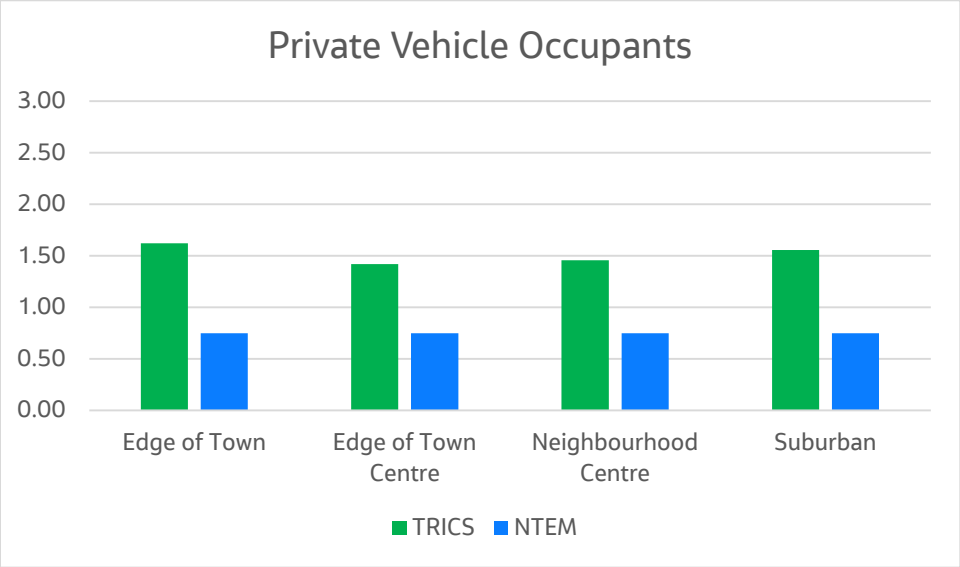
The comparison of the peak period trip rates from TRICS and NTEM for the AM peak period for the various modes and locations is displayed in the graphs below.



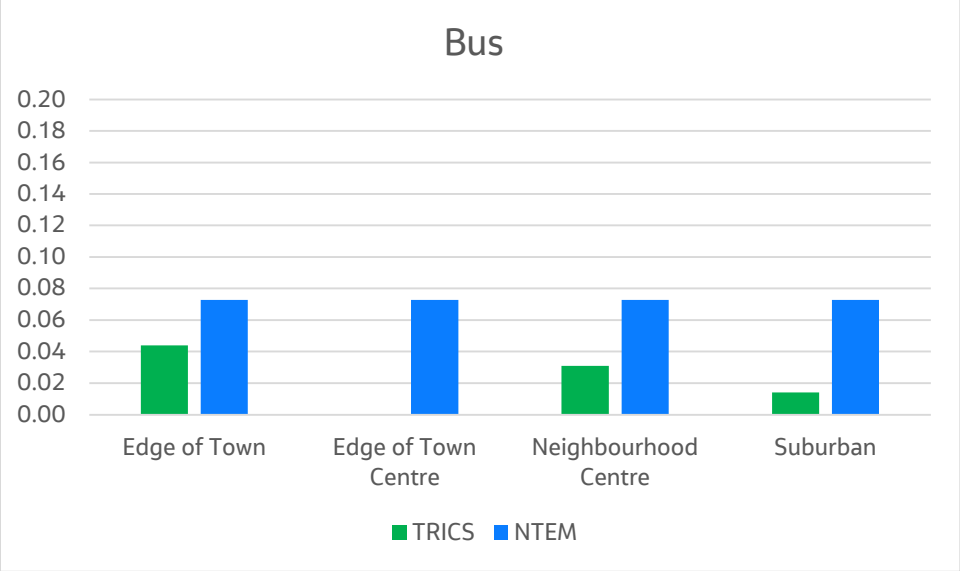


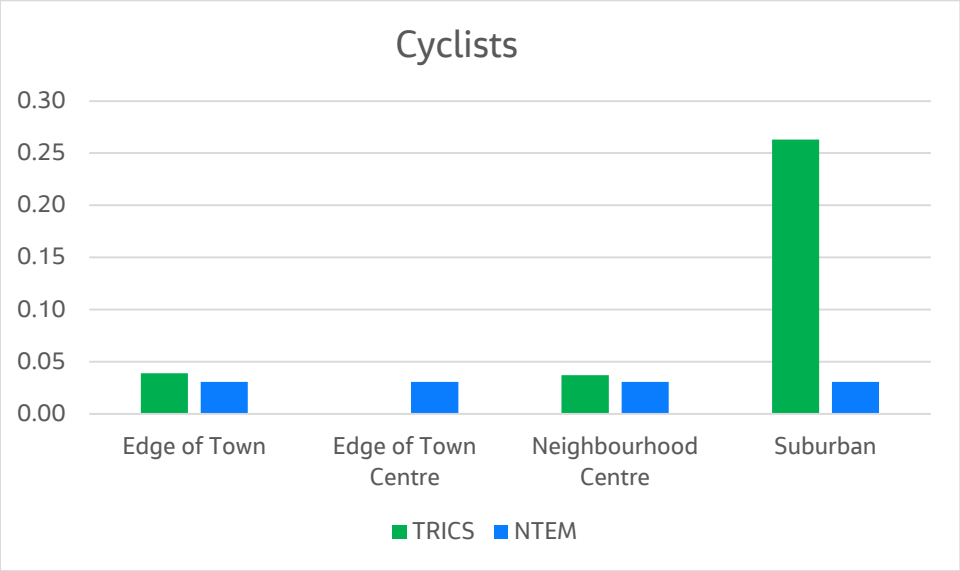

Pedestrians
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Edge of Town
Edge of Town Centre
Neighbourhood Centre
Suburban
TRICS
NTEM

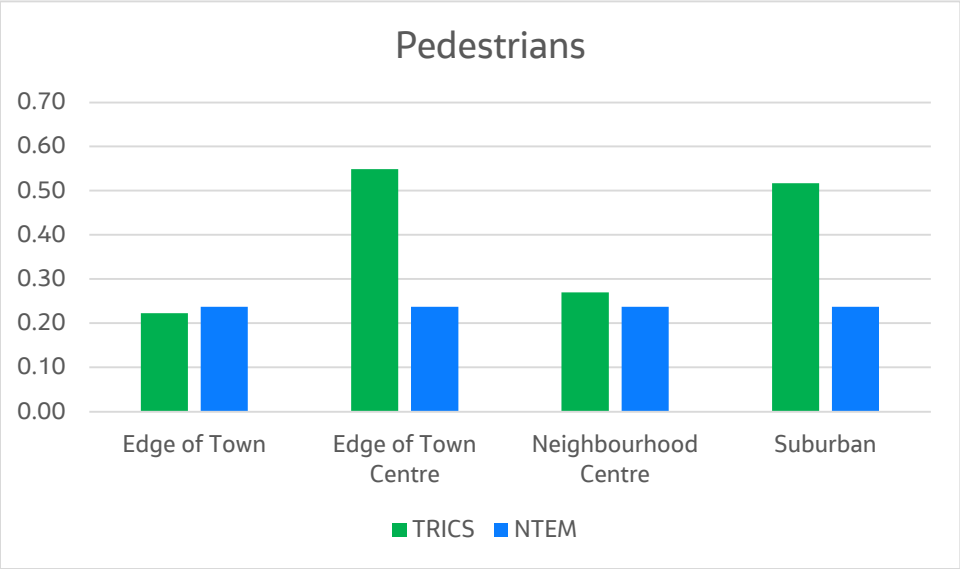

Rail
0.04
0.03
0.03
0.02
0.02
0.01
0.01
0.00
Edge of Town
Edge of Town Centre
Neighbourhood Centre
Suburban
TRICS
NTEM

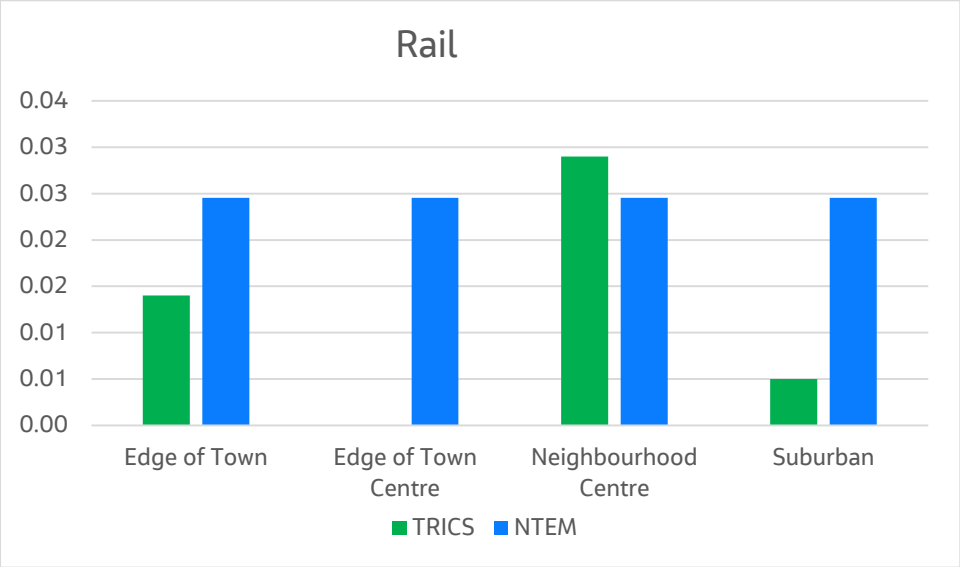


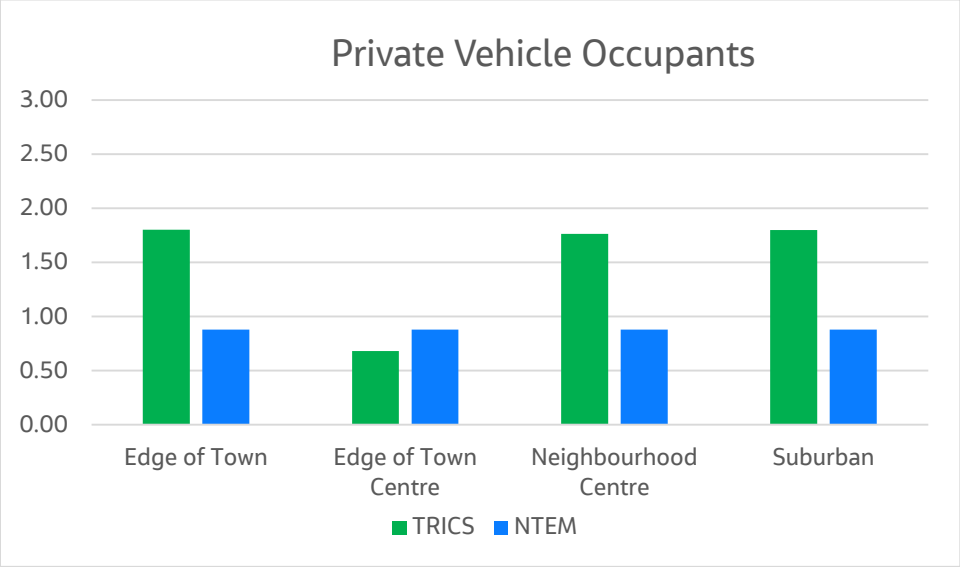
The comparison of the trip rates from TRICS and NTEM for the PM peak period for the various modes and locations is displayed in the graphs below.



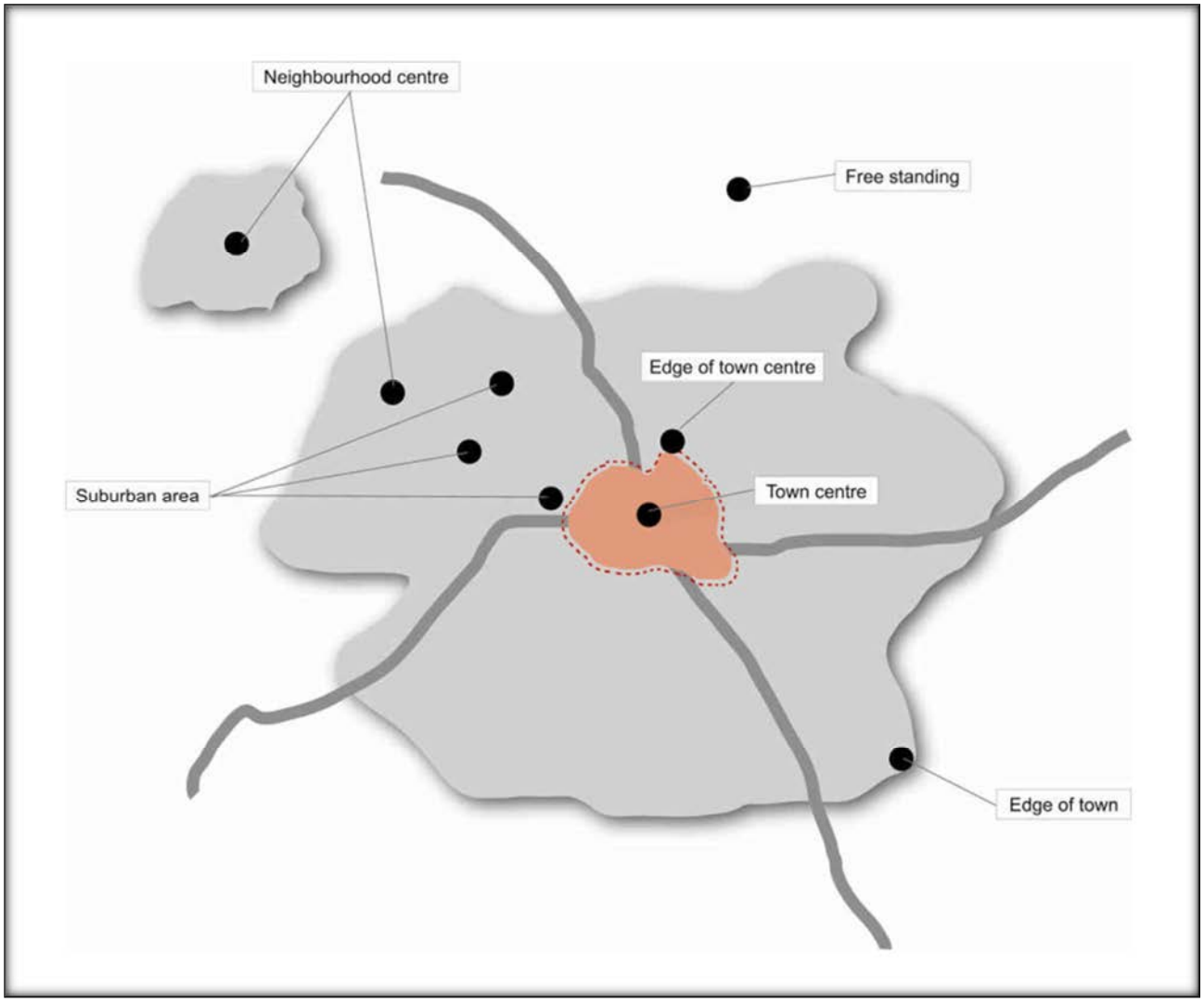

Cyclists
0.30
0.25
0.20
0.15
0.10
0.05
0.00
Edge of Town
Edge of Town Centre
Neighbourhood Centre
Suburban
TRICS
NTEM


Pedestrians
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
Edge of Town
Edge of Town Centre
Neighbourhood Centre
Suburban
TRICS
NTEM





For metric 5, the residential sites are classified into four main location classes, which are: Edge of Town centre, Suburban area, Edge of Town, and Neighbourhood Centre. This classification is based on the guidance from TRICS, the description of which as per 'TRICS location definitions – December 2008', is as follows:



Source: TRICS Data Collection - Location Type Definitions (2008)

- **Edge of Town Centre:** For retail, a location within easy walking distance (i.e. up to 300 metres) of the central primary shopping area, often providing parking facilities that serve the centre as well as the site, thus enabling one trip to serve several purposes. For other uses, the edge-of-centre radius from the town/city centre may be more extensive, based on how far people would be prepared to walk. For offices this may be outside the town centre but in the urban area within 500m of a public transport interchange.
- **Neighbourhood Centre (Local Centre):** Predominantly residential area, but with additional amenities like local shops, schools, etc. Could be described as a small "district" or "village" within the town/city itself. Would also apply to actual villages. The local shops serve a small catchment. These may include a general grocery store, a newsagent, a sub-post office and a pharmacy, as well as others. These centres provide accessible shopping for people's day-to-day needs.
- **Suburban Area (Out of Centre):** An area outside the edge of the town/city centre, but not at the town/city's physical edge. This can encompass a wide range of physical locations within a town/city.

Suburban Area sites can range from busy built-up areas near the centre of town (but outside of the Edge of Town Centre radius), to leafy suburbs far from the centre.

- **Edge of Town:** At the physical edge of the town/city, where the town/city meets the countryside. The actual physical distance from the site to the beginning of the countryside can vary proportionately to the size of the town/city.

The site classification for the residential sites in the three districts are as below (Figure A-3-7, Figure A-3-8, Figure A-3-9):

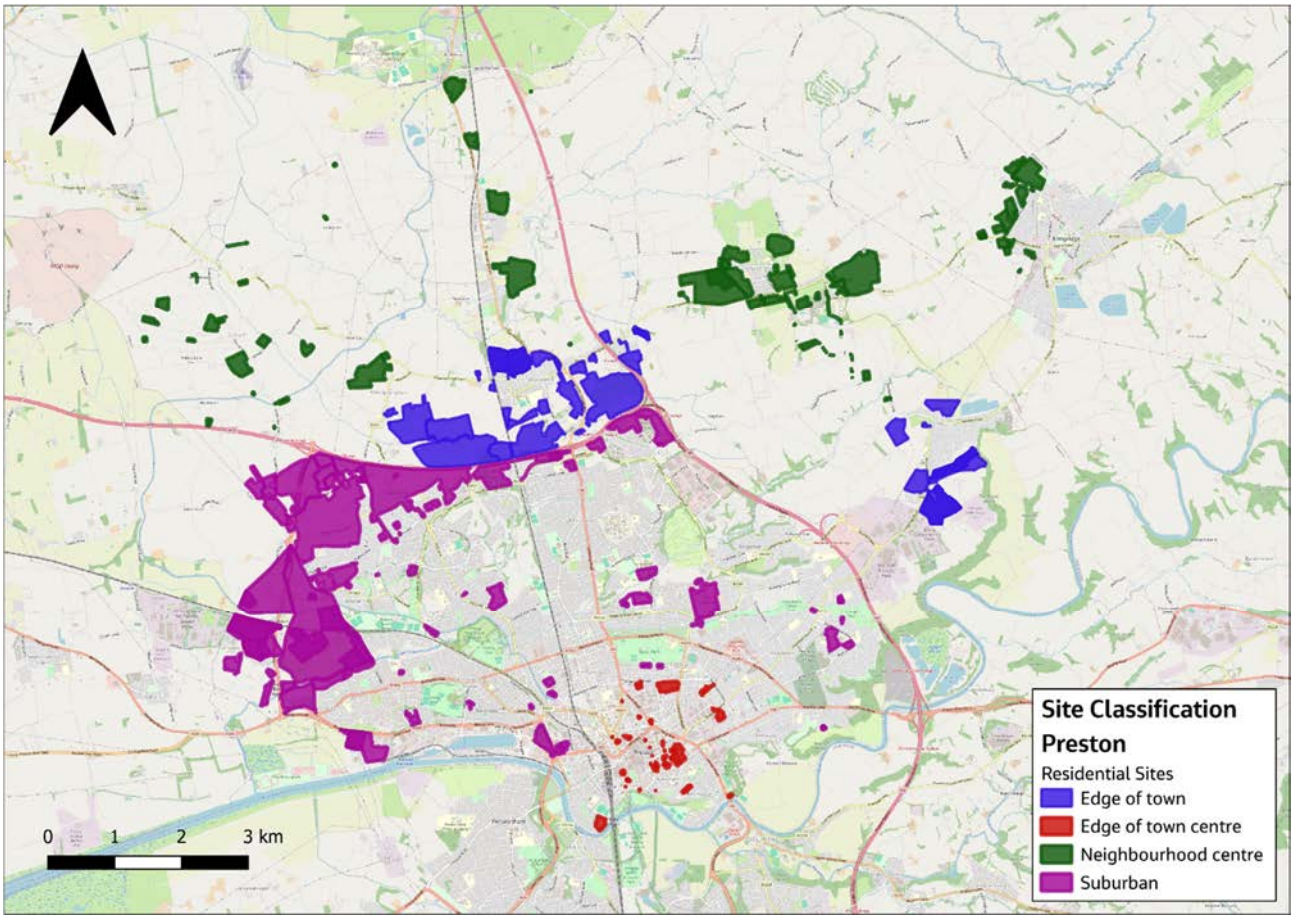


Figure A-3-7 Site classification for Preston

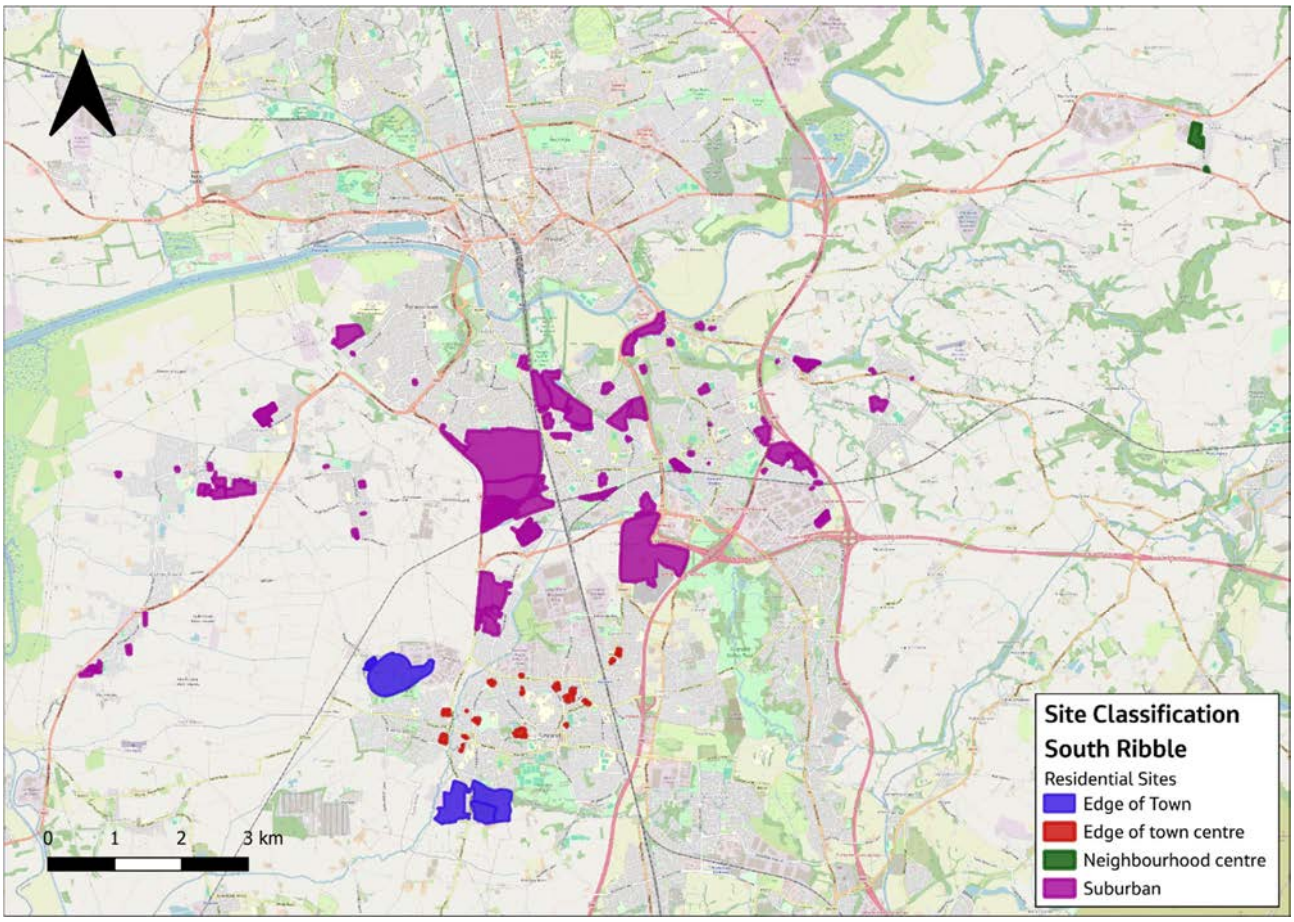


Figure A-3-8 Site classification for South Ribble

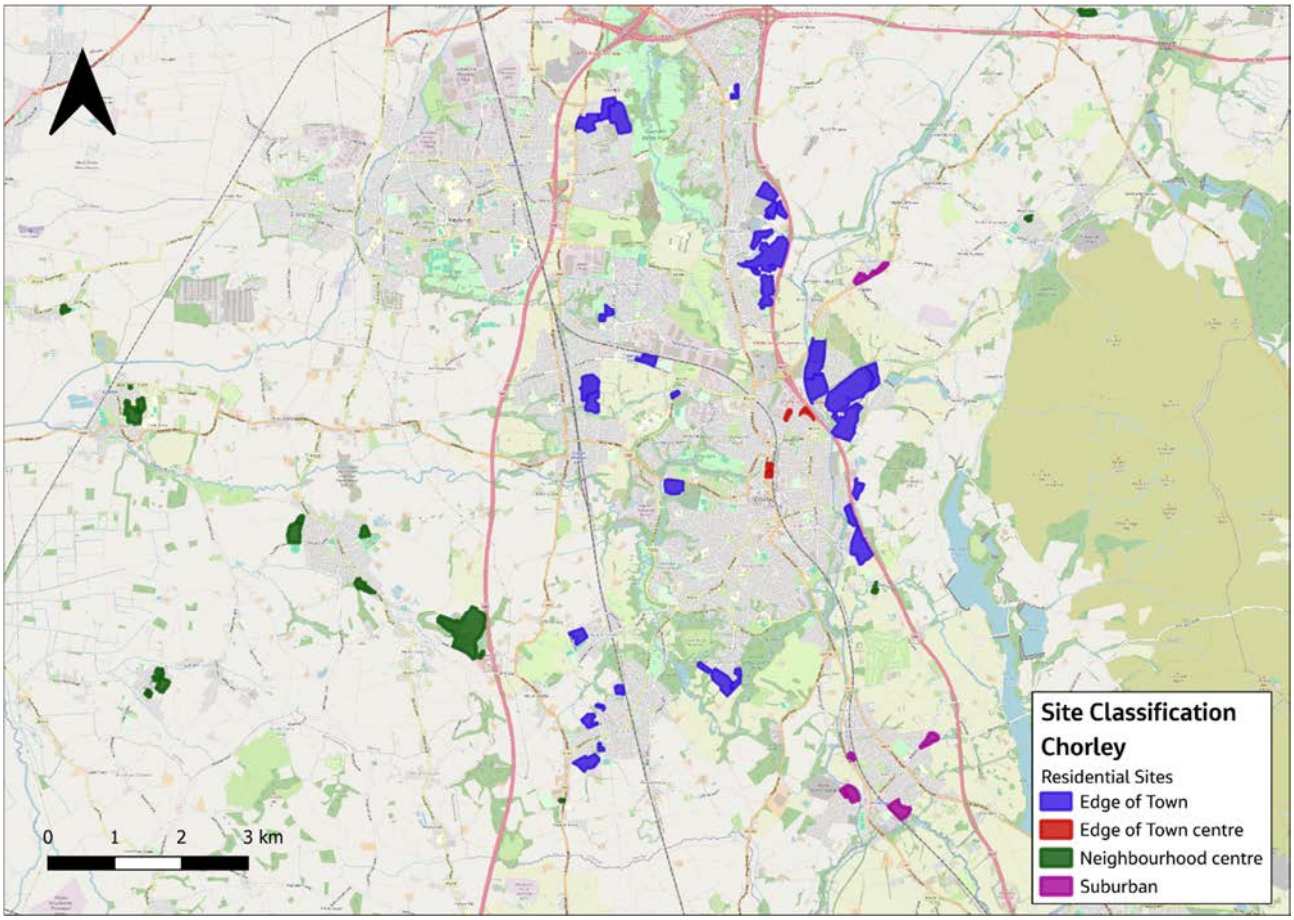


Figure A-3-9 Site classification for Chorley