

A person with dark hair, wearing a light-colored long-sleeved shirt and dark pants, is sitting on a grassy hill. They are looking down at a small object in their hands, possibly a phone. The background shows a cityscape with various buildings, including a prominent white building with a classical facade. The scene is bathed in warm, golden light, suggesting late afternoon or early morning. The foreground is filled with tall, dry grasses.

**Greater London Authority**

**London Green  
Infrastructure Framework  
Spatial Data Analysis  
Background and Findings  
Report**

**Final report**

Prepared by LUC

December 2025

## Greater London Authority

### London Green Infrastructure Framework Spatial Data Analysis Background and Findings Report

Version	Status	Prepared	Checked	Approved	Date
1.	Draft report (first 3 chapters only)	S. Crewe J. Bournazel C. Green T. Livingston	T. Livingston	T. Livingston	07.03.2025
2.	Full draft report	S. Crewe J. Bournazel C. Green	T. Livingston	T. Livingston	04.04.2025
3.	Final draft report	S. Crewe J. Bournazel C. Green	T. Livingston	T. Livingston	02.05.2025
4.	Final report	S. Crewe J. Bournazel C. Green	T. Livingston	T. Livingston	23.05.2025
5.	Minor updates to final report (including terminology and approach to analysing blue space access)	S. Crewe J. Bournazel	T. Livingston	T. Livingston	22.12.2025
6.	Final report	J. Bournazel S. Crewe	T. Livingston	T. Livingston	23.12.2025

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# Chapter 1

## Introduction

This opening chapter introduces the London Green Infrastructure Framework (LGIF) and describes its scope and context.

### Background

**1.1** The importance of GI in delivering multiple benefits for people and nature, whilst also responding to the climate and ecological emergencies, has never been more apparent. GI is now recognised as essential infrastructure and must be planned, delivered and managed with a clear purpose and vision.

**1.2** In 2012, the Greater London Authority (GLA) published the All-London Green Grid (ALGG) Supplementary Planning Guidance (SPG)<sup>1</sup> and accompanying series of 'area frameworks'. Using spatial data available at the time, these static documents established a vision for London's GI network by identifying key functions; defining area objectives; establishing strategic opportunities; and setting out a programme of projects for delivery. The ALGG informed the development of GI strategies, initiatives, and projects across London at a range of scales.

**1.3** The London Environment Strategy (LES)<sup>2</sup>, published in 2018, includes a commitment to review and update the ALGG to provide a stronger evidence base for GI programmes, projects, and interventions, and to identify priority areas for GI investment (Proposal 5.3.1). The London Plan<sup>3</sup> (2021) also includes a commitment to review and update the ALGG to provide guidance on the strategic GI network (paragraph 8.1.3).

**1.4** The LGIF builds upon the ALGG Supplementary Planning Guidance (SPG)<sup>4</sup> and GI Focus Map<sup>5</sup>, whilst also complementing the emerging London Local Nature Recovery Strategy (LNRS)<sup>6</sup>.

**1.5** Changes in policy and the legislative context, combined with advancements in data and geographic information system (GIS) technology, present an opportunity to make use of high-resolution spatial data in the development of the LGIF. The outputs of the LGIF spatial data analysis aim to identify where GI interventions might provide multi-functional benefits, and enable that information to be presented in an interactive and user-friendly online map.

### Purpose

**1.6** The LGIF will provide a strategic-level spatial evidence base for London. The interactive public-facing online map will provide the latest London-wide spatial data to help plan for and prioritise the siting of GI interventions that support key objectives and achieve multiple benefits. The tool will help decision makers prioritise strategic locations and suitable types of intervention for investment in GI delivery across London. Acting as a tool to inform decision making (rather than supplementary planning guidance), the LGIF will help the Mayor of London / GLA, borough planners, green space landowners / managers, catchment managers, infrastructure providers and developers consider how best to plan, fund, design and deliver GI.

**1.7** The LGIF will comprise the following elements:

- The outputs of the spatial data analysis (as presented in this report, with more detail about the process provided in the **LGIF Spatial Data Analysis Technical Methodology Report**).

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<sup>1</sup> Mayor of London (2012) Green Infrastructure and Open Environments: All London Green Grid Supplementary Planning Guidance

<sup>2</sup> Mayor of London (2018) London Environment Strategy

<sup>3</sup> Mayor of London (2021) The London Plan: The Spatial Development Strategy for Greater London

<sup>4</sup> Mayor of London (2012) Green Infrastructure and Open Environments: All London Green Grid Supplementary Planning Guidance

<sup>5</sup> Greater London Authority (updated 2023) Green Infrastructure Focus Map ([Green Infrastructure Focus | Mayor of London](#))

<sup>6</sup> Greater London Authority (emerging) London Local Nature Recovery Strategy

- An interactive public-facing online map that presents the spatial data analysis, showing areas with highest need for strategic GI, alongside relevant contextual datasets. This online map will enable users to interrogate the data to support GI decision making in London, at a range of scales.
- Supporting guidance explaining how to use the interactive online map and interpret the information it presents in order to guide future GI investment.

**1.8** The development of the LGIF has been informed by insight from a range of internal and external stakeholders, responsible for the planning, delivery and management of GI across London (see **Chapter 2**).

## Phased approach to LUC's role in the development of the LGIF

**1.9** LUC has been commissioned to support the GLA in the development of the LGIF, through three key phases, as summarised below:

### Phase 1: Spatial data analysis

**1.10** Working iteratively and involving extensive liaison with the GLA's Environment and GIS Teams, this phase included the delivery of London-wide multi-variate spatial data analysis, structured via a series of Strategic Objectives.

**1.11** The analysis of this spatial data aimed to identify priority geographic areas for investment in GI, including composite priority areas where multi-functional benefits could be delivered.

### Phase 2: Technical specification for the interactive web-based map

**1.12** This stage involved the development of the technical brief for the creation and functionality of the LGIF web map, which will host the spatial data analysis produced in Phase 1.

### Phase 3: Advisory role for the production of the web-based map

**1.13** Undertaken in collaboration with GLA GIS team, Phase 3 includes the provision of GIS support to inform the web-map build and user testing. User responses will be sought in the form of feedback surveys and targeted survey questions to elicit useful feedback. A user-friendly user guide for the web-map will also be developed.

## Structure of this document

**1.14** This report is structured as follows:

### Chapter 1: Introduction

**1.15** Outlines the scope and background behind the development of the LGIF.

### Chapter 2: Review of key findings from consultation and engagement

**1.16** Summarises the stakeholder responses which have been used to inform the development of the LGIF (both at Phase 1 (spatial data analysis) and at Phase 2 (the functionality of the web map)).

### Chapter 3: Drivers for GI in the London context

**1.17** Establishes the principal drivers for GI within the London context, structured as a series of Strategic Objectives.

### Chapter 4: Summary of data analysis methodology for the LGIF

**1.18** Briefly describes the key steps in the LGIF spatial data analysis methodology.

### **Chapter 5: Bi-variate analysis**

**1.19** Presents maps showing the datasets used as indicators of need or GI provision, areas of high, medium or low need / provision and the bivariate analysis results for each Strategic Objective. The maps are supported by brief commentary highlighting particular locations / areas where different levels of need versus provision are identified.

### **Chapter 6: Multi-criteria analysis**

**1.20** Introduces the final map outputs of the LGIF spatial data analysis, with all the Strategic Objectives combined to identify overall areas of highest need / lowest provision, as well as other categories of need versus provision. High-level guidance relating to the strategic approach to the siting of GI interventions is outlined with the aim of informing the types of GI intervention that may be relevant in specific areas.

### **Chapter 7: Next steps**

**1.21** Provides an overview of next steps in the development of the LGIF.

### **Appendix A: Summary of responses from consultation and engagement**

**1.22** Provides an overview of the feedback received by different methods of consultation and engagement with external and internal (GLA) stakeholder groups.

## Chapter 2

### How consultation feedback has informed the development of the LGIF

This chapter summarises the key consultation feedback which has been used to shape the development of the LGIF.

**2.1** A range of consultation and engagement activities were undertaken with external and internal (GLA) stakeholder groups between September 2024 and February 2025 to inform the preparation of the LGIF. These sessions are outlined below:

- External stakeholder workshops (facilitated by CAG Consultants and LUC);
- External scoping meetings / calls (carried out by GLA GI Team);
- London GI Partnership group meetings (hosted by GLA GI Team, including presentation by LUC); and
- LGIF cross-GLA co-ordination group meetings (led by LUC).

**2.2** A summary of stakeholder responses received during these sessions is provided in **Appendix A**.

**2.3** Stakeholder recommendations, grouped by theme, are summarised below in **Tables 2.1 – 2.5**. Supporting narrative is provided detailing how the recommendations will be addressed within the LGIF.

**Table 2.1: How would participants like to be able to use the LGIF?**

Summary of recommendation	How will this be addressed in the LGIF
Data should be as complete and up to date as possible; with transparency on any data limitations and the timescale for updates.	The LGIF online map will provide background detail relating to source data, including the version and date of individual datasets and frequency of updates, where possible. Statements relating to the potential limitations of the data (information on any known data gaps or other data weaknesses) have been included within the <b>LGIF Spatial Data Analysis Technical Methodology Report</b> .
An overarching LGIF user guide should be provided, plus guidance tailored for specific users on how the LGIF data can be used in practical ways, such as planning and policy development, and how to integrate it with local tools and datasets.	The LGIF will incorporate guidance material, providing clear support on how to use the LGIF. To be undertaken as part of Phase 3.
The LGIF should facilitate cross-boundary collaboration between LBs and cross-boundary planning	The LGIF will be available across Greater London, providing consistency and allowing continuity between different LBs and other geographies.
Datasets should be made available for download to users so the data can be used to supplement local data at the borough level to inform GI analysis (as per the Natural England GI Framework).	The LGIF online map will allow users to download the spatial outputs (i.e. overall needs and scored indicators rather than all the underlying layers that contribute to the indicators) comprising the LGIF in a GIS file format via an Open Government Licence. This will allow users to import the LGIF data into their own internal GIS mapping platforms and supplement with data from the local / borough scale. This approach will add value in providing shareable datasets that local authorities and other stakeholders can use alongside their own local data.

**Table 2.2: What data analysis would be useful?**

Summary of recommendation	How will this be addressed in the LGIF
The LGIF should allow a degree of customisation for local and site-specific requirements.	The LGIF online map will allow users to customise the tool to focus on specific Strategic Objectives or Inequalities across London, with a view to helping to inform the siting of specific GI interventions.
Areas of priority for future GI investment should be identified.	The LGIF will identify GI priority areas, representing the locations of highest need for strategic GI, based on the outputs of the spatial data analysis.
Deliver a consolidated tool capable of aggregating data from multiple sources to streamline decision-making.	The LGIF online map will group multiple spatial indicators, by Strategic Objective, which can then be aggregated in different combinations to define overall areas of greatest or lowest strategic need and / or deficiency.

**Table 2.3: What are the key datasets that should be included?**

Summary of recommendation	How will this be addressed in the LGIF
Incorporate 'human' data as well as environmental data to better reflect the range of local needs within the London context.	The LGIF spatial analysis is structured using 10 Strategic Objectives. The analysis also integrates data relating to both health and social inequalities as a mechanism to strengthen the approach to GI prioritisation.

**Table 2.4: What scale would participants find most useful?**

Summary of recommendation	How will this be addressed in the LGIF
Ideally the LGIF will be multi-scale, covering the strategic to the granular scale to help prioritise future GI investment	Users will be able to view and interrogate the LGIF data down to the hexagon scale, including what is in their borough or adjacent. All data included will be available across Greater London. This is to ensure consistency and continuity between different boroughs and other geographies.

**Table 2.5: How do participants feel about aligning the LGIF with the five Natural England 'Benefit Principles'?**

Summary of recommendation	How will this be addressed in the LGIF
A degree of alignment with the Natural England GI Framework will support best practice at the national level.	Natural England's five 'Benefit Principles' were explored as a suggested approach to structure the data analysis, to ensure alignment with national best-practice. However, this approach was not adopted within the LGIF as it was considered that the five 'Benefit Principles' were too broad to structure effective data analysis. Commonalities were identified though between the Strategic Objectives and Natural England's five 'Benefit Principles' (see <b>Chapter 3</b> ).

## Chapter 3

### Drivers for GI in the London context

This chapter considers the key Strategic Objectives which GI can help to address and mitigate across London. The relationship with the Natural England GI Framework is described.

#### Approach to the identification of Strategic Objectives

**3.1** A number of Strategic Objectives which GI can help to address and mitigate within the London context were identified. This process was undertaken as part of a collaborative approach with the GLA, informed by feedback received during the external stakeholder workshops in October 2024 (see **Appendix A** for a summary of key findings from these sessions). Further details relating to the approach are provided within the **LGIF Spatial Data Analysis Technical Methodology Report**. The finalised list of positively framed Strategic Objectives has been used to structure the spatial data analysis.

**3.2** The consideration of Inequalities within the London context are used to strengthen the approach to prioritisation within the LGIF. Differentiated from Strategic Objectives, Inequalities are categorised separately as 'Health Inequalities' and 'Social Inequalities'. The list of 10 Strategic Objectives and two Inequalities that the LGIF aims to help address is shown in **Figure 3.1**.

**3.3** A brief summary of the way in which GI can help to achieve the Strategic Objectives is provided below in **Table 3.1**.

**Table 3.1 Summary of Strategic Objectives**

Name of Strategic Objective	Rationale
Improved access to green space	Provision of accessible green spaces within easy reach provides opportunities for physical activity and social interaction for Londoners, supporting physical and mental health and strengthening communities.
Improved access to blue space	Access to blue networks contributes a range of recreational and health benefits. This can range from waterside access for walking and angling, to active sports.
Nature recovery	GI can provide habitat and improve ecological linkages and connectivity to promote the movement of species as part of the wider nature recovery network.
Flood control	GI can help support resilience and adaptation to surface water and fluvial flooding as part of nature-based solutions or sustainable drainage systems (SuDS).
Clean water	GI can play a role in improving water quality to help maximise the benefits of water resources for Londoners.
Urban cooling	GI performs a role in mitigating and adapting to climate change through local climate regulation, provision of shade and the reduction in ambient temperatures.
Clean air	If appropriately sited, GI can contribute to improved air quality along key transport corridors, reducing impacts from vehicle emissions.
Noise reduction	The integration of greening interventions, if implemented correctly, can have significant noise abatement benefits along key transport corridors.

Name of Strategic Objective	Rationale
Greener active travel routes	Through sensitive design, GI can enhance the walking and cycling environment across London, leading to physical health benefits from more active lifestyles.
Greener high streets	GI helps create high quality environments which attract inward investment, support high streets and retail, attract tourists and act as a catalyst for regeneration.

## Relationship to the Natural England GI Framework

**3.4** Owing to its multifunctionality, the benefits of high-quality GI are numerous and far reaching. The ‘GI Principles Wheel’ developed by Natural England as part of its national GI Framework (see **Figure 3.2**) outlines 15 principles to promote the successful delivery of GI. These 15 principles are comprised of the following:

- Five ‘Benefit Principles’;
- Five ‘Descriptive Principles’; and
- Five ‘Process Principles’.

**3.5** The five ‘Benefit Principles’ summarise the role GI can play in the creation of high quality, attractive, nature rich and climate resilient places, providing a setting for healthy, active day-to-day living. These are described below:

### Nature rich beautiful places

**3.6** GI supports nature to recover and thrive. This includes conserving and enhancing natural beauty, wildlife and habitats, geology and soils, whilst also promoting our cultural and personal connections with nature. This principle aims to enhance ecological connectivity through the built environment whilst connecting people to nature.

### Active and healthy places

**3.7** Green neighbourhoods, green / blue spaces and green routes support active lifestyles, community cohesion and nature connections that benefit physical and mental health and wellbeing. GI also helps to mitigate health risks such as urban heat stress, noise pollution, flooding and poor air quality. To achieve ‘active and healthy places’ GI should maximise health and wellbeing outcomes and address deficiencies in access to green and blue spaces, whilst also delivering indirect environmental benefits.

### Thriving and prospering communities

**3.8** GI helps to create and support prospering communities by creating high quality environments which are attractive to businesses and investors and help support the local economy / regeneration.

### Improved water management

**3.9** GI reduces flood risk and helps to maintain the natural water cycle and sustainable drainage at local and catchment scales, reducing pressures on the water environment as well as delivering amenity, biodiversity and economic benefits. This principle aims to encourage the use of SuDS to address the impacts of climate change.

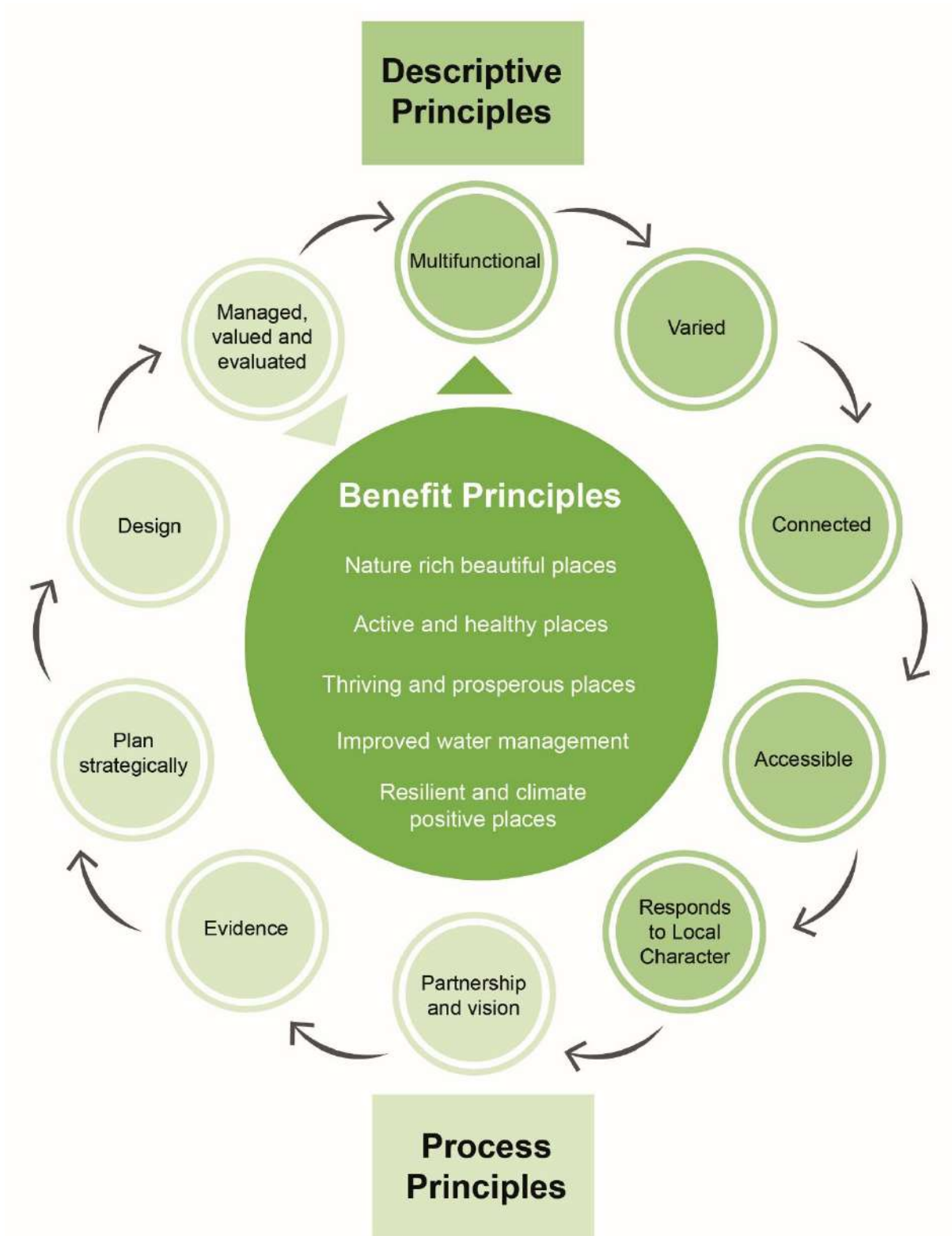
### Resilient and climate positive places

**3.10** GI promotes climate resilience and climate change adaptation to help meet zero carbon and air quality targets. To achieve ‘resilient and climate positive places’, GI should be adapted to climate change to ensure long-term resilience.

Figure 3.1 Strategic Objectives and Inequalities



Figure 3.2 Natural England's 'GI Principles Wheel'



### Integration of the five 'Benefit Principles' within the LGIF

**3.11** LUC's Research and Analysis for the Scoping of a London GI Framework (2024) report recommended the adoption of GI themes to organise and group relevant spatial datasets to inform the 'layering based' spatial analysis for the LGIF. Natural England's five 'Benefit Principles' were proposed as a suggested approach to structure the data analysis, to ensure alignment with national best-practice. However, this approach was not adopted within the LGIF as it was considered that the five 'Benefit Principles' were too broad to structure effective data analysis. Commonalities were identified though between the Strategic Objectives and Natural England's five 'Benefit Principles', as summarised within **Figure 3.3**.

Figure 3.3 Alignment of the LGIF Strategic Objectives with the Five 'Benefit Principles

**Natural England's Green Infrastructure Framework: Five Benefit Principles**

	Nature-rich and beautiful places	Active & healthy places	Thriving & prosperous places	Improved water management	Resilient & climate positive places
Improved access to green space	✓	✓	✓		
Improved access to blue space	✓	✓		✓	
Nature recovery	✓			✓	✓
Flood control	✓		✓	✓	✓
Clean water		✓		✓	✓
Urban cooling		✓	✓	✓	✓
Clean air		✓	✓		✓
Noise reduction		✓			
Greener active travel routes	✓	✓	✓		
Greener high streets	✓	✓	✓		✓

## Chapter 4

# Summary of spatial data analysis methodology for the LGIF

This chapter summarises the key steps used in the LGIF spatial data analysis.

### Introduction

**4.1** The approach to the spatial data analysis adopted by LUC involved a combination of bivariate analysis (to identify areas of high, medium or low need against areas of high, medium or low existing GI provision for each of the Strategic Objectives and Inequalities identified in **Chapter 3**), and multi-criteria analysis (combining all or some of the Strategic Objectives and Inequalities to identify areas where multiple benefits could be achieved with GI interventions). Further detail is provided in the **LGIF Spatial Data Analysis Technical Methodology Report**.

### Scale of spatial data analysis

**4.2** Spatial data analysis within the LGIF is displayed on a hexagon grid. Each hexagon measures 350m across and just over 10 hectares in area. This approach was chosen as a lot of London-wide data is already available at the hexagon grid scale. The use of LSOAs would have potentially introduced a level of bias to the analysis, as well as the loss of spatial resolution.

### Phased approach to spatial data analysis

**4.3** LUC and the GLA GI team have taken a phased approach to the LGIF spatial data analysis, which has involved five key steps. **Figure 4.1** graphically summarises the key steps in the approach to the spatial data analysis, which are briefly described below.

#### Step 1: Identify key Strategic Objectives within the London context

**4.4** As described in **Chapter 3**, this step involved identifying the key Strategic Objectives that GI could help to deliver, and demographic inequalities in London that should be considered when planning GI.

#### Step 2: Categorise relevant datasets for each Strategic Objective identified in Step 1

**4.5** For each Strategic Objective, key relevant datasets were identified as indicators of:

- the need for the functions that GI can provide (e.g. areas at risk of flooding for the flood control Strategic Objective), and
- existing GI provision (e.g. green cover across London has been used for many of the Strategic Objectives).

**4.6** The datasets that have been considered and selected or rejected are discussed in the **LGIF Spatial Data Analysis Technical Methodology Report**, along with the justification for their selection or rejection.

#### Step 3: Define thresholds for each Strategic Objective indicator and GI provision indicator

**4.7** For each Strategic Objective indicator dataset, thresholds have been defined to identify areas with high, medium or low relative levels of need for GI, and high, medium or low relative levels of existing GI coverage. Where possible, thresholds have been based on national or London Plan policy targets or legal standards that exist, and the thresholds and justification for their use is described in the **LGIF Spatial Data Analysis Technical Methodology Report**. If no policy or legal targets/standards exist, then thresholds have been applied using a proportionate split of data based on the spatial distribution across hexes or catchments or boroughs.

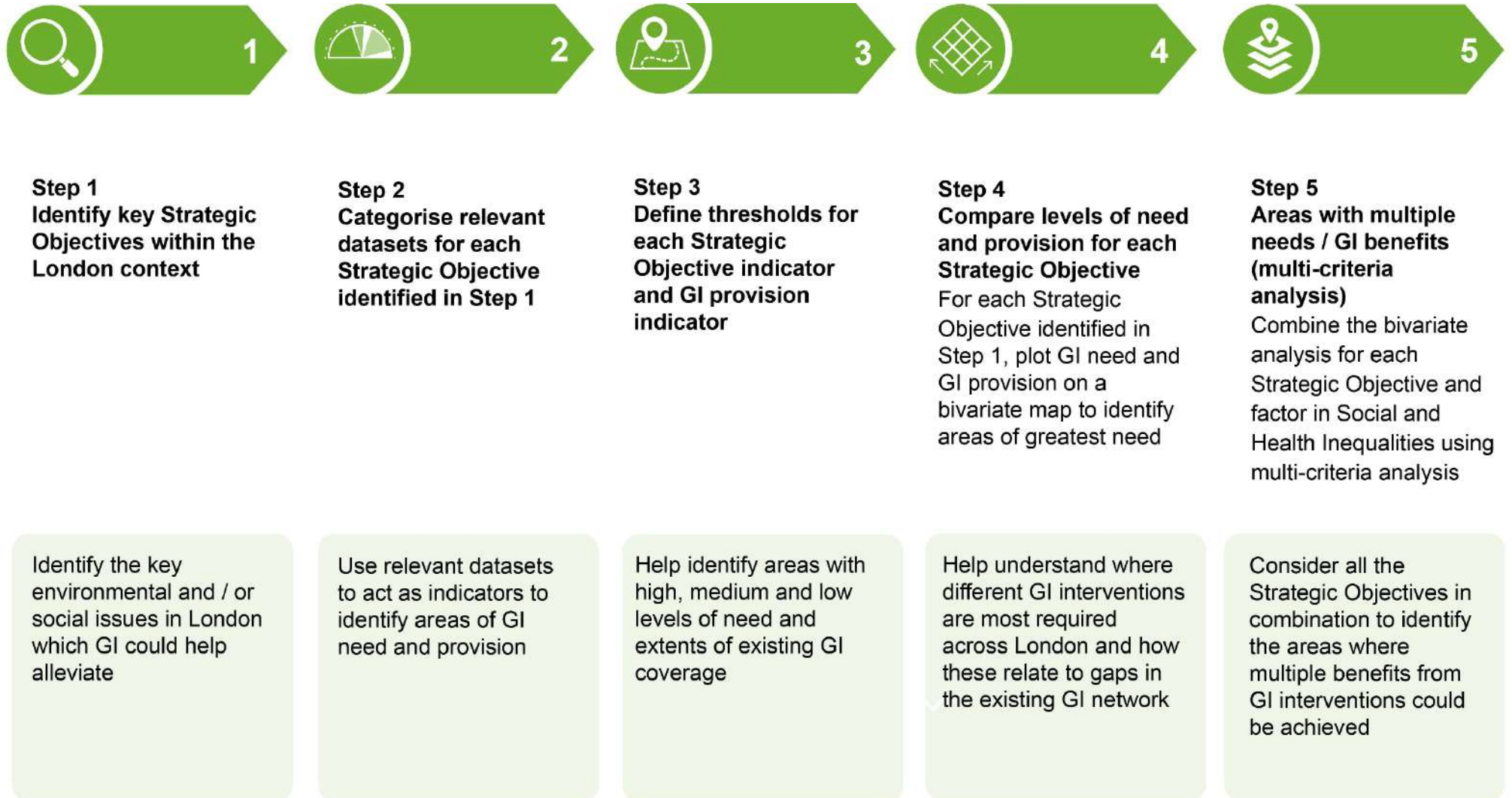
#### Step 4: Compare levels of need and provision for each Strategic Objective (bivariate analysis)

**4.8** For each Strategic Objective, the indicators of need and provision have been mapped using the hexagon grid, and then combined using bivariate analysis to help identify the relationship between need and provision. This helps to understand where different types of GI interventions are most needed across London for each Strategic Objective, and how these relate to gaps in the existing GI network. The component maps and final bivariate maps are presented in **Chapter 5**.

#### Step 5: Identify areas with multiple needs / GI benefits (multi-criteria analysis)

**4.9** The multi-criteria analysis helps to identify geographically specific areas across London where different types of GI intervention could address multiple needs/delivery multiple benefits (e.g. planting street trees to reduce heat mitigation, air/noise pollution and flood risk, and help make a high street, walking and cycling more attractive). The multi-criteria analysis maps and interpretation of the priority areas and appropriate types of GI interventions are provided in **Chapter 6**.

Figure 4.1: Key steps in the approach to the spatial data analysis



## Chapter 5

### Bi-variate analysis results

This chapter presents the mapped outputs of the bi-variate analysis carried out for each of the LGIF Strategic Objectives (and Inequalities) discussed in Chapter 3.

**5.1** For each Strategic Objective, maps are presented showing the datasets used for each indicator of need or provision, along with how that has been translated into areas of high, medium and low need or provision by hex (based on the thresholds established for the LGIF – these are described in detail in the **LGIF Spatial Data Analysis Technical Methodology Report**, which also explains the rationale for the datasets used). Where there is more than one indicator of need or more than one indicator of provision for a Strategic Objective, maps showing the overall need / overall provision are presented. Finally, a map showing the result of the bivariate analysis is presented, illustrating the relationship between need and provision across London for each Strategic Objective. The Strategic Objectives are as follows:

1. Improved access to green space;
2. Improved access to blue space;
3. Nature recovery;
4. Flood control;
5. Clean water;
6. Urban cooling;
7. Clean air;
8. Noise reduction;
9. Greener active travel routes; and
10. Greener high streets.

#### Consideration of Inequalities

**5.2** Equity is a key issue for the Mayor and has been a driver of LGIF project. The nature and climate emergencies are issues of social justice (disadvantaged Londoners and those from ethnic minority backgrounds often have poorer access to quality green spaces and are more vulnerable to the impacts of climate changes). The consideration of Health and Social Inequalities within the London context has been used to strengthen the approach to prioritising areas of functional need for GI within the LGIF based on demographic variations across London. Considering Health and Social Inequalities in this way reflects Mayoral priorities for improving health and social equity of Londoners.

#### Strategic Objective 1: Improved access to green space

This Strategic Objective considers opportunities to create new parks and other publicly accessible green space, as well as the creative use of highway space in areas where space is limited. The integration of community gardens / food growing and new access points into green spaces to improve their accessibility are also recommended as potential interventions to improve access to green space.

**5.3** For this Strategic Objective, the following indicators of need were identified:

- Areas of deficiency (AoD) in access to public open space: district parks;
- AoD in access to public open space: local parks;
- AoD in access to nature (Sites of Importance for Nature Conservation or SINC)s; and
- Area of private gardens in m<sup>2</sup> per 1,000 people.

**5.4** The following indicator of existing GI provision was identified:

- Green cover – this dataset shows the extent of green cover in London irrespective of which type it is or how accessible it is.

**5.5** **Figures 5.1 to 5.4** show the datasets used for each indicator of need, along with how that was translated into areas of high, medium and low need by hex across London. Areas of high need relate to areas outside the London Plan accessibility standards for the different scale of Local and District Parks or SINC)s:

- **Deficiency in access to district parks** covers about half of London, including areas of inner London, such as the whole of the City of London, and parts of outer London, for example parts of the LBs of Havering, Harrow and Kingston upon Thames. Boroughs with district parks within or adjacent have less deficiency in access and therefore more areas of low need, such as LBs Richmond, Wandsworth, City of Westminster, and Hackney.
- Particularly high levels of **deficiency in access to local parks** are evident in outer London, for example within the LBs of Bromley, Kingston upon Thames, Harrow and Enfield. Inner London boroughs such as LBs Camden, City of Westminster, Islington, Lambeth and Tower Hamlets have numerous local parks and therefore lower levels of need than other boroughs.
- Areas of **deficiency in access to nature** (SINC)s is less widespread, although there are still notable areas of deficiency. These include parts of LBs Hillingdon, Harrow, Enfield, Croydon, Lambeth, Waltham Forest, Newham and Havering.
- Areas of high need with respect to access to **private garden space** are generally located in inner and central London, as well as the north east, for example in the LBs of Newham, Tower Hamlets, Hackney and Islington. Although LBs Hounslow, Ealing and Croydon in the west and south also have notable areas of high need. High need equates smaller amounts of private garden space per person. While private gardens may not offer all the benefits of public open spaces (e.g. social interaction), they are still important because they can offer an alternative green space experience in areas deficient in public open space.

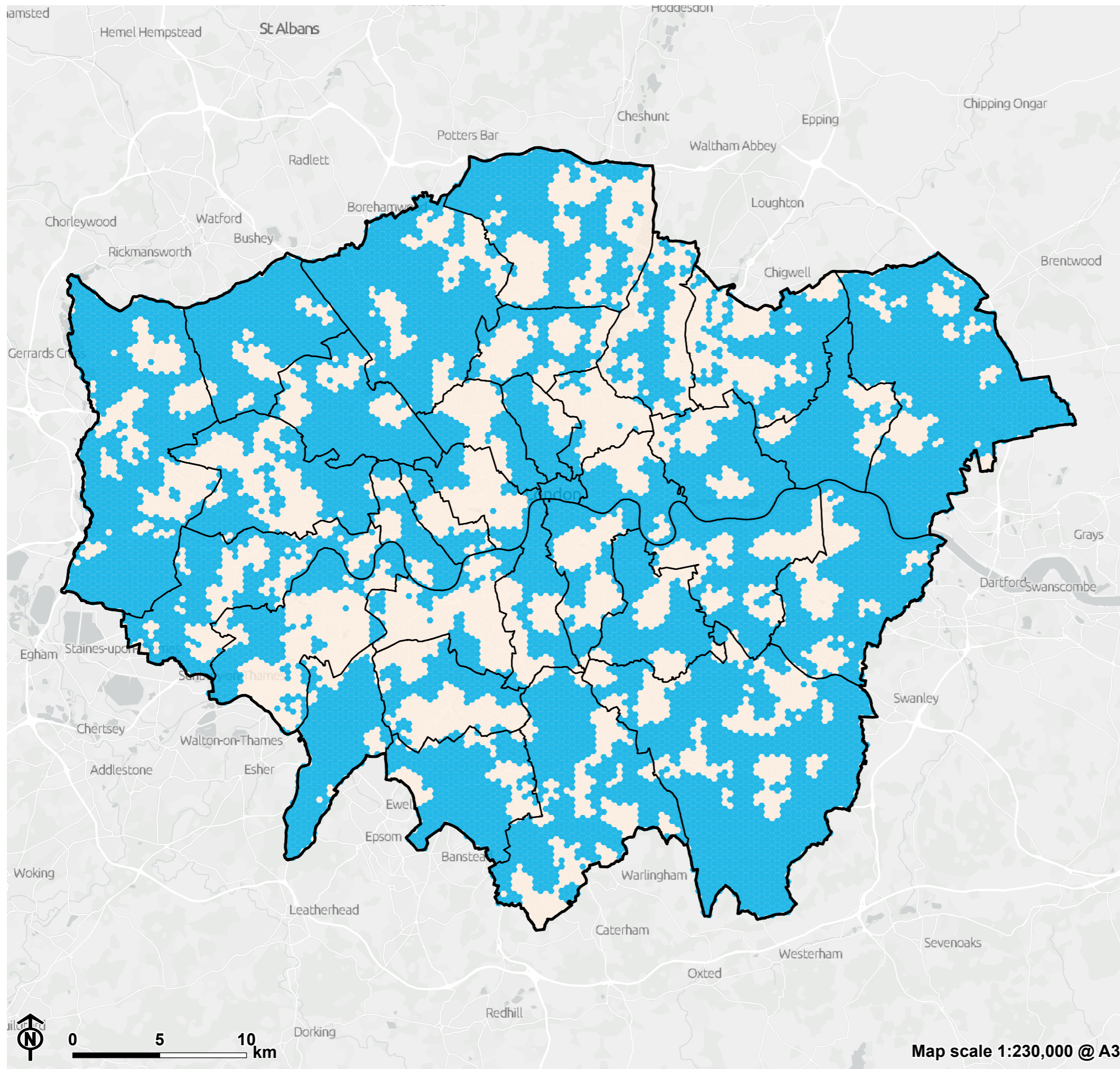
**5.6** **Figure 5.5** shows the overall levels of need for improved access to green space when all the indicators are combined. Areas of high need on this map highlight parts of London where Londoners do not currently have close (i.e. walking distance) access to small or medium public open spaces (local and district parks), nature sites (SINC)s or private gardens. Therefore, they are less able to access the health and wellbeing benefits green space provides. This shows the areas of greatest need are around the River Thames east of the City, around Heathrow Airport, Croydon, Romford, Lambeth, Walthamstow and the western edge of LB Enfield.

**5.7** **Figure 5.6** presents the dataset used for the indicator of existing GI provision for this Strategic Objective (green cover), and how that was translated into areas of high, medium and low provision by hex across London. Areas of high provision therefore relate to different types of green space e.g. parks, front or back gardens, street trees, grass verges etc. Areas with large parks, for example Hampstead Heath, Hyde Park and Richmond Park, show up as high existing provision, as do outer boroughs of London with larger private gardens and/or areas of greenfield land. Lower provision is mostly concentrated where private gardens are fewer and smaller and/or there are fewer parks e.g. in the centre of London, as well as parts of inner London including along the River Thames north of the city centre, in the north west, and in the south in Lambeth and Croydon.





**5.8** **Figure 5.7** presents the results of the bivariate analysis for improved access to green space. The key findings are described below.

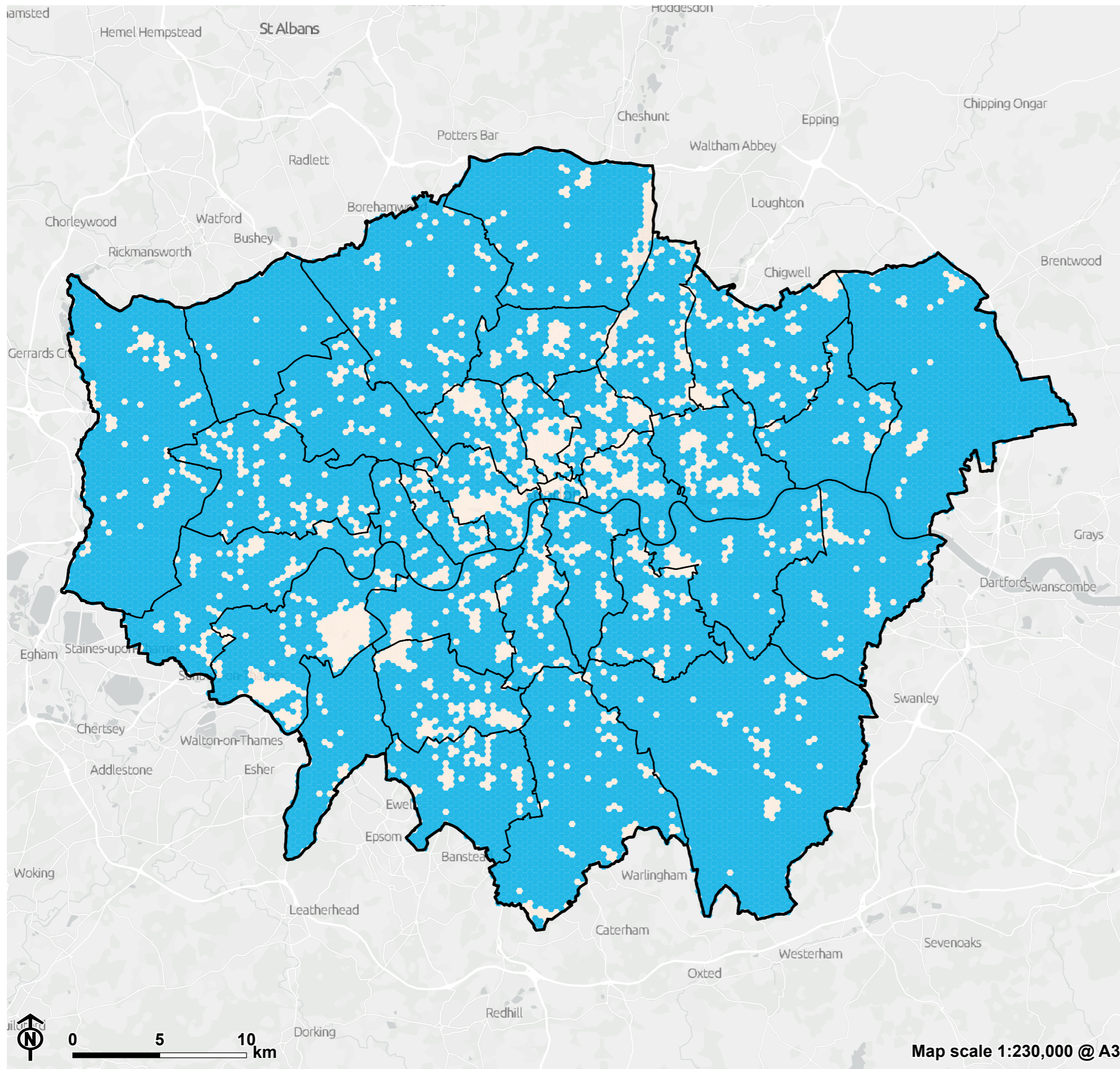
- Areas of **highest need and lowest provision** are shown in the **dark brown hexes**. These are more concentrated in the central boroughs of London (particularly areas with higher commercial and/or industrial uses, for example in City of London, along the Thames in LBs Tower Hamlets, Newham, Greenwich and Southwark), as well as in more densely populated areas such as within LBs Camden, Newham, Haringey, Waltham Forest, Croydon and Hammersmith & Fulham.

- Areas with **high need and medium provision** are indicated by **dark blue hexes** and tend to be in more built up areas of outer London boroughs, e.g. parts of LBs Brent, Havering and Harrow where there is a medium level of green cover (indicating between 25-50% existing green cover), but still deficiency in access to parks, SINC's and/or private gardens.
- In LBs Wandsworth, City of Westminster, Redbridge are examples of areas with **medium provision, but a low need** shown by **dark orange/tan hexes** (indicating between 25-50% existing green cover, and better access to parks, SINC's and private gardens).
- Large parts at the edge of outer London boroughs such as LBs Bromley and Havering, and the north of LBs Hillingdon, Harrow, Barnet and Enfield, are shown in **light blue hexes**, indicating **medium need and higher provision**. This indicates areas with high general green cover (greater than 50%), but only medium levels of access to parks, SINC's and/or private gardens. These areas tend to coincide with Green Belt land.
- Areas with **lowest need but highest provision** are shown in the **cream hexes**. These correspond with large areas of green space, such as Richmond Park, Hampstead Heath, Greenwich Park / Blackheath and Wanstead Flats.







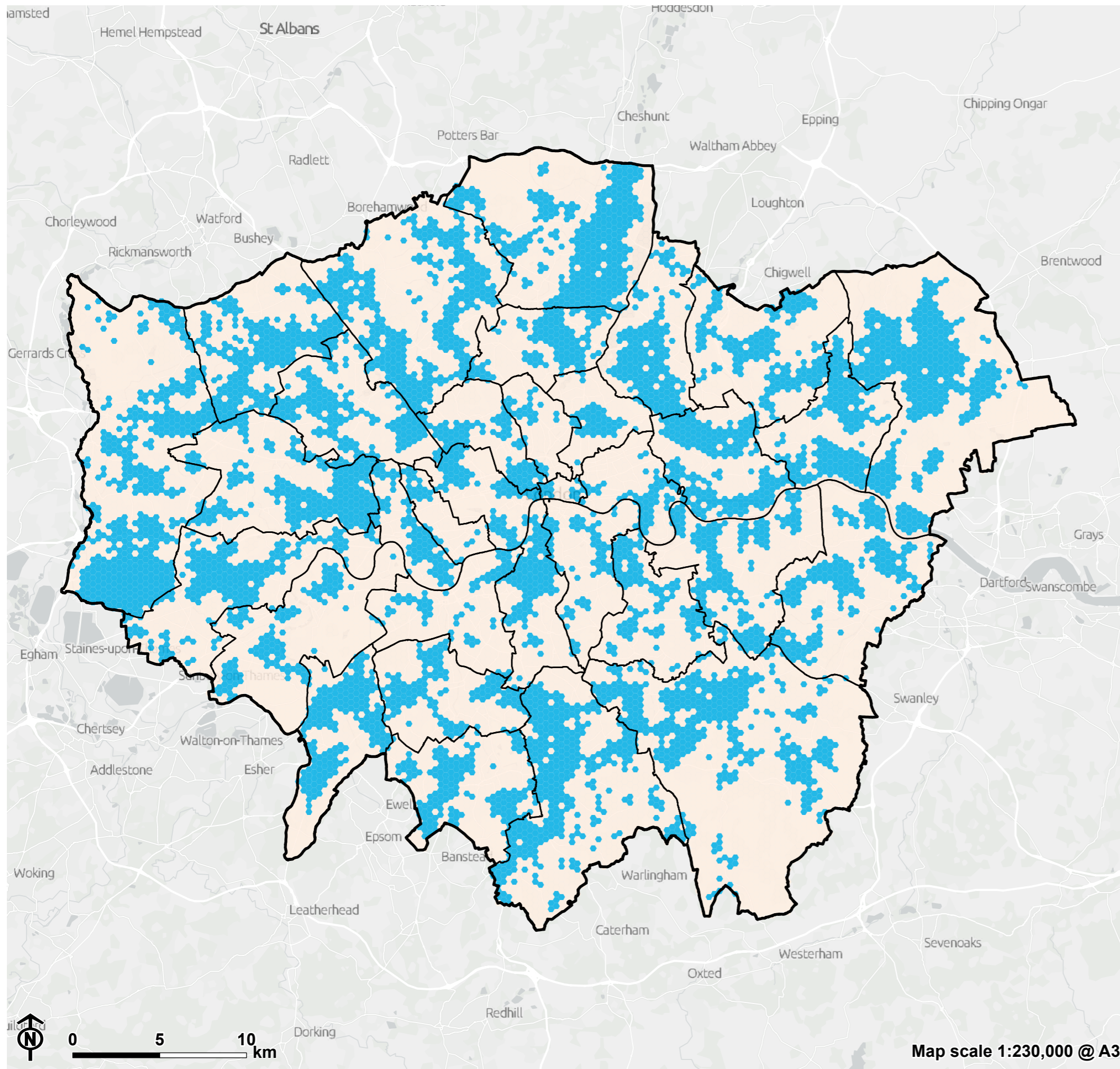
**Figure 5.1: Area of deficiency (AoD) for public open space: district parks need scores**

-  Greater London Authority boundary
-  Borough boundary
- Indicator of need: AoD District Parks**
-  High need
-  Low need







**Figure 5.2: Area of deficiency (AoD) for public open space: local and small pocket parks need scores**

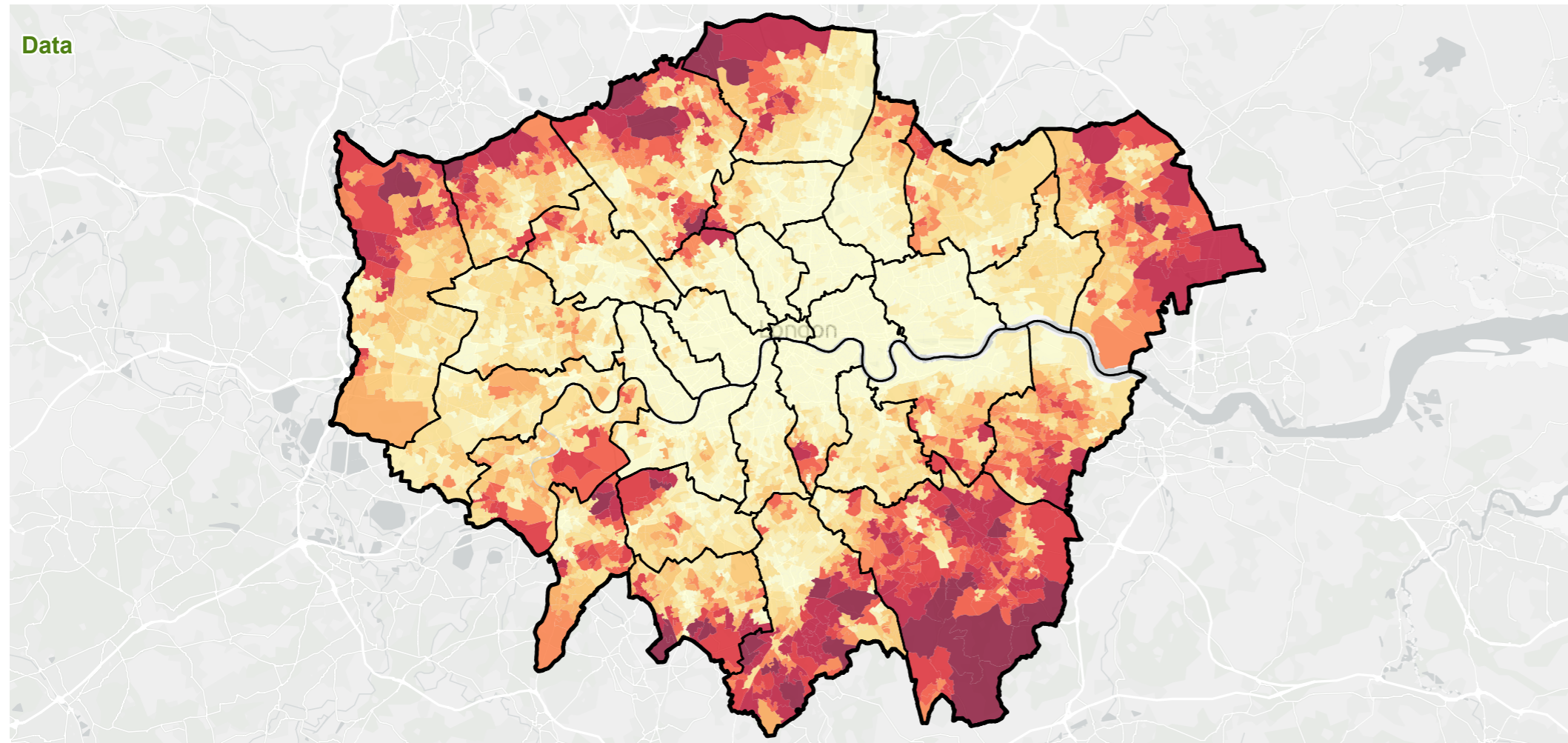
-  Greater London Authority boundary
-  Borough boundary
- Indicator of need: AoD Local Parks**
-  High need
-  Low need



**Figure 5.3: Area of deficiency (AoD) for access to nature need scores**

-  Greater London Authority boundary
-  Borough boundary
- Indicator of need: AoD Access to nature**
-  High need
-  Low need

**Figure 5.4: Area of private gardens data and need scores**



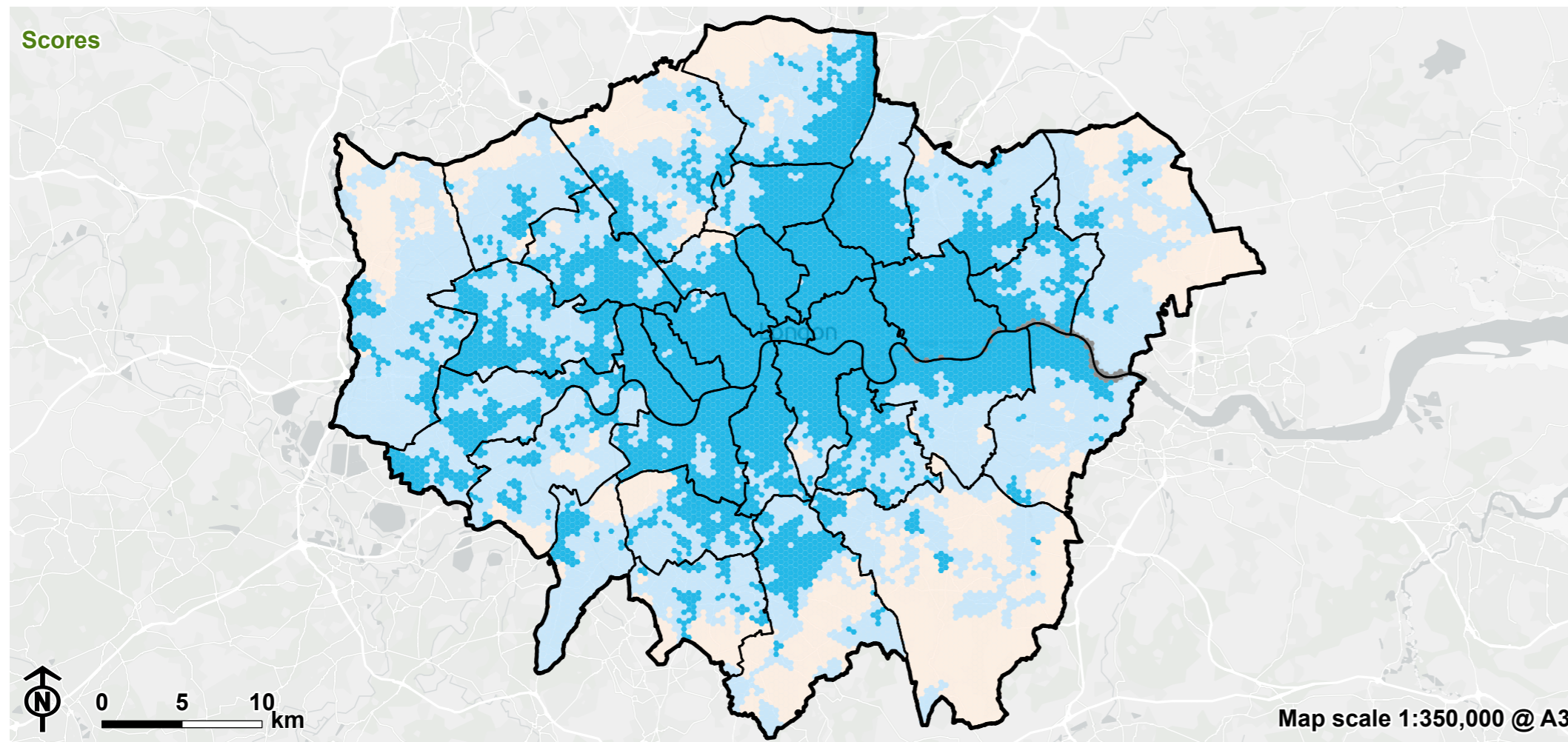
- Greater London Authority boundary
- Borough boundary

**Data**

**Private garden area**

m2 per 1000 people

- 0 - 25000
- 25000 - 40000
- 40000 - 55000
- 55000 - 70000
- 70000 - 80000
- 80000 - 90000
- 90000 - 110000
- 110000 - 150000
- 150000 - 250000
- 250000 - 1124590



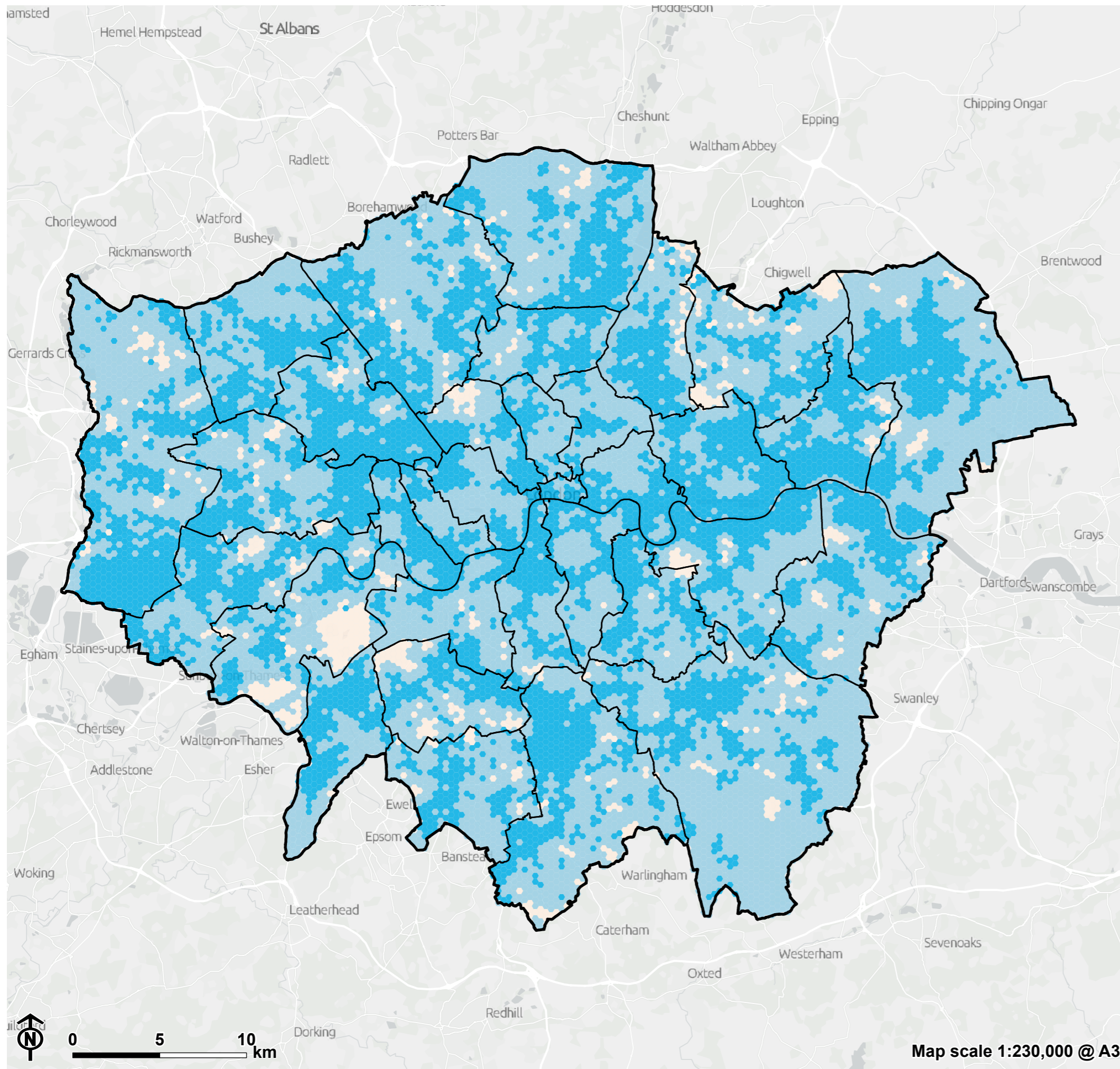
**Scores**

**Indicator of need: area of private gardens**

- High need
- Medium need
- Low need
- N/A



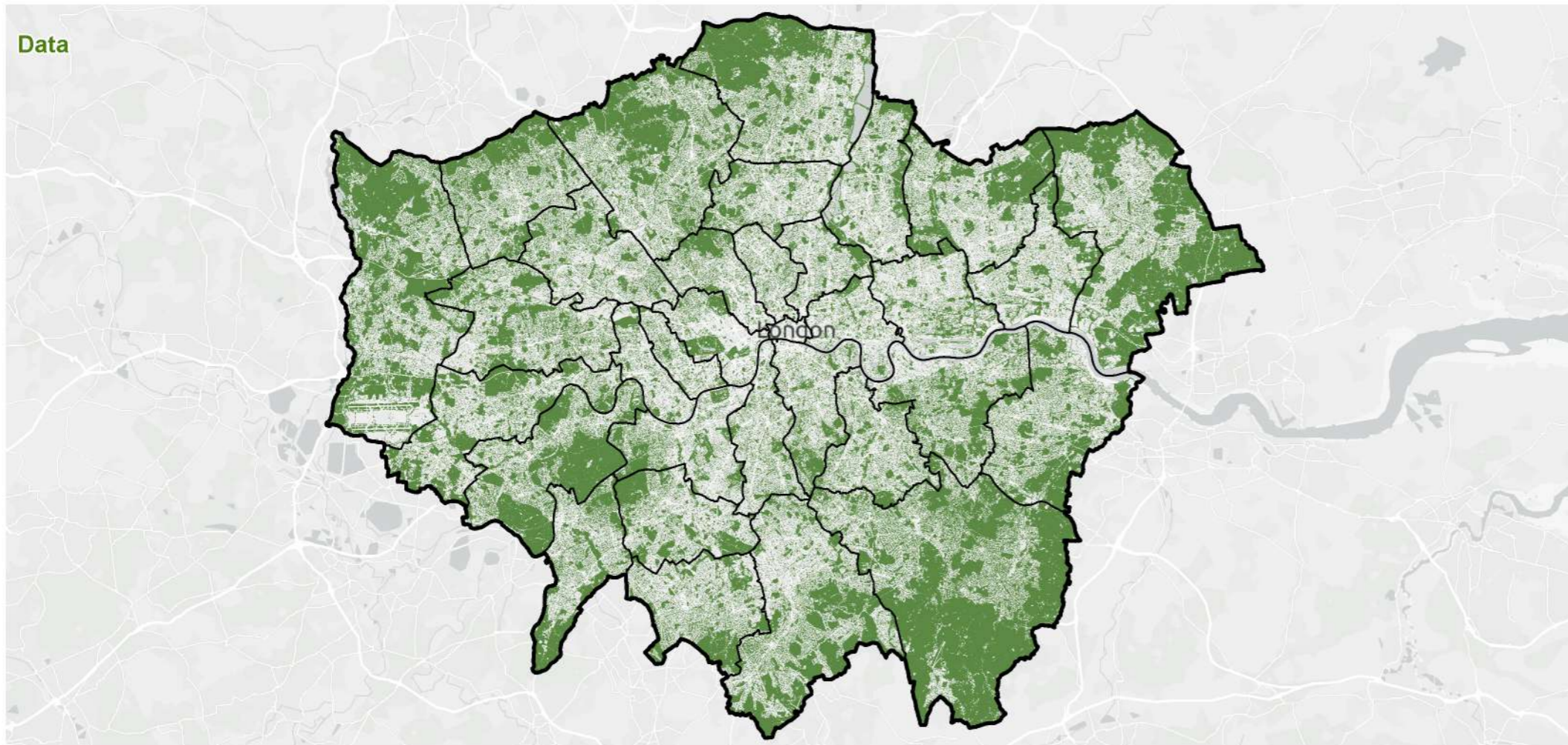
Map scale 1:350,000 @ A3



**Figure 5.5: SO1 Improved access to green space overall need**

- Greater London Authority boundary
- Borough boundary
- Overall need**
- High need
- Medium need
- Low need

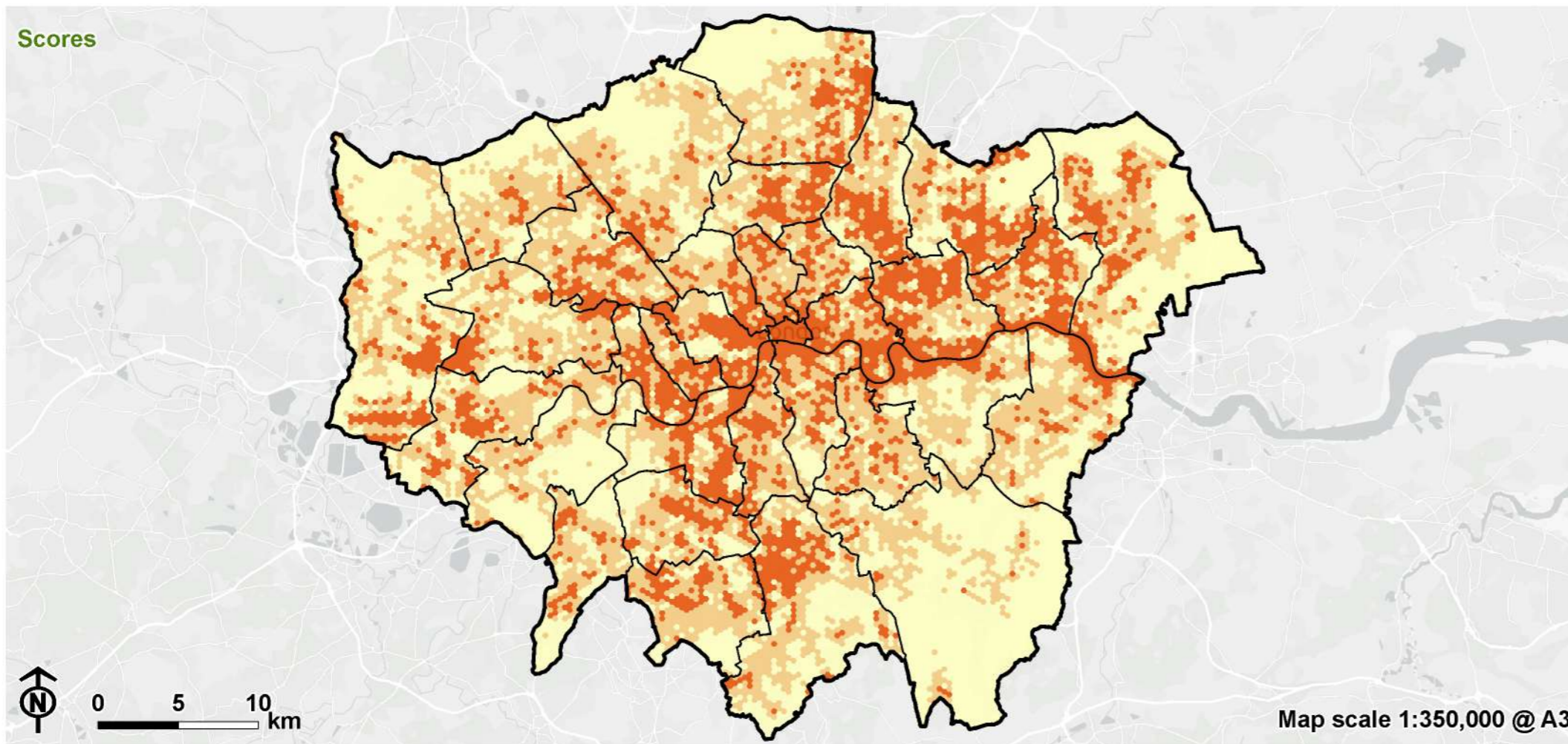
Figure 5.6: Green cover data and provision score



- Greater London Authority boundary
- Borough boundary

Data

- Green Cover 2024



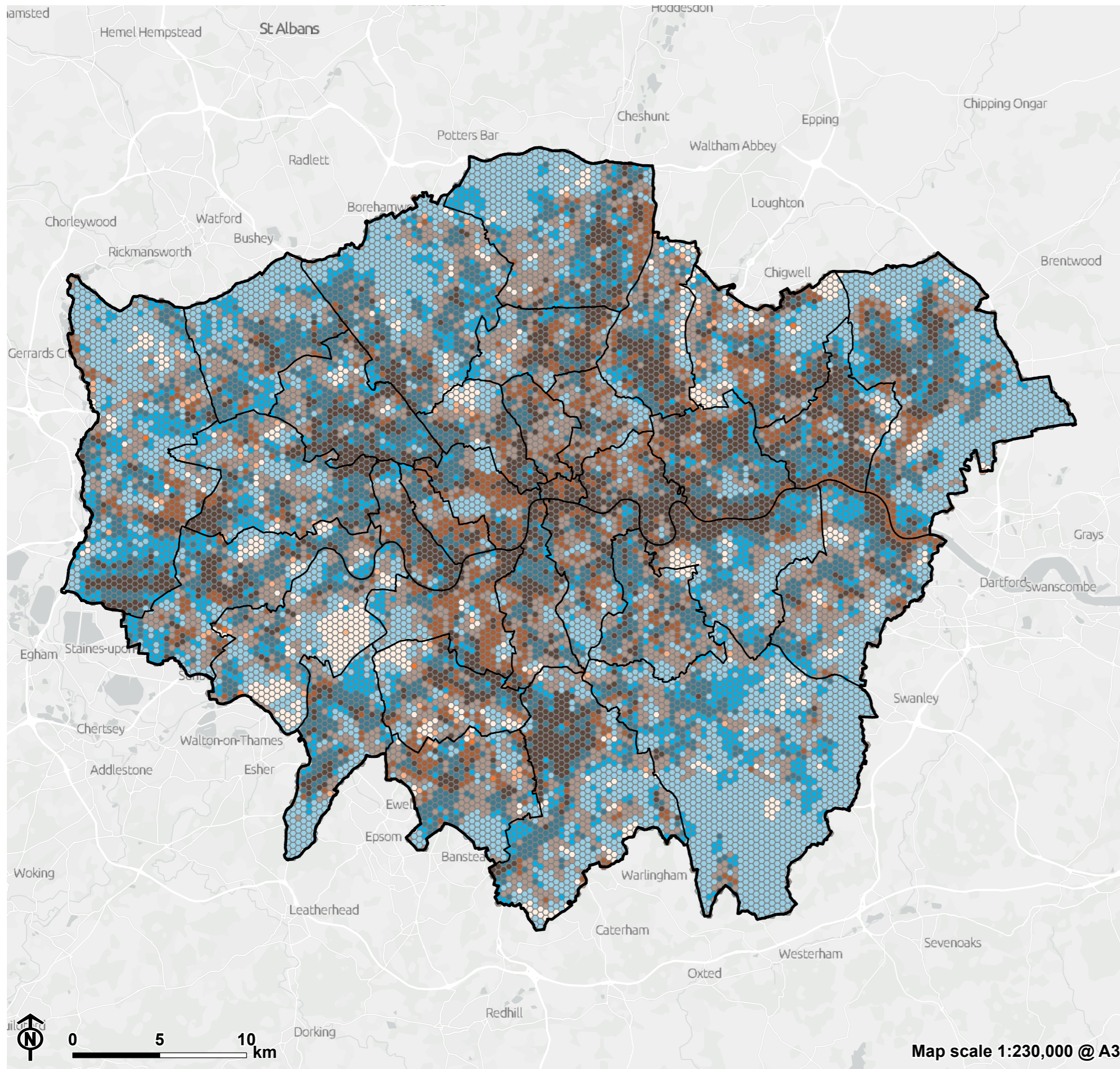
Scores

Overall provision: Green Cover 2024

- High provision
- Medium provision
- Low provision



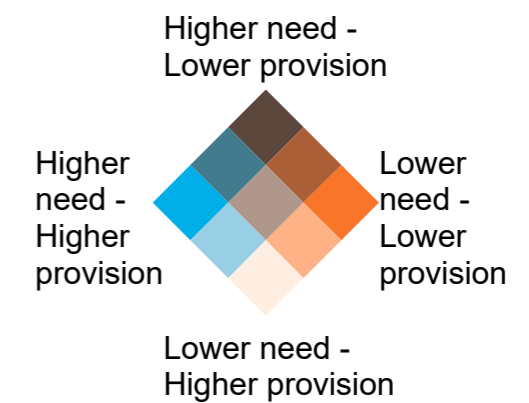
Map scale 1:350,000 @ A3



**Figure 5.7: SO1 Improved access to green space bivariate results**

- Greater London Authority boundary
- Borough boundary

**Need versus provision**



## Strategic Objective 2: Improved access to blue space

This Strategic Objective considers opportunities for opening up areas of inaccessible waterside or improving existing access through measures such as waterside footpaths or wayfinding.

**5.9** The following indicator of need was identified:

- 800 m buffer around accessible waterside, based on the GLA Blue Cover dataset and Natural England Accessible Waterside, corresponding to a 10-minute walk - the dataset identifies an 800m buffer around edges of rivers or water bodies that include the presence of a Public Right of Way (PRoW) or that are adjacent to accessible GI, indicating that the river or water body is also publicly accessible. An 800m buffer around waterways that are not publicly accessible shows areas within 10-minute walk from an inaccessible waterway. High need is identified where hexes are within 800m buffer from an inaccessible waterway or when hexes are not within 10-minute walking distance of any type of waterway, regardless of whether it is accessible or inaccessible.

**5.10** The following indicator of existing GI provision was identified:

- 800 m buffer around GLA Blue Cover – this dataset shows a 10-minute walking distance from blue space in London irrespective of how accessible it is.

**5.11** **Figure 5.8** shows the areas of accessible and inaccessible waterways with the application of an 800m (10-minute walking distance) buffer, along with how that translates into areas of high, medium and low need by hex across London. The areas with the highest need for improving access to existing rivers and water bodies are those within the 800m buffer around inaccessible waterways as well as areas outside of the 800 m buffer around waterways. Areas described as high need are distributed across Greater London, with all LBs containing some localised pockets of high need. Although discrete pockets of high need do exist (e.g. within LBs Hackney and Wandsworth), much of the data output for high need forms cross-boundary corridors. Examples of this pattern include the area of high need running east-west between the LBs Brent, Harrow and Hillingdon. A corridor of high need is also evident connecting the LBs of Southwark, Lambeth and Croydon. The lowest need in terms of access to existing blue space is unsurprisingly close to major river corridors, including the length of the River Thames, the River Lee and River Ingrebourne. Areas of low need are particularly extensive in LBs Richmond upon Thames and Tower Hamlets.

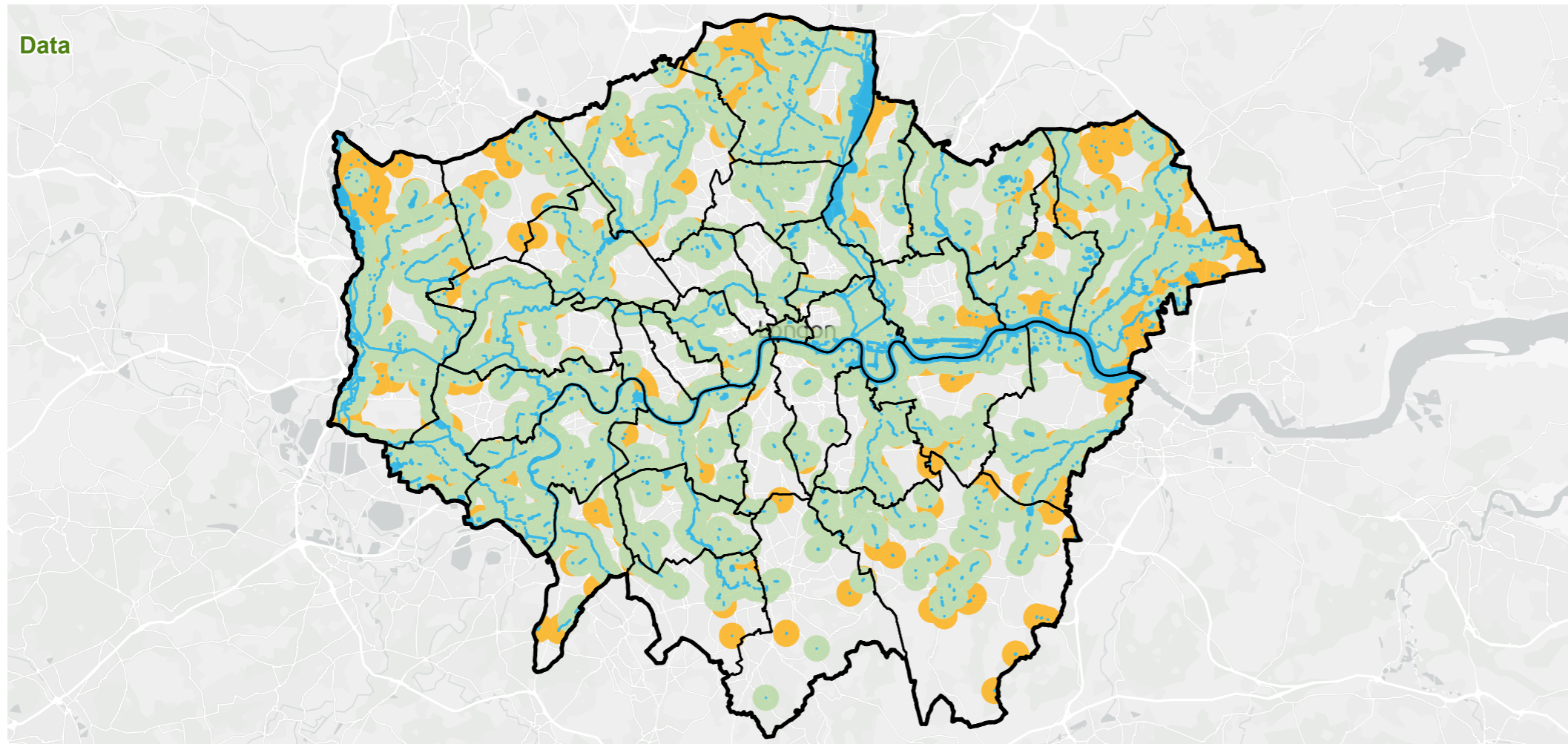
**5.12** **Figure 5.9** presents the 800 m buffer (10-minute walking distance) around waterways (regardless of accessible or inaccessible) used for the provision indicator for this Strategic Objective, along with how that was translated into areas of high, medium and low provision by hex across London. The major river corridors and wetland areas correspond to areas of high provision, including the River Thames, its wider tributaries and land such as Walthamstow Wetlands associated with the River Lee. Blue cover generally forms linear patterns, interspersed with large intervening areas of low provision. This is particularly the case within the LBs of Sutton, Croydon and Bromley.

**5.13** **Figure 5.10** presents the results of the bivariate analysis for improved access to blue space. The key findings are described below.

- **Areas of highest need and lowest provision** are shown in the **dark brown hexes**. These correspond to areas that are outside the 800m buffer, i.e. approximately a 10-minutes' walk away from accessible or inaccessible waterways. Large swaths of land at the southern extent of Greater London is defined within this category, incorporating areas of LBs Sutton, Croydon and Bromley. Improving access in areas of highest need and lowest provision could be met through the creation of new blue infrastructure. This includes opportunities to create a new wetland, waterbody or undertake 'daylighting' works to a watercourse (restoration of a previously buried watercourse). However, these interventions generally require extensive collaboration, consultation and investment to ensure successful implementation.
- Areas shown in **blue hexes** correspond with areas of **high need and high provision**, where waterbodies are present but inaccessible. These represent areas with potential to open up public access to currently inaccessible waterways. The pattern of high need and high provision form discrete pockets distributed across Greater London, albeit with gaps evident in LBs of Camden, Islington, Tower Hamlets and City of London.
- Areas with **lowest need but highest provision** are shown in **cream**. These are areas within reach of an accessible waterway. All LBs across Greater London contain land described as lowest need and highest provision of access to blue

space. However, LBs with relatively large extents of this data output include LBs Richmond upon Thames, Hillingdon, City of Westminster, Tower Hamlets and Enfield.

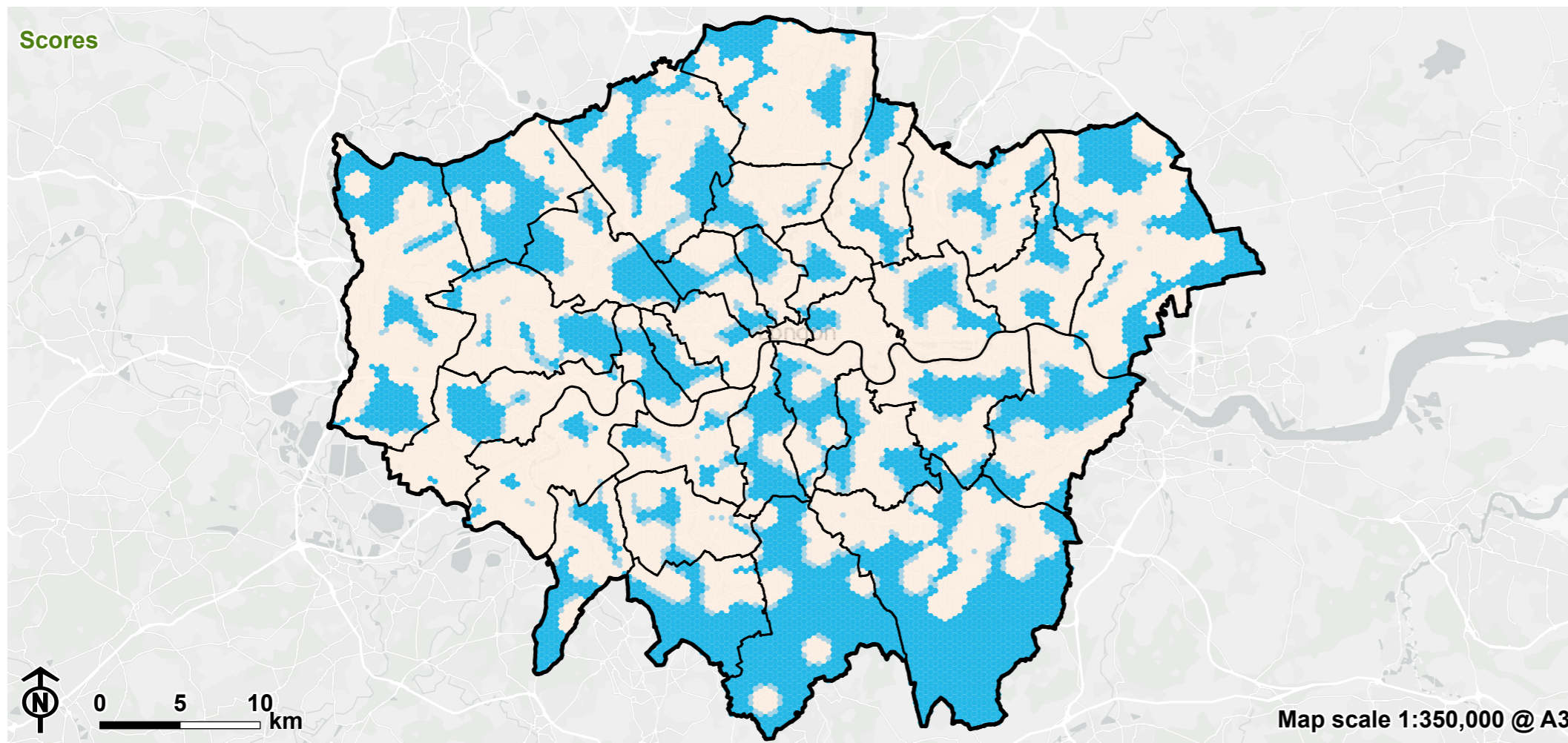
**Figure 5.8: SO2 Improved access to blue space overall need**



- Greater London Authority boundary
- Borough boundary

**Data**

- Blue Cover 2024
- 10min (800m buffer) public access to waterways
- No 10min public access to waterways



**Scores**

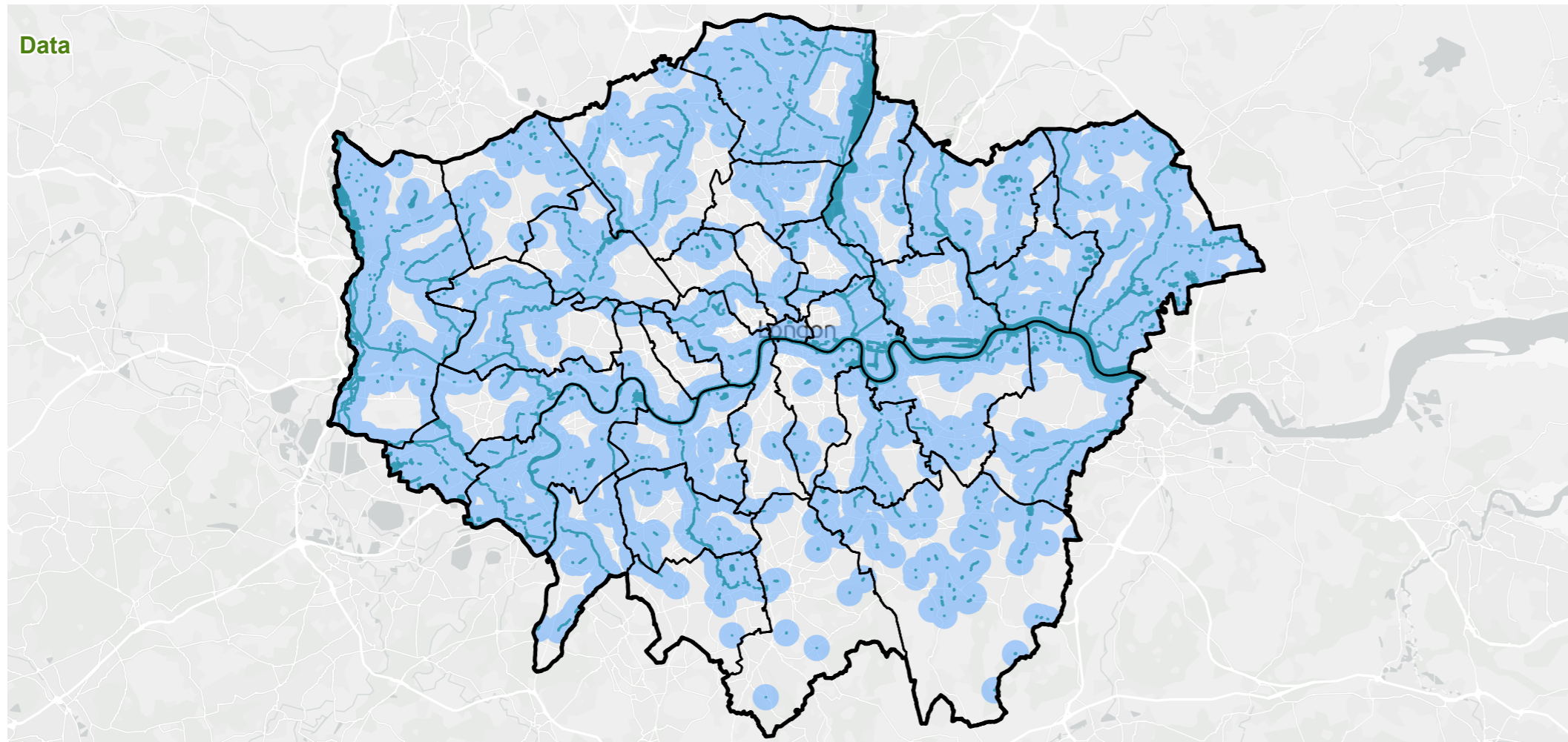
**Overall need: Accessible waterways**

- High need
- Medium need
- Low need



Map scale 1:350,000 @ A3

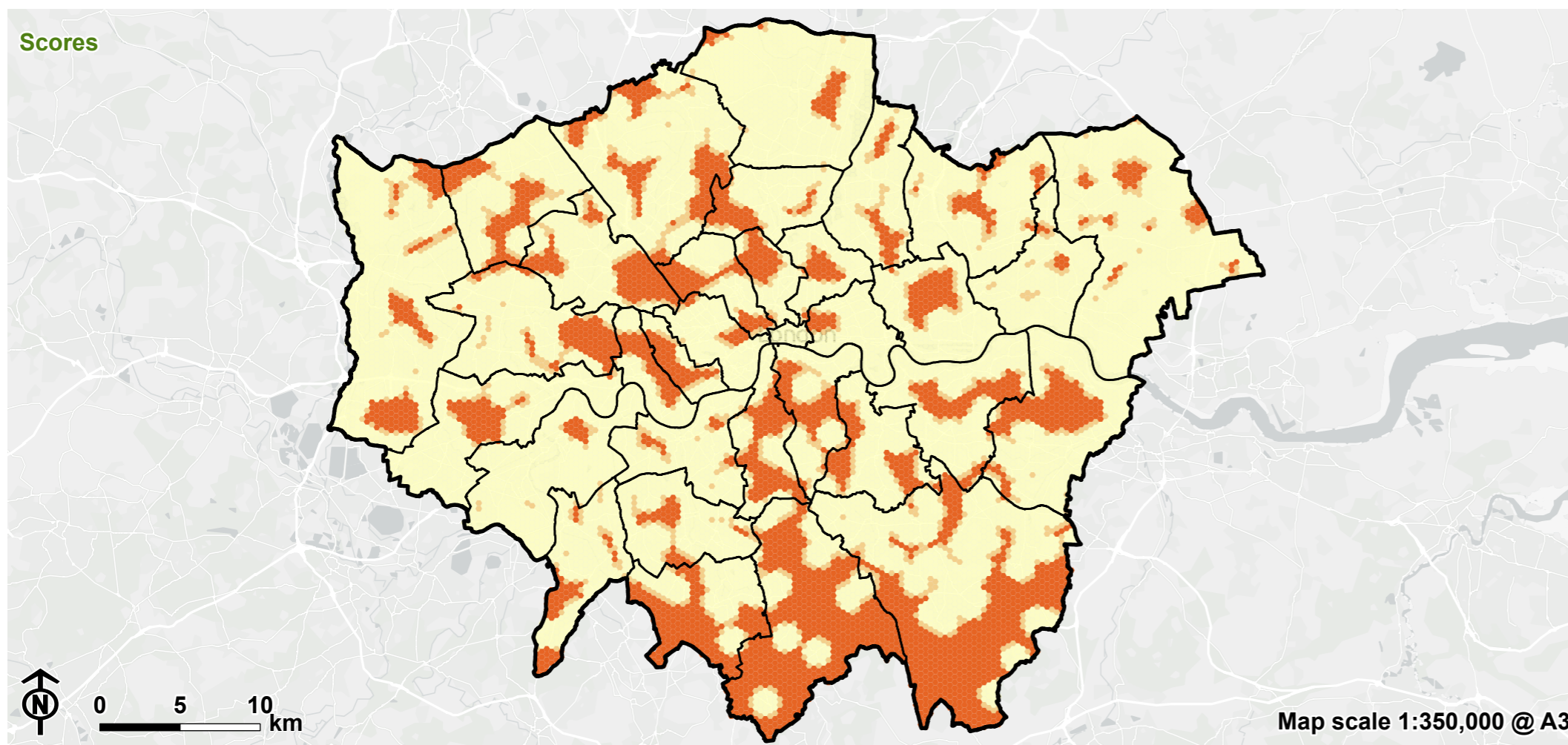
**Figure 5.9: SO2 Improved access to blue space overall provision**



- Greater London Authority boundary
- Borough boundary

**Data**

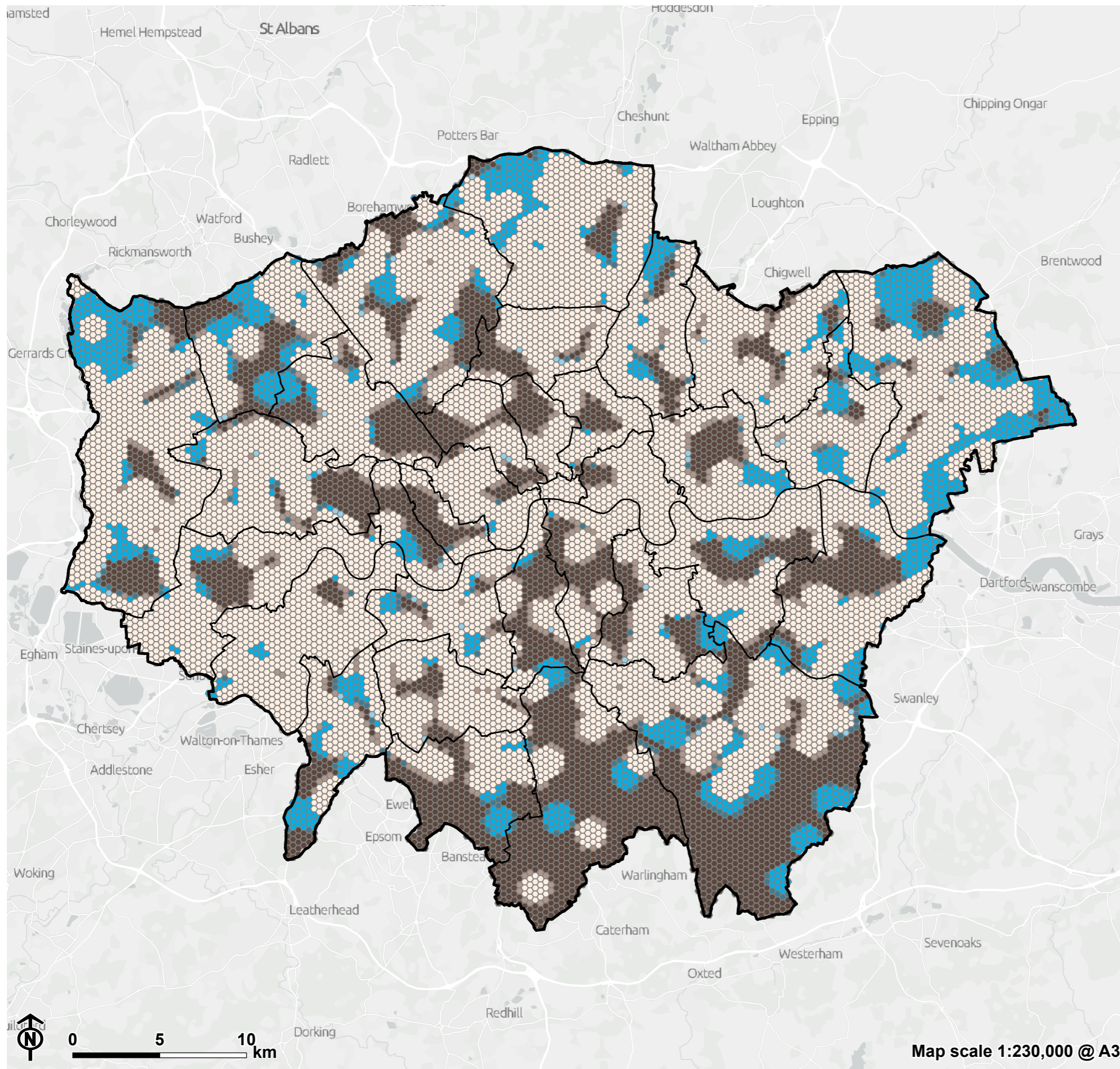
- Blue Cover 2024
- 800m buffer (10-minute walk) around blue cover



**Scores**

**Overall provision: 800m buffer (10-minute walk) around blue cover**

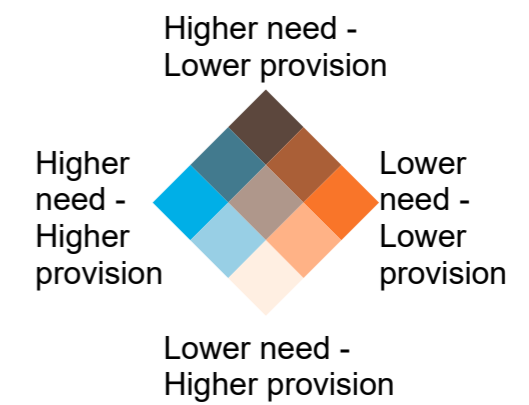
- High provision
- Medium provision
- Low provision



**Figure 5.10: SO2 Improved access to blue space bivariate results**

Greater London Authority boundary  
 Borough boundary

**Need versus provision**



### Strategic Objective 3: Nature recovery

This Strategic Objective considers opportunities to create, improve and connect habitats using evidence from the LNRS to identify relevant biodiversity priorities and actions. Depending on the location, this could include activity such as tree planting, watercourse restoration, provision of nesting sites, or other appropriate actions.

**5.14** For this Strategic Objective, the following indicator of need was identified:

- London LNRS “Potential measures” – this dataset comprises locations in London where potential nature recovery measures have been identified that could deliver the priorities of the LNRS. The potential measures areas include habitats in need of nature recovery that could help to improve the quality, size and connectivity of existing wildlife spaces, and opportunity areas for further expansion in and around London.

**5.15** The following indicator of existing GI provision was identified:

- London LNRS “Areas of particular importance for biodiversity” (APIB) – this dataset includes existing national nature conservation sites (e.g. SSSI, SPAs, SCAs, etc.), local nature reserves, local wildlife sites (in London these sites are called Sites of Importance for Nature Conservation - SINC), proposed SINC and the Ancient Woodland Inventory.

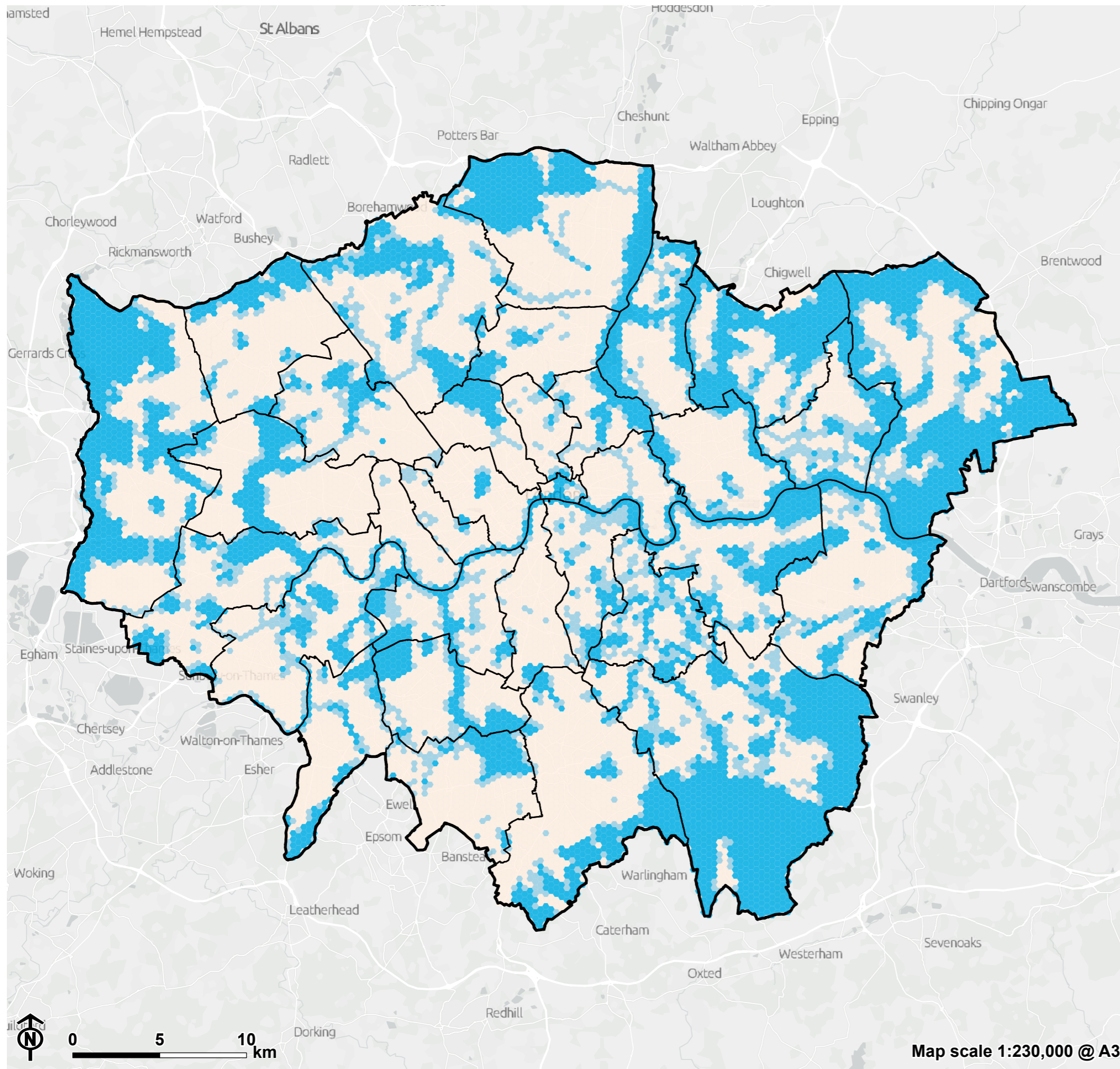
**5.16** **Figure 5.11** presents the LNRS Potential measures translated into areas of high, medium and low need for nature recovery by hex across London (the underlying dataset for **Figure 5.11** could not be shown as the LNRS was not yet finalised at the time of reporting). Note: This figure pre-dates the December 2025 updates to this report and therefore reflects a now superseded version of the LNRS data (January 2025). The current version of the LNRS APIB and Potential Measures can be viewed on the final LGIF web map. The areas of highest need (corresponding to LNRS Potential measures areas) are concentrated along the River Thames and River Lee, and other areas where there are large, connected or closely located areas of green space that have been identified for potential nature recovery, such as around the outer edges of London, including in LBs Bromley, Havering and Hillingdon. The areas of lowest need, have fewer or smaller LNRS Potential measures identified, and are more often found in the inner boroughs and within the western half of London, for example in LBs Hammersmith and Fulham and Lambeth.

**5.17** **Figure 5.12** presents the nature conservation sites identified as areas of particular importance for biodiversity (APIBs) in the LNRS, translated into areas of high, medium and low provision by hex across London. Note: This figure pre-dates the December 2025 updates to this report and therefore reflects a now superseded version of the LNRS data (January 2025). The highest provision relates to the Areas of particular importance for biodiversity (APIB) located along river corridors and large green spaces. This includes around Richmond Park, Hampstead Heath, Hyde Park, and along the River Thames and Lee including in LBs Bexley and Enfield. Areas of low provision are common across London, including large parts of LBs Hillingdon, Kingston upon Thames, Sutton and Barking & Dagenham.





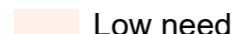
**5.18** **Figure 5.13** shows the results of the bivariate analysis for Strategic Objective 3: nature recovery. Note: This figure pre-dates the December 2025 updates to this report and therefore reflects a now superseded version of the LNRS data (January 2025). The key findings are described below.

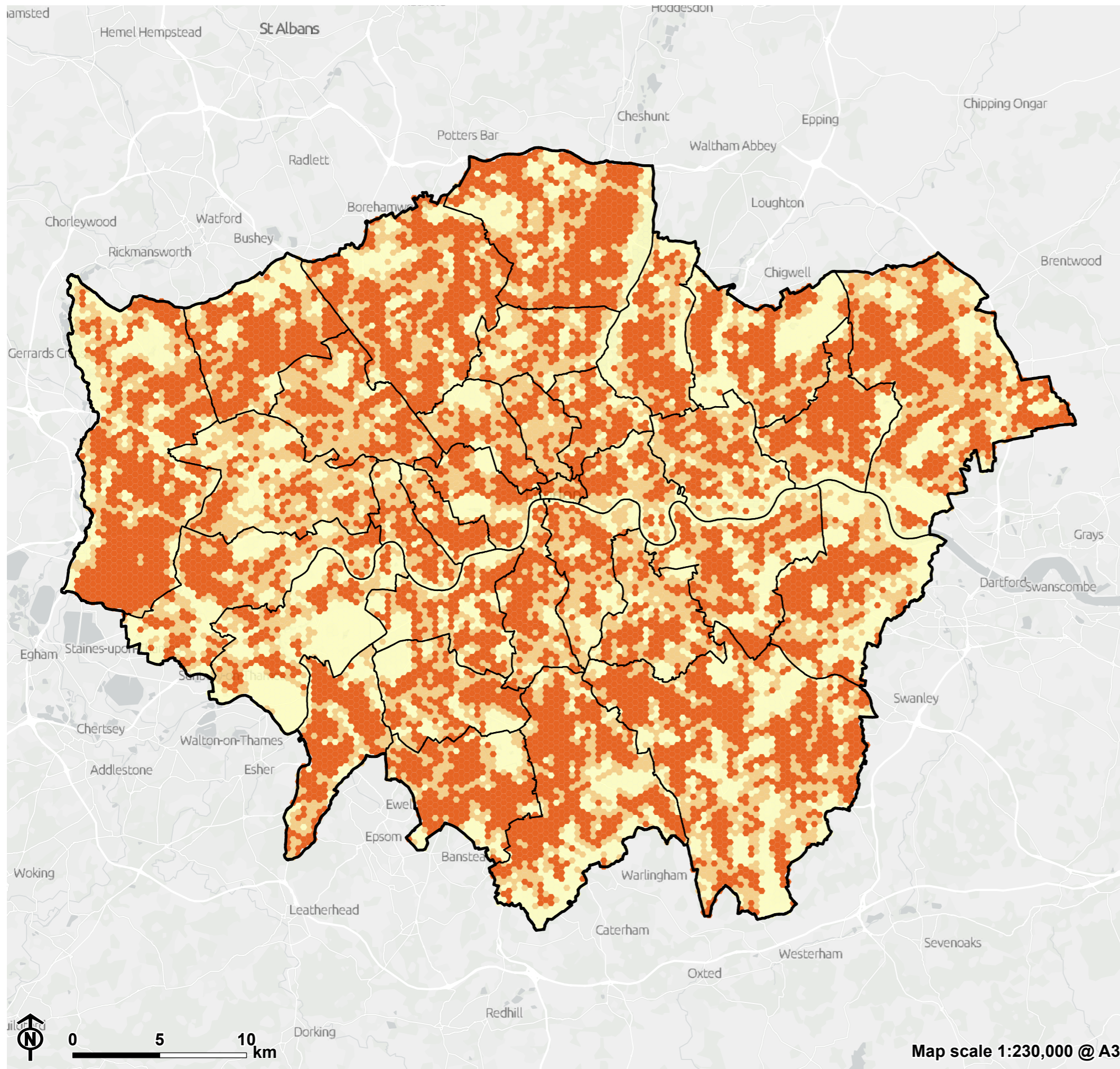
- Areas of **highest need and lowest provision** are shown in **dark brown hexes** and are generally located around the outer edges of London, including in the south of LBs Bromley and Havering, north of LB Enfield, and parts of LB Hillingdon. These represent large areas where the LNRS has identified potential nature recovery measures could be delivered; they are generally in between existing areas of importance for biodiversity, hence showing as low provision areas.
- Other areas on the outer edges of London are shown in **blue hexes**, indicated areas of **higher need and higher provision**. These correspond with existing nature conservation sites that have also been identified as LNRS Potential measures locations, e.g. parts of the Colne Valley in LB Hillingdon, Hainault Forest Country Park in LB Redbridge, as well as the river corridors along the Thames and the Lee.

- Large parts of London are represented by **orange hexes**, indicating areas of **lower need and lower provision**. This includes most of LBs Lambeth, Islington and Hammersmith & Fulham. These are primarily areas that include fewer and smaller nature conservation sites, and have fewer areas identified for potential nature recovery measures in the LNRS.
- Areas with the **lowest need but highest provision** are shown in **cream**. These areas are mostly found in LB Richmond upon Thames, as well as parts of LBs Croydon, City of Westminster, and Bexley, and generally correspond with the large parks e.g. Richmond Park, Bushy Park, Arlington Park and golf course, Hyde Park and Regents Park and Danson Park and Gattons Wood.



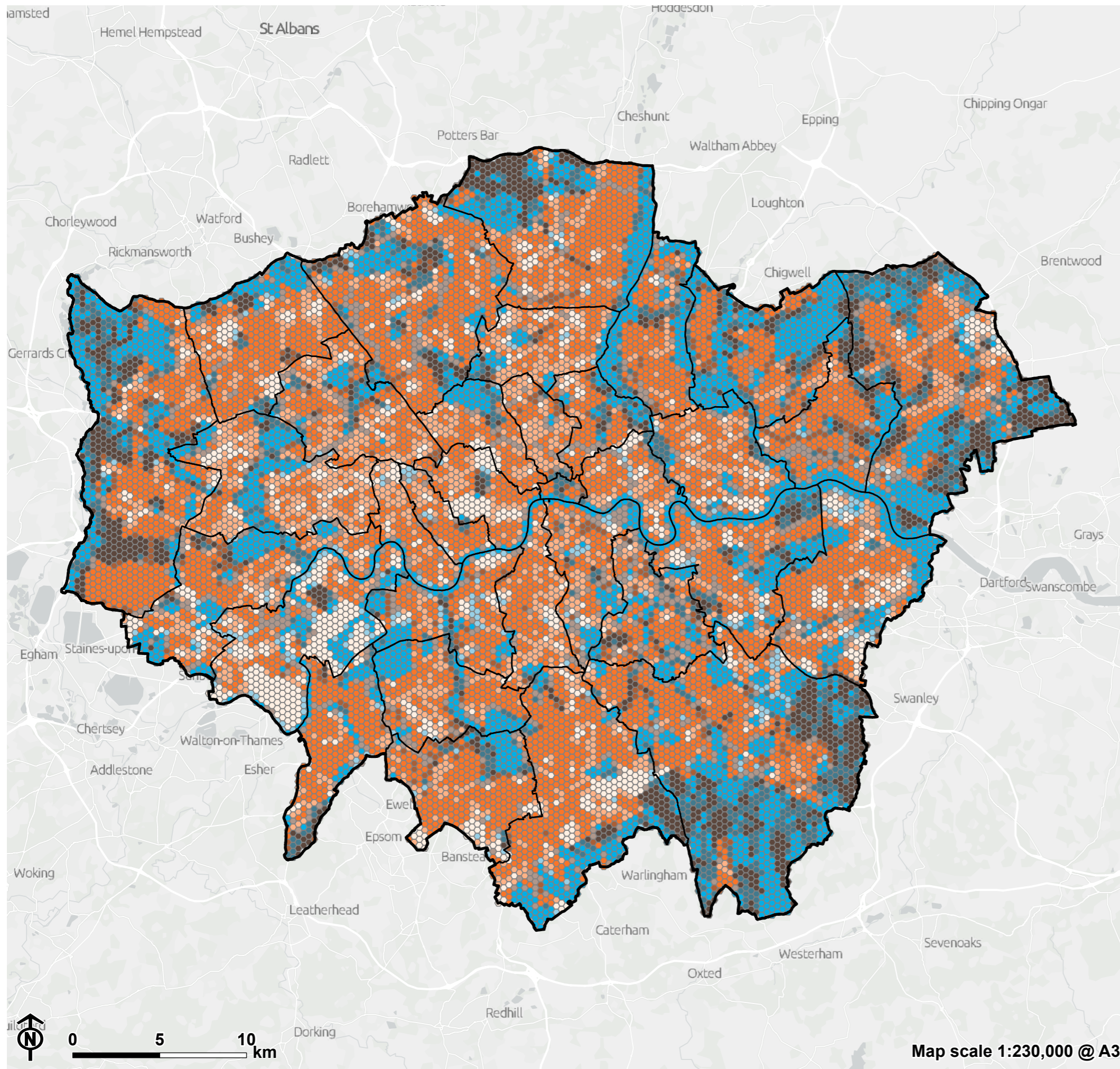
**Figure 5.11: SO3 Nature recovery overall need**

-  Greater London Authority boundary
-  Borough boundary
- Overall need: London Local Nature Recovery Strategy Potential measures**
-  High need
-  Medium need
-  Low need



**Figure 5.12: SO3 Nature recovery overall provision**

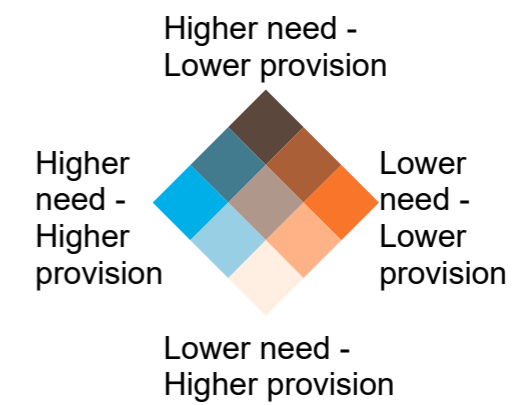
- Greater London Authority boundary
- Borough boundary
- Overall provision: London Local Nature Recovery Strategy - Areas of particular importance for biodiversity (APIB)**
- High provision
- Medium provision
- Low provision



**Figure 5.13: SO3 Nature recovery bivariate results**

- Greater London Authority boundary
- Borough boundary

**Need versus provision**



## Strategic Objective 4: Flood control

This Strategic Objective considers opportunities for 'greening the grey' by introducing rain gardens, swales and roof gardens to capture and retain rainwater in hard surfaced areas. Interventions which open up or naturalise watercourses through green spaces to slow the flow of water into the drainage system are also recommended as potential solutions to mitigate flood risk.

**5.19** For this Strategic Objective, the following indicators of need were identified:

- Fluvial flood zones – this dataset shows flooding associated with rivers (tidal flooding has not been included, because GI cannot address tidal flood risk); and
- Surface water flooding – this dataset from the London Surface Water Strategy (LSWS) defines 'priority areas' as areas where rainfall flows and eventually collects, resulting in flooding.

**5.20** The following indicators of existing GI provision were identified:

- Green cover, including trees, shrubs, grassland, which can intercept rainfall and slow down surface water flows; and
- Blue cover, including waterbodies which can help to store water and reduce flooding.

**5.21** **Figures 5.14** and **5.15** present the datasets used for each indicator of need for flood control, and how these were translated into areas of high, medium and low need by hex across London. Fluvial flood risk is concentrated around the river corridors as you would expect. Most of London is at low risk from fluvial flooding. High areas of need correspond to flood zones 2 and 3 adjacent to the River Lee in LBs Newham and Waltham Forest and along the River Roding in LBs Barking & Dagenham, Tower Hamlets and Redbridge. Along the River Thames, the greatest flood risk is in the west, including in LBs Kingston upon Thames and Richmond upon Thames. In the east, parts of London benefit from the Thames Barrier flood defence. Surface water flood risk (**Figure 5.15**) as identified in the LSWS, is concentrated more within inner London boroughs north of the River Thames. This includes most of LBs Kensington & Chelsea, City of Westminster, Camden and Islington. Most of the outer boroughs show as having lower need in terms of surface water flooding, including LBs Hillingdon, Barking & Dagenham and Havering.

**5.22** **Figure 5.16** shows the combined level of need for flood control, by taking the average of the two need indicators. Most of inner London now has a medium level of need for flood control. There are small pockets where a high need for flood control is identified. This includes along the River Lee on the boundaries of LBs Tower Hamlets, Newham, Waltham Forest and Hackney and Ravensbourne River on the boundaries of LBs Lewisham and Greenwich. Most of the outer boroughs of London have a mostly low need for flood control, including large parts of LBs Croydon, Bromley, Havering and Barnet.

**5.23** **Figure 5.17** and **5.18** present the datasets for the two indicators for existing GI provision in relation to flood control and how these were translated into areas of high, medium and low provision by hex. Green cover can intercept rainwater and reduce surface water flows, helping to reduce fluvial and surface water flood risk. There is a higher proportion of green cover in outer London areas, and within large parks such as Richmond Park and Hampstead Heath, as discussed in **paragraph 5.7** for Strategic Objective 1. The lowest provision is in the inner city. Blue cover provision, as discussed in **paragraph 5.12** for Strategic Objective 2, is highest close to river corridors, most notably the Rivers Thames and Lee. There is greater blue cover in the north and east, including in LBs Enfield, Waltham Forest, Lambeth, Greenwich and Barking & Dagenham. Existing water bodies can help to store water in times of high rainfall and reduce flooding elsewhere.

**5.24** **Figure 5.19** shows the combined indicators, representing overall provision for flood control, grouped into overall high, medium and low hex across London. Overall, this figure shows generally higher and medium provision of green and blue cover in outer London, and lower provision in the inner city. Areas with the highest provision include parts of LBs Havering and Richmond-upon-Thames. Areas with the lowest provision include the City of London and the City of Westminster.

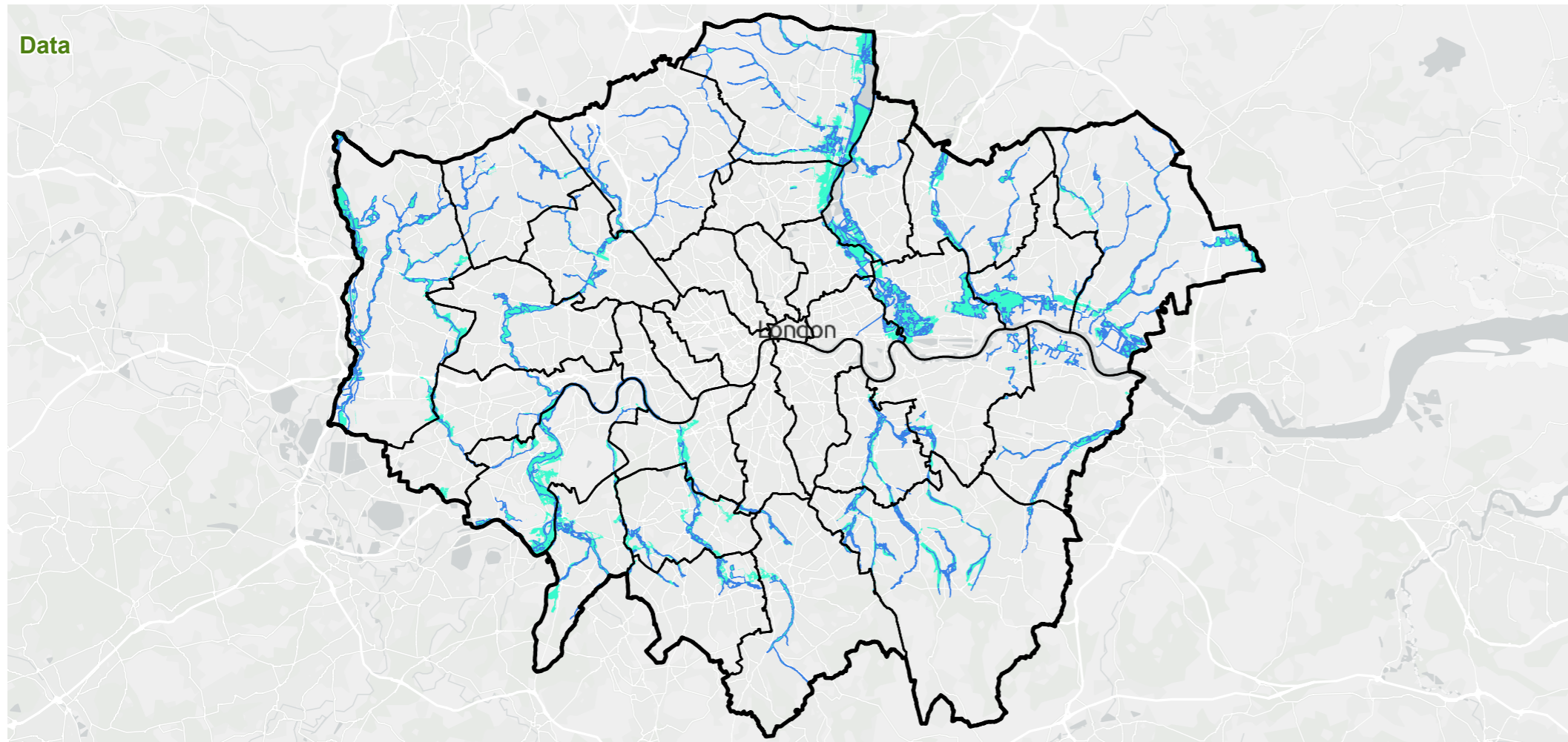
**5.25** **Figure 20** presents the results of the bivariate analysis for flood control. The key findings are described below.

- Areas of **highest need and lowest provision** are shown in the **dark brown hexes**, of which there are very few; some in the north of LB Lewisham and nearby in west of LB Greenwich; two each in LBs Newham, Havering and Croydon.

Similarly, there are a few hexes with **high need and medium provision** shown in **dark blue hexes**, which are generally located near to the dark brown hexes.

- Areas of **medium need and lower provision (dark orange/tan hexes)** or **medium need with medium provision (light brown hexes)** are more concentrated in the central boroughs of London, reflecting densely built up areas with relatively less green cover, which are more susceptible to surface water flooding.
- The majority of the boroughs in outer London are represented by a **light orange hex**, indicating a **lower need and medium provision**. This includes most of LBs Bromley, Barnet and Hillingdon.
- Along river corridors, **blue and light blue hexes** represent areas of **high and medium need, and higher provision**. This includes along Walthamstow wetlands, the River Roding along Wanstead Park, Rainham Marshes and along the River Thames in LB Richmond upon Thames.
- Areas with **lowest need but highest provision** are shown in the **cream hexes**. These correspond with large areas of green space outside of fluvial and surface water flood risk areas, such as Richmond Park, Hampstead Heath, Greenwich Park / Black Heath and Wanstead Flats.

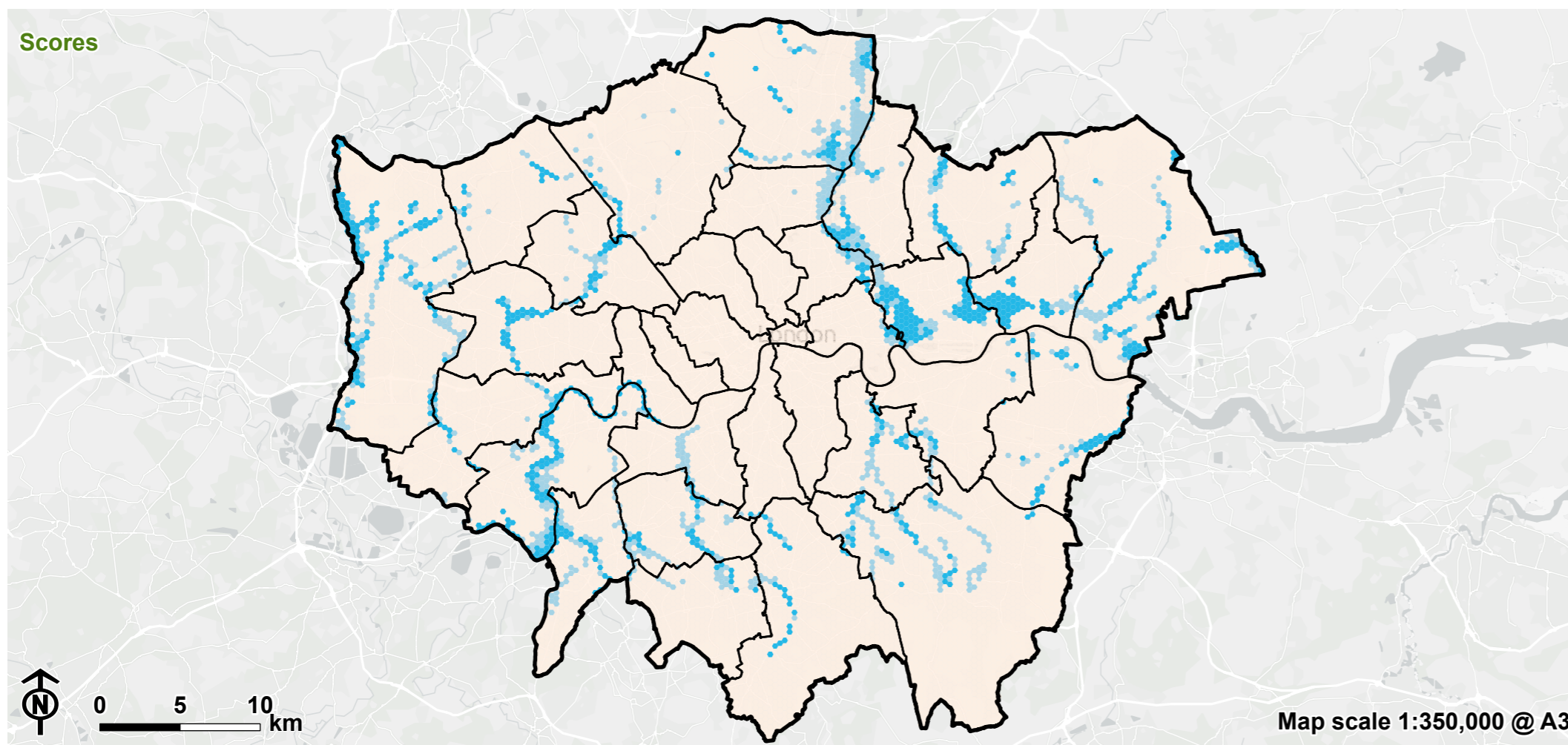
**Figure 5.14: Fluvial flood zones data and need scores**



- Greater London Authority boundary
- Borough boundary

**Data**

- Fluvial Flood Zone 2
- Fluvial Flood Zone 3



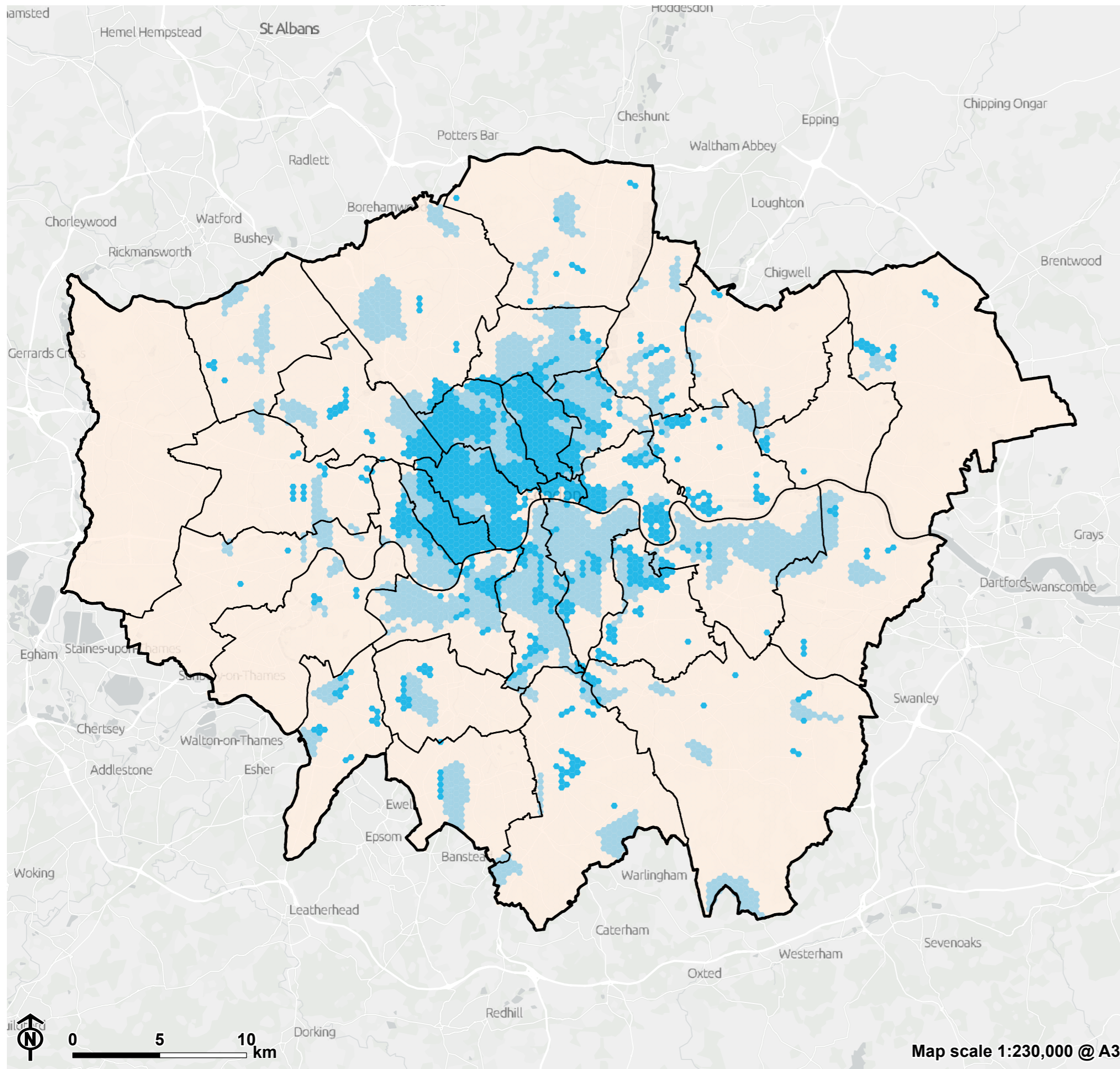
**Scores**

**Indicator of need: fluvial flood zones**

- High need
- Medium need
- Low need

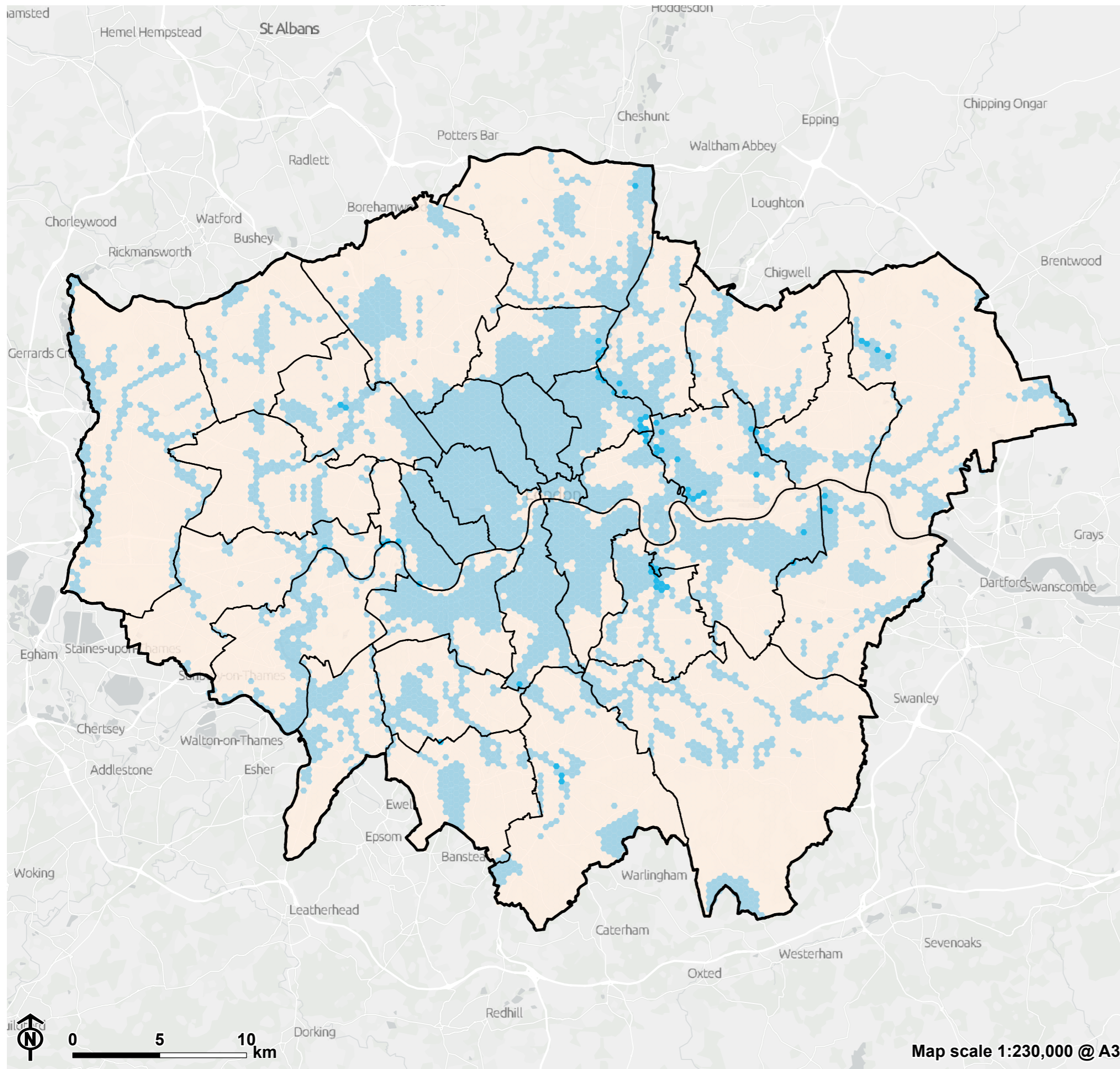


Map scale 1:350,000 @ A3



**Figure 5.15: London Surface Water Strategy wet spots need scores**

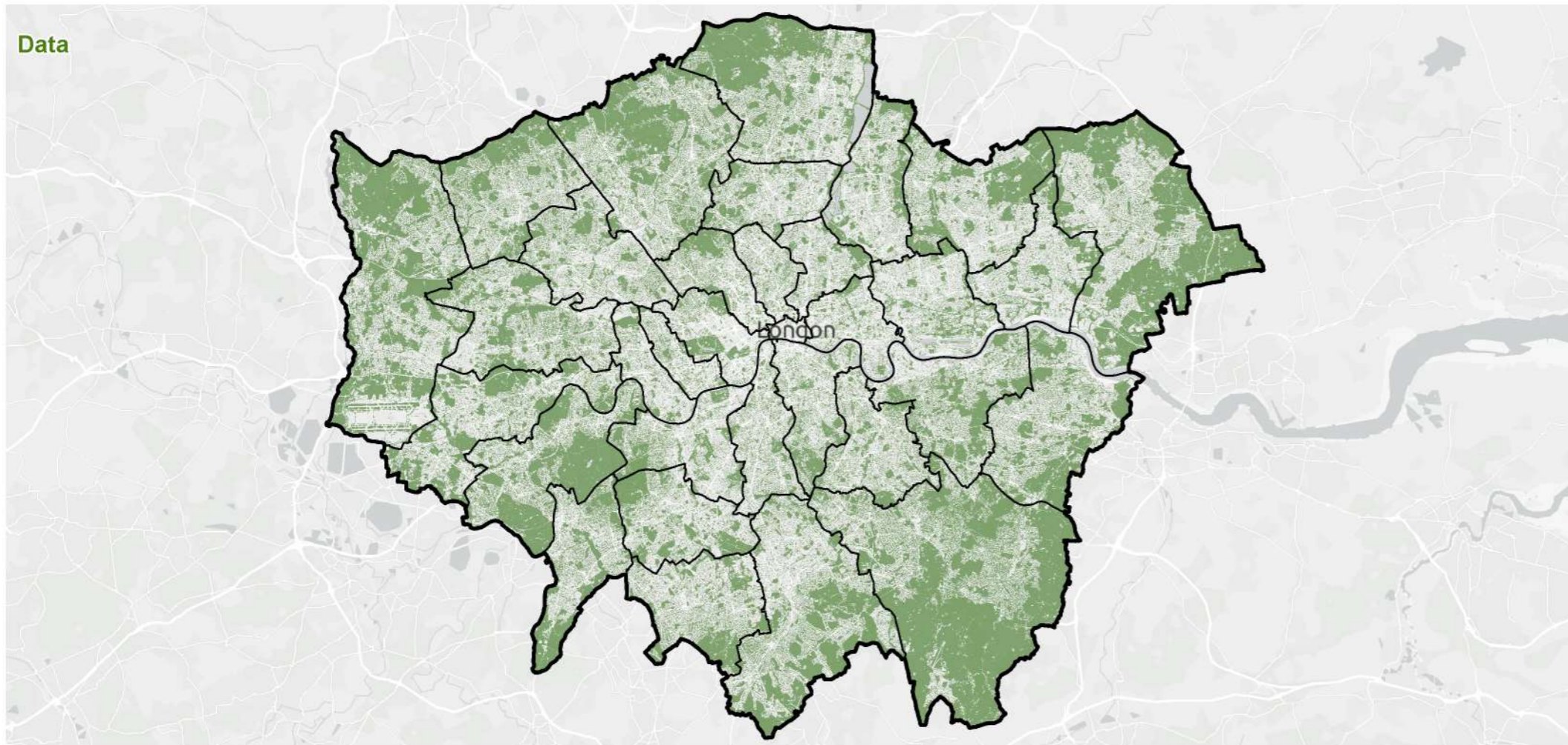
- Greater London Authority boundary
- Borough boundary
- Indicator of need: surface water wet spots per subcatchment**
- High need
- Medium need
- Low need



**Figure 5.16: SO4 Flood risk mitigation overall need**

- Greater London Authority boundary
- Borough boundary
- Overall need**
- High need
- Medium need
- Low need

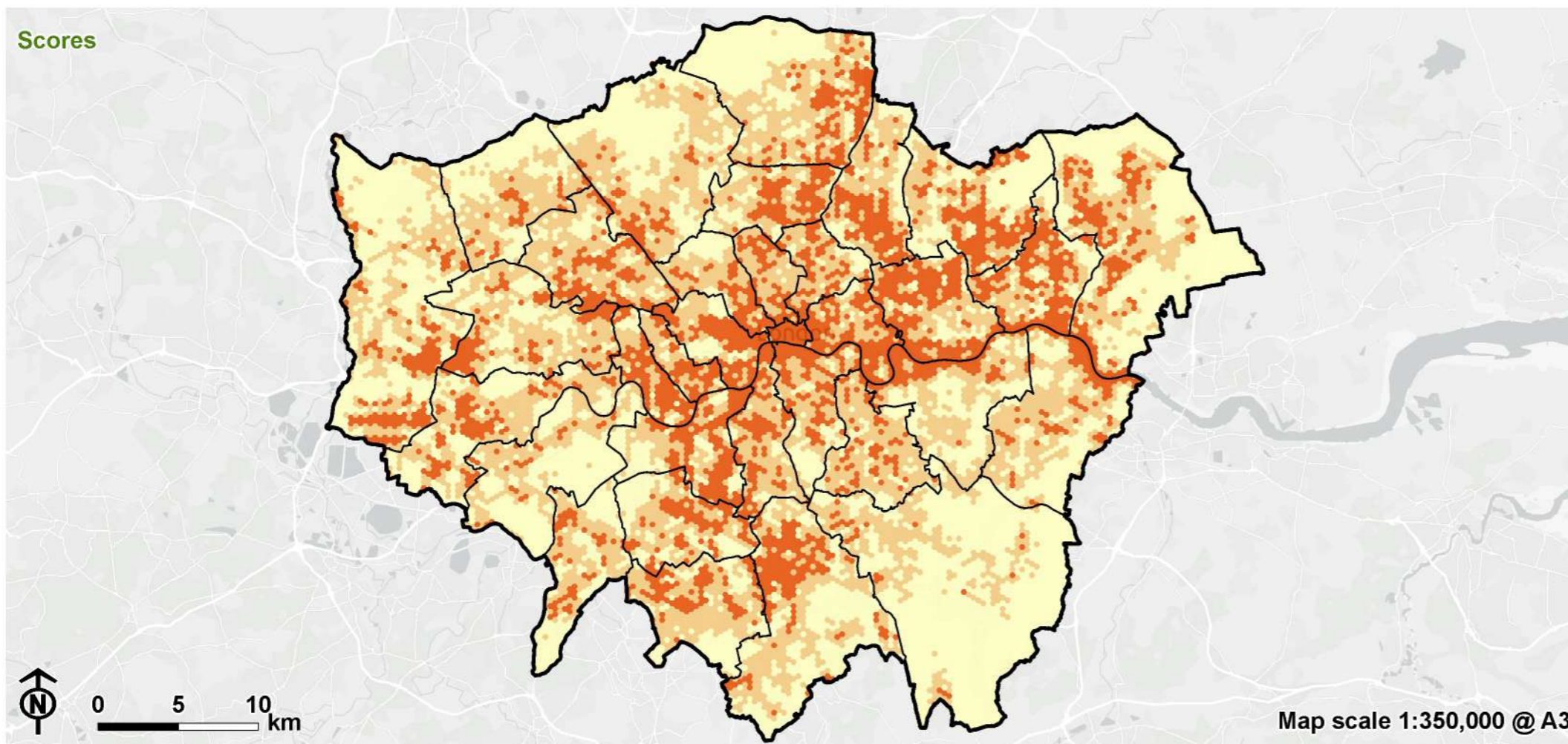
**Figure 5.17: Green cover data and provision scores**



- Greater London Authority boundary
- Borough boundary

**Data**

- Green Cover 2024



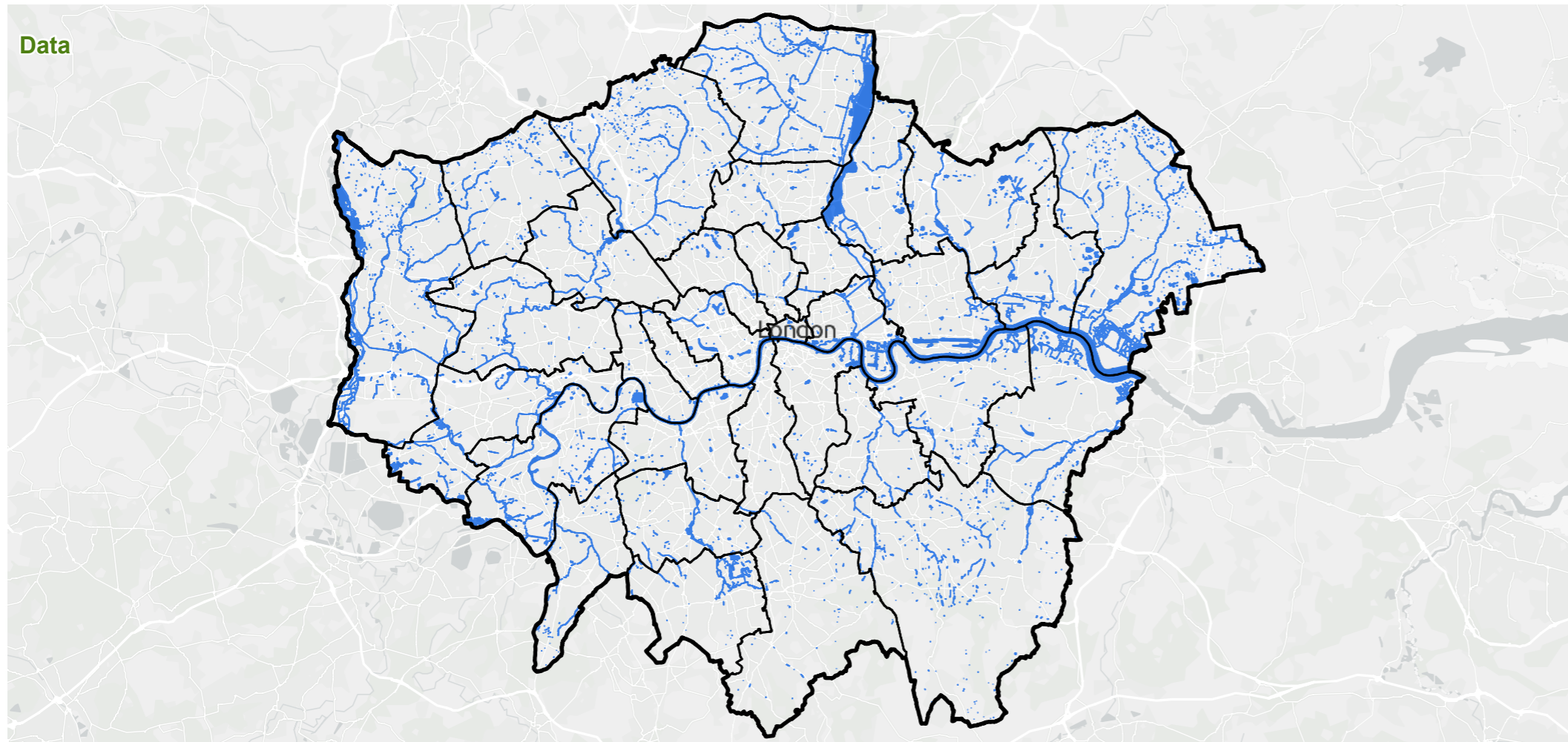
**Scores**

**Indicator of provision: green cover**

- High provision
- Medium provision
- Low provision

Map scale 1:350,000 @ A3

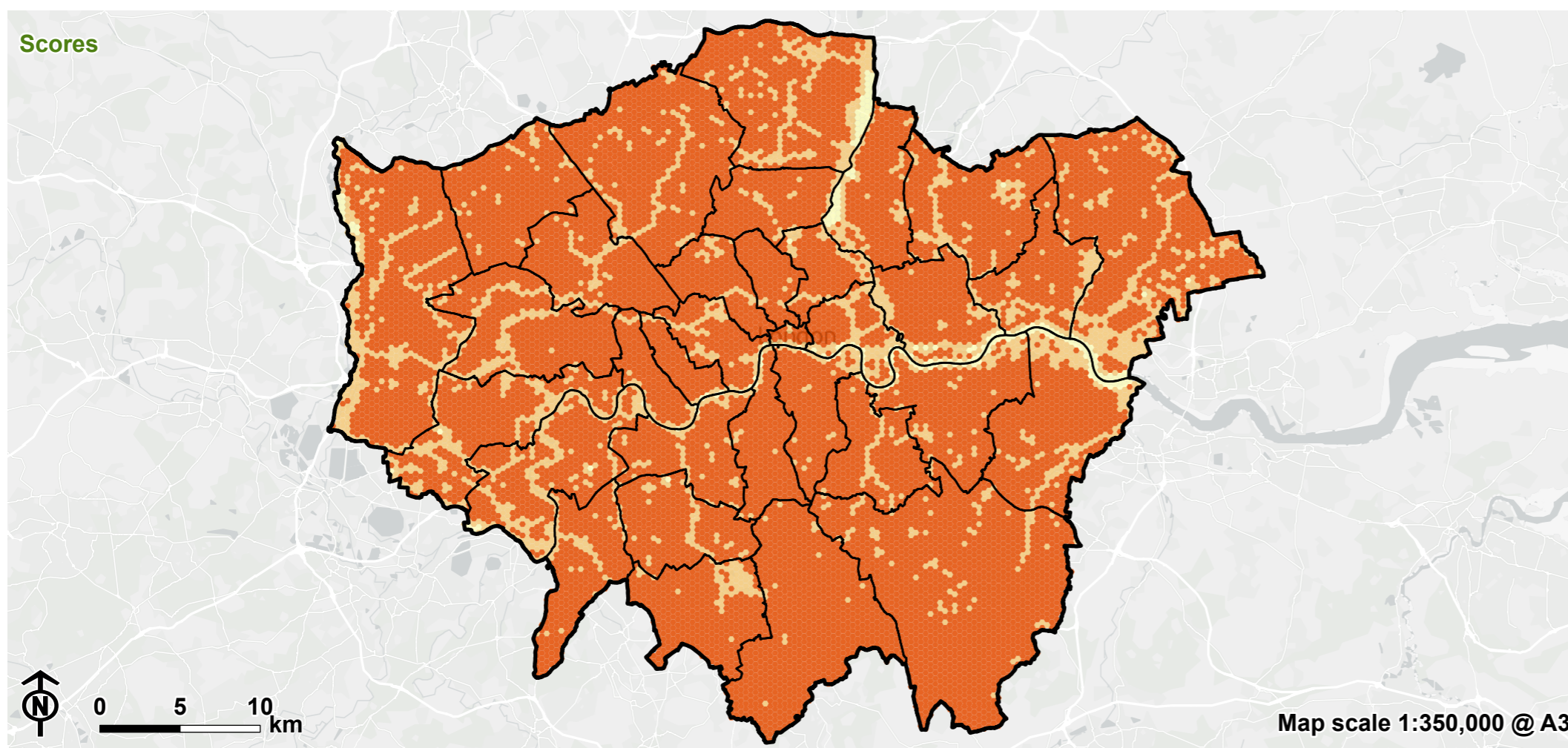
Figure 5.18: Blue cover data and provision scores



- Greater London Authority boundary
- Borough boundary

Data

- Blue Cover 2024

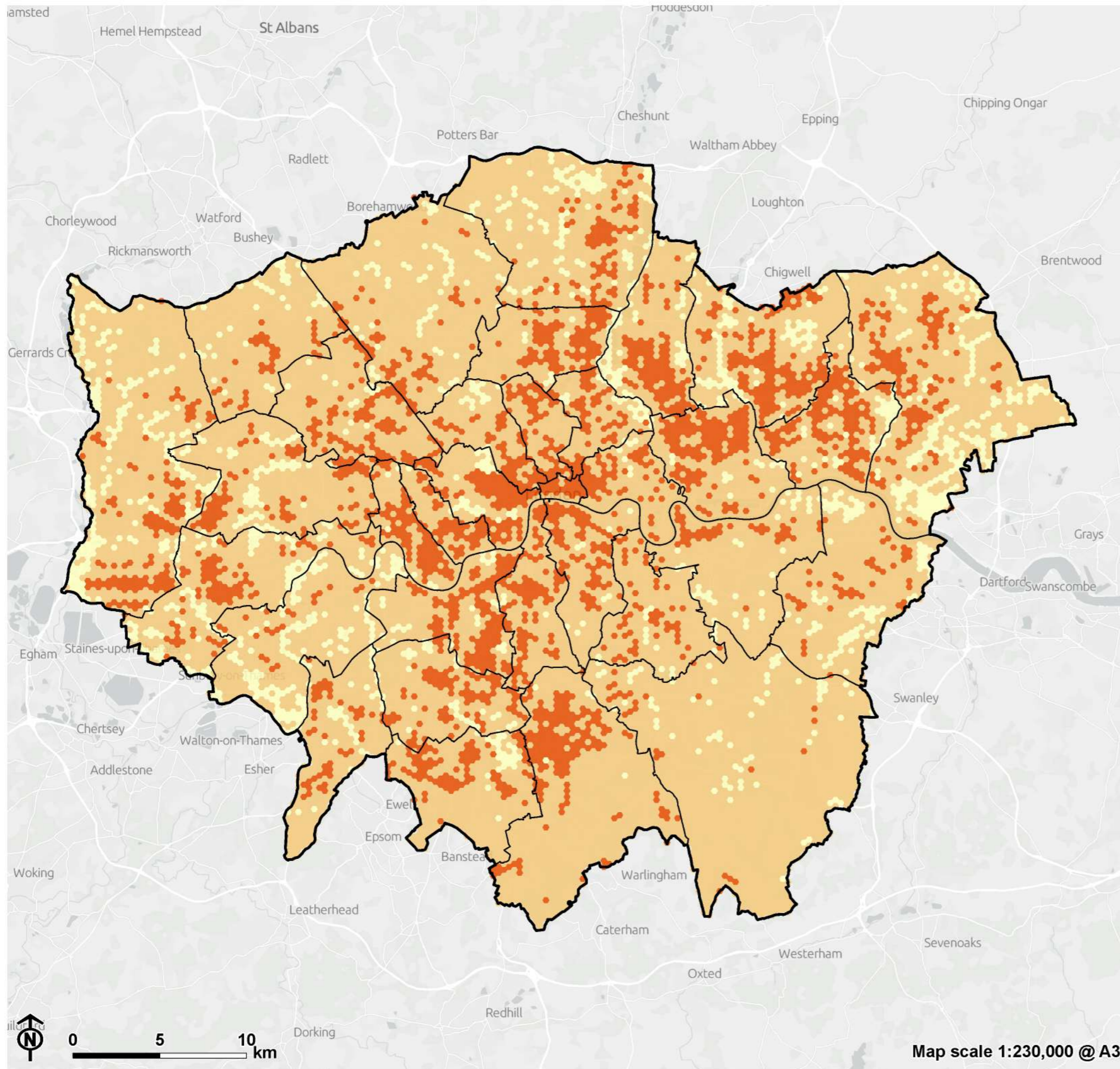


Scores






Indicator of provision: blue cover

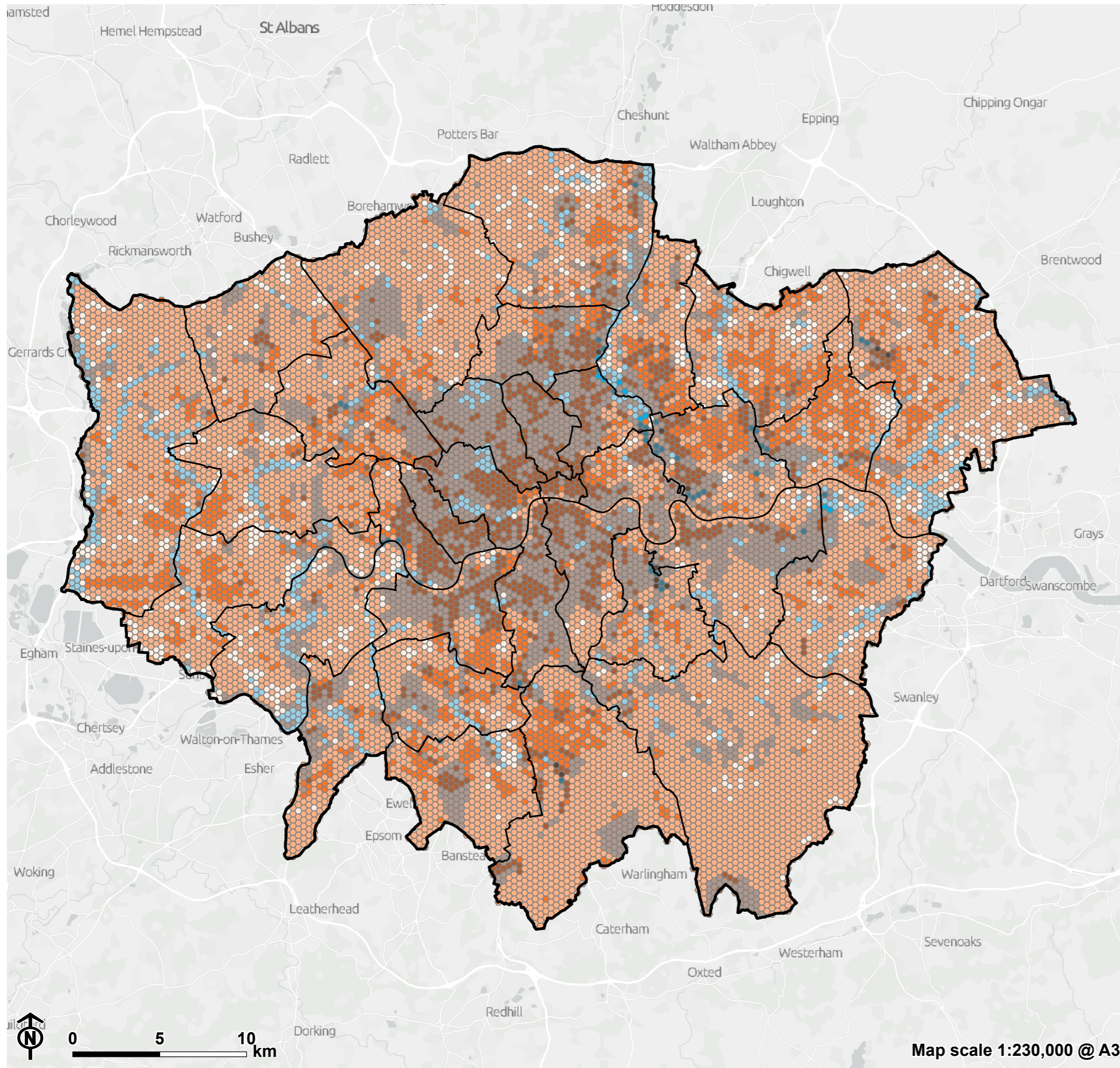
- High provision
- Medium provision
- Low provision

Map scale 1:350,000 @ A3





**Figure 5.19: SO4 Flood risk mitigation overall provision**

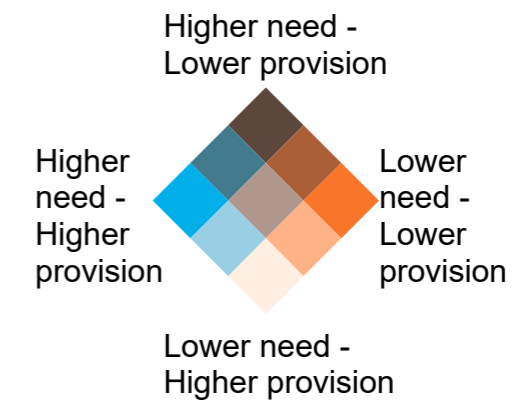
-  Greater London Authority boundary
-  Borough boundary
- Overall provision**
-  High provision
-  Medium provision
-  Low provision



**Figure 5.20: SO4 Flood risk mitigation bivariate results**

-  Greater London Authority boundary
-  Borough boundary

**Need versus provision**



## Strategic Objective 5: Clean water

This Strategic Objective considers opportunities to introduce 'buffer' planting adjacent to watercourses (such as reedbeds) to filter out pollution or the use of rain gardens and swales to intercept road run-off.

**5.26** For this Strategic Objective, the following indicators of need were identified:

- River quality by river catchments (based on the Water Framework Directive ecological quality status and catchments);
- Reported misconnection (pollution) points by river catchments; and
- Road run-off pollution by river catchments.

**5.27** The following indicator of existing GI provision was identified:

- Green riparian buffers, approximated from the Green and Blue cover datasets to show buffer areas adjacent to river corridors that are already vegetated, which can help to provide filtration of surface water run-off to reduce pollution entering rivers.

**5.28 Figures 5.21 to 5.23** show the datasets used for each indicator of need, along with how that was translated into areas of high, medium and low need by hex across London. River quality shows three key hotspots of high need. The largest of these is around the River Lee, where there is bad and poor ecological water quality recorded on many of the artificial and canalised tributaries and river sections, including Limehouse Cut, St Thomas Creek and Waterworks River, impacting LBs Tower Hamlets, Hackney, Waltham Forest and Enfield. In the south, two further hotspots include around Bushy Park in LBs Richmond upon Thames and Kingston upon Thames in the catchment of the south-eastern stretches of the River Thames, and between Carshalton and Little Woodcote in the catchment of the upper River Wandle, in LB Sutton. The lowest need is generally in inner London, particularly south of the river including Lambeth and Southwark. Reported pollution points indicate the highest need in the northwest of London, including in LBs Enfield, Barnet, Harrow, Brent, Ealing, Hillingdon and Hounslow. Additional areas of high need include around LBs Waltham Forest, Hackney and Tower Hamlets, and further east, on the boundary of LBs Havering and Barking & Dagenham. There is lowest need according to this indicator in inner London and some of the eastern boroughs. High need in relation to road runoff is generally in outer London boroughs particularly close to large, busy roads A roads and motorways. This includes in LBs Merton, Hounslow (including along the M4), Barnet (including along the M1), and Redbridge (including along the M11).

**5.29 Figure 5.24** shows the overall levels of need for water quality when all three indicators are combined. The highest need is generally in the northwest and north, including LBs Hounslow, Ealing, Barnet, Enfield and Hackney. The lowest need is in the inner London boroughs, including in LBs Southwark, City of Westminster, Islington and Newham.

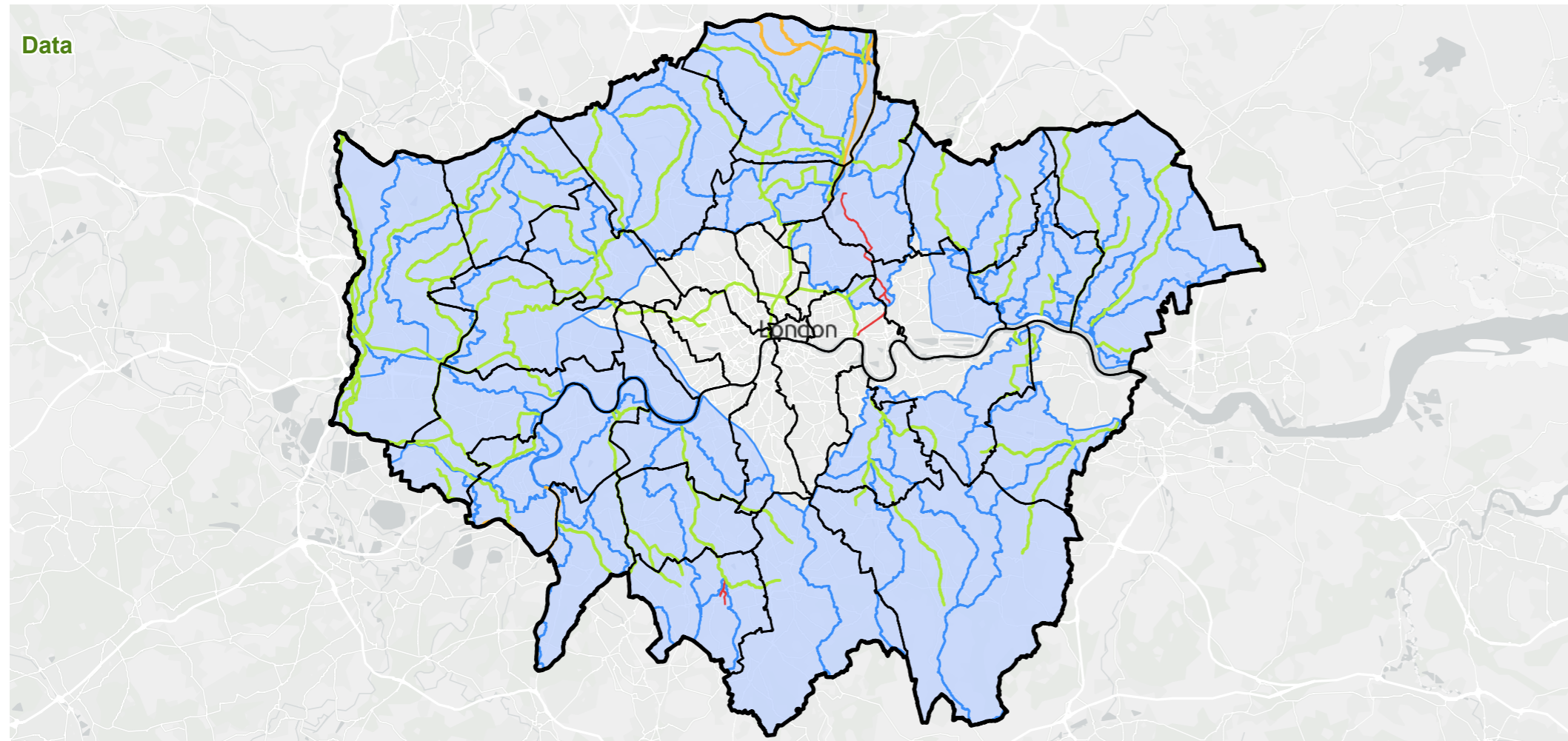
**5.30 Figure 5.25** presents the dataset used for the indicator of green riparian buffers provision, and how that was translated into areas of high, medium and low provision by hex across London. The majority of London has low provision for green riparian buffers. Areas of high provision are linear, following the river corridors and are more common in the north, west and east parts of outer London. The largest continuous areas of high provision correlate with wetland areas, including Walthamstow wetlands along the River Lee on the boundaries of LBs Waltham Forest, Enfield and Haringey; Rainham Marshes along the River Thames in LB Havering, and along Frays River from Broadwater Lakes Nature Reserve to Heathrow Colne Valley Biodiversity Site, in LB Hillingdon.

**5.31 Figure 5.26** presents the results of the bivariate analysis for clean water. The key findings are described below.

- Areas of **highest need and lowest provision** are shown in the **dark brown hexes**. These are concentrated within river catchments in the north and north west boroughs, not directly adjacent to major river corridors, where there are often large busy roads and limited areas of riparian buffers, including in LBs Hackney, Haringey, Barnet, Ealing, Brent, Hillingdon and Hounslow.
- Areas with **medium need and low provision (dark orange/tan hexes)** are outside of the river corridors within the majority of the remaining outer London boroughs, which either have poorer river quality and/or high risk of road run-off pollution. This includes most of LBs Croydon, Merton and Bromley.

- The majority of inner London is represented by **orange hexes**, indicating **low need and low provision**, this includes most of LBs Southwark, City of Westminster, Camden, Islington and Newham. This is because in inner London there are combined sewers and therefore less likelihood of pollution from roads flowing into waterways, less reported pollution incidents and moderate river quality.
- Areas with **lowest need but highest provision** are shown in the **cream hexes**. There are only limited areas of low need and high provision, which generally correlate with small areas of marshland or wetland along rivers in the east of the city. This includes pockets in LBs Bexley and Greenwich around Crossness Nature Reserve, Crayford Marshes, and Plumstead Marshes to Gallions Park. Other areas of low need and high provision are located within the Royal Parks, including in Regents Park, Hyde Park, St James's Park in LB City of Westminster, as well as Finsbury Park, Alexandra Park and Hampstead Heath in LBs Haringey and Camden.

Figure 5.21: River quality data and need scores



- Greater London Authority boundary
- Borough boundary

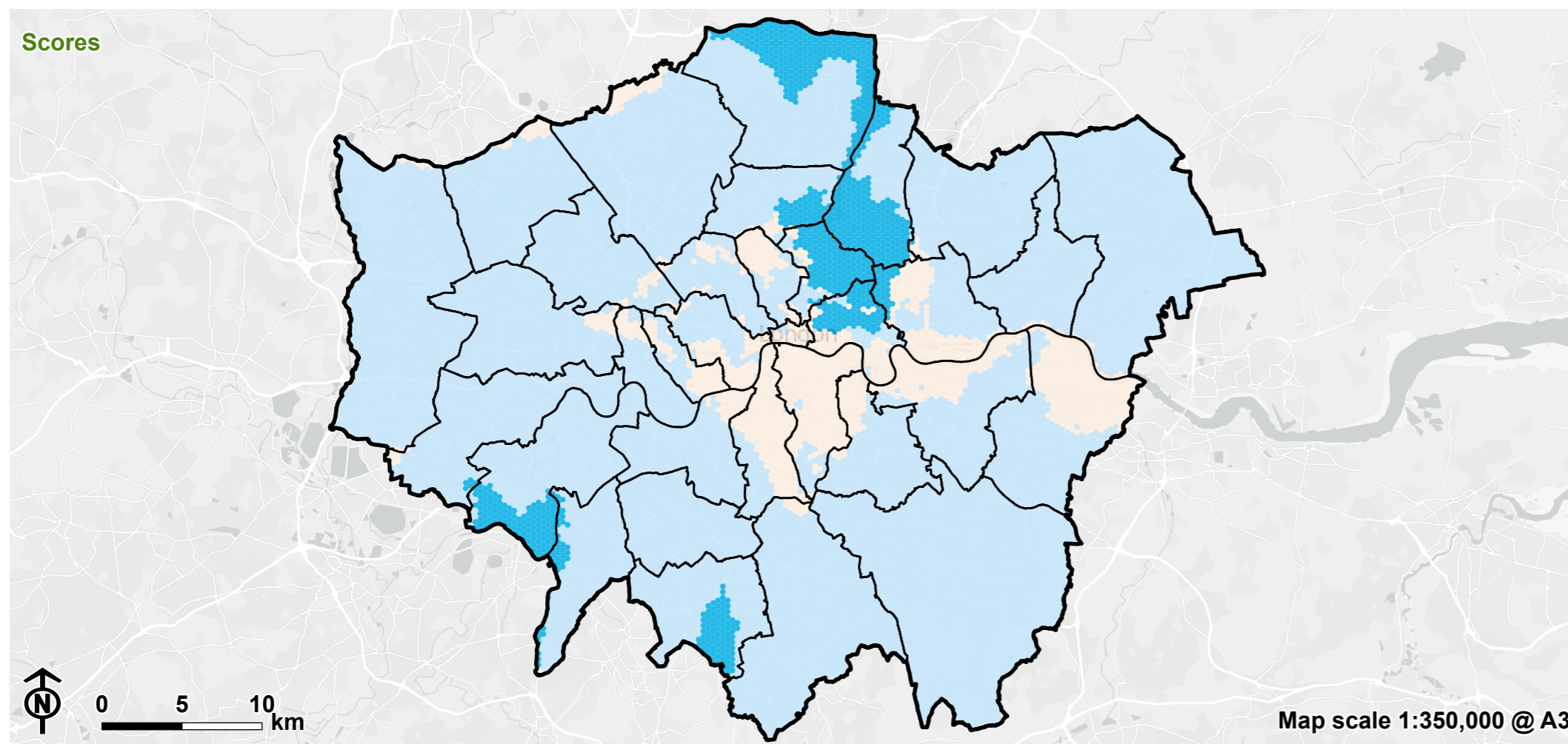
**Data**

- River Waterbody Catchment Cycle 2 without Central London

**River Quality 2019 Cycle 3**

Status

- Bad
- Poor
- Moderate



**Scores**

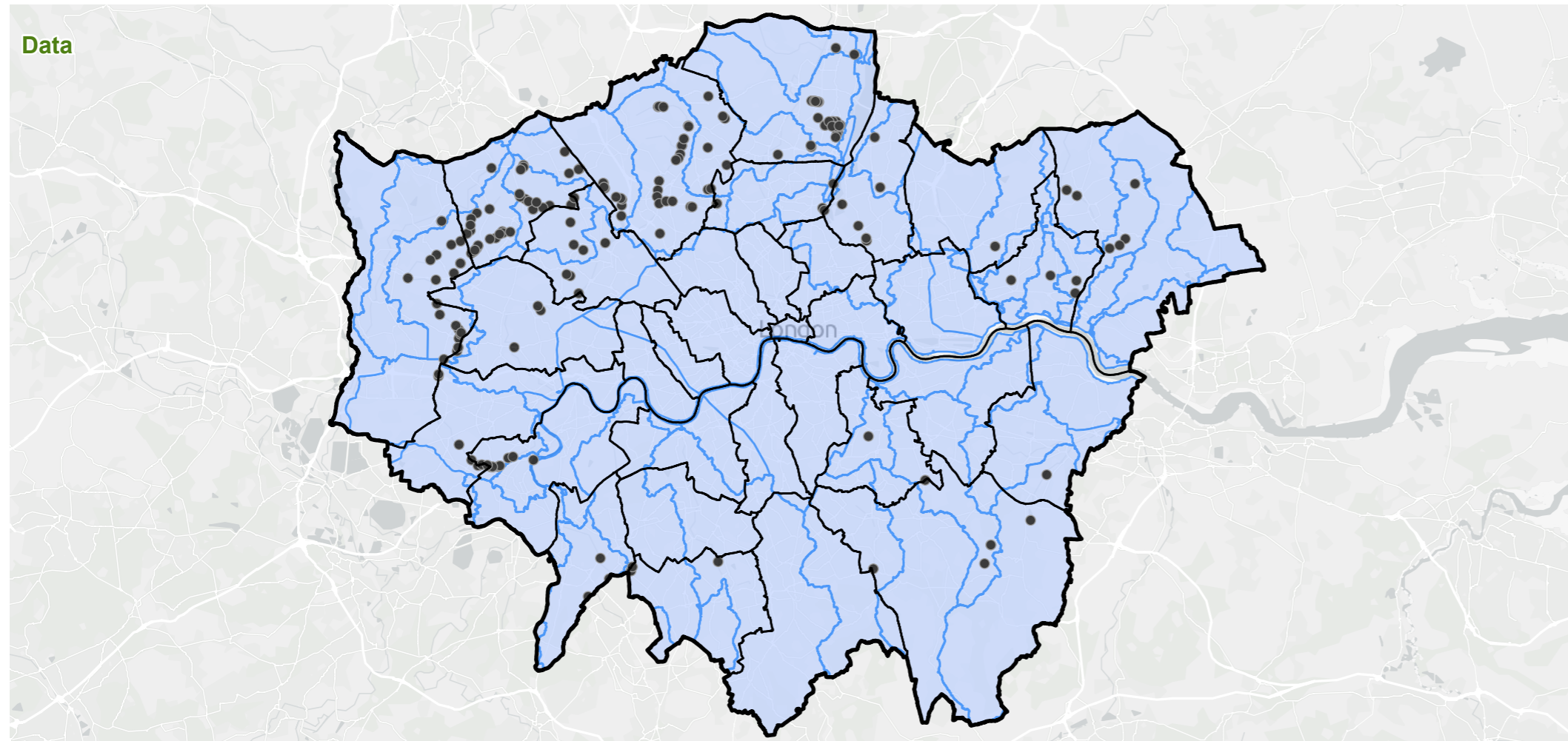
**Indicator of need: water quality per catchment**

- High need
- Medium need
- Low need



Map scale 1:350,000 @ A3

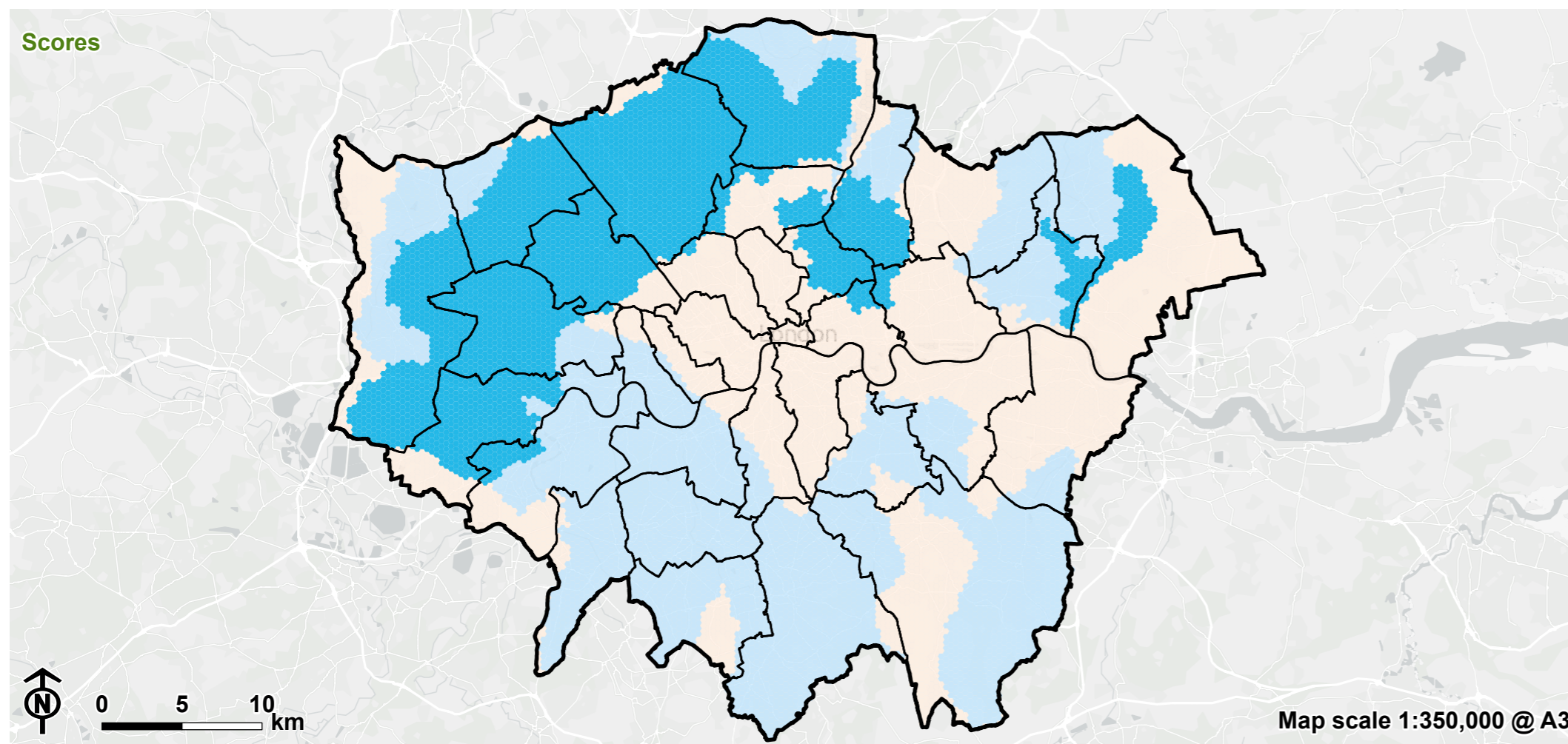
**Figure 5.22: Misconnection points data and need scores**



Greater London Authority boundary  
Borough boundary

**Data**

- Reported misconnection points 2015-2020
- River Waterbody Catchment Cycle 2



**Scores**

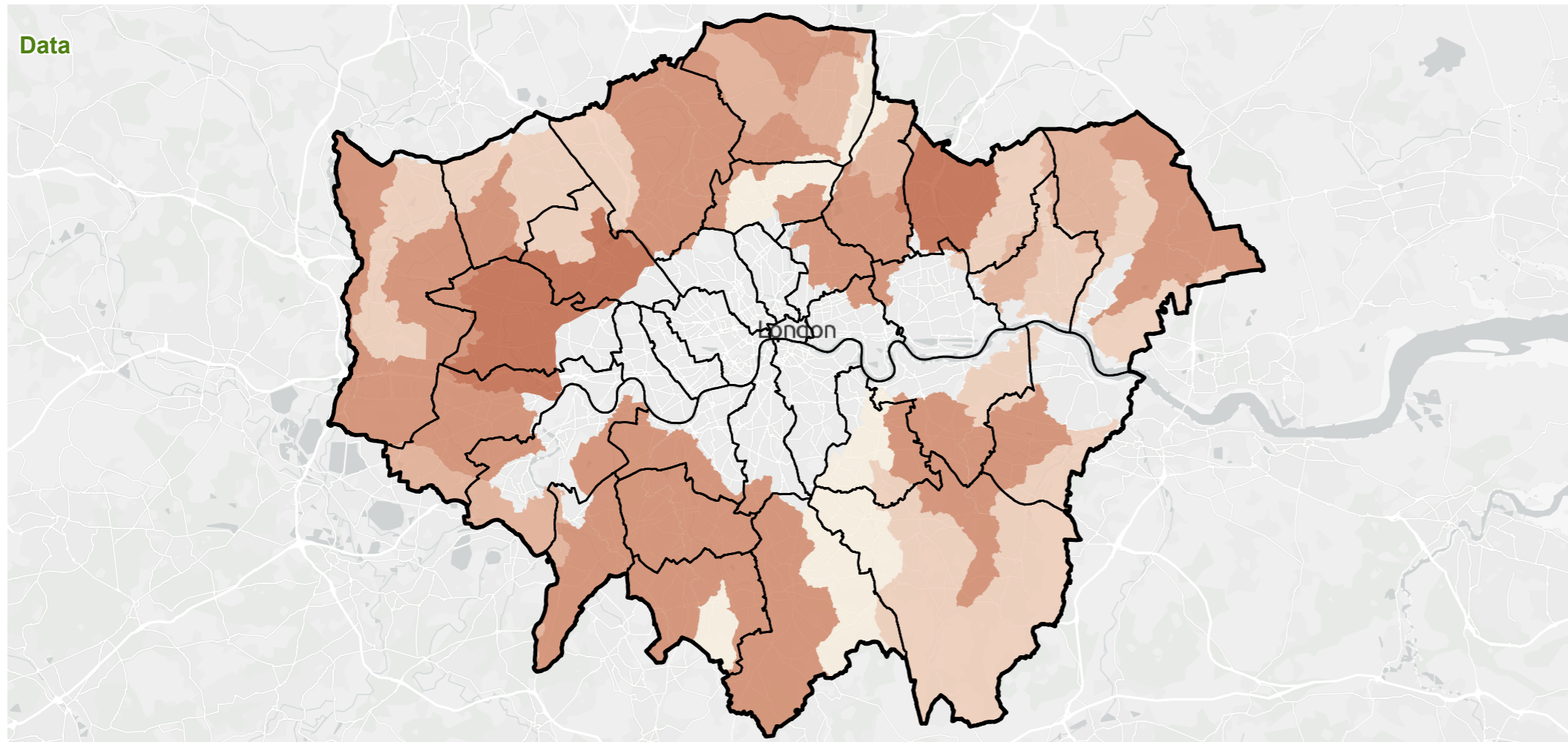
**Indicator of need: misconnection points per catchment**

- High need
- Medium need
- Low need



Map scale 1:350,000 @ A3

**Figure 5.23: Road run-off pollution data and need scores**



Greater London Authority boundary  
 Borough boundary

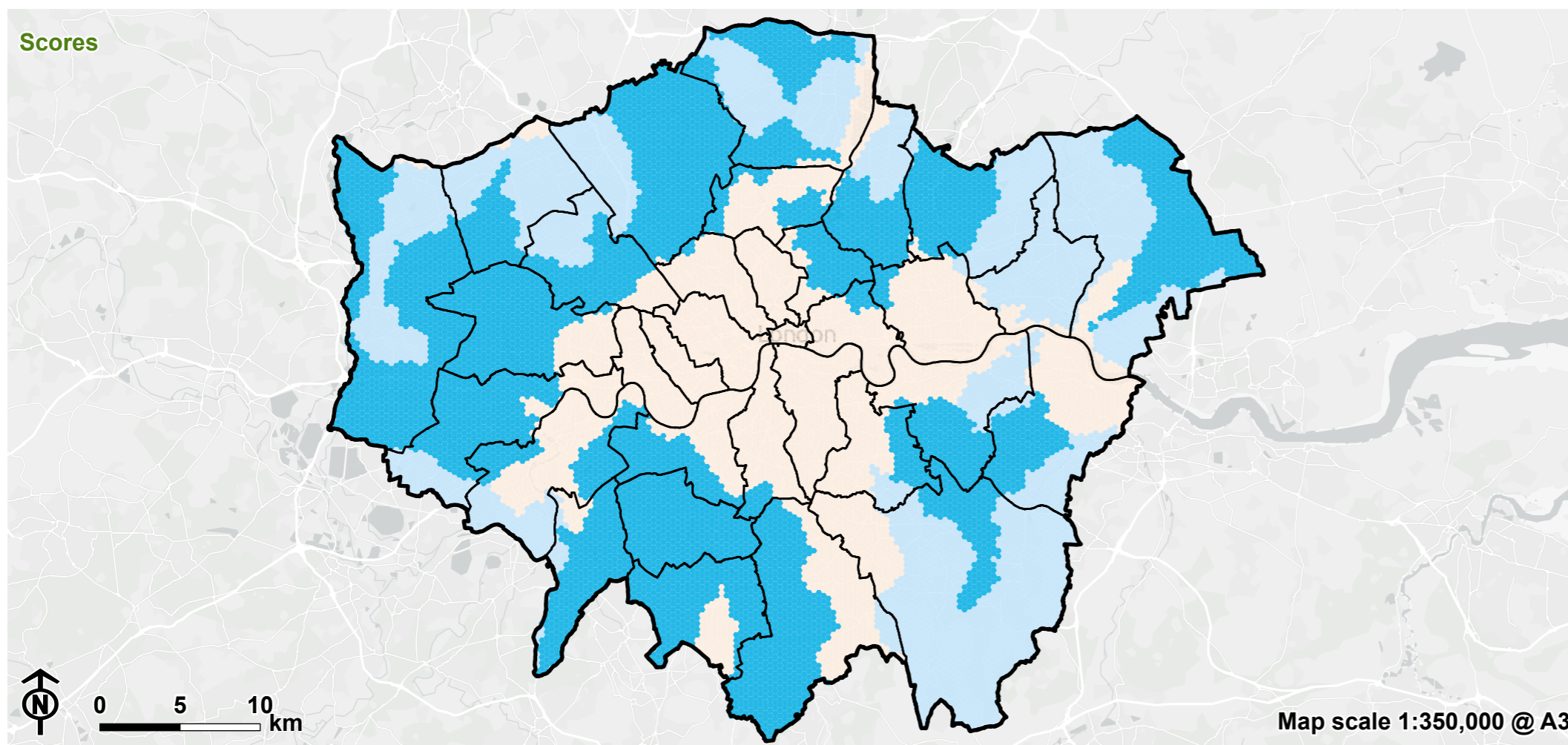
**Data**

**Length of high priority roads by river catchment**

Length (km)

- 0 - 2
- 2 - 5
- 5 - 10
- 10 - 25
- 25 - 45

Central London does not appear in the analysis because there are combined sewers in this area, thus less likelihood of pollution from roads flowing into waterways.



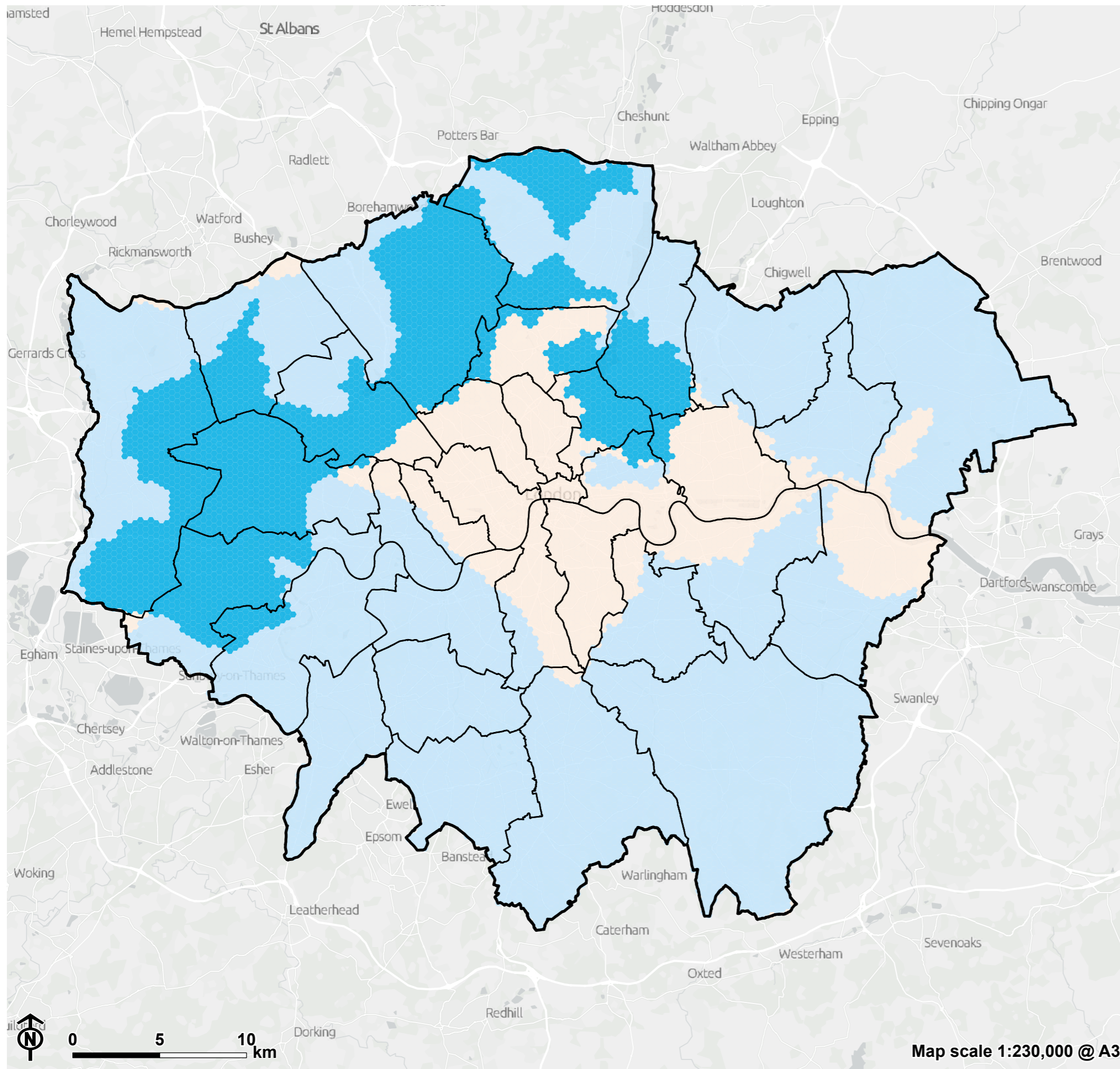
**Scores**

**Indicator of need: road run-off pollution per catchment**

- High need
- Medium need
- Low need



Map scale 1:350,000 @ A3



**Figure 5.24: SO5 Clean water overall need**






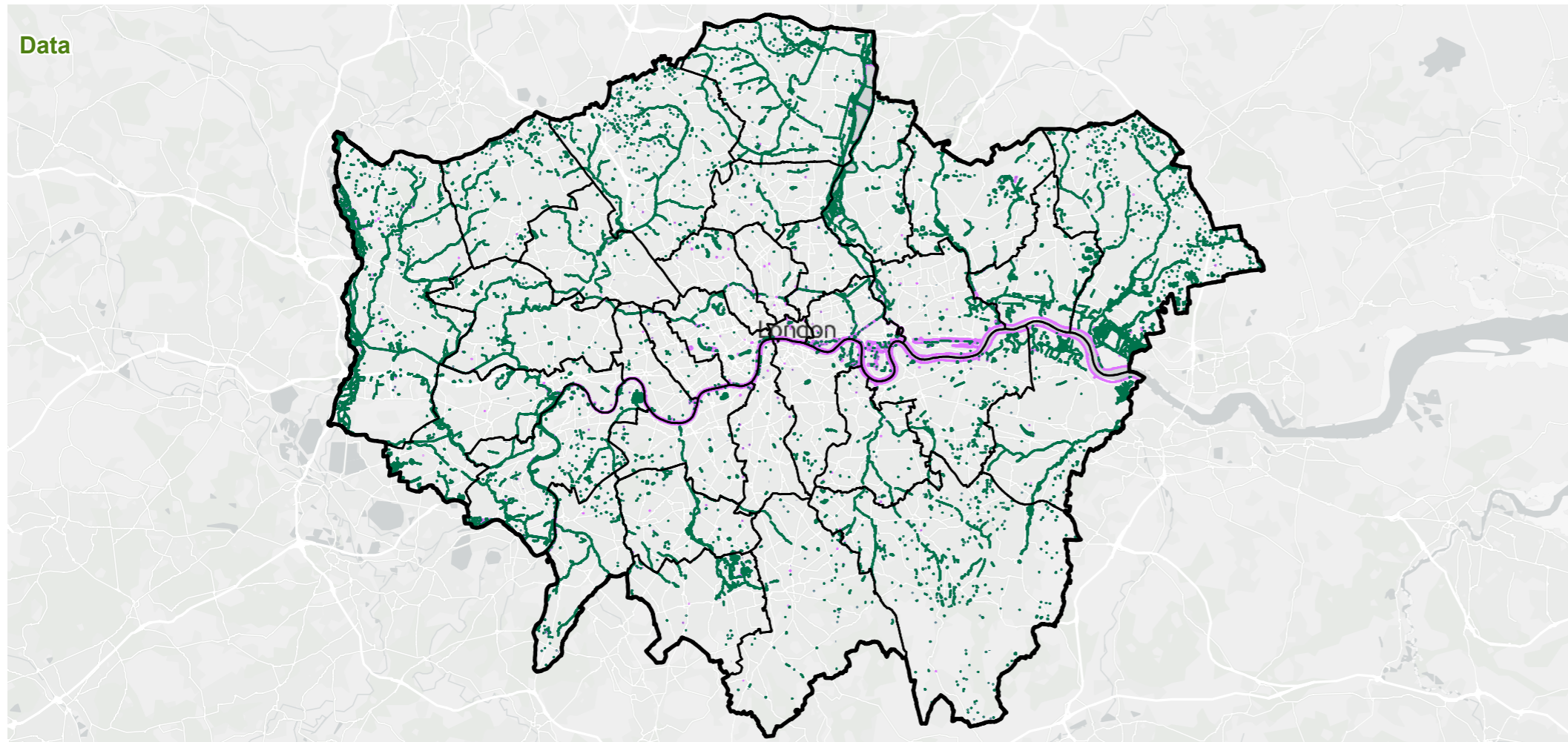
-  Greater London Authority boundary
-  Borough boundary
- Overall need**
-  High need
-  Medium need
-  Low need

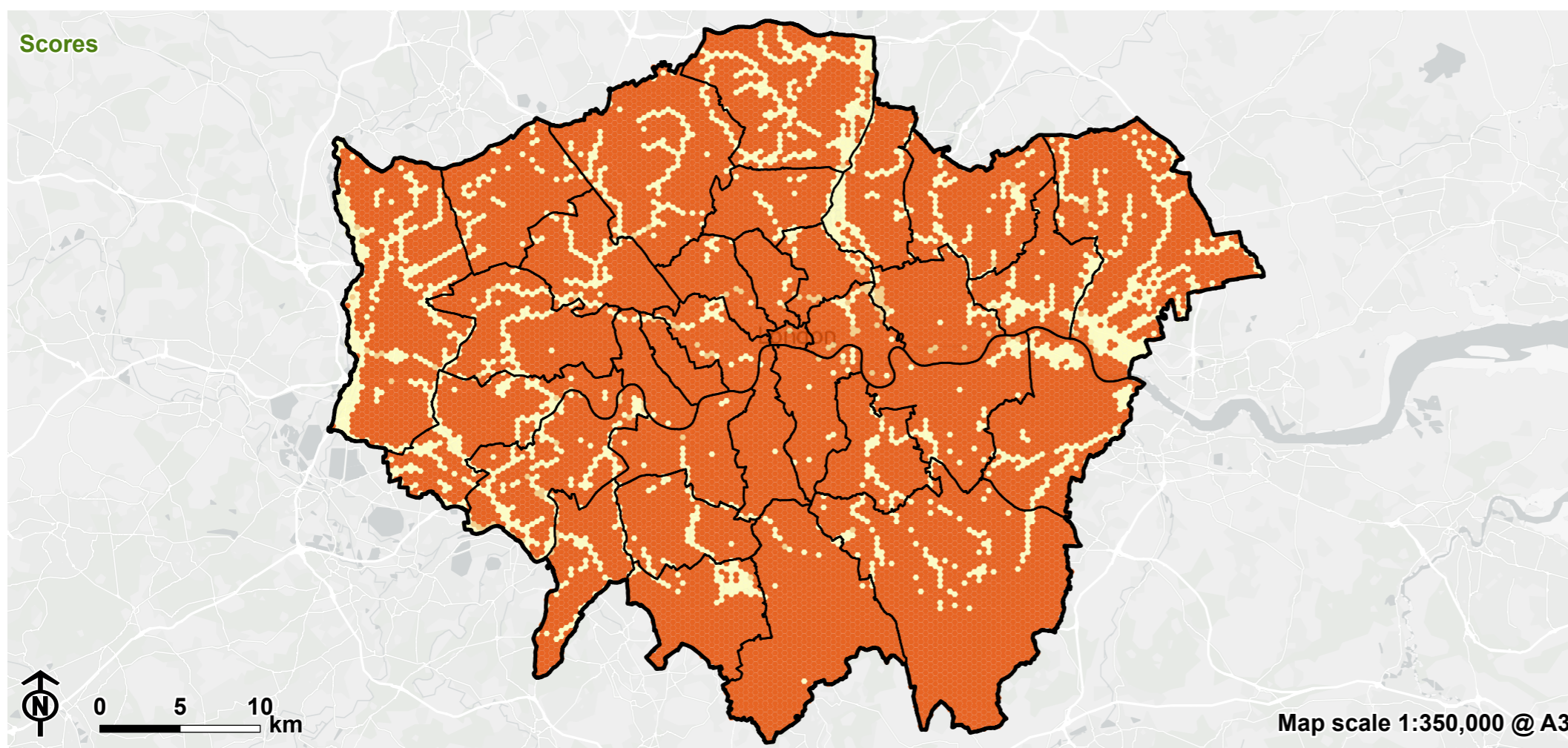
Figure 5.25: SO5 Clean water overall provision



- Greater London Authority boundary
- Borough boundary

**Data**

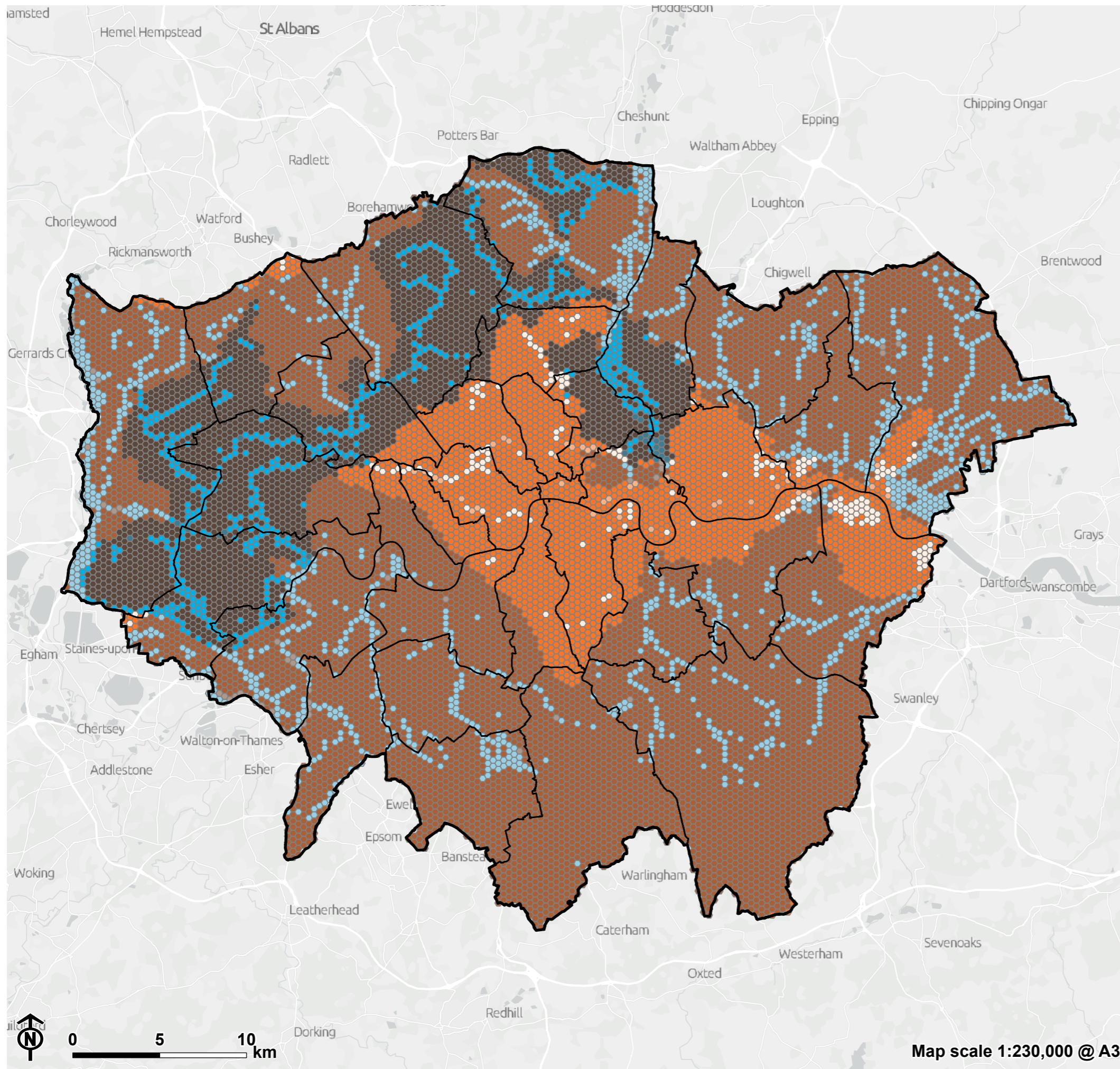
- Green cover within the riparian buffer
- Riparian buffer - 2.5m around blue cover



**Scores**

**Overall provision: Green riparian buffers**

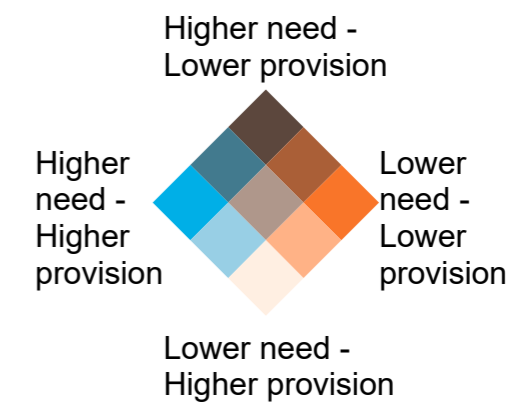
- High provision
- Medium provision
- Low provision



**Figure 5.26: SO5 Clean water bivariate results**

- Greater London Authority boundary
- Borough boundary

**Need versus provision**



## Strategic Objective 6: Urban cooling

This Strategic Objective considers opportunities to plant trees to provide shade and increase the amount of green space in the area. The inclusion of tree planting and rain gardens are also recommended to provide additional benefits.

**5.32** For this Strategic Objective, the following indicator of need was identified:

- Major summer heat spots, which shows the areas in London recording the highest daytime temperatures in summer.

**5.33** The following indicators of existing GI provision were identified:

- Green cover, which may include areas of grass or shrubby vegetation as well as trees, which all contribute to reducing urban heat;
- Tree canopy cover – this dataset was included in addition to general green cover, due to the greater contribution larger trees can make to helping to reduce urban heat; and
- Blue cover – the cooling effect of water bodies was also considered to be an important contributor to reducing the urban heat effect.

**5.34** **Figure 5.27** presents the dataset used for the indicator of major summer heat spots for the urban cooling Strategic Objective, and how that was translated into areas of high, medium and low need by hex across London. Areas of high need correspond with the more densely built, often industrial areas, including Heathrow airport in LB Hillingdon, and around Wembley Depot, Stadium and Industrial Estate in LB Brent. Additional areas of high need include around areas of high population density, including in LBs Newham, Barking & Dagenham and Redbridge in the northeast, and LB Croydon in the south.

**5.35** **Figures 5.28 to 5.30** show the datasets used for each provision indicator for urban cooling, along with how that was translated into areas of high, medium and low provision by hex across London. Green cover, as discussed in **paragraph 5.7** for Strategic Objective 1, is primarily located in outer London, particularly where there are large open spaces including in LBs Bromley, Barnet and Enfield, with lower provision in the city centre, including LB City and County of the City of London. Tree cover varies across London, with highest provision often concentrated in areas where there are large parks, heaths and other recreational areas for example in LBs Bromley, Richmond upon Thames and Camden. Lower provision is generally found in more built-up areas, including the city centre, as well as in the east including LBs Barking & Dagenham, Newham, Havering and Bexley, in the south in LBs Croydon and Sutton and in the west around Heathrow Airport in LB Hillingdon. Blue cover, as discussed in **paragraph 5.12** for Strategic Objective 2, is highest close to river corridors, most notably the Rivers Lee, around Walthamstow Wetlands, and Thames, in the east where the river is wider. There is greater blue cover in the north and east, including in LBs Enfield, Waltham Forest, Lambeth, Greenwich and Barking & Dagenham.

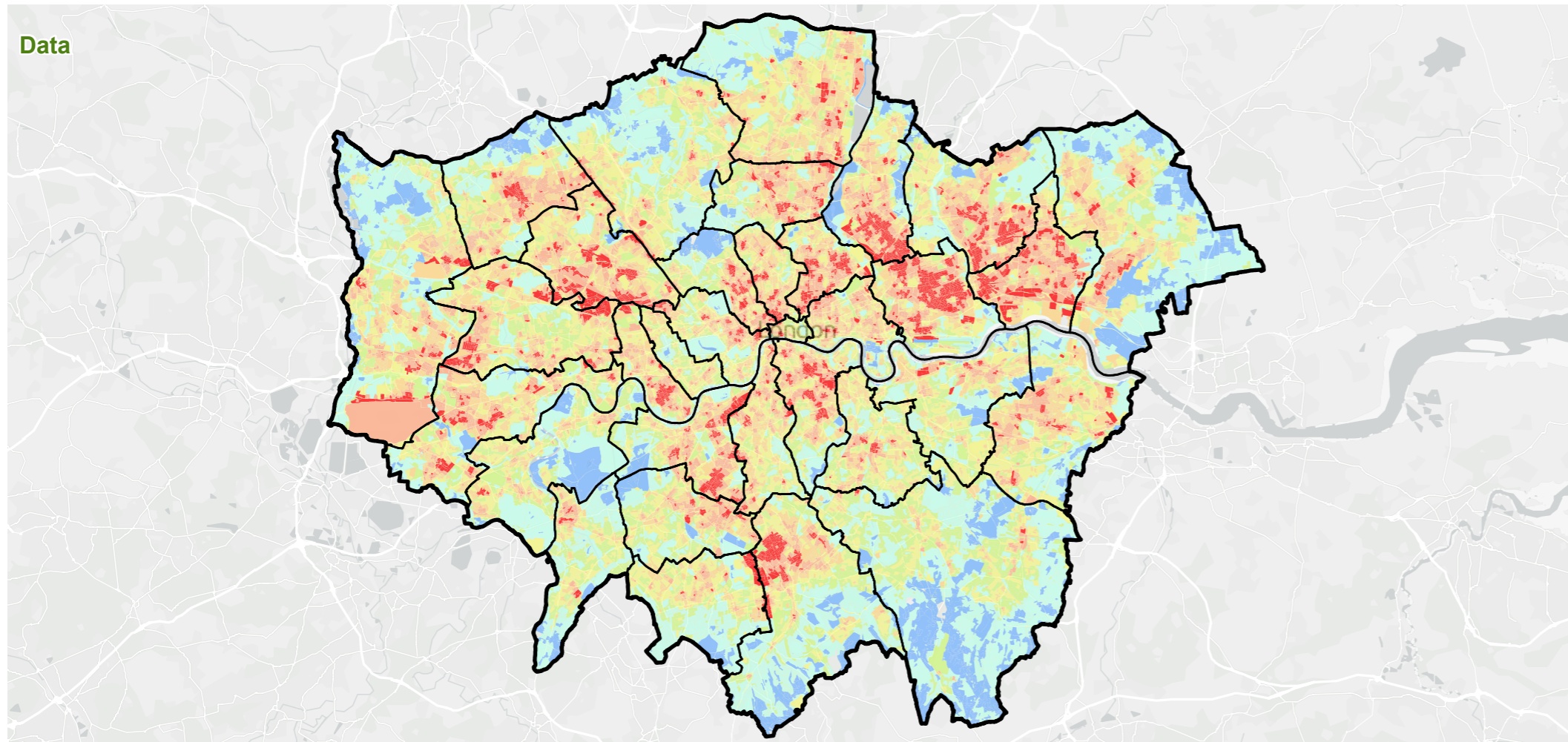
**5.36** **Figure 5.31** presents the overall provision based on the combined indicators for urban cooling. The highest provision is within the less densely built areas, including the peri-urban / rural fringe on the outer edges of London (e.g. in LBs Bromley and Hillingdon) and around large green spaces such as Richmond Park and Wimbledon Park, around LBs Richmond upon Thames, Merton and Wandsworth. The lowest provision is in the more densely built areas, including in LB Croydon, Bexley, Newham, Waltham Forest and Brent.

**5.37** **Figure 5.32** presents the results of the bivariate analysis for urban cooling. The key findings are described below.

- Areas of **highest need and lowest provision** are shown in the **dark brown hexes**. These are concentrated in the most built up areas where more concrete and hard paved surfaces generate hotter temperatures and there is less existing green and blue cover, and occur across London, but particularly in the north east. Such areas are located in LBs Croydon, Newham, Barking & Dagenham and Wandsworth, as well as around Heathrow Airport in LB Hillingdon. Areas of **higher need and medium provision (dark blue hexes)** are more limited but generally in close proximity to the dark brown hexes.
- There are limited areas with **lower need and low provision** represented by **orange hexes**. This includes in Coulsdon in LB Croydon and Canary Wharf in LB Tower Hamlets.

- Areas with **low need and medium provision** shown in the **pale orange hexes** generally include along the major rivers and in more peri-urban edges of London for example in LB Havering. These areas may already have lower temperatures due to the presence of waterbodies.
- Areas represented by **blue and pale blue hexes** indicate areas where there is **high or medium need** and **high provision**. These areas are found across London, for example parts of LBs Hillingdon, Ealing and Hackney and represent areas where there is a higher existing provision of green and blue infrastructure, but also medium to high summer temperatures.
- Areas with **lowest need but highest provision** are found in the **cream hexes**. These are mostly located in the outer boroughs, including parts of LBs Bromley, Barnet and Harrow (where there is more green belt and private gardens), as well as large green spaces such as Richmond Park, Wimbledon Common and Hampstead Heath.

Figure 5.27: SO6 Urban cooling overall need



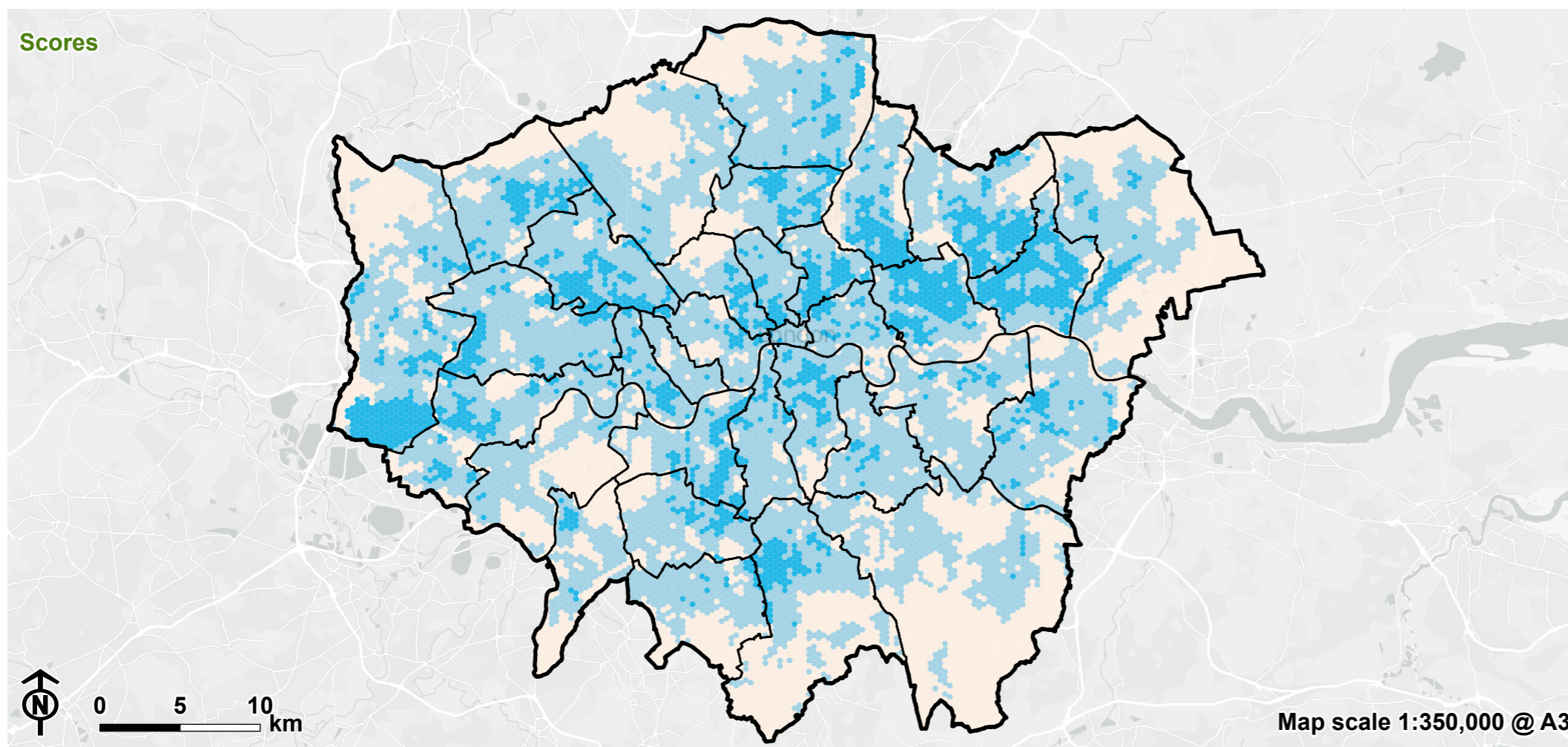
Greater London Authority boundary  
Borough boundary

Data

Major summer heat spots from Landsat-8 thermal satellite data - 2020

Mean daytime land surface temperature (degrees Celsius)

- 20 - 28
- 28 - 31
- 31 - 32
- 32 - 33
- 33 - 34
- 34 - 35
- 35 - 39



Scores

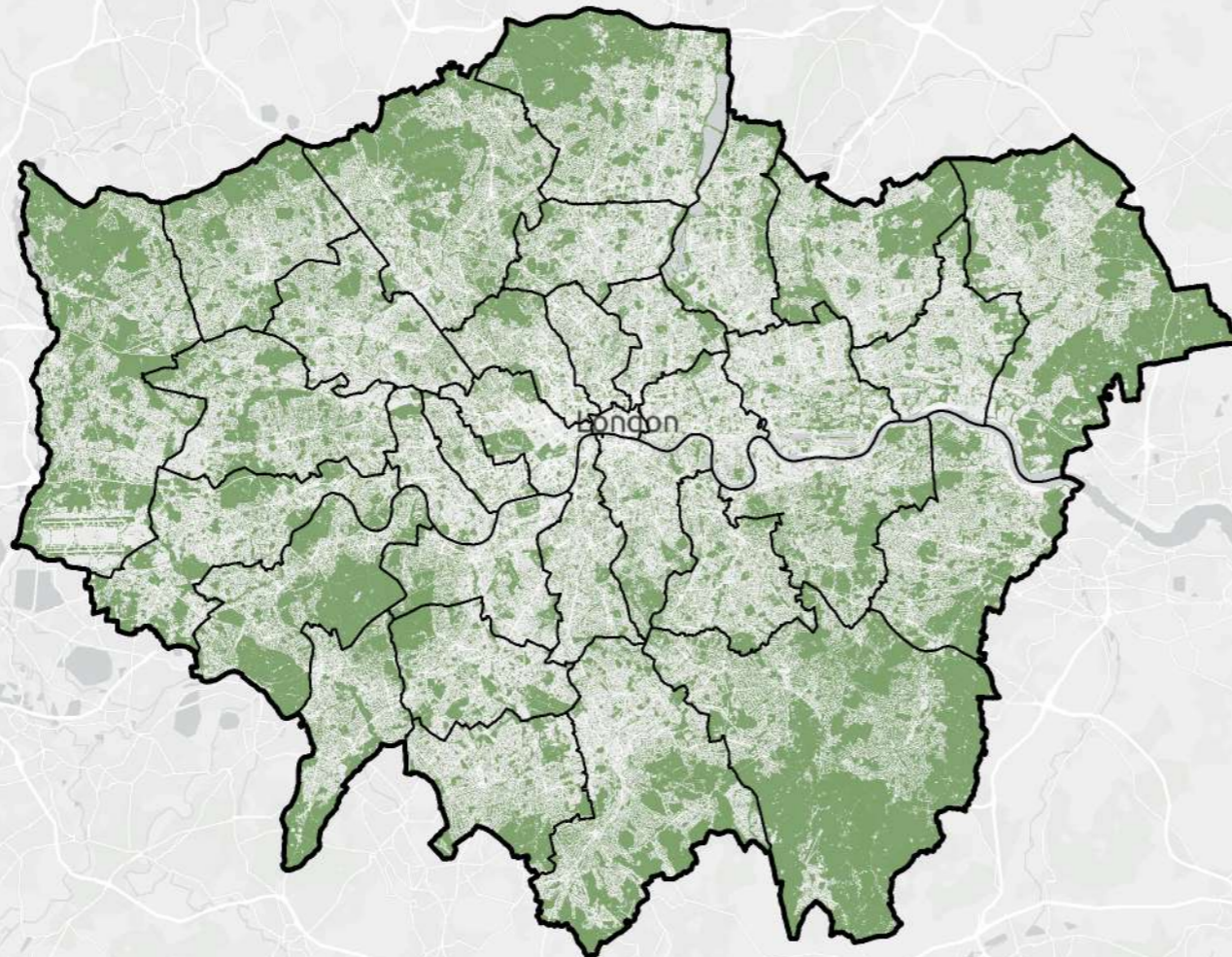
Overall need: Major summer heat spots 2020

- High need
- Medium need
- Low need



Map scale 1:350,000 @ A3

Data



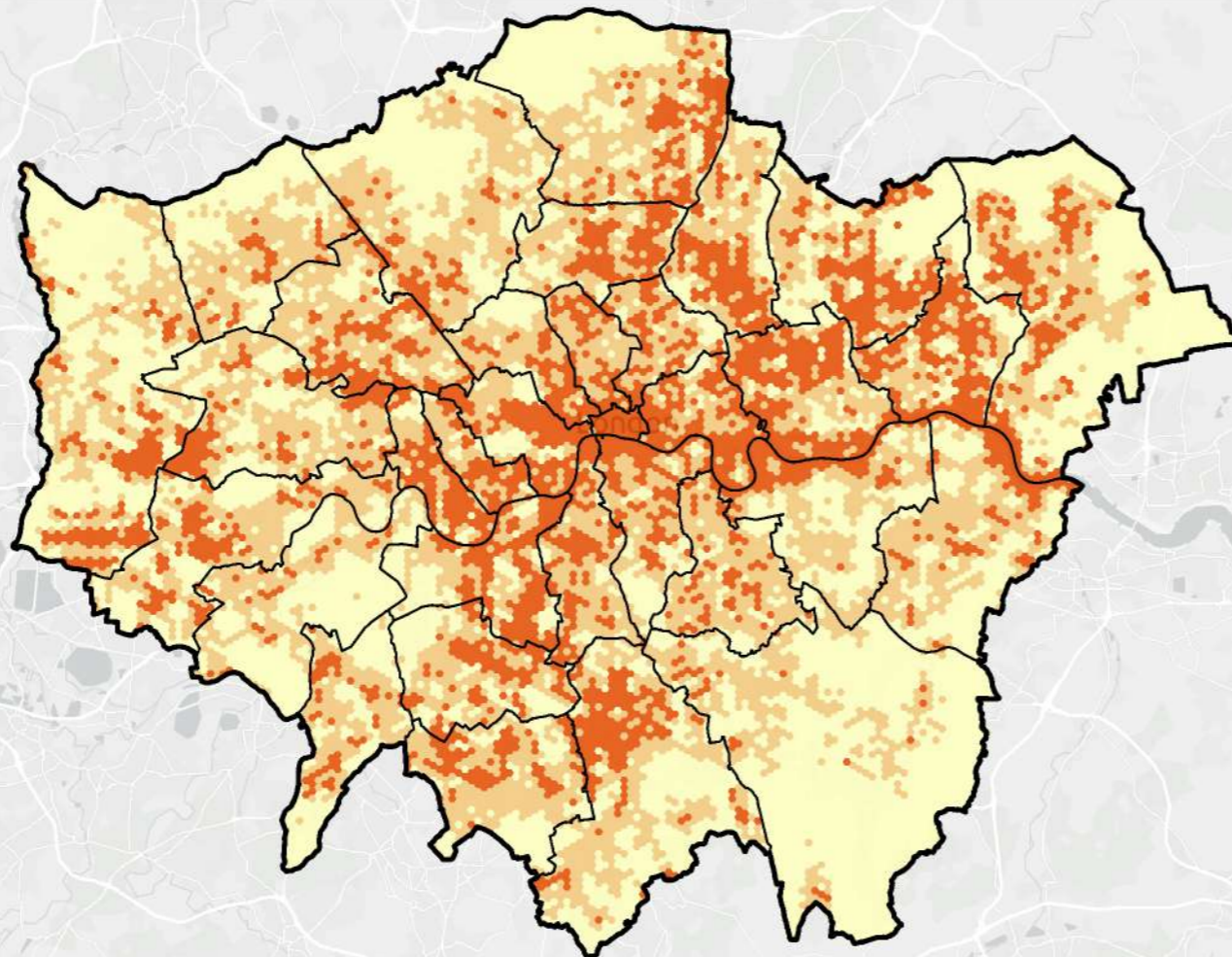
**Figure 5.28: Green cover data and provision scores**

-  Greater London Authority boundary
-  Borough boundary

**Data**




-  Green Cover 2024

Scores



**Scores**

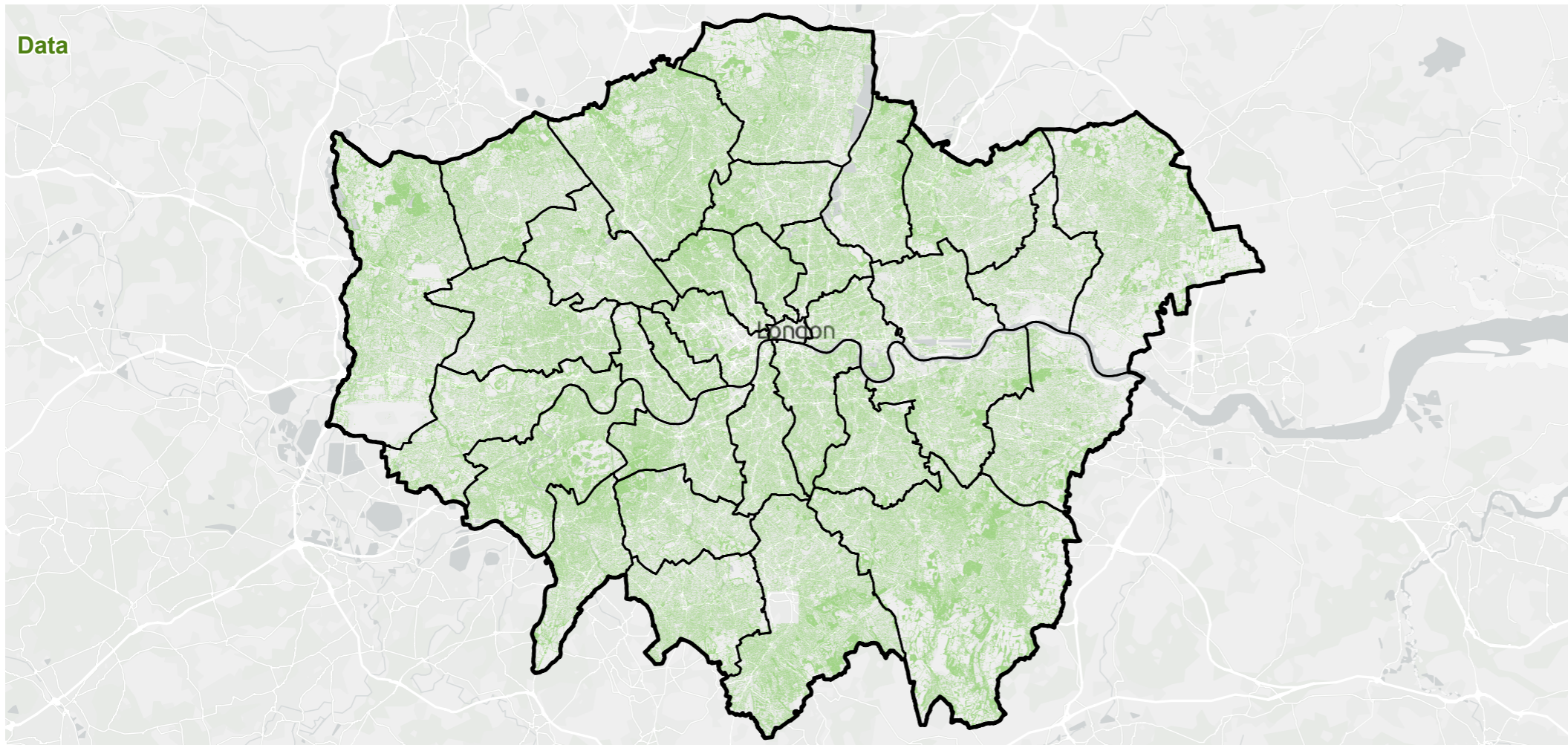
**Indicator of provision: green cover**

-  High provision
-  Medium provision
-  Low provision



Map scale 1:350,000 @ A3

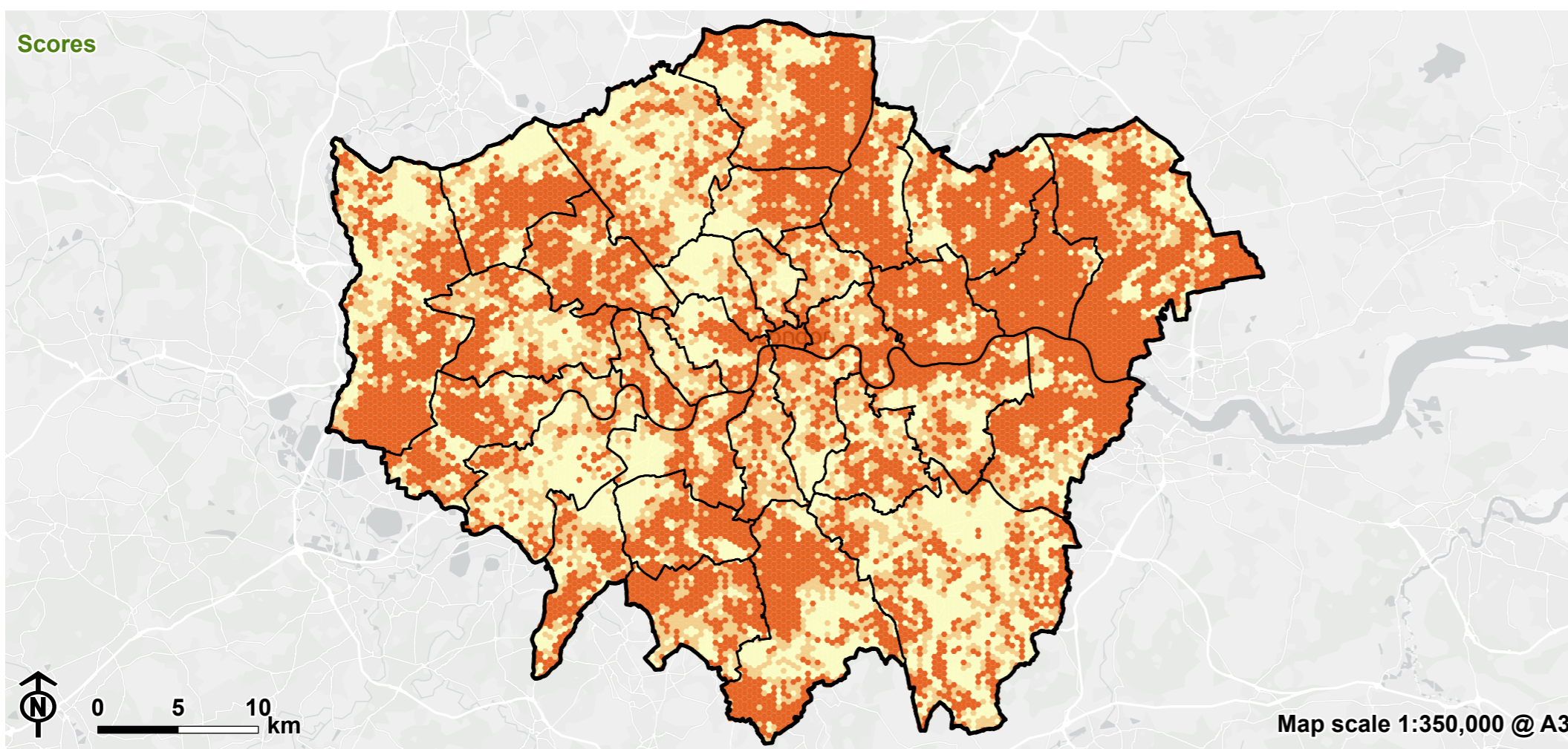
**Figure 5.29: Tree canopy cover data and provision scores**



- Greater London Authority boundary
- Borough boundary

**Data**

- Tree Canopy Cover 2024



**Scores**

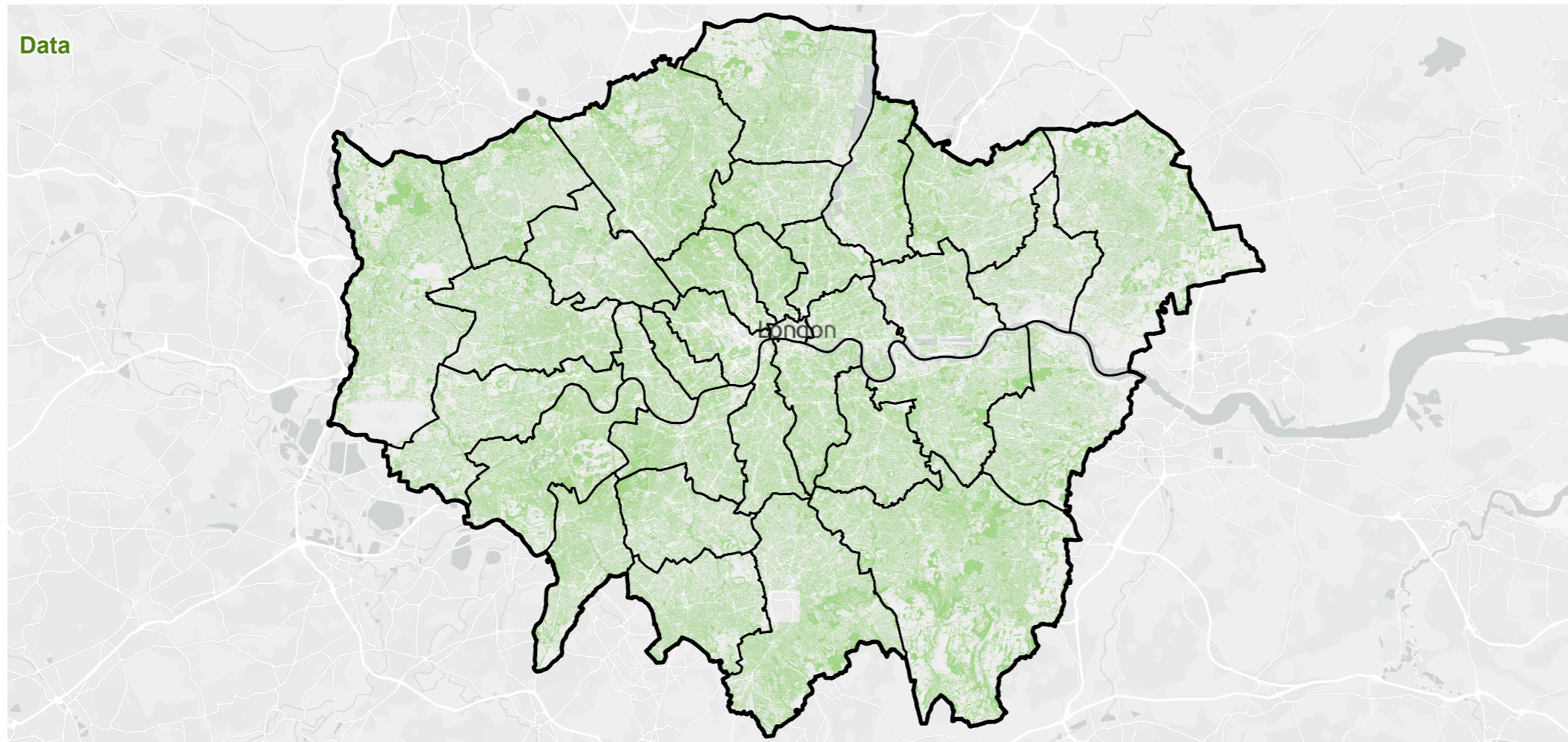
**Indicator of provision: tree canopy cover**

- High provision
- Medium provision
- Low provision



Map scale 1:350,000 @ A3

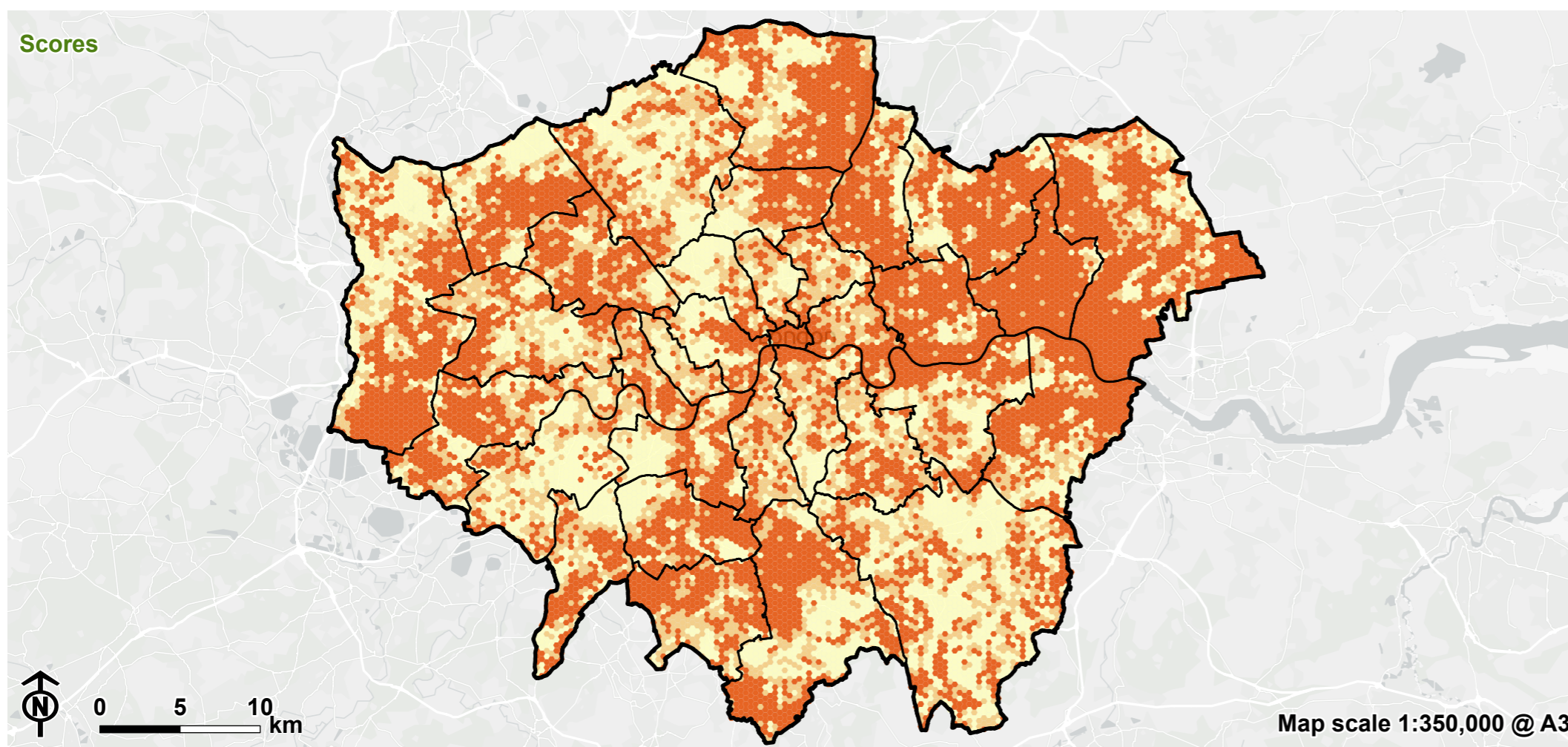
**Figure 5.29: Tree canopy cover data and provision scores**



- Greater London Authority boundary
- Borough boundary

**Data**

- Tree Canopy Cover 2024



**Scores**

**Indicator of provision: tree canopy cover**

- High provision
- Medium provision
- Low provision

Map scale 1:350,000 @ A3

Data

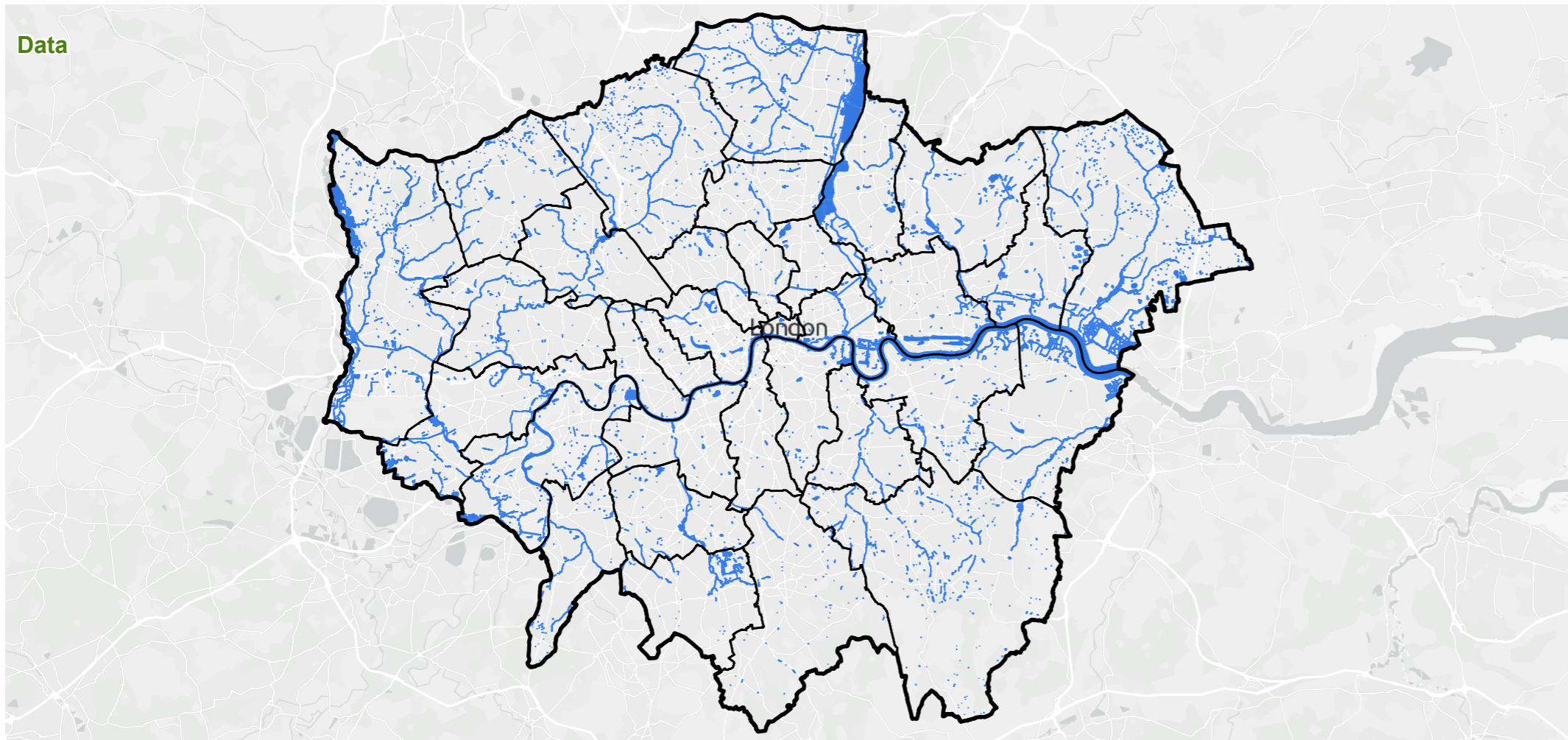


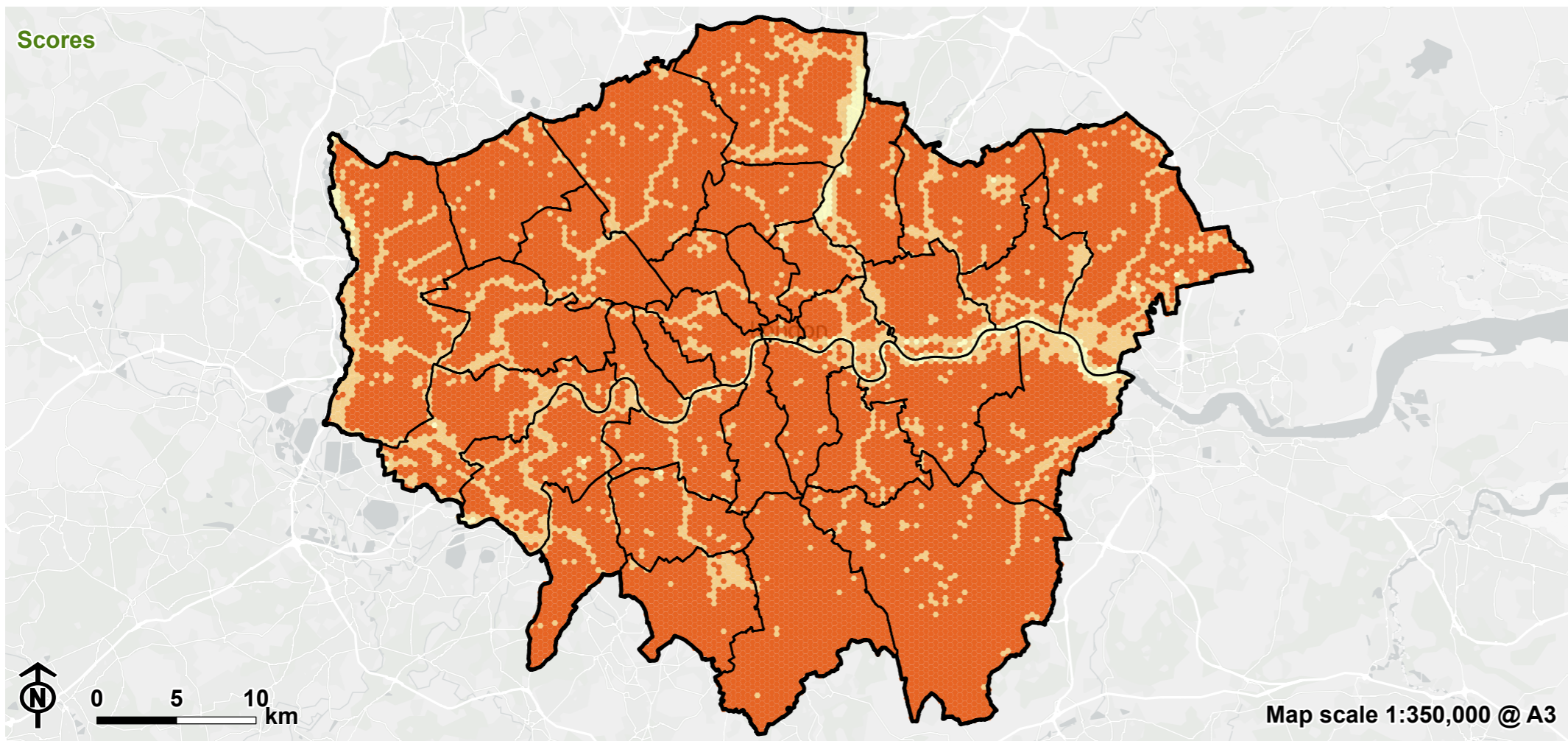
Figure 5.30: Blue cover data and provision scores

- Greater London Authority boundary
- Borough boundary

Data

- Blue Cover 2024

Scores

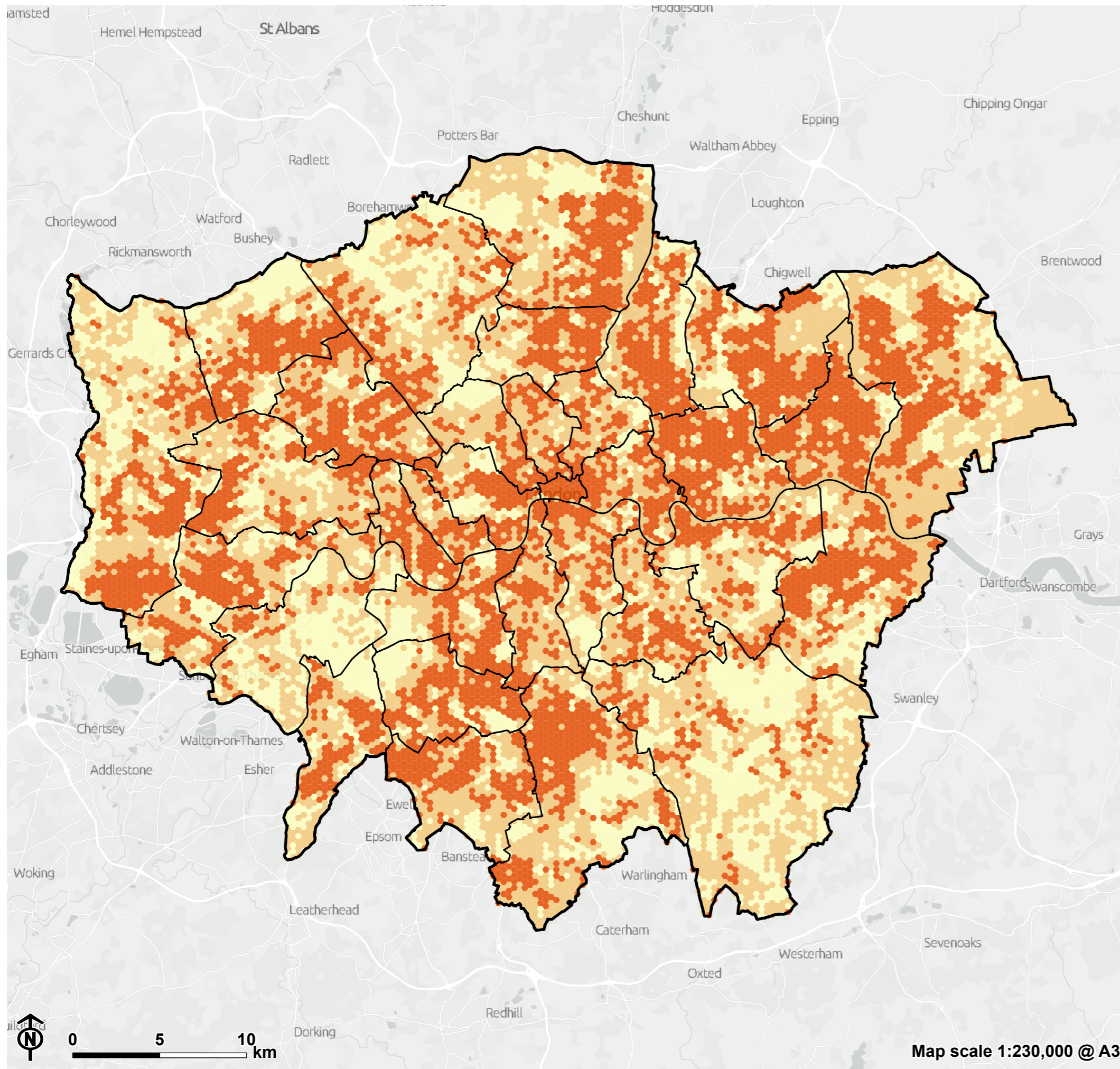


Scores






Indicator of provision: blue cover

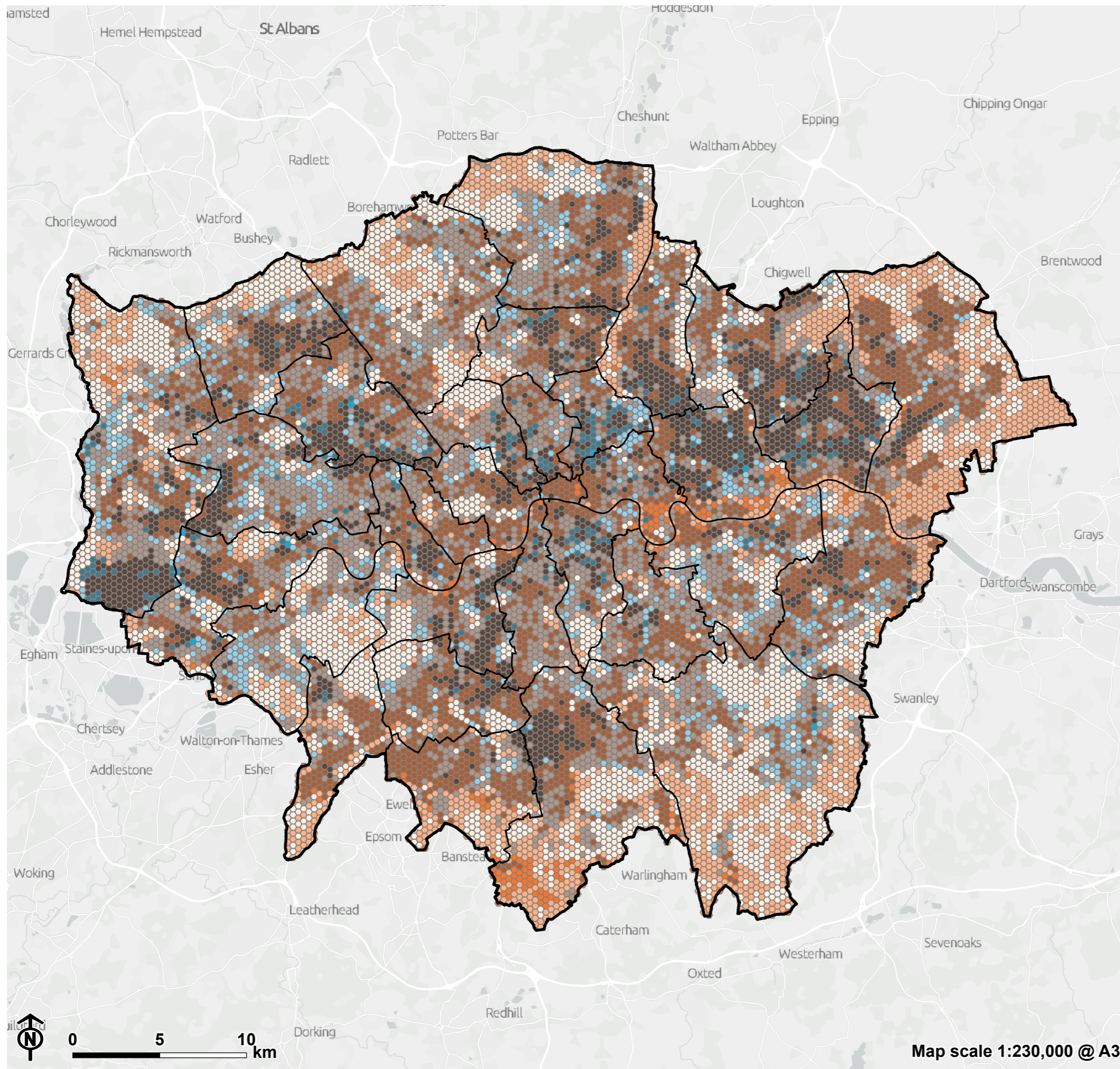
- High provision
- Medium provision
- Low provision

Map scale 1:350,000 @ A3



**Figure 5.31: SO6 Urban cooling overall provision**

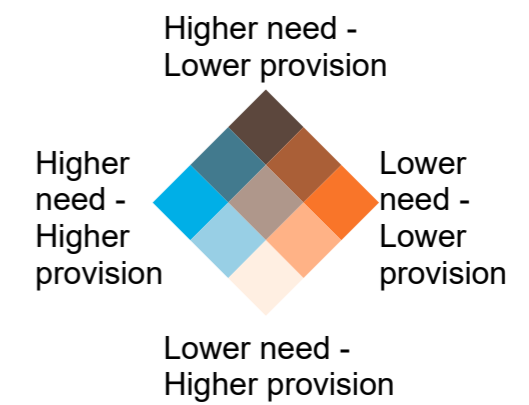
-  Greater London Authority boundary
-  Borough boundary
- Overall provision**
-  High provision
-  Medium provision
-  Low provision



**Figure 5.32: SO6 Urban cooling bivariate results**

Greater London Authority boundary  
 Borough boundary

**Need versus provision**



## Strategic Objective 7: Clean air

This Strategic Objective considers opportunities for carefully designed roadside tree and shrub planting, using pollution tolerant species. Green walls also offer potential design solutions, whilst ensuring compliance with fire safety regulations.

- NO<sub>2</sub> concentration, 2025 forecast; and
- PM 2.5 concentration, 2025 forecast.

**5.38** The following indicators of existing GI provision were identified:

- Green cover, which may include areas of grass or shrubby vegetation as well as trees, which can all contribute to intercepting particulate matter and reducing air pollution; and
- Tree canopy cover – this dataset was included in addition to general green cover, due to the greater contribution larger trees (in particular, street trees) can make to helping to reduce air pollution.

**5.39** **Figures 5.33 to 5.34** show the datasets used for each indicator of need, along with how that was translated into areas of high, medium and low need by hex across London for clean air. The whole of London is identified as having low need for NO<sub>2</sub> concentration, as the levels are below the EU air quality standard of 40µg/m<sup>3</sup>. The World Health Organisation's standard for PM2.5 concentration of 10µg/m<sup>3</sup> is exceeded, mainly in the inner parts of London, which have corresponding high need. This includes the City of London, City of Westminster, LBs Kensington & Chelsea, Islington and Tower Hamlets. Additional areas of high need occur along busy road corridors, for example the A406 in LBs Brent, Barnet, Enfield, Waltham Forest and Redbridge, and M4, A40, A2 and A13 in LBs Ealing, Hounslow, Greenwich and Newham. No areas show medium need.

**5.40** **Figure 3.35** shows the overall level of need based on both need indicators for clean air. As the NO<sub>2</sub> concentration shows a uniform low level of need across London, this figure shows the same pattern as for PM2.5 (in **Figure 5.34**).

**5.41** **Figures 5.36 to 5.37** show the datasets used for each provision indicator for clean air, along with how that was translated into areas of high, medium and low provision by hex across London. Green cover, as discussed in **paragraph 5.7** for Strategic Objective 1, is primarily located in outer London, particularly where there are large open spaces including in LBs Bromley, Barnet and Enfield, with lower provision in the city centre, including LB City and County of the City of London. Tree canopy cover, as discussed in **paragraph 5.35** for Strategic Objective 5, shows the highest provision concentrated in areas where there are large parks, heaths and other recreational areas for example in LBs Bromley, Richmond upon Thames and Camden. Lower provision is generally found in more built-up areas, including the city centre, as well as in the east including LBs Barking & Dagenham, Newham, Havering and Bexley, in the south in LBs Croydon and Sutton and in the west around Heathrow Airport in LB Hillingdon.

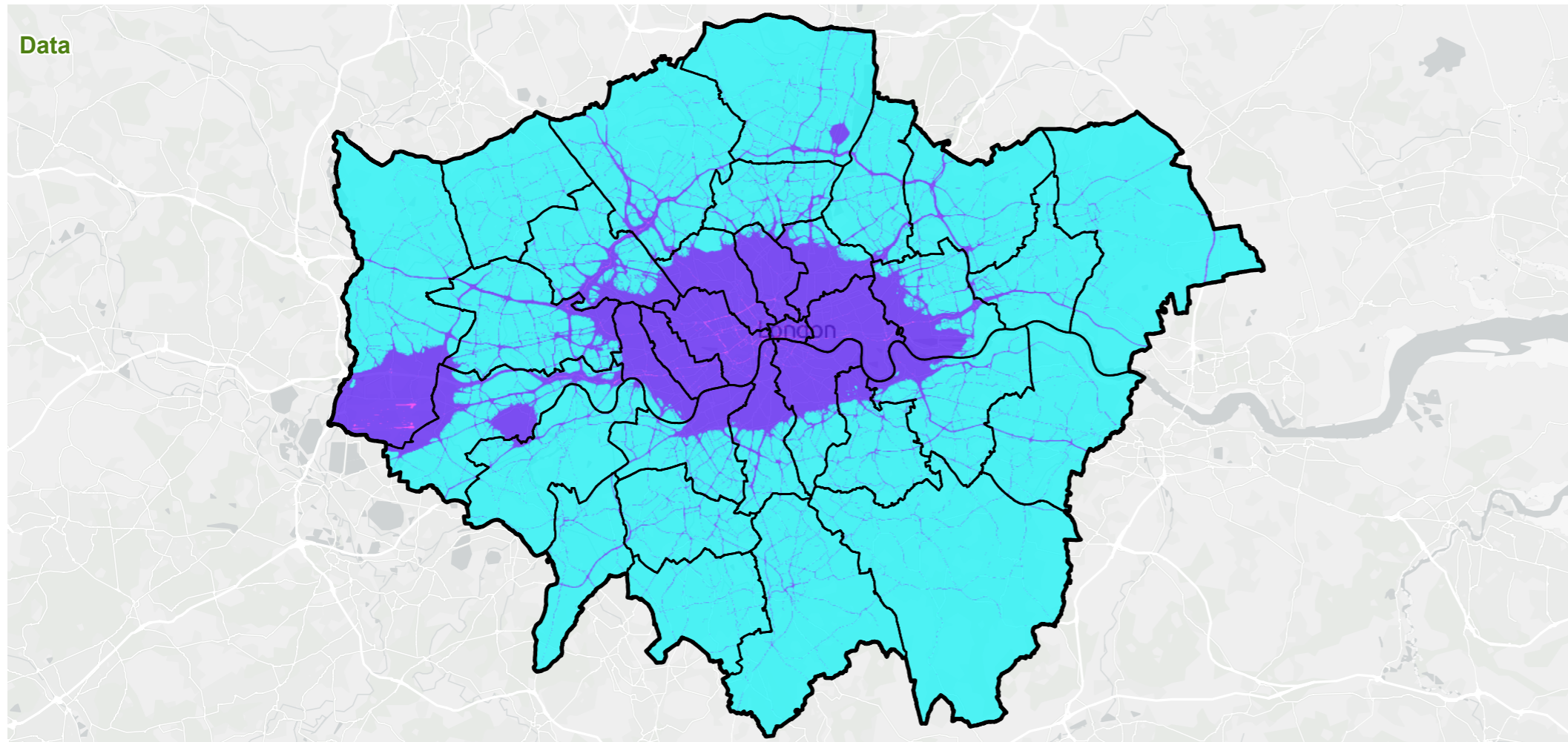
**5.42** **Figure 5.38** shows the combined indicators showing overall GI provision for clean air. The areas of highest provision are primarily located in outer London and around large green spaces, for example in LB Bromley, Richmond upon Thames, Hillingdon and Barnet. The lowest provision is in more densely built areas, including in the city centre and north east, for example in LBs City of London, Tower Hamlets and Newham.

**5.43** **Figure 5.39** presents the results for the bivariate analysis for clean air, which shows a clear distinction between inner and outer London.

- Areas of **highest need and lowest provision** for clean air are shown in the **dark brown hexes**. These are concentrated in the most built-up areas within inner London, including the city centre, and along the River Thames in inner London, for example in parts of City of Westminster, City of London, LBs Wandsworth and Tower Hamlets.
- Other areas in the inner city are mostly represented by **blue hexes**, indicating **higher need and higher provision**, due to higher concentrations of PM 2.5 coupled with higher green and blue cover. This also includes many of the road corridors including the A406.
- In outer London, there are areas of **low need and low provision**, represented by **orange hexes**. This includes areas around Croydon, Heathrow airport, Wembley and in LBs Barking & Dagenham and Waltham Forest.

- Areas with **lowest need but highest existing GI provision** are shown in the **cream hexes**. These are mostly located in the outer edges of London and around large green spaces, including LBs Richmond upon Thames, Bromley, Hillingdon and Barnet.

**Figure 5.33: NO2 concentration data and need scores**



Greater London Authority boundary  
Borough boundary

**Data**

**NO2 concentration 2025 forecast**

µg/m3

- 0 - 20
- 20 - 40
- >= 40



**Scores**

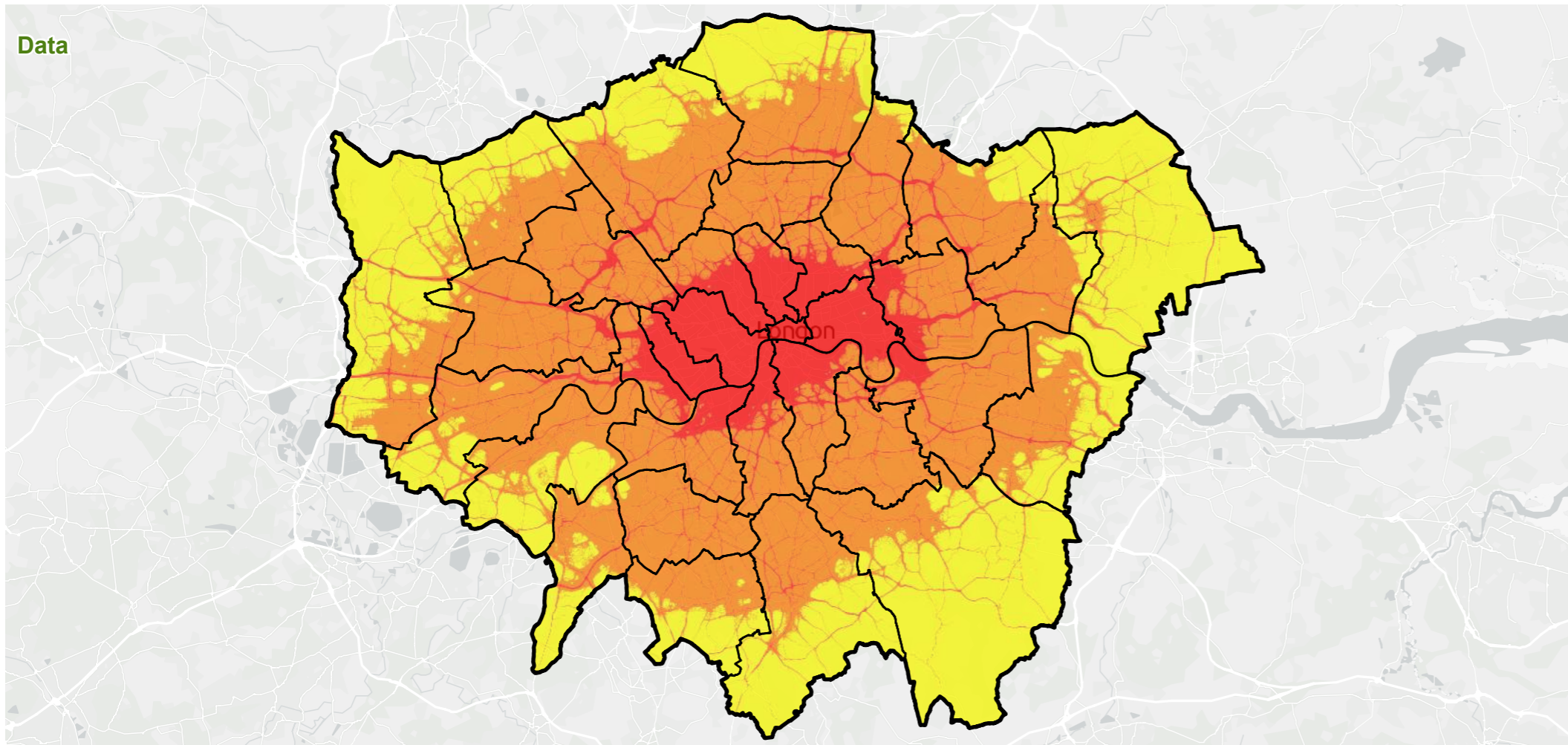
**Indicator of need: NO2 concentration 2025 forecast**

- High need
- Low need



Map scale 1:350,000 @ A3

**Figure 5.34: PM2.5 concentration data and need scores**



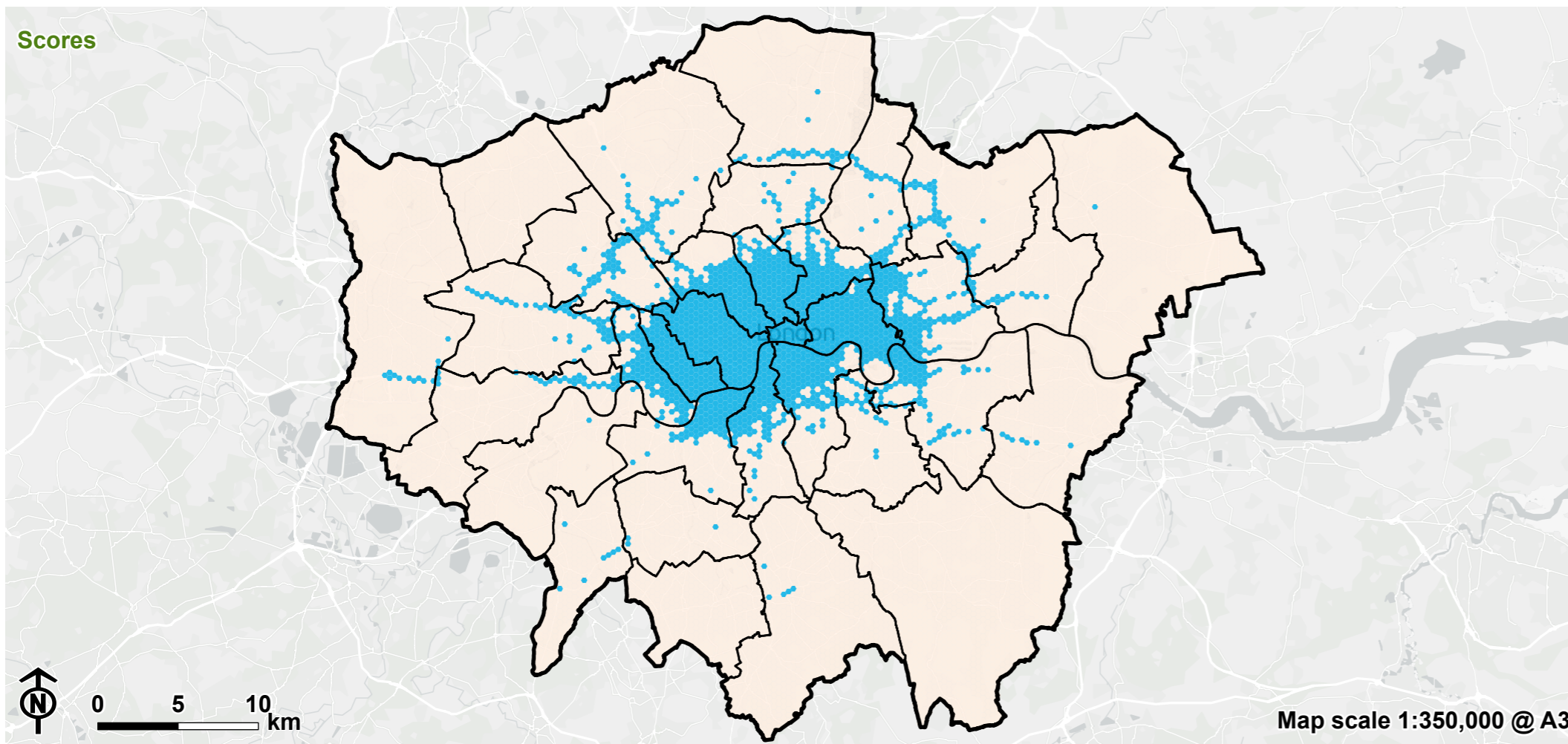
Greater London Authority boundary  
Borough boundary

**Data**

**PM2.5 concentration 2025 forecast**

Value

- 7 - 9
- 9 - 10
- $\geq 10$



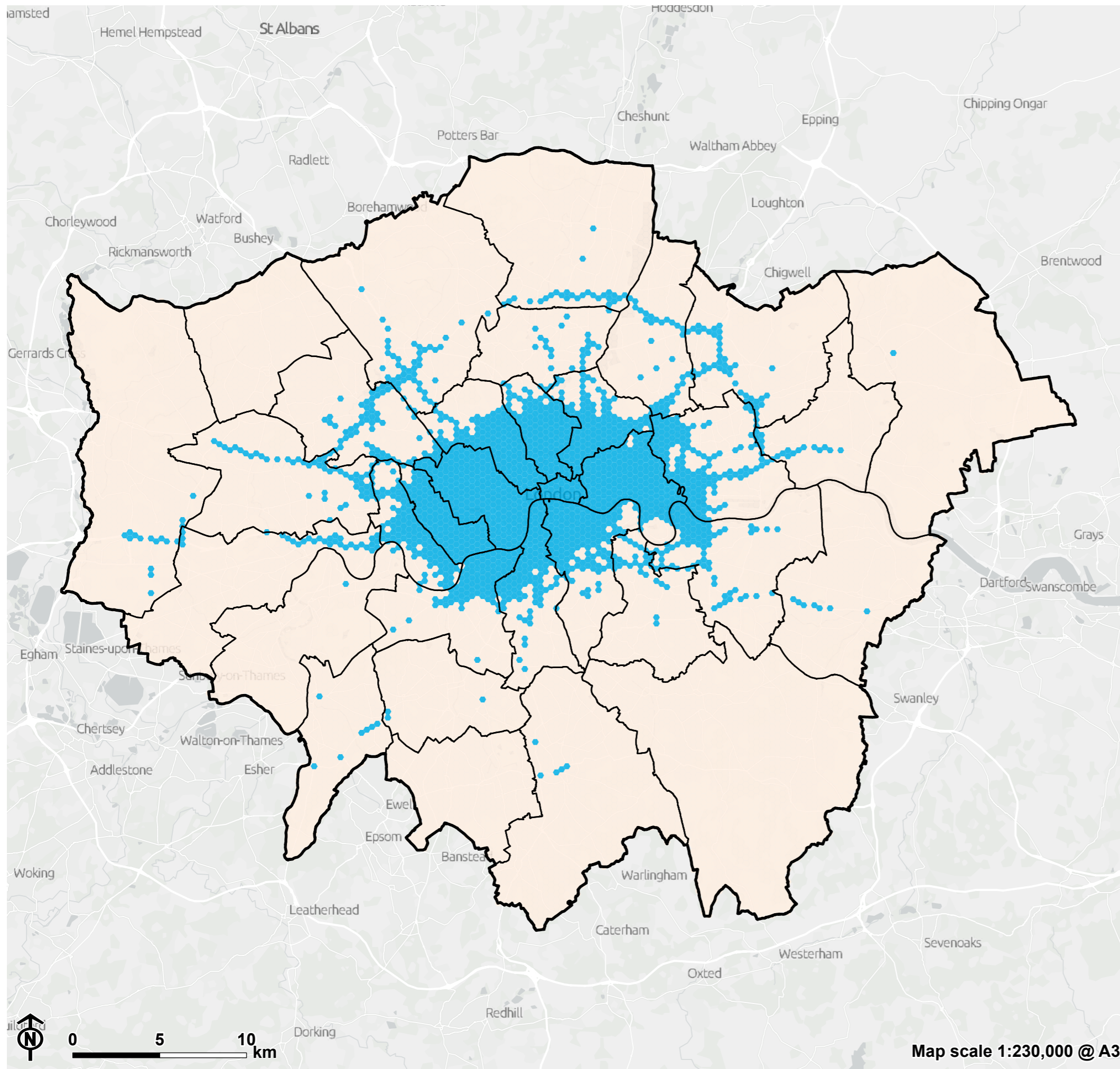
**Scores**

**Indicator of need: PM2.5 concentration 2025 forecast**

- High need
- Low need



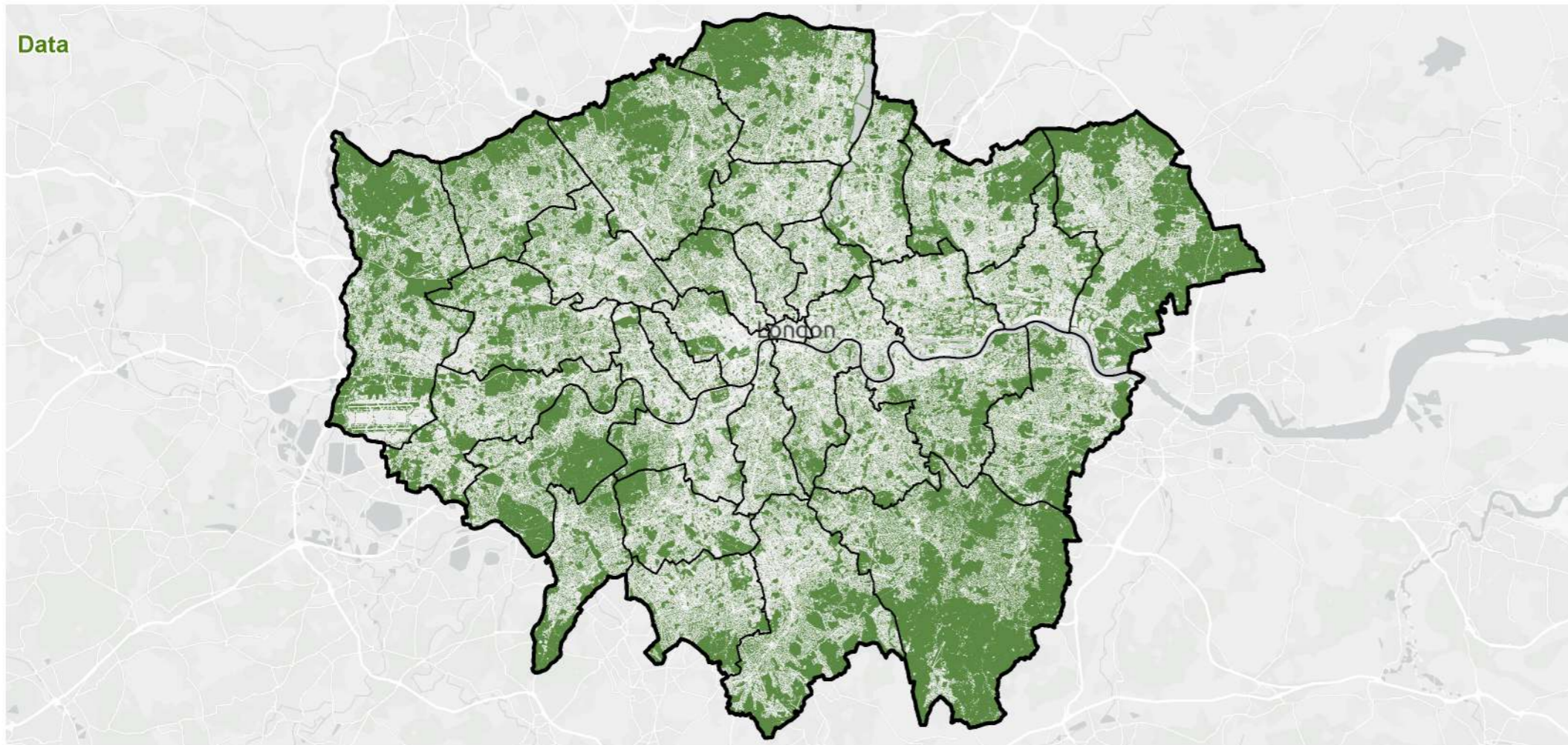
Map scale 1:350,000 @ A3



**Figure 5.35: SO7 Clean air overall need**

- Greater London Authority boundary
- Borough boundary
- Overall need**
- High need
- Low need

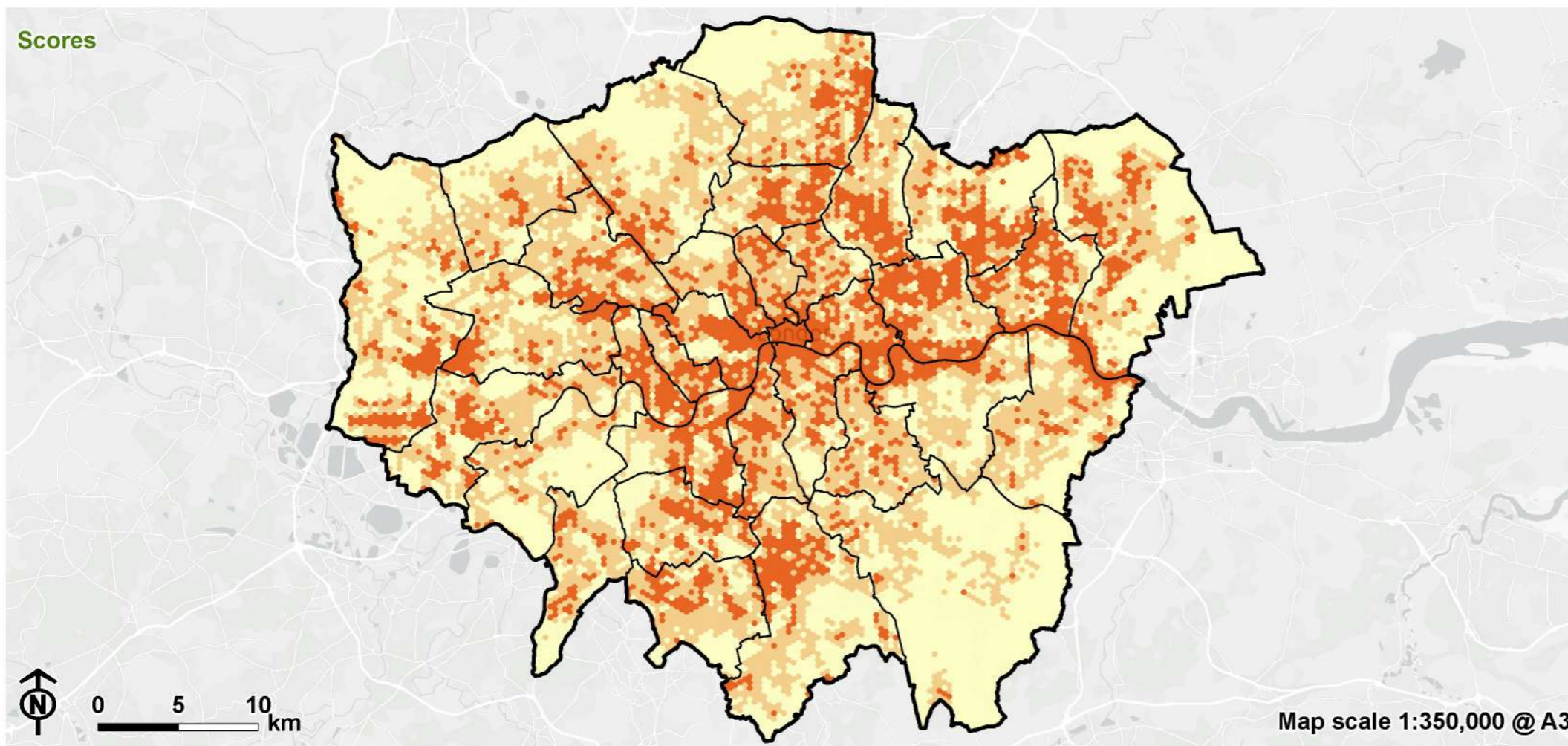
**Figure 5.36: Green cover data and provision scores**



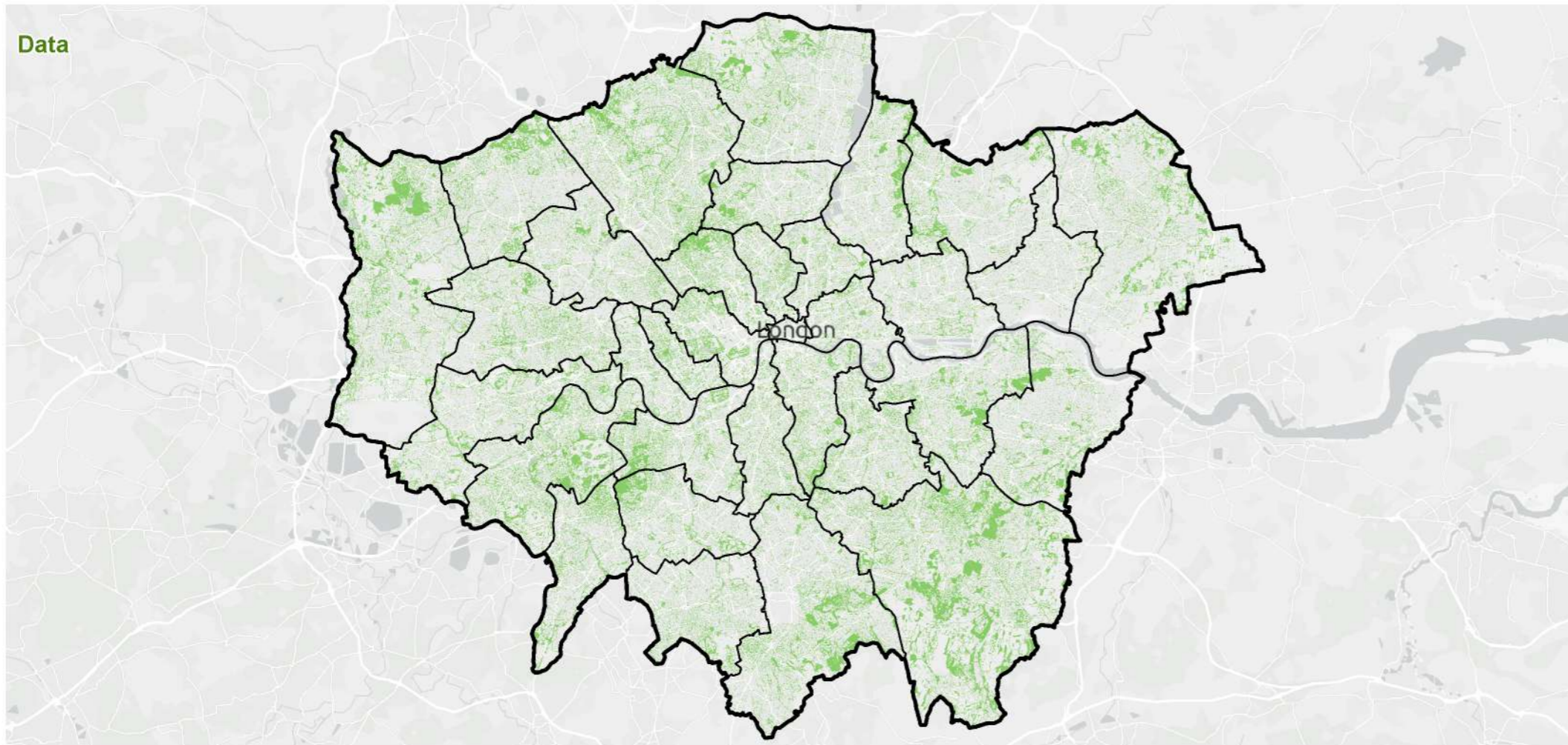
- Greater London Authority boundary
- Borough boundary

**Data**

- Green Cover 2024



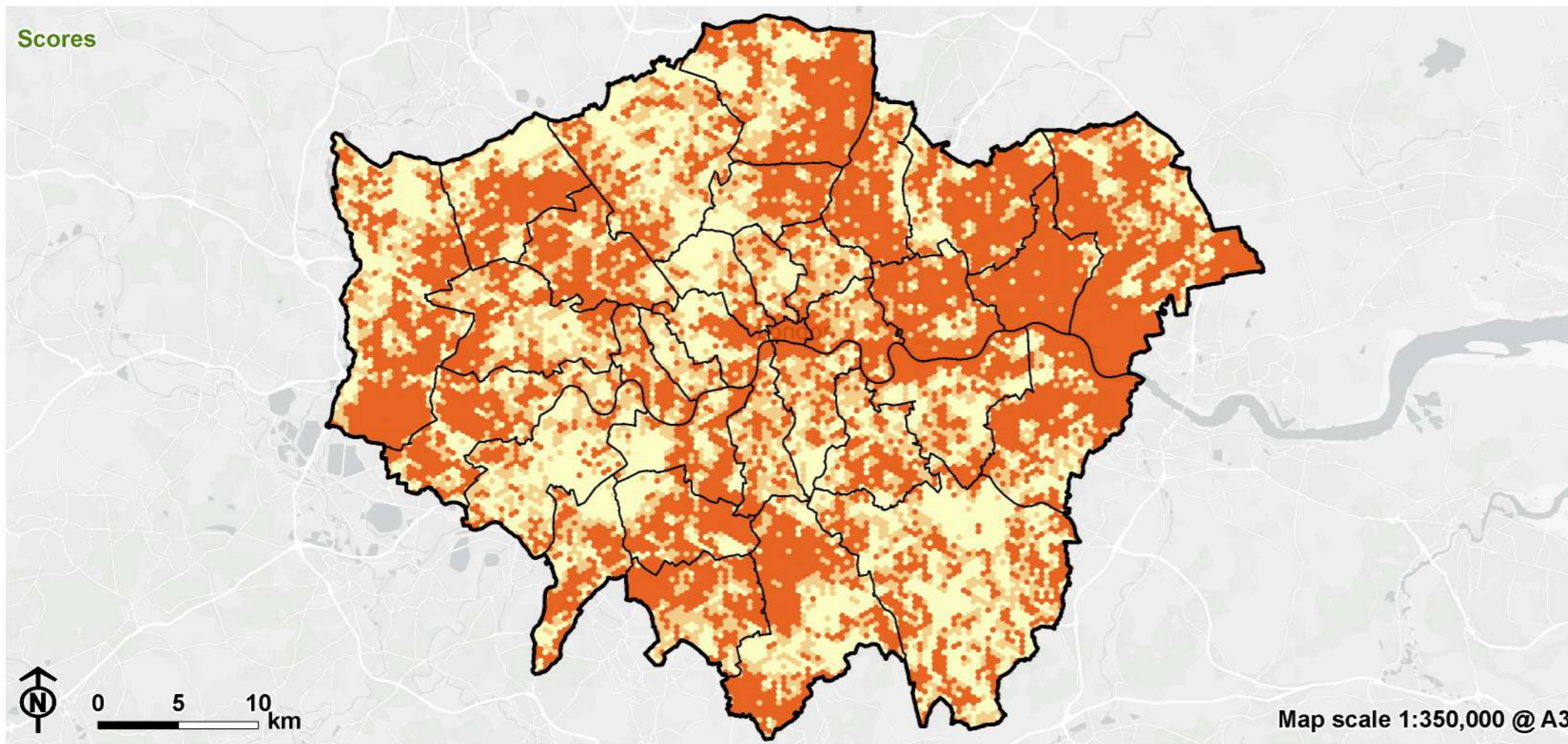
**Figure 5.37: Tree canopy cover data and provision scores**



- Greater London Authority boundary
- Borough boundary

**Data**

- Tree Canopy Cover 2024

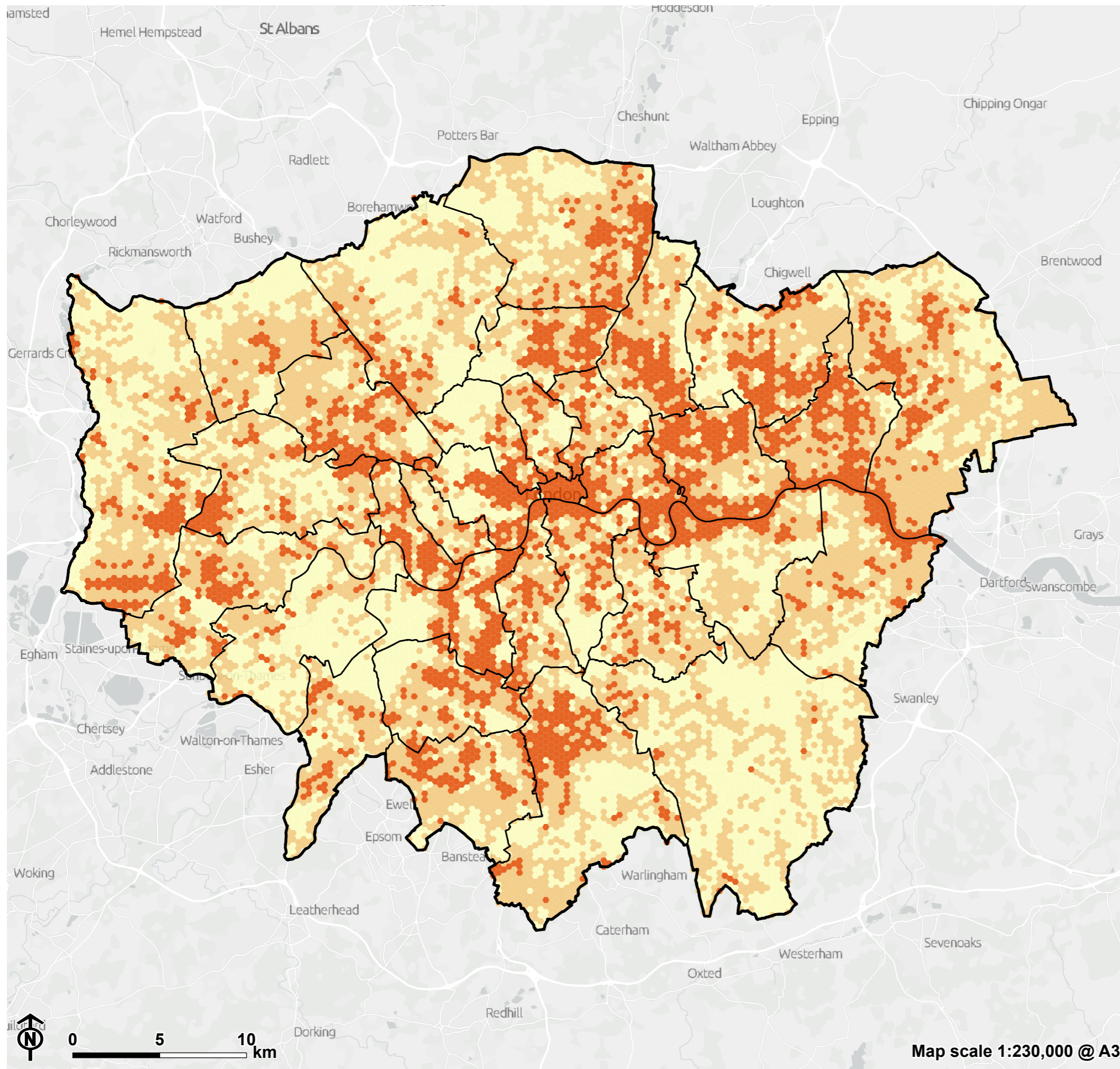


**Scores**

**Indicator of provision: tree canopy cover**

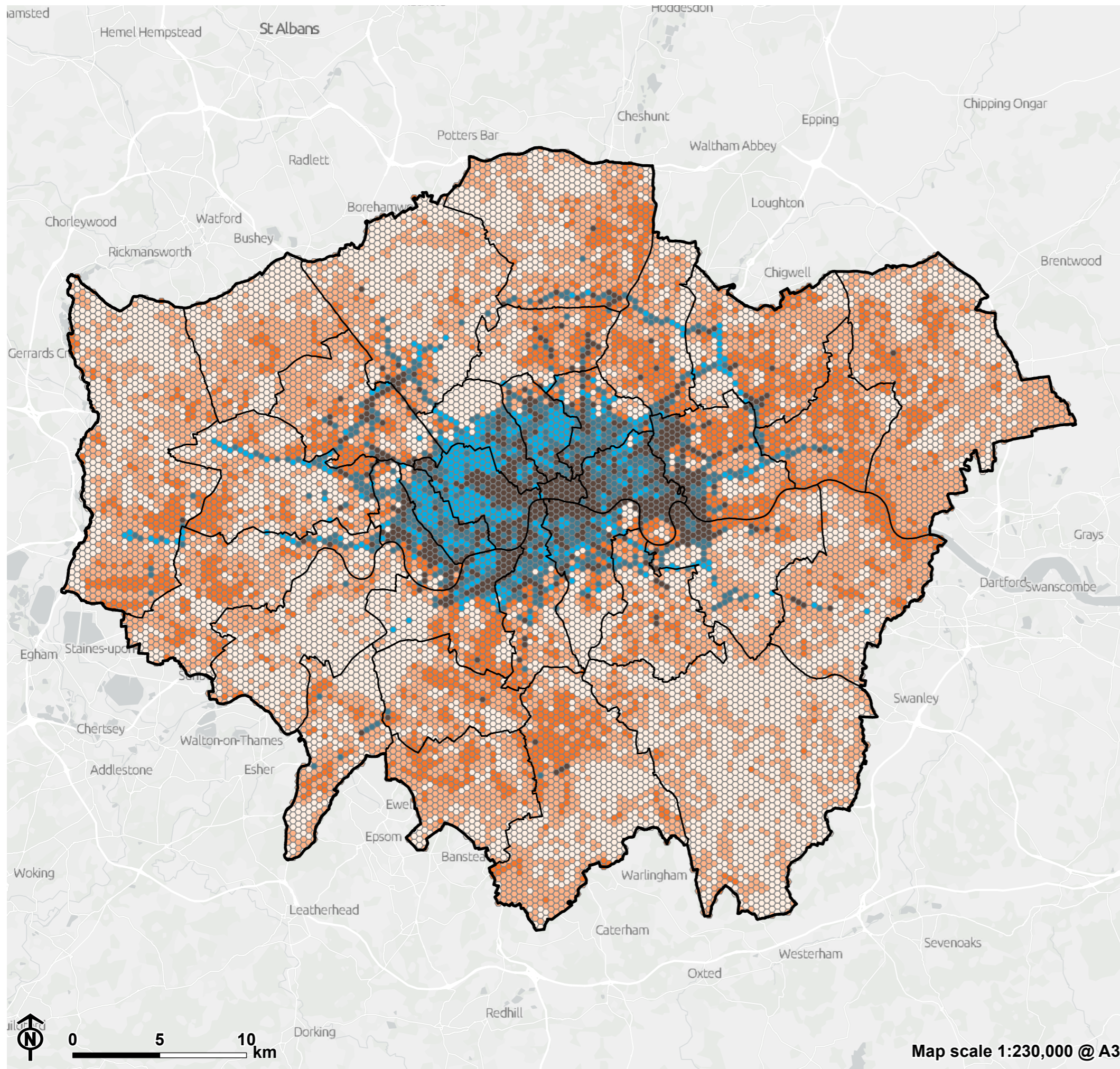
- High provision
- Medium provision
- Low provision

Map scale 1:350,000 @ A3



**Figure 5.38: SO7 Clean air overall provision**

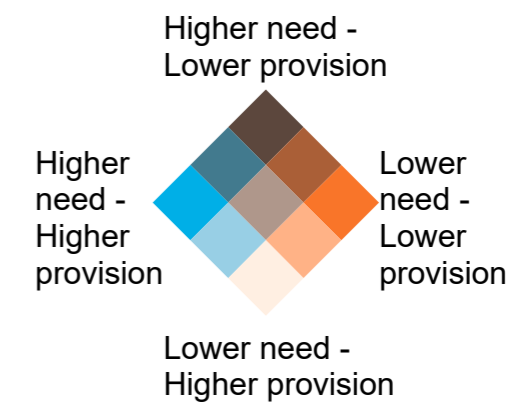
- Greater London Authority boundary
- Borough boundary
- Overall provision**
- High provision
- Medium provision
- Low provision



**Figure 5.39: SO7 Clean air bivariate results**

Greater London Authority boundary  
 Borough boundary

**Need versus provision**



## Strategic Objective 8: Noise reduction

This Strategic Objective considers opportunities for wide buffer planting of trees and shrubs adjacent to road and rail lines as well as the potential for earth mounding to reduce noise intrusion, particularly in residential areas.

**5.44** For this Strategic Objective, the following indicators of need were identified, as road and rail noise levels are nationally recognised and monitored indicators of noise pollution. However, the number of residential addresses per hex was factored in as well in order to identify areas where people were more likely to be exposed to noise:

- People impacted by rail noise; and
- People impacted by road noise.

**5.45** The following indicator of existing GI provision was identified:

- Tree canopy cover, as the presence of trees, and in particular street trees, can help to reduce noise pollution.

**5.46** **Figures 5.40** and **5.41** show the datasets used for each indicator of need for noise reduction, along with how that was translated into areas of high, medium and low need by hex across London. High need in relation to road noise is concentrated in the inner London boroughs, including City of Westminster, City of London and LB Kensington & Chelsea, correlating with the dense road networks in the city centre and inner city and densely populated areas. There are pockets of low need around the large parks and green spaces, including LBs Richmond upon Thames and Bromley, as well as around the River Thames in the east of the city, and in the outer London boroughs which are less densely populated. Need based on the rail noise indicator is less extensive. High and medium need in relation to rail noise is located along railway lines, with the highest need where multiple lines converge within more densely populated areas, for example around and between London Waterloo and London Bridge stations, between London Bridge to Bricklayers Arms junction and Silwood Triangle Sidings; and between Clapham Junction and Vauxhall. This includes within LBs Wandsworth, Southwark and Lewisham. Away from railway lines there is the lowest need, occurring in both inner and outer boroughs of London.

**5.47** **Figure 5.42** shows the overall levels of need for noise reduction when both the indicators are combined. This shows the areas of greatest need along major road and rail corridors in the centre of the city, including in LBs Wandsworth, Lambeth, Southwark, Lewisham and Tower Hamlets. The lowest noise reduction need is located in the outer edges of London, including in LBs Bromley, Hillingdon and Havering, Heathrow airport shows as having low noise reduction need, partly due to the lack of people living there but also as noise from air traffic is not taken into account through the indicators of need.

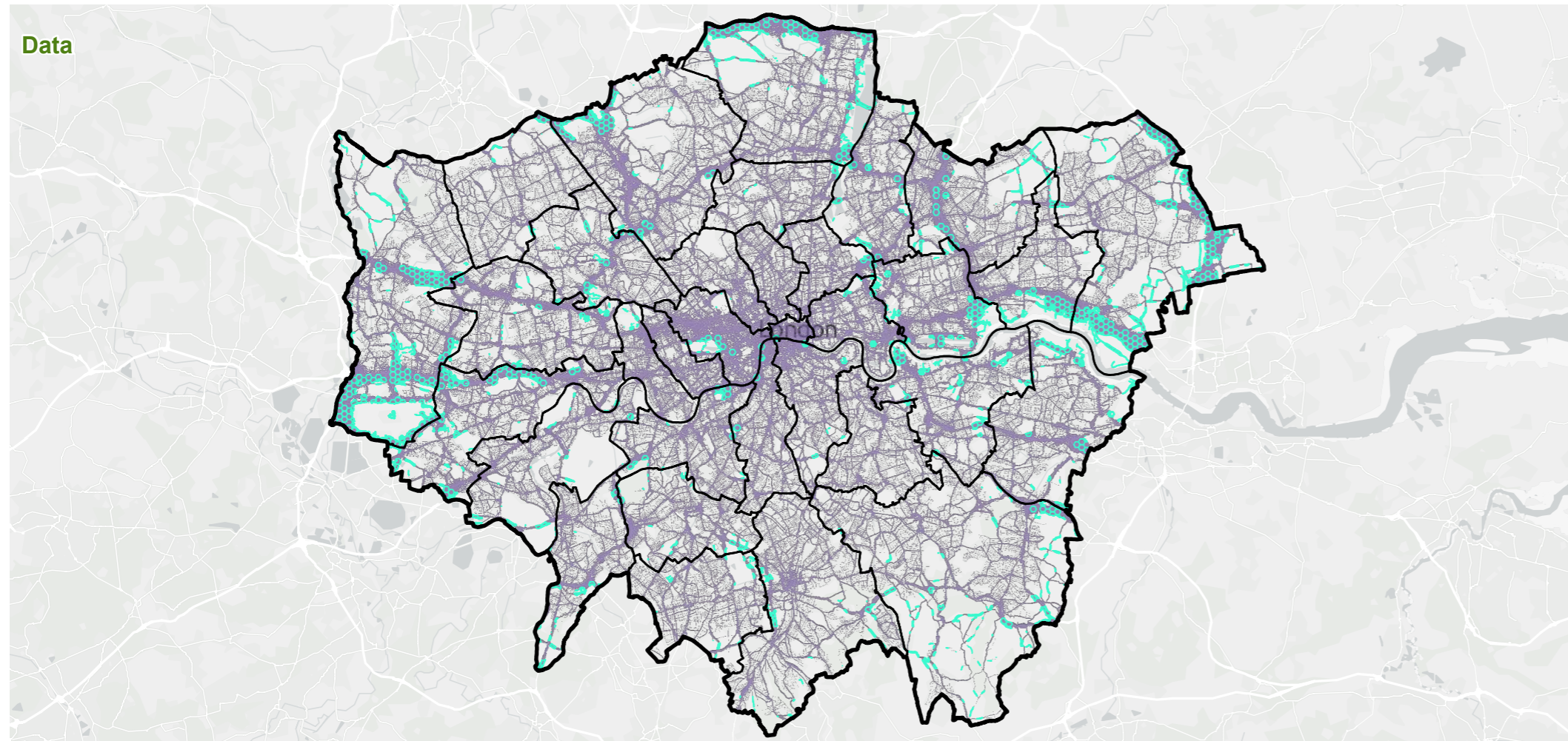
**5.48** **Figure 5.43** shows the level of provision of tree cover, along with how this was translated to high, medium and low hex. This is the only provision indicator for noise reduction. Tree cover, as discussed in **paragraph 5.35** for Strategic Objective 5, shows the highest provision concentrated in areas where there are large recreational green spaces for example in LBs Bromley, Richmond upon Thames and Camden. Lower provision is generally found in more built up areas, including the City of London and immediately around it. Other large areas of low provision occur in LBs Barking & Dagenham, Newham, Havering and Bexley, in the south in LBs Croydon and Sutton and in the west around Heathrow Airport in LB Hillingdon.

**5.49** **Figure 5.44** presents the results for the bivariate analysis for noise reduction.

- Areas of **highest need and lowest provision** for noise reduction are shown in the **dark brown hexes**. There is a relatively low coverage of dark brown hexes, indicating few areas with high need and low provision. The more extensive pockets occur near to railway junctions and large stations within more built-up, densely populated areas with low tree cover, for example in north east LB Wandsworth, north LBs Lambeth and Southwark, Croydon centre and Stratford in LB Newham.
- The majority of London is represented by **dark orange/tan hexes**, representing **medium need and low provision**, for example in LBs Brent, Hounslow, Bexley, and Sutton where there is medium exposure to noise and low tree cover.
- There are pockets of **orange hexes**, corresponding to areas of **low need and low provision**, where road and rail noise is low and less people that would be affected as well as low tree cover. This includes along the river Thames and River Lee corridors in the east and north, around Heathrow airport and smaller parts of other more outer London boroughs.

- Areas of **blue and light blue hexes** represent areas of **medium or high need and high provision**. This generally correlates to road and rail corridors close to larger green areas, for example in LBs Bromley and Barnet.
- Areas with **lowest need but highest provision** are shown in the **cream hexes**. These are mostly located in pockets within large green areas, including around Richmond Park, Wimbledon Park, Hampstead Heath and Holwood Park in LBs Richmond upon Thames, Merton, Camden and Bromley respectively.

**Figure 5.40: Road noise data and need scores**



Greater London Authority boundary  
Borough boundary

**Data**

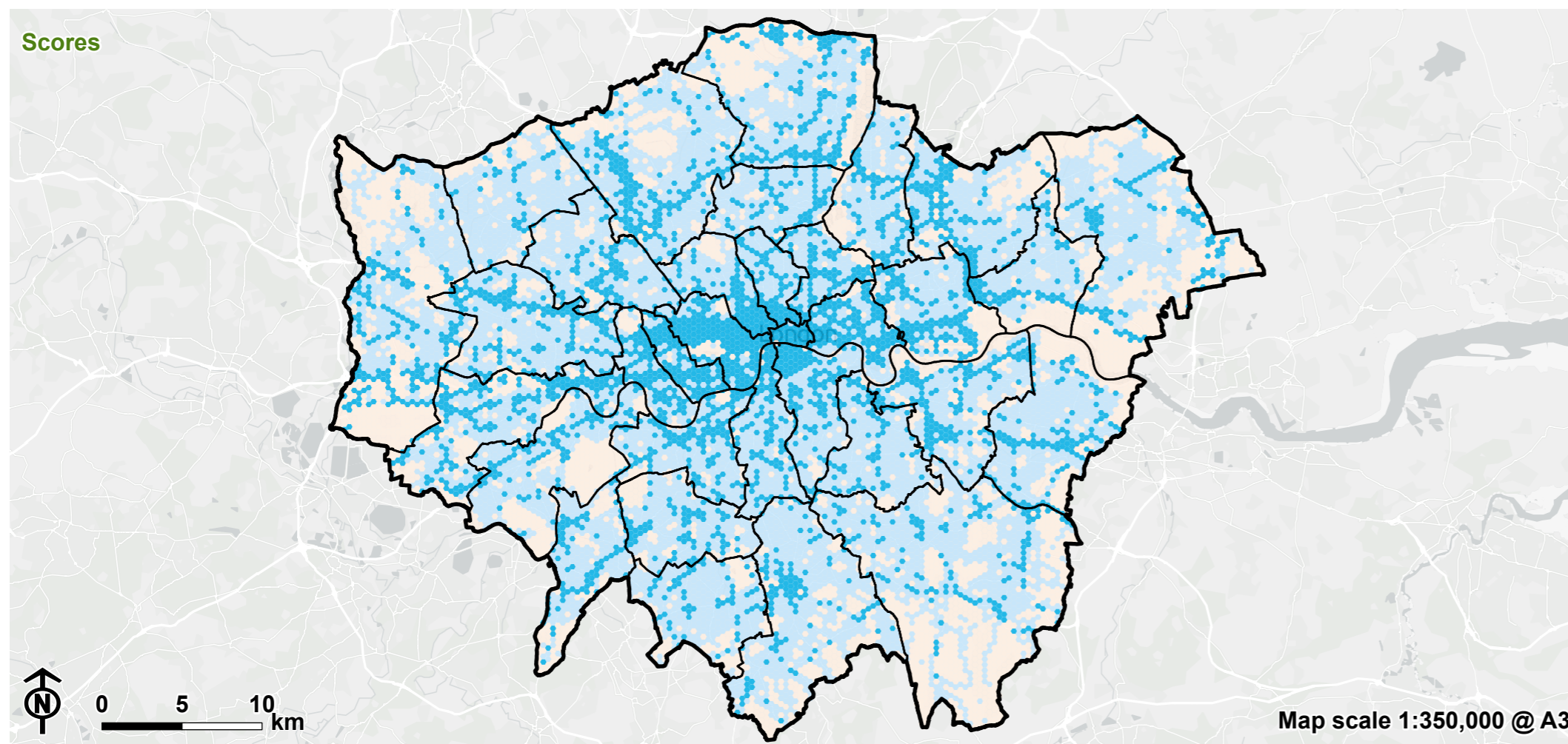
Hex with 0 residential addresses within noise 55dB or more

**Road noise 2022 - Lden**

Decibel

$\geq 55$

Lden indicates a 24h annual average noise level.



**Scores**

**Indicator of need: road noise**

High need

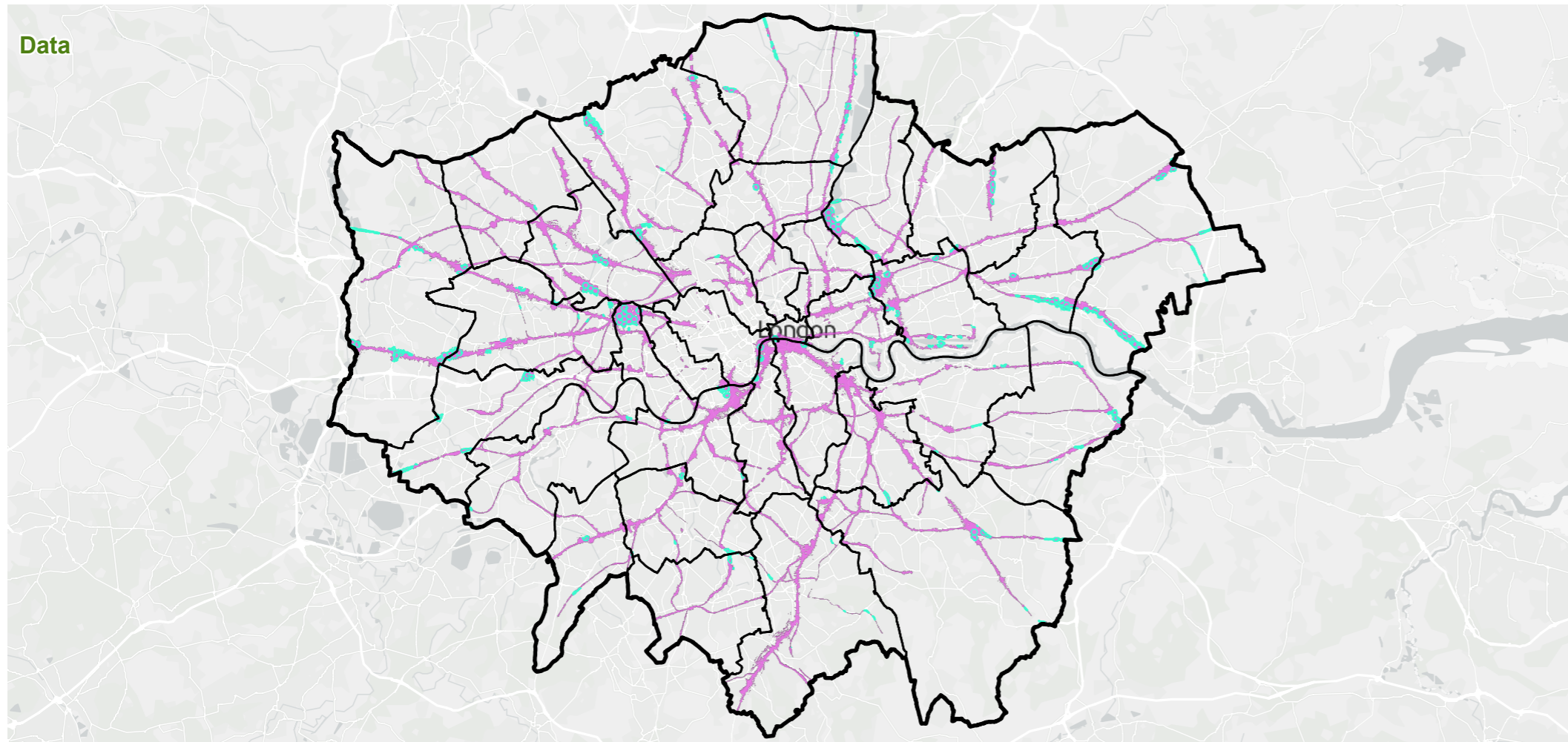
Medium need

Low need



Map scale 1:350,000 @ A3

Figure 5.41: Rail noise data and need scores



- Greater London Authority boundary
- Borough boundary

**Data**

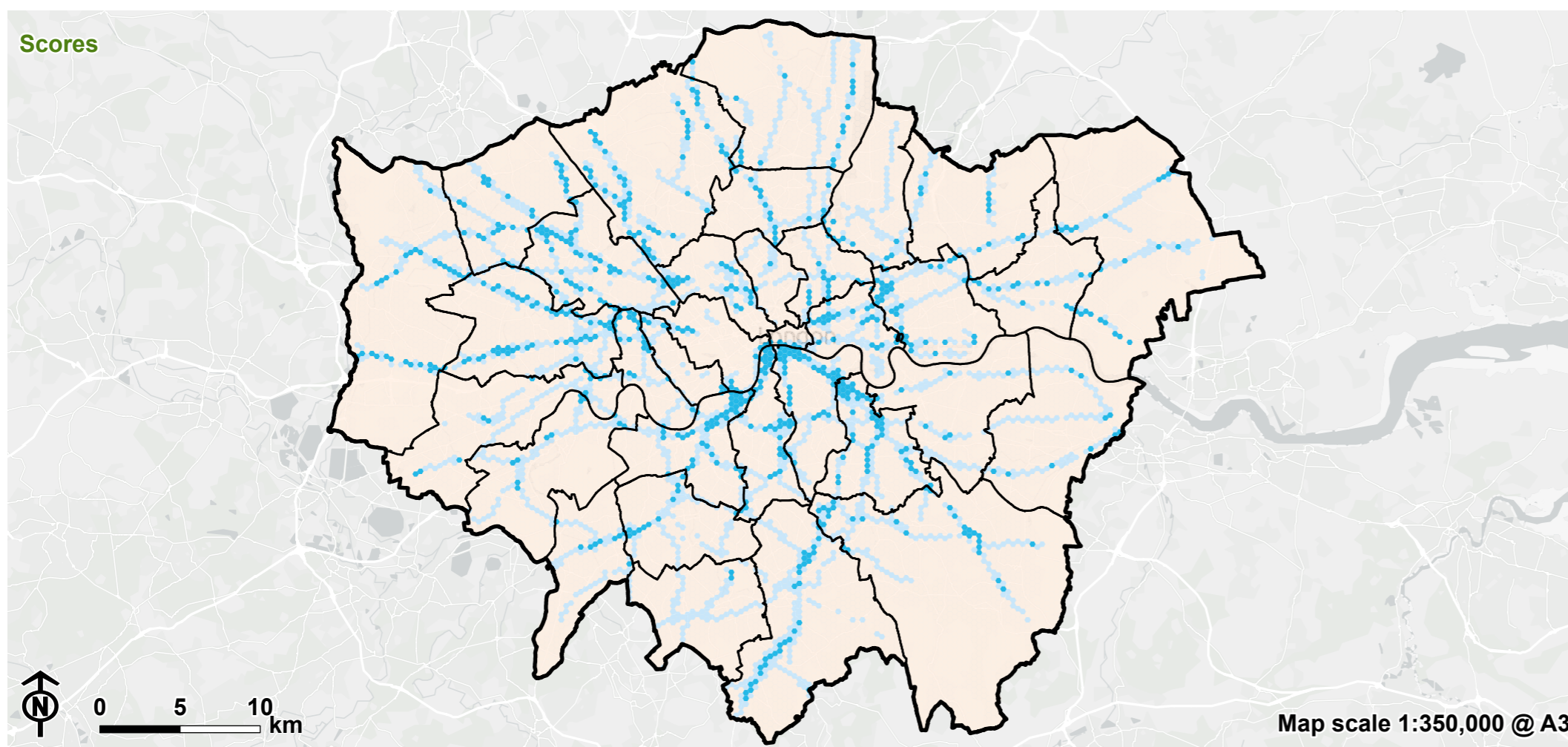
- Hex with 0 residential addresses within noise 55dB or more

**Rail noise 2022 - Lden**

Decibel

- $\geq 55$

Lden indicates a 24h annual average noise level.

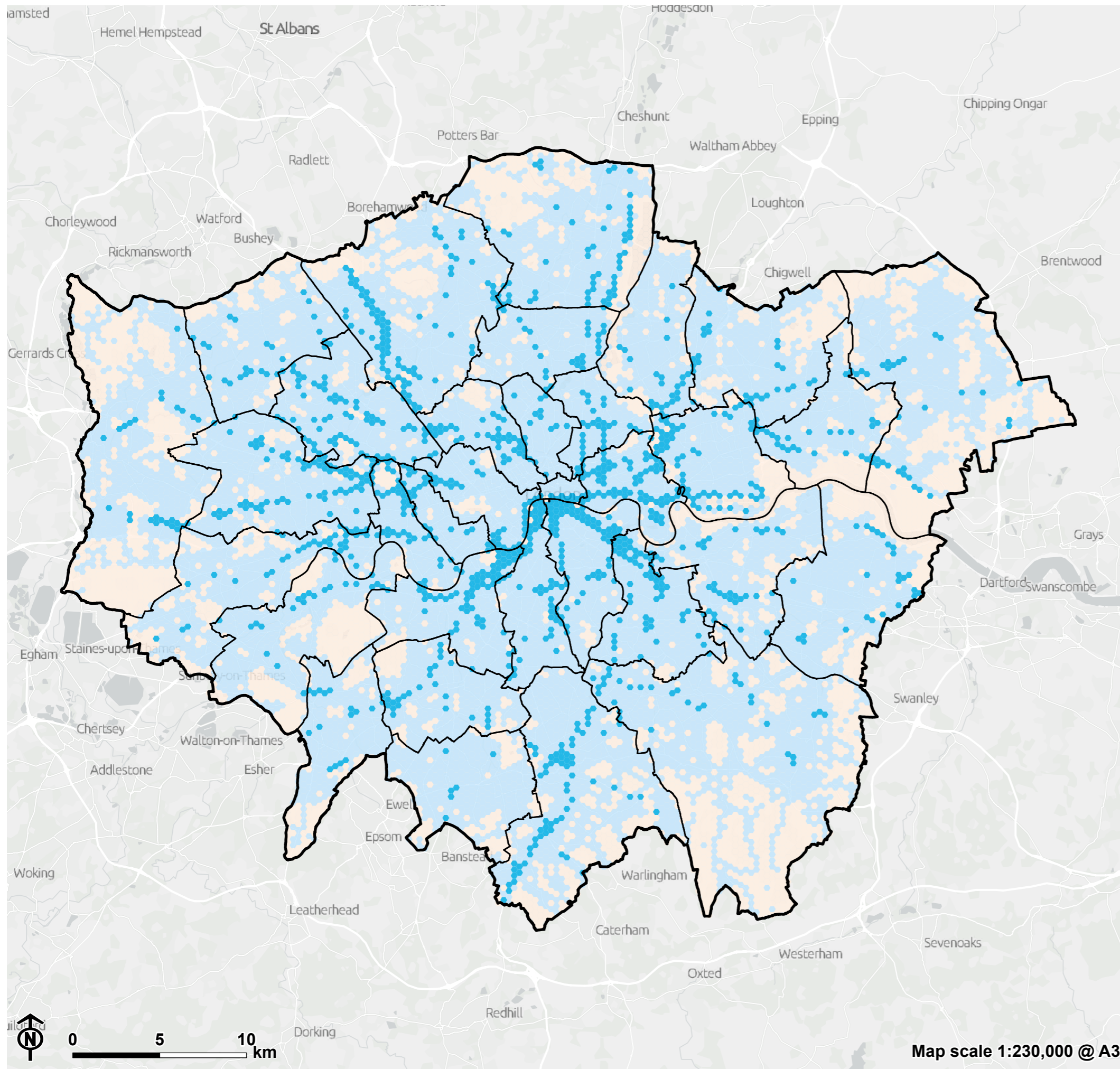


**Scores**

**Indicator of need: rail noise**

- High need
- Medium need
- Low need

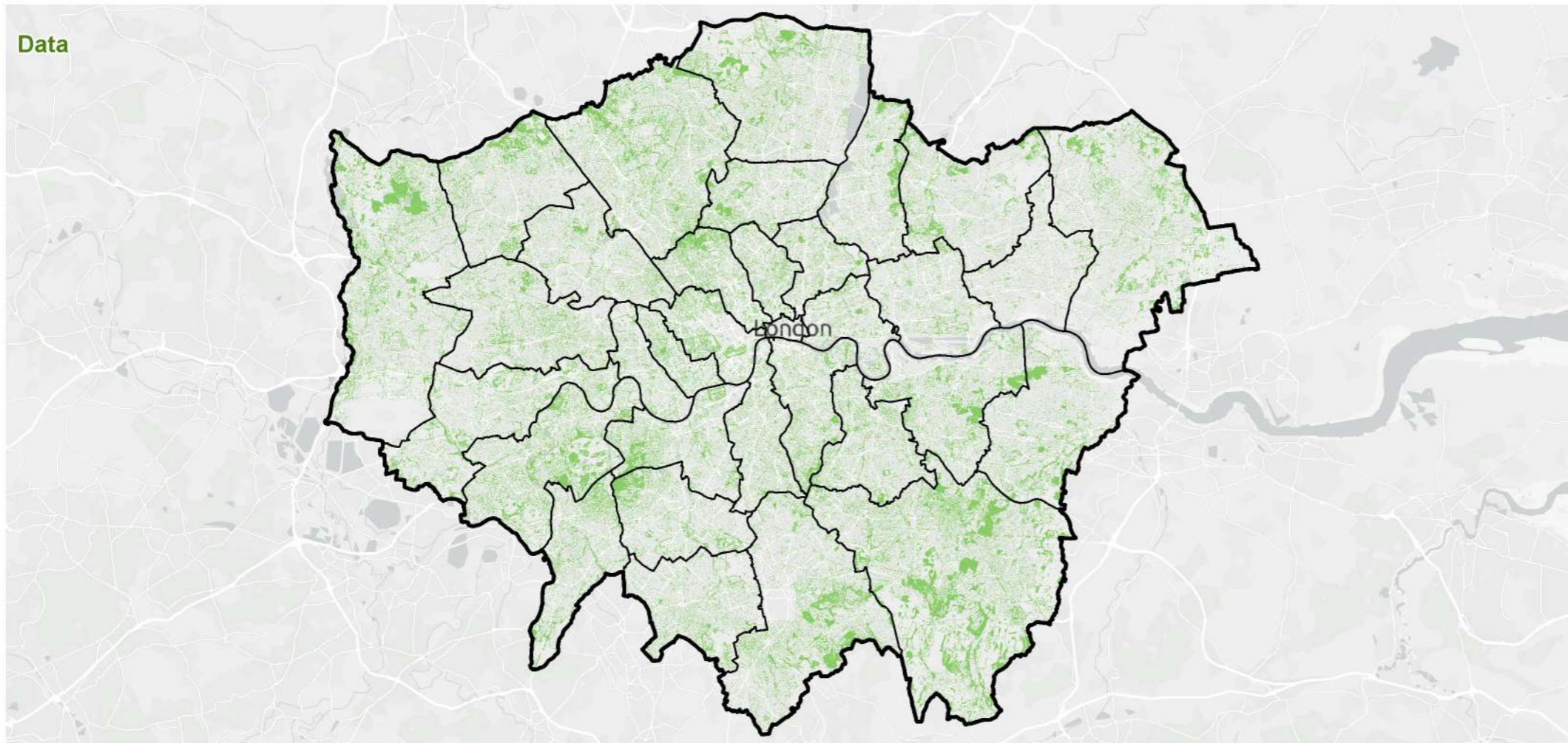
Map scale 1:350,000 @ A3





**Figure 5.42: SO8 Noise reduction overall need**

- Greater London Authority boundary
- Borough boundary
- Overall need**
- High need
- Medium need
- Low need

Data



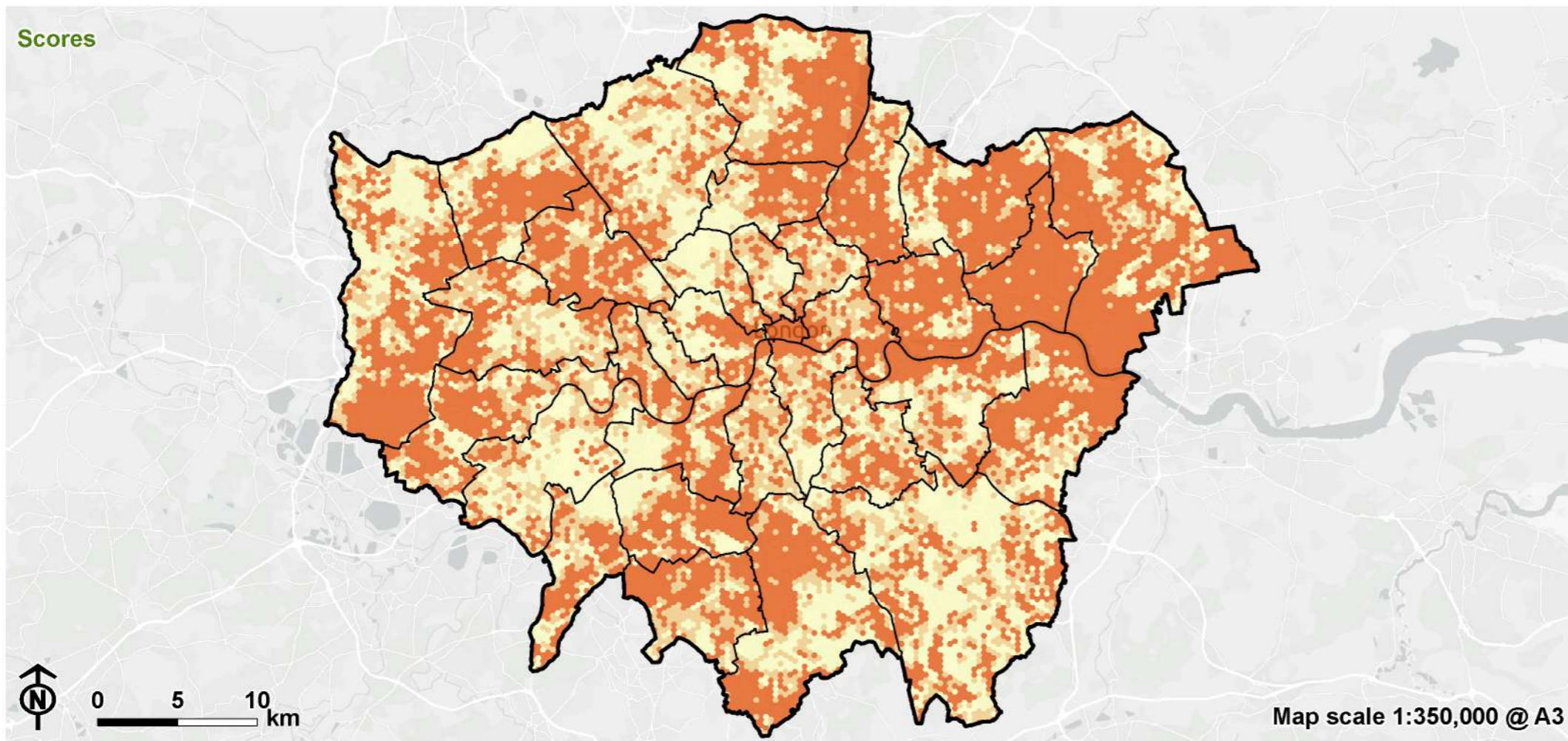
**Figure 5.43: SO8 Noise reduction overall provision**

-  Greater London Authority boundary
-  Borough boundary

Data




-  Tree Canopy Cover 2024

Scores



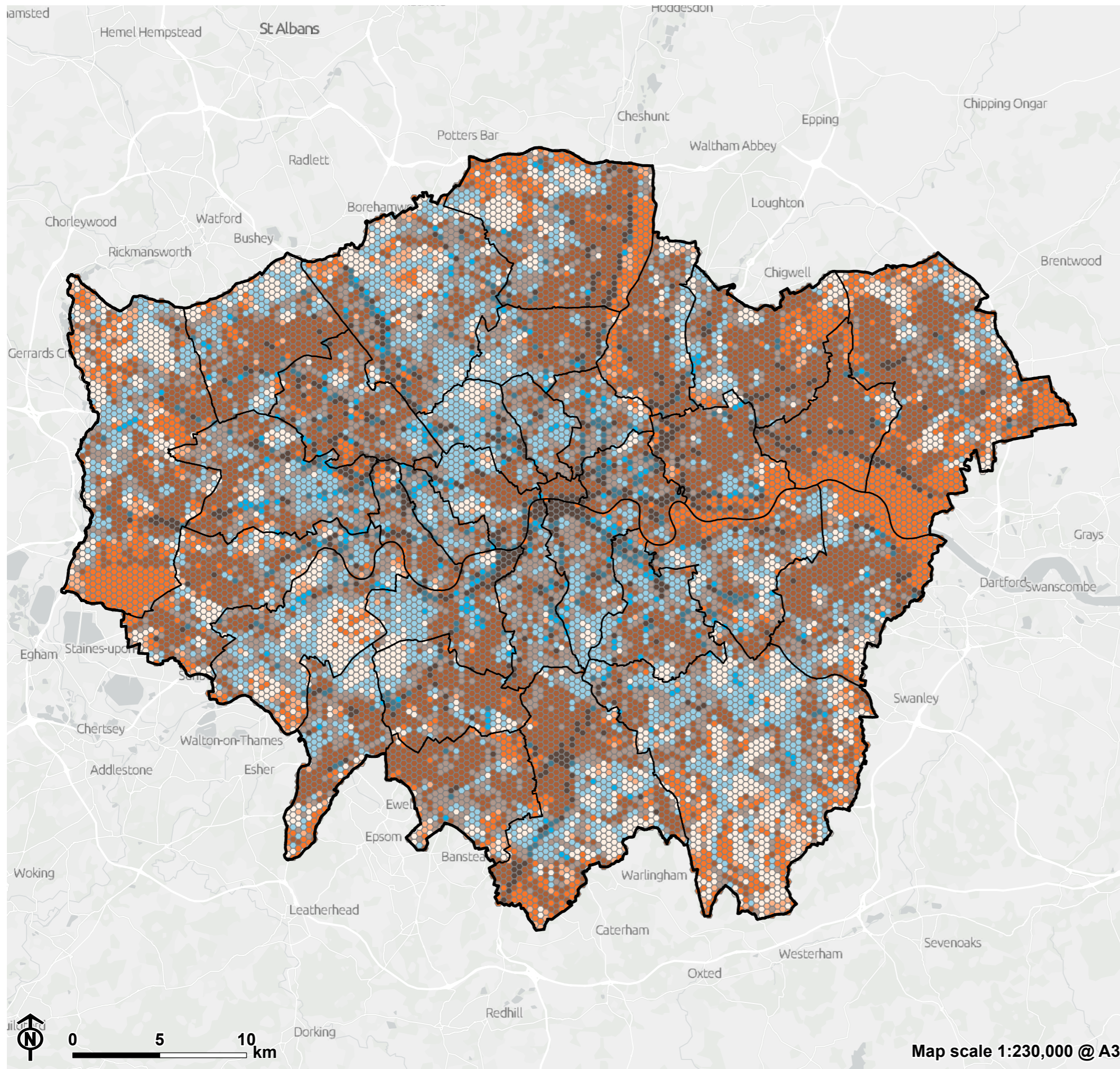
Scores

**Overall provision: tree canopy cover**

-  High provision
-  Medium provision
-  Low provision



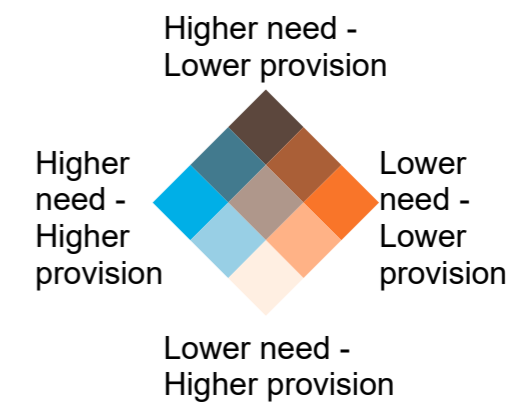
Map scale 1:350,000 @ A3



**Figure 5.44: SO8 Noise reduction bivariate results**

- Greater London Authority boundary
- Borough boundary

**Need versus provision**



## Strategic Objective 9: Greener active travel routes

This Strategic Objective considers opportunities for tree planting and other urban greening adjacent to existing footpaths and cycleways.

**5.50** For this Strategic Objective, the following indicators of need were identified:

- Cycle network: National Cycle Network and London Cycle Network (buffered by 5 m and intersected with the Green Cover dataset, to reflect the presence of vegetation / green corridors bordering existing active travel networks, and therefore determine areas of need where cycle routes are not already within green spaces and/or tree lined); and
- Strategic Walking Analysis: Total walking potential density and Pedestrian density. These Transport for London datasets provide a good indication of where everyday trips (e.g. to work, school, shops) are already of could be made on foot.

**5.51** The following indicator of existing GI provision was identified:

- Green cover, as this provides a good indication of areas where cycling and walking might be more or less in need of greening.

**5.52 Figures 5.45 to 5.48** show the datasets used for each indicator of need for the greener active travel network Strategic Objective, along with how that was translated into areas of high, medium and low need by hex across London. High need relates to the location of cycle networks, where there is scope for greening to occur. These form linear corridors, often around high streets and local amenities within inner London, for example around Brixton, Tooting, East Greenwich and Walthamstow in LBs Lambeth, Wandsworth, Greenwich and Waltham Forest, as well as around the city centre. Outer London generally has low need based on the cycle network indicator, with limited exceptions, including in of parts of LBs Croydon, Kingston upon Thames, Enfield, and Havering. Higher need based on areas with high pedestrian density and walking potential is more widespread, with the highest need in the city centre, including the City of London, as well as parts of inner London, including LBs City of Westminster and Camden. Medium need is more widespread across the boroughs, although still more concentrated in the central boroughs, with smaller areas in the outer London boroughs, coinciding with town centres and high streets.

**5.53 Figure 5.49** shows the overall levels of need for green active travel routes when both indicators are combined. This shows slightly more areas of medium need and slightly fewer areas of high need generally in the more densely built areas, particularly in inner London, for example parts of LBs Southwark, Lambeth, Camden and Islington. There is some high need in outer boroughs such as LBs Kingston upon Thames, Enfield, Waltham Forest and Croydon.

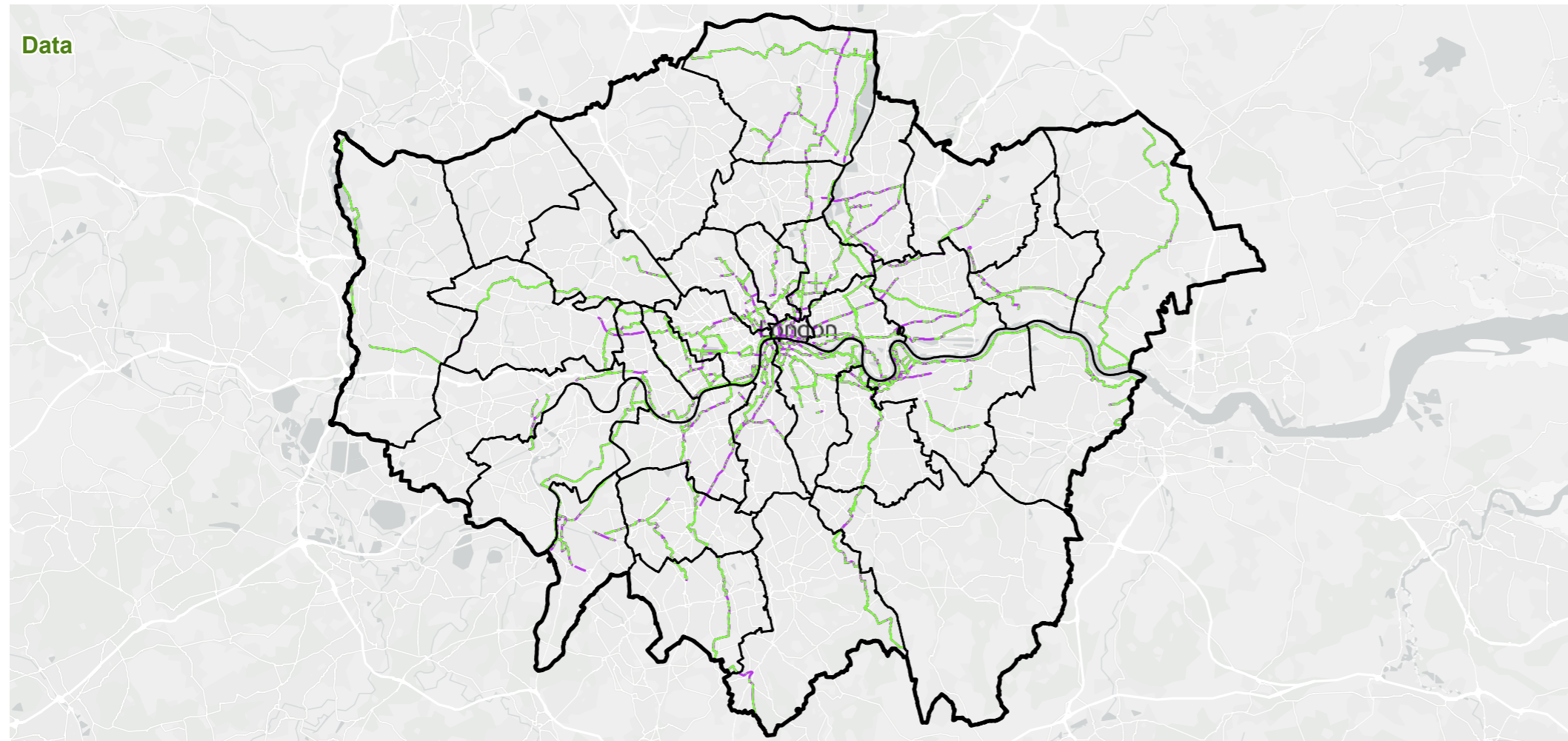
**5.54 Figure 5.50** presents the dataset used for the indicator of existing GI provision for greener active travel routes (green cover), and how that was translated into areas of high, medium and low provision by hex across London. As discussed in **paragraph 5.7** for Strategic Objective 1, this shows that areas with large parks and the outer boroughs show up as high existing provision. For example, this includes around Richmond Park and in LBs Bromley, Barnet and Enfield. Low provision is mostly concentrated in the centre of London, as well as parts of inner London including along the River Thames north of the city centre, in the north west, and in the south in LBs Lambeth and Croydon.

**5.55 Figure 5.51** presents the results from the bivariate analysis for greener active travel routes.

- Areas of **highest need and lowest provision** for greener active travel routes are shown in the **dark brown hexes**. These hexes are mostly concentrated in the city centre, including around Waterloo, Bankside, Holborn and Shoreditch (in LBs Lambeth, Southwark, Camden and Hackney) and represent areas with high pedestrian density and/or walking potential but low green cover. Further out, linear corridors including the A24 between Tooting and Balham in LB Wandsworth and in places along the A1010 in LB Enfield are identified.
- Large parts of inner London are represented by **light brown hexes**, representing **medium need and medium provision**, for example much of LBs Lambeth, Southwark, Islington and Hackney.
- There are pockets of **orange hexes**, corresponding to areas of **low need and low provision**. This includes non-residential areas, such as around Heathrow airport in LB Hillingdon, industrial estates around Harlesden (LBs Ealing and Brent) and industrial units along the River Thames in the east, in LBs Barking & Dagenham and Havering.

- Areas with **lowest need but highest provision** are shown in the **cream hexes**. These are mostly located on the outer edges of London, where there are green, less developed areas, for example in LBs Bromley, Hillingdon, Havering and Barnet, as well as around large parks, for example in LB Richmond upon Thames.

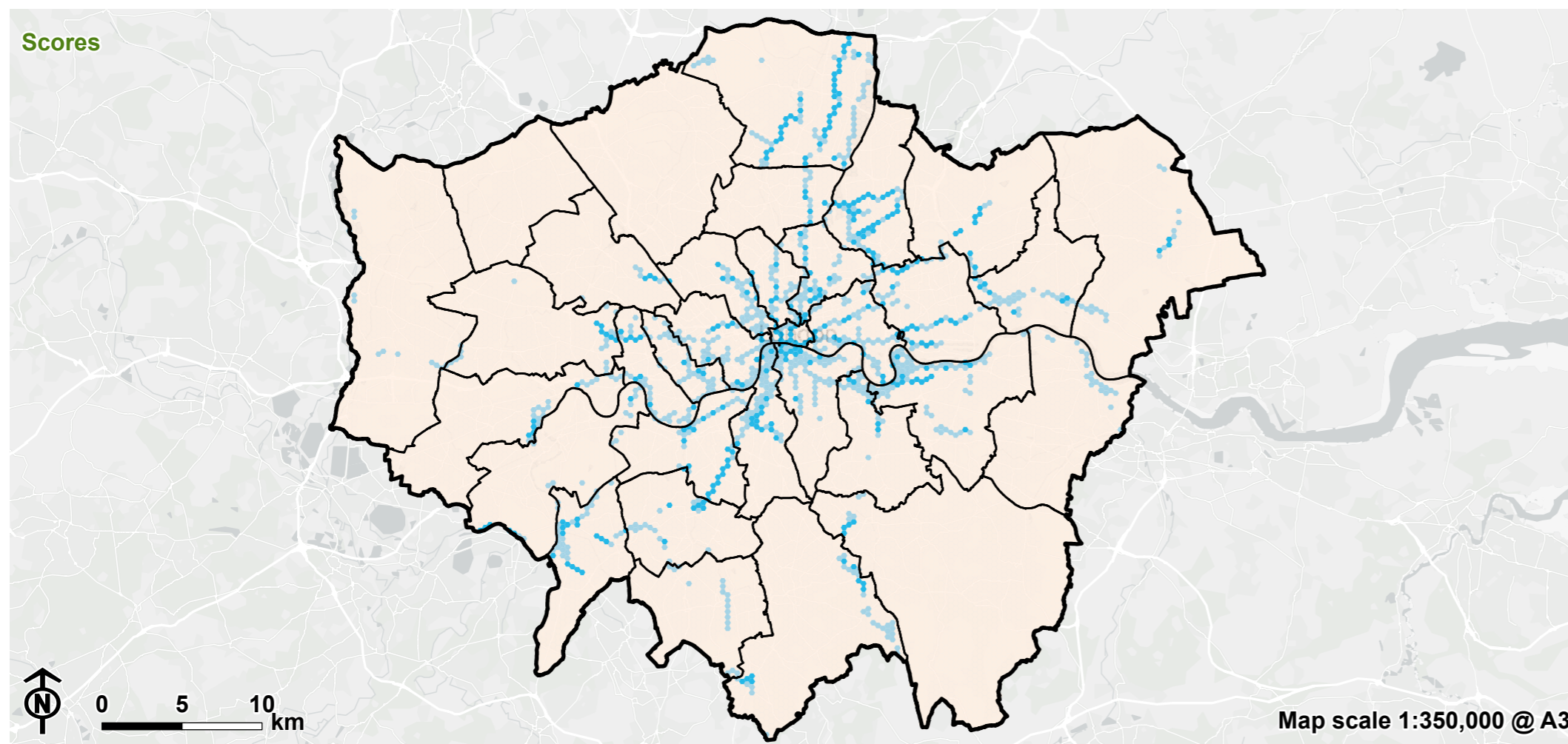
**Figure 5.45: Green cycle network data and need scores**



- Greater London Authority boundary
- Borough boundary

**Data**

- Cycle network within green cover
- NCN and London Cycle Network - 5m buffer



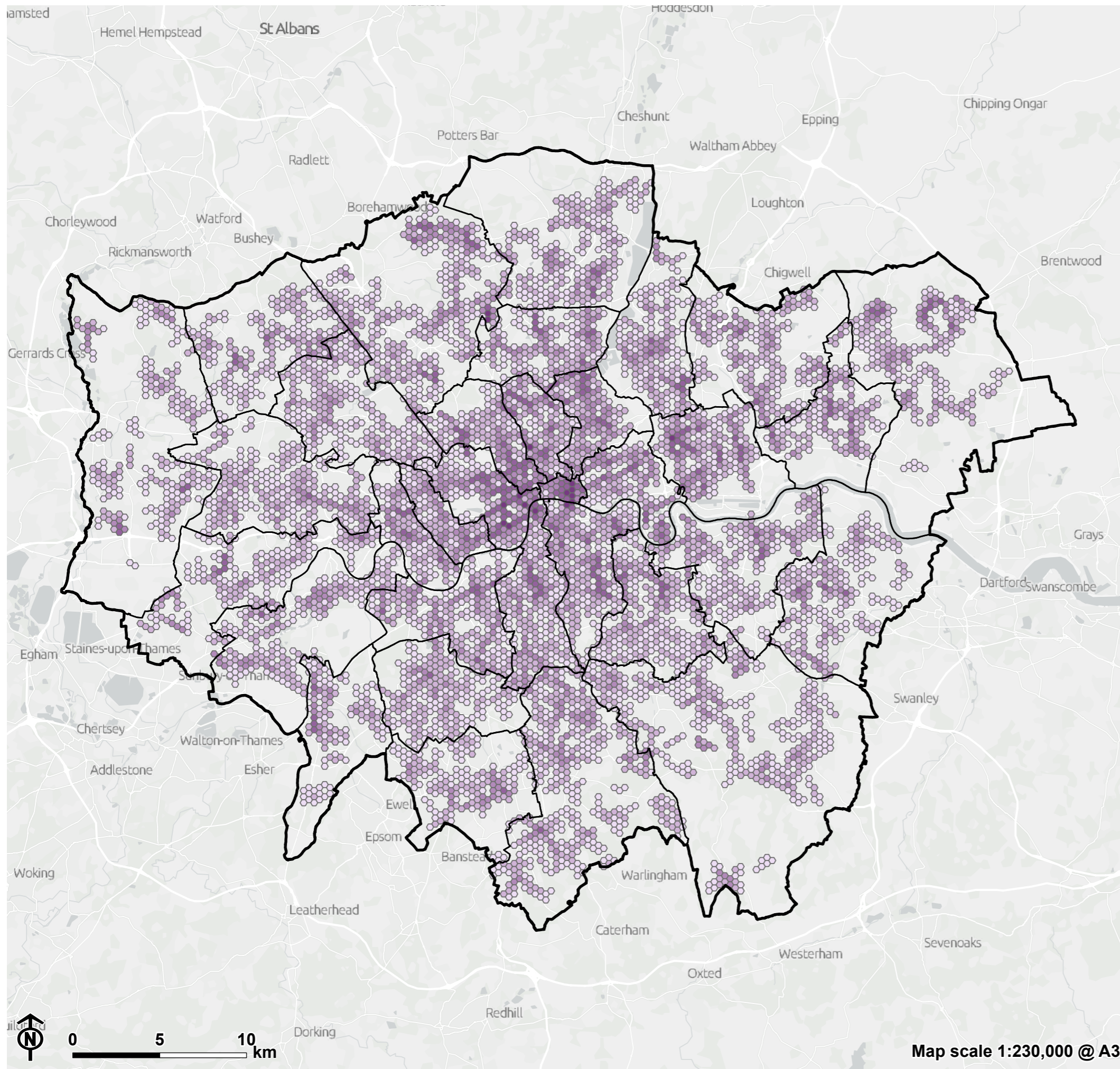
**Scores**

**Indicator of need: green cycle network**



- High need
- Medium need
- Low need








Map scale 1:350,000 @ A3

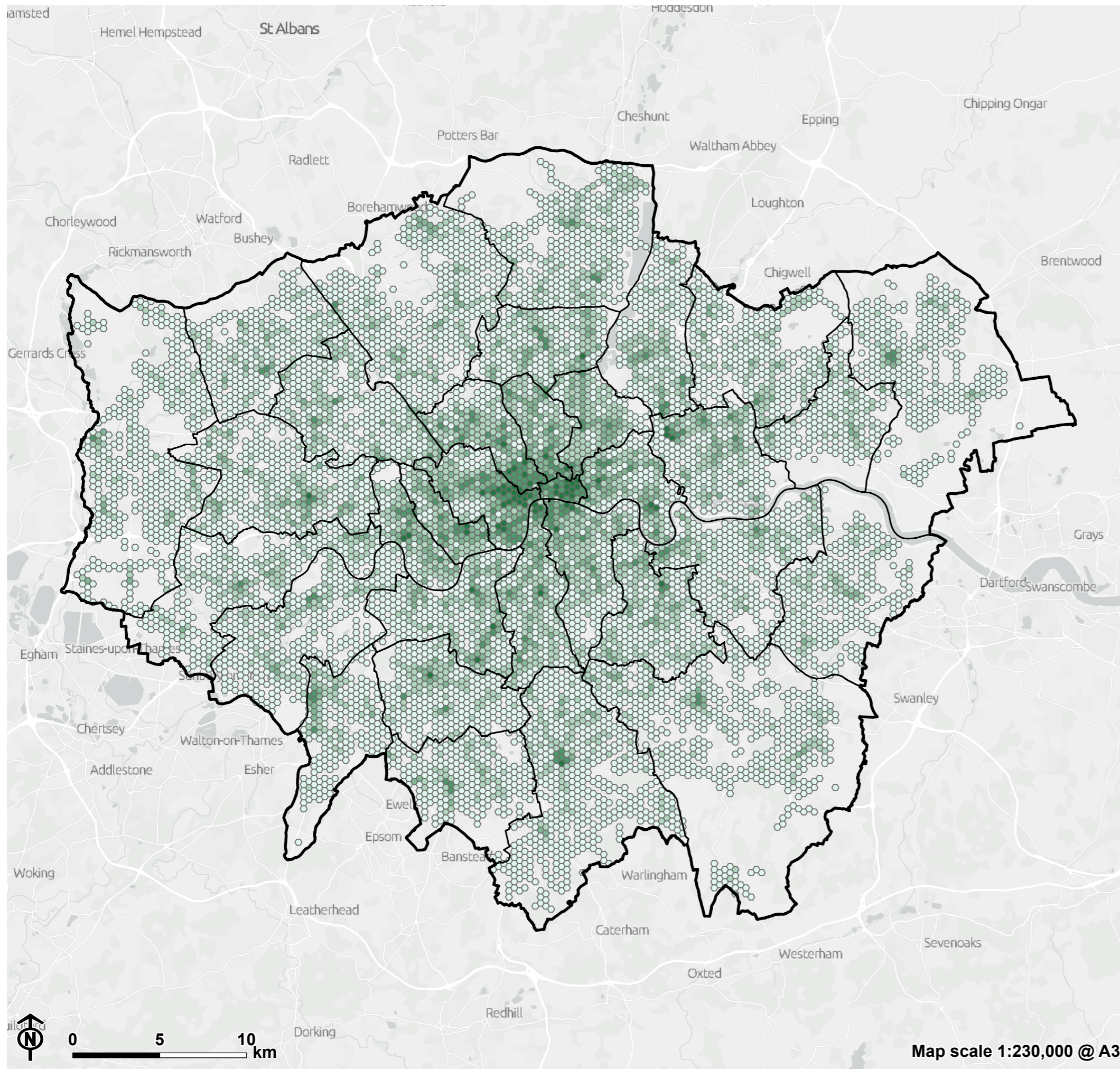


**Figure 5.46: Strategic Walking Analysis - Total walking potential**

 Greater London Authority boundary  
 Borough boundary

**Total walking potential (2015-2017)**  
 Potential metres walked per m2

	0 - 2
	2 - 7
	7 - 16
	16 - 42
	42 - 88

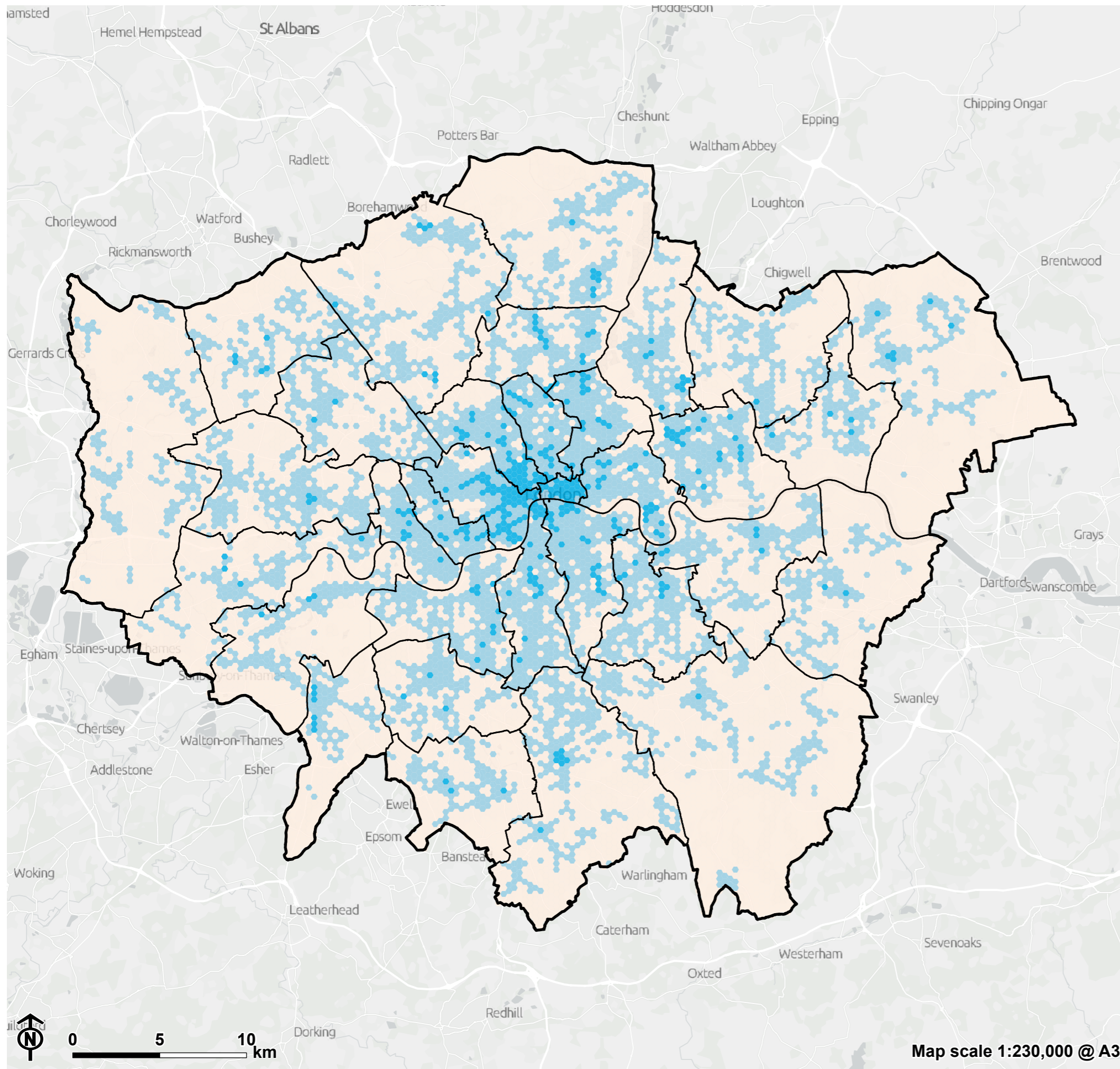


**Figure 5.47: Strategic Walking Analysis - Pedestrian density**



- Greater London Authority boundary
- Borough boundary
- Pedestrian density 24h (2013-2017)**
- Metres walked per m2
- 0 - 10
- 10 - 25
- 25 - 50
- 50 - 100
- 100 - 400






Map scale 1:230,000 @ A3

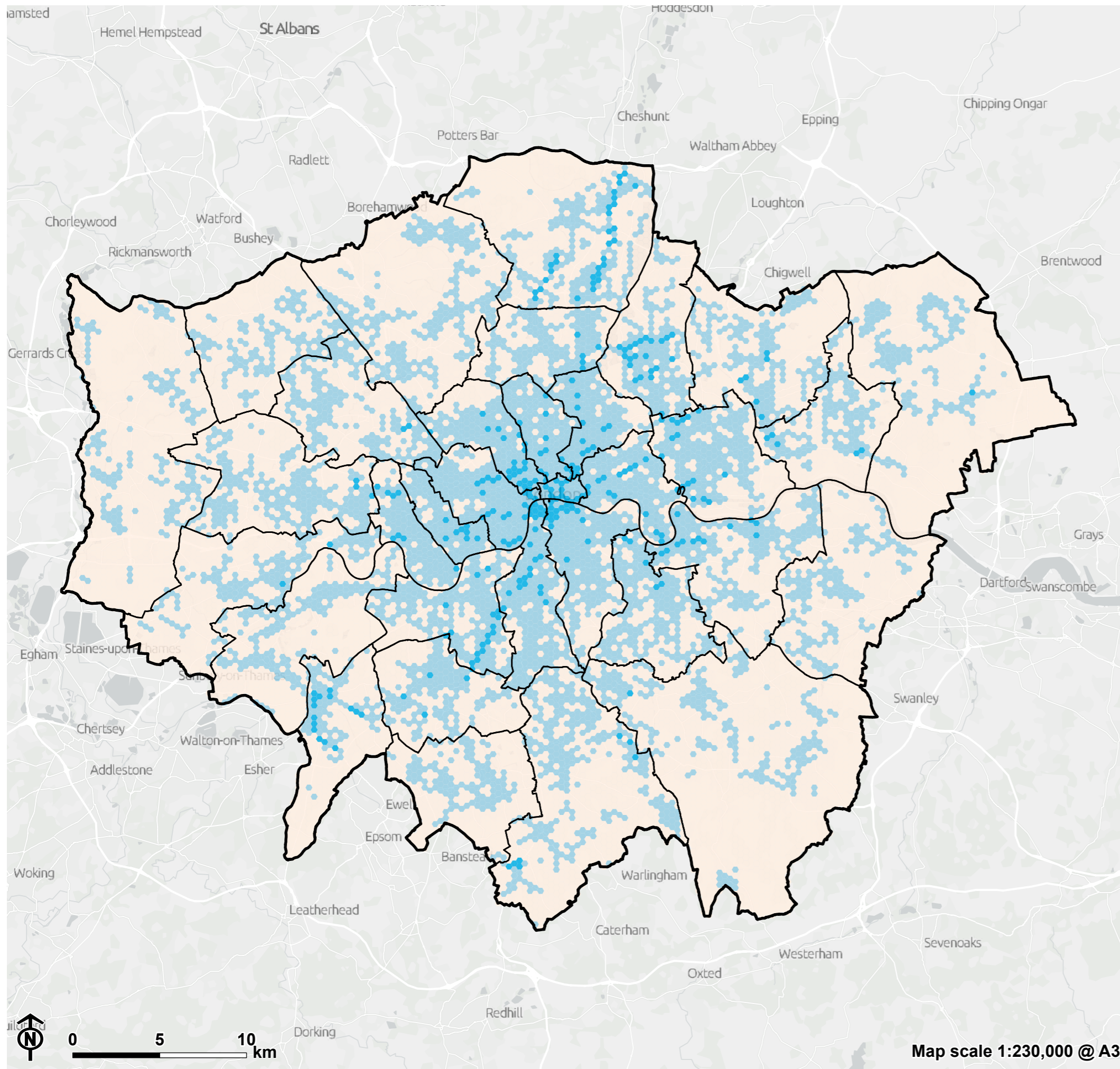


**Figure 5.48: Strategic Walking Analysis indicator of need**

-  Greater London Authority boundary
-  Borough boundary

**Indicator of need: Strategic Walking Analysis (SWA)**

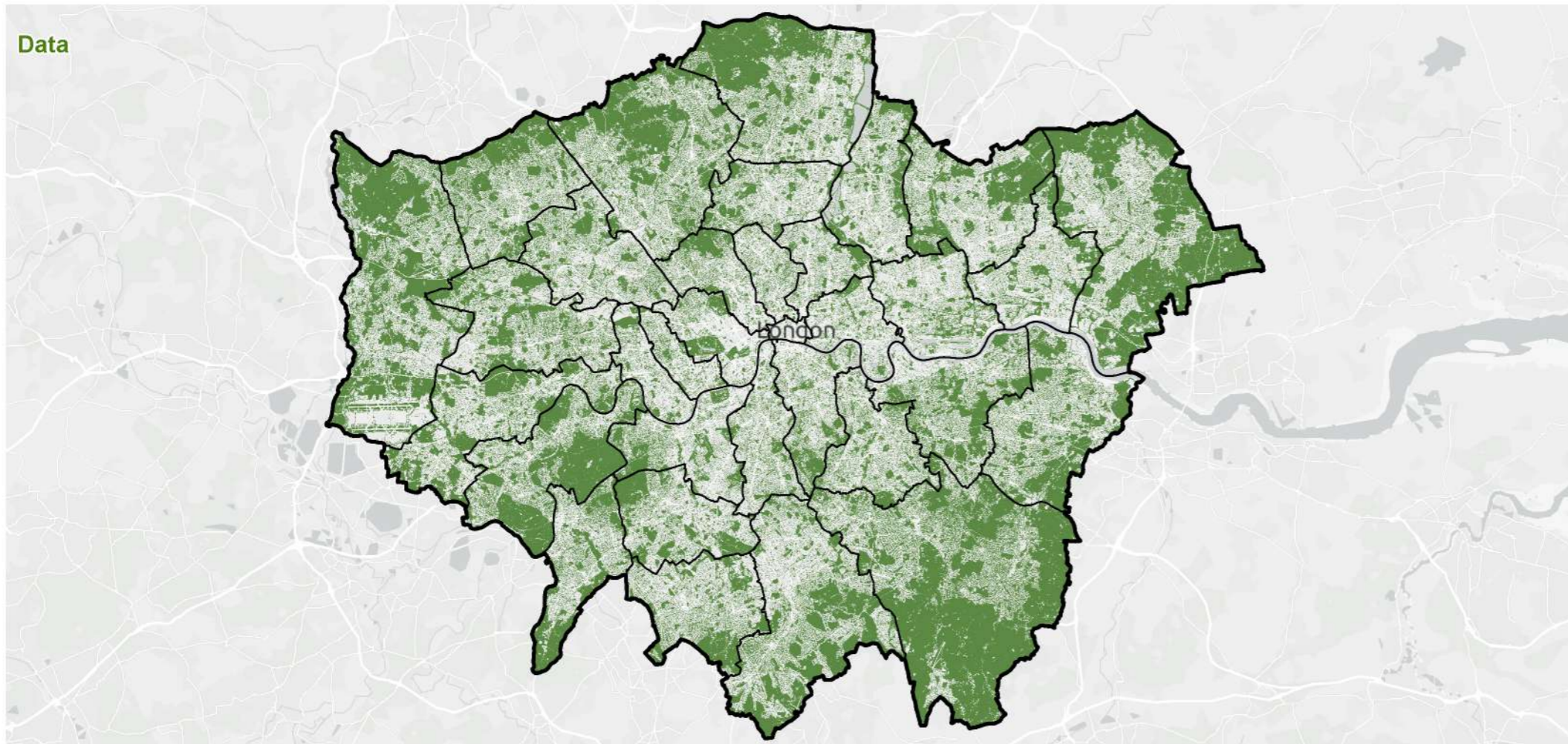
-  High need
-  Medium need
-  Low need



**Figure 5.49: SO9 Greener active travel routes overall need**

- Greater London Authority boundary
- Borough boundary
- Overall need**
- High need
- Medium need
- Low need

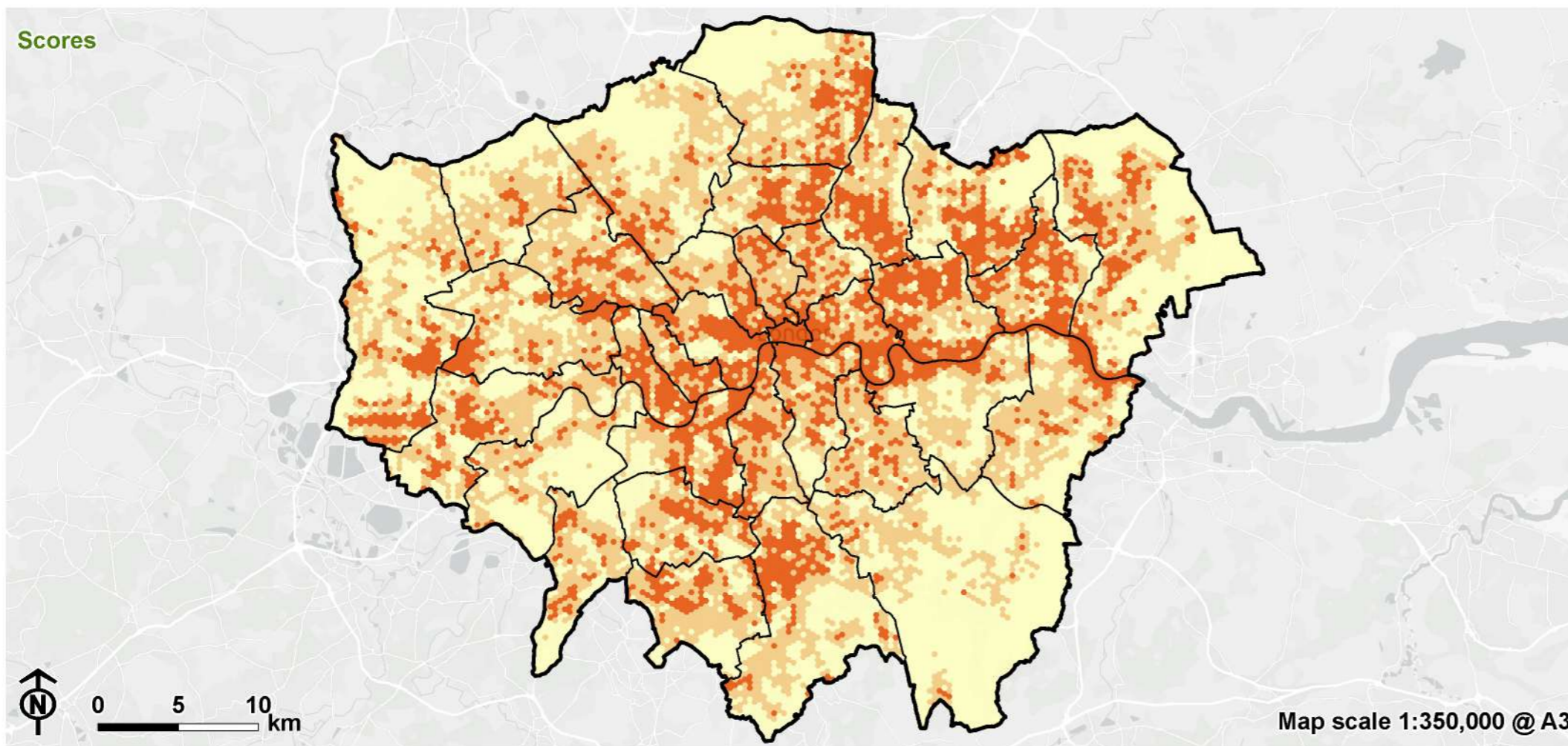
**Figure 5.50: SO9 Greener active travel routes overall provision**



- Greater London Authority boundary
- Borough boundary

**Data**

- Green Cover 2024

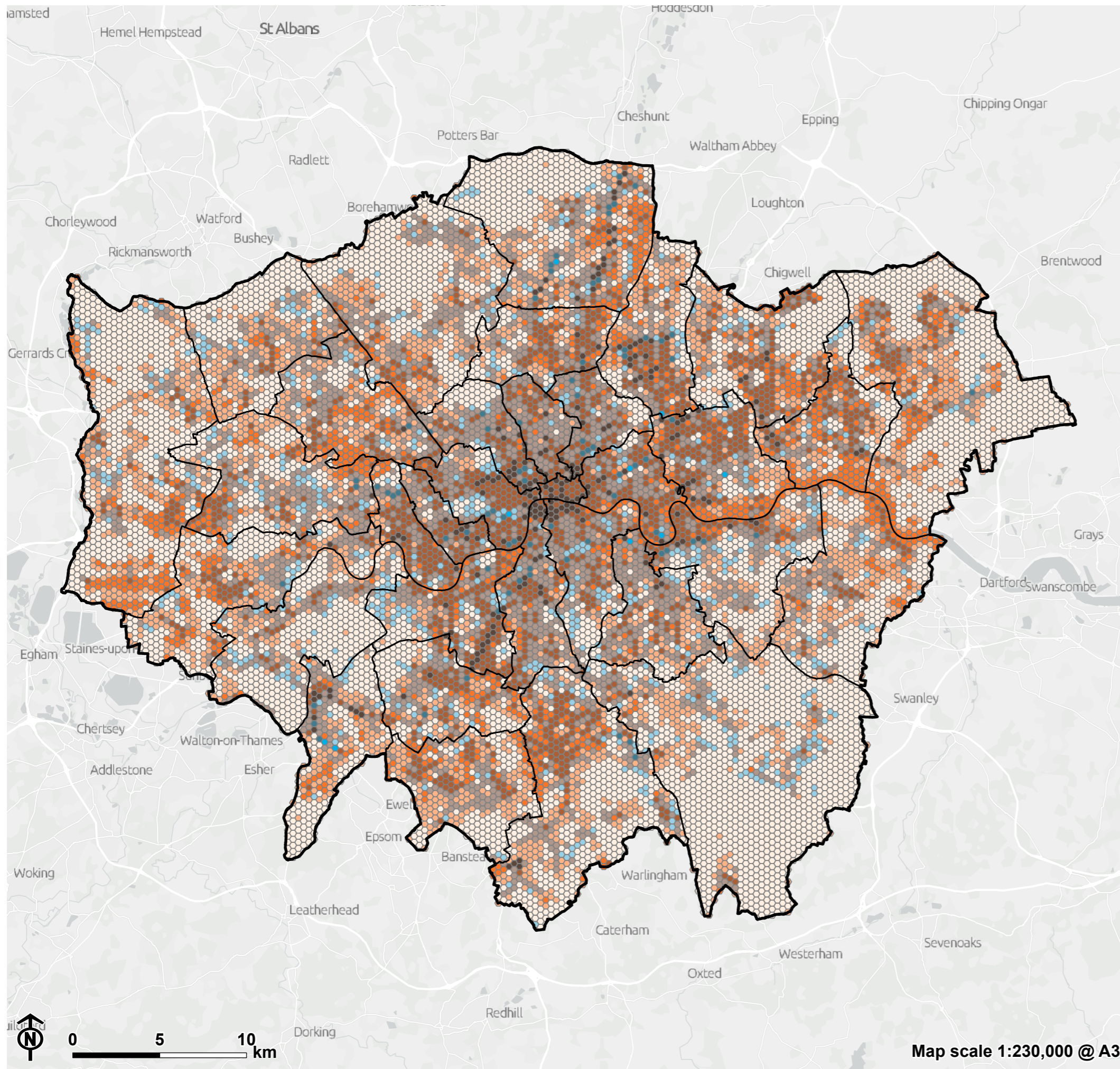


**Scores**

**Indicator of provision: green cover**

- High provision
- Medium provision
- Low provision

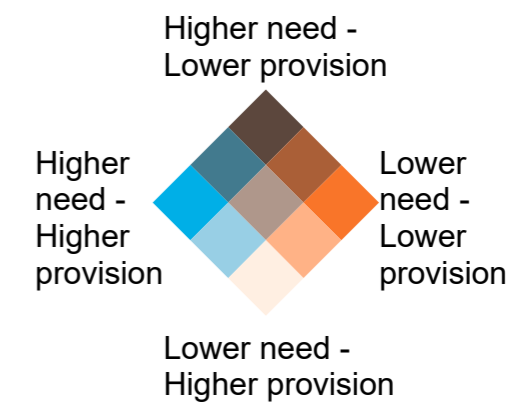
Map scale 1:350,000 @ A3



**Figure 5.51: SO9 Greener active travel routes bivariate results**

- Greater London Authority boundary
- Borough boundary

**Need versus provision**



## Strategic Objective 10: Greener high streets

This Strategic Objective considers opportunities for all types of greening; including tree and shrub planting, pocket parks and rain gardens to improve the quality of high streets and increase visitor dwell time. Interventions which provide improved connections from high streets to existing parks and green spaces are also recommended.

**5.56** For this Strategic Objective, the following indicator of need was identified:

- Average count of visitors, residents and workers in high streets and town centres, as this helped to identify high streets and town centres with higher footfall than others. Greening of these high streets and town centres could help to attract more visitors and longer stays in the area, thereby indirectly supporting the local economy.

**5.57** The following indicators of existing GI provision were identified, as they help to identify those high streets and town centres that already have a lot of green infrastructure within them or a local park nearby, all of which are likely to attract more visitors and longer stays in the area:

- High streets / town centres with Green Cover;
- High streets / town centres with Tree Canopy Cover; and
- High streets / town centres in Areas of Deficiency to local and small pocket parks.

**5.58** **Figures 5.52 to 5.55** show the datasets used for each indicator of need for greener high streets based on residents', workers' and visitors' footfall, along with how that was translated into areas of high, medium and low need by hex across London. High footfall for both visitors and workers is particularly in central London, around the South Bank in LB Southwark between Waterloo and London Bridge, and around Mayfair, Soho and the Strand in LB City of Westminster. These two groups also have high footfall around town centres, for example Croydon, Kingston-upon-Thames, Romford and Stratford, in LBs Croydon, Kingston upon Thames, Havering and Newham respectively, as well as around Canary Wharf in LB Tower Hamlets. The highest footfall for residents is predominantly in inner London areas, including within LBs Wandsworth, Islington, Hackney, Tower Hamlets and Newham. Overall, the need for greener high streets is greater in inner London and pockets around major town centres in outer London.

**5.59** **Figures 5.56 to 5.58** show the datasets used for each provision indicator for greener high streets, along with how that was translated into areas of high, medium and low provision by hex across London. There is low provision of town centres and high streets within green cover throughout most of London, as the town centres and high streets themselves are spatially limited to certain parts of London. It should be noted that the City of London itself and the areas immediately to the north and north west in LBs Camden and Islington up to Euston Road and Pentonville road have no designated high streets or town centres, so show as both low need and low provision. Similarly, Belgravia, Pimlico and Victoria in LB City of Westminster contain no high streets or town centres. The greener high streets and town centres are mostly located away from central London. This includes Green Street Green and Shortlands in LB Bromley, Hatch End and Harrow-on-the-Hill in LB Harrow, and Highgate in LB Haringey. Town centres and high streets with tree cover are similarly spatially limited. These are more present within the inner boroughs and some parts of the outer boroughs. For example, near Deptford, St John's and Forest Hill in LB Lewisham, Canonbury and Barnsbury in LB Islington, and Maitland Park in LB Camden. Town centres and high streets with proximity to open space include town centres throughout London, but are more densely located in the inner city and city centre. For example, around Soho in LB City of Westminster, South Kensington in LB Kensington & Chelsea, Brixton in LB Lambeth and the eastern part of LB Tower Hamlets.

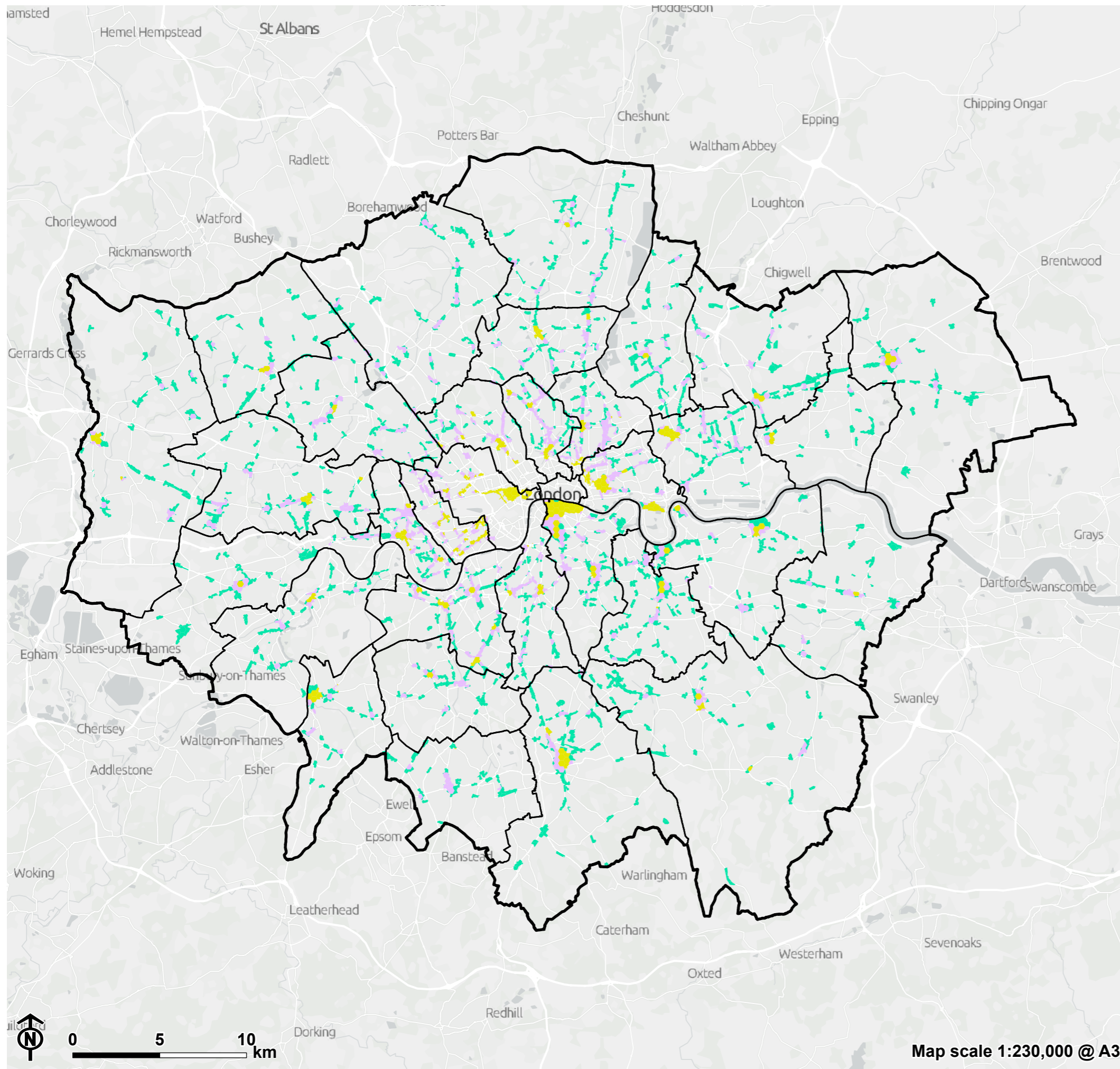
**5.60** **Figure 5.59** shows the overall levels of greener high street / town centre provision when all indicators are combined. Most of London has low provision for this indicator. Small, discrete areas of high provision are located across London but more common in the inner boroughs. This includes Canonbury and Barnsbury (LB Islington); Brockwell Park (LB Lambeth); and Elephant and Castle in LB Southwark.

**5.61** **Figure 5.60** presents the results from the bivariate analysis for greener high streets, and the findings are summarised below.

- Areas of **highest need and lowest provision** for greener high streets are shown in the **dark brown hexes**. These hexes are mostly concentrated in small discrete areas correlating with busier high streets away from parks and green spaces,

generally within inner London boroughs. For example, North Southwark in LB Southwark. Stratford in LB Newham and Tooting in LB Wandsworth.

- Most of London is represented by **orange hexes**, representing **low need and low provision**. This is particularly the case in outer boroughs where high streets and town centres are less densely clustered, for example LBs Bexley, Havering, Hillingdon, Harrow and Redbridge.
- There are limited **blue hexes**, corresponding to areas of **high need and high provision**, and they are generally adjacent to **dark blue hexes**, which represent **high need and medium provision**. This includes the greener, busier high streets and town centres and those near open spaces, for example Whitechapel / Spitalfields in LB Tower Hamlets, and Bayswater, Mayfair and Soho in City of Westminster.
- Areas with **lowest need but highest provision** are shown in the **cream hexes**. There are very few of these areas within London, and they are often spatially discrete. This includes small high streets in the outer boroughs, including in parts of LBs Bromley, Enfield and Richmond upon Thames.

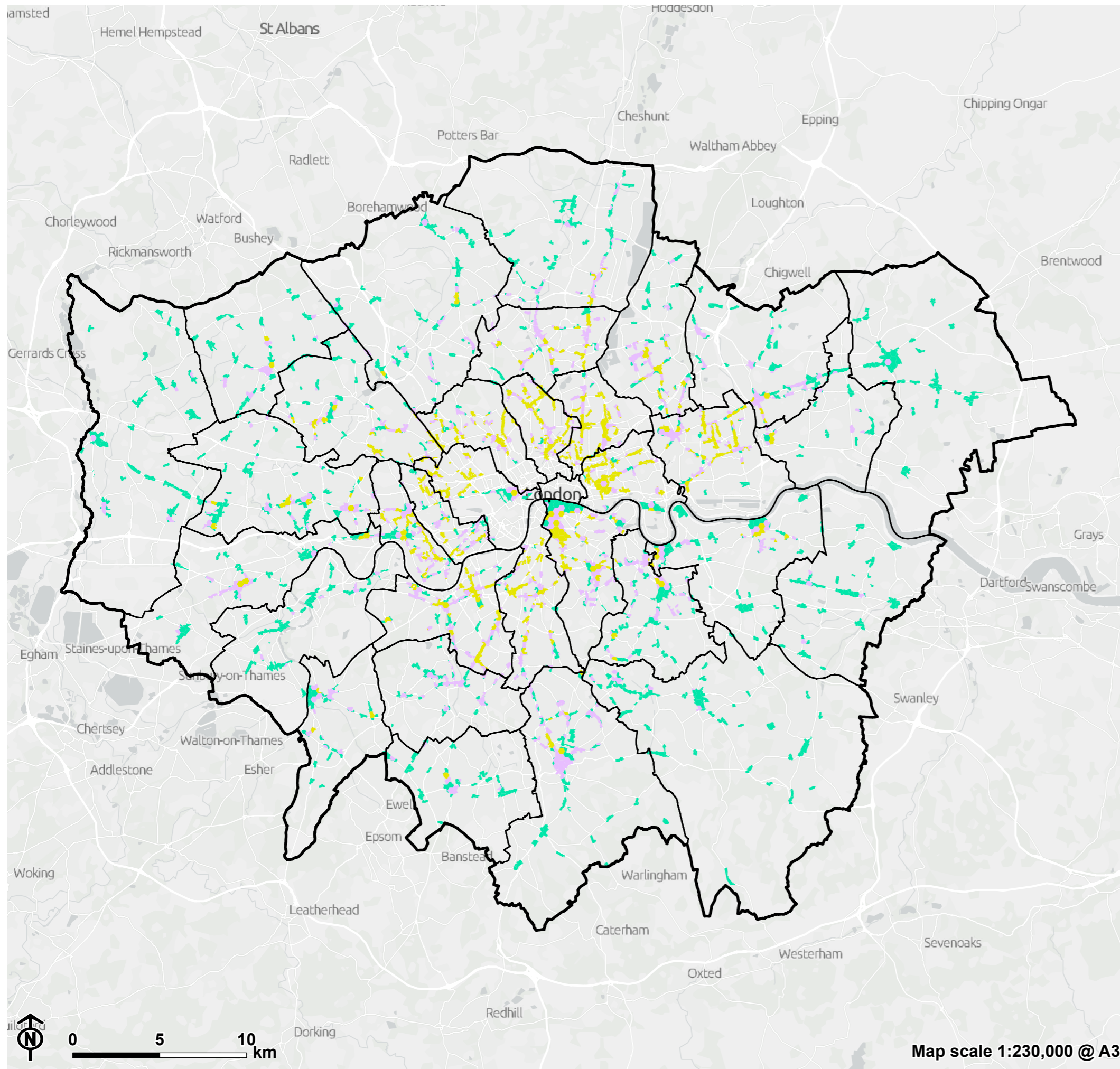


**Figure 5.52: Footfall - workers**

- Greater London Authority boundary
  - Borough boundary
- Average workers footfall in high streets and town centres**
- 0 - 150
  - 150 - 400
  - >400



Map scale 1:230,000 @ A3

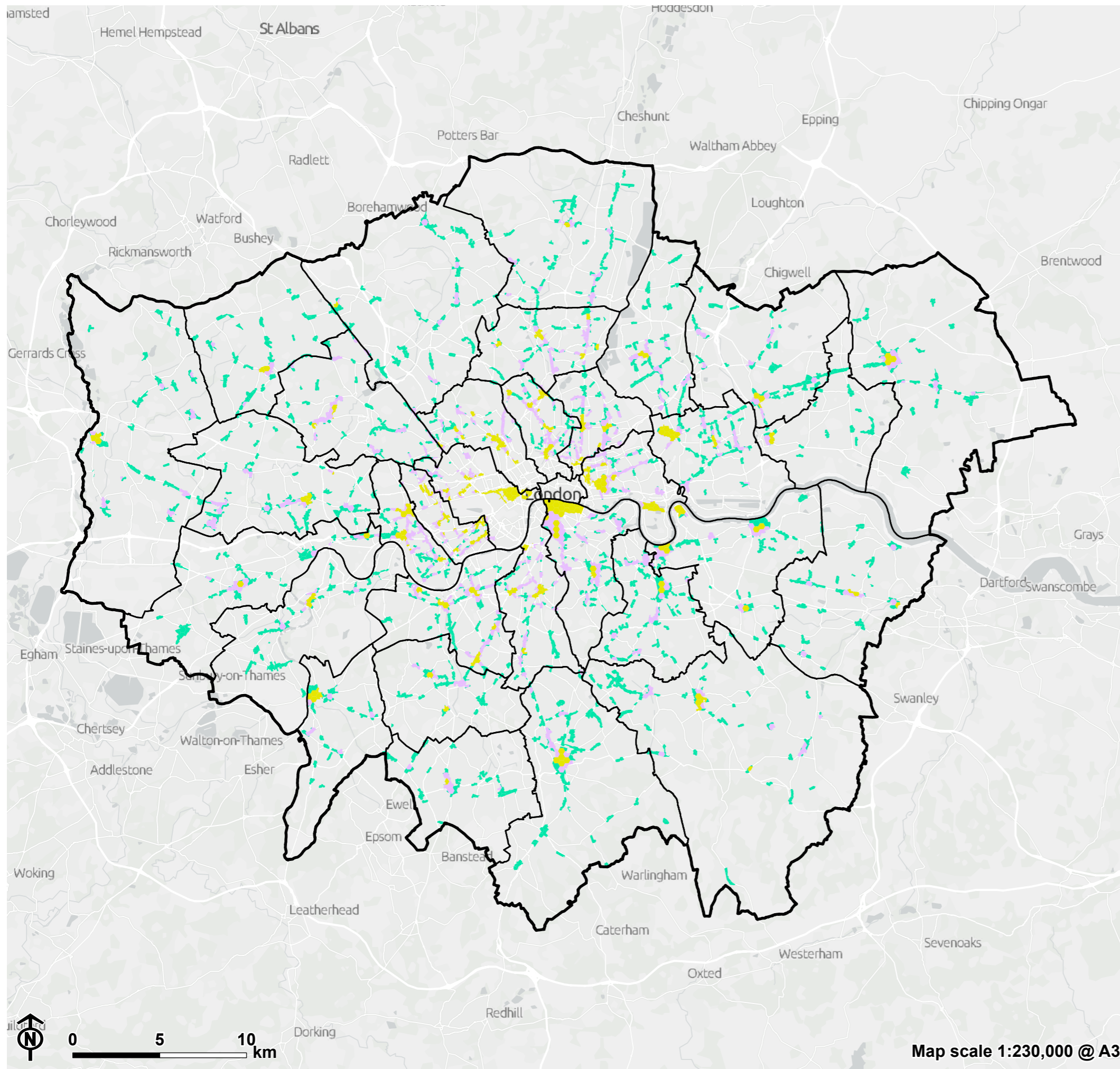


**Figure 5.53: Footfall - residents**

- Greater London Authority boundary
  - Borough boundary
- Average residents footfall in high streets and town centres**
- 0 - 730
  - 730 - 1150
  - >1150

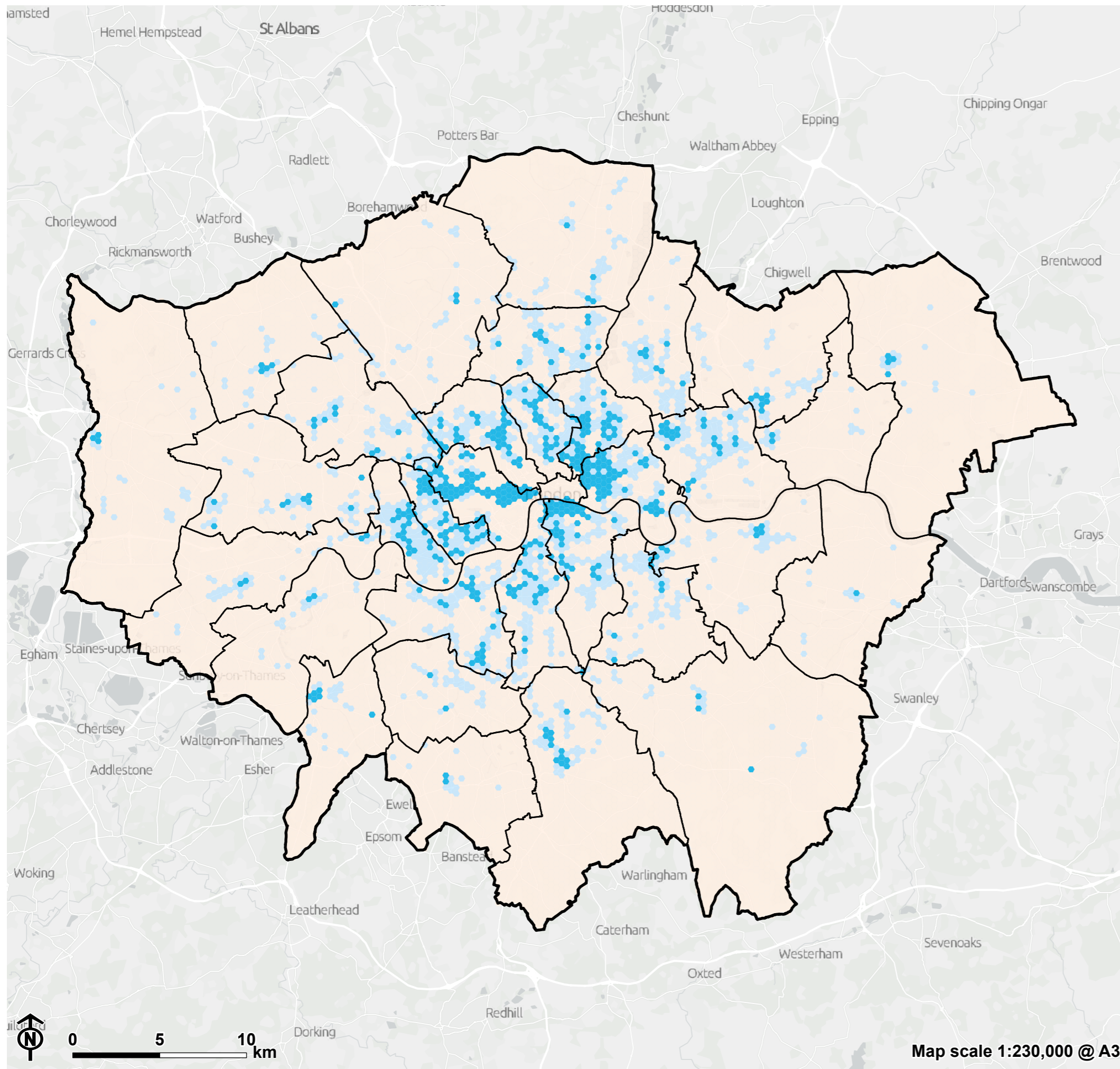


Map scale 1:230,000 @ A3



**Figure 5.54: Footfall - visitors**

- Greater London Authority boundary
  - Borough boundary
- Average visitors footfall in high streets and town centres**
- 0 - 330
  - 330 - 750
  - >750



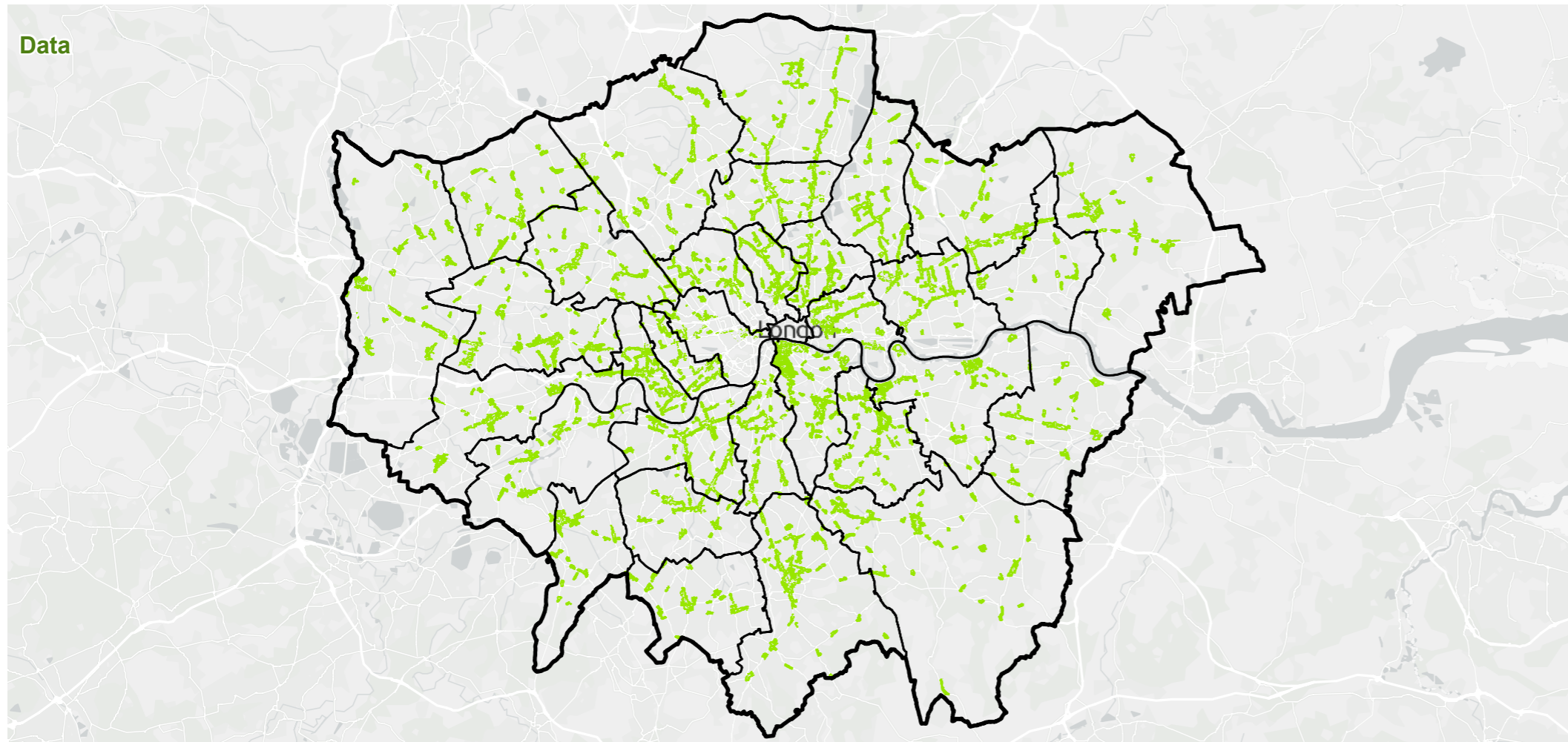
**Figure 5.55: SO10 Greener high streets overall need**

- Greater London Authority boundary
- Borough boundary
- Overall need: footfall**
- High need
- Medium need
- Low need



Map scale 1:230,000 @ A3

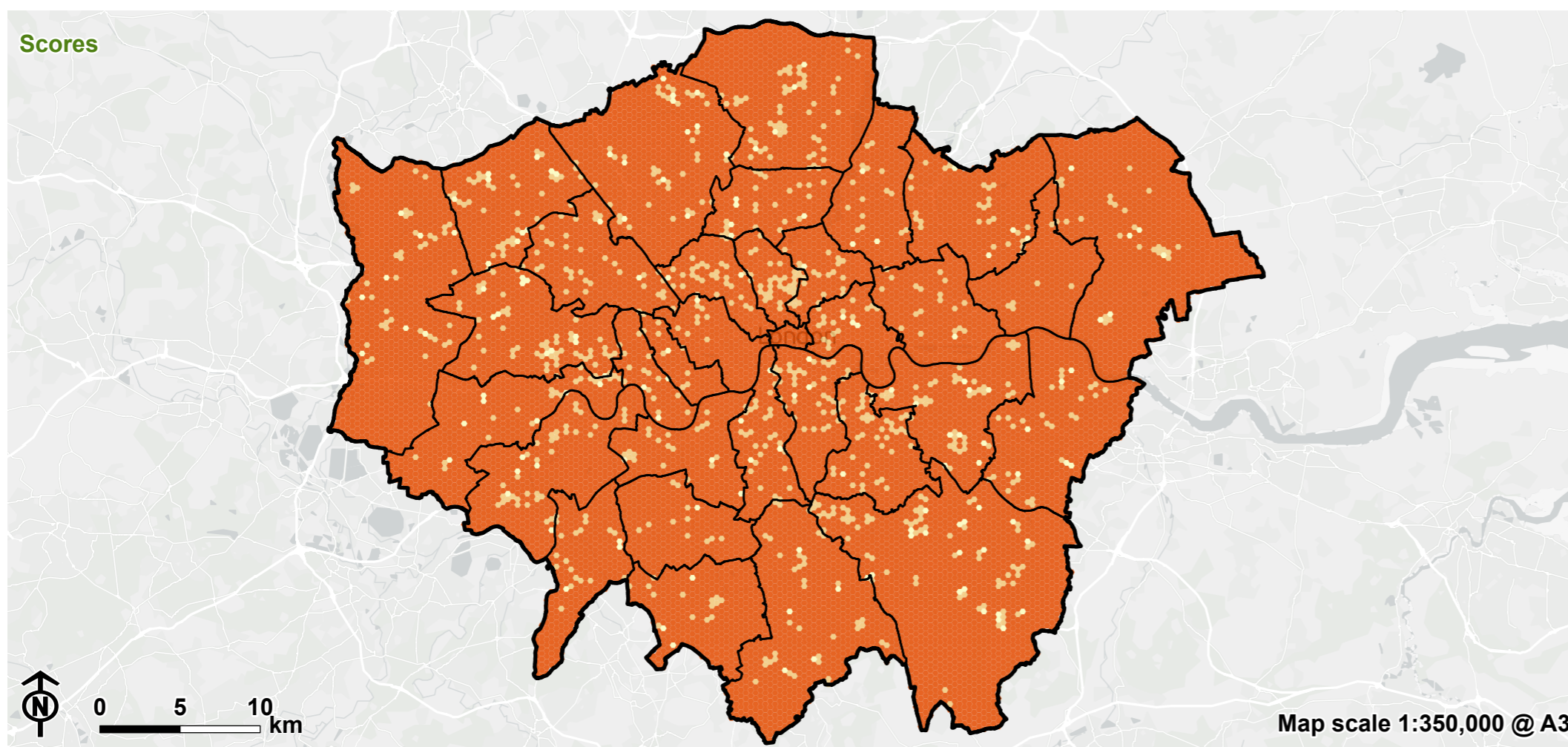
**Figure 5.56: High streets and town centres within green cover data and provision scores**



- Greater London Authority boundary
- Borough boundary

**Data**

- Green cover in town centres and high street boundaries



**Scores**

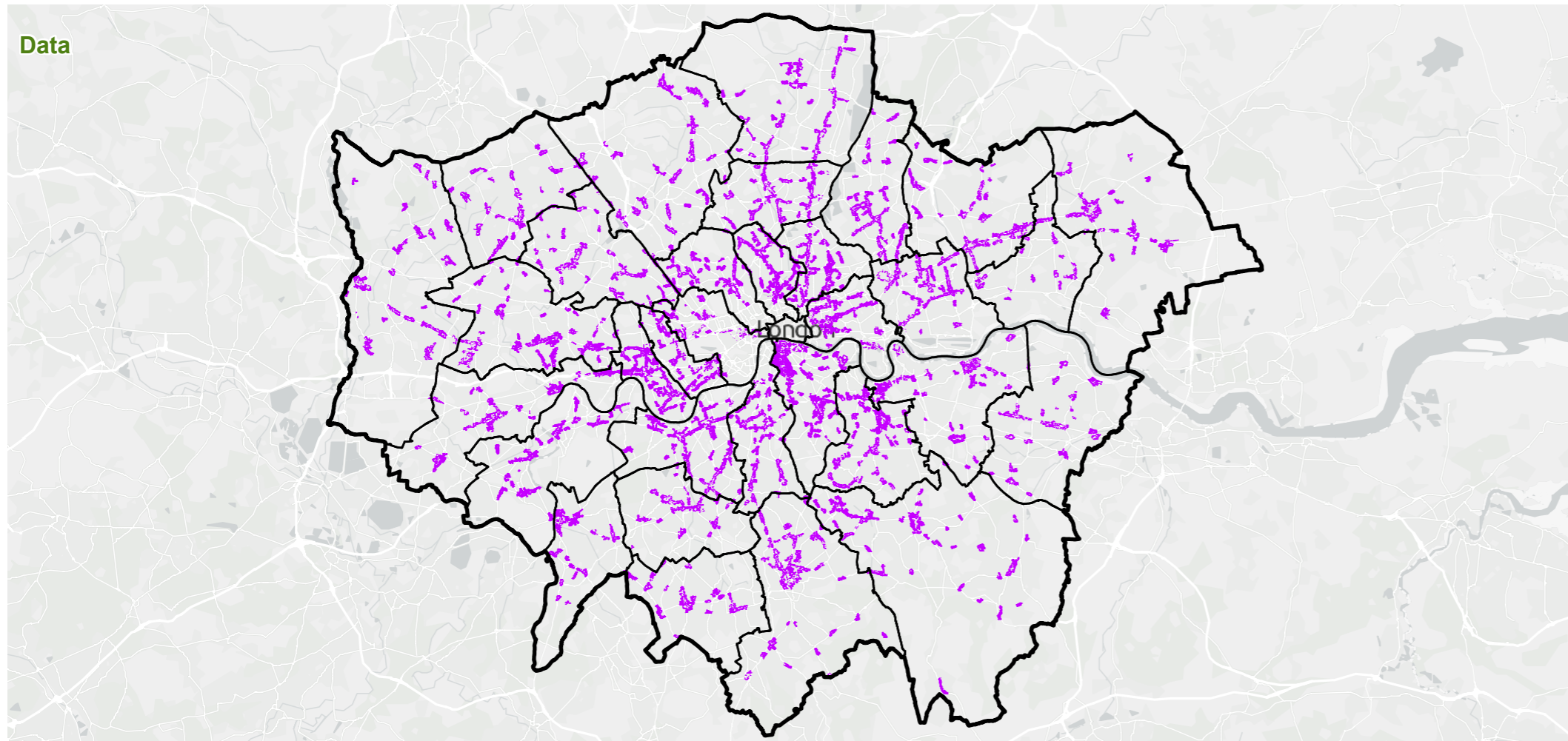
**Indicator of provision: town centres and high streets within green cover**

- High provision
- Medium provision
- Low provision



Map scale 1:350,000 @ A3

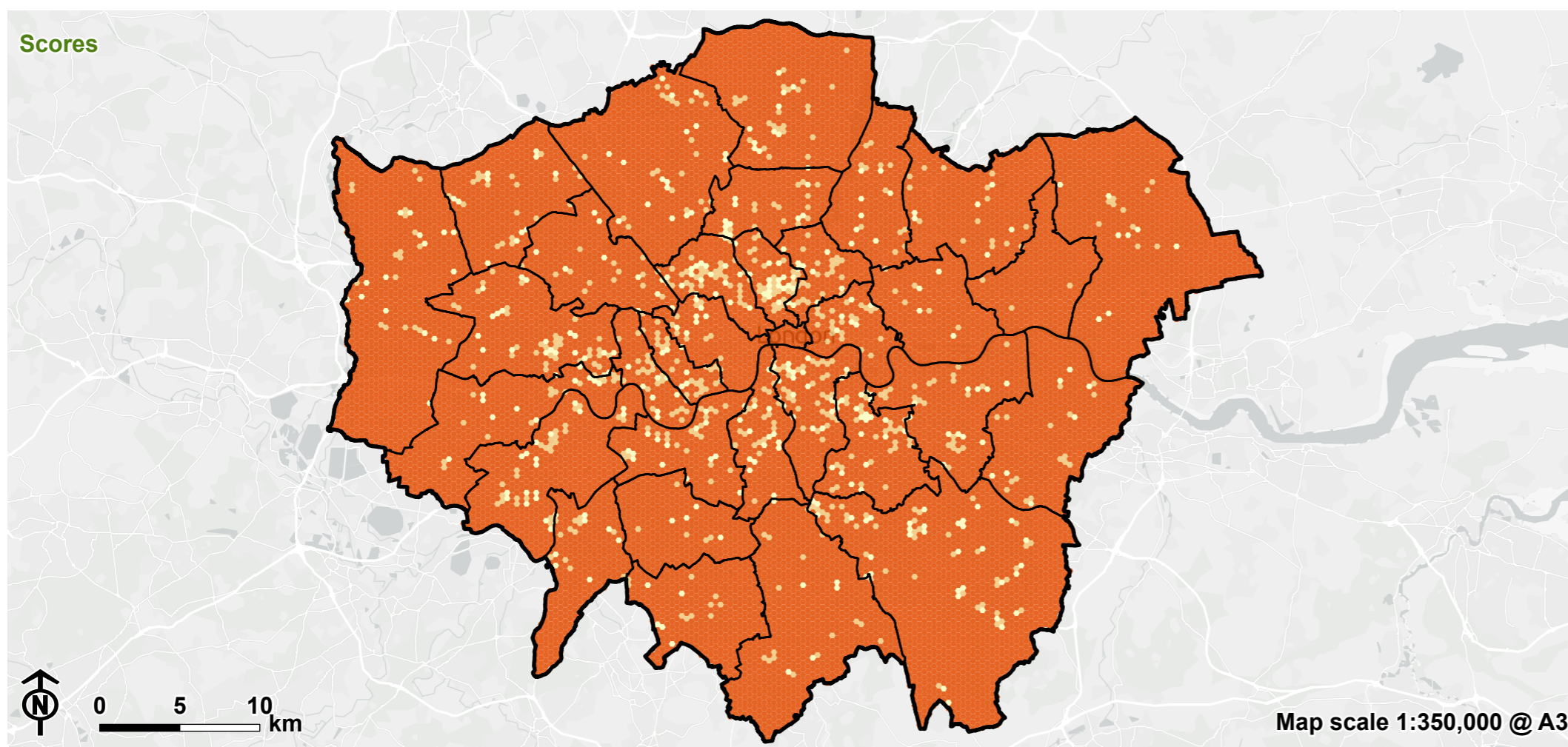
**Figure 5.57: High streets and town centres within tree canopy cover data and provision scores**



- Greater London Authority boundary
- Borough boundary

**Data**

- Tree cover in town centres and high street boundaries



**Scores**

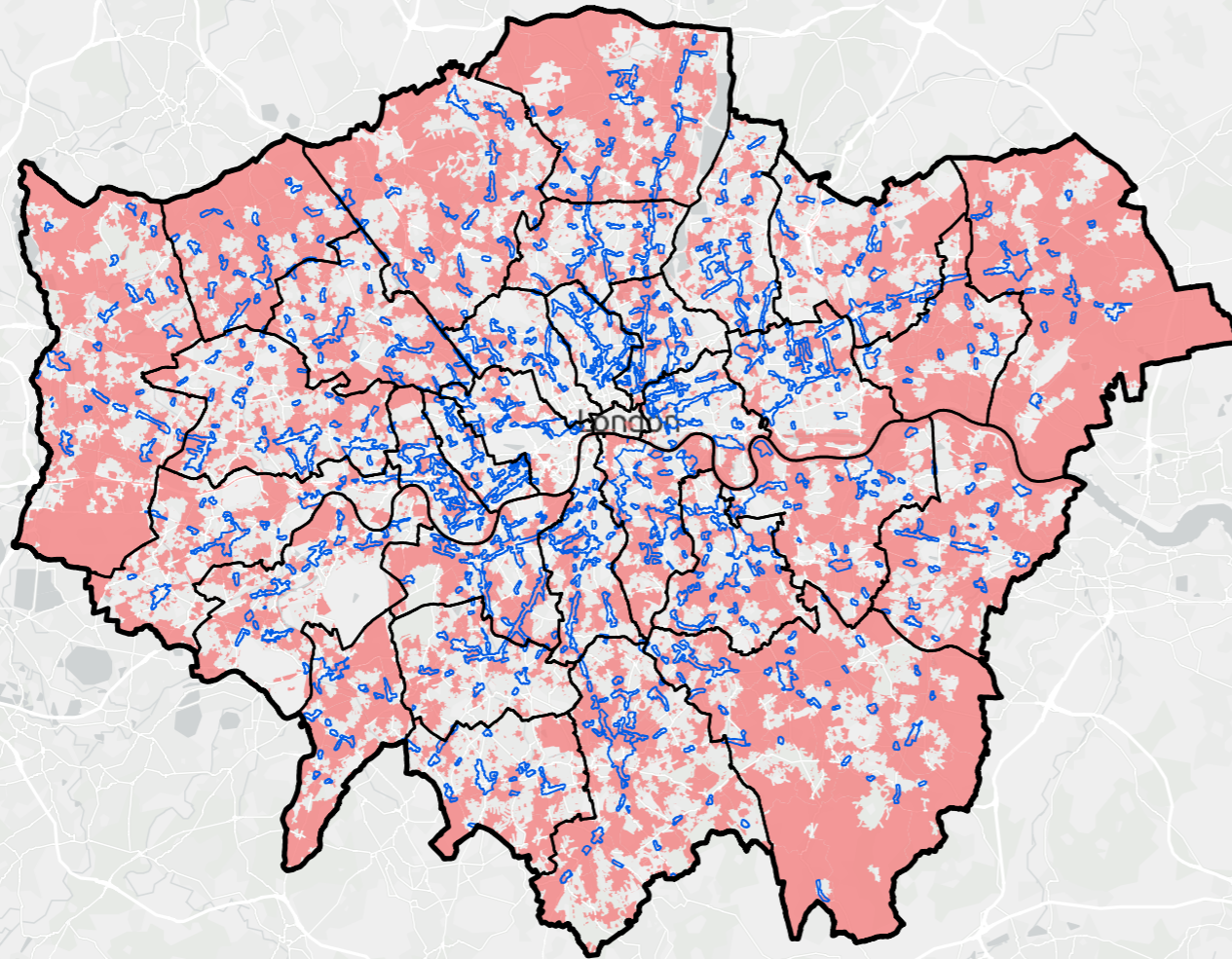
**Indicator of provision: town centres and high streets within tree cover**

- High provision
- Medium provision
- Low provision



Map scale 1:350,000 @ A3

Data



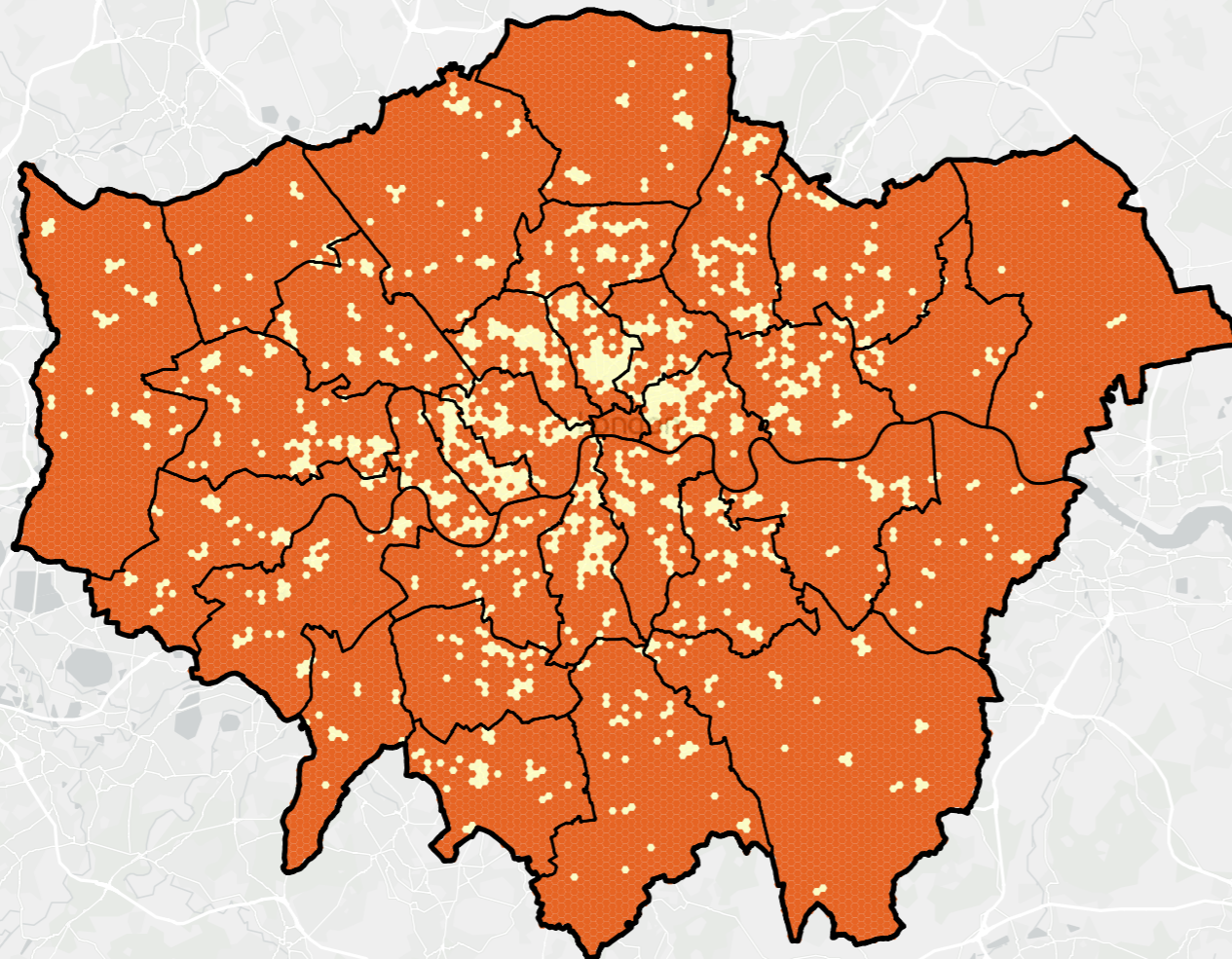
**Figure 5.58: Area of deficiency (AoD) for public open space local parks data and provision scores**

- Greater London Authority boundary
- Borough boundary

**Data**

- High street and town centre
- AoD for public open space: local and pocket parks and small open spaces

Scores



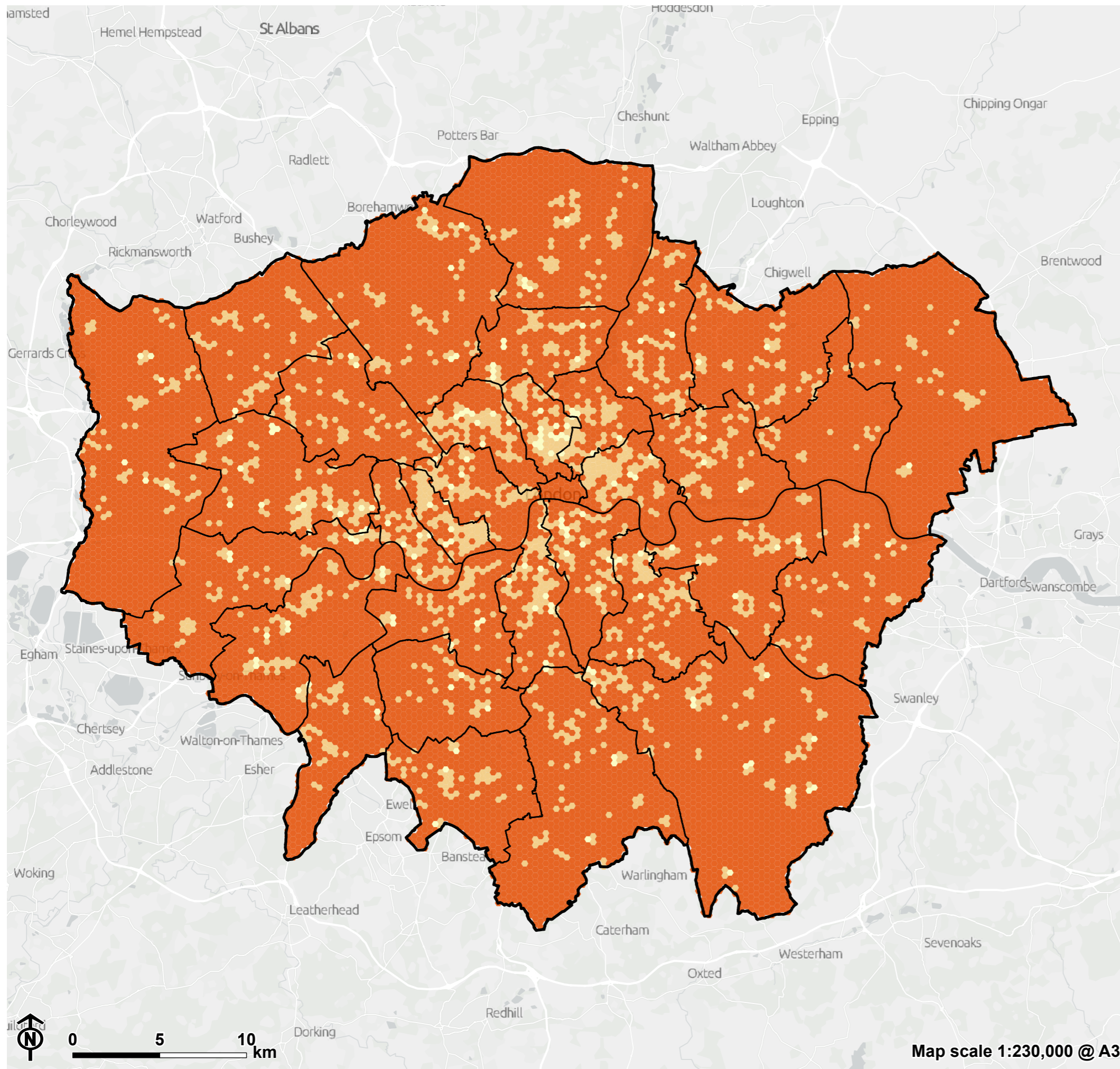
**Scores**

**Indicator of provision: town centres and high streets with proximity to open space**






- High provision
- Low provision

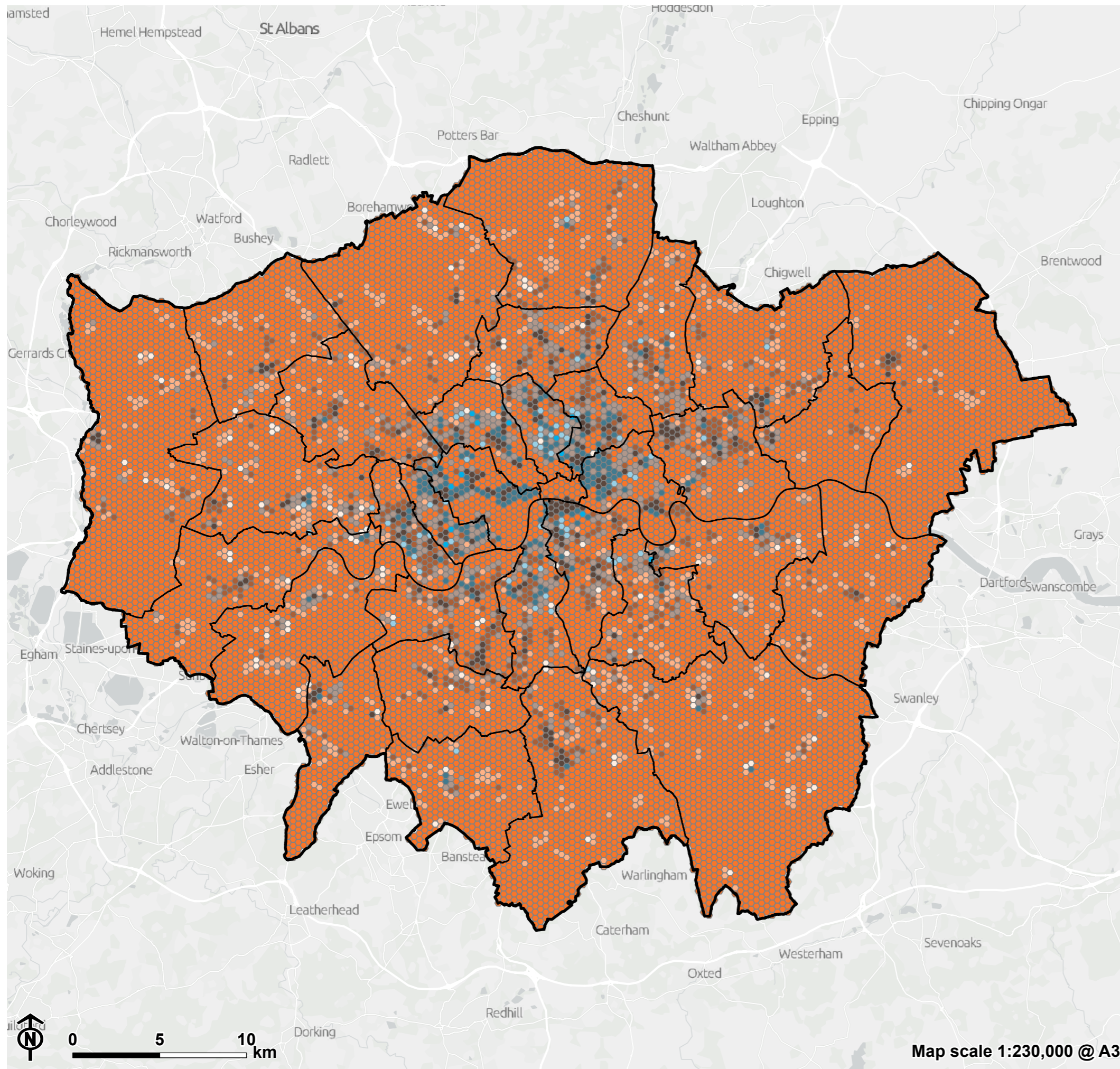


Map scale 1:350,000 @ A3





**Figure 5.59: SO10 Greener high streets overall provision**

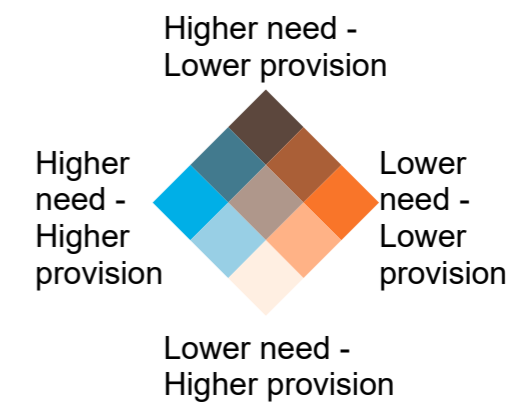
-  Greater London Authority boundary
-  Borough boundary
- Overall provision**
-  High provision
-  Medium provision
-  Low provision



**Figure 5.60: SO10 Greener high streets bivariate results**

-  Greater London Authority boundary
-  Borough boundary

**Need versus provision**



## Inequality 1: Health inequalities

**5.62** For this inequality, the following indicator of need was identified:

- Health deprivation and disability domain of the Indices of Multiple Deprivation (IMD).

**5.63** While access to green and blue space and nature is known to have beneficial effects on physical and mental health, the provision of existing GI has already been considered for this benefit within Strategic Objectives 1, 2 and 9. Similarly, the provision of GI to help reduce air, noise and water pollution, urban temperatures and flooding could also have indirect benefits for health, but has already been considered within Strategic Objectives 4, 5, 6, 7 and 8. Therefore, it was decided not to include indicators of provision for Health Inequalities within the LGIF spatial data analysis, and instead use the Health and Social Inequalities to strengthen the approach to prioritising areas of functional need for GI within the LGIF based on demographic variations across London.

**5.64** **Figures 5.61** and **5.62** show the health deprivation and disability domain of the IMD, along with how that was translated into areas of high, medium and low need by hex across London:

- The highest health deprivation and therefore the highest need in terms of health inequalities is generally in the inner boroughs and more in the east, such as LBs Tower Hamlets, Hackney, Greenwich and Bexley. However, there are also pockets in some of the outer boroughs such as LBs Hillingdon, Hounslow, Croydon, Waltham Forest.
- The lowest need in terms of health deprivation is found in larger outer London boroughs, including LB Bromley, Harrow and Barnet, as well as LBs Kingston and Richmond upon Thames.

## Inequality 2: Social inequalities

**5.65** For this inequality, the following indicators of need were identified, as they represent different population groups that may be more likely to experience inequalities within London, and areas where there is a higher population density:

- Population density (based on the count of residential addresses per hex as a proxy for population density)
- % of people under the age of 5
- % of people over the age of 75
- % of people not proficient in English
- % of people in social housing
- % of people identifying as Black, Asian or Minority Ethnic (BAME)
- % of people considered income deprived.

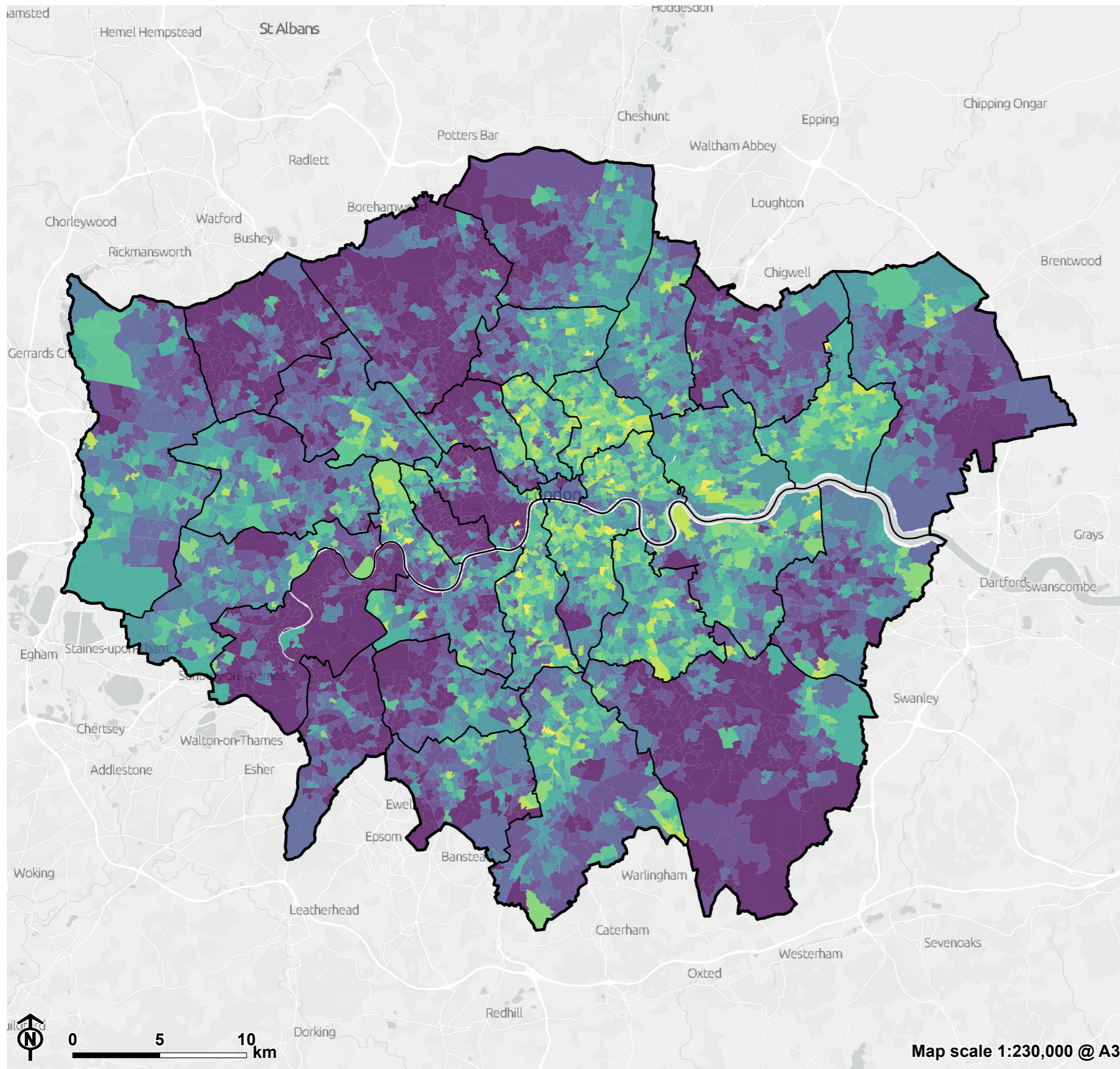
**5.66** While the provision of GI to help reduce air, noise and water pollution, urban temperatures and flooding could also have indirect benefits for population groups that might be experiencing social inequality in London, this has already been considered within Strategic Objectives 4, 5, 6, 7 and 8. Similarly, access to green space can have beneficial effects on physical and mental health as well as more opportunities for social interactions with others in the local community, the provision of existing GI has already been considered within Strategic Objectives 1, 2 and 9. Finally, making town centres and high streets greener through planting of street trees, shrubs and ornamental planting or amenity spaces can make them more attractive and more likely to provide opportunities for social interactions, however this GI provision has already been considered within Strategic Objective 10. As with Health Inequalities above, it was decided not to include indicators of provision for Social Inequalities within the LGIF spatial data analysis and instead use them to strengthen the approach to prioritising areas of functional need for GI based on demographic variations across London.

**5.67** **Figures 5.63** to **5.69** show the social inequality indicators, along with how that was translated into areas of high, medium and low need by hex across London:

- The population density shows the highest need in the inner London boroughs except for the City of London, where employment and commercial land use is dominant. It should be noted that because population density is based on a count of residential addresses per hex, it does not consider areas of high population usage for other purposes (workplace, tourism, transport etc).

- The areas with highest % of people under the age of five that are identified as high need for social inequalities are generally in outer London, particularly in the east, including in LBs Barking & Dagenham and Greenwich, as well as parts of LBs Hillingdon and Hounslow in the west and LBs Enfield and Waltham Forest in the north.
- Similarly, the areas identified as high need due to having the highest % of people over the age of 75 are mostly located in the outer boroughs, including most of LBs Bromley, Havering, Croydon, Harrow and Barnet.
- The areas with highest % of people not proficient in English that are identified as high need are more concentrated in the north, with clusters in LBs Tower Hamlets, Newham, Enfield, Haringey, Brent and Ealing.
- The % of people in social housing is high across various parts of London, more so in the inner boroughs and the east including within LBs Hammersmith & Fulham, Southwark, Tower Hamlets and Hackney.
- The areas identified as high need due to having the highest % of people identifying as Black, Asian or Minority Ethnic (BAME), are generally located in the northern half of the city, in large clusters including in LBs Hounslow, Brent, Harrow, Tower Hamlets, Newham and Redbridge. In the south, the most extensive high BAME population indicator is around Croydon.
- The highest % of people considered income deprived is dispersed in pockets across London, but overall is more common in the north east. This includes a continuous area west of the River Lee, including in LBs Enfield, Haringey.

**5.68 Figure 5.70** shows the overall levels of need for social inequalities when all the indicators are combined. As many locations do not show as high need for all (or even most) of the seven indicators, there are very few areas showing as having high overall need in terms of social inequalities. These pockets are most widespread in LB Tower Hamlets, and also are present in small parts of number of other boroughs, including LBs Enfield, Haringey, Hackney, Newham, Greenwich, Lewisham, Southwark, Croydon, Ealing, Brent, City of Westminster and Camden. Larger areas across most of London show as medium need in terms of social inequalities, with the biggest areas of low need being near the outer edges of London, including in LBs Bromley, Havering and Richmond upon Thames.



**Figure 5.61: Health inequalities - IMD health deprivation and disability domain**













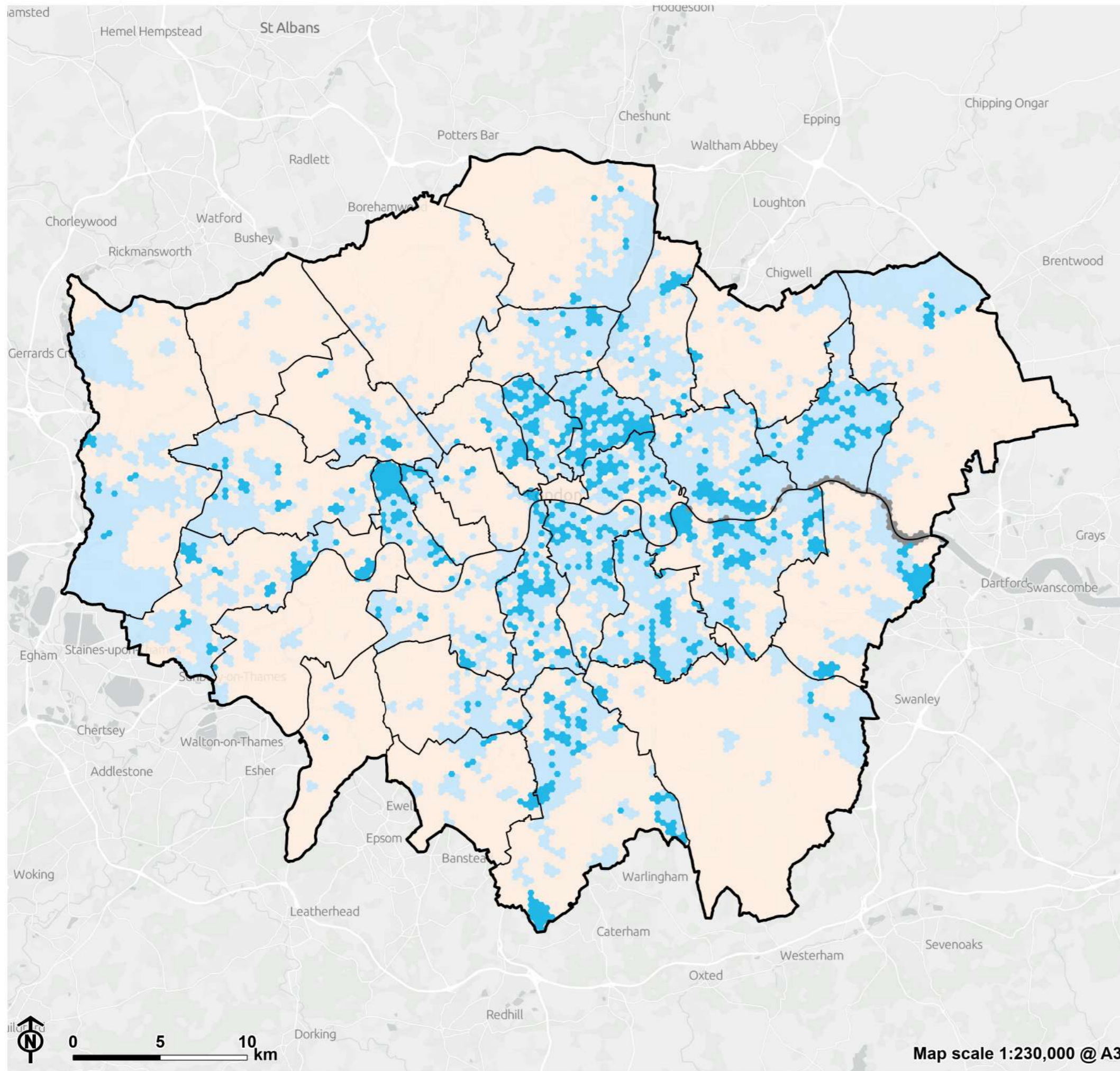
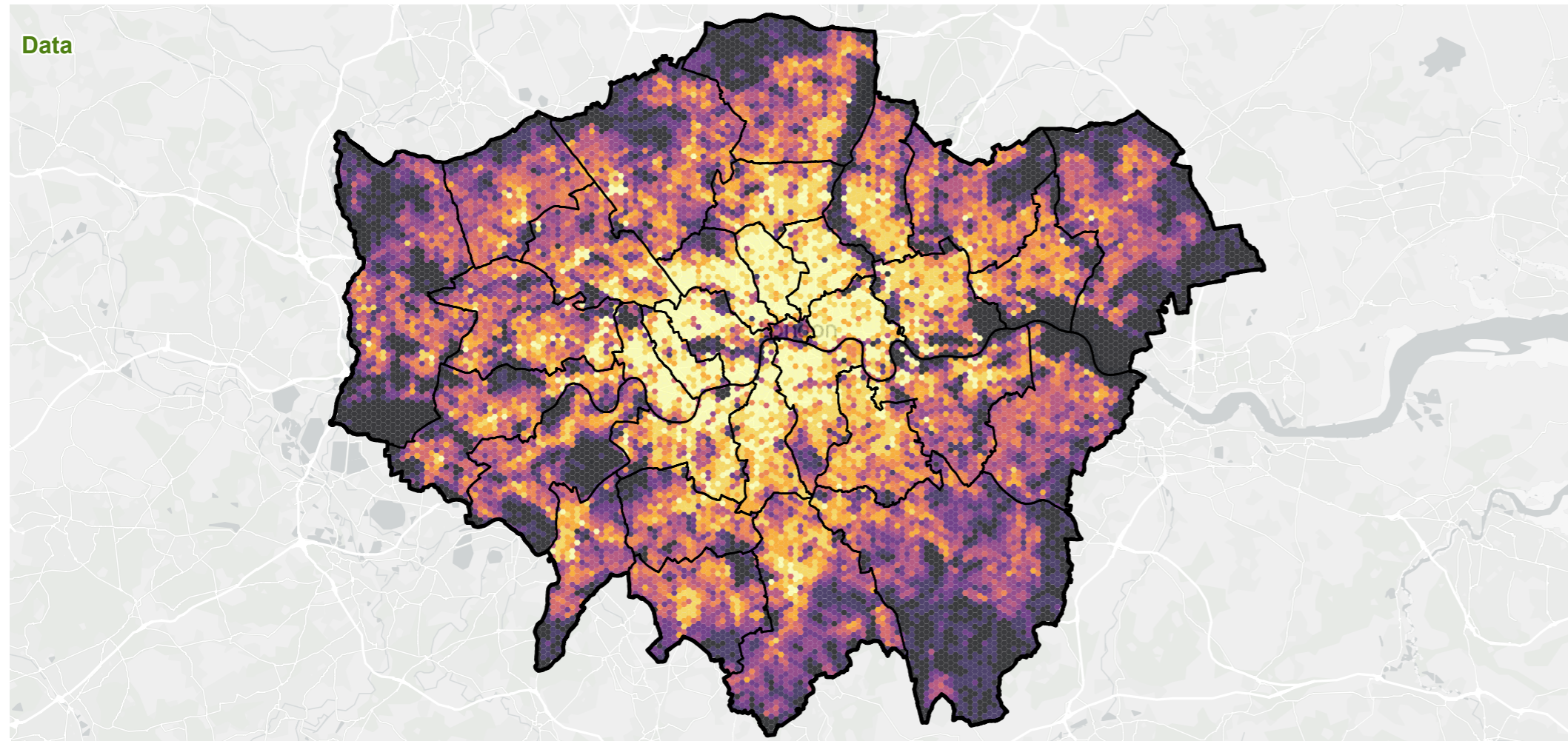
-  Greater London Authority boundary
-  Borough boundary
- IMD 2019 Health deprivation and disability**
- Decile
-  1 (most deprived)
-  2
-  3
-  4
-  5
-  6
-  7
-  8
-  9
-  10 (least deprived)

Figure 5.62: Health inequalities overall need



- Greater London Authority boundary
- Borough boundary
- Overall need**
  - High need
  - Medium need
  - Low need
  - N/A

**Figure 5.63: Count of residential addresses data and need scores**

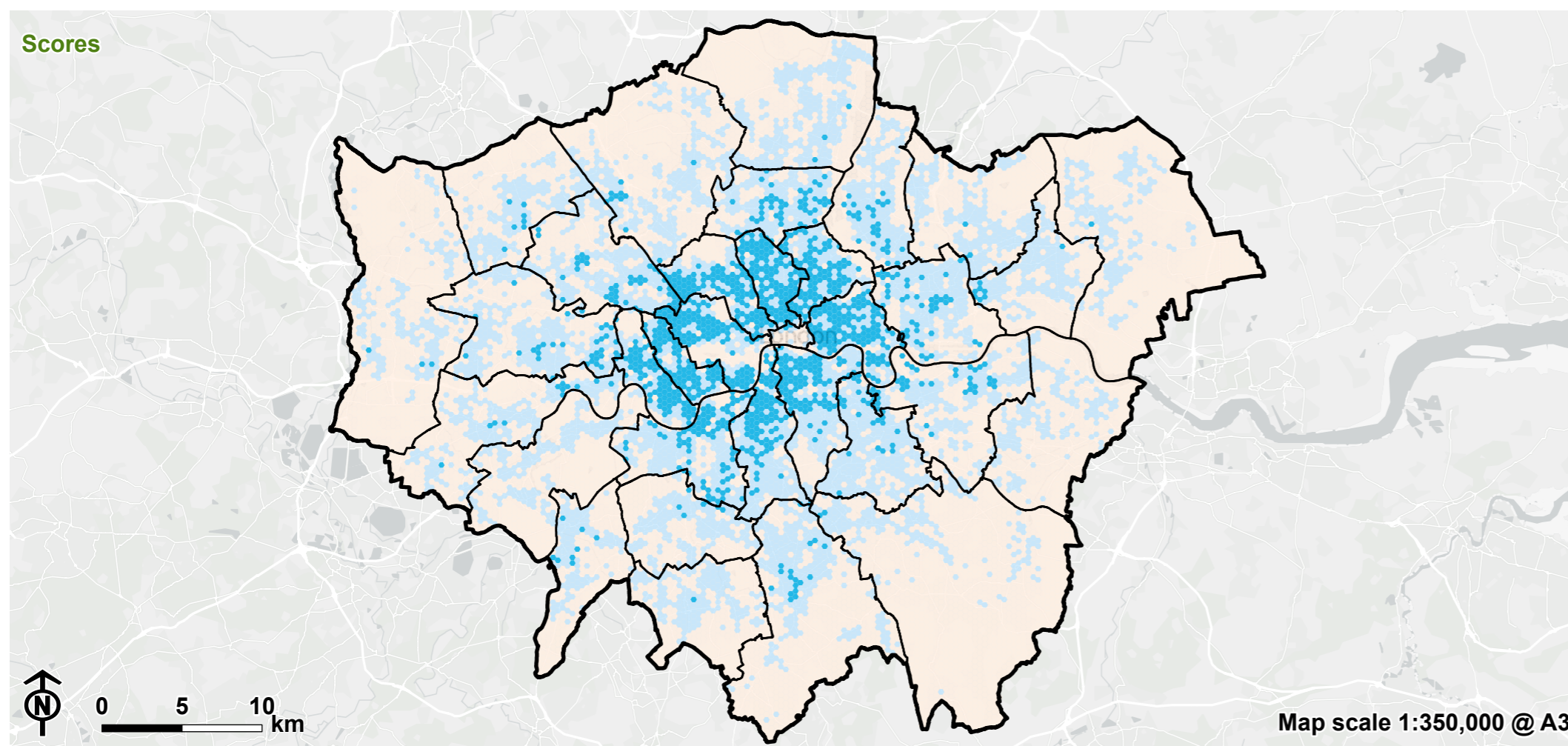


Greater London Authority boundary  
Borough boundary

**Data**

**Count of residential addresses per hex**

- 0
- 1 - 35
- 36 - 110
- 111 - 180
- 181 - 250
- 251 - 320
- 321 - 400
- 401 - 540
- 541 - 750
- 751 - 3420



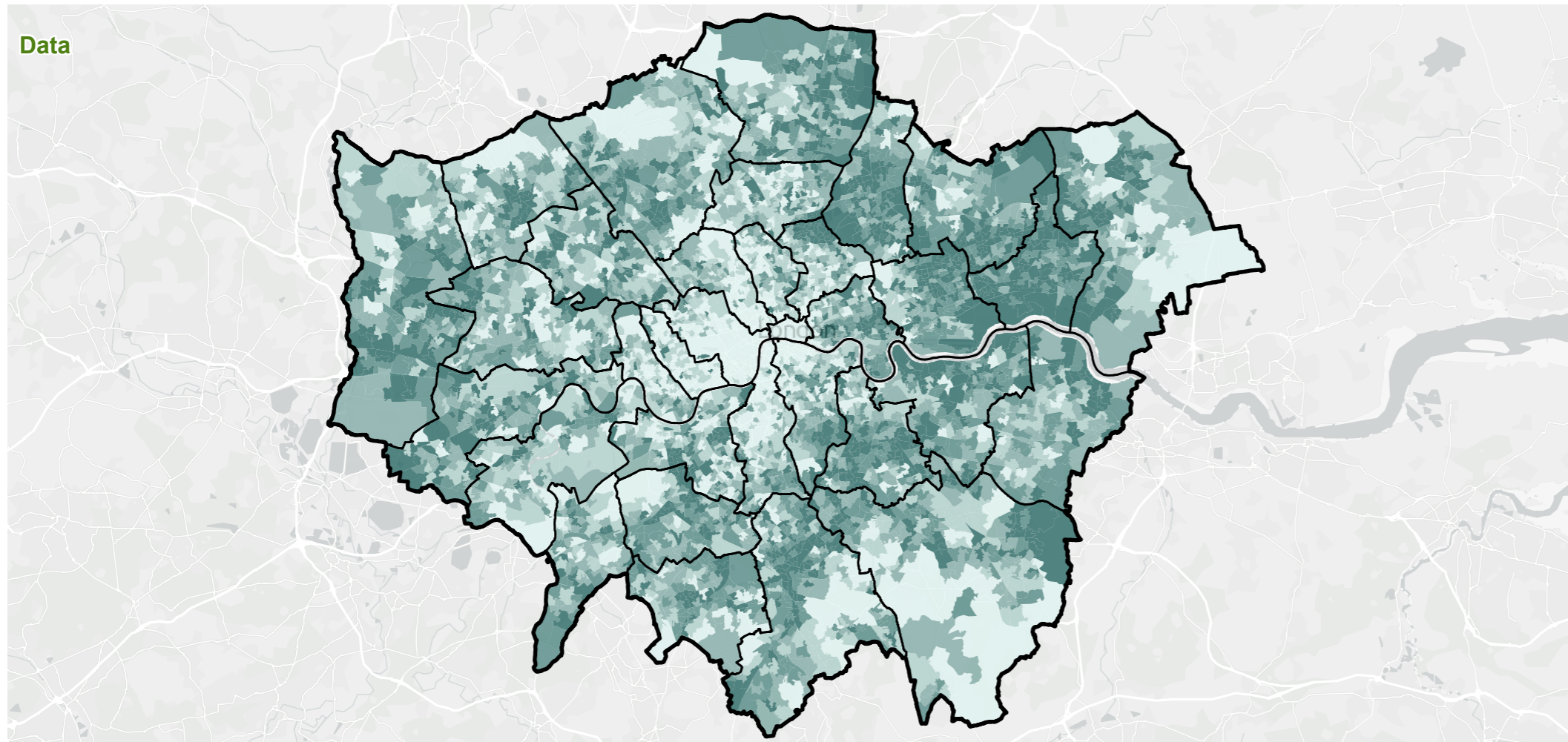
**Scores**

**Indicator of need: count of residential addresses**

- High need
- Medium need
- Low need

Map scale 1:350,000 @ A3

**Figure 5.64: % of people under the age of 5 data and need scores**

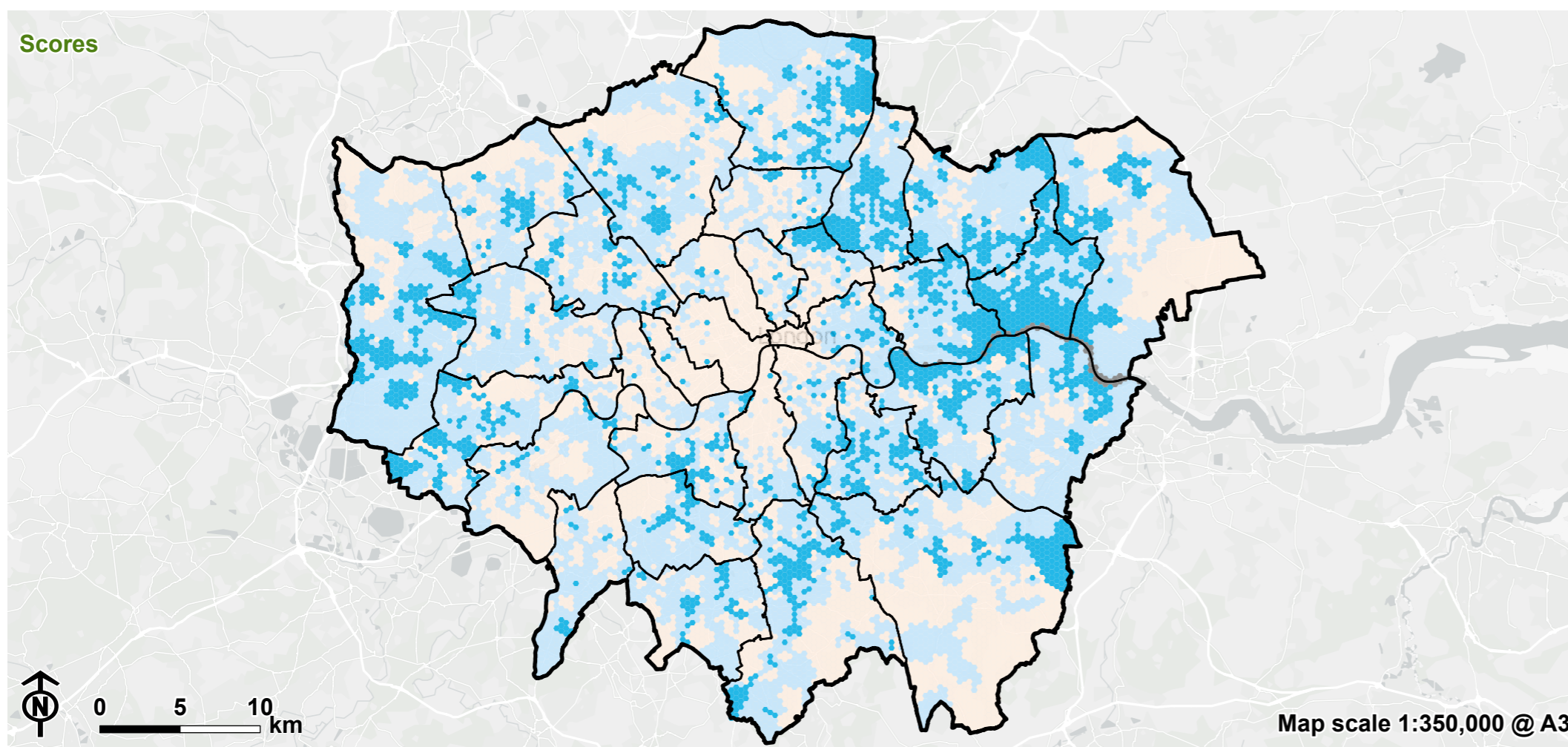


Greater London Authority boundary  
Borough boundary

**Data**

**% of people under the age of 5 by LSOA**

- 0.6 - 4.5
- 4.6 - 5.3
- 5.4 - 6.1
- 6.2 - 7.0
- 7.01 - 18.7



**Scores**

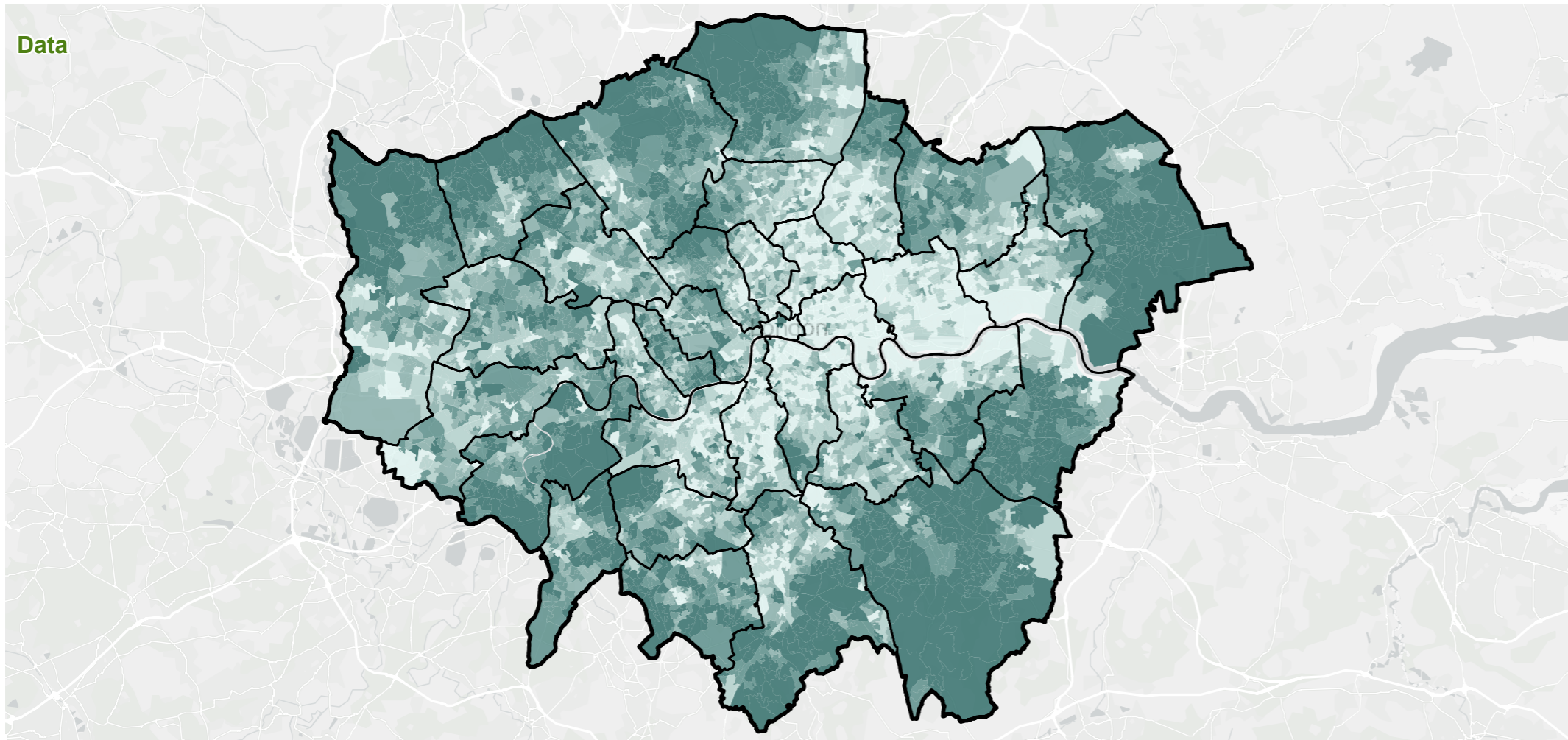
**Indicator of need: % of people under the age of 5**

- High need
- Low need
- Medium need
- N/A



Map scale 1:350,000 @ A3

Data



**Figure 5.65: % of people over the age of 75 data and need scores**

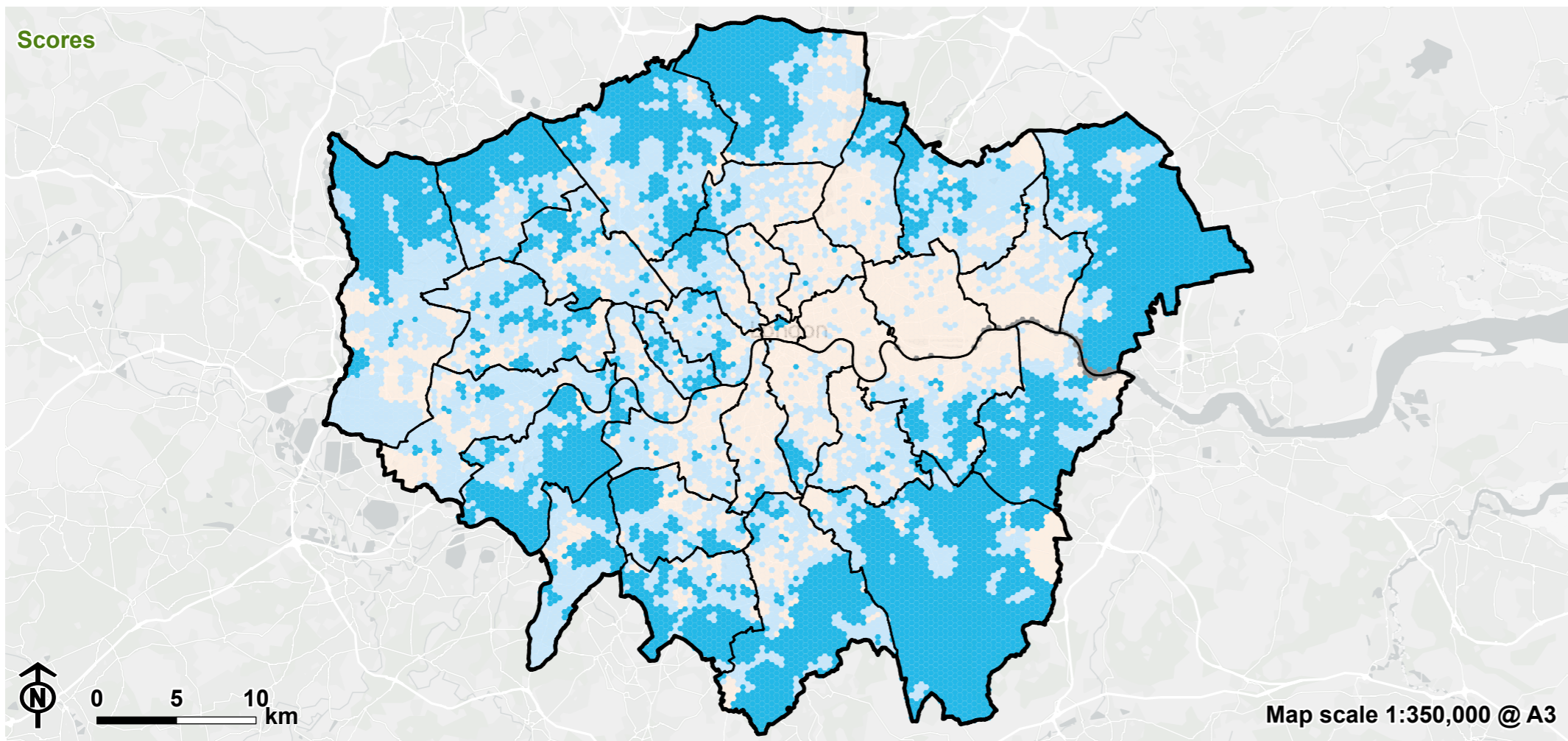
- Greater London Authority boundary
- Borough boundary

**Data**

**% of people over the age of 75 by LSOA**

- 0 - 3.1
- 3.2 - 4.2
- 4.3 - 5.5
- 5.6 - 7.6
- 7.7 - 30

Scores



**Scores**

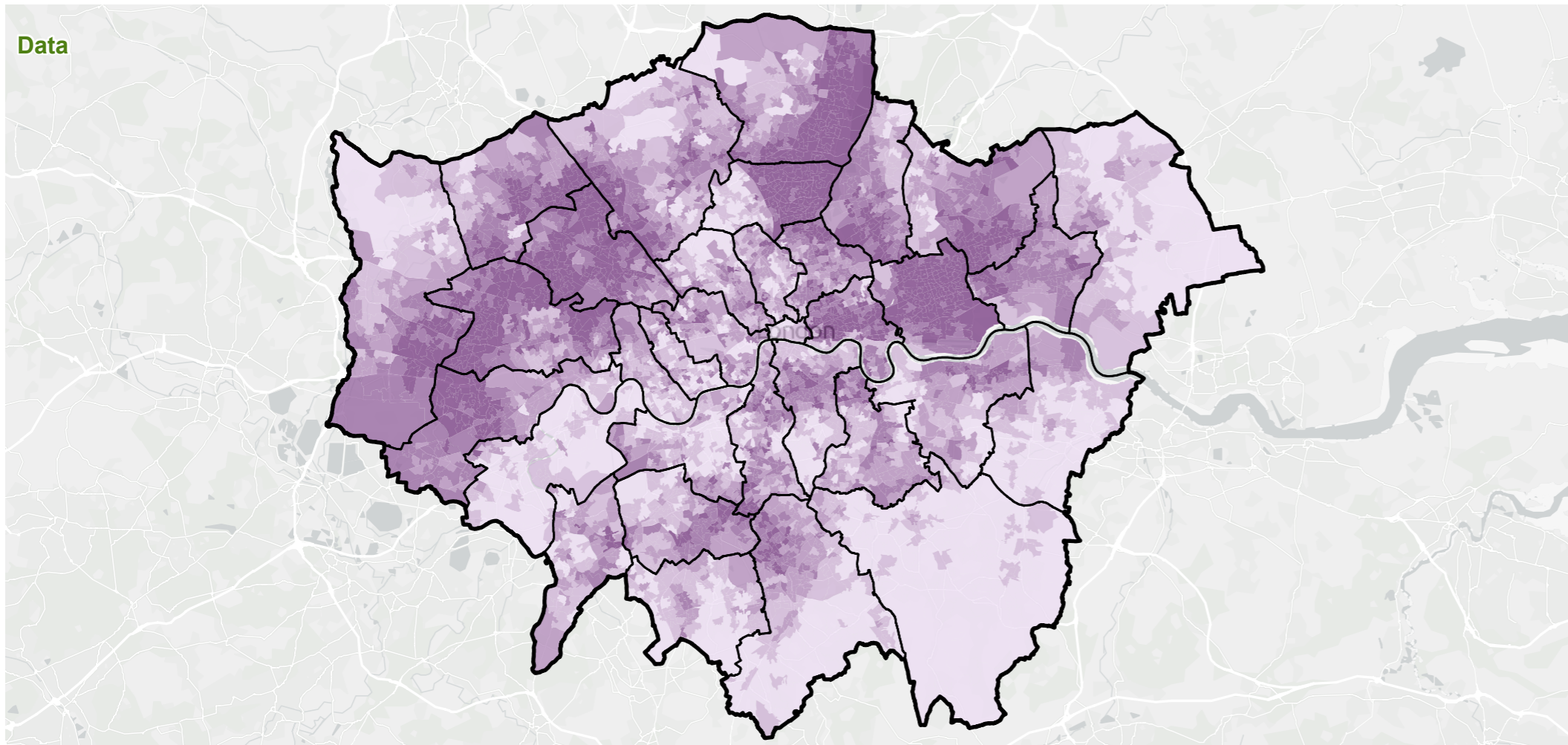
**Indicator of need: % of people over the age of 75**

- High need
- Low need
- Medium need
- N/A



Map scale 1:350,000 @ A3

**Figure 5.66: % of people not proficient in English data and need scores**

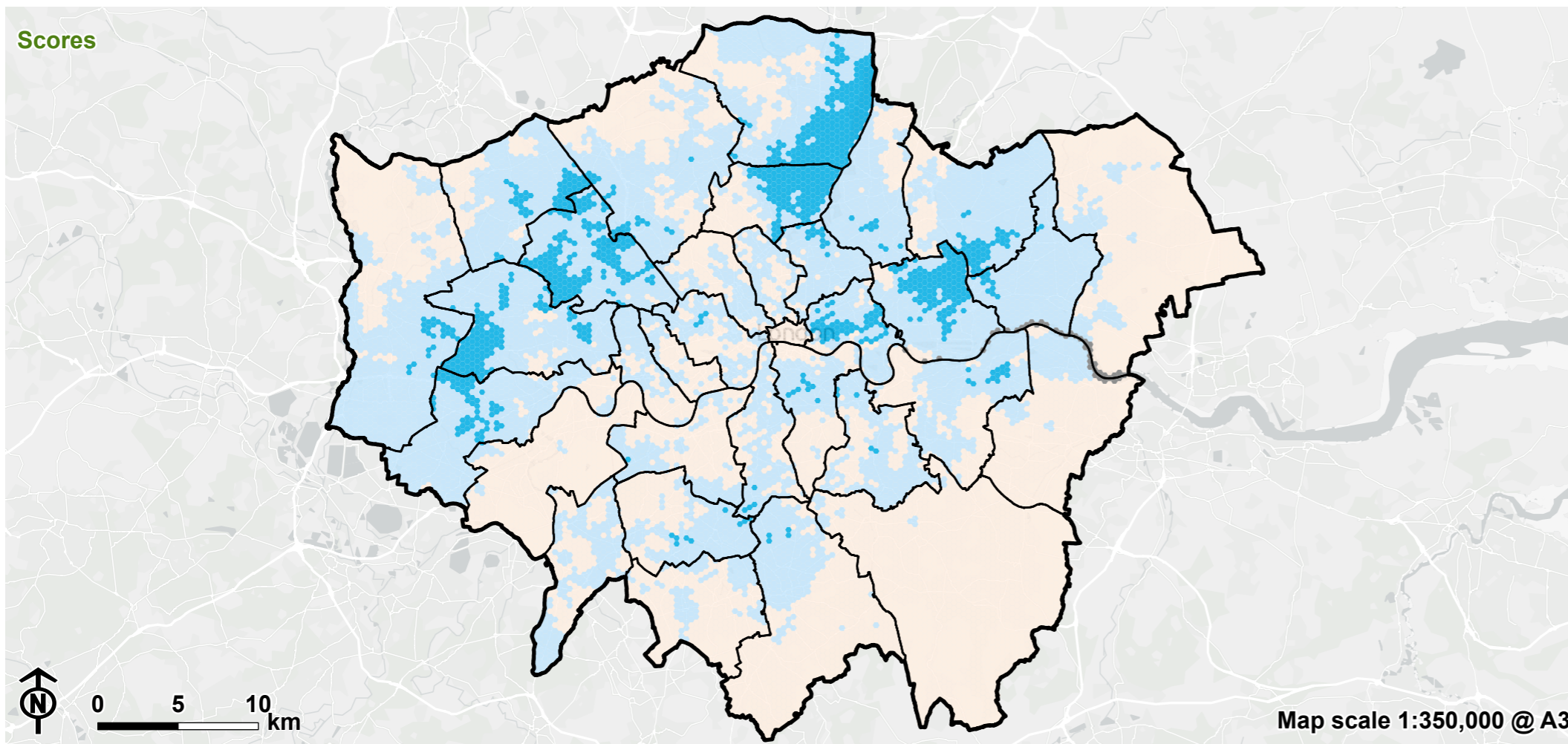


Greater London Authority boundary  
Borough boundary

**Data**

**% of people not proficient in English by LSOA**

- 0 - 1.3
- 1.4 - 2.5
- 2.6 - 4
- 4.1 - 6.1
- 6.2 - 23



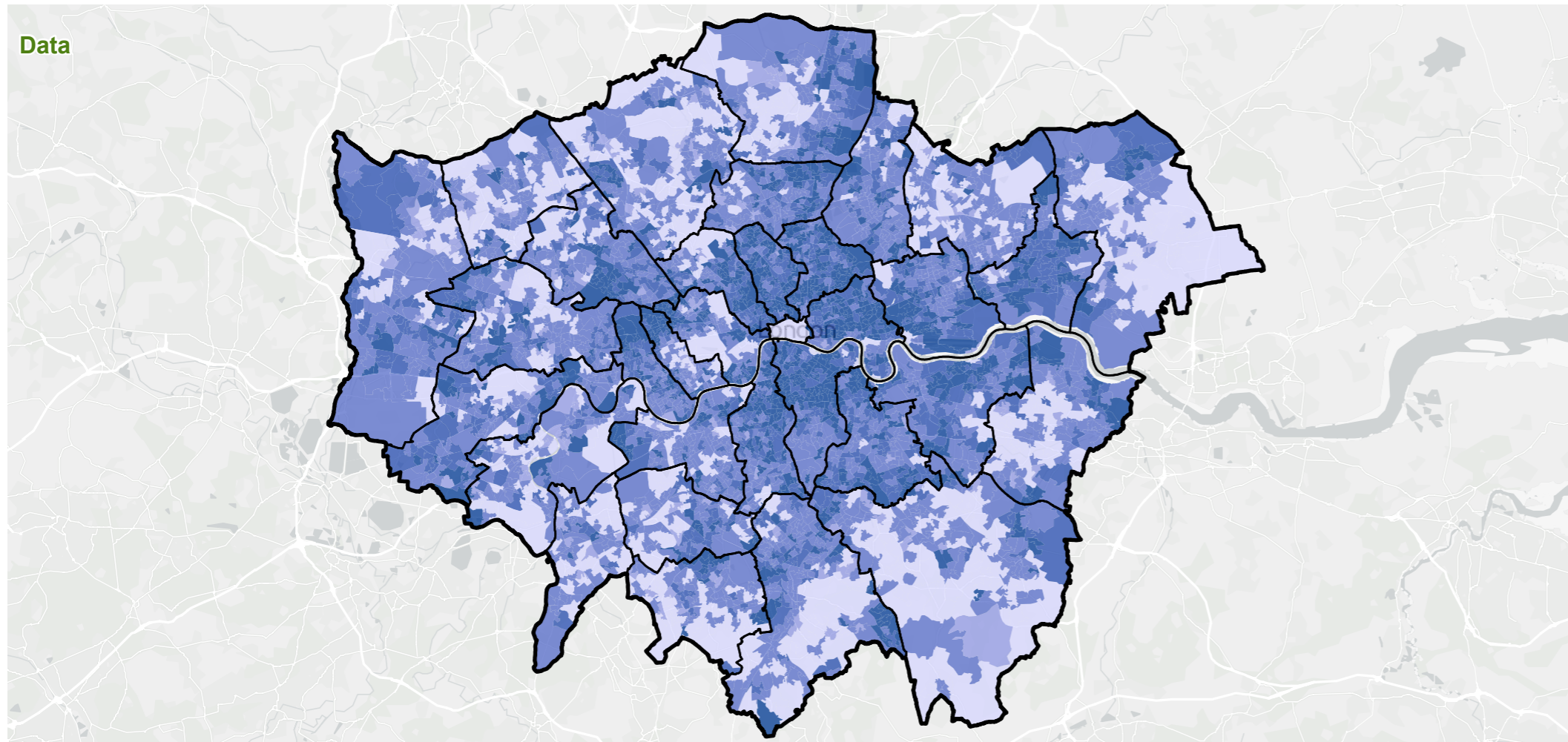
**Scores**

**Indicator of need: % of people not proficient in English**

- High need
- Low need
- Medium need
- N/A

Map scale 1:350,000 @ A3

**Figure 5.67: % of people in social housing data and need scores**

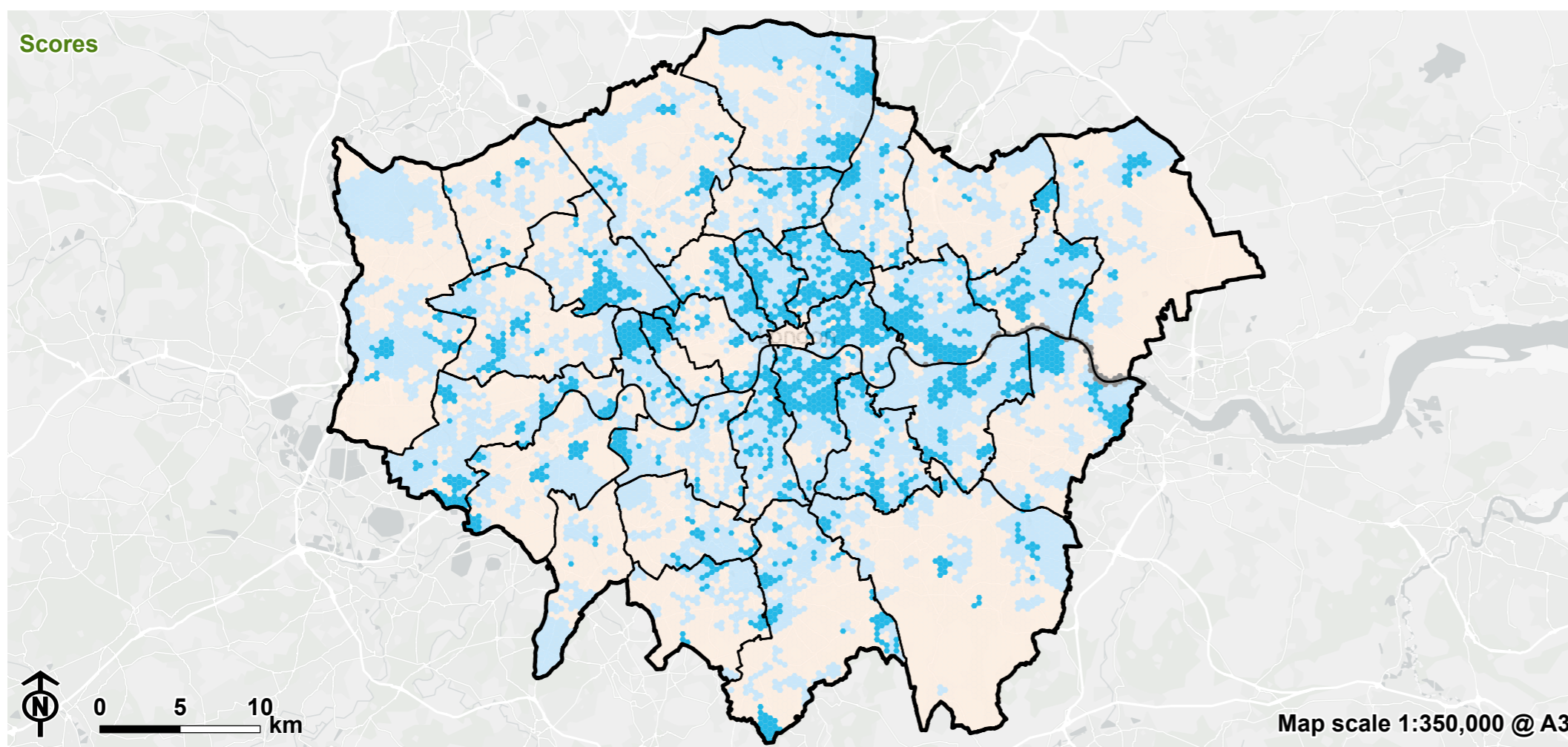


Greater London Authority boundary  
Borough boundary

**Data**

**% of people in social housing by LSOA**

- 0 - 5
- 6 - 12
- 13 - 22
- 23 - 38
- 39 - 92



**Scores**

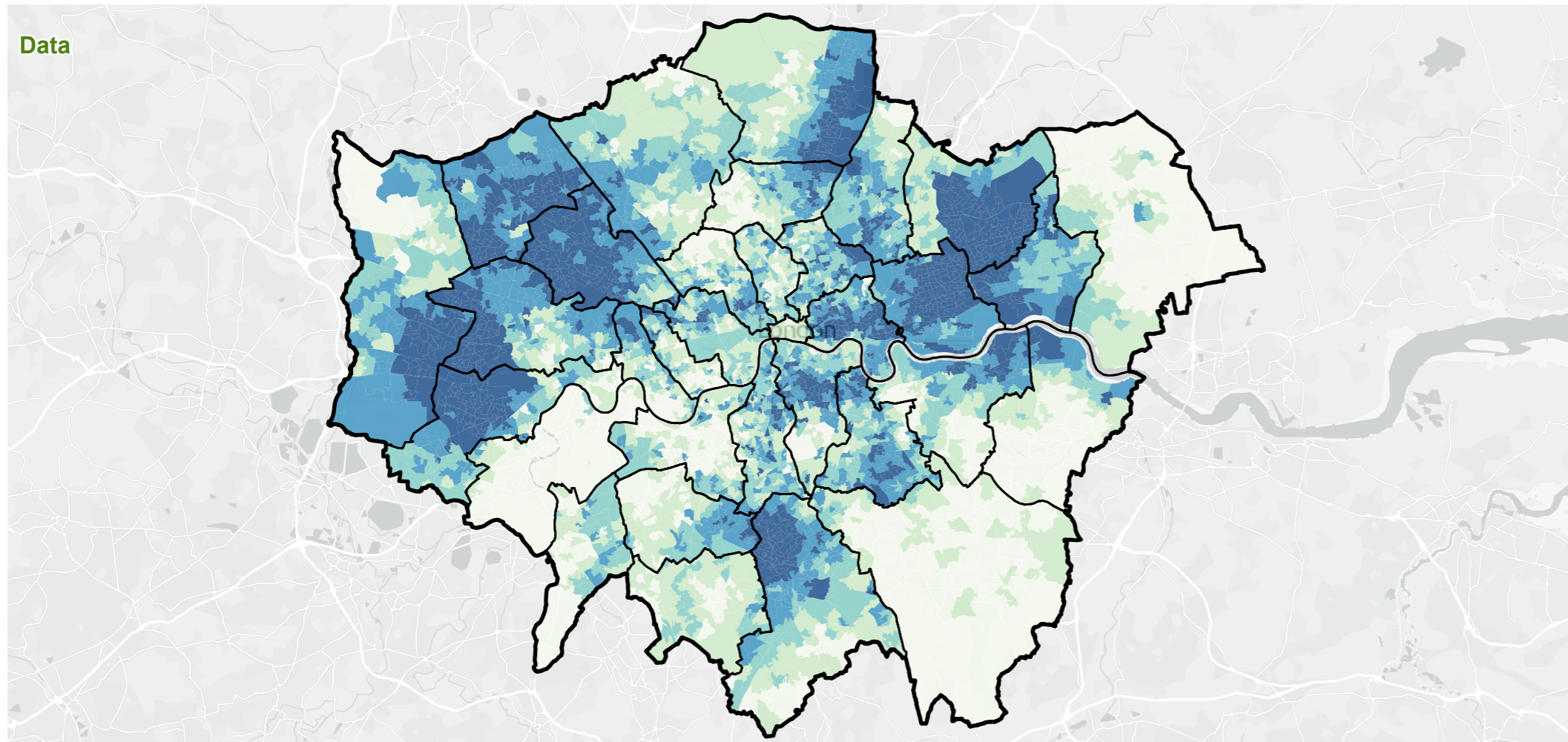
**Indicator of need: % of people in social housing**

- High need
- Low need
- Medium need
- N/A



Map scale 1:350,000 @ A3

**Figure 5.68: % of people identifying as BAME data and need scores**

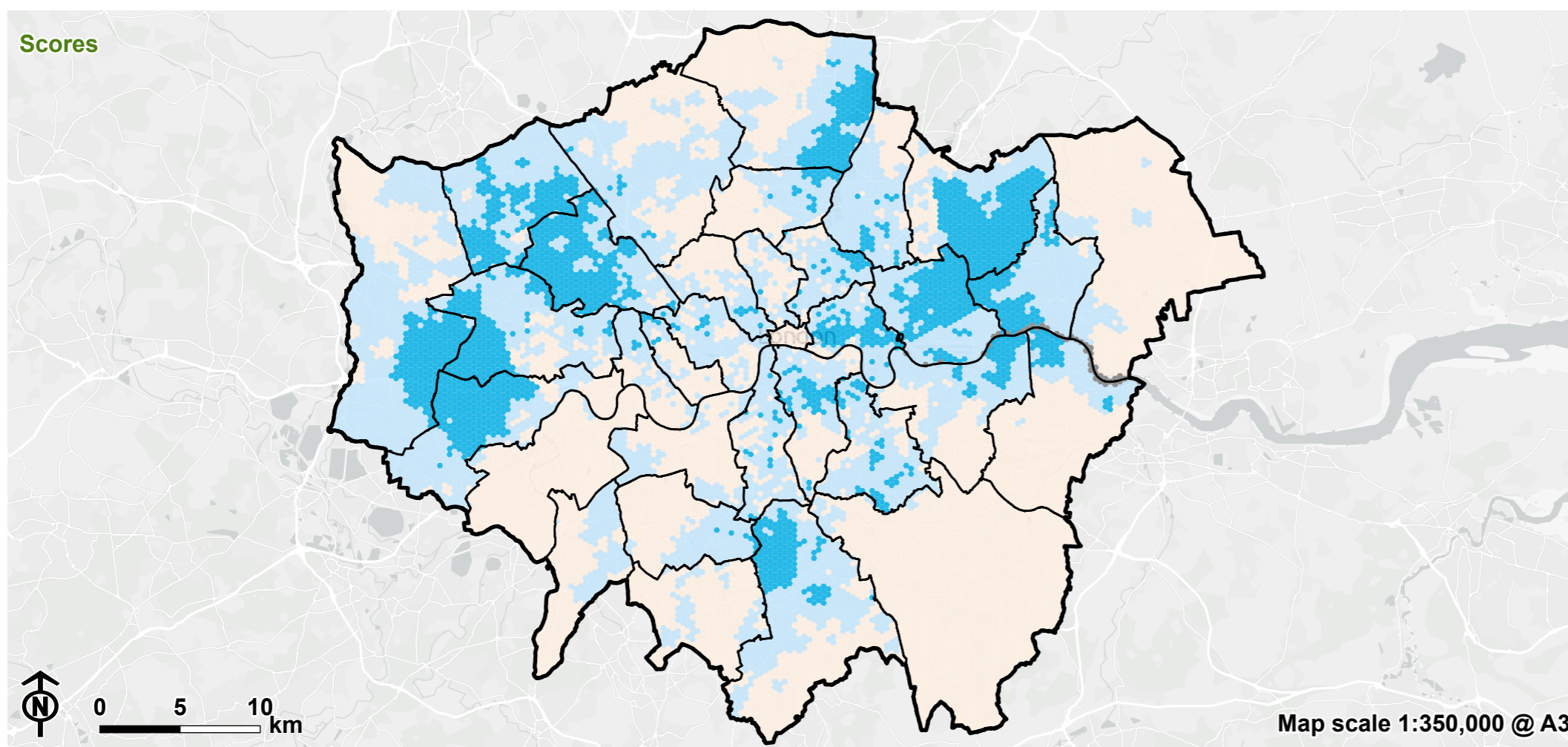


Greater London Authority boundary  
Borough boundary

**Data**

**% of people identifying as BAME by LSOA**

- 3 - 26
- 27 - 37
- 38 - 48
- 49 - 61
- 62 - 98



**Scores**

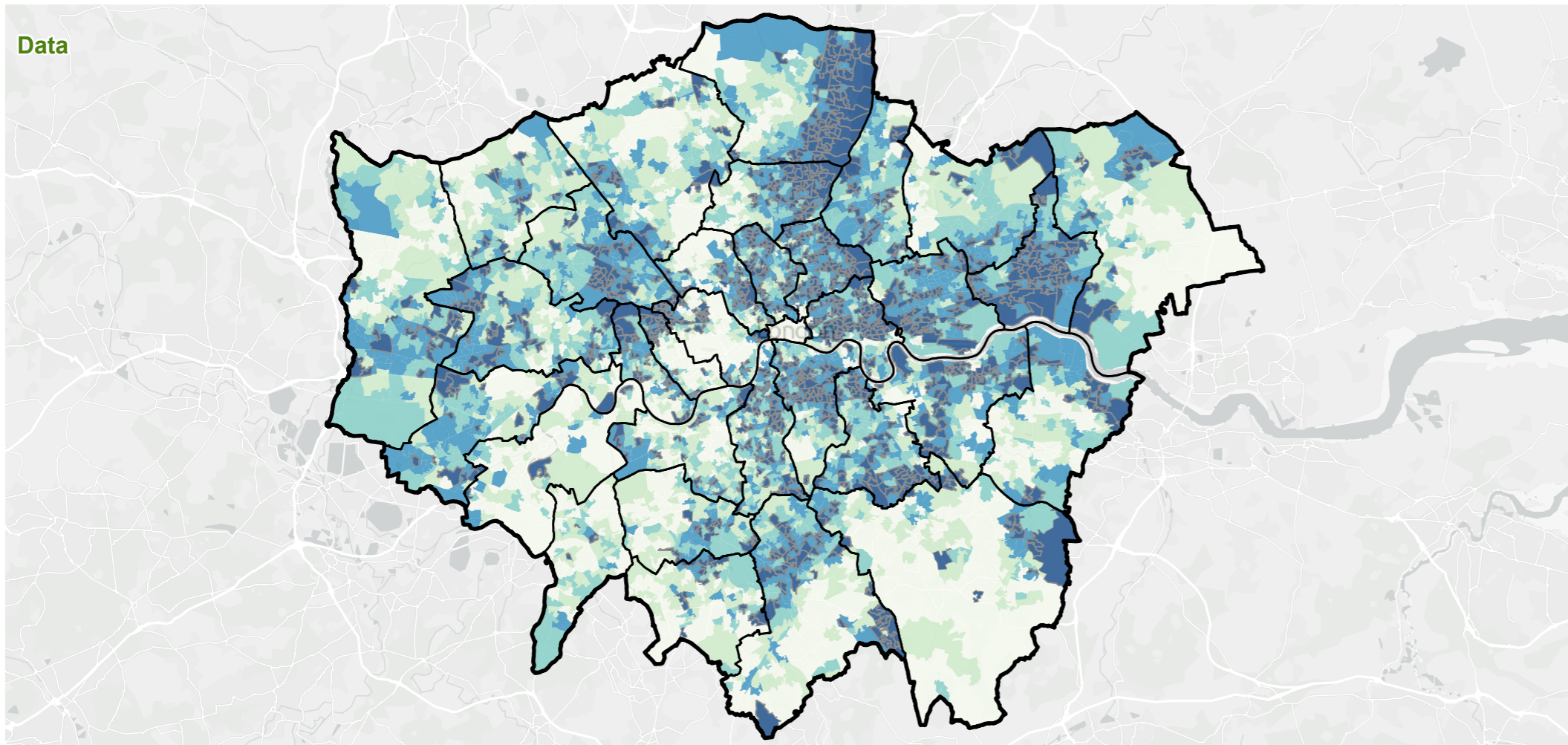
**Indicator of need: % of people identifying as Black, Asian or Minority Ethnic (BAME)**

- High need
- Low need
- Medium need
- N/A



Map scale 1:350,000 @ A3

**Figure 5.69: % of people considered income deprived data and need scores**

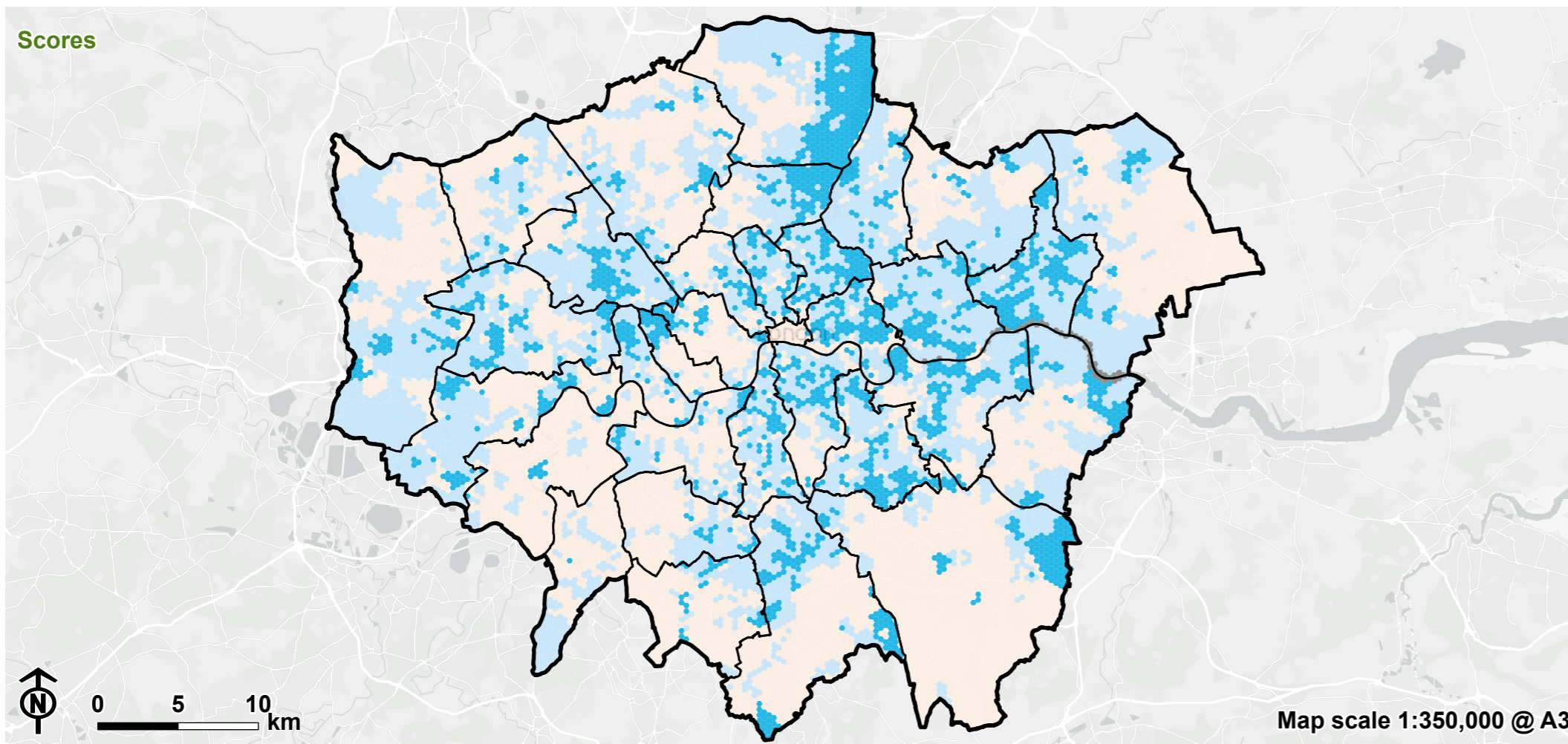


Greater London Authority boundary  
Borough boundary

**Data**

**% of people considered income deprived by LSOA**

- 0 - 6
- 7 - 10
- 11 - 14
- 15 - 19
- 20 - 44



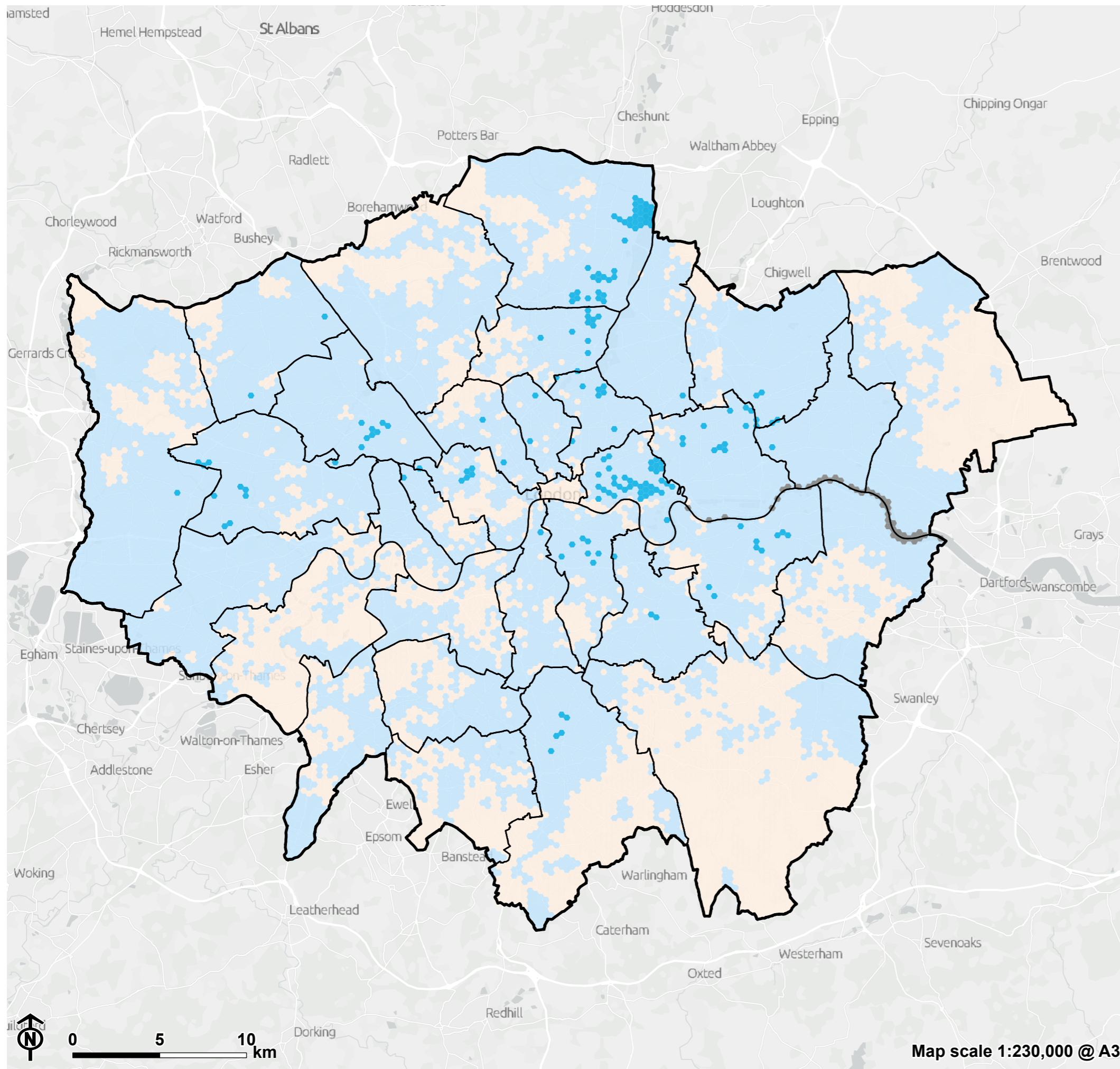
**Scores**

**Indicator of need: % of people considered income deprived**

- High need
- Low need
- Medium need
- N/A



Map scale 1:350,000 @ A3



**Figure 5.70: Social inequalities overall need**

- Greater London Authority boundary
- Borough boundary
- Overall need**
- High need
- Low need
- Medium need
- N/A

## Chapter 6

### Multi-criteria analysis results

This chapter presents the LGIF maps resulting from the multi-criteria analysis.

**6.1** The multi-criteria analysis (MCA) combines the overall level of need versus existing GI provision for all of the Strategic Objectives and Inequalities in order for the LGIF to identify specific areas across London where GI is most needed and could deliver multiple benefits. This chapter briefly summarises the approach taken to the MCA, and presents the LGIF maps that arise from the MCA.

#### Approach taken to multi-criteria analysis

**6.2** The specific method used for the MCA is explained in the **LGIF Spatial Data Analysis Technical Methodology Report**. Different options for presenting the MCA outputs were explored with the GLA GI team, including:

- using numerical values to show locations with the highest need for GI overall across all the Strategic Objectives and Inequalities; and
- using the categories resulting from the bivariate analysis of different levels of need versus provision.

**6.3** In addition, several different MCA scenarios were explored to see how focusing on one particular Strategic Objective or combination of Strategic Objectives and Inequalities might influence the LGIF map outputs. The scenarios considered were:

- MCA Scenario 1: All Strategic Objectives and Inequalities combined with equal weighting.
- MCA Scenario 2: All Strategic Objectives combined equal weighting, excluding Health and Social Inequalities.
  - MCA Scenario 2a: All Strategic Objectives combined equal weighting, excluding Health and Social Inequalities, and then hexes with high need for Health Inequalities and/or Social Inequalities multiplied by 1.5.
- MCA Scenario 3: All Strategic Objectives Inequalities with Health and Social Inequalities weighted highest.
- MCA Scenario 4: All Strategic Objectives and Inequalities with Access to green / blue space and nature recovery weighted highest.
  - MCA Scenario 4a: Just Access to green / blue space and Nature recovery combined.
- MCA Scenario 5: All Strategic Objectives and Inequalities with Heat risk weighted highest.
- MCA Scenario 6: All Strategic Objectives and Inequalities with Flood risk and Water pollution weighted highest.
  - MCA Scenario 6a: Just Flood risk and Water pollution Strategic Objectives combined.
- MCA Scenario 7: Combination of four Strategic Objectives where street trees could be solution (greener active travel routes, clean air noise reduction and greener town centres).

**6.4** **Figure 6.2** shows the relative contribution of the different Strategic Objectives / Inequalities under each scenario. Note that Scenario 2a used a slightly different methodology so it is not possible to show the relative %age contribution that health and social inequalities have versus the Strategic Objectives in **Figure 6.2**. This is because Scenario 2a takes the score for all ten Strategic Objectives and amplifies the score where there is medium or high need for Health and/or Social Inequalities. In this way, it helps to identify areas where multiple needs for GI could be addressed while also meeting some of the highest health and social needs in London.

**6.5** Following workshops and meetings with the GLA's GI and GIS team, as well as the wider LGIF cross-GLA Coordination Group, it was agreed that a slightly revised version of MCA Scenario 2a (see below) was the most appropriate approach to take for the LGIF. The revised Scenario 2a is summarised as:

- All SOs combined equal weighting, excluding Health and Social, and then hexes with medium need for health and/or social inequalities multiplied by 1.1, and hexes with high need for health and/or social inequalities multiplied by 1.3.

## Presentation of MCA outputs

### MCA map based on numerical scale

**6.6** Figure 6.3 shows the results of the MCA when all the Strategic Objectives are combined, and hexes with medium or high need for health and social inequalities are factored in. **Note: This figure pre-dates the December 2025 updates to this report and thus reflects an older version of LNRS data (January 2025) and a now superseded approach to analysing 'improved access to blue space'.** The results are based on a numerical scale, with yellow showing the areas in London with the highest overall need across all ten Strategic Objectives and medium to low levels of existing GI provision, and purple showing those areas with the lowest overall need and medium to high existing provision. This version of the combined objectives was not taken forward in the LGIF web map.

**6.7** In general, the areas of highest overall need for GI provision are located within the inner London boroughs, with the pattern of lower need associated predominantly with the Outer London boroughs. Examples of boroughs exhibiting clusters of higher need include Tower Hamlets, Hackney, Southwark, Lambeth and Hammersmith & Fulham. However, some pockets of higher need are also apparent in Outer LBs such as Croydon and Barking & Dagenham. The darker purple areas on Figure 6.3 generally align with areas of existing GI provision (e.g. parks and open spaces) across London. Examples include strategic sites such as the Lea Valley, and the Royal Parks, as well as areas of local provision such as Mile End Park in the London Borough of Tower Hamlets.

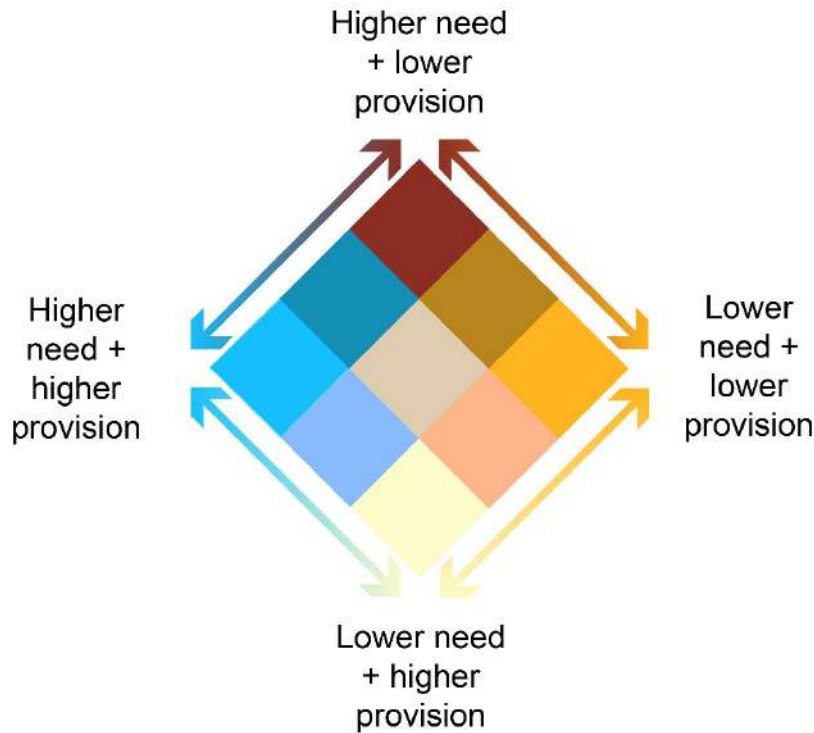
**6.8** Presenting the MCA results using the numerical values is useful for highlighting areas of greater need where new GI could be invested in and created in order to achieve multiple benefits across the ten Strategic Objectives and Health and Social Inequalities. However, it is limited in its ability to differentiate between other areas where existing GI may need to be protected, maintained, restored or enhanced.

### MCA map based on the bivariate diamond categories

**6.9** Figure 6.4 shows the results of the MCA based on the nine categories of need versus provision from the 'bivariate diamond' shown on the figures in Chapter 5 (e.g. higher need / lower provision, medium need / medium provision, lower need / medium provision etc.). This way of presenting the combined objectives was taken forward in the LGIF web map. **Figure 6.5** shows the same results of the MCA but isolates the 'four corners' of the bivariate diamond (i.e. HL, HH, LL, LH). **Note: These two figures pre-date the December 2025 updates to this report, reflecting an older version of LNRS data (January 2025) and a now superseded approach to analysing 'improved access to blue space'.** The nine categories of need versus provision (as shown in Figure 6.1) may be used to inform the approach to GI planning, design and delivery, as outlined below:

- **Higher need and lower provision:** A strategic priority for the creation of new, multifunctional GI where possible and improving / adapting existing GI.
- **Higher need and higher provision:** A strategic priority for the improvement and adaptation of existing GI to maximise multifunctionality.
- **Lower need and lower provision:** Consider specific local needs and conserve, manage, adapt or create GI to support these.
- **Lower need and higher provision:** Consider specific local needs and conserve, manage or adapt GI to support these. Re-provision of GI in alternative locations may be appropriate where other priorities exist, or GI needs could be better met in other ways.

Figure 6.1 The bivariate diamond showing the relationship between need and provision and different GI approaches for different levels of need and provision



**6.10** In general, areas of higher need and lower provision on **Figures 6.4** and **6.5** align with those indicated by the MCA results based on the numerical scale (**Figure 6.3**) and are located predominantly within the inner London boroughs. Examples of specific concentrations of higher need and lower provision are found with the LBs of Newham, Southwark, Waltham Forest, Hackney, Southwark and Hammersmith & Fulham.

**6.11** Another way that might be useful for the GLA to identify the areas of greatest combined need across the 10 Strategic Objectives and two Inequalities from the MCA is shown on **Figure 6.6**, which shows the top three categories of highest need from the bivariate diamond (**noting that this figure pre-dates the December 2025 updates to this report and thus reflects a now superseded version of LNRS data (January 2025) and an earlier approach to analysing 'improved access to blue space'**):

- Dark brown = higher need / lower GI provision
- Tan/dark orange = medium need / lower GI provision
- Blue = higher need/medium GI provision

### Sense-checking the MCA outputs

**6.12** Detailed analysis of the outputs for MCA Scenario 1 (all Strategic Objectives and Inequalities combined with equal weighting) was prepared for three boroughs across London (Camden, Newham and Southwark). This task was undertaken to 'ground truth' / sense-check the data and to confirm the data outputs were reasonable, accurate and logical. **Note: This sense-checking was completed on the emerging results pre-dating the December 2025 updates to this report, reflecting a previous version of the LNRS data and an earlier approach to analysing 'improved access to blue space'**. Results of this data sense-checking exercise are illustrated in **Figures 6.7 – 6.9**, with summary narrative provided below:

### London borough of Camden

**6.13** Located within the northern portion of the borough, the extent of existing green cover at Hampstead Heath, Parliament Hill and the adjoining Highgate Cemetery is apparent within the mapping shown on **Figure 6.7**. Additional areas of higher provision at Primrose Hill and the boundary of Regent's Park are also defined as areas of lower need and higher provision within the borough. Central areas of the borough at Kentish Town and Camden Town are distinguishable as areas of higher need and lower provision within the data outputs, including the linear corridor of the A501 Euston Road to the south.

### London Borough of Newham

**6.14** As indicated in **Figure 6.8**, the results of the MCA data analysis broadly reflect the patterns of existing GI provision across the London Borough of Newham. Densely populated areas of the borough at Stratford and Canning Town are categorised as areas of higher need and lower provision. In contrast, the distribution of local green spaces are generally defined as areas of lower need and higher provision. Specific sites distinguishable in the hex output include West Ham Park, New Beckton Park, Plaistow Park and King George V Park. Existing green space at City of London Cemetery, located at the borough's north eastern extent, is also apparent. The corridor of the River Thames and surrounding Docklands are discernible as areas of higher provision within the south of the borough.

### London Borough of Southwark

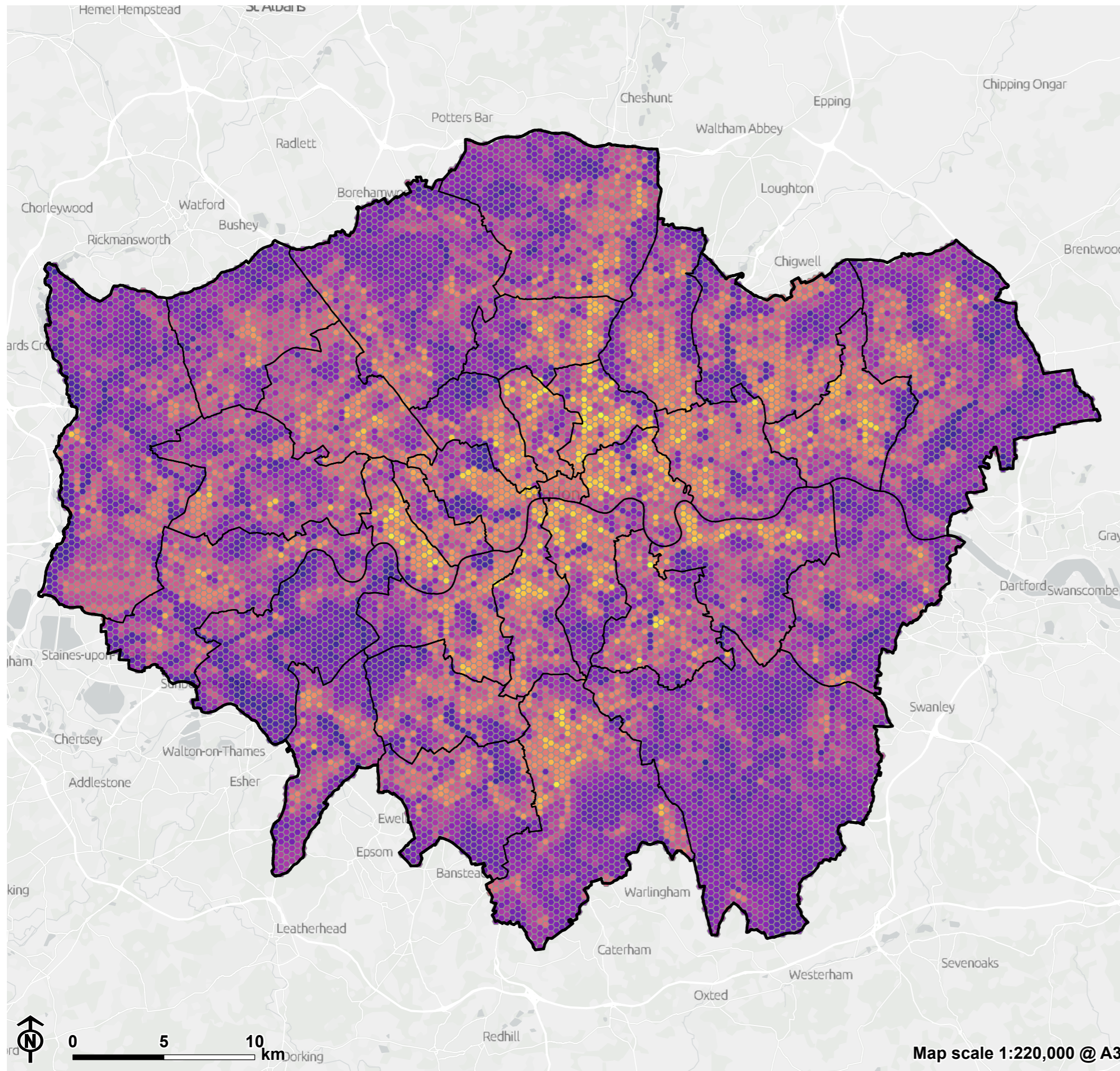
**6.15** The data output for London Borough of Southwark indicates the contrast between higher need urban locations (such as Bermondsey, Camberwell, Elephant & Castle and Peckham) and those areas of higher provision (such as Dulwich Park). The pattern of localised provision is also reflected on **Figure 6.9**, with sites such as Burgess Park and Southwark Park apparent as isolated pockets of GI provision.

Figure 6.2 Graph showing relative contribution of Strategic Objectives in MCA scenarios



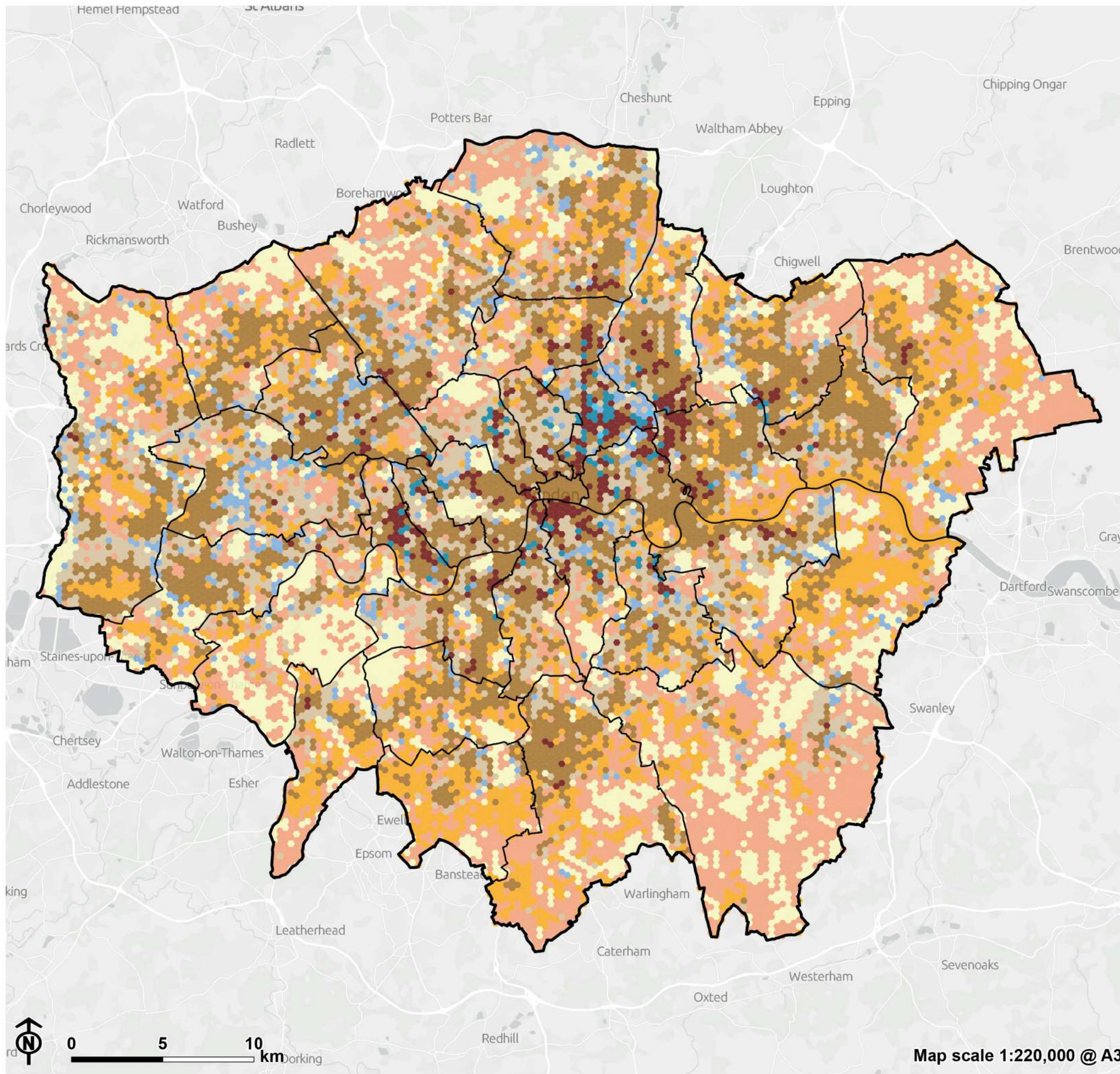


**Figure 6.3: Multi-criteria results - all strategic objectives combined and health and social factored in**

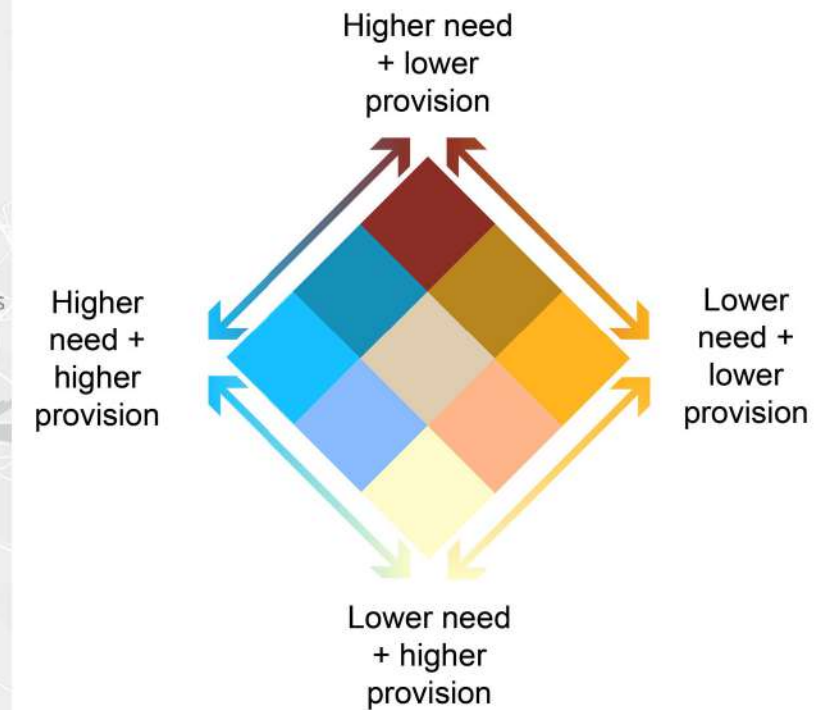


- Greater London Authority boundary
- Borough boundary
- Multi-criteria results**
- 10 - lowest overall need
- 39 - highest overall need

**Figure 6.4: Multi-criteria results - nine categories of need versus provision**



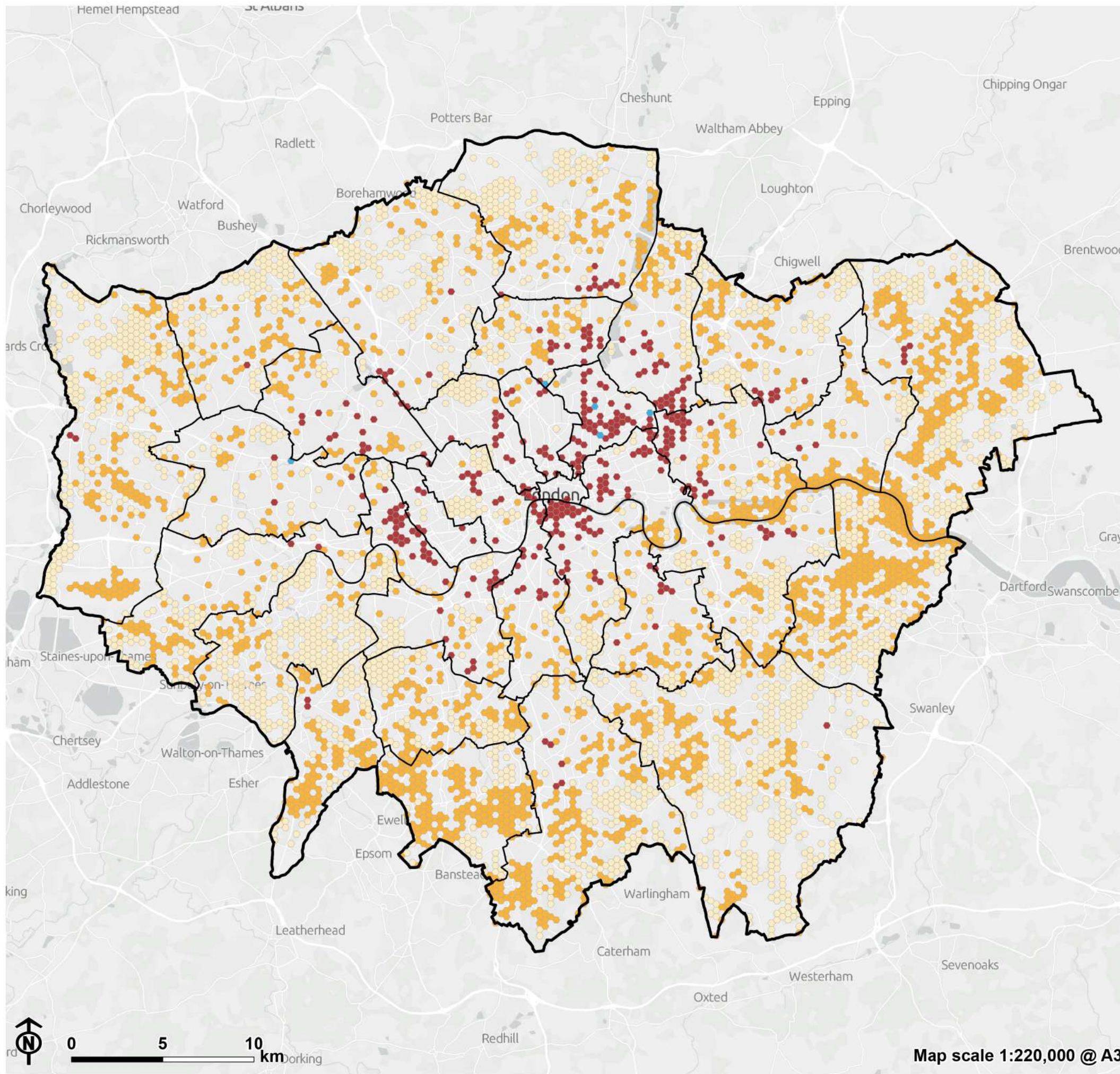
Greater London Authority boundary  
 Borough boundary





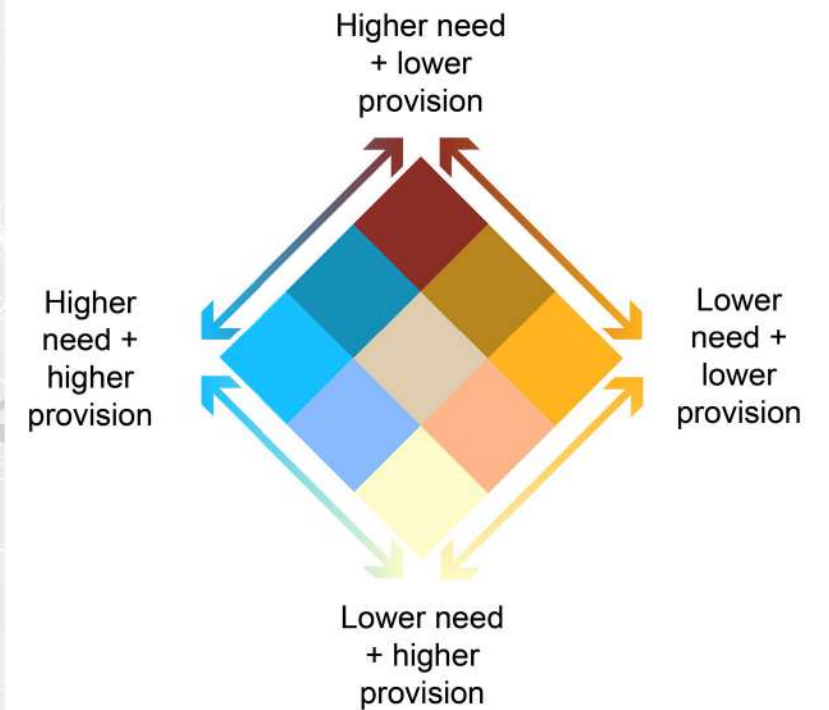
**Overall bivariate - all strategic objectives combined and health and social factored in**

- Higher need - Lower provision
- High need - Medium provision
- Higher need - Higher provision
- Medium need - Lower provision
- Medium need - Medium provision
- Medium need - Higher provision
- Lower need - Lower provision
- Lower need - Medium provision
- Lower need - Higher provision





**Figure 6.5: Four corners of the overall bivariate**



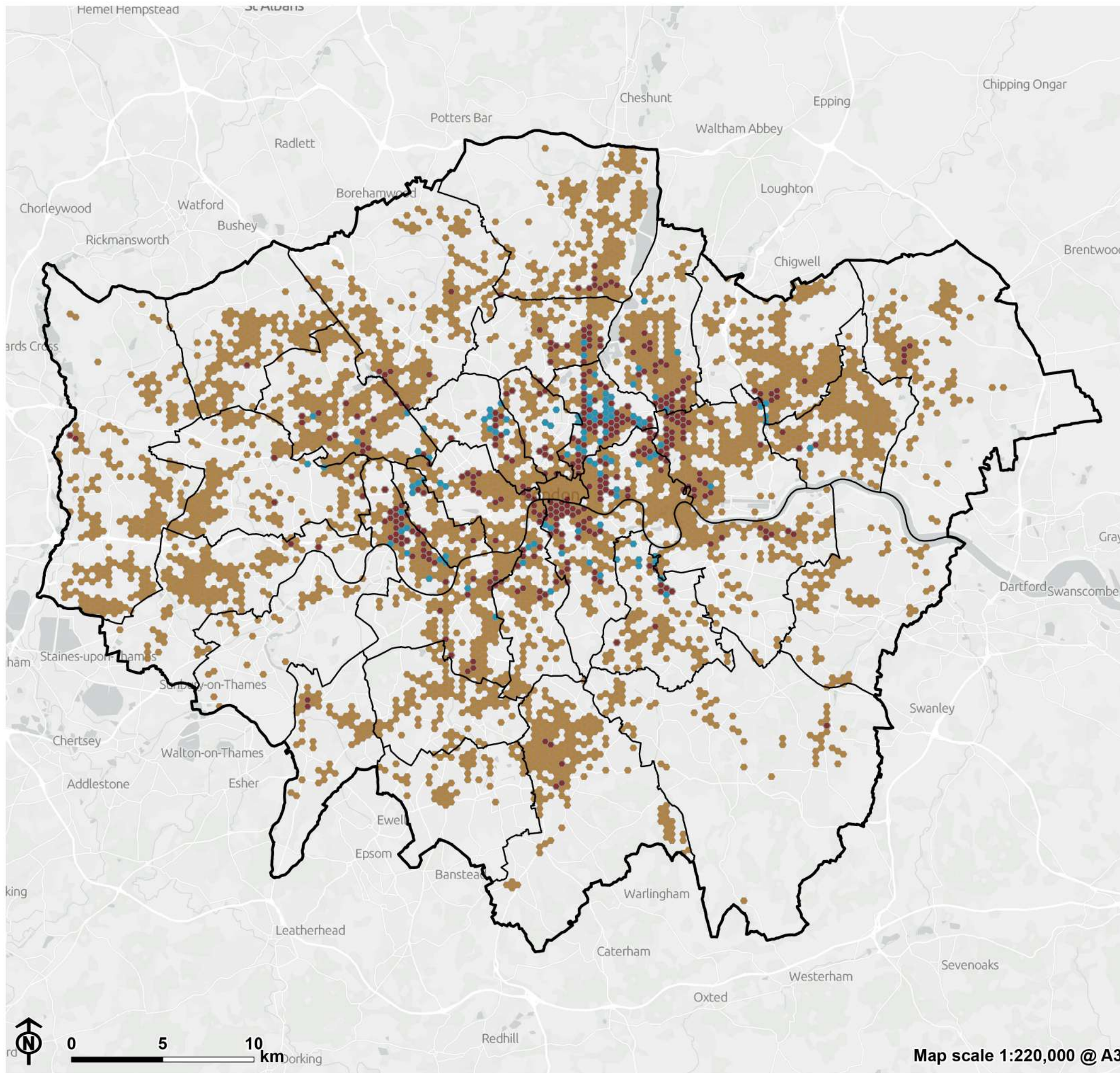
 Greater London Authority boundary  
 Borough boundary





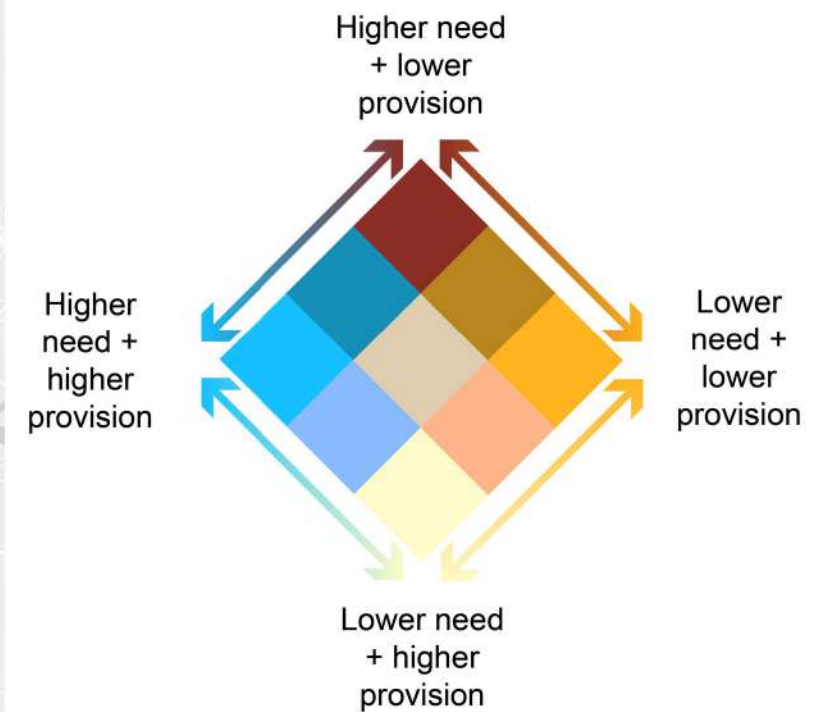
**Four corners - all strategic objectives combined and health and social factored in**

-  Higher need - Lower provision
-  Higher need - Higher provision
-  Lower need - Lower provision
-  Lower need - Higher provision




**Figure 6.6: Top categories of the overall bivariate**

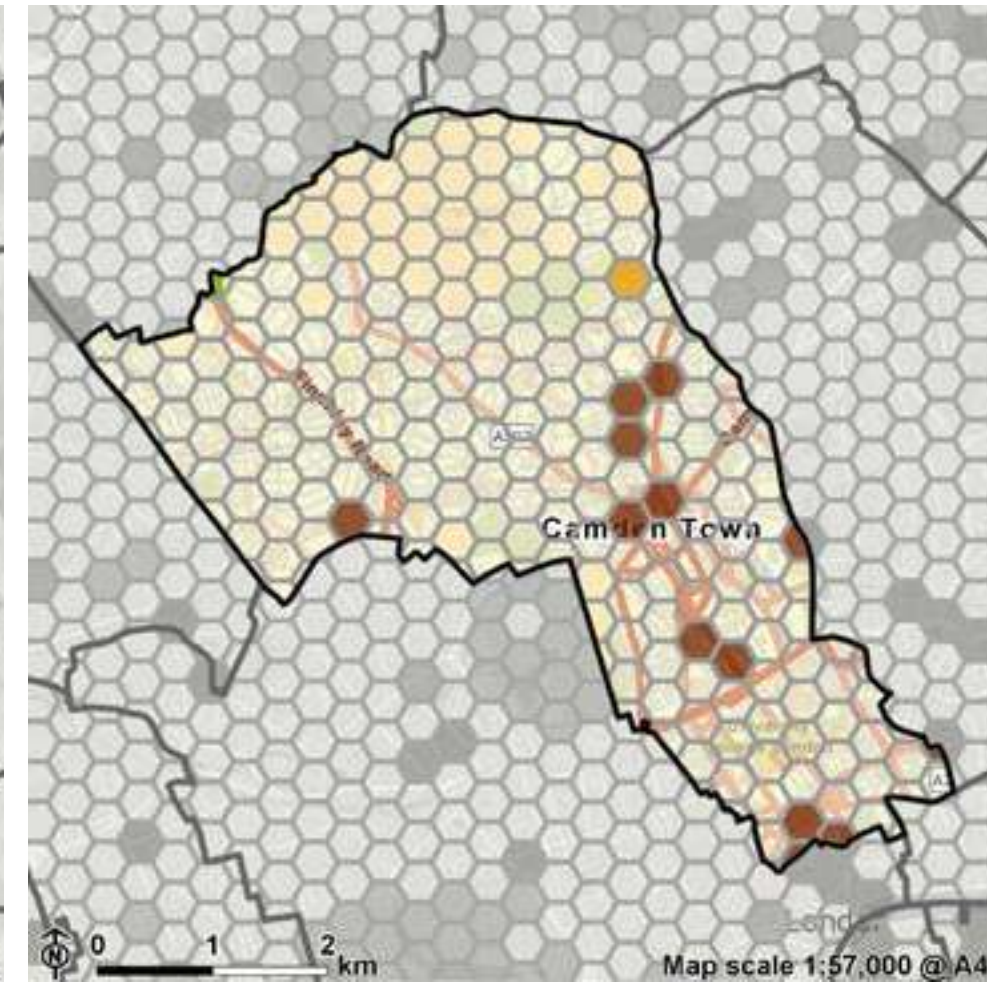
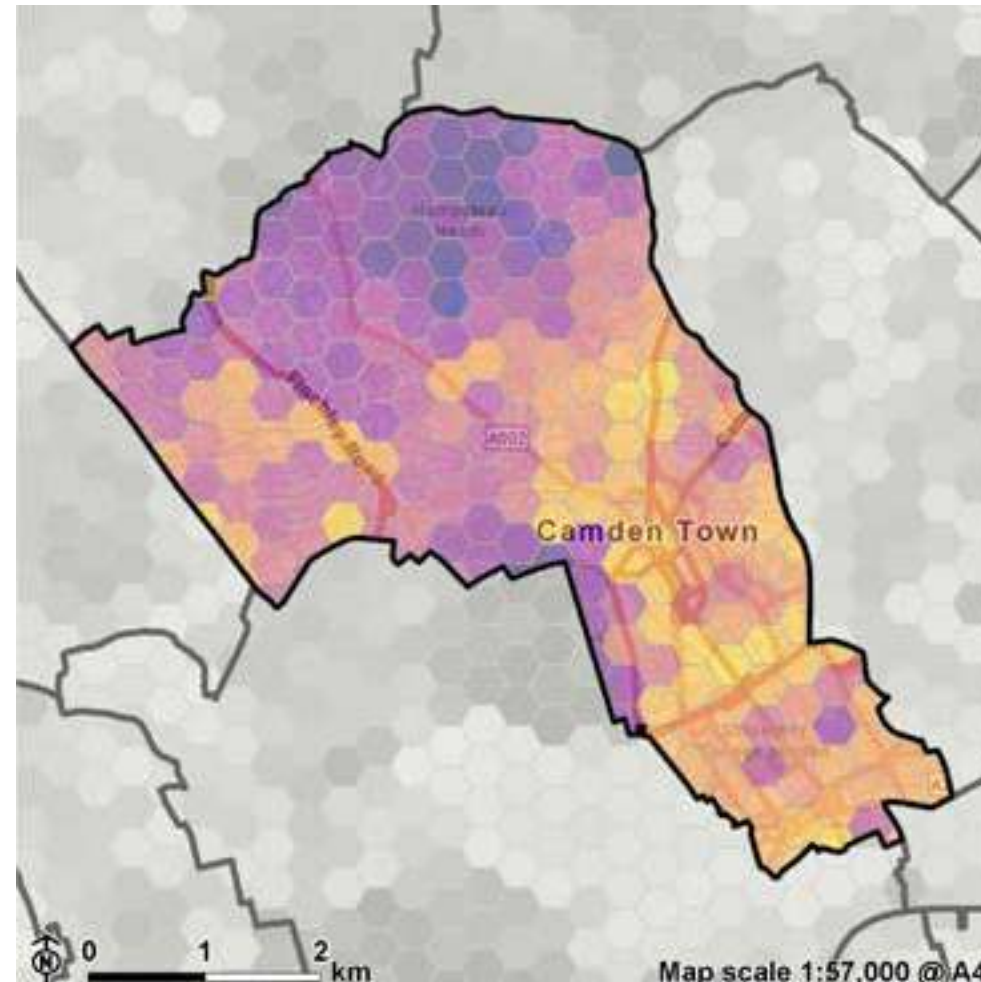
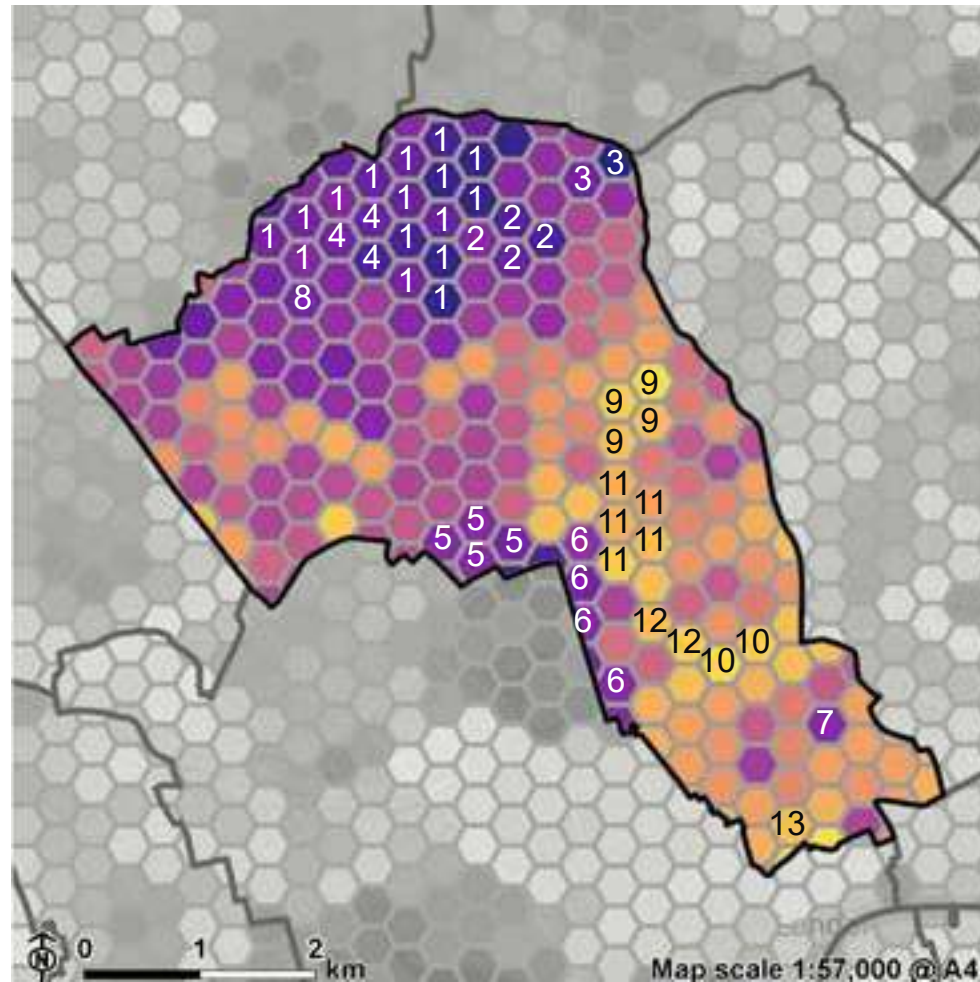
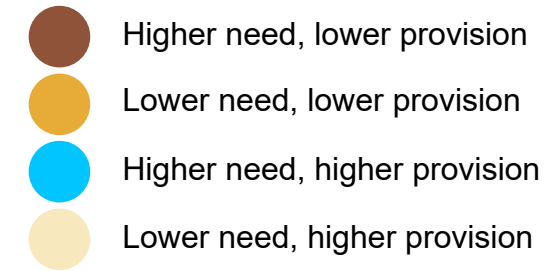
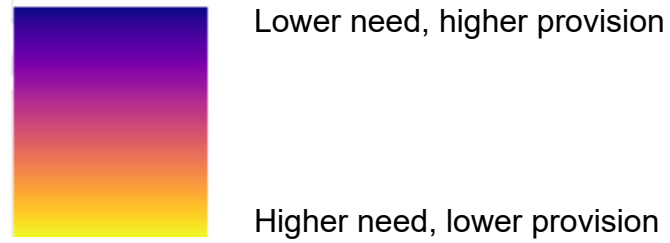


 Greater London Authority boundary  
 Borough boundary



**Overall bivariate top categories - all strategic objectives combined and health and social factored in**

-  Higher need - Lower provision
-  Medium need - Lower provision
-  Higher need - Medium provision



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**Lower need, higher provision**

- 1. Hampstead Heath
- 2. Parliament Hill
- 3. Highgate Cemetery
- 4. Vale of Health
- 5. Primrose Hill
- 6. Regent's Park
- 7. St George's Gardens
- 8. Fenton House and Garden (National Trust)

**Higher need, lower provision**

- 9. Kentish Town
- 10. A501 Euston Road corridor
- 11. Camden Town
- 12. Somers Town
- 13. St Giles

**Higher need, lower provision**

A501 Euston Road corridor, Camden Town, Kentish Town and Somers Town

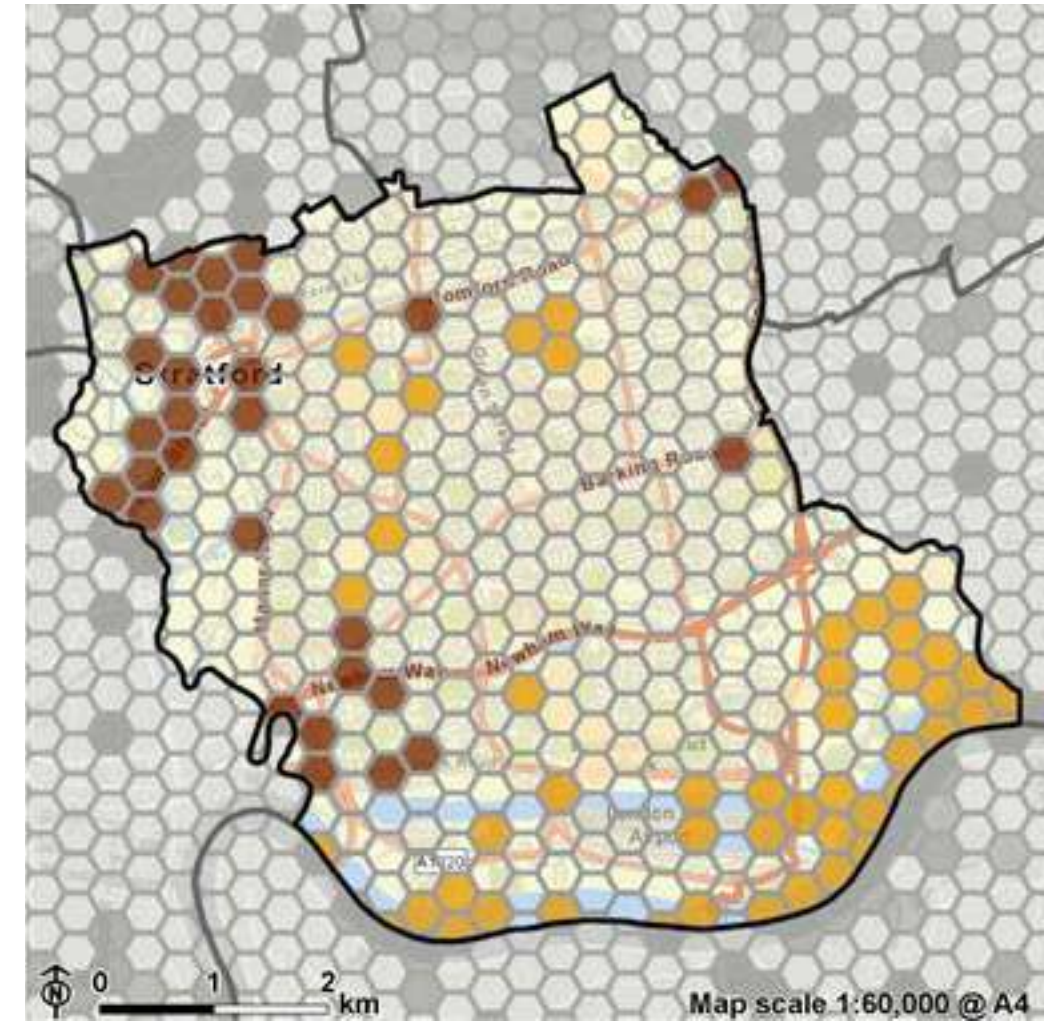
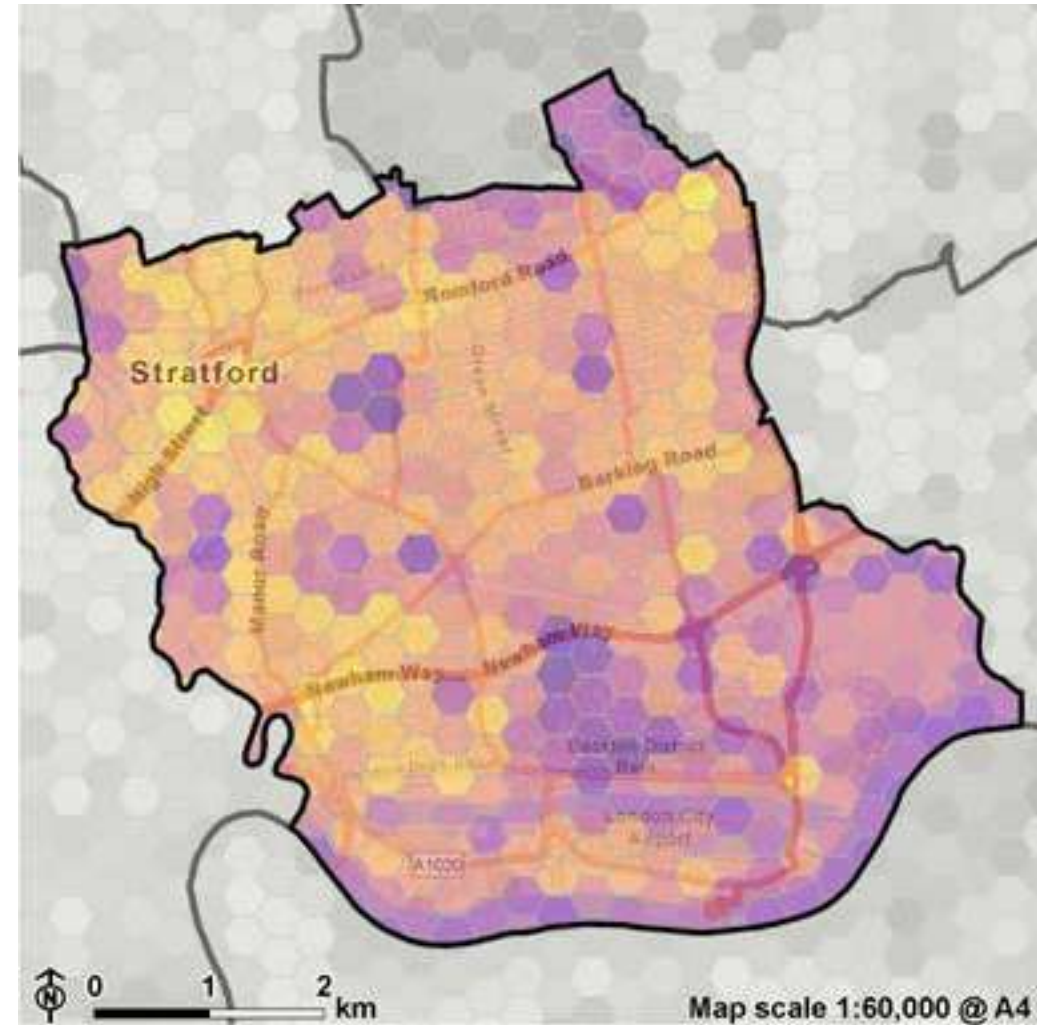
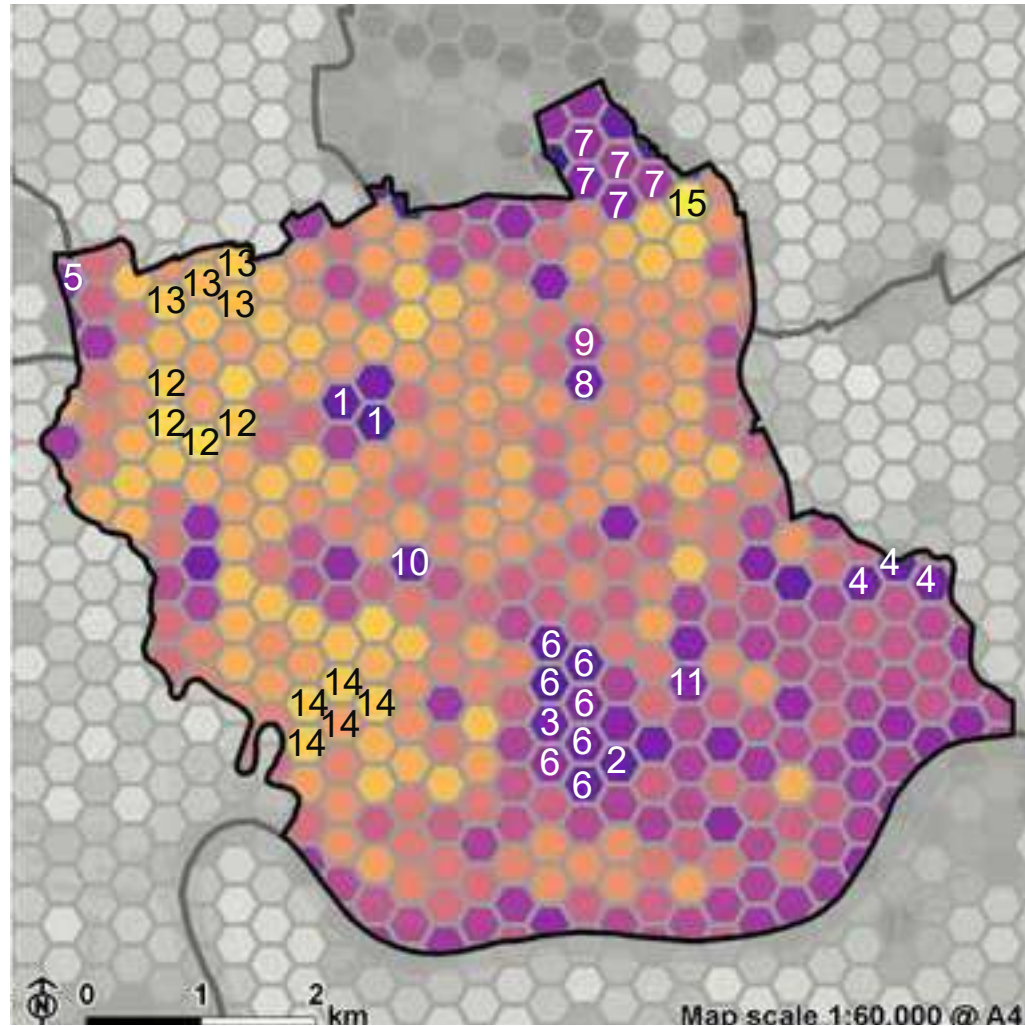
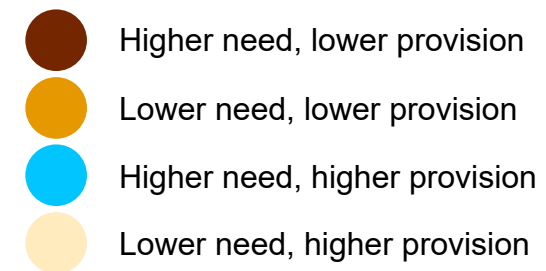
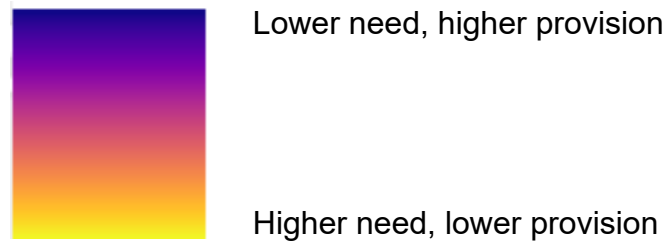
**Lower need, lower provision**

Dartmouth Park

**Lower need, higher provision**

Hampstead Heath, Parliament Hill, Fenton House and Garden (National Trust) and Highgate Cemetery

**Figure 6.7: Summary of MCA results for London Borough of Camden – MCA Scenario 1**



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**Lower need, higher provision**      **Higher need, lower provision**

- 1. West Ham Park
- 2. New Beckton Park
- 3. King George V Park
- 4. Barking Creek
- 5. Queen Elizabeth Olympic Park
- 6. Beckton District Park
- 7. City of London Cemetery
- 8. Plashet Park
- 9. Plashet Jewish Cemetery
- 10. Plaistow Park
- 11. East Ham Nature Reserve
- 12. Stratford Stations and Westfield
- 13. Stratford New Town
- 14. Canning Town
- 15. Little Ilford

**Higher need, lower provision**

Stratford, Canning Town, Little Ilford, East Ham and Forest Gate

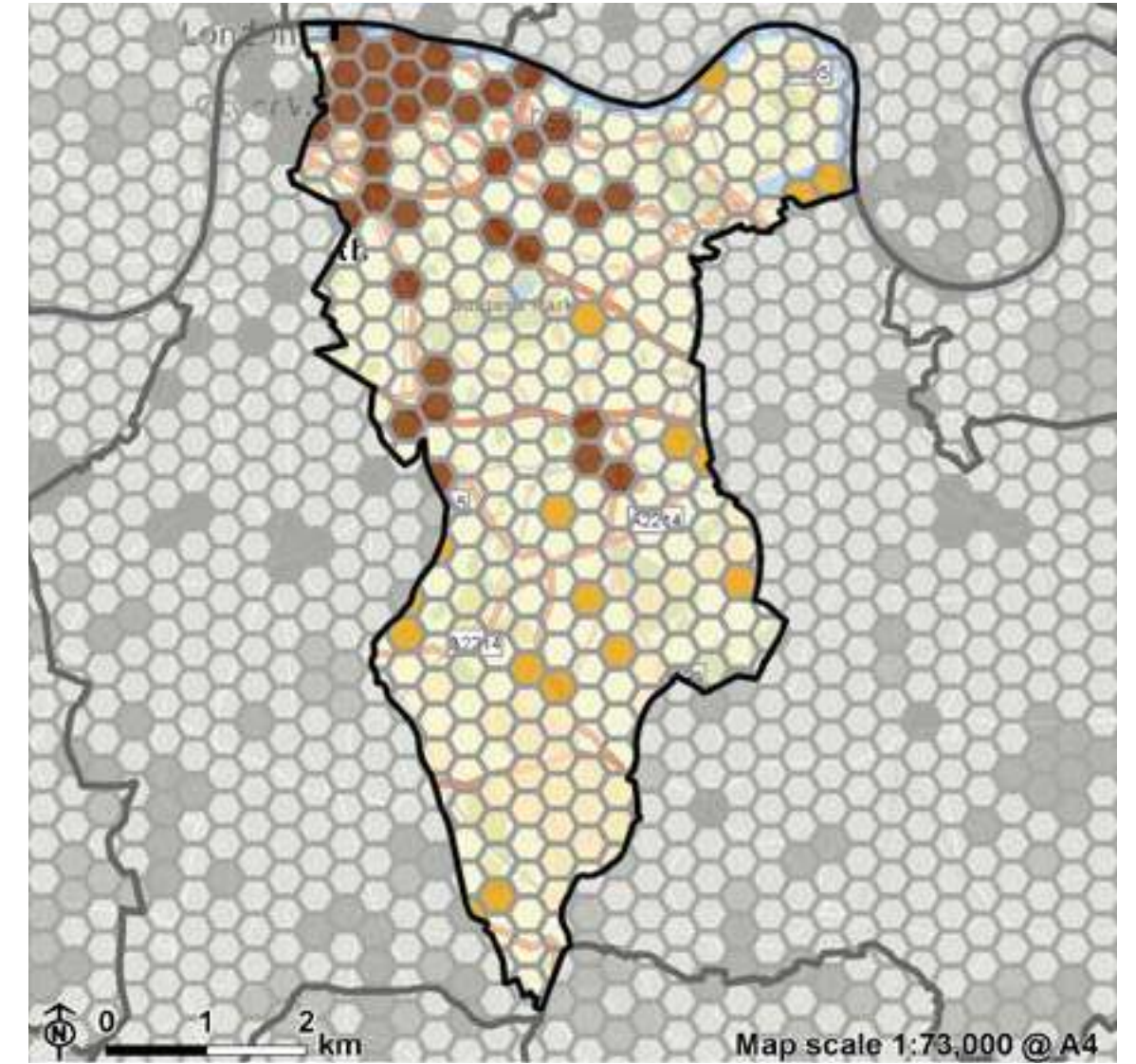
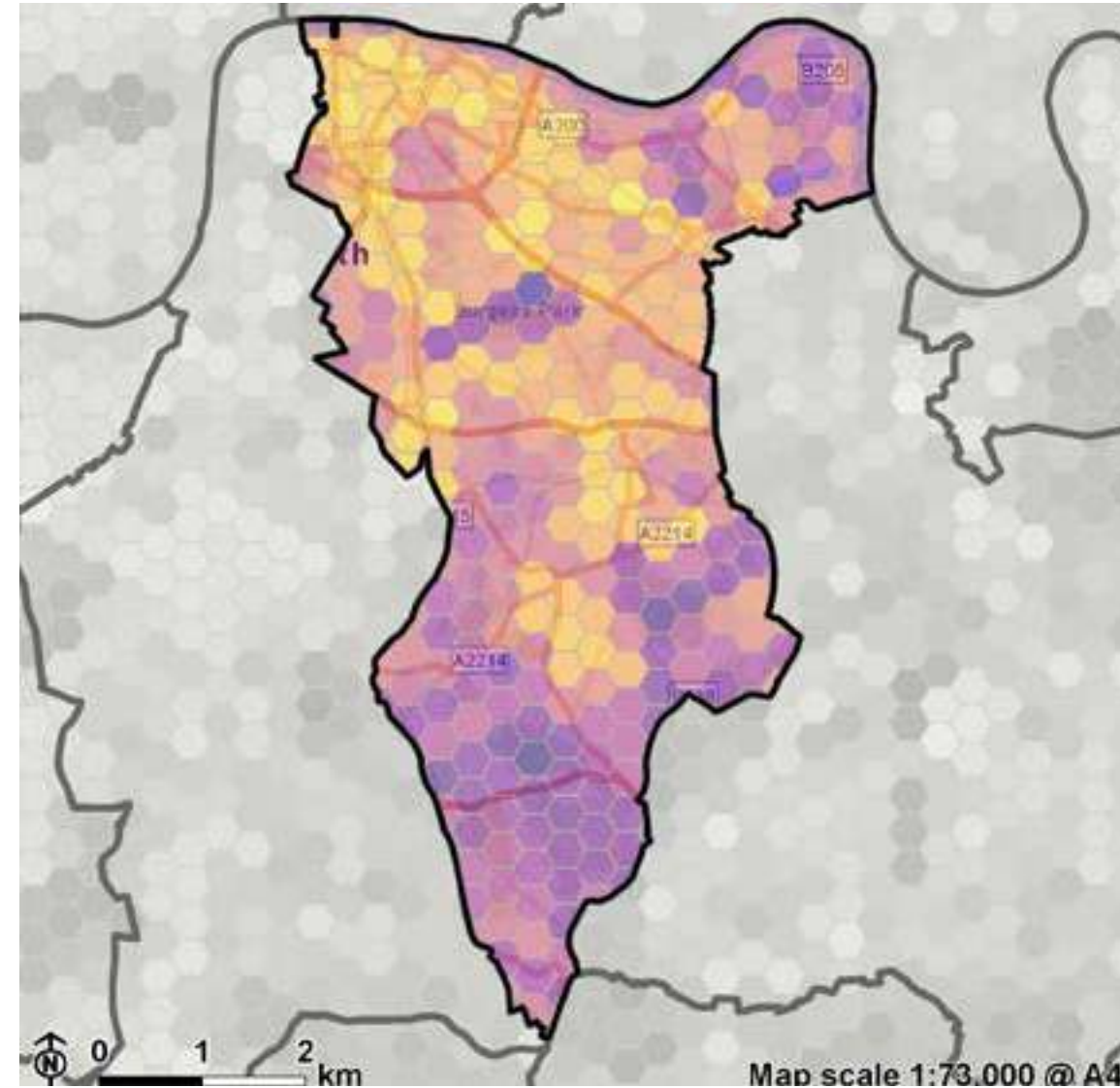
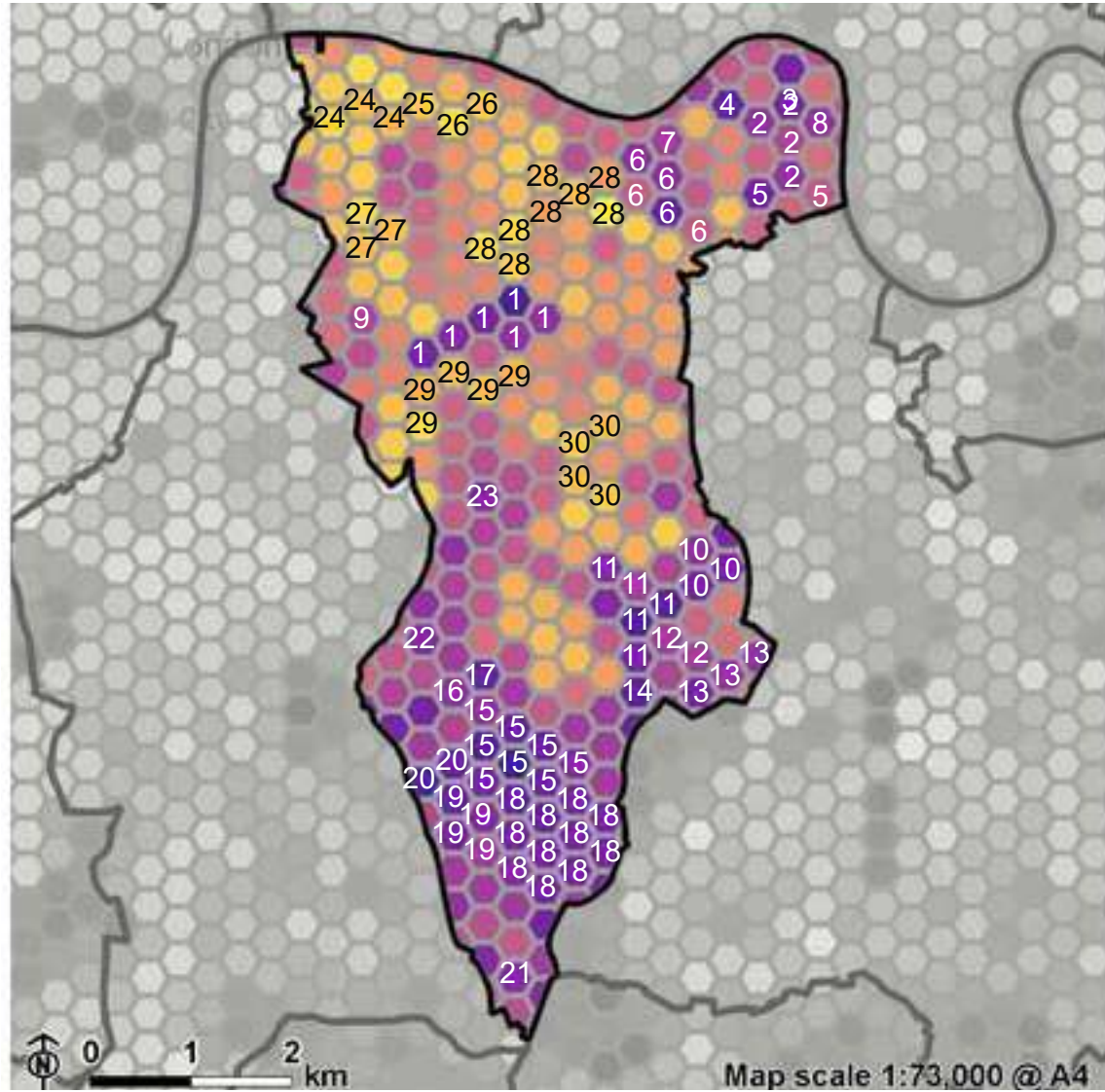
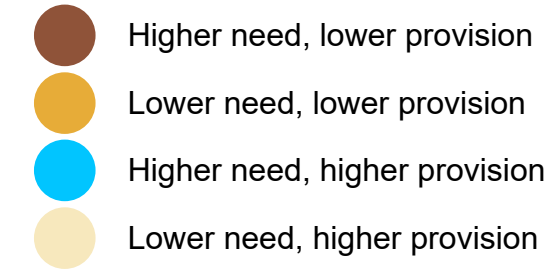
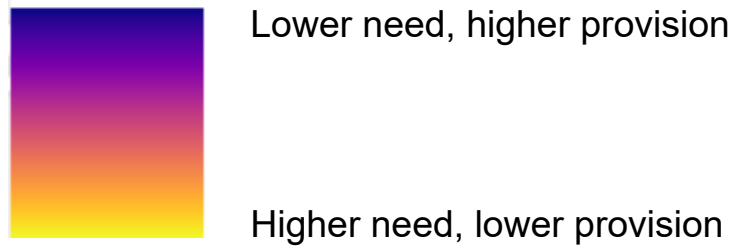
**Lower need, lower provision**

Silvertown, North Woolwich and Gallions Reach

**Lower need, higher provision**

Beckton District Park, Plaistow Park, West Ham Park, Plashet Park and City of London Cemetery

**Figure 6.8: Summary of MCA results for London Borough of Newham – MCA Scenario 1**



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**Lower need, higher provision**

- |                               |                               |                                       |
|-------------------------------|-------------------------------|---------------------------------------|
| 1. Burgess Park               | 9. Pasley Park                | 17. Open space at Townley Road        |
| 2. Stave Hill Ecological Park | 10. Nunhead Cemetery          | 18. Dulwich & Sydenham Hill Golf Club |
| 3. St. Paul's Sports Ground   | 11. Peckham Rye Park & Common | 19. Dulwich College                   |
| 4. Surrey Water               | 12. Beechcroft Reservoir      | 20. Belair Park                       |
| 5. Greenland Dock             | 13. Honor Oak                 | 21. Dulwich Upper Woods               |
| 6. Southwark Park             | 14. Camberwell Old Cemetery   | 22. Sunray Gardens                    |
| 7. King's Stairs Gardens      | 15. Dulwich Park              | 23. Grove Park                        |
| 8. Durand's Wharf             | 16. Herne Hill Velodrome      |                                       |

**Higher need, lower provision**

- 24. South Bank
- 25. Borough Market
- 26. London Bridge
- 27. Elephant and Castle
- 28. Bermondsey
- 29. Camberwell
- 30. Peckham

**Higher need, lower provision**

South Bank, Bermondsey, Elephant & Castle, Camberwell and Peckham

**Lower need, lower provision**

East Dulwich, Herne Hill, Nunhead and Peckham

**Lower need, higher provision**

St. Paul's Sports Ground, Nunhead Cemetery, Peckham Rye Park, Dulwich Park, Dulwich & Sydenham Hill Golf Club and Belair Park

**Figure 6.9: Summary of MCA results for London Borough of Southwark – MCA Scenario 1**

## Chapter 7

### Conclusions and Next steps

This chapter considers how the LGIF spatial data analysis may be used to define broad GI outcomes and inform decision making in relation to GI delivery across London. It also summarises the next steps in the LGIF development.

**7.1** The spatial data analysis has been carried out to help shape the development of a dynamic, comprehensive and user-friendly GI framework for London. As explained in **Chapter 1**, the LGIF will comprise the following elements:

- The outputs of the spatial data analysis (as presented in this report, with more detail about the process provided in the **LGIF Spatial Data Analysis Technical Methodology Report**).
- An interactive public-facing online map that presents the spatial data analysis, alongside relevant contextual datasets. This online map will enable users to interrogate the data to support GI decision making in London, at a range of scales.
- GI priority areas, representing the highest need for strategic GI, based on the outputs of the spatial data analysis.
- Supporting guidance explaining how to use the interactive online map and interpret the information it presents in order to guide future GI investment.

#### Next steps in the development of the spatial data analysis and LGIF

**7.2** Led by the GLA GI and GIS teams, the next steps in the development of the LGIF will involve building the online map, as well as further interpretation of the outputs of the bivariate (see **Chapter 5**) and multi-criteria analyses (see **Chapter 6**) to help address the Strategic Objectives and Inequalities identified in **Chapter 3**, and provide guidance to inform strategic decision making about GI interventions. LUC has provided a specification to the GLA for building the online map, which includes recommendations for how to present the data and outputs of the spatial data analysis, as well as the functionality of the web map that users would expect to be able to make use of. The next steps for interpreting the spatial data analysis and providing guidance are outlined below:

#### Consider contextual factors and areas of expected change

**7.3** This step will overlay relevant associated GLA datasets including areas of potential future change (e.g. strategic development locations from the London Plan) on top of the multi-criteria analysis maps to highlight opportunity areas where GI interventions may be more easily delivered, or targeted.

#### Define broad outcomes to provide a high-level guide to inform GI decision making

**7.4** This step is intended to involve identifying the relevant, broad GI interventions or solutions for different areas identified through the spatial data analysis. It will also set out specific types of GI solutions that could be used to target the Strategic Objectives, with links to case studies and other guidance (e.g. Natural England's GI Design Guide<sup>7</sup>). LUC has done some initial work to illustrate how this might be structured and presented, as described below.

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<sup>7</sup> Natural England (2023) Green Infrastructure Planning and Design Guide ([Natural England Green Infrastructure Planning and Design Guide 2023](#)).

## A strategic approach to the identification of GI interventions

**7.5** The outputs of the bivariate analysis relating to need and provision (see **Chapter 5**) and the 'bivariate diamond' categories have been used to define relevant GI outcomes across London, as outlined below:

- **Higher need and lower provision:** A strategic priority for the creation of new, multifunctional GI where possible and improving / adapting existing GI.
- **Higher need and higher provision:** A strategic priority for the improvement and adaptation of existing GI to maximise multifunctionality.
- **Lower need and lower provision:** Consider specific local needs and conserve, manage, adapt or create GI to support these.
- **Lower need and higher provision:** Consider specific local needs and conserve, manage or adapt GI to support these. Re-provision of GI in alternative locations may be appropriate where other priorities exist, or GI needs could be better met in other ways.

**7.6** This approach acknowledges that different types of GI intervention are required in different areas, and the method of GI delivery across London should not be limited to areas with highest need and lowest existing provision. The LGIF should also help to protect, conserve, maintain, enhance, restore and connect GI as appropriate in areas where GI already exists. Finally, while there may be areas of London that currently have lower need for and lower existing GI, they may become areas of higher need in the future due to land use change (e.g. development) that may occur.

**7.7** The LGIF has been developed to identify and deliver GI interventions in response to locally-specific Strategic Objectives. GI interventions may be defined to address single Strategic Objectives by using the bivariate analysis maps for individual objectives, or as part of a wider approach where multiple Strategic Objectives are considered to promote multi-functionality and maximise the delivery of GI benefits for Londoners. **Figure 7.1** lists example GI interventions which may be appropriate in areas where new GI interventions are needed to address areas of higher need and lower existing provision. With all Strategic Objectives listed down the left hand side, users of the LGIF would be able to consider which GI assets (top row) could be specified to deliver multi-functional benefits. It is envisaged that users of the LGIF online map tool would then be able to click on the interventions and bring up links to more detailed guidance relating to that particular intervention.

**7.8** **Figures 7.2** and **7.3** illustrate how the interpretation of the LGIF mapping outputs could be used to inform the selection and siting of GI interventions within the LBs of Hackney and Hammersmith & Fulham. These are examples only, and would not take the place of detailed borough-level GI strategies.

**7.9** The GI interventions shown by the symbols on the right hand side of **Figures 7.2** and **7.3** show those types of GI in the brightest green, that would help to address all of the Strategic Objectives identified as having the highest need in a particular location, e.g. in Stamford Hill in LB Hackney, the highest needs relate to achieving clean water and clean air in the borough, which could both be addressed through planting of street trees and increasing canopy cover, as well as retention of existing planting. In LB Hammersmith & Fulham, planting street trees and increasing canopy cover in all four locations identified (Shepherd's Bush, West Kensington, Hammersmith and Walham Green) would help to address all of the Strategic Objectives identified as having the highest need in those locations. The other GI interventions shown by the symbols in paler green would all contribute to at least one of the Strategic Objectives.

## Limitations of the spatial data analysis

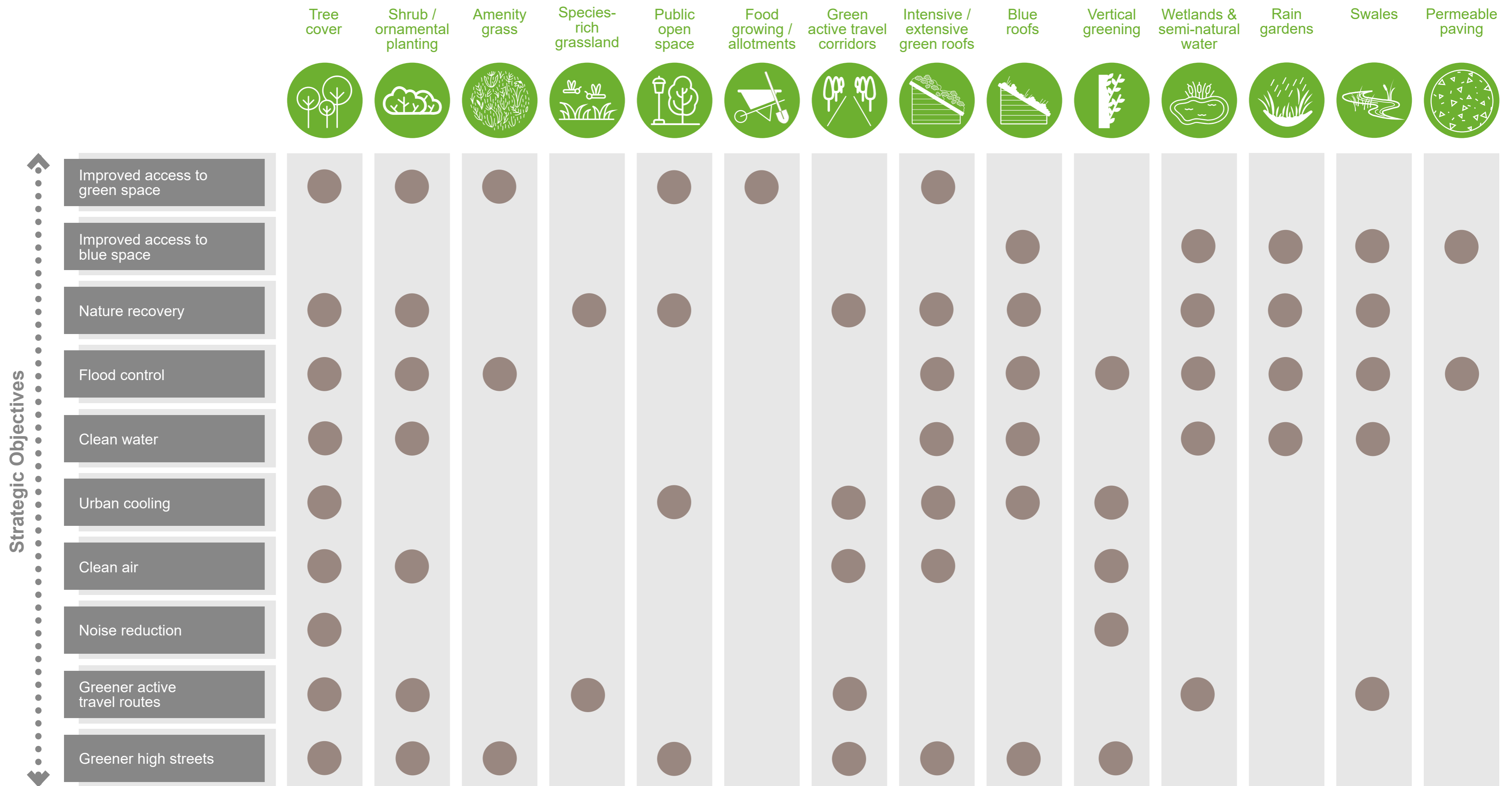
**7.10** Whilst the spatial data analysis undertaken for the LGIF has been comprehensive, thorough and tested through many iterations and collaborative sessions with the GLA GI team, other internal GLA stakeholders and external stakeholders, there are inevitably some limitations to its use:

- There are 10 Strategic Objectives and two Inequalities, which each comprise numerous indicator datasets, with thresholds applied. The datasets may be subject to updates, or newer, more appropriate/accurate datasets may become available. Thresholds may need to be reviewed if national or London Plan policies or standards change. The GLA recognises this limitation and is developing the online map so that datasets can be updated and the multi-criteria analysis re-run if needed. The **LGIF Spatial Data Analysis Technical Methodology Report** describes all of the datasets and sources, as well as the thresholds that have been applied to enable the analysis to be updated and replicated if needed.

- It is not intended that updates to the LGIF be used to compare temporal changes in GI provision and need with the first version of the LGIF, especially if the thresholds are updated. The LGIF's main purpose is to enable the comparison of relative levels of need or provision spatially across London.
- Due to the large variety of different types of datasets that have been used as indicators of need or provision for each Strategic Objective and Inequality, and the categorisation of them into low, medium and high groupings, the resulting numerical bivariate and multi-criteria values for each hex are only meaningful in terms of their relative value to each other (i.e. nothing can be inferred about a particular need or amount of GI provision within a hex based solely on the MCA numerical values). The underlying dataset for each indicator of need or GI provision would need to be referred to instead, e.g. to understand the specific level of air or noise pollution, or flood risk in a hex, or the amount and type of green space it contains.
- Similarly, the spatial data analysis uses selected datasets as broad indicators of 'need' and 'provision' for the purpose of strategic prioritisation when planning and delivering GI across London. However, when making decisions about a specific Strategic Objective (e.g. flood control or urban cooling) or specific locations (e.g. at the borough or LSOA level), there are likely to be more detailed/locally appropriate datasets to refer to, which should be considered where available.
- The LGIF is intended to be a strategic framework to help with decision-making at the London-wide scale. While the spatial data analysis identifies areas of need for GI and existing provision across London at the hexagon scale (just over 10 ha), and the online map will be able to be zoomed in to borough and LSOA level, it is not intended to take the place of detailed borough-level GI strategies which will be able to respond to local contextual data and factors which may influence the siting, planning and delivery of GI interventions at the local level. However, the LGIF online map, data and information it provides should still be useful at the local level, in particular for seeing where multiple benefits from GI interventions to meet cross-boundary needs could be achieved.

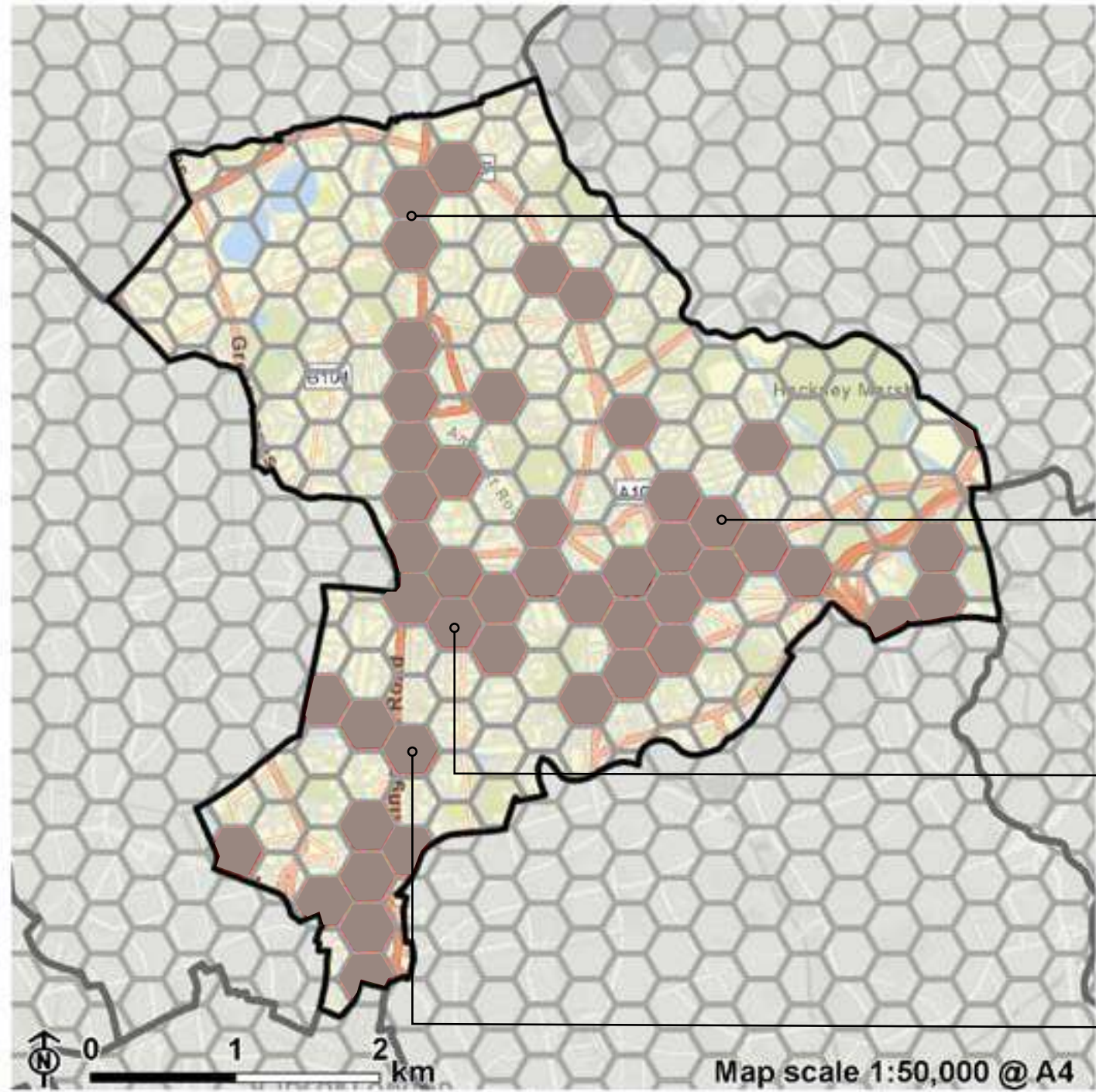
## Conclusion

**7.11** The spatial data analysis undertaken and presented in this report provides the GLA with an up to date understanding of the spatial variation across London in terms of needs that could be addressed by GI, and where multiple benefits from GI interventions could be achieved. This concludes an important stage in the development of the LGIF, and the outputs will now be developed further into an interactive online map, which will be hosted on the London Datastore, following user testing over the summer 2025. The GLA anticipates launching the final LGIF package including the online map, methodology, and user guide in 2026.



**London Green Infrastructure Framework**

Figure 7.1: Overview of GI interventions of relevance to help deliver specific Strategic Objectives



**Stamford Hill**  
 High overall need = clean water and clean air



**Clapton Park**  
 High overall need = improved access to green and blue spaces, clean water, urban cooling and clean air





**Dalston**  
 High overall need = improved access to green space, clean water, urban cooling, clean air and greener high streets

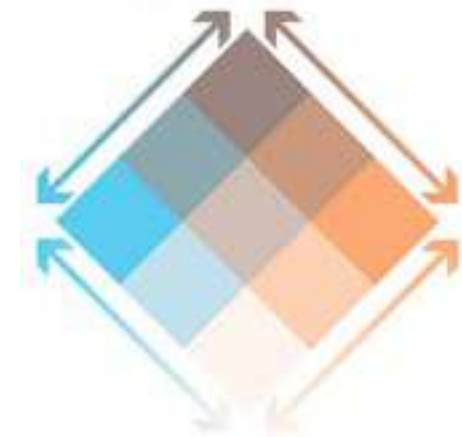


**Haggerston**  
 High overall need = Urban cooling, clean air, noise reduction and greener high streets



**Key:**

-  GI interventions which will help to address all the Strategic Objectives within a specific hex
-  GI interventions which will help to address a selection of the Strategic Objectives within a specific hex

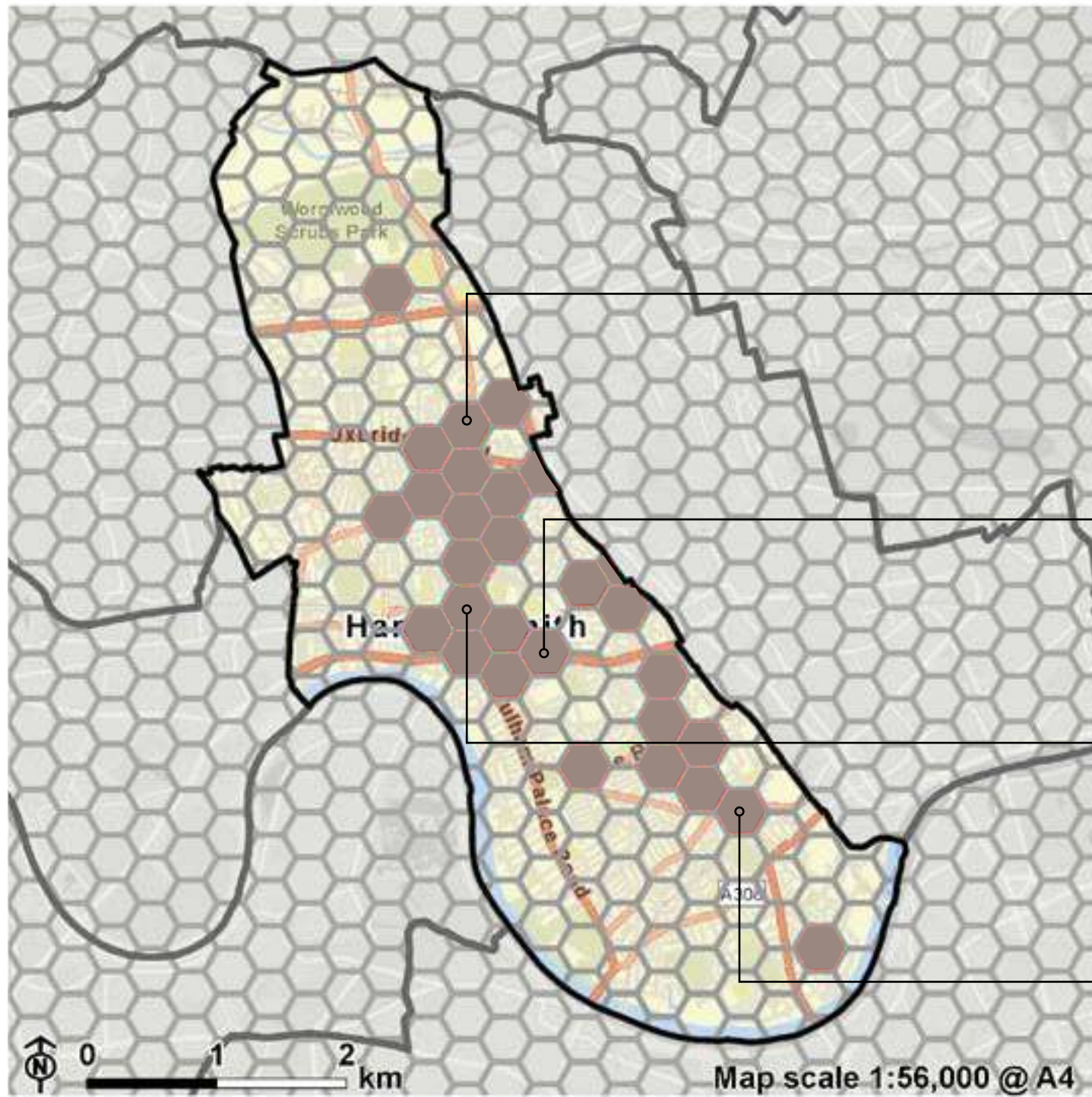


Higher need and lower provision



**London Green Infrastructure (GI) Framework**

Figure 7.2 Identification of GI interventions to help achieve spatially specific Strategic Objectives in the London Borough of Hackney



**Shepherd's Bush**

High overall need = improved access to green space, clean air and noise reduction



**West Kensington**

High overall need = improved access to green and blue spaces, clean air and noise reduction



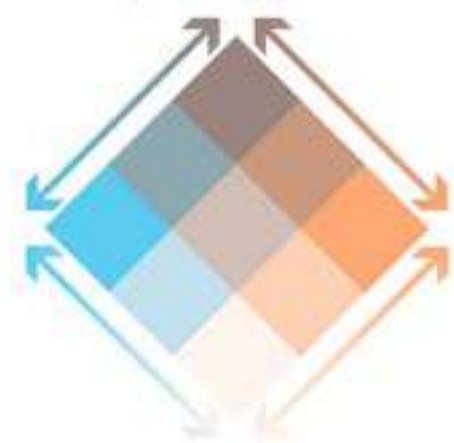
**Hammersmith**

High overall need = improved access to green space, clean air, noise reduction and greener high streets



**Walham Green**

High overall need = improved access to green and blue spaces, noise reduction and greener high streets



Higher need and lower provision

**Key:**



GI interventions which will help to address all the Strategic Objectives within a specific hex



GI interventions which will help to address a selection of the Strategic Objectives within a specific hex



**London Green Infrastructure (GI) Framework**

Figure 7.3 Identification of GI interventions to help achieve spatially specific Strategic Objectives in the London Borough of Hammersmith & Fulham

# Appendix A

## Summary of responses from consultation and engagement

### Findings from external stakeholder workshops

**A.1** CAG Consultants, working with LUC, were commissioned to design and deliver three stakeholder workshops in October 2024. The objective of these workshops was to:

- Understand how different stakeholders currently use spatial tools in relation to GI, including their gaps and deficiencies;
- Explore how different stakeholders might use the completed LGIF interactive map and framework;
- Scope out the most appropriate data available for inclusion in the LGIF; and
- Investigate what types of analysis stakeholders would like the LGIF to be able to do.

**A.2** Details relating to the workshop methodology and structure are described in the LGIF Stakeholder Engagement Report<sup>8</sup>. An overview of invitees to the three stakeholder workshops is also provided.

**A.3** Interactive sessions within the stakeholder workshops were structured around a series of questions aimed at gathering information relating to existing mapping tools and their usage. The potential scope, coverage and scale of LGIF was also discussed. A summary of the feedback and recommendations are summarised below under each of the workshop questions.

### What are the key areas of deficiency in existing spatial tools and maps in terms of GI?

- Enhanced usability: A more integrated, user-friendly, and updated approach to GI tools and mapping resources in London is required.
- Data completeness: LGIF needs to address frequency of updates and usability to enable the LGIF to effectively support GI work across diverse stakeholder groups and geographic areas.
- Data downloads: A standardised approach to data classification which enables the incorporation of local data is required. This would improve data reliability and enhance the strategic impact of GI in London.
- Data projections: Participants felt that a tool that projects into the future on climate impacts, population and densification would be very valuable.

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<sup>8</sup> CAG Consultants (on behalf of the Greater London Authority) (2024) London Green Infrastructure Framework Stakeholder Engagement Report

### How would participants like to be able to use the LGIF?

- **Integration and cross-boundary collaboration:** Participants repeatedly highlighted the LGIF's potential to facilitate collaboration between boroughs, improve cross-boundary planning, and provide a consistent framework for GI across London.
- **Guidance and user support:** Many users requested guidance on how to interpret the LGIF data for practical applications, such as planning and policy development, and how to integrate it with local tools and datasets.
- **Data accessibility and updates:** A recurring concern was the need for updated, reliable data and a centralised platform where all relevant GI data is accessible and regularly refreshed.
- **Support for strategic funding and planning:** The LGIF has been developed to help strengthen funding applications by linking projects to broader GI goals and offering evidence of GI's social, economic, and environmental benefits.

### What data analysis would be useful?

- **Customisation for local and site-specific requirements:** Attendees expressed a preference for tools that allow users to adjust metrics and criteria based on site-specific needs, and a desire to reflect local priorities, socio-economic factors and community engagement metrics.
- **Futureproofing and adaptation:** Participants would welcome a tool that includes projections for high-density growth areas, heat and flood risk, and GI / biodiversity needs to prepare for future urban challenges. They would also welcome a tool that allows tracking of GI over time and enables scenario-based analysis, planning for evolving local population, housing growth and climate risks.
- **Prioritisation of opportunity areas and strategic corridors:** Users would like to be able to identify GI opportunity areas, particularly in high-growth zones and biodiversity-sensitive regions. Participants highlighted the value of cross-cutting datasets that assess multiple GI benefits (e.g. flood prevention, biodiversity, recreational access) to prioritise interventions with the greatest community and environmental impact.
- **Integrated mapping and user-friendly analysis:** A consolidated tool aggregating data from multiple sources would be valuable for comparing variables like canopy cover, flood risk, and socio-economic conditions. This would enhance accessibility and streamline decision-making. Tools with bi-variate functionality to

compare selected data points (e.g. tree equity and income levels) would support more nuanced decision-making.

- **Downloadable shape-files:** Whilst interactive mapping tools are valuable, users also require options to download shapefiles and data layers for use in internal systems, allowing for greater adaptability and precision in analysis.
- **Generating reports:** Participants would welcome the opportunity to be able to click on the LGIF tool and generate a report or additional information for an area (e.g. for a 350m hex, or at Middle Layer Super Output Area (MSOA) level).

### What are the key datasets that should be included?

- **Equity and demographic data:** Participants emphasised the need for social equity data (e.g. race and gender) to ensure GI benefits are accessible across diverse demographics. This was considered to be an oversight in the current Natural England 'Benefit Principles' (see **Chapter 3**).
- **Safety and accessibility indicators:** Safety metrics such as crime data were seen as essential but not fitting neatly within the Natural England 'Benefit Principles'. Inclusion of these metrics would make GI more user-centred, reflecting both safety and accessibility.
- **Climate and human health link:** To align GI more closely with public health and climate resilience, participants recommended including data on climate risks (heat and flooding – listed against some but not all of the five themes) as well as health and wellbeing, especially for disadvantaged communities.
- **Broader categories for emerging needs:** Suggestions included integrating data on circular economy, food, social housing, and community-specific needs like vertical farming and community gardening, highlighting GI's evolving role.
- **Science-based and real-time data:** Participants noted that scientific accuracy and currency in data are essential for planning decisions, encouraging the use of free resources like the EU's Copernicus data and other real-time, satellite-based datasets.
- **Planning and infrastructure data:** Public health data, community engagement data, citizen science, wildlife charity datasets, and local planning data were seen as valuable for the LGIF. The London Development Database was suggested as a possible data hub for planning application insights on trees, green roofs, and sustainable drainage.

- Land use and management responsibility: Participants stressed the need for data on land management as well as management responsibility, including the importance of GI on social housing estates, where data on current GI assets and opportunities is limited.

### What scale would participants find most useful?

- Ward-level detail: Localised data, especially at the ward or even street level, is necessary for site-specific GI planning and something that many feel is lacking in existing tools. This granularity would aid in assessing community needs, health indicators, and project outcomes more accurately.
- Cross-boundary analysis: Many participants pointed to the need for data that extends beyond borough boundaries, enabling a comprehensive, interconnected approach to GI across London. This would be crucial for planning green corridors and managing shared resources.
- Broad strategic scale for planning and funding: City-scale data, which integrates ward-level details, would support wider Strategic Objectives, such as prioritising investment in deprived areas, building cross-borough GI networks, and targeting climate resilience measures.
- Multi-layered, selective mapping: A London-wide map that integrates selective data layers on GI priorities and regional infrastructure is essential for cross-boundary collaboration and for aligning with national GI policies.

## Findings from external scoping calls

### Environment Agency

**A.4** A summary of feedback received during a meeting on 8 October 2024 is outlined below:

- Environment Agency is considered both a user and contributor of data – the LGIF should be used as an evidence base to support Environment Agency ambitions.
- Beneficial for Environment Agency if the LGIF can tie to water management strategies / catchment planning / Water Framework Directive to support leveraging of funds. The Environment Agency wants to push for alignment of LGIF with the Water Framework Directive and catchment planning for blue infrastructure.
- The Environment Agency is keen to bring strategies together as much as possible, avoiding duplicate procurement and use of public funds.
- Setting targets – consideration should be given to what a good measure of success would be for LGIF e.g. in 10 years and 20 years? What does London need to do to be climate resilient etc.?

- Environment Agency is updating its five year monitoring review for TE2100 – will share any data gathering to avoid duplicate public procurement.

- LGIF should not be a planning document, instead allowing for more strategic decision making beyond planning. The tool should allow for prioritisation and strategic investment.

### Natural England

**A.5** A summary of feedback received during a meeting on 3 September 2024 is outlined below:

- LGIF should not duplicate what the Natural England GI Framework delivers, but should add London specific context and datasets. Consideration should be given to how a London-focussed GI Framework might add value to what Natural England already provides?
- Structuring LGIF with the Natural England 'Benefit Principles' makes a lot of sense as it ties back into the national framework.
- Additional detail regarding user journeys for local authorities was released on 4 September 2024. Version 2.1 of Natural England GI Framework mapping provides a number of additional datasets – e.g. urban heat data within the London context.
- Natural England requests additional clarification on how the GI Framework, LGIF and borough GIFs all sit together.
- Further clarification on how a borough would refer to both LGIF and NEGIF guidance when developing a GI strategy.
- GIGL data is generally more advanced than Natural England GI Framework data within the London context.
- Access to green space – discrepancies between the London Plan and Accessible Greenspace Standards. Which one will take priority in the LGIF?
- Make sure all data is shareable and interchangeable – boroughs / stakeholders can feed into their own systems and strategy development at borough level.
- Borough joint strategic needs assessments conducted at borough level – may be other datasets that are London-wide.
- Natural England evidence series published last year: The 'Included outside' publication series ([naturallengland.org.uk](http://naturallengland.org.uk)) - evidence series about barrier to access to nature / green space for different groups.

- Natural capital – could use LGIF to steer stakeholders towards natural capital accounting – roll out / capacity building stage.

### Transport for London

**A.6** A summary of feedback received during a meeting on 11 September 2024 is outlined below:

- Transport for London (TfL) data is all available via GiGL.
- An updated biodiversity baseline for TfL land will be available in late 2024.
- Walking data is available via Go Jauntly, albeit charge to access data.
- Potential to map proposed green corridors on TfL land as part of the LGIF.
- Would be useful if LGIF could indicate GI prioritisation to assist with funding bids.
- Potential for LGIF to show different approaches to management and maintenance.
- Some case studies as part of LGIF would be useful e.g. successful low maintenance roadside habitats etc.

### Urban Design London

**A.7** A summary of feedback received during a meeting on 3 September 2024 is outlined below:

- LGIF provides an opportunity to inform a spatially intelligent approach to planning policy for varying land uses, including Green Belt.
- The GLA should consider how useful strategic scale data analysis is for differing audiences. For instance, is London-wide mapping helpful if boroughs are already looking at data at the hex level?
- Boroughs that are ahead and already using their own data should be consulted - how would LGIF support them? What could LGIF provide to support those boroughs that want to create their own / more granular data outputs?
- The LGIF will provide two products at two different scales e.g. GLA framework with broad priority areas and a separate public facing tool which works at the LSOA level for borough use.
- The mapping outputs need to avoid conflict with local priorities - e.g. priorities of local groups or locally defined priority areas. The LGIF should be a tool which considers local visioning, rather than a directive.
- User guidance for the LGIF should be developed, describing how LGIF should be used by different

audiences e.g. boroughs. Include caveats where required - LGIF evidence base provides best available data but local circumstances / considerations should be taken into account.

- Use LGIF to describe the 'big picture' narrative for delivery of GI benefits at a London-wide scale.
- The potential exists for LGIF to demonstrate GI benefits on a London-wide scale.
- The LGIF will provide spatial mapping for London at the regional scale. Beyond that, design codes are required at the local level (i.e. how to build / implement / embed the different types of major change we want to see). For instance, guidance is required to advise what type of Sustainable Drainage Systems (SuDS) should be used to achieve change?
- Next step for boroughs, after understanding what the mayoral priorities are, should be to work out priorities for their area using LGIF evidence base. This includes the identification of local needs and delivery.
- Part of roll out of LGIF should include capacity building / working with boroughs / and other stakeholders to advise on the use of the LGIF.

### London Councils

**A.8** A summary of feedback received during a meeting on 19 November 2024 is outlined below:

- Surface water flood risk work which recommends a catchment partnership approach to support cross-borough collaboration is currently being progressed.
- Priorities for land use and infrastructure across London Limited Land are in the process of being established. London Councils is keen to promote smaller but cumulative interventions in densely populated areas across London.
- The spatial layers for the London network available from Sustrans, Thames Water and the Environment Agency were highlighted.
- London Councils propose to use LGIF to support cross-borough collaboration. The tool will also be used to develop the business case for projects / grant funding applications by integrating the findings with socio-economic data.

### Findings from the London GI Partnership group

**A.9** A meeting with the London GI Partnership (LGIP) on 1 August 2025 was used to introduce the approach to the LGIF

and discuss key considerations with stakeholders. A summary of feedback received is outlined below:

- Priorities for GI / nature recovery within the LGIF should include enhanced quality and connectivity of native woodlands, increased urban tree canopy, and improved access to nature.
- Some concerns regarding the use of the 'Benefit Principles' within the Natural England GI Framework, as "ugly" places can be important for biodiversity.
- Alignment with both national and local strategies relating to GI delivery should be sought.
- Request for integration of food growing opportunities within the LGIF.
- Concern over the perceived dominance of flood risk considerations in the development of the LGIF. Request for consideration of connectivity and water quality factors.
- The need for granularity at the borough-level was emphasised, in order to consider issues such as access to green space and nature.
- The scale of opportunities should balance granularity with a strategic pan-London view.
- Need for the LGIF to coordinate with ongoing initiatives and strategies (e.g. LNRS).

**A.10** A further meeting with LGIP was held on 29 January 2025 to inform the development of the LGIF. The objective of the session was to update and gather feedback on the development of the Strategic Needs (see **Chapter 3**), the approach to spatial analysis and strategic GI priority areas. A summary of feedback received is outlined below:

- Opportunity to incorporate datasets relating to food deserts / food insecurities within the LGIF.
- The decline in landscape quality / aesthetic value in connecting green space in the rural / urban fringe in London was flagged.
- River flooding concerns within London and the Mayoral priority for clean and healthy waterways was highlighted.
- Potential issues regarding the interpretation of datasets was flagged.
- The importance of currently unmanaged sites with high potential for habitat creation was emphasised.
- Queries relating to the approach to the weighting of Strategic Needs.
- Need for future fluvial and tidal flood risk to be integrated within the LGIF.

- Datasets to inform the analysis of social inequalities were discussed.
- The importance of water quality, including the importance of nature-based solutions, was highlighted.
- Need for alignment between LGIF and LNRS, and how nature recovery priorities have been mapped within the tightly constrained urban context of London.
- Consideration should be given to greening within private gardens, especially in relation to the extent of front and back garden hard landscape.
- The importance of data efficacy and the need for a system to regularly update datasets.

### Findings from the LGIF internal coordination group

**A.11** A workshop was hosted with the GLA's LGIF internal coordination group on 4 December 2024. The purpose of the session was to explore and agree the approach to the initial data analysis. The Strategic Needs used to structure the spatial data analysis were also reviewed. Key findings are summarised below.

#### How can the LGIF best support work across the GLA?

- Promote increased and improved GI through mayoral policy, strategic planning and investment.
- Support strategic decision making by identifying opportunity areas at the London scale.
- Inform evidence-based decisions regarding mayoral investment as well as promoting GI delivery.
- Convene new partnerships and facilitate joint planning to deliver GI outcomes.
- Influence and build capacity among stakeholders to embed enhanced GI practices.

#### Which tools / mapping / spatial data are currently used to inform GLA decision making? Are there any limitations?

- A range of internal maps and resources are used within GLA teams, as well as data and mapping provided by national government or non-governmental organisations. Notably, only one GLA team (Regeneration) referenced use of the GI Focus Map.
- GLA teams currently use data and mapping across a wide range of sources and support was expressed for a single source of all data related to GI as a 'one-stop shop'.

- Existing mapping does not enable users to overlay data across policy priorities in relation to GI, as well as combine data across a range of geographic and temporal scales.

**What additional factors would you like to explore in relation to GI, to inform your work?**

- Identify strategic opportunities, including opportunities for cross-borough collaboration.
- Understand which specific GI intervention would be best suited to particular locations, as well as which GI interventions would be most impactful.
- Explore opportunities to promote enhanced climate resilience.
- Identify areas deficient in GI to support future investment.

**A.12** A subsequent workshop was delivered with the LGIF internal coordination group on 6 February 2025 to provide an update on the development of the LGIF. Detailed comments relating to the approach to spatial data analysis, as well as suggestions for additional datasets to be explored were recorded.