

Heathrow Strategic Planning Group

EDVAP Baseline Study



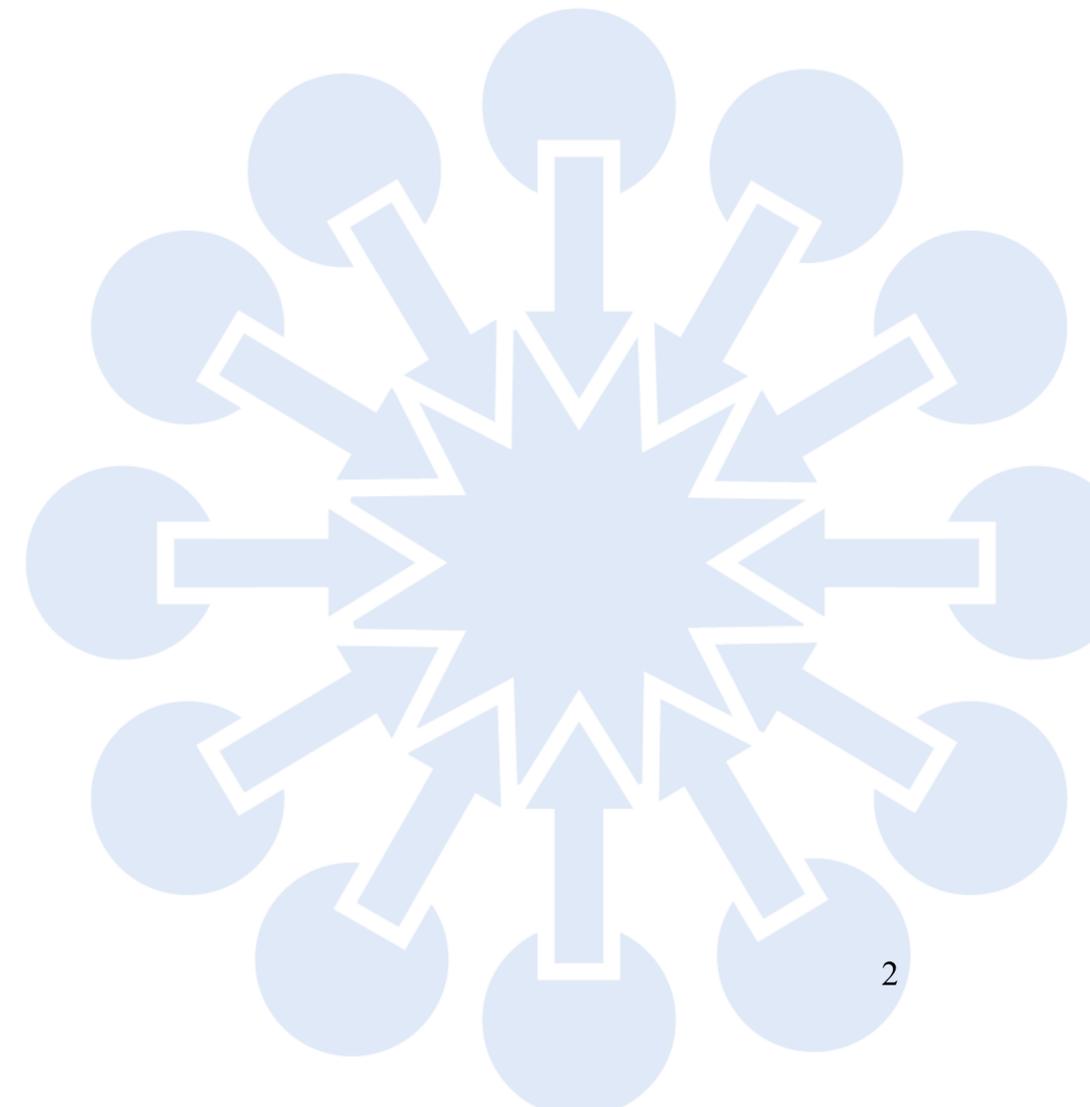
Disclaimer

ARUP

This report has been prepared specifically for and under the instructions and requirements of the *Heathrow Strategic Planning Group* under an appointment to undertake the study “*Economic Development Vision and Action Plan*”.

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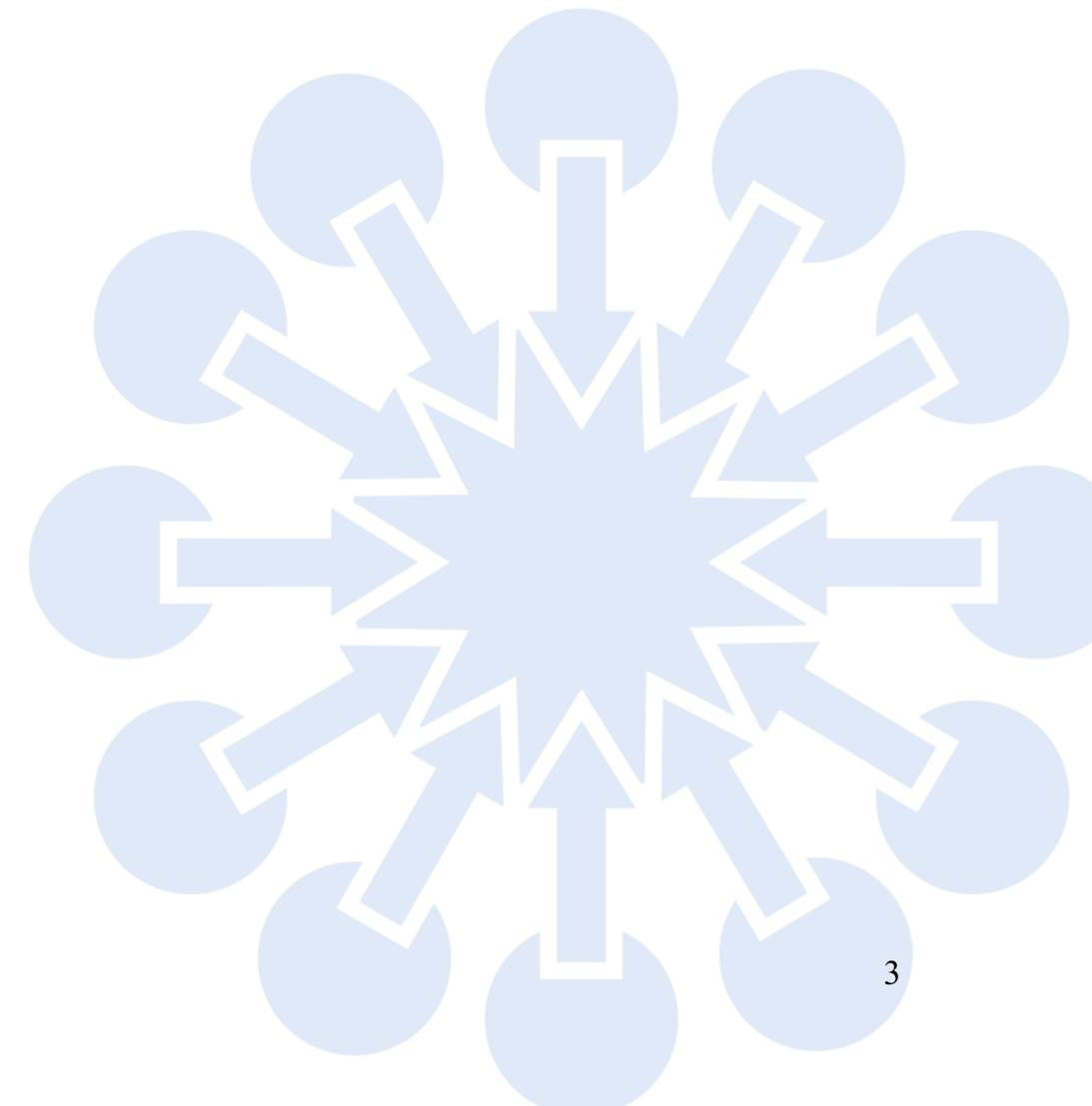
March 2020



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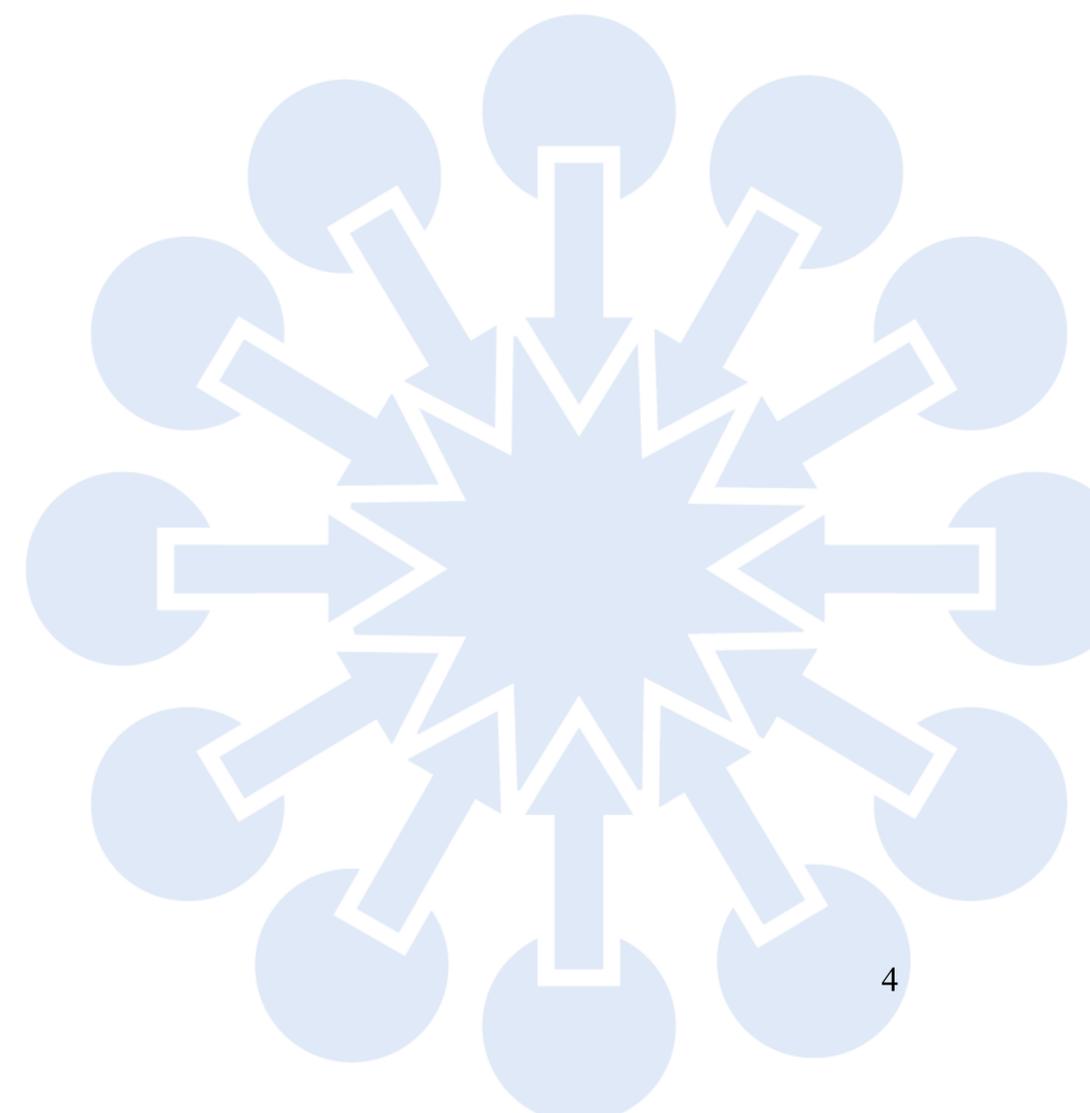
- Population and demographics
- Employment
- Skills
- Occupations
- Wages
- Productivity and key sectors
- Business demographics
- Property market
- Travel to work (commuting)
- Digital connectivity
- JEBIS (reference)



Population

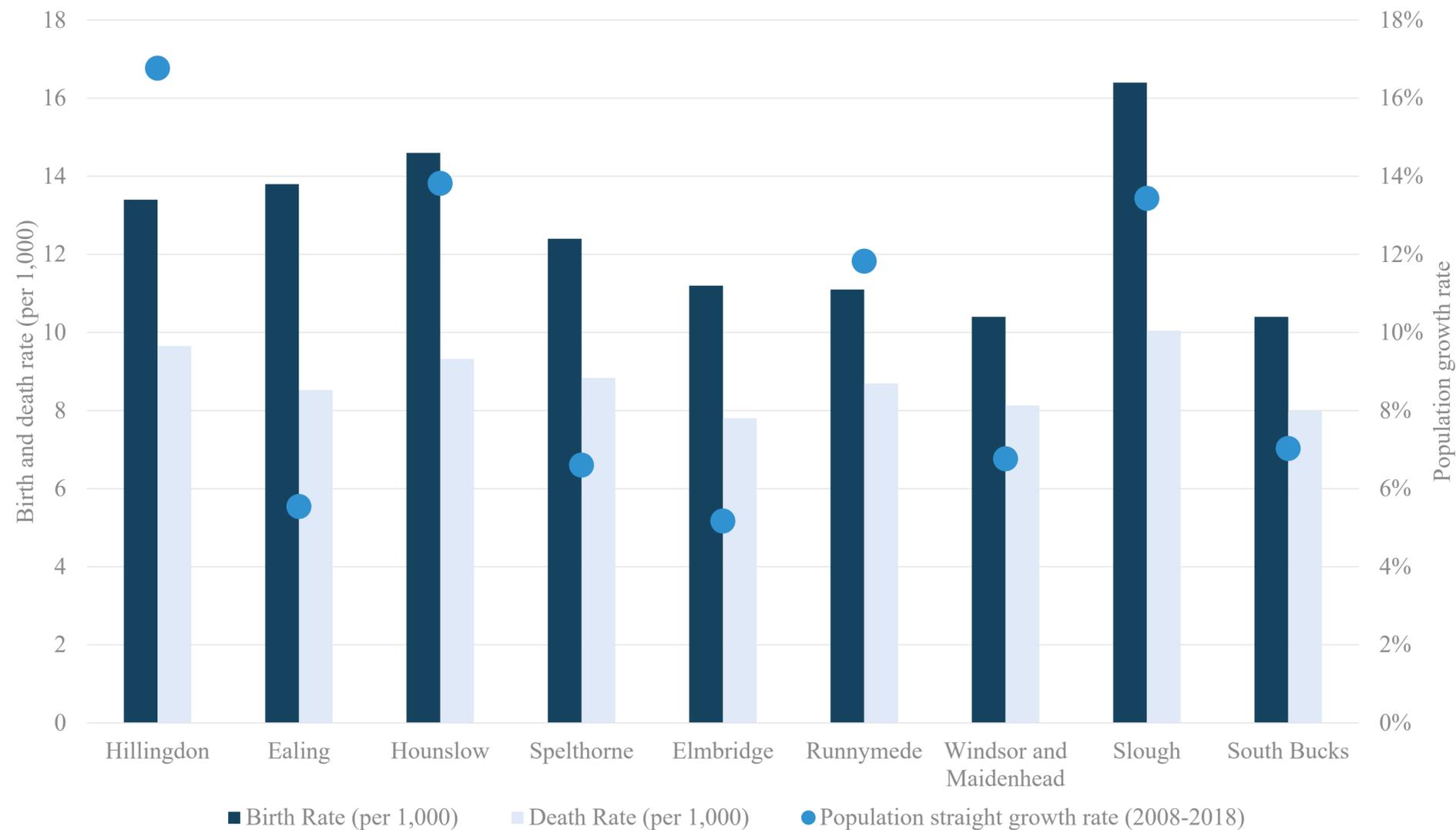
Growth
Dependency
Age structure
Migration

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Population estimates: natural increase in all local authorities. Hillingdon, Hounslow and Slough having the highest population growth rate.

Birth and death rate, straight population growth rate (2008-2018) by Local Authority, 2018 (Source: ONS)

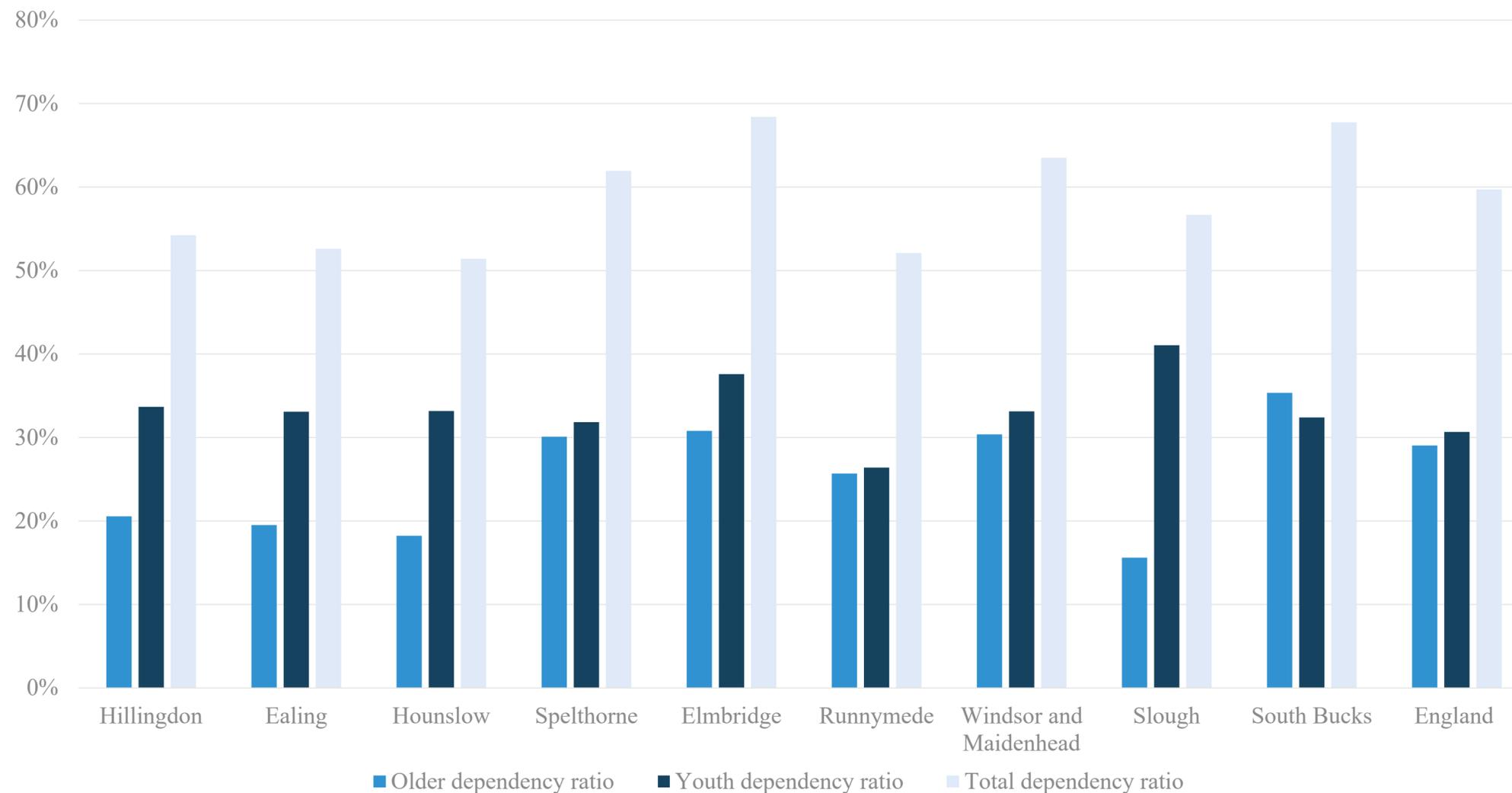


Key insights:

- Natural population increase in all local authorities, with the highest birth rates in Slough, Hounslow, Ealing and Hillingdon.
- Hillingdon has the highest population growth rate in the last ten years, followed by Hounslow and Slough
- Ealing has one of the slowest growth rates despite its high birth rate, very probably because it is growing from the largest base. The local authorities with the highest population growth rate are expected to be the key strategic locations in the next years *for housing growth and workers*

Dependency ratio in rural areas relatively higher than in urban areas (LB) except in Runnymede

Dependency ratios, by Local Authority, 2018 (Source: Annual Population Estimates, ONS)

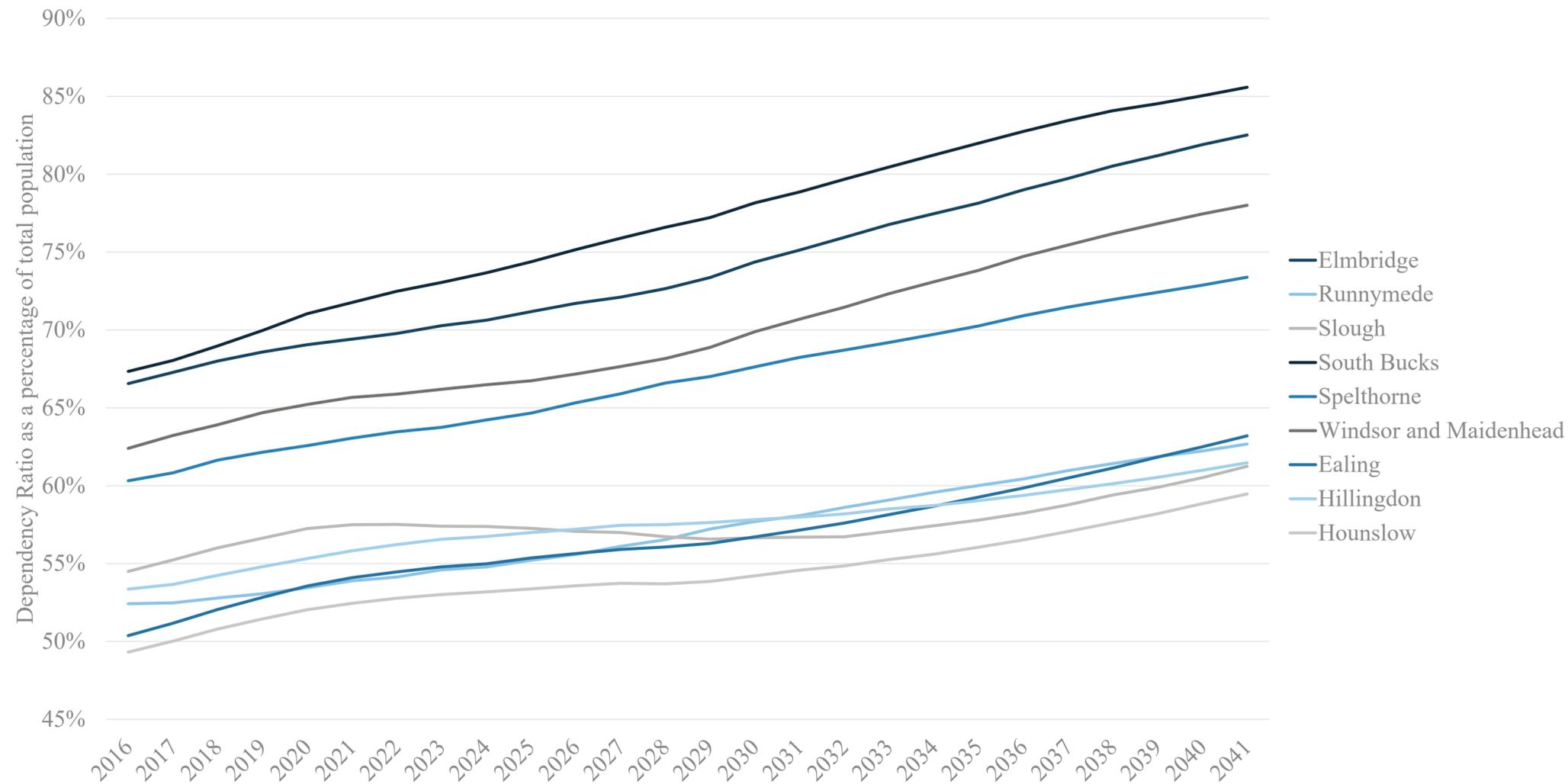


Key insights:

- Higher dependency ratio in Spelthorne, Elmbridge, Windsor & Maidenhead and South Bucks than overall England showing *the working population is facing a greater burden supporting its dependant population (implication: potential higher tax to compensate for low tax revenues)*
- Age distribution:
 - ❑ Population in South Bucks is ageing with a higher older than youth dependency ratio
 - ❑ London boroughs are very similar with a higher youth than older dependency ratio
 - ❑ Slough has a significantly higher youth than older dependency ratio – *the need for youth services could grow in the coming years*
 - ❑ Overall, lower dependency ratio for the urban areas than for rural areas.

Projected dependency ratio: ever increasing burden for rural working population

Total dependency ratio, by Local Authority, 2016-2041 (Source: Population Projections, ONS)

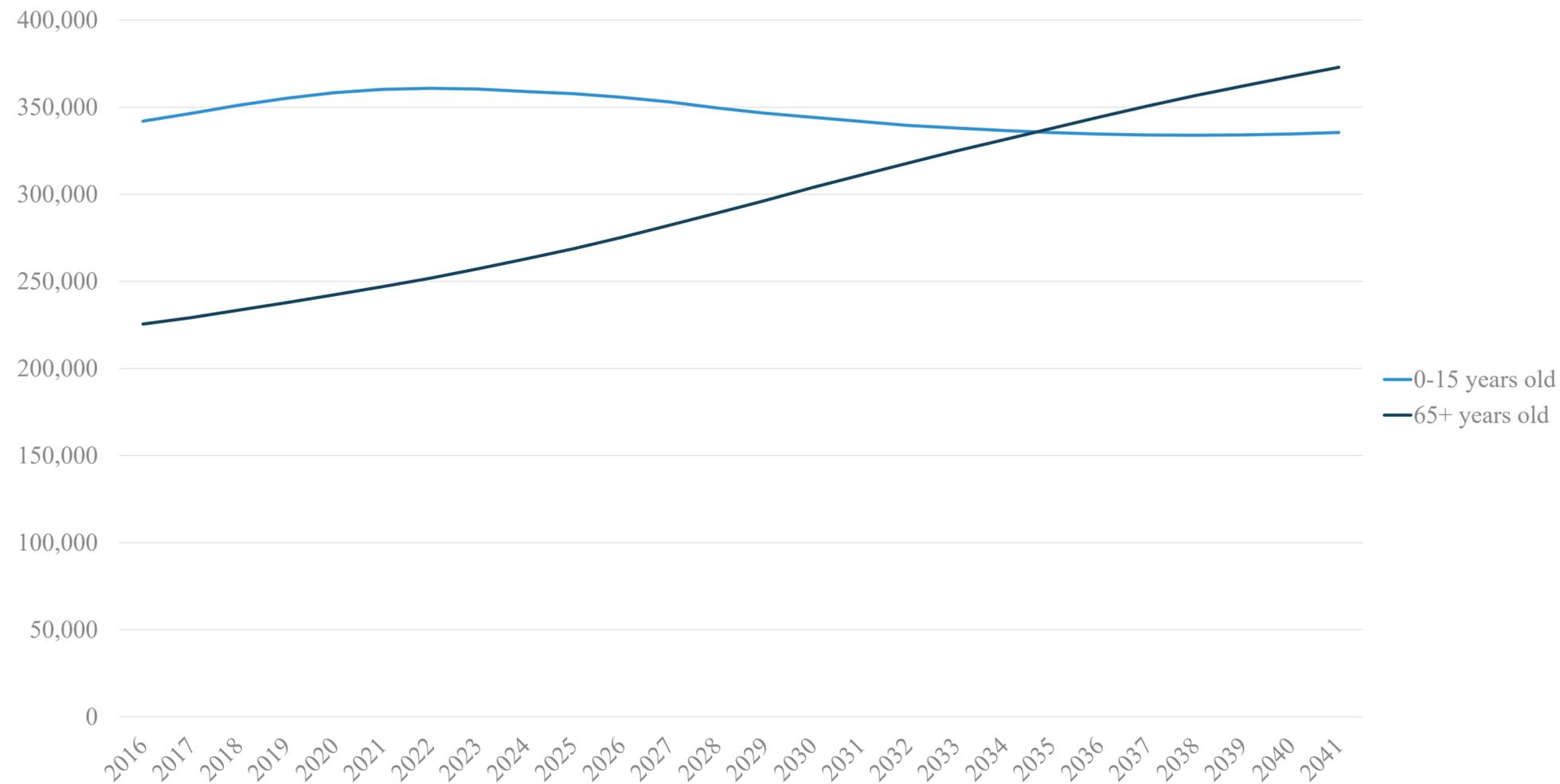


Key insights:

- We can distinguish two sets of local authorities: on one side, rural localities with high ratio experiencing a relatively stable but significant growth over time reaching up to 83% ratio for South Bucks; on the other side, mostly urban localities with lower ratio, all growing but at different pace.
- It is expected that in just over 20 years' time, the more rural authorities will have dependency ratios above 70%, while the urban authorities will have dependency ratios under 60%. *Both raise concerns for funding local public services, but there will be a particular focus on elderly services in those with highest dependency. This is compounded by the fact that the elderly population is more dispersed in rural areas rather than concentrated in urban areas.*

65+ population will grow dramatically in the next years, even exceeding 0-15 years old

0-15 and 65+ population projection in HSPG, 2016-2040 (Source: Population projection, ONS)

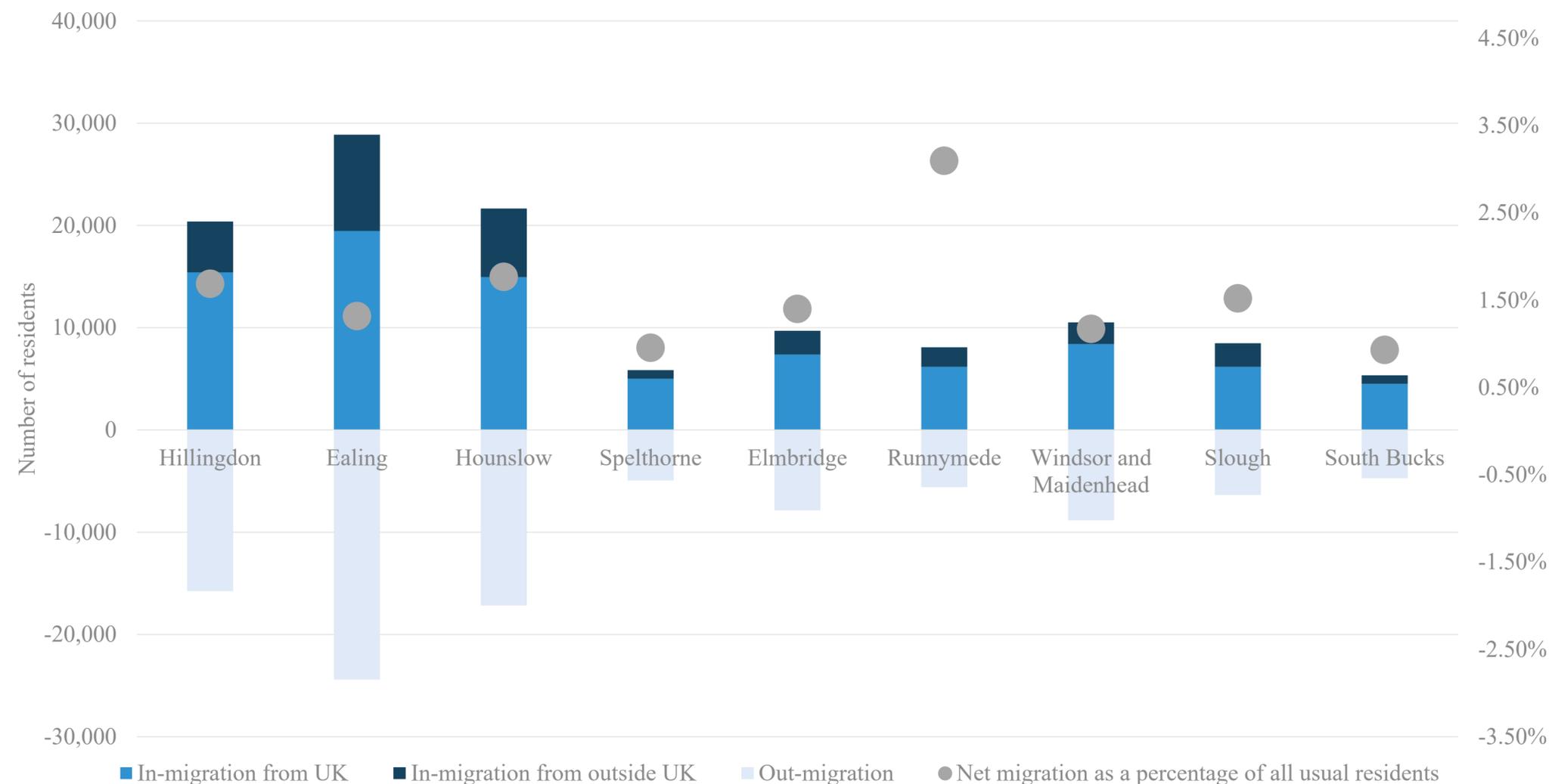


Key insights:

- The 65+ population is set to increase by 57% looking at the 2019 number and the 2041 projection
- 0-15 population is set to remain relatively stable until 2028 before slightly dropping

Migration: positive net migration in all localities, however some are more attractive than others

Migration and Net migration as a percentage of all usual residents, by Local Authority, 2011 (Source: Census 2011, ONS)

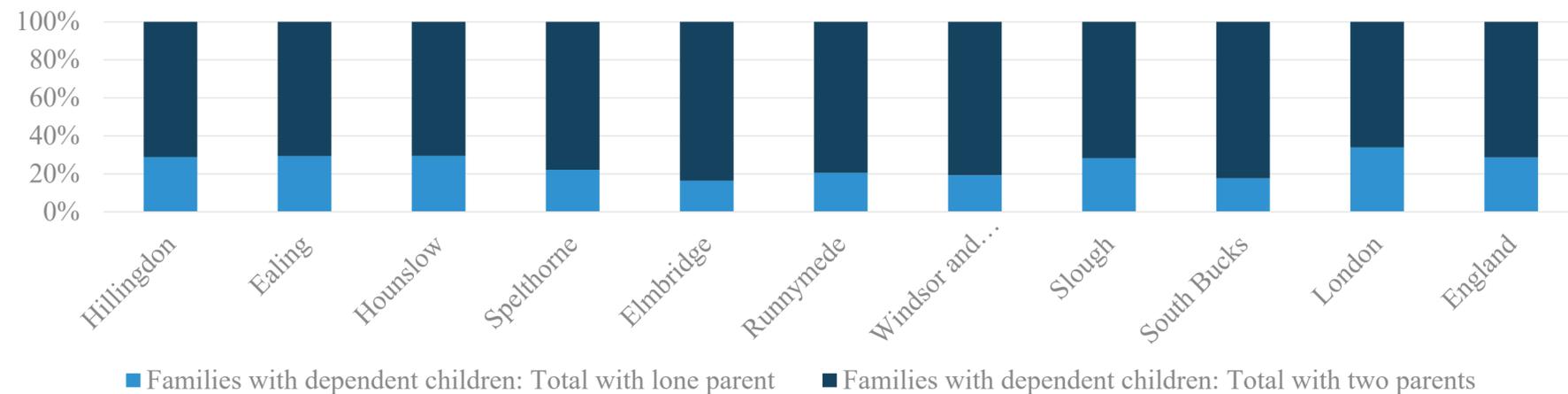


Key insights:

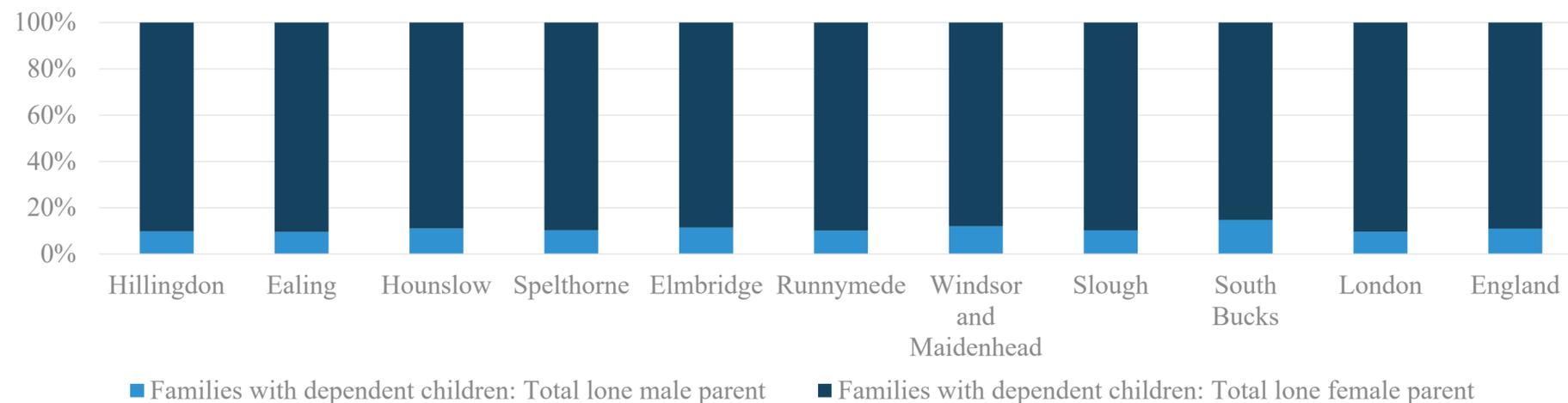
- The London Boroughs have the highest net migration numbers figure due to both high in-migration from the UK and from outside the UK – expected population growth due to migration along with natural increase
- In all localities, in-migration from UK is higher than from outside the UK
- Highest net migration as a percentage of all usual residents in Runnymede, reflecting lower out-migration compared to other districts.
- *There does not appear to be a direct correlation between net migration and house prices, suggesting location, local amenities, and existing stock type and quality—among other factors—are at play.*

Relatively lower proportion of lone parents families in HSPG than in England, South Bucks has the highest proportion of lone mothers

Families with dependent children, with or without lone parent, by local authority, April 2018 to March 2019 (Source: Annual population survey)



Lone parents whether male or female, by local authority, April 2018 to March 2019 (Source: Annual population survey)



Key insights:

- The proportion of lone parents families is in similar ranges as England average
- Elmbridge and South Bucks have relatively lower proportion of lone parents families
- An overwhelming majority of lone parents families have the female parent present.
- South Bucks has the lowest proportion of lone mothers across all localities
- *Lone parents is an important measure for understanding both barriers to work (oftentimes the cost of childcare could outweigh wages), as well as have implications on commuting patterns and shift work. This may also shed light on demand for children’s services, which may be particularly acute in some places.*

Employment and Unemployment

Economically active population

Employment growth

Unemployment (JSA)

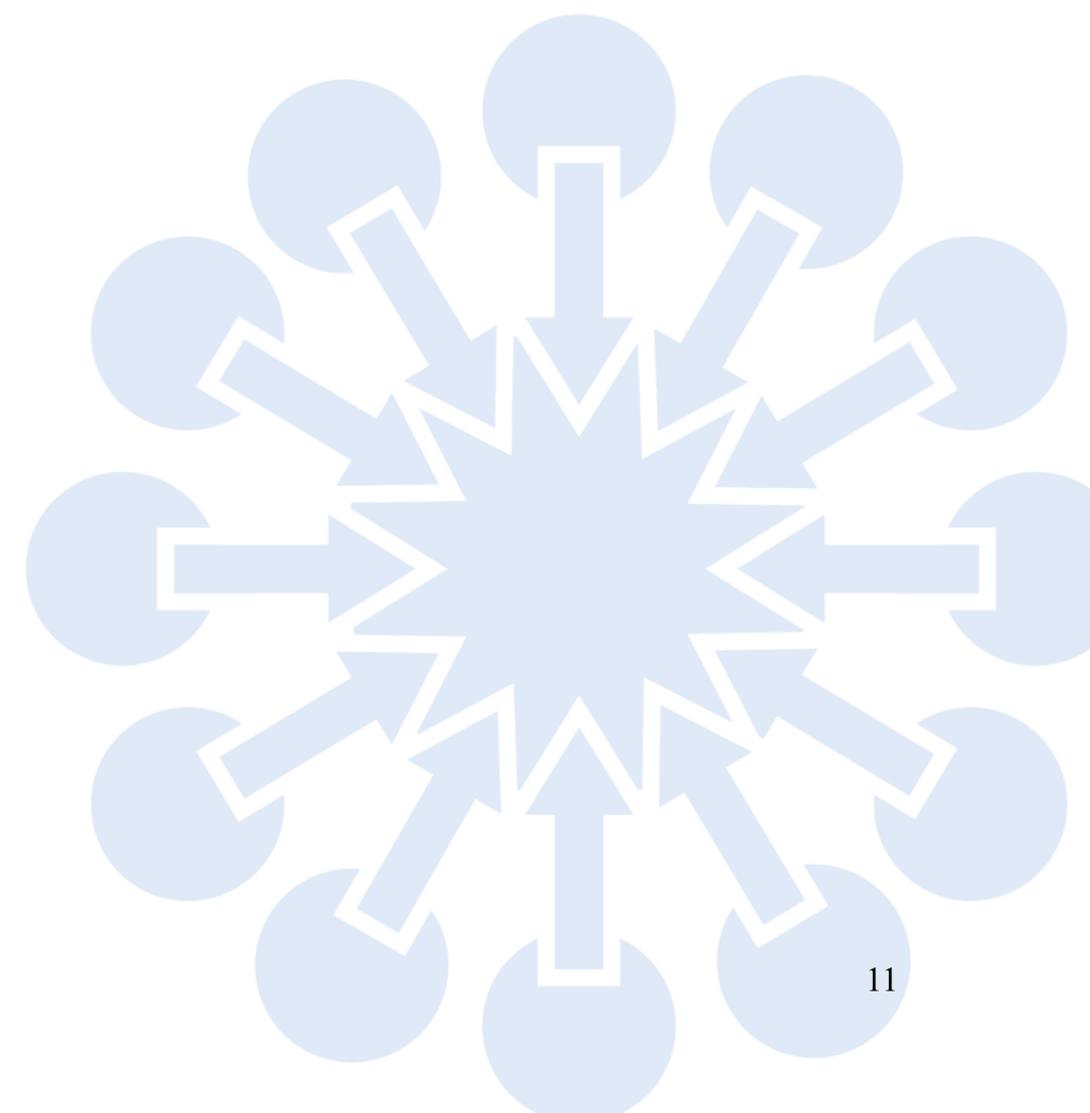
Long term unemployed

JSA Service Sector

Disability allowance

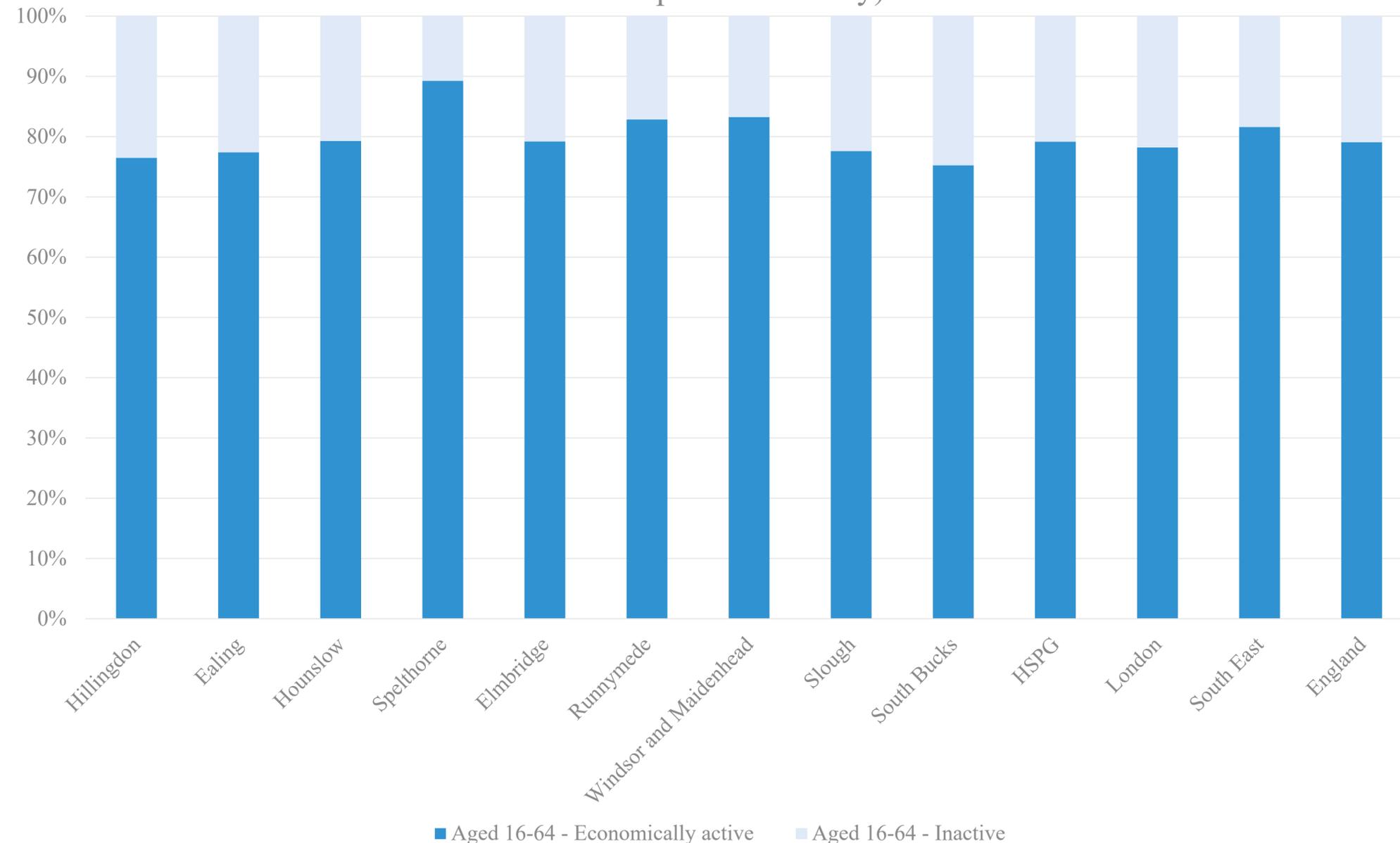
Inclusive employment

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HSPG has a lower portion of economically active population than South East, with quite high proportion of inactive population in some localities (eg. 25% in South Bucks)

Economic activity, by local authority, July 2018 - June 2019 (Source: Annual Population Survey)

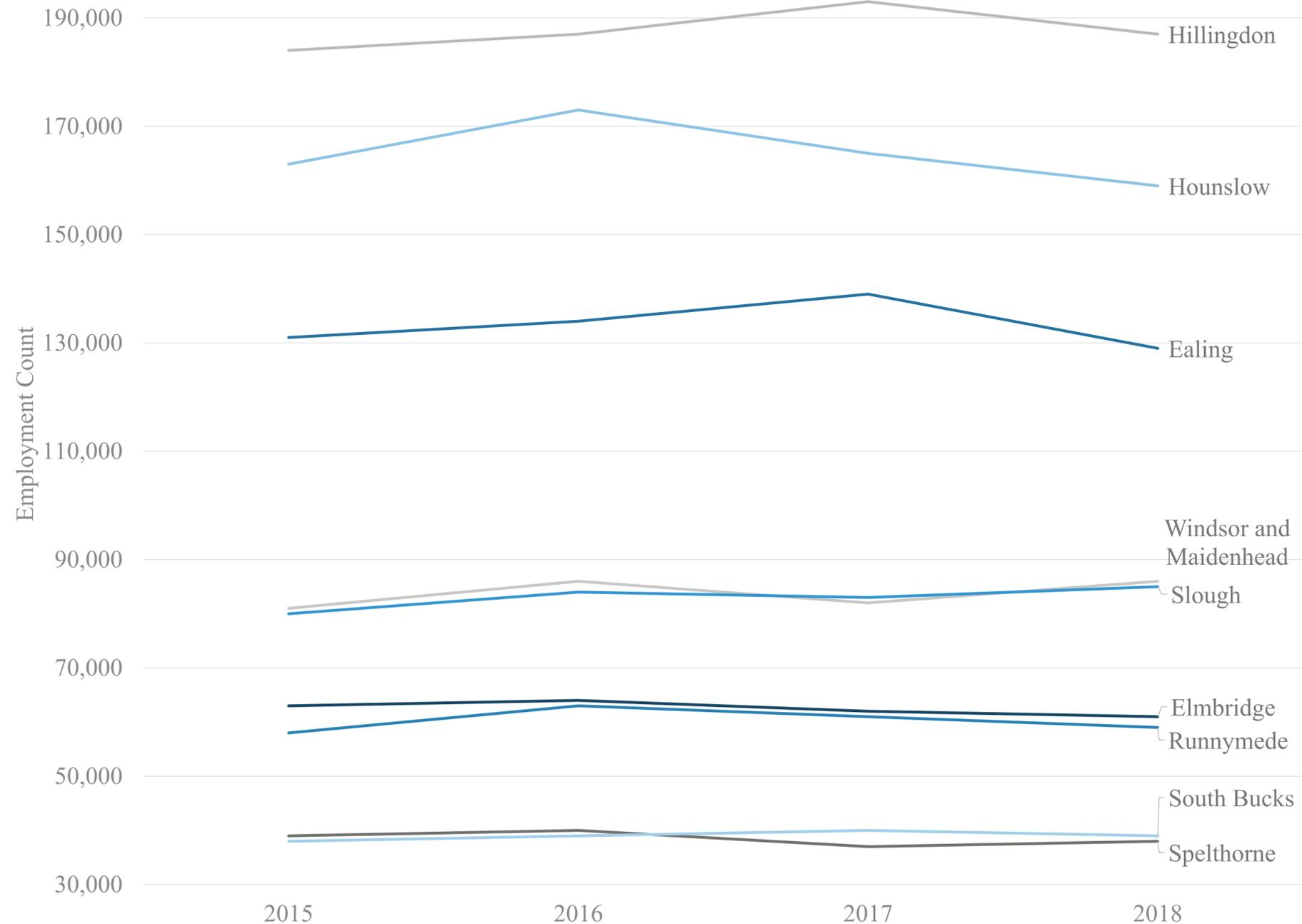


Key insights:

- Spelthorne has the highest proportion of economically active population, reaching almost 90%, South Bucks has the lowest with 75% active population
- The London boroughs are having higher proportion of inactive population than average HSPG
- Overall, HSPG has a higher economically inactive population than South East, but lower than London and the same as England.

Employment growth

Change in employment between 2015 and 2018, by Local Authority (Source: Business Register and Employment Survey)

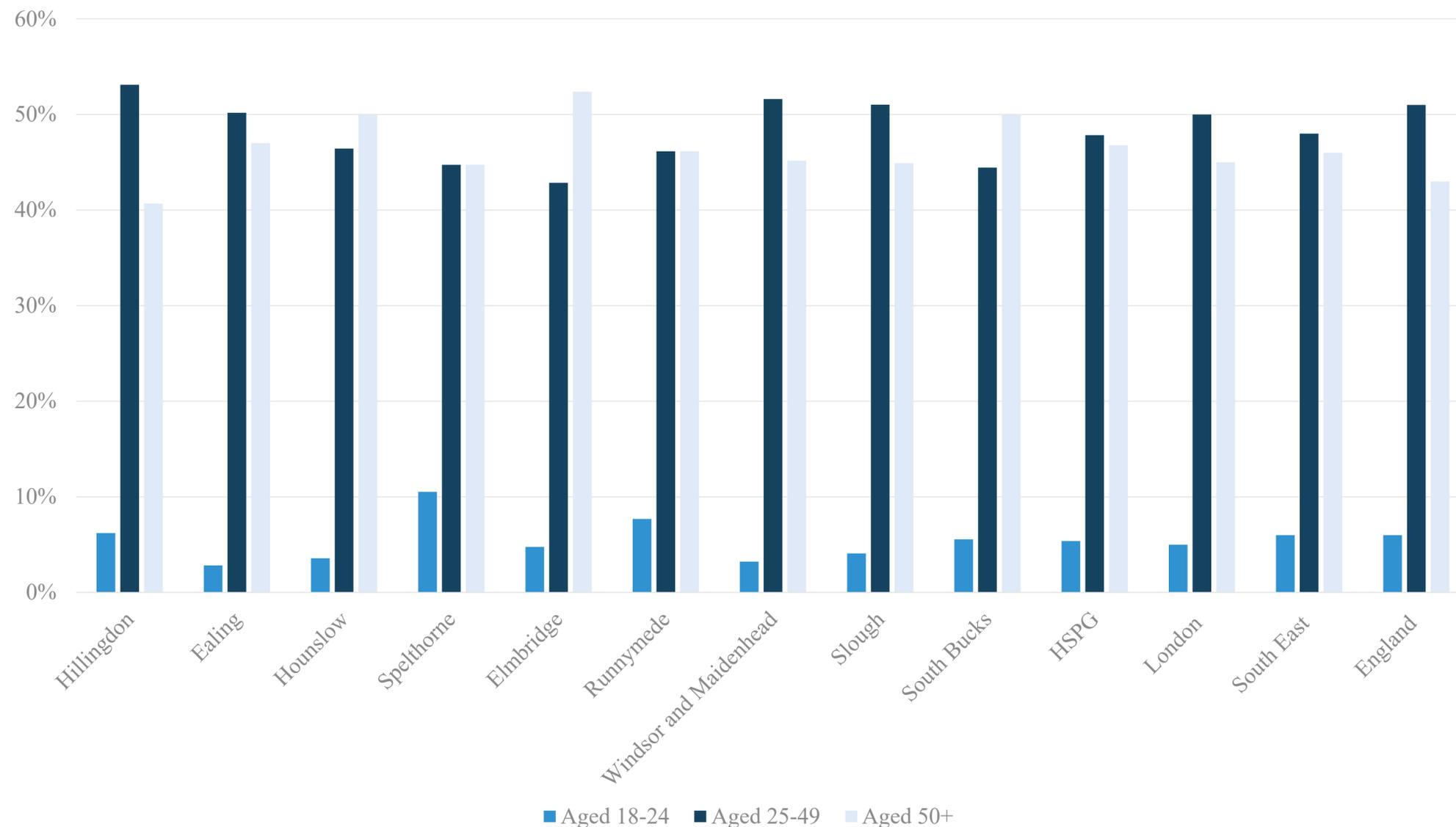


Key insights:

- Overall, employment growth continues to rise in the HSPG sub-region (by 0.7% in this period), but not as strongly as in other regions, or as much as the national average of 3.5%.
- Between 2015 and 2018, employment growth fell in four of the nine HSPG districts, by as much as 3.2% in Elmbridge.
- Slough and Windsor and Maidenhead saw the greatest rise in employment in this period, outpacing the London, South East and national averages.

Bulk of resident claiming JSA are over 25, with different trends across localities

Residents claiming Job Seekers Allowance (JSA), by age, by Local Authority, July 2019 (Source: ONS)

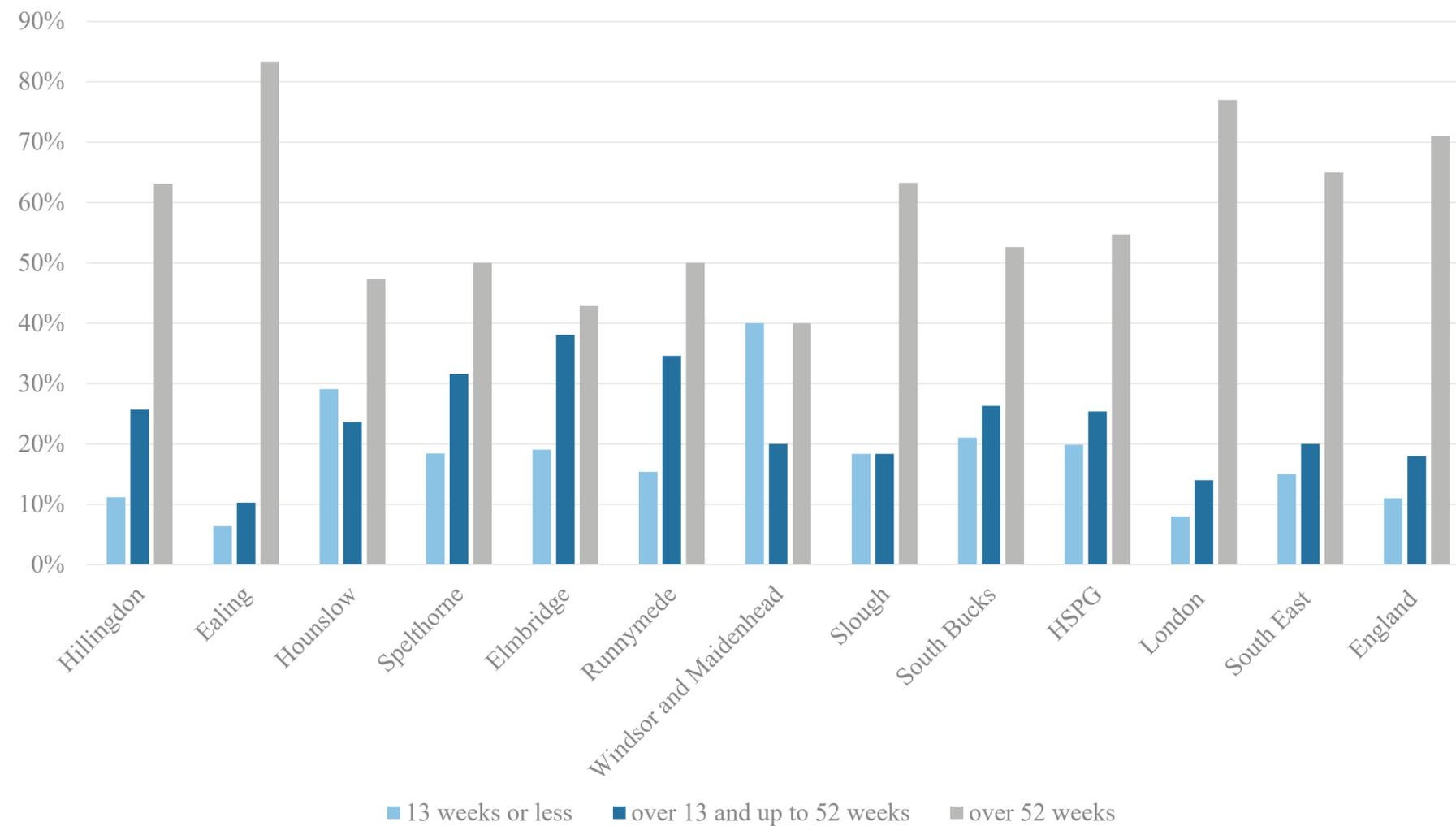


Key insights:

- All localities have a relatively high employment rate for people aged over 25
- Some localities have higher 50+ unemployment: eg. Hounslow, Elmbridge, and South Bucks
- Overall, HSPG has similar trends than London and England, with higher proportion of JSA claimer being aged 25-49

London Boroughs struggling to tackle long-term unemployment (over 52 weeks), aligned with overall London data

Residents claiming Job Seekers Allowance (JSA), proportionately by duration, by Local Authority, July 2019 (Source: ONS)

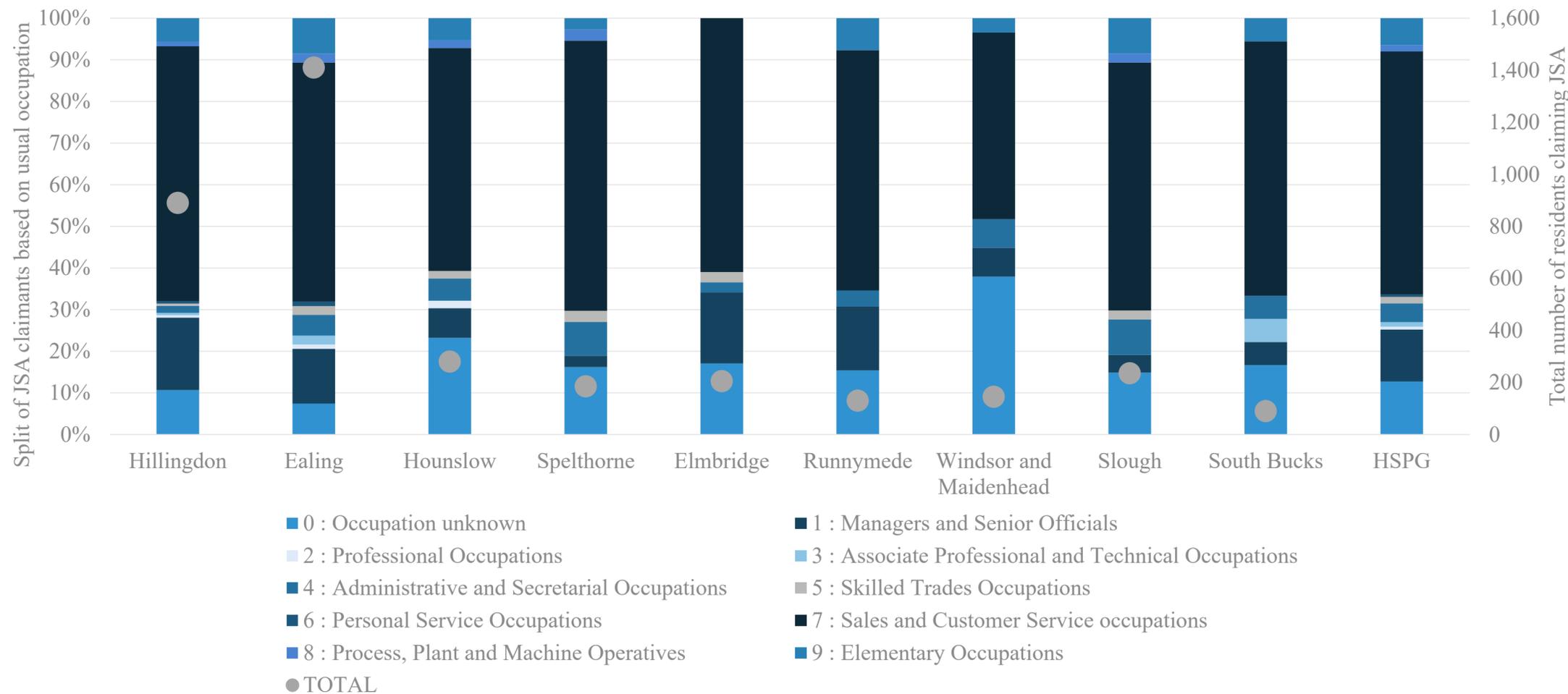


Key insights:

- Ealing comprises the highest proportion of JSA claimers unemployed for more than 52 weeks (over 80%), followed by Hillingdon and Slough (around 60%)
- All other HSPG localities have a more even unemployment in terms of duration, better spread out than South East and England
- The London Boroughs are aligned with the overall London data in terms of long-term employment

Most JSA claimants are from the Sales and Customer services sector

Residents claiming Job Seekers Allowance (JSA), by usual occupation, by Local Authority, July 2019 (Source: ONS)

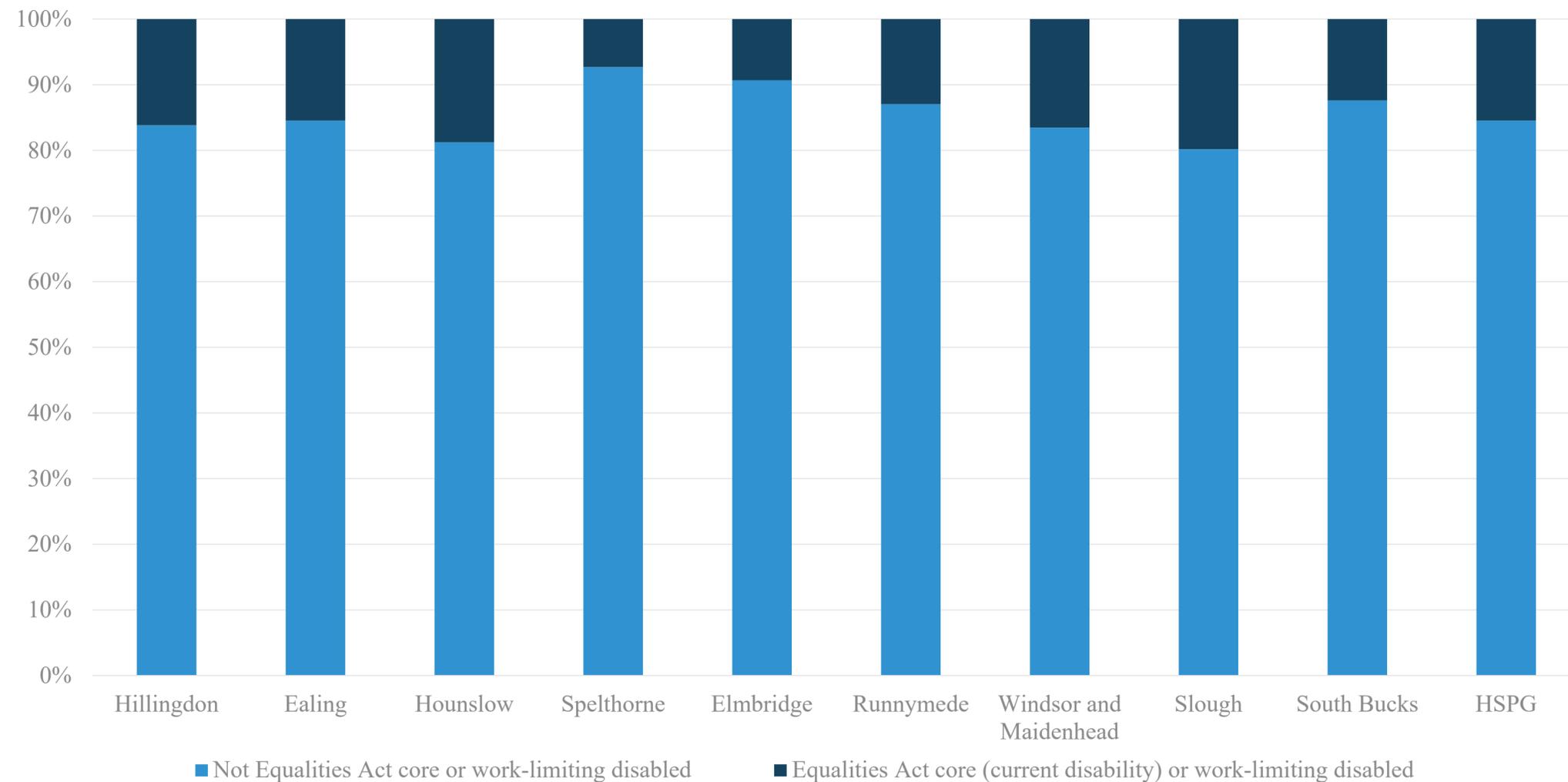


Key insights:

- Ealing is the locality with the highest number of residents claiming JSA
- In all other localities, this number is relatively low
- The most popular occupation among JSA claimants in Sales and Customer service is the highest proportion across the sub-region – one of the occupation with the highest risk of automation (however not the most prevalent occupation among HSPG workers)

More than 15% of working age people in HSPG study area are work-limiting disabled

Proportion of working age people who fall under the Equalities Act core (current disability) or work-limiting disabled, by Local Authority, April 2018 to March 2019
(Source: Annual Population Survey)

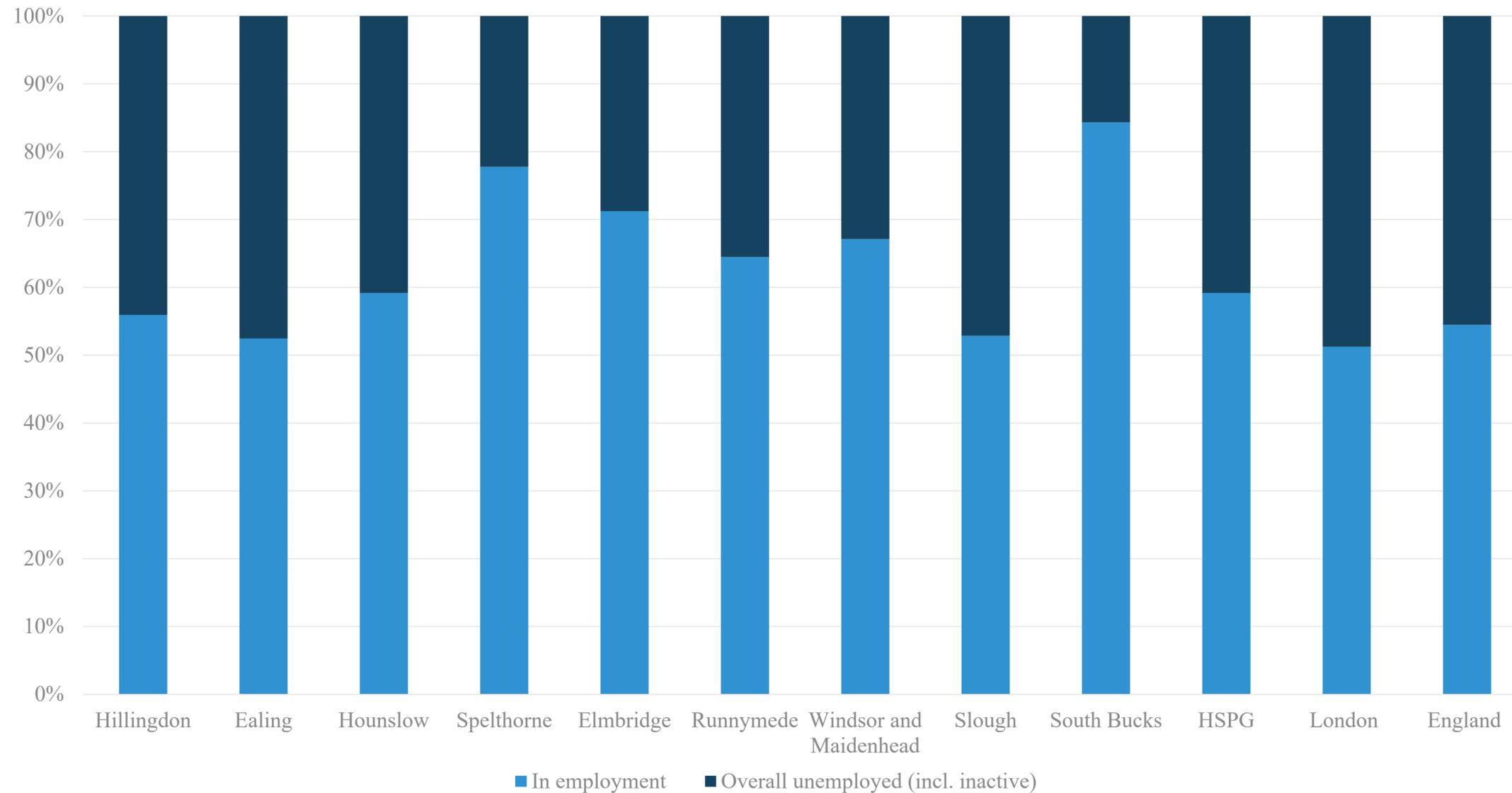


Key insights:

- The local authority with the highest proportion of people under the Equalities Act core is Slough quickly followed by Hounslow with around 20% of disabled people
- *While imperfect, this is a good indicator for understanding what proportion of the population may face barriers to employment or be unable to work.*

HSPG is relatively inclusive as compared to London and England for disabled people in work

Proportion of disabled people employed, April 2018 to March 2019 (Source: Annual Population Survey)

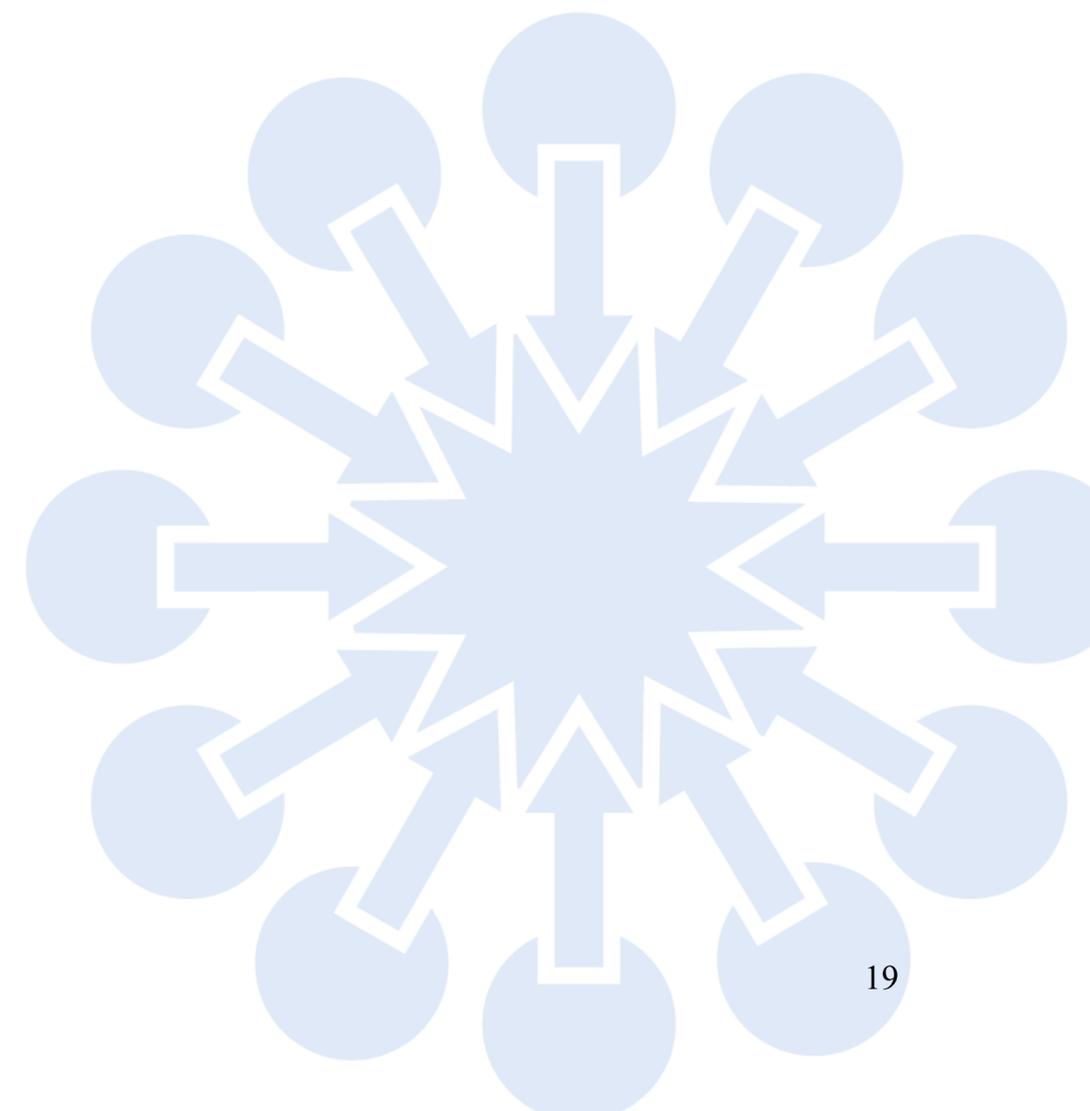


Key insights:

- HSPG has more disabled people in employment than London and England as a whole.
- South Bucks has the highest level of employment with more than 80% employment of the disabled population (but also has the highest employment level)
- Overall, more than 50% of disabled people are employed.

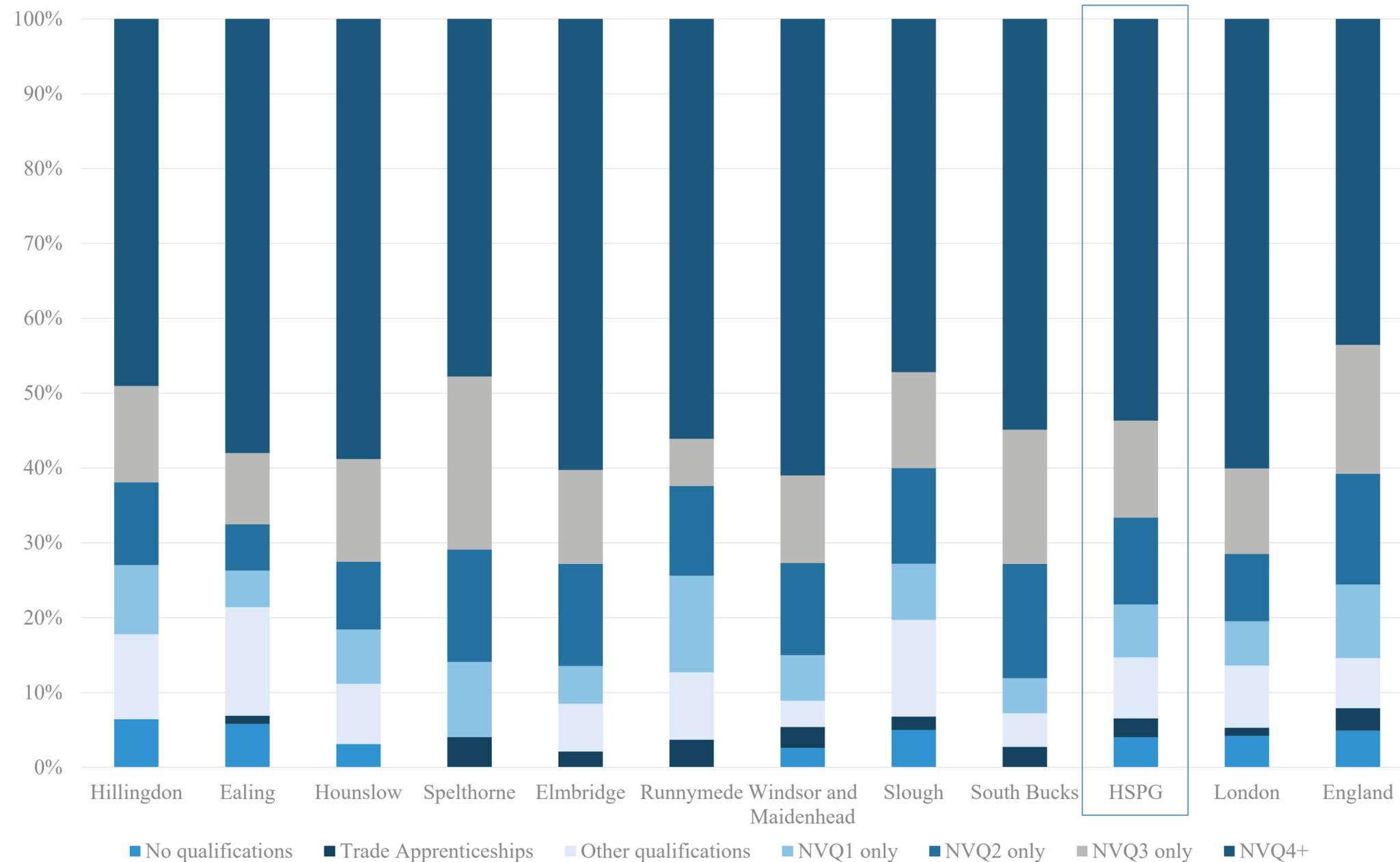
Skills

Apprenticeships
Skill gaps
Education levels



A relatively well-educated population across all localities

Skill levels amongst economically active residents aged 16-64, by local authority, 2018 (Source: Annual Population Survey)



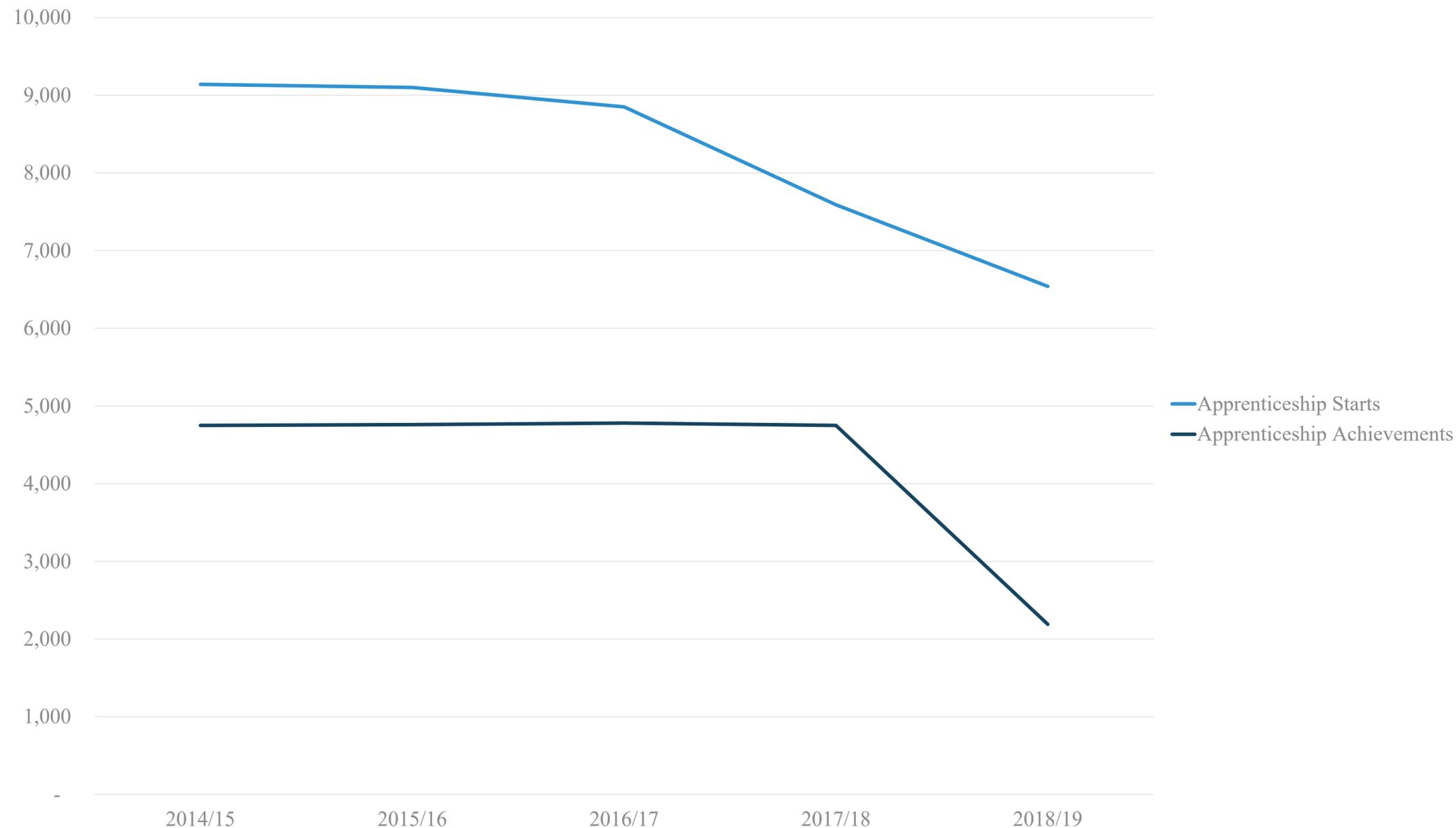
Key insights:

- More than half of HSPG population has a qualification of NVQ4+. All HSPG authorities have a higher NVQ4+ proportion than England, showing an overall high level of education across all localities.
- Spelthorne and South Bucks have a higher proportion of ‘middle-skilled’ workers (NVQ2-3) than the English average.
- Three districts—Hillingdon, Ealing and Slough--have a higher proportion of “no-qualification” residents than the England average.

Those authorities with more middle-skilled employees may face higher employment risk in the long-term due to automation—though all skills levels will need to adapt.

An overall decrease in both apprenticeship starts and achievements, with a sharper decrease for achievements

Apprenticeship starts and achievements in HSPG, 2014/15 to 2018/19 (Source: Department for Education)

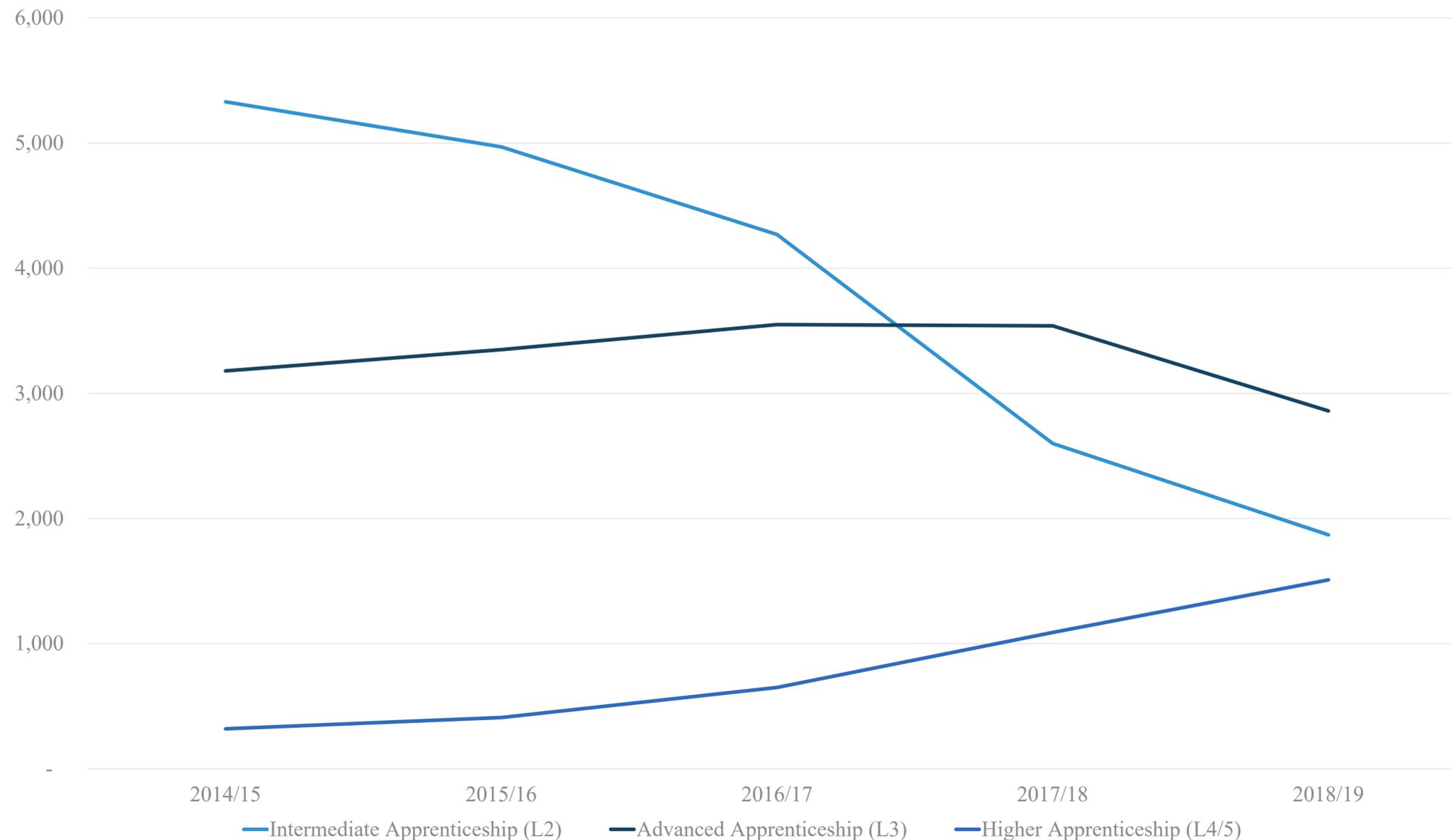


Key insights:

- Based on stakeholders engagement, apprenticeship popularity has dropped both on the supply and demand side which could explain the overall decrease of starts over time, with a sharp decrease from 2016-17
- This could be related to the introduction of the apprenticeship levy in 2017, which has discouraged smaller businesses to host apprentices.
- The number of achievements has significantly dropped from 2017-18 to 2018-19
- Achievements have experienced a sharper drop than starts, showing increase in apprentices leaving before completion of their programme

A rise in higher-level apprenticeship starts, but a reduction of those at medium and low level.

Apprenticeship starts in HSPG, by level, 2014/15 to 2018/19 Q3
(Source: Department for Education)

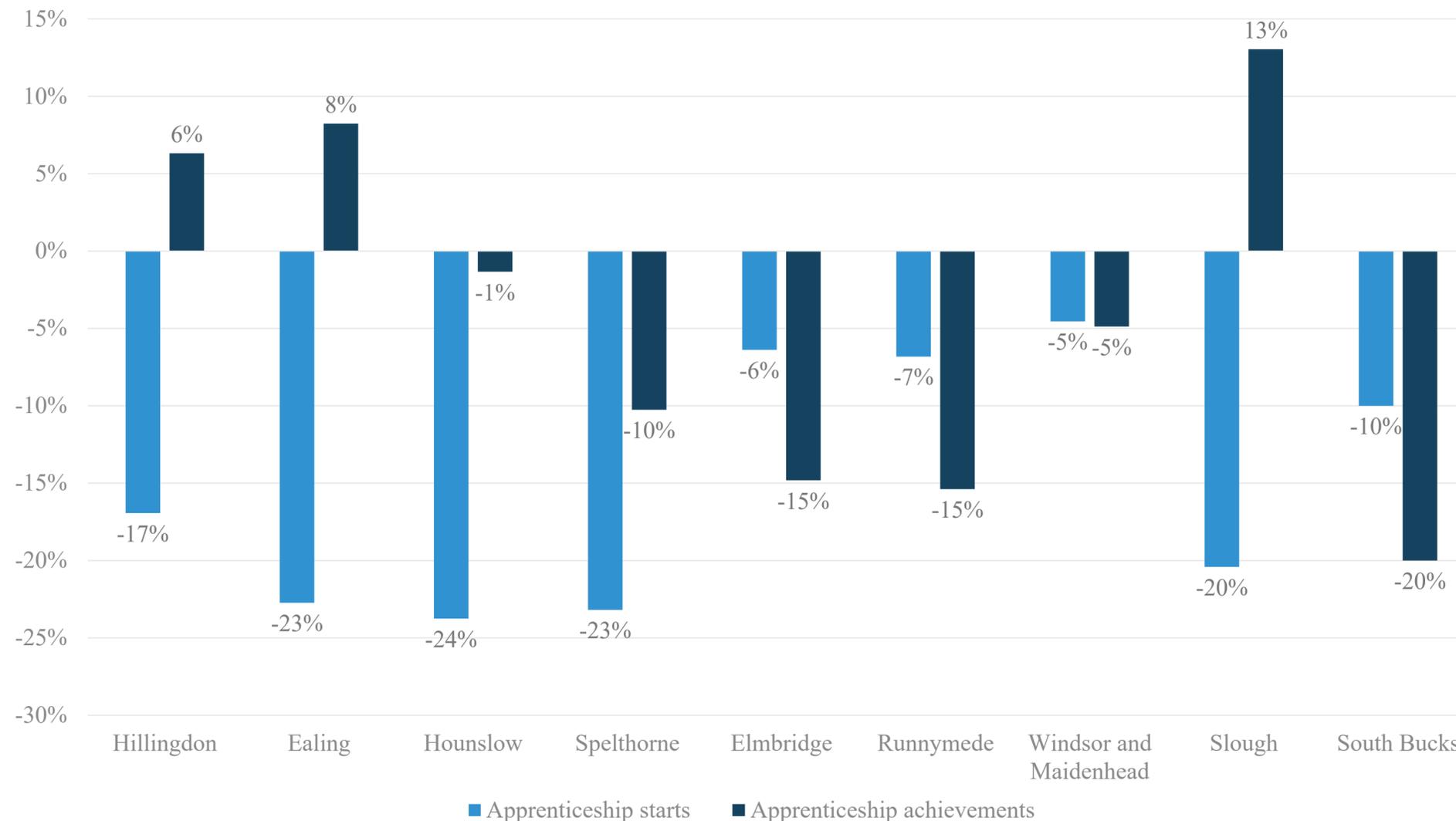


Key insights:

- The number of apprenticeship **starts** in HSPG at the highest level (Higher – Level 4/5) has been rising since 2014/15.
- However the number of Advanced (Level 3) **starts** has remained stagnant, with year on year growth falling in 2017/18 to bring it below 2014/15 levels in the most recent period.
- Intermediate (Level 2) apprenticeships **starts** have seen the biggest decline in this period, falling from around 5,300 in 2014/15 to just below 1,900 in 2018/19.
- **Achievements** for Higher (Level 4/5) apprenticeships have remained fairly consistent, and there has been an overall rise in achievements across HSPG between 2014/15 and 2018/19.
- **Achievements** for Intermediate (Level 2) and Advanced (Level 3) apprenticeships in HSPG have fallen substantially between 2017/18 and 2018/19.

Apprenticeship completions are falling in most areas, and apprenticeship starts are falling everywhere

Change in the number of apprenticeship starts and achievements, by Local Authority, 2014/15 to 2017/18 (Source: Department for Education)



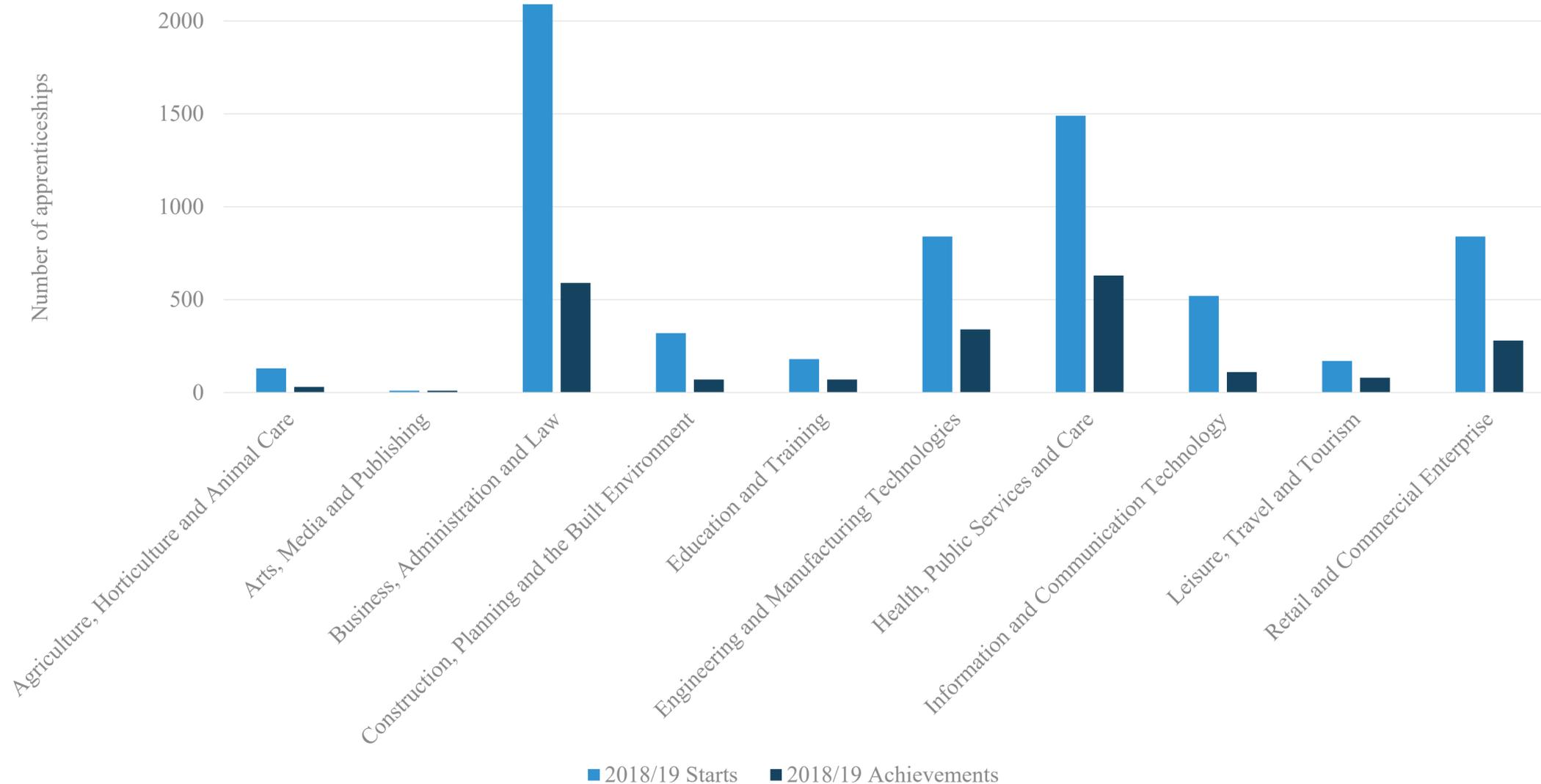
Key insights:

- Overall, the number of starts has dropped more significantly than the number of achievement, except in Elmbridge, Runnymede and South Bucks
- The number of starts in HSPG dropped from 14,640 in 2014 to 10,340 in 2018, and achievements dropped from 7,510 to 3,570.
- Slough and the London Boroughs have the highest achievement rates. Though, the fall in starts over the same period means that achievements will fall in the future.

Heathrow expansion could play an important role in increasing the supply of apprenticeships, but ensuring the programmes are suitable and candidates are ready (among other programmatic issues) will be required to reverse the 'drop-out' trend in some localities. Accessibility to Heathrow and a wide range of sectors / occupations will be required to meet the Apprenticeships target.

The highest apprenticeship drop-out in real numbers occurred in Business, Administration and Law across UK

HSPG apprenticeship starts and achievements, by sector, 2018/19 (Source: Department for Education)

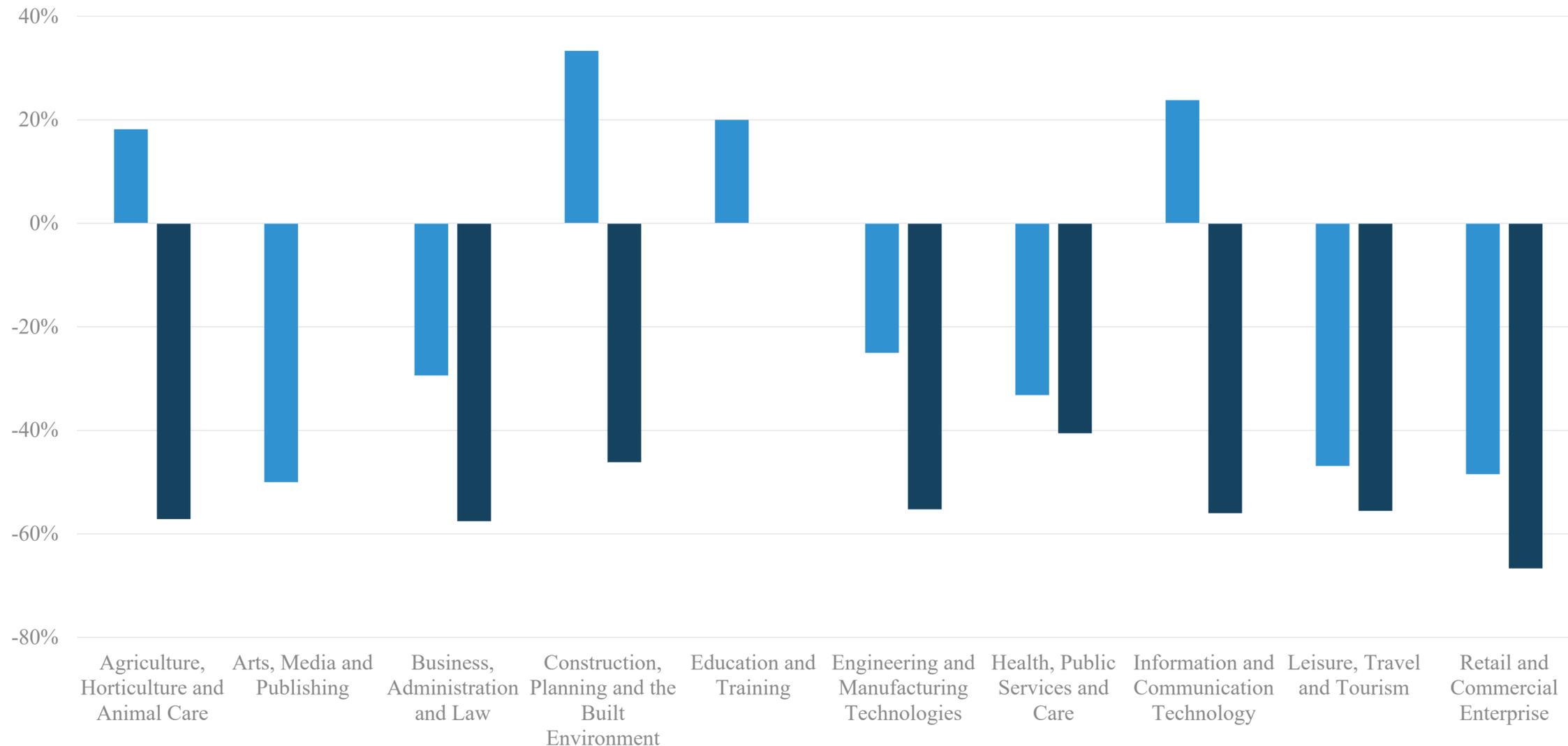


Key insights:

- In 2018/19, most new apprenticeships were in Business Administration and Law, followed by Health, Public services and care. *Construction apprenticeships starts are relatively low, which are an important part of Heathrow’s expansion programme. Accordingly, a robust programme for recruitment and retention will be important.*

Highest fall in starts and achievement (both in real number and percentage decrease) in Retail and Commercial Enterprise followed by Business and Administration

HSPG apprenticeship and achievements growth rate from 2014/15 to 2018/18, , by sector (Source: Department for Education)



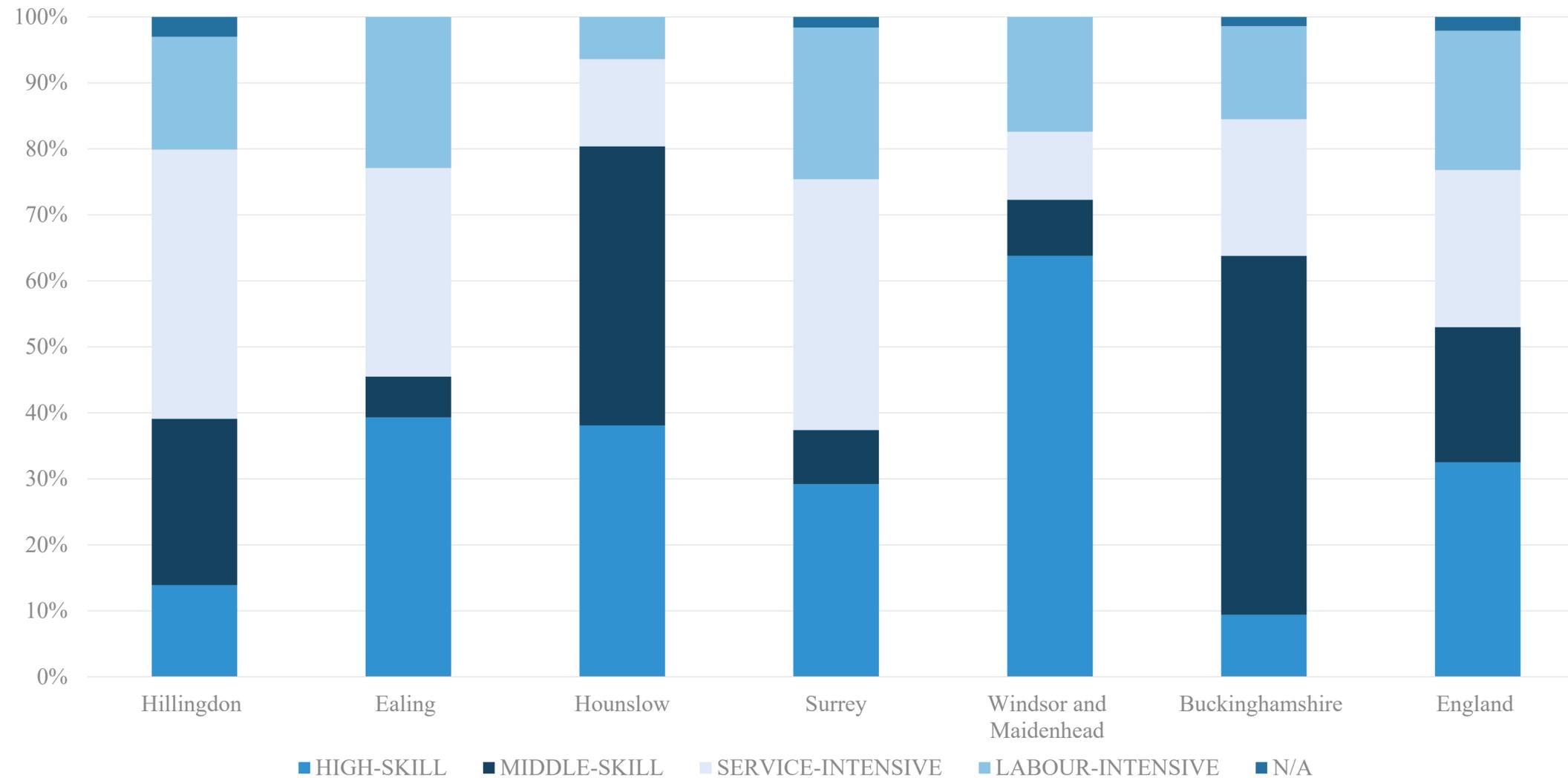
Key insights:

- Both apprenticeship starts and completion have fallen since 2014/15 across almost all the sectors
- Retail and commercial enterprise sector has experienced the largest fall in completion (-67%), followed by Business and Administration
- Starts in Art Media and publishing has fallen by 50% but it does not represent lots of student, whereas retail and commercial enterprise starts has fallen by 48%, representing 550 less students starting

Mixed patterns of hard-to-fill vacancies by occupation across the sub-region

Profile of hard-to-fill vacancies by occupation, by Local Education Authority (Slough data not available), 2017 (Source: Employer Skills Survey, DfE)

Base: All hard-to-fill vacancies (up to 6 occupations)

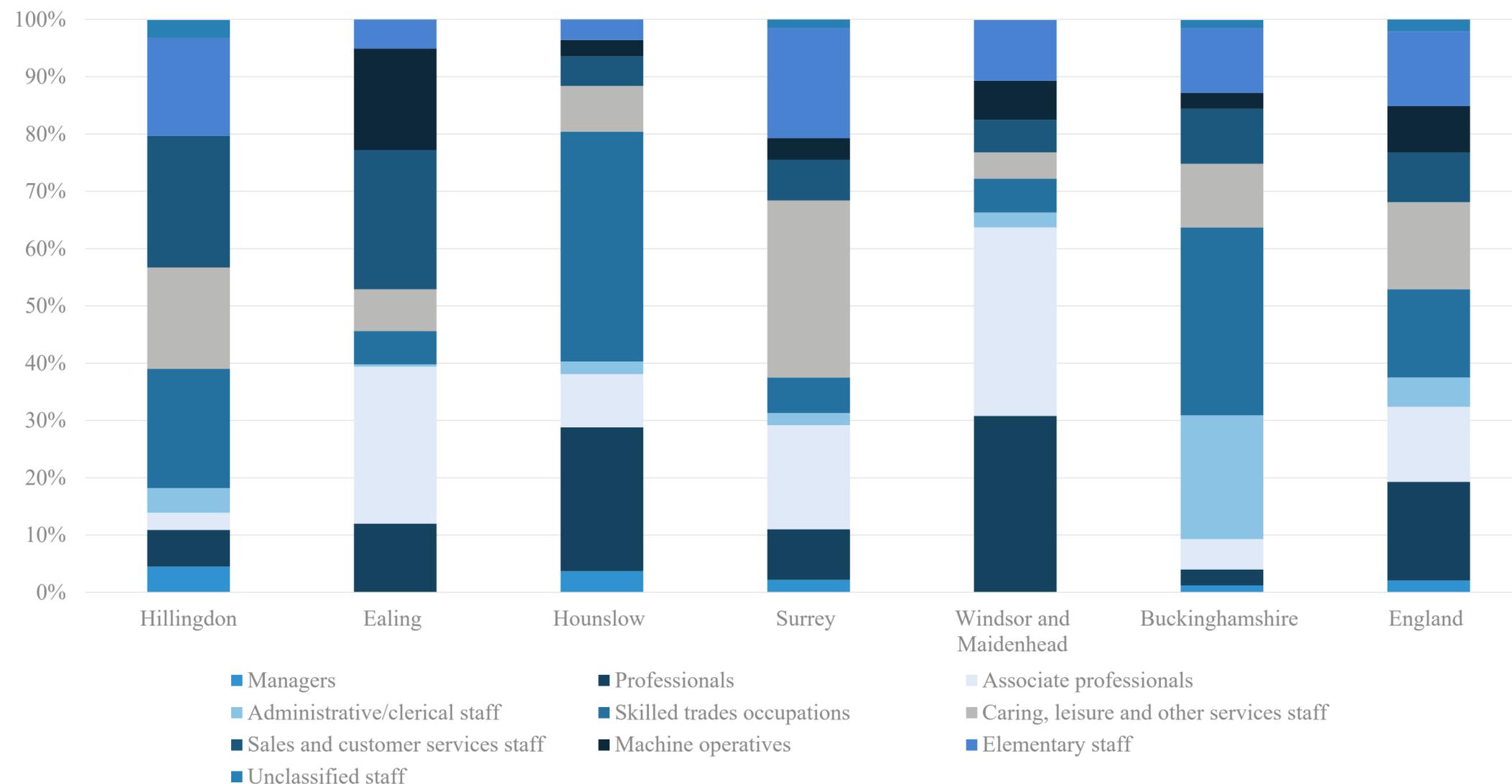


Key insights:

- Needs for Middle-skill workers is most prominent in Buckinghamshire and Hounslow
- Need for high-skilled workers is most prominent in Windsor and Maidenhead, though also high in Ealing, Hounslow and Surrey
- Need for service-intensive workers is greatest Hillingdon and Surrey

Mixed patterns of hard-to-fill vacancies by occupation across the sub-region

Profile of hard-to-fill vacancies by occupation, by Local Education Authority (Slough data not available), 2017 (Source: Employer Skills Survey, DfE)
Base: All hard-to-fill vacancies (up to 6 occupations)



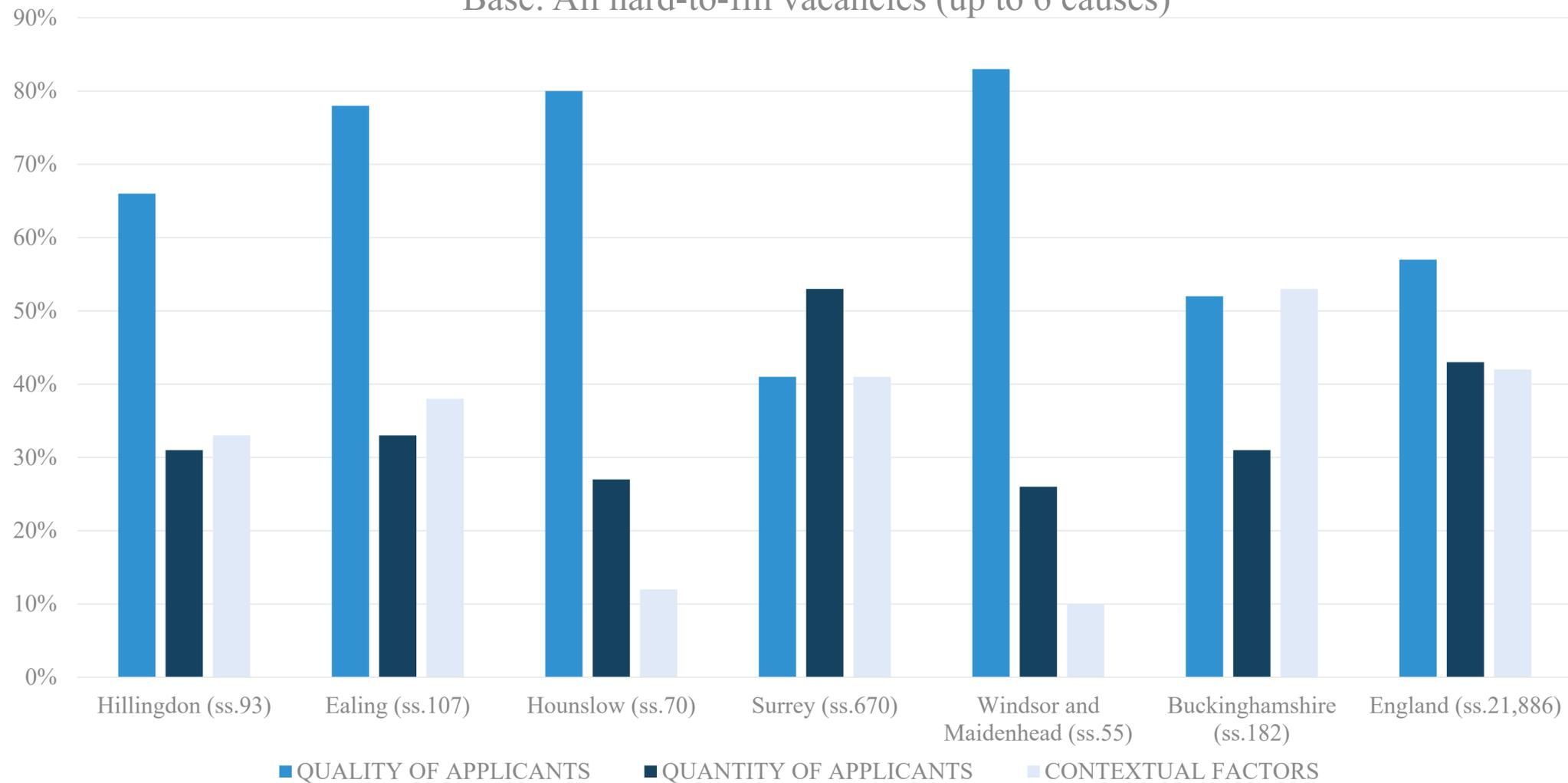
Key insights:

- There is not a common trend of occupations facing hard-to-fill vacancies (HTFVs) across the HSPG sub-region.
- Associate Professionals account for the most HTFVs in Ealing and Windsor and Maidenhead.
- Skills trades occupations are the biggest HTFV category in Hounslow and Buckinghamshire.

Business support programmes and employment programmes will need to work together to help people into the right positions across the HSPG sub-region. This may also link to investments in transport that help better match residents with the right work opportunities elsewhere in the sub-region.

Localities' needs tailored strategies (attract more people vs. attract the right fit of skills)

Main causes of having a hard-to-fill vacancy, by Local Education Authority (Slough data not available) 2017 (Source: Employer Skills Survey, DfE)
Base: All hard-to-fill vacancies (up to 6 causes)

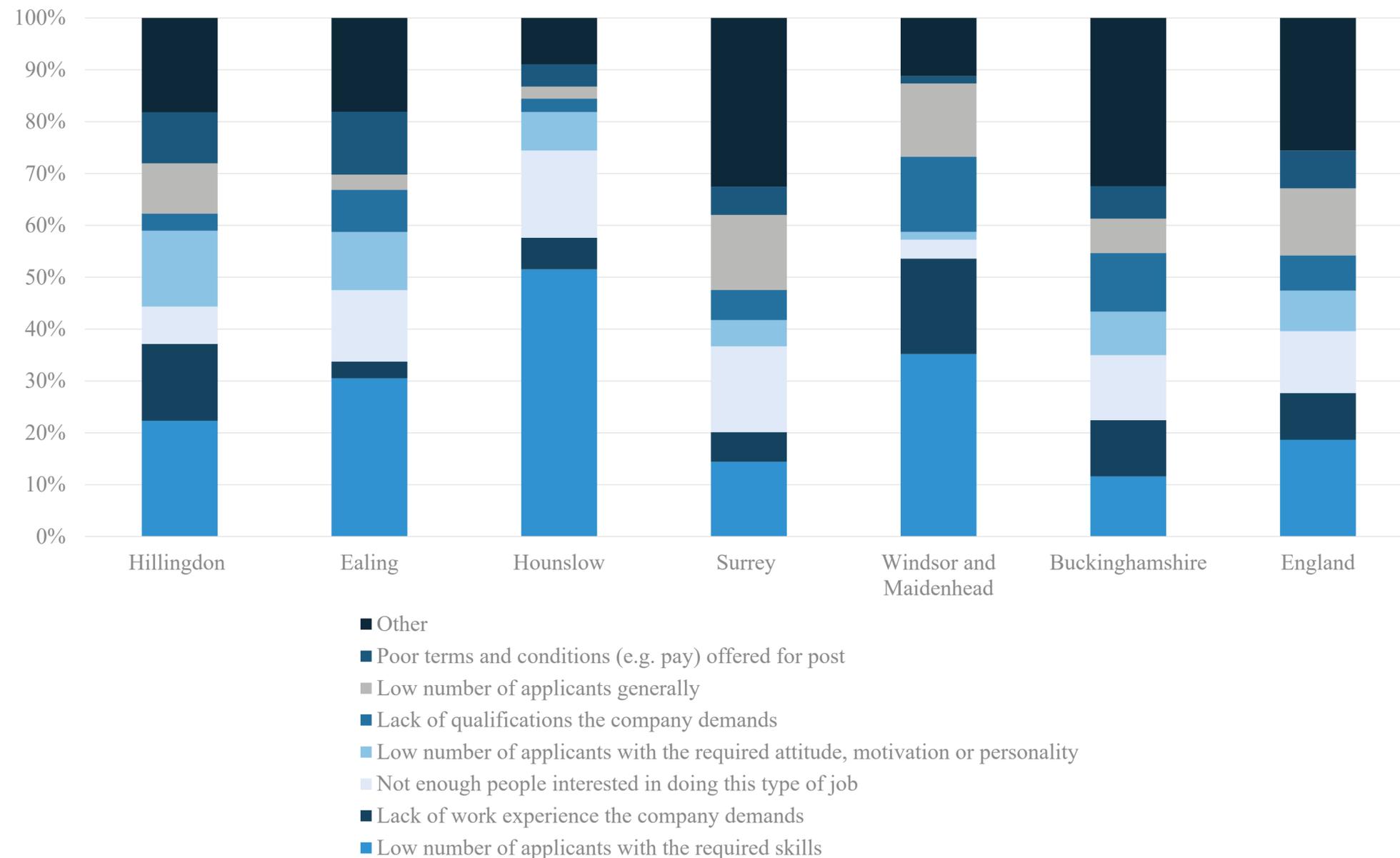


Key insights:

- The quality of applicants is the primary reason for businesses having a HTFV in most localities (not attracting the right people) except in Surrey and Buckinghamshire.
- In Surrey, the quantity of applicants is problematic (not attracting enough people) whereas in Buckinghamshire, both quality of applicants and contextual factors is challenging (eg. poor terms, unsociable hours, remote location or high level of competition from other employers).

Businesses across the HSPG sub-region face challenges to match jobs with the right worker

Main causes of having a hard-to-fill vacancy, by Local Educational Area (Slough data not available) 2017 (Source: Employer Skills Survey, DfE, sample size: 71,527)

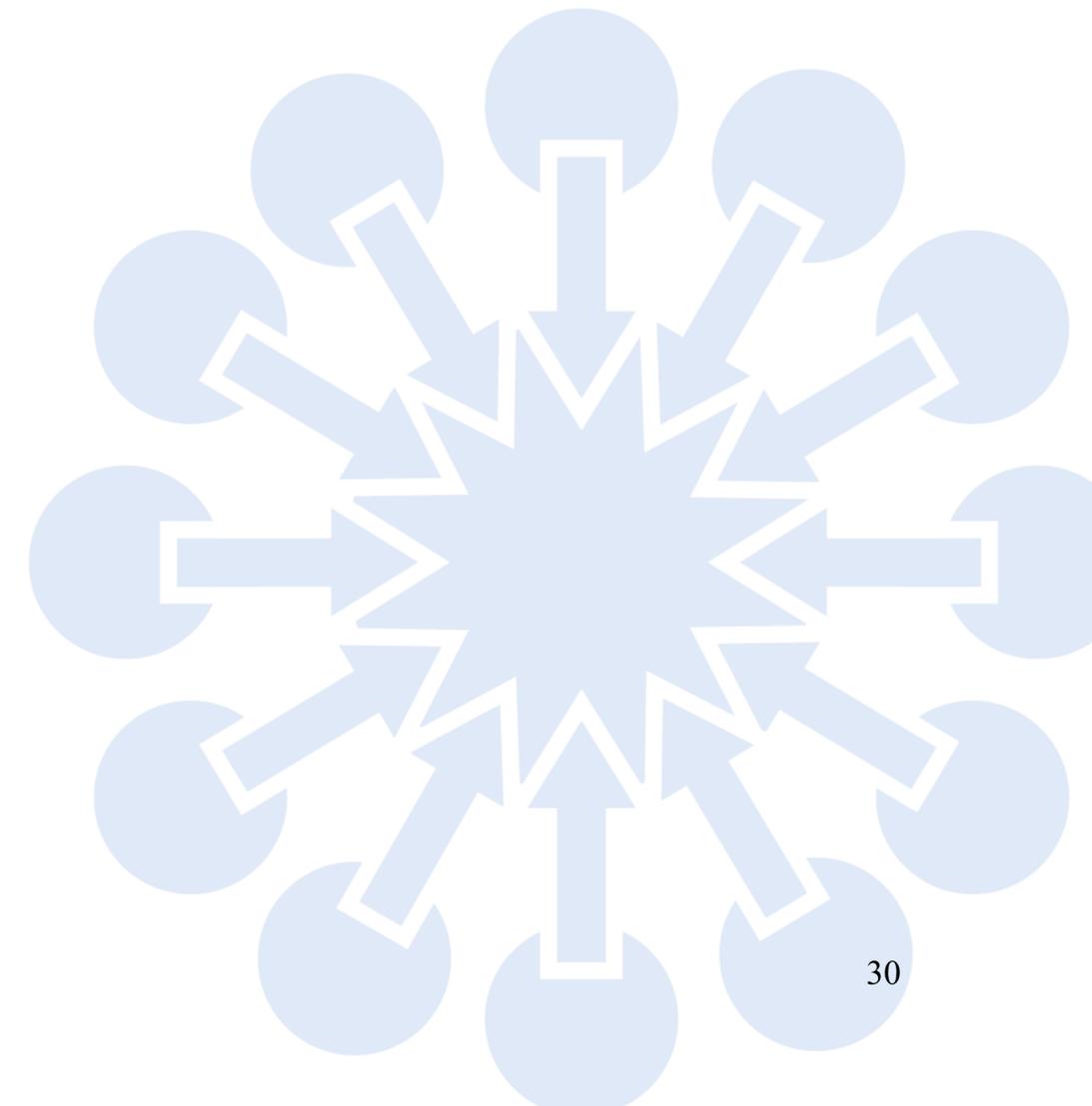


Key insights:

- The three main causes in order of significance are:
 - ☐ Low number of applicants with the required skills
 - ☐ Lack of work experience the company demands
 - ☐ Not enough people interested in doing this job

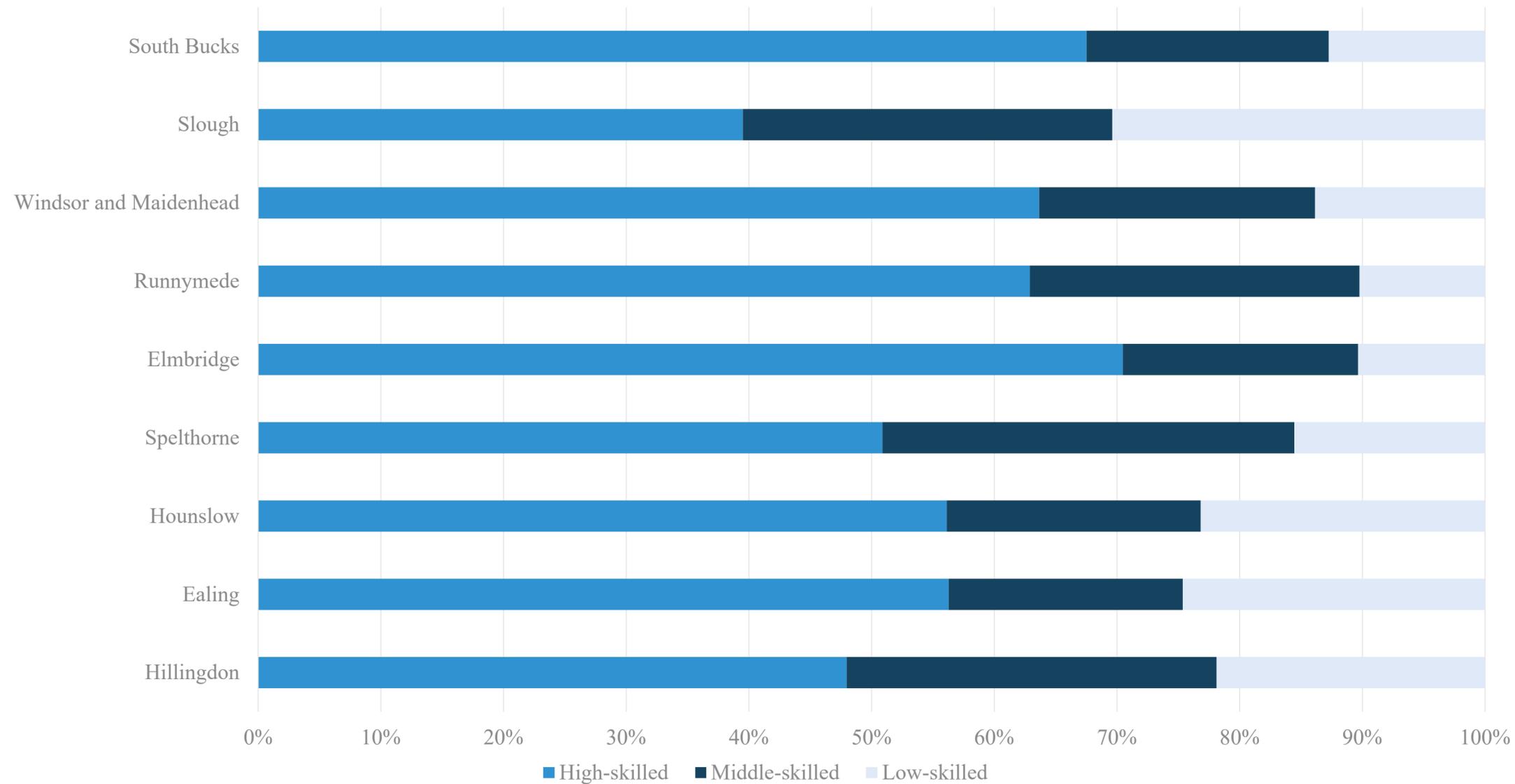
Occupations

Probability of automation



Relatively high level of high-skilled workers in most of HSPG localities

Occupation by Local Authority, April 2018-March 2019 (source: Annual Population Survey, ONS)



Key insights:

- Across all HSPG localities, high-skilled workers represents the highest proportion of workers, more than 50% except Slough and Hillingdon as they are more balanced in terms of occupation levels.

Transport and Communications (H and J categories)

Proportion of High Skill Occupations

Data: Occupation by MSOA by industry (here official Nomis following categories H, J: transport and communication)

Key insights:

- Around Heathrow, there are high concentrations of both high- and low-skilled transport occupation
- The Western edge of HSPG area and inner London have higher-skilled transport jobs, whilst the outer London tends to have lower skilled transport jobs farther west and east ends of the HSPG area have higher-skilled transport jobs

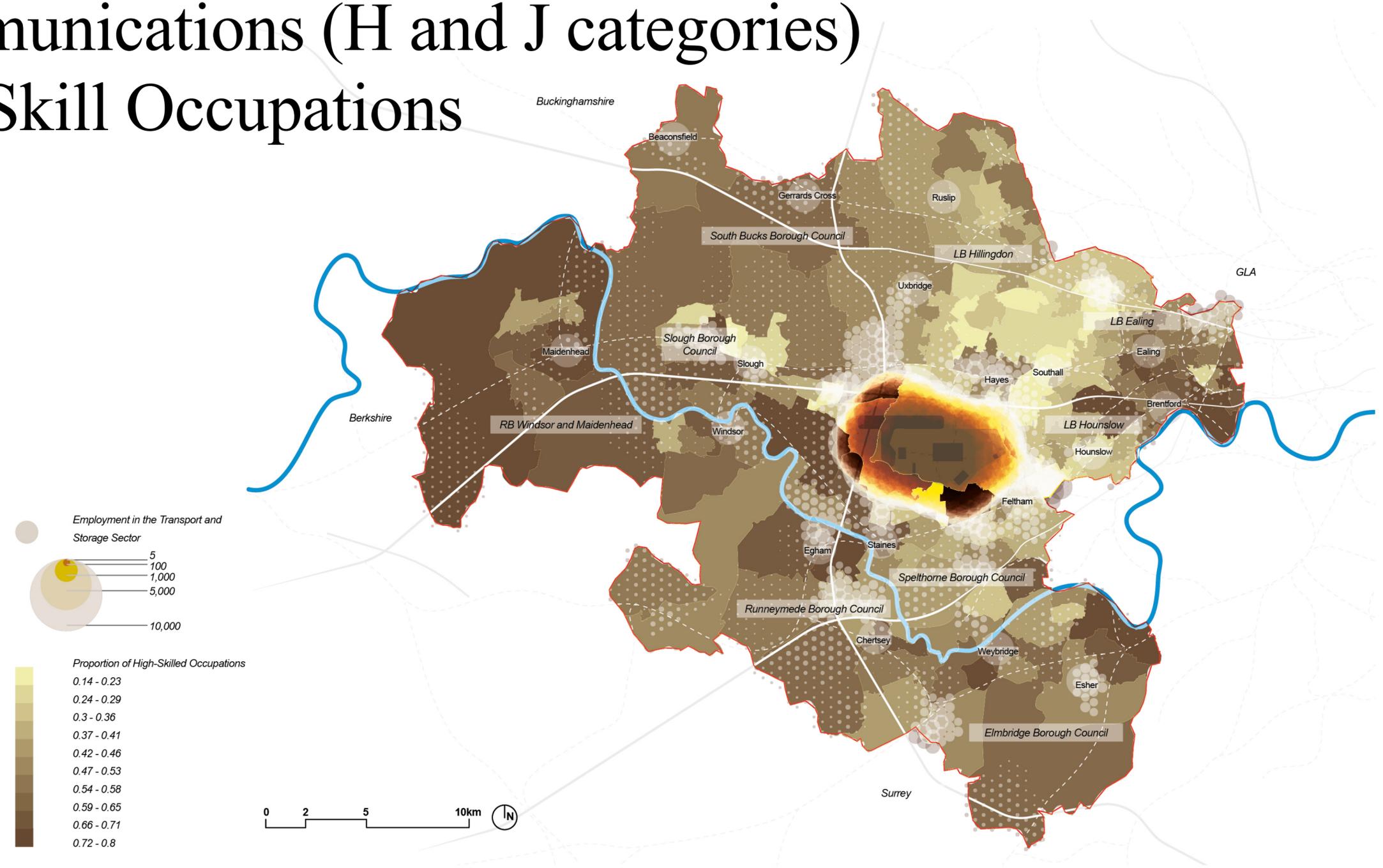


FIGURE XX CREATIVE INDUSTRIES - FILM AND TV

Manufacturing

Proportion of High Skill Occupations

Data: Occupation by MSOA by industry (here official Nomis categories C: Manufacturing)

Key insights:

- Mixed clusters of lower-skilled manufacturing occupations across the study area
- Clusters of high-skilled jobs often representing HQ offices (e.g., Sony in Elmbridge)

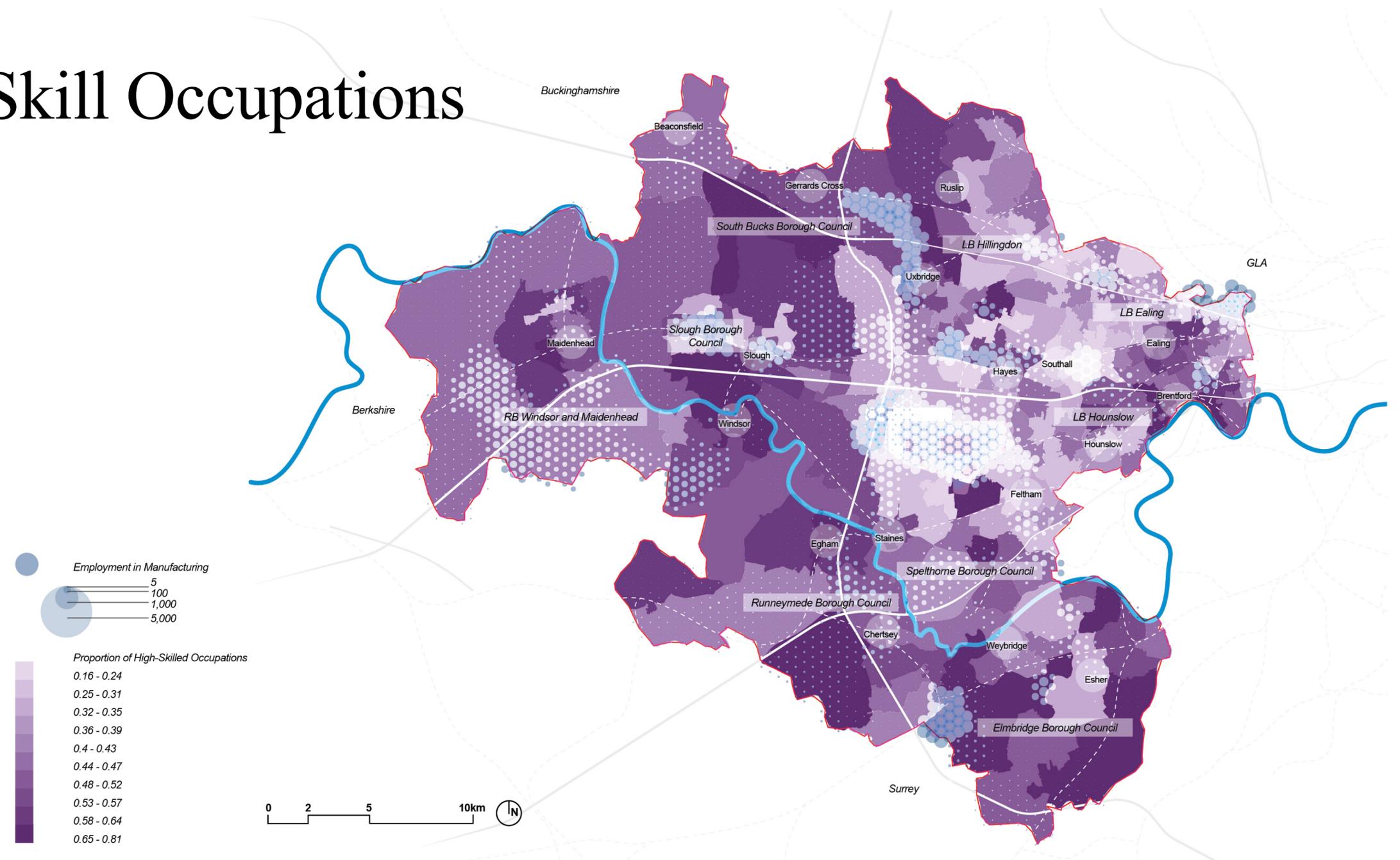


FIGURE XX MANUFACTURING - LOW, MEDIUM AND HIGH TECHNOL-

Professional Services

Proportion of High Skill Occupations

Data: Occupation by MSOA by industry (here official Nomis following categories K, L, M, N Financial, Real Estate, Professional and Administrative activities)

Key insights:

- Most professional services jobs in the HSPG area are highly-skilled, with the exception of lower-skilled occupations directly around the airport and to the east (except Ealing).
- The Western edge of HSPG area and inner London have higher-skilled professional services jobs, whilst outer London tends to have lower skilled professional services jobs.

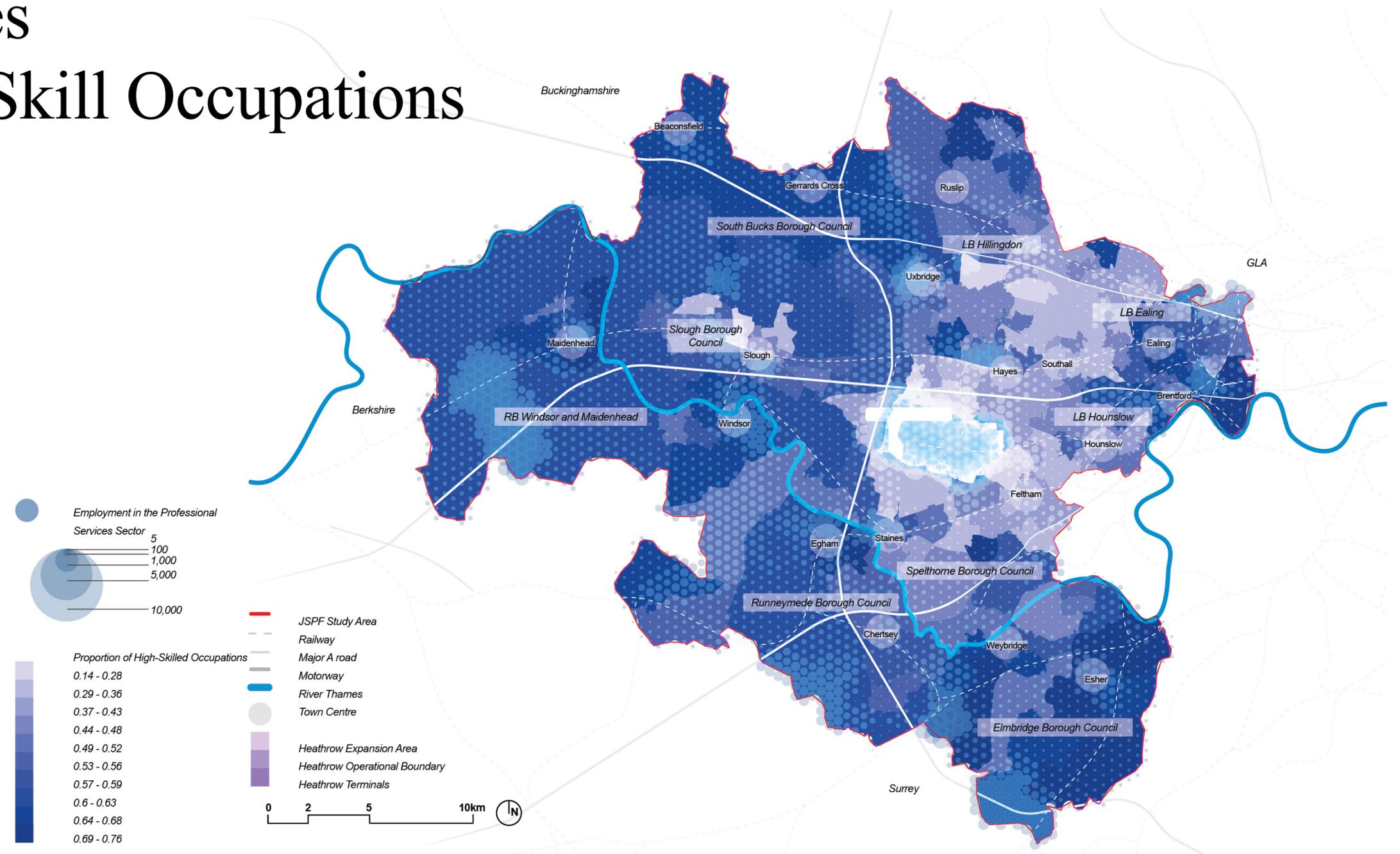
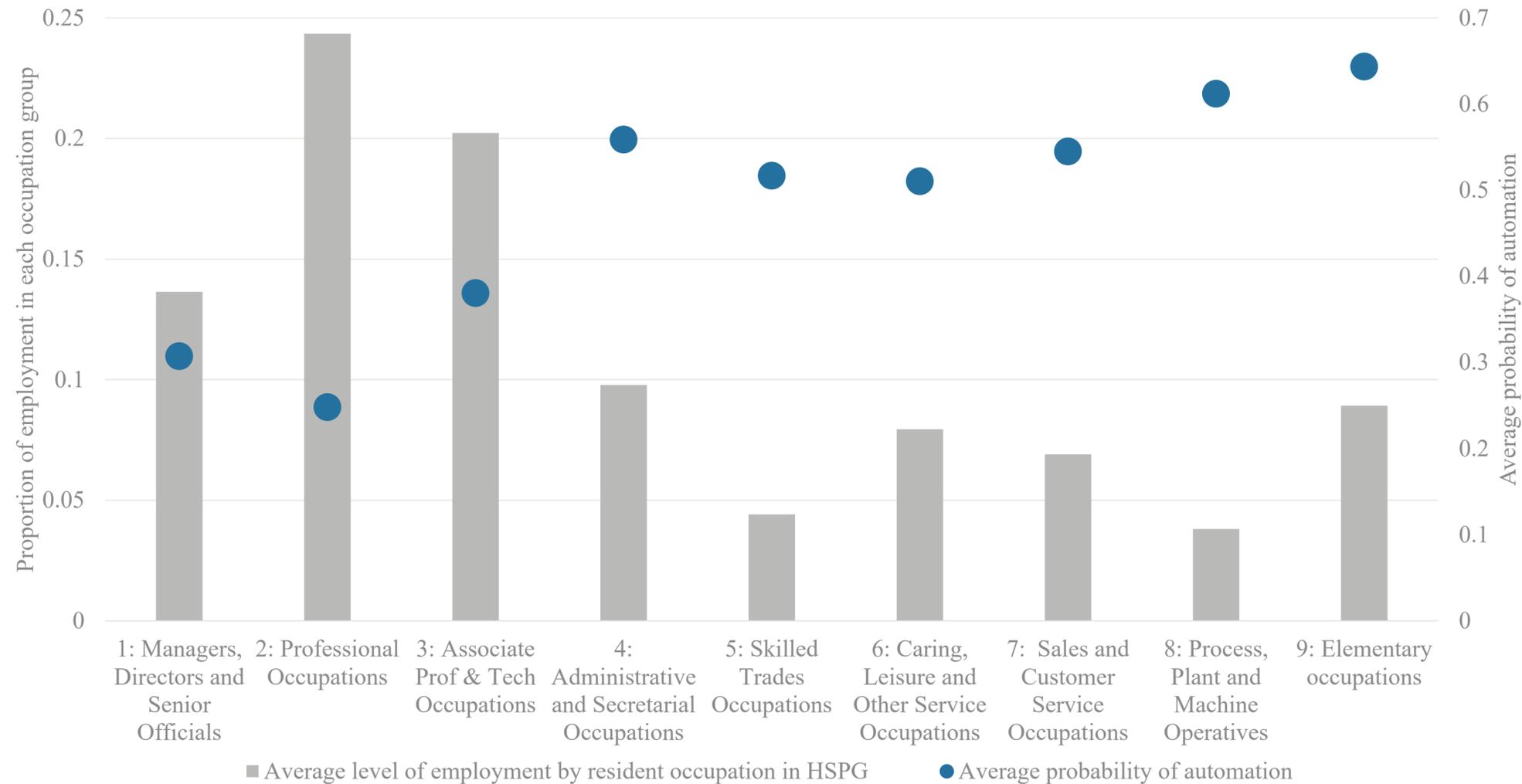


FIGURE XX FURTHER AND HIGHER EDUCATION

Risk to jobs from automation concentrated in lower-skilled occupation

HSPG levels of employment by resident occupation (Apr 2018 - Mar 2019), versus average probability of occupation automation (2017) (Source: Annual Population Survey; ONS)



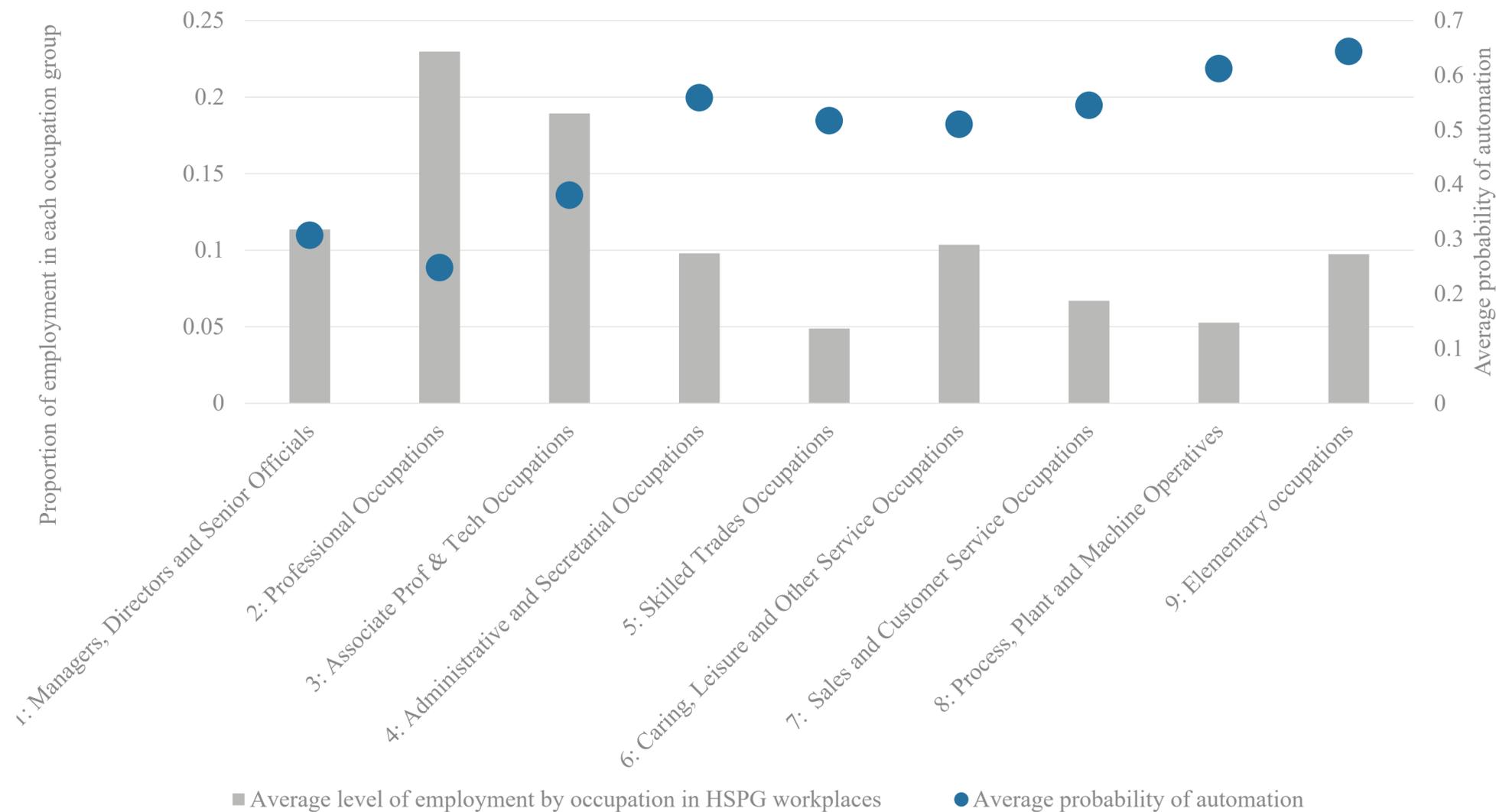
Key insights:

- The occupations with the highest proportion of employment are not those which are the most expected to be automated, however they are at risk.
- The occupations with the highest probability of automation risk tend to be in the middle- and low-skilled occupations.

All occupations will need to adapt to technological change and automation. Those most at-risk will require additional and tailored approaches to ensure that barriers to re-training or new work do not impede them in finding appropriate employment.

Limited risks for employment from automation in HSPG

HSPG levels of employment by workplace occupation (Apr 2018 - Mar 2019), versus average probability of occupation automation (2017) (Source: Annual Population Survey; ONS)



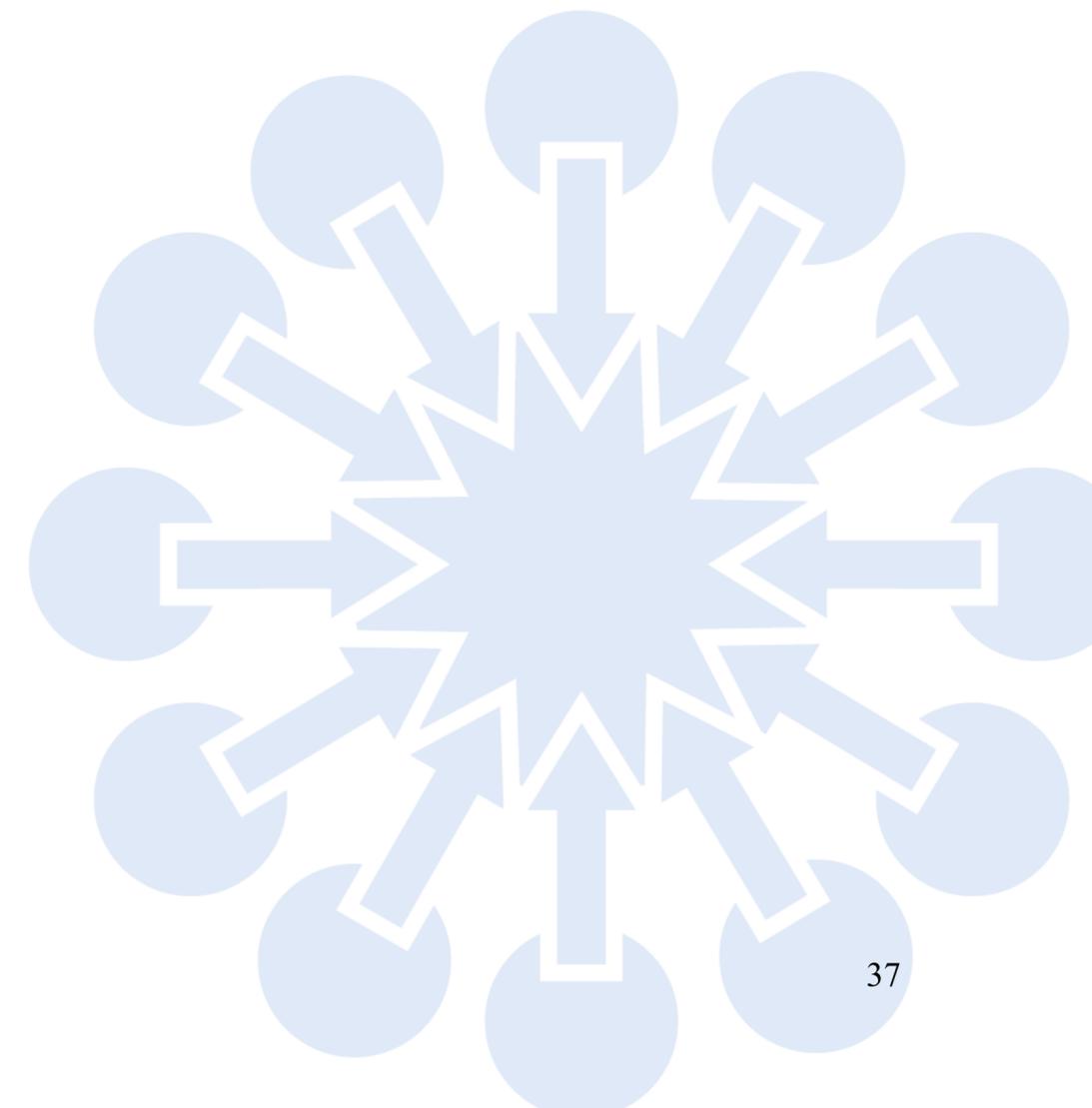
Key insights:

- This is quite similar to the HSPG level of employment by workplace occupation
- The same conclusion than the one expressed earlier can be drawn

Wages

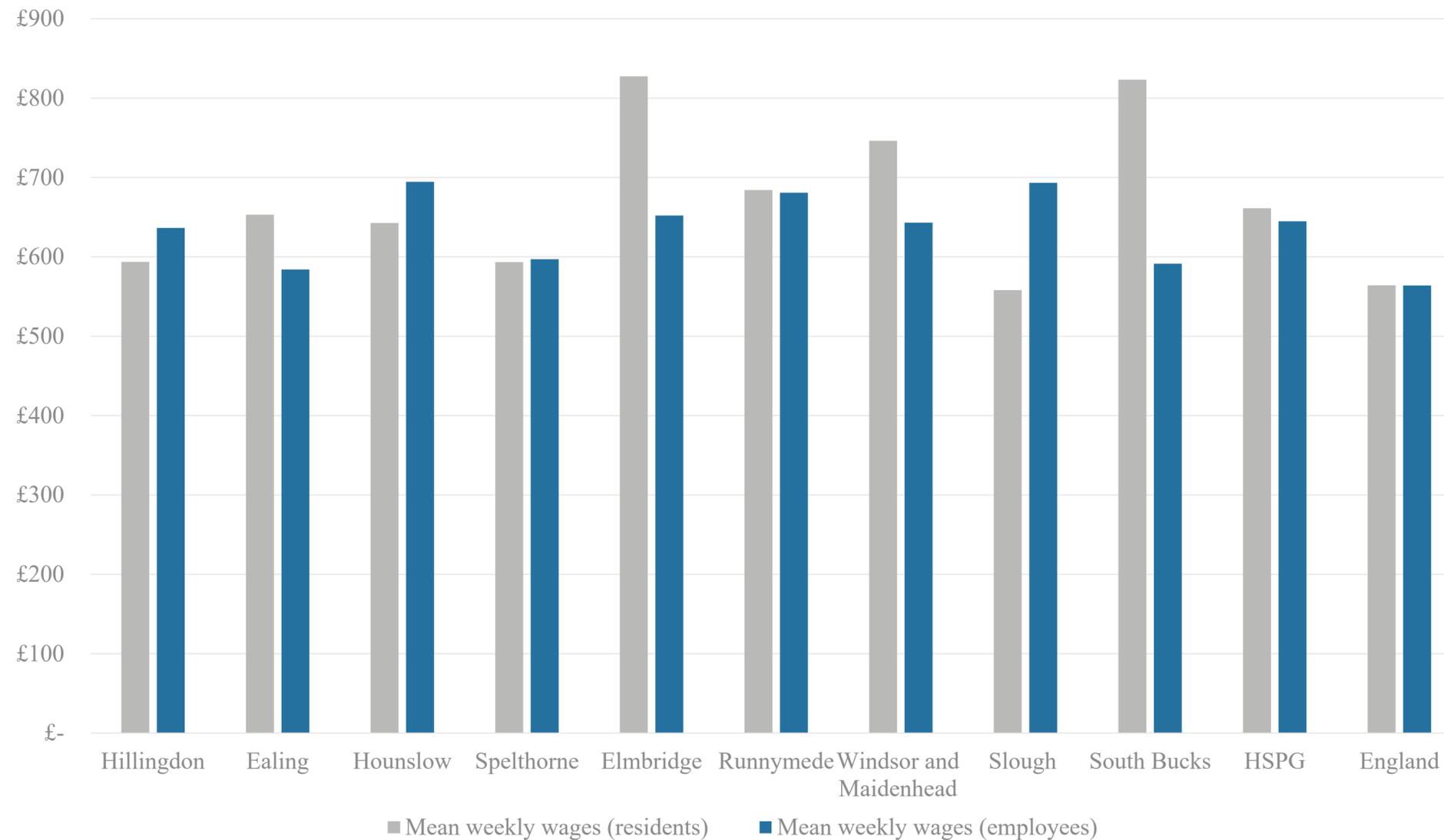
Mean wages

Types of JSA claimants



Some discrepancies between residents and workers wages might entail inadequate local offers in some cases

Mean gross weekly wages, by Local Authority, including weighted average of HSPG, 2018 (Source: Annual Survey of Hours and Earnings)

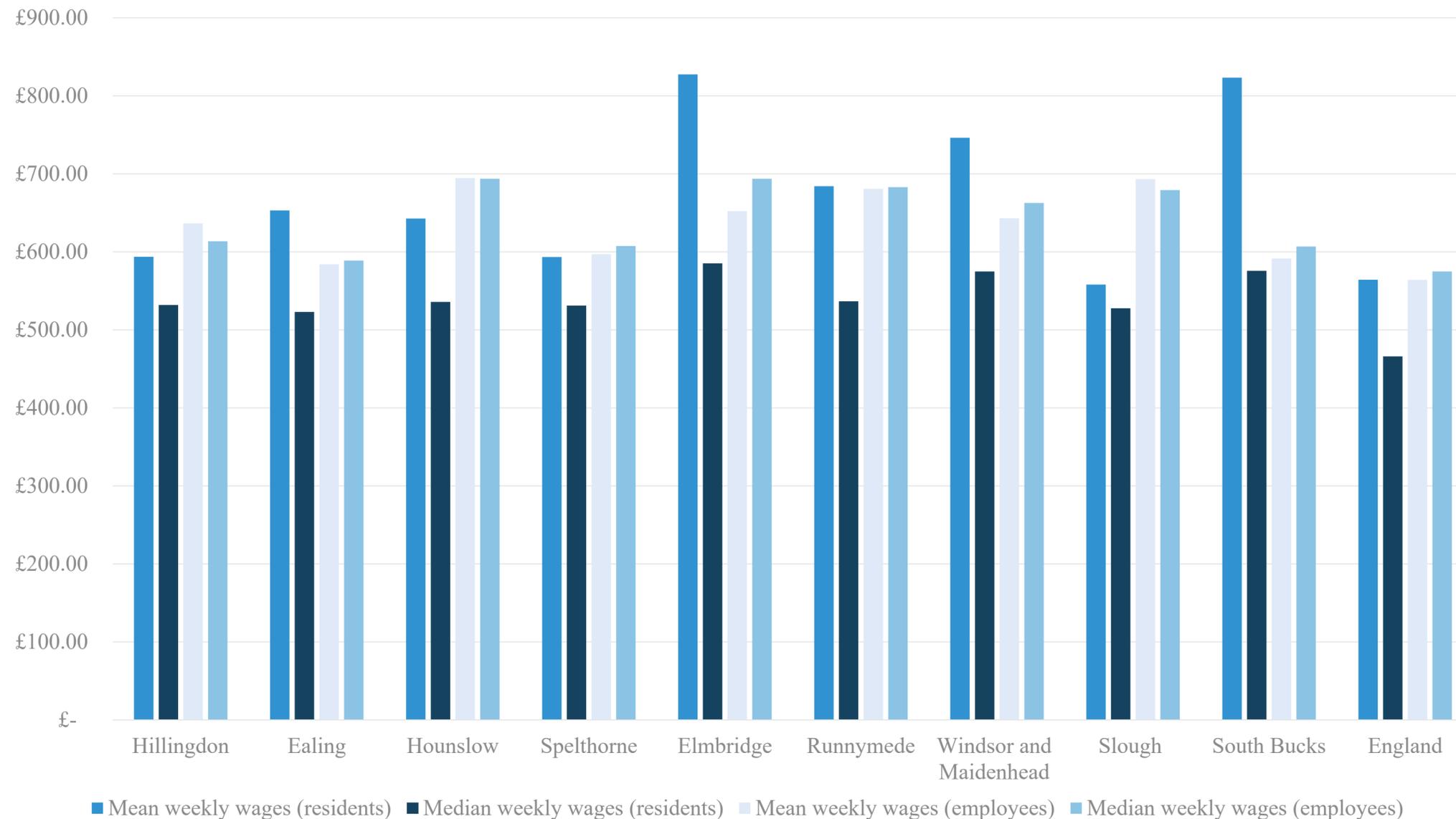


Key insights:

- Relatively large discrepancies in Elmbridge and South Bucks, where residents have a higher wage than workers. *This could have implication on the need for affordable housing and residents commute to other localities to work to have access to better employment.*
- Slough and Hounslow workers earn more than residents, suggesting it is a more attractive location for businesses (especially higher-paid work) compared to residents. *This could offer opportunities for residents to access quality local employment, but this could require skills interventions.*
- *Elmbridge and South Bucks residents earn more than those who work there, on average, which may create challenges for housing affordability for workers and commuting distances/modes.*

On average, wages are higher for HSPG residents than those who work in the HSPG area

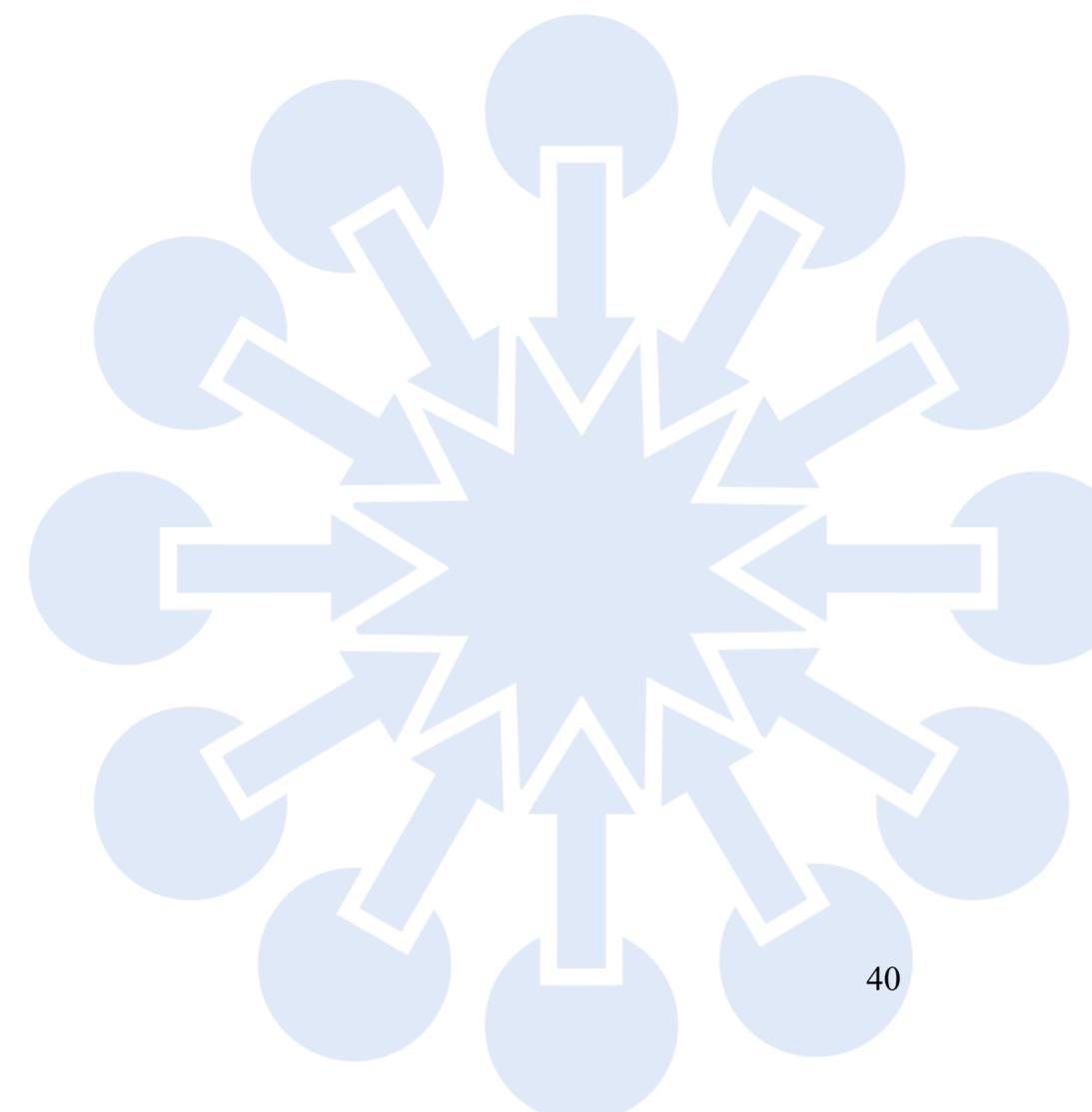
Mean and Median gross weekly wages, by local authority, 2018, (Source: Annual Survey of Hours and Earning)



Key insights:

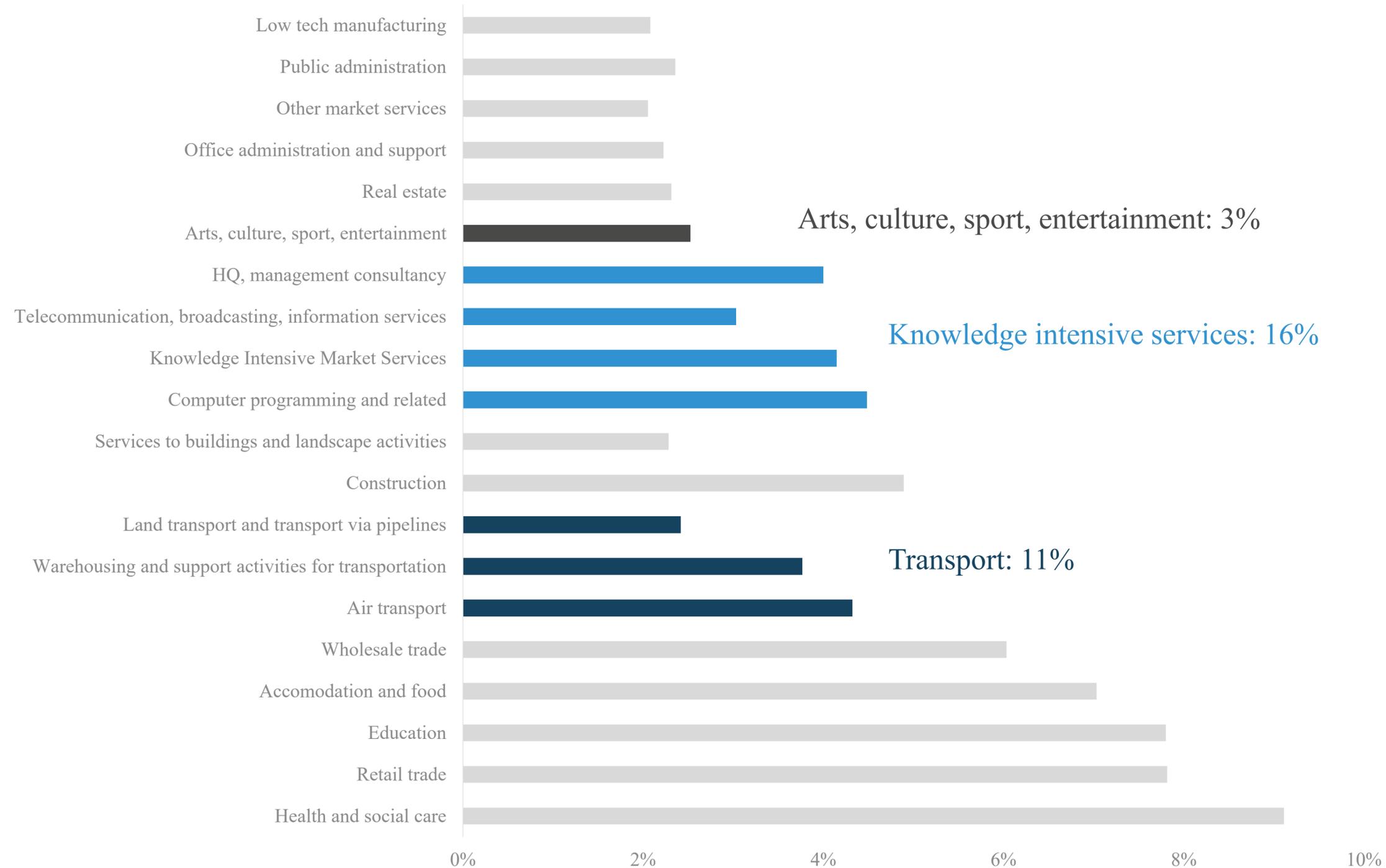
- Resident mean salary is higher than median salary across all localities – this inequality is the most significant in Elmbridge, Windsor & Maidenhead and South Bucks. This means that there is likely higher disparity between the higher and lower earners compared to other local authorities in the sub-region.
- However, workers mean and median salaries are quite the same across all localities, meaning there are no significant salaries disparities
- The HSPG wealthier residents may not work in the area, just live there
- The HSPG resident mean is £660 and the worker’s is £644.
- Around 40% of HSPG residents live outside the HSPG study area (slide 78).

Productivity and key sector analysis



Employment structure 2017

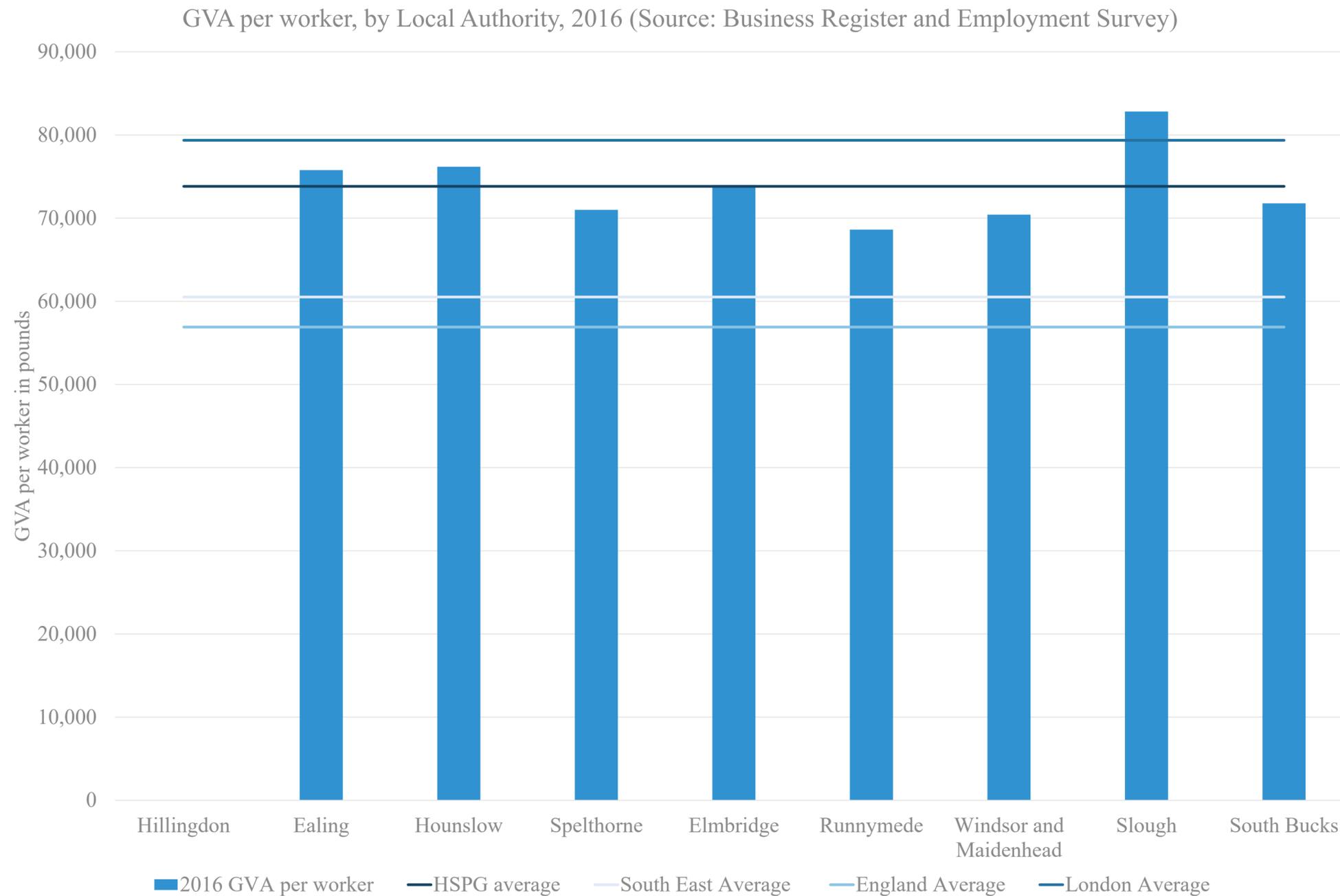
HSPG level



Key insights:

- These 20 sectors in 2017 accounted for at least 2% HSPG jobs each and 85% HSPG jobs in total.
- Practically the same structure in 2009 (when those 20 sectors covered 83% of jobs).

The HSPG sub-region is highly productive

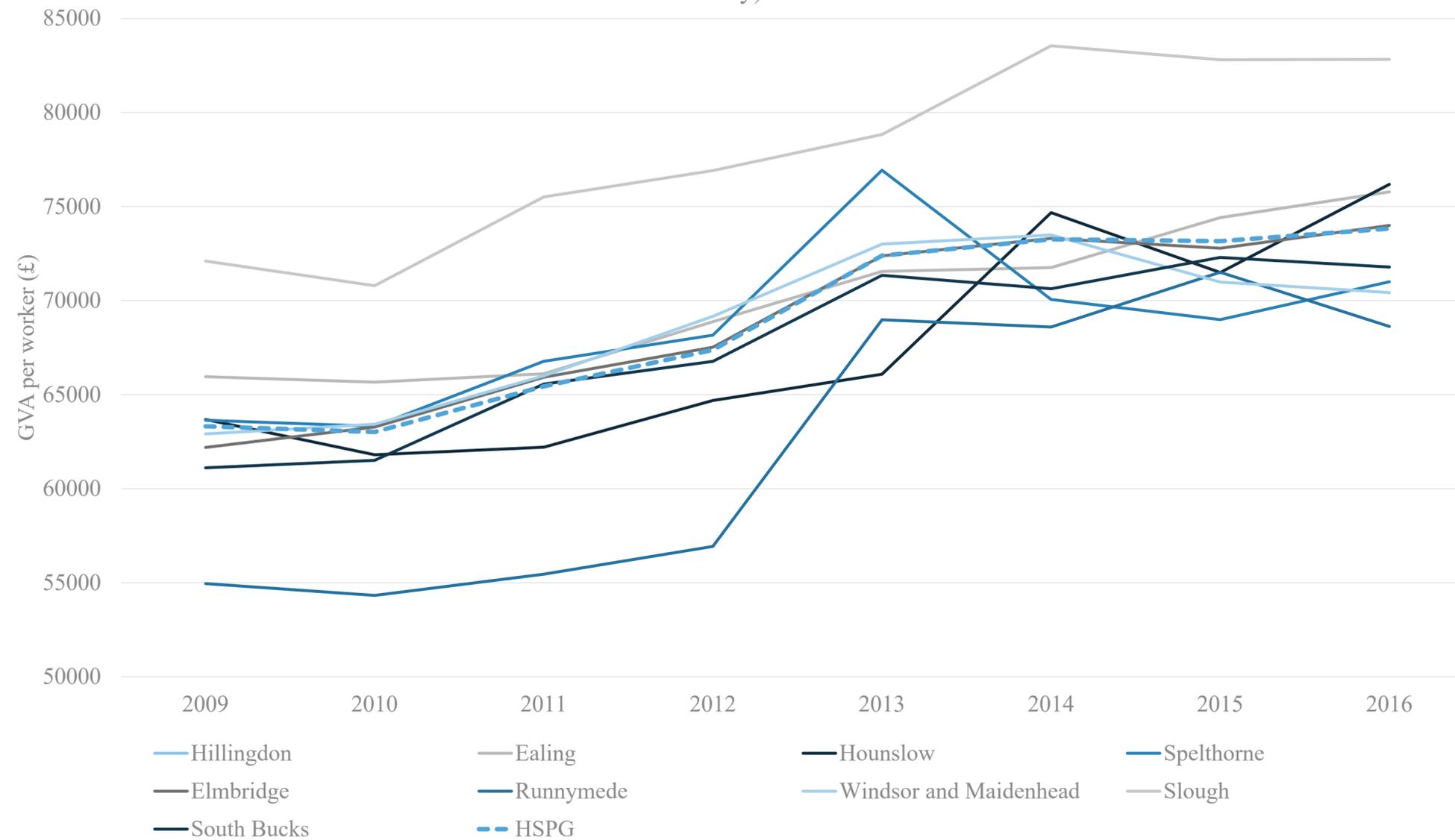


Key insights:

- All localities have a higher GVA per worker than England and South East average, making them highly productive areas
- Slough has the highest GVA per worker across all the localities, slightly higher than London average. This could be the result of its proximity to London, proximity to an airport, M4 Tech Corridor and, the agglomeration of a significant number of headquarters

GVA per worker growth

GVA per worker in pounds, by Local Authority, 2009-2016 (Source: Business Register and Employment Survey)



Key insights:

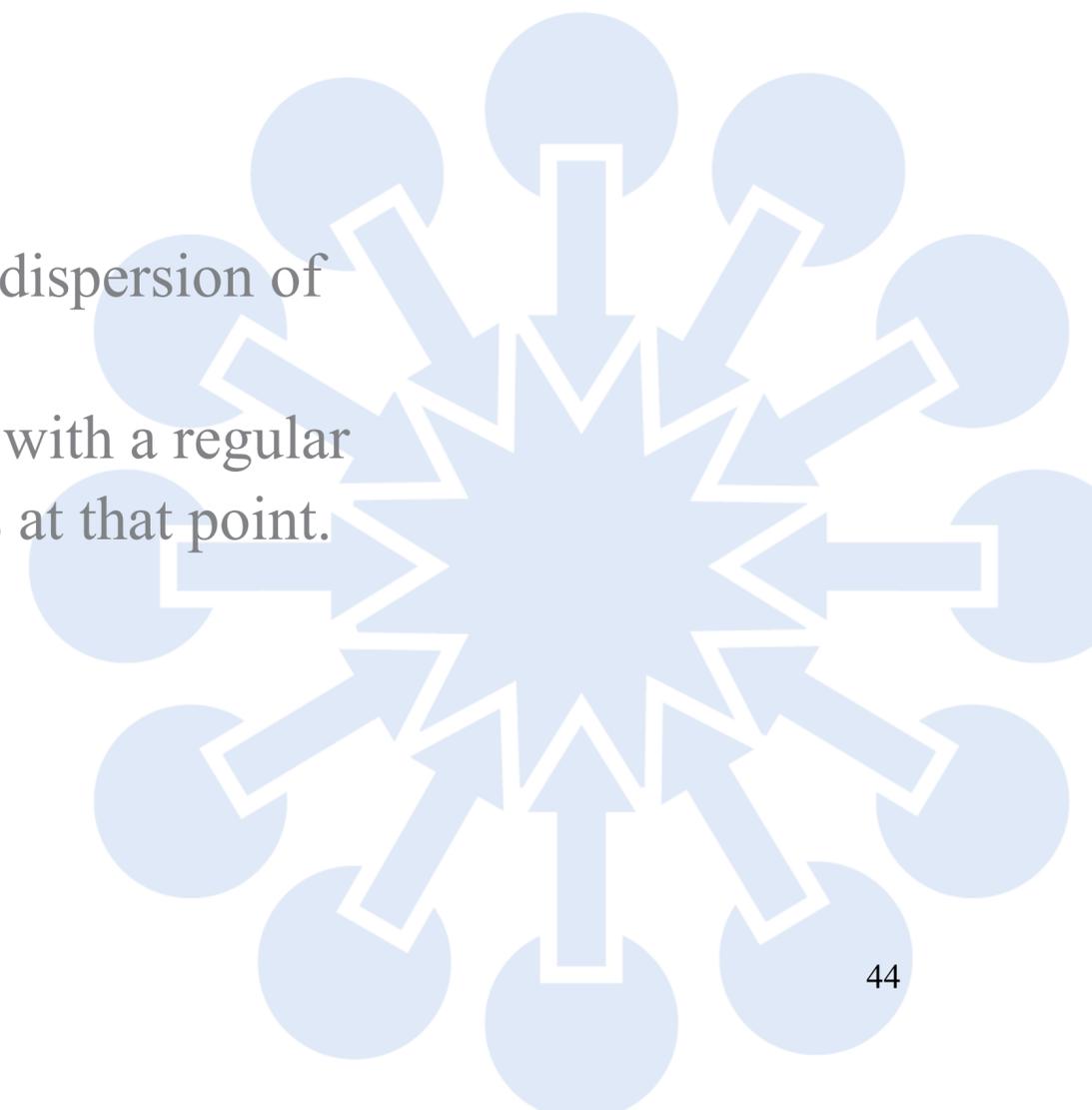
- There has been a general upward trend in GVA per worker between 2009 and 2016 in the sub-region
- In later years, some areas saw a fall in GVA per worker, including Windsor and Maidenhead, Spelthorne, Slough, and Hounslow, which caused the HSPG-wide positive trend to plateau.
- Over the period, GVA per worker rose by around £10,000 in Slough, and over £13,500 in Runnymede

Employment Sectors Maps

Note on the method:

These maps are intended to indicate the approximate geographic concentration or dispersion of employment across the HSPG area.

These maps are based on 2018 BRES data [Eva please check this] at LSOA level, with a regular grid of dots overlaid and sized proportionally to the average number of employees at that point.



Tourism, Leisure, Food & Beverages and Hospitality

High level of employment evenly spread-out with concentrations at main tourist destinations

Sectors included:

Accommodation for visitors, food & beverages serving activities, passenger transport/vehicle hire, travel agencies, cultural/sport/recreational/conferences

Key insights:

- A relatively high level of employment across the area (likely because many tourist sector jobs also provide services to the general public).
- Evenly distributed and fairly widespread with well identified tourist attractions:
 - Windsor Castle
 - Theme parks (e.g. Legoland South Windsor)
 - Old racing track in Brooklands
 - Thorpe park north to Chertsey
- Unsurprisingly some high level of employment around Heathrow with all the airport service-related activities

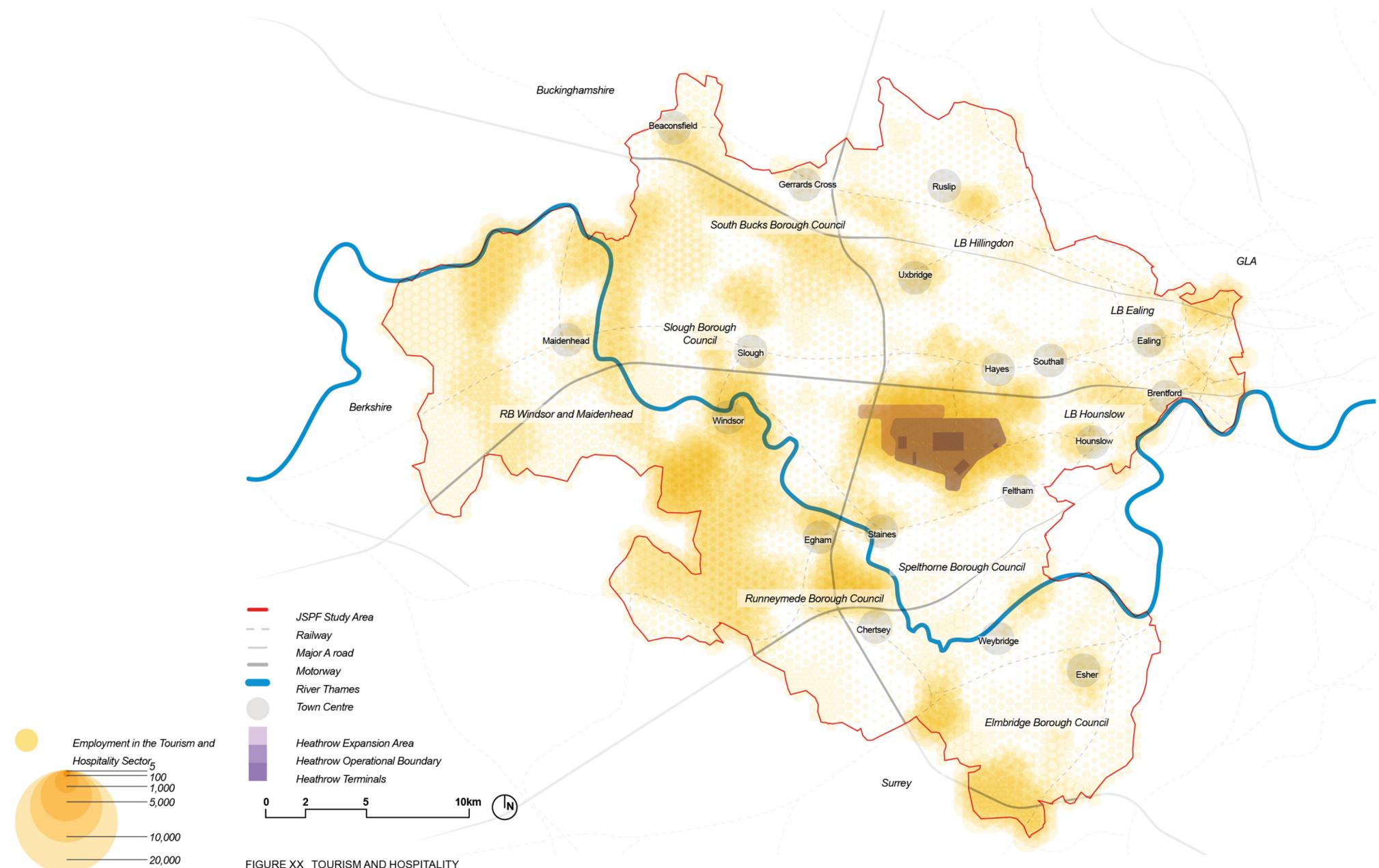


FIGURE XX TOURISM AND HOSPITALITY

Logistics and Storage

fairly well concentrated along motorways and around the airport

Sectors included:

Freight, warehousing and transportation support activities

Key insights:

- Fairly concentrated due to the nature of the activity, gathered around strategic transport hubs:
 - Heathrow airport
 - Motorway network (e.g. along the North/South M25 or at the M25/M3 intersection)
 - Strategic industrial employment sites (e.g. Brooklands)
 - Old Oak Common future HS2 station
- Due to space required and importance of transport links, these sectors tend to not locate around town centres except in Slough, Esher and Hayes

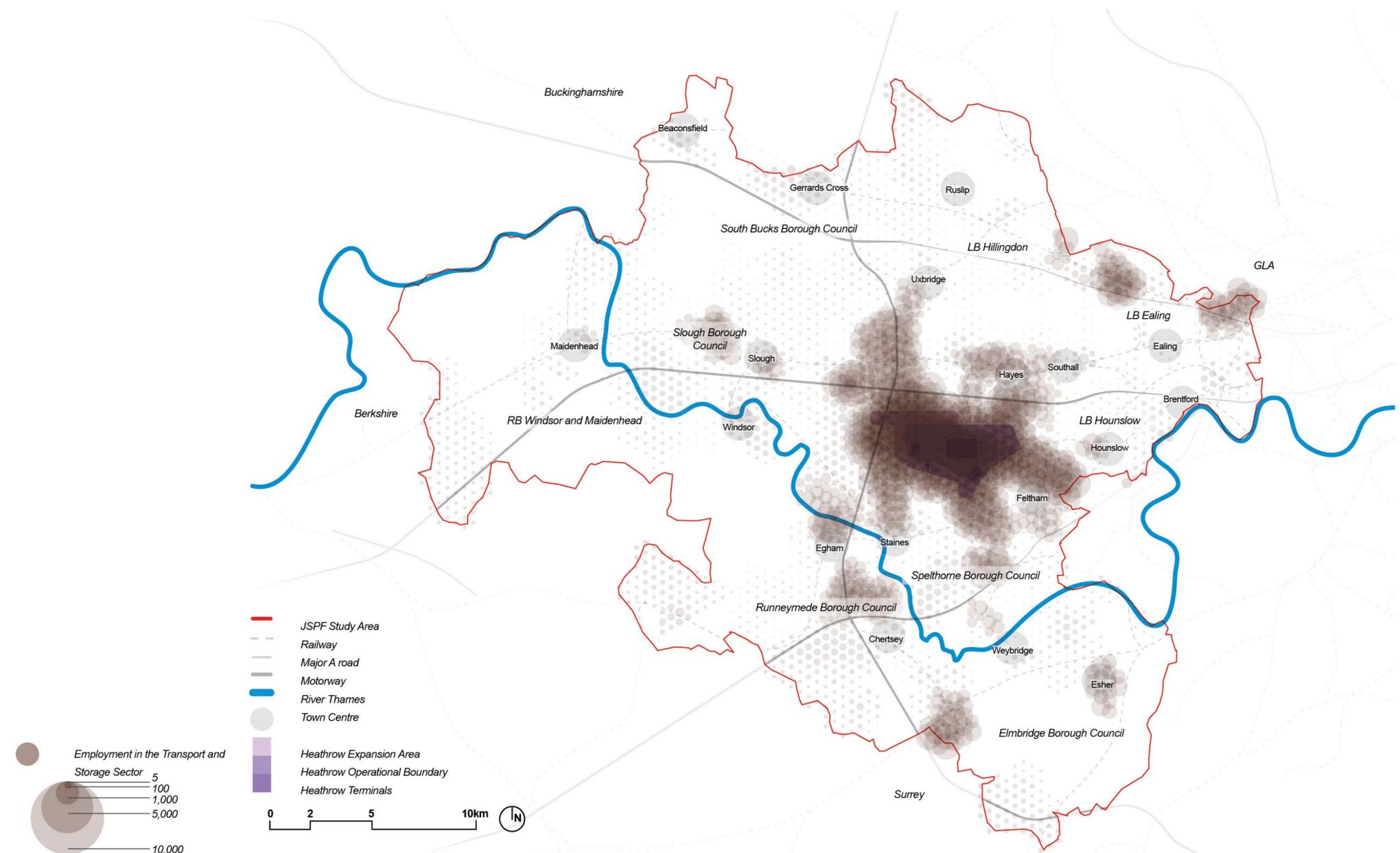


FIGURE XX TRANSPORT AND STORAGE

Aviation

Highly concentrated around the airport and some specialist manufacturing north of Uxbridge

Sectors included:

Manufacturing, sales and operation

Key insights:

- Highly concentrated around Heathrow Airport
- Some more locally-significant sites (e.g. Hounslow and Hayes)
- High concentration of aviation-related specialists (mostly manufacturers) gathered between Uxbridge and Gerrards Cross

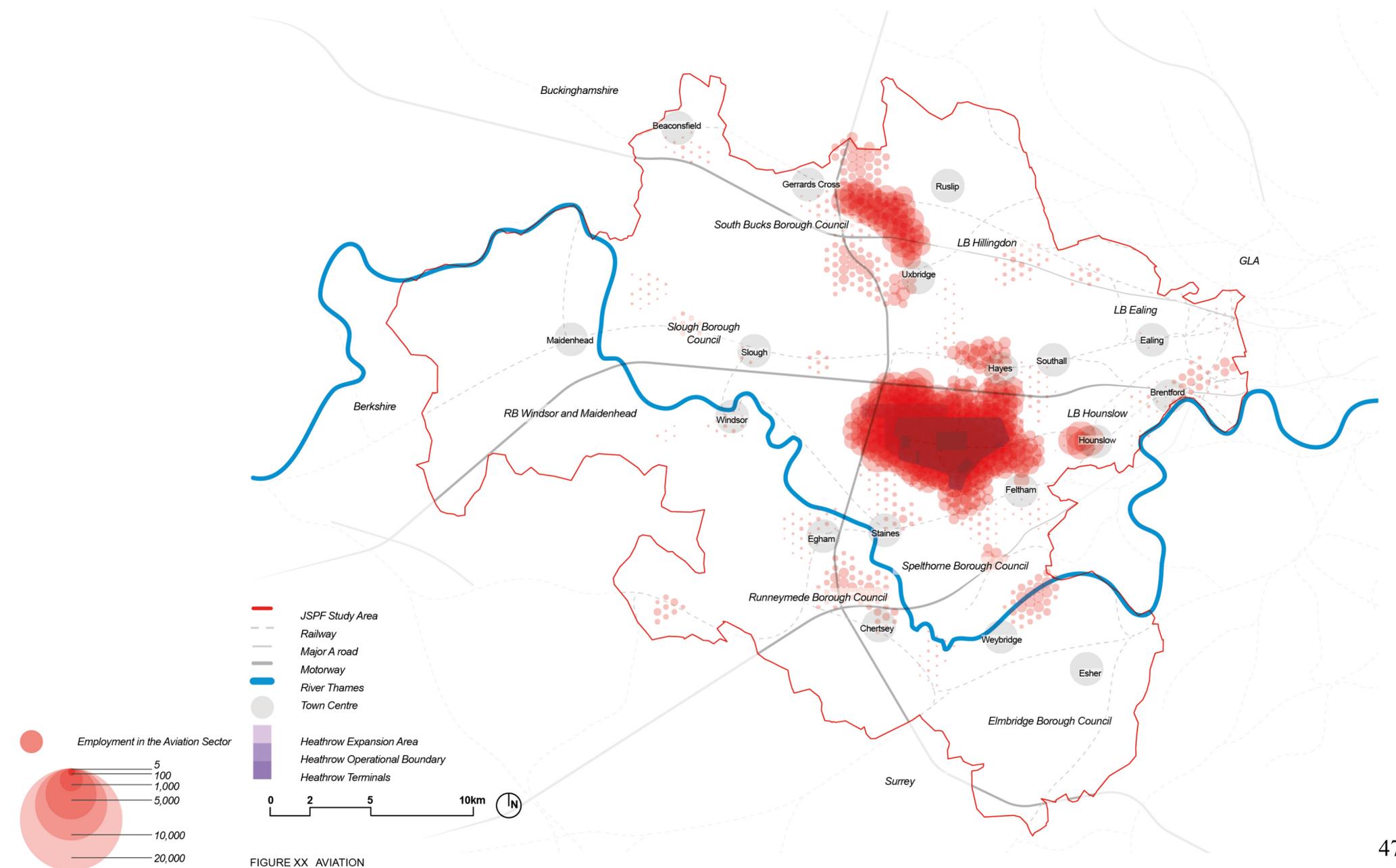


FIGURE XX AVIATION

Pharmaceutical Research and Manufacturing

Low density of employment with few single big employers

Sectors included:

Research and manufacturing

Key insights:

- Low density of employment across HSPG and quite spread-out
- Some denser co-location in West Windsor & Maidenhead and South-West Chertsey, likely home to one single large employer

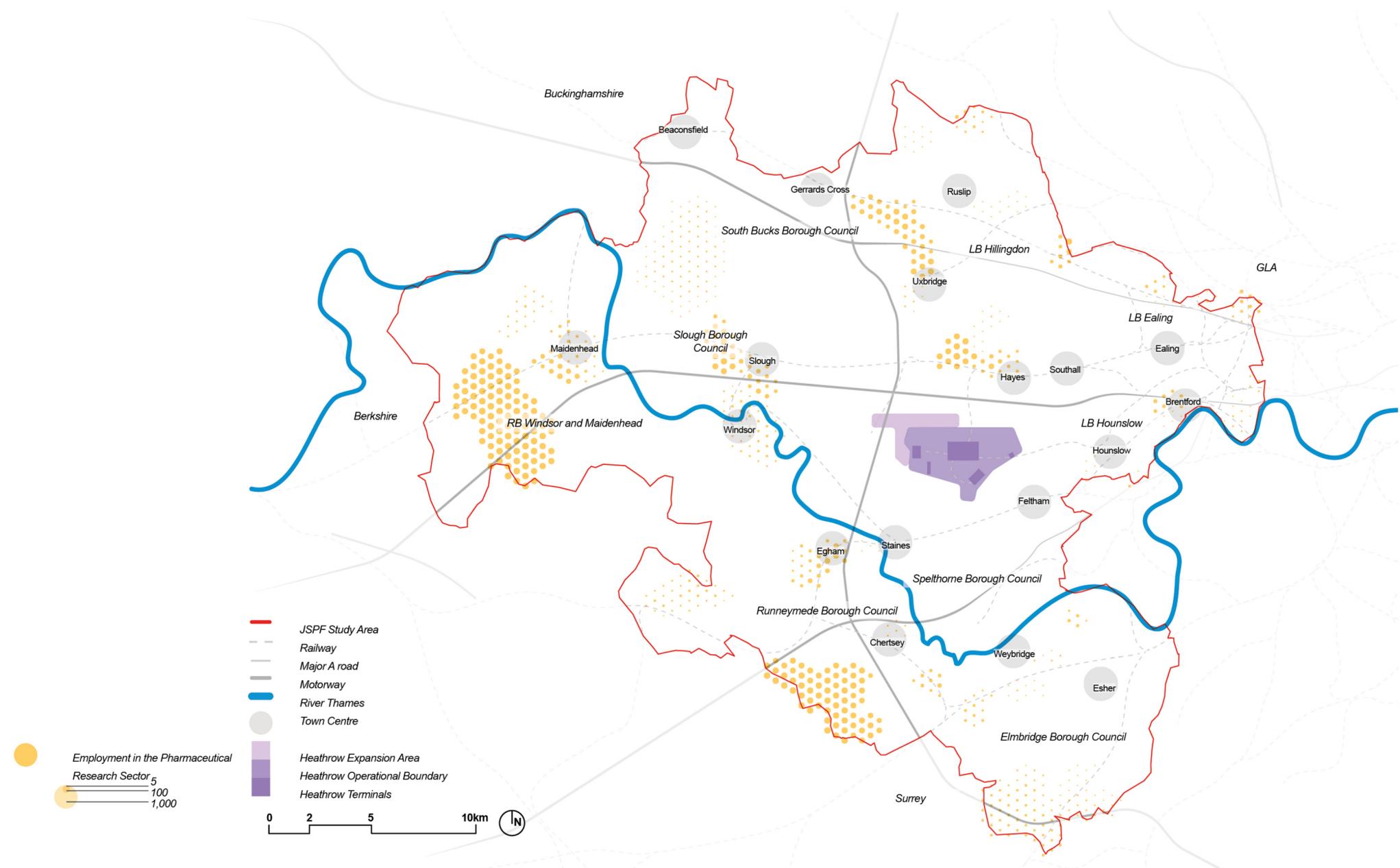


FIGURE XX PHARMACEUTICAL RESEARCH

Professional Services

Even distribution across HSPG with well-represented town centres and some business parks outside centres

Sectors included:

Insurance and financial services, real estate, head offices and management consultancy, scientific research, office administrative and other business support activities

Key insights:

- Employment tends to concentrate in town centres and along transport corridors to business parks. Some concentrations around town centres including Uxbridge, Slough, Windsor, Egham, Hayes and Esher.
- There are also some important business park concentrations outside town centres. Dense employment belt from Berkshire to Surrey

*Note: There is an overlap with pharmaceutical research

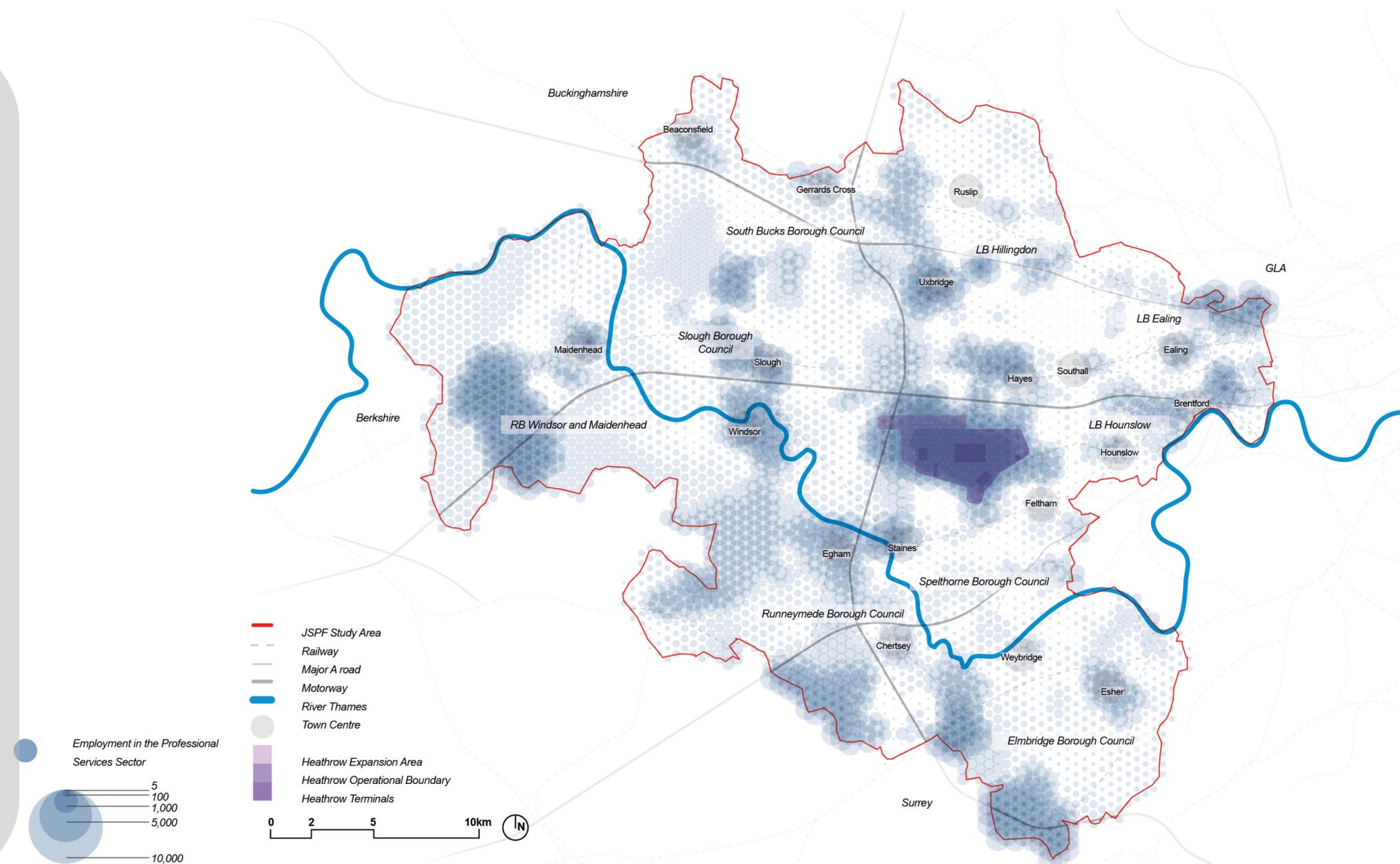


FIGURE XX PROFESSIONAL SERVICES

Creative Industries

Some clusters outside town centres around key single large employers

Sectors included:

Film industry (blue) and TV & Broadcasting industry (purple)

Key insights:

- Highly concentrated around some key hubs representing single large employers
- Two were identified in the film industry:
 - Pinewood and West London Studio near Uxbridge
 - Shepperton Studio in Spelthorne
- Sky TV is located in Hounslow
- There are concentrations outside of town centres as headquarters and production activities can both require large amounts of space
- Most concentrations tend to represent single big employers rather than clusters of small firms co-locating

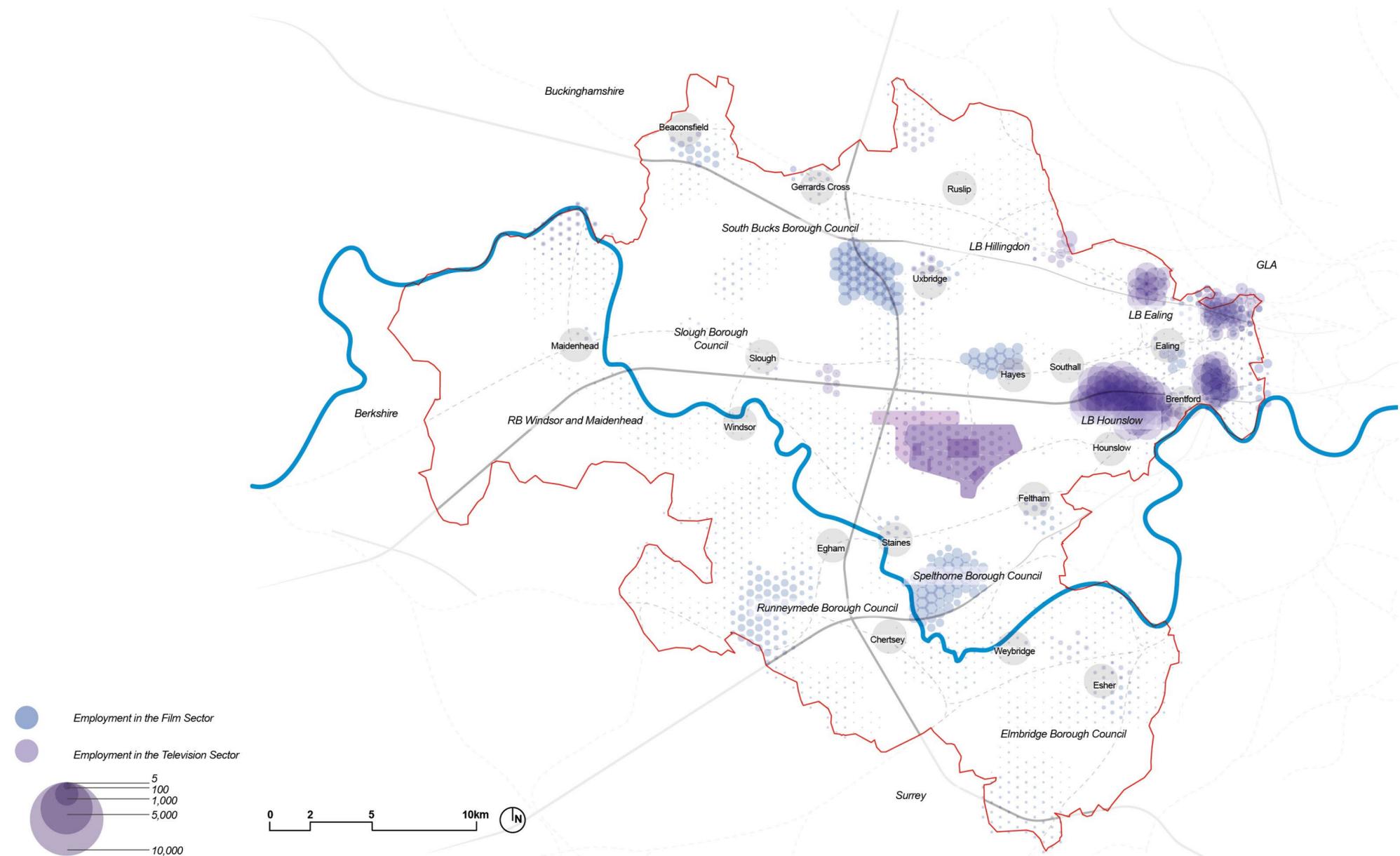


FIGURE XX CREATIVE INDUSTRIES - FILM AND TV

Manufacturing

Employment highly concentrated around key strategic sites – high tech corridor north Uxbridge, home to some aircraft manufacturers

Sectors included: low, medium, low-medium and high tech

Key insights:

- Relatively highly concentrated around key strategic industrial employment sites
- Lots of high-tech employment north to Uxbridge linked to the aircraft manufacturing subsector
- Mixed vibrant manufacturing area in Old Oak and Park Royal as well as in some town centres (e.g. Slough and around Hayes/Southall)
- High density in mixed-manufacturing in Brooklands, where one side is low-tech (industrial) and the other side high-tech (as comprising some key headquarters such as P&G and Sony Europe*)
- Slough Trading Estate very dense – strategic manufacturing employment site

*Note: This represents Sony’s professional services rather than manufacturing facilities, so covering the management side of manufacturing

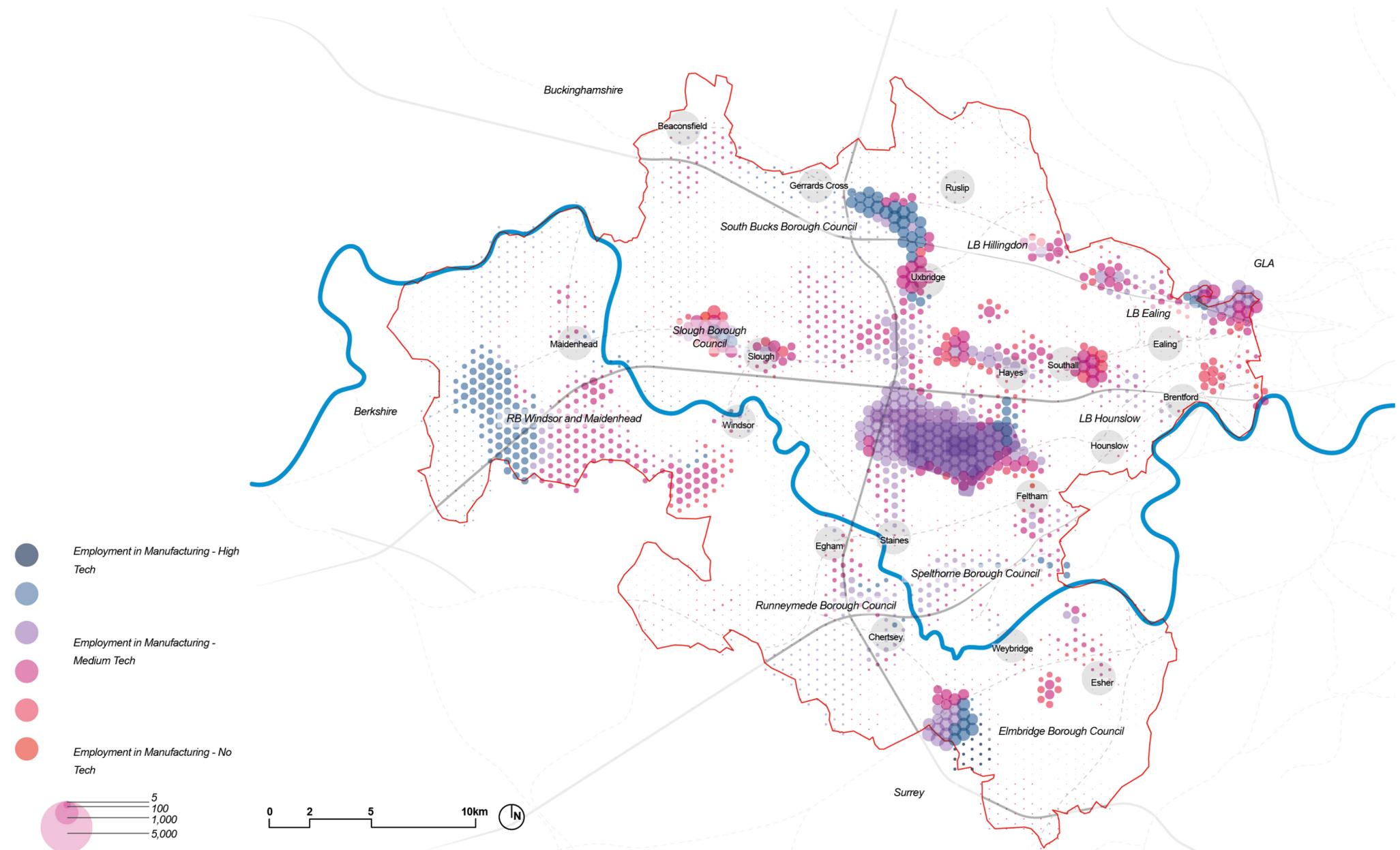


FIGURE XX MANUFACTURING - LOW, MEDIUM AND HIGH TECHNOLOGY

Further and Higher Education

Highly concentrated around two major universities but low density of employment overall

Sectors included:

First degree and graduate levels of higher education

Key insights:

- Low density of employment overall
- Highly concentrated around two important universities:
 - Brunel University near Uxbridge
 - Royal Holloway west of Egham

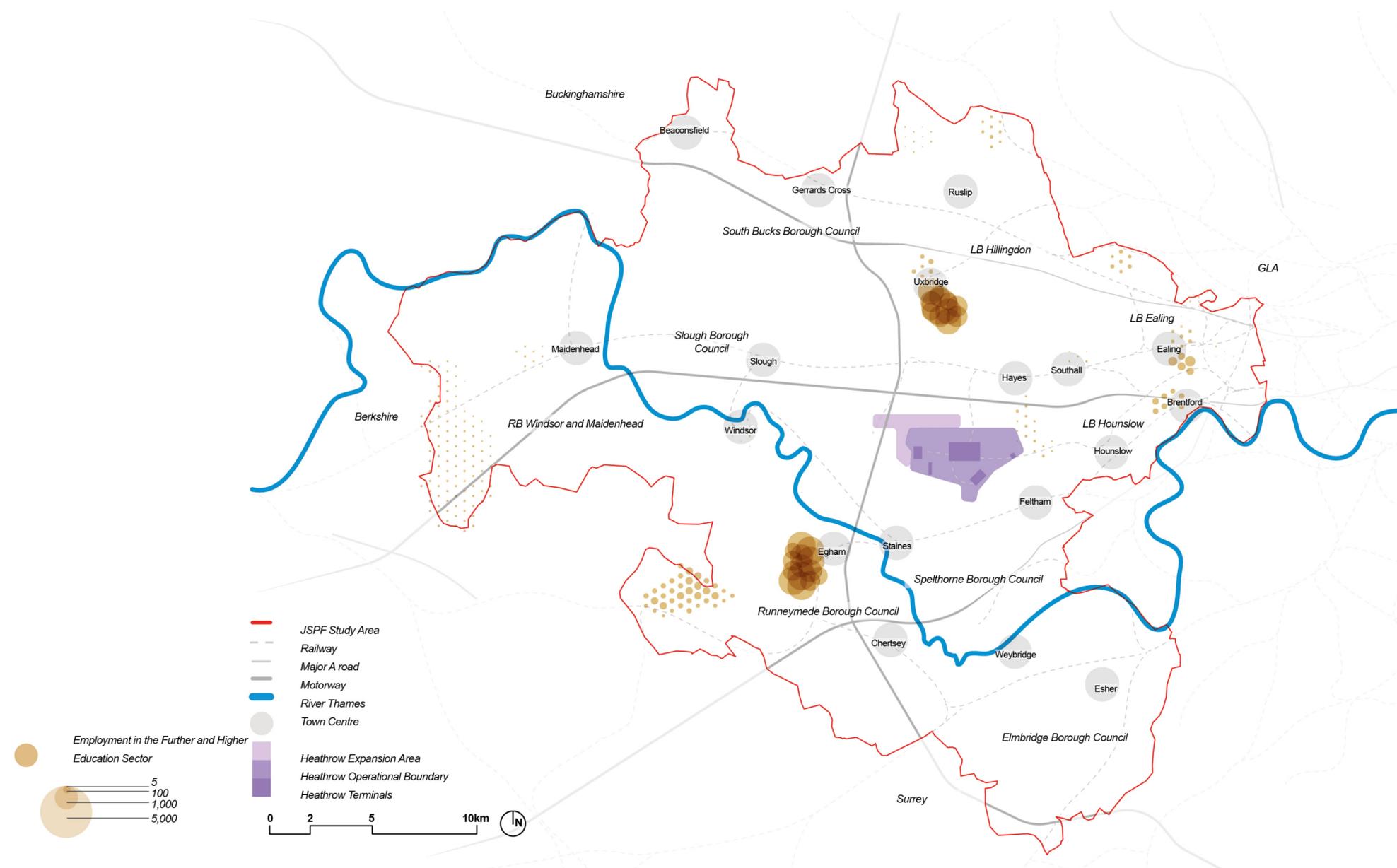


FIGURE XX FURTHER AND HIGHER EDUCATION

Digital

Spread-out relatively spread-out across HSPG

Sectors included: computer programming and data processing

Key insights:

- Fairly evenly spread-out across HSPG
- Not a significant employment industry
- Pockets of digital employment positioned in areas not identified as either town centre or strategic employment sites
- Some areas of higher concentration: south Slough, East Brentford, Egham town centre and south Heathrow

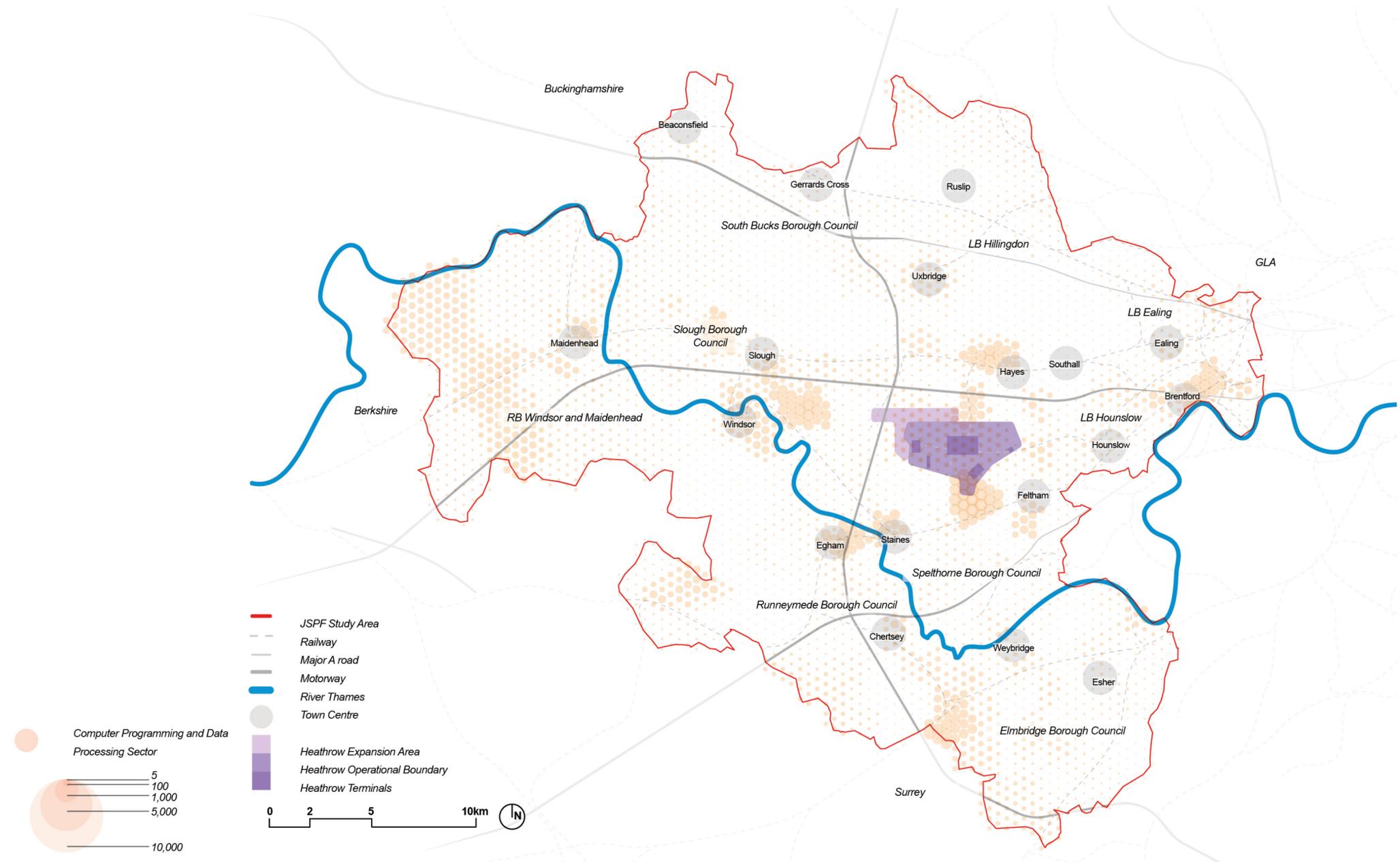


FIGURE XX DIGITAL - COMPUTER PROGRAMMING AND DATA PROCESSING

Specialisms and shift-share analysis

How to read this section

Location Quotients show the relative employment specialism of a sector for a given area compared to the national level. A LQ of 1.0 means that the local area employs as many people in that sector as would be expected if the local economy matched the national economy. A LQ of 2.0 means that the local area has twice the amount of employment in a sector compared to the national average. Normally, a LQ greater than 2.0 suggests some specialisation in employment in a sector, compared to the national economy.

Shift-share analysis evaluates employment numbers in sectors, and how they are changing over time in one location relative to national employment on the whole and national employment of that sector. The 'Local Competitiveness' factor from this analysis shows how much employment a sector in the HSPG region is growing more (or less) compared to the national economy and that sector at the national level. So, a high 'Local Competitiveness' factor means that employment in the sector at the local level is adding more jobs compared to the national jobs growth levels or the growth in the sector at the national level.

arup.com

Specialisation 2017 (Location quotient analysis)

HSPG level

	change 2017-2009	sector share 2017	sector	LQ > 2	Local competitiveness
1	-3%	4.3%	51 : Air transport	15.5	-4%
2	149%	0.1%	06 : Extraction of crude petroleum and natural gas	8.3	183%
3	22%	0.9%	60 : Programming and broadcasting activities	6.8	-44%
4	192%	0.2%	37 : Sewerage	2.4	179%
5	47%	0.3%	11 : Manufacture of beverages	2.3	33%
6	42%	0.8%	59 : Motion picture, video and television programme production, sound recording	2.1	23%
Total shares 7 %					

Key Insights

- HSPG as a whole specialises (LQ >2) in 6 industries, which account for 7% of HSPG employment in total.
- 5 out of the 6 accounts for less than 1% of jobs each in the sub-region, except for Air Transport.
- Air Transport employment has declined slightly over the period (while 1% growth at England level).
- Programming and broadcasting has grown by 22% since 2009, but at national level that industry grew by 66%.
- Oil Extraction and Sewerage grew high percentages and they are very much concentrated in the area, but they have low numbers of employment.

Employment change 2009-2017

HSPG level unless stated otherwise

	change 2017-2009	sector share 2017	sector	LQ > 2	Local competitiveness
1	71%	2.2%	82 : Office administrative, office support and other business support activities		-5%
2	61%	2.4%	49 : Land transport and transport via pipelines		52%
3	46%	1.4%	96 : Other personal service activities		42%
4	45%	4.1%	78 : Employment activities		5%
5	44%	2.6%	43 : Specialised construction activities		39%
6	33%	1.4%	69 : Legal and accounting activities		-1%
7	31%	1.4%	55 : Accommodation		3%
8	30%	5.5%	86 : Human health activities		11%
9	29%	5.7%	56 : Food and beverage service activities		4%
10	26%	1.5%	41 : Construction of buildings		12%
11	23%	1.9%	93 : Sports activities and amusement and recreation activities		1%
12	23%	1.5%	87 : Residential care activities		5%
13	22%	7.8%	85 : Education		16%
14	17%	2.1%	88 : Social work activities without accommodation		10%
15	14%	1.5%	68 : Real estate activities		0%
16	14%	4.5%	62 : Computer programming, consultancy and related activities		-38%
17	13%	1.5%	53 : Postal and courier activities		34%
18	11%	6.0%	46 : Wholesale trade, except of motor vehicles and motorcycles		5%
19	7%	3.8%	52 : Warehousing and support activities for transportation		-50%
20	7%	1.2%	10 : Manufacture of food products		-4%
21	6%	4.0%	70 : Activities of head offices; management consultancy activities		-38%
22	4%	7.8%	47 : Retail trade, except of motor vehicles and motorcycles		2%
23	3%	1.6%	45 : Wholesale and retail trade and repair of motor vehicles and motorcycles		-13%
24	2%	2.3%	81 : Services to buildings and landscape activities		-15%
25	-3%	4.3%	51 : Air transport	15.5	-4%
26	-3%	1.1%	80 : Security and investigation activities		-13%
27	-11%	1.0%	73 : Advertising and market research		-31%
28	-23%	1.0%	61 : Telecommunications		-18%
29	-26%	2.4%	84 : Public administration and defence; compulsory social security		-7%
Total shares 86 %					

Key Insights

This table is ranked by which sectors grew the most (percentage) between 2009-2017, including those sectors accounting for at least 1% of jobs in 2017.

Among the growing sectors, 30% are not competitive locally (meaning the local jobs growth rate is less than the national and sector trend – computer programming, accounting services, warehousing supporting transport, management consultancy.

The rest are either growing and competitive (growing faster than national and sector trends):

- Land transport, Specialised construction services, Other personal activities, Education and postal and courier activities

Or not competitive and declining (falling faster than national and sector trends):

- Air transport, Public administration, advertising and market research, Security services.

Local employment competitiveness

HSPG level, based on 2009-2017 shift-share analysis

	change 2017-2009	sector share 2017	sector	LQ > 2	Local competitiveness
1	149%	0.1%	06 : Extraction of crude petroleum and natural gas	8.3	183%
2	192%	0.2%	37 : Sewerage	2.4	179%
3	161%	0.2%	21 : Manufacture of basic pharmaceutical products and pharmaceutical preparati		160%
4	120%	0.8%	35 : Electricity, gas, steam and air conditioning supply		97%
5	95%	0.1%	16 : Manufacture of wood and of products of wood and cork, except furniture;mar		84%
6	50%	0.0%	09 : Mining support service activities		83%
7	50%	0.2%	30 : Manufacture of other transport equipment		59%
8	42%	0.0%	19 : Manufacture of coke and refined petroleum products		54%
9	61%	2.4%	49 : Land transport and transport via pipelines		52%
10	100%	0.0%	03 : Fishing and aquaculture		50%
11	46%	1.4%	96 : Other personal service activities		42%
12	39%	0.0%	17 : Manufacture of paper and paper products		40%
13	59%	0.2%	90 : Creative, arts and entertainment activities		40%
14	44%	2.6%	43 : Specialised construction activities		39%
15	13%	1.5%	53 : Postal and courier activities		34%
16	47%	0.3%	11 : Manufacture of beverages	2.3	33%
17	81%	0.0%	02 : Forestry and logging		31%
18	23%	0.2%	91 : Libraries, archives, museums and other cultural activities		28%
19	12%	0.0%	24 : Manufacture of basic metals		27%
20	42%	0.8%	59 : Motion picture, video and television programme production, sound recording	2.1	23%
21	-2%	0.3%	58 : Publishing activities		20%
22	52%	0.5%	33 : Repair and installation of machinery and equipment		18%
23	22%	0.5%	94 : Activities of membership organisations		17%
24	22%	7.8%	85 : Education		16%
25	26%	1.5%	41 : Construction of buildings		12%
26	30%	5.5%	86 : Human health activities		11%
		Total shares 27 %			

Key insights

HSPG has been most (>50%) competitive in:

- mix of low and medium-tech manufacturing – but very small shares currently,
- land transport.

Medium competitiveness 50-20%:

- Specialised construction activities
- Postal services
- Cultural and publishing activities

Weaker competitiveness (<20%):

- Education and Health – large share of employment
- Construction – medium share of employment

Local weakness

HSPG level, based on shift-share 2009-2017 analysis

	change 2017-2009	sector share 2017	sector	LQ > 2	Local competitiveness
1	-8%	0.0%	39 : Remediation activities and other waste management services. This division inclu		-308%
2	7%	3.8%	52 : Warehousing and support activities for transportation		-50%
3	-51%	0.2%	26 : Manufacture of computer, electronic and optical products		-45%
4	9%	0.2%	75 : Veterinary activities		-44%
5	22%	0.9%	60 : Programming and broadcasting activities	6.8	-44%
6	-10%	0.3%	63 : Information service activities		-41%
7	-48%	0.2%	20 : Manufacture of chemicals and chemical products		-40%
8	6%	4.0%	70 : Activities of head offices; management consultancy activities		-38%
9	14%	4.5%	62 : Computer programming, consultancy and related activities		-38%
10	-39%	0.1%	31 : Manufacture of furniture		-35%
11	-26%	0.2%	28 : Manufacture of machinery and equipment n.e.c.		-31%
12	-11%	1.0%	73 : Advertising and market research		-31%
13	-38%	0.0%	08 : Other mining and quarrying		-28%
14	-13%	0.3%	79 : Travel agency, tour operator and other reservation service and related activities		-27%
15	7%	0.6%	74 : Other professional, scientific and technical activities		-27%
16	11%	0.4%	38 : Waste collection, treatment and disposal activities; materials recovery		-26%
17	-6%	0.9%	71 : Architectural and engineering activities; technical testing and analysis		-21%
18	-23%	1.0%	61 : Telecommunications		-18%
19	2%	2.3%	81 : Services to buildings and landscape activities		-15%
20	-2%	0.2%	92 : Gambling and betting activities		-14%
21	-3%	0.7%	72 : Scientific research and development		-13%
22	3%	1.6%	45 : Wholesale and retail trade and repair of motor vehicles and motorcycles		-13%
23	-3%	1.1%	80 : Security and investigation activities		-13%
24	-1%	0.1%	29 : Manufacture of motor vehicles, trailers and semi-trailers		-12%
25	-22%	0.5%	64 : Financial service activities, except insurance and pension funding		-12%
26	-46%	0.0%	14 : Manufacture of wearing apparel		-10%
27	-10%	0.3%	25 : Manufacture of fabricated metal products, except machinery and equipment		-10%
Total shares 26 %					

Key Insights

HSPG has been least (<-50%) competitive (growing jobs at a slower pace than national and sector levels) in:

- Waste management (very small employment share)
- Warehousing activities for transportation (4% share and growing).

Medium weakness -50 to -20%:

- High and medium-tech computer and chemicals manufacturing (very small shares and declining)
- programming and broadcasting (LQ7 and growing),
- Computer programming (5% share and growing)
- Head offices and MC activities (4% share and growing)

Small weakness (<-20%):

- Services to buildings (2% and growing),
- Motor vehicles industry (2% and growing)
- Scientific research (small share and declining),

Employment change 2009-2017 – growing and competing

HSPG level unless stated otherwise

	change 2017-2009	sector share 2017	sector
1	61%	2.4%	49 : Land transport and transport via pipelines
2	46%	1.4%	96 : Other personal service activities
3	45%	4.1%	78 : Employment activities
4	44%	2.6%	43 : Specialised construction activities
5	31%	1.4%	55 : Accommodation
6	30%	5.5%	86 : Human health activities
7	29%	5.7%	56 : Food and beverage service activities
8	26%	1.5%	41 : Construction of buildings
9	23%	1.9%	93 : Sports activities and amusement and recreation activities
10	23%	1.5%	87 : Residential care activities
11	22%	7.8%	85 : Education
12	17%	2.1%	88 : Social work activities without accommodation
13	14%	1.5%	68 : Real estate activities
14	13%	1.5%	53 : Postal and courier activities
15	11%	6.0%	46 : Wholesale trade, except of motor vehicles and motorcycles
16	4%	7.8%	47 : Retail trade, except of motor vehicles and motorcycles
17	Total shares 55 %		

HSPG LQ > 2	Local employment competitiveness	LALQ > 2
	52%	Ealing 2.2
	42%	South Bucks, W&M 2.1, 2.7
	5%	Slough 2.1
	39%	Spelthorne 2.7
	3%	
	11%	
	4%	
	12%	Elmbridge 2.1
	1%	Elmbridge, Runnymede, W&M 2.6, 2.6, 2.8
	5%	
	16%	
	10%	
	0%	
	34%	Ealing, Hounslow, Slough 2.3, 2, 7.6
	5%	South Bucks 2.1
	2%	

Key Insights

The sectors in this table have grown in employment between 2009-2017 and have a positive local competitiveness factor (growing faster than national and sector trends). This table includes sectors accounting for at least 1% of jobs in 2017.

Growing and competitive:

- Land transport
- Specialised construction services,
- Other personal activities,
- Education
- Postal and courier activities

Local authorities with concentrations in these growing and competitive sectors are highlighted on the right of the table.

Employment change 2009-2017 – declining and weak

HSPG level unless stated otherwise

	change 2017-2009	sector share 2017	sector
1	-3%	4.3%	51 : Air transport
2	-3%	1.1%	80 : Security and investigation activities
3	-11%	1.0%	73 : Advertising and market research
4	-23%	1.0%	61 : Telecommunications
5	-26%	2.4%	84 : Public administration and defence; compulsory social security
6	Total shares 10 %		

HSPG LQ > 2	Local employment competitiveness
15.5	-4%
	-13%
	-31%
	-18%
	-7%

LALQ > 2	
Hillingdon, Hounslow	17, 60
Hillingdon	5.0
Ealing, Elmbridge, W&M	3, 2, 3
Slough, W&M	6, 3

Note: While Air Transport employment has fallen over the period, and it has not matched national or sector growth, the high levels of employment overall and HAL's expansion programme will likely see a reversal of this trend in the coming years.

Key Insights

The sectors in this table have shrunk in employment between 2009-2017 and have a negative local competitiveness factor (growing slower or declining more than national and sector trends). This table includes sectors accounting for at least 1% of jobs in 2017. Includes sectors accounting for at least 1% of jobs in 2017.

Declining and weak:

- Air transport,
- Security services,
- Advertising and market research,
- Public administration.

Employment change 2009-2017 – growing and weak

HSPG level unless stated otherwise

	change 2017-2009	sector share 2017	sector
1	71%	2.2%	82 : Office administrative, office support and other business support activities
2	33%	1.4%	69 : Legal and accounting activities
3	14%	4.5%	62 : Computer programming, consultancy and related activities
4	7%	3.8%	52 : Warehousing and support activities for transportation
5	7%	1.2%	10 : Manufacture of food products
6	6%	4.0%	70 : Activities of head offices; management consultancy activities
7	3%	1.6%	45 : Wholesale and retail trade and repair of motor vehicles and motorcycles
8	2%	2.3%	81 : Services to buildings and landscape activities
9	Total shares 21 %		

HSPG LQ > 2	Local employment competitiveness	LALQ > 2
	-5%	
	-1%	
	-38%	Hounslow, Runnymede, Slough, 2.5, 3, 2, 2.5
	-50%	Hillingdon, Spelthorne, Slough 5, 3, 2
	-4%	Ealing 4.0
	-38%	Elmbridge 2.5
	-13%	
	-15%	South Bucks 2.0

Key Insights

The sectors in this table have grown in employment between 2009-2017 and have a negative local competitiveness factor (growing slower or declining more than national and sector trends). This table includes sectors accounting for at least 1% of jobs in 2017.

Growing and weak:

- Warehousing and support for transportation,
- Computer programming and consultancy,
- Activities of head offices and management consultancy,

Employment change 2009-2017 – declining and competing

ARUP

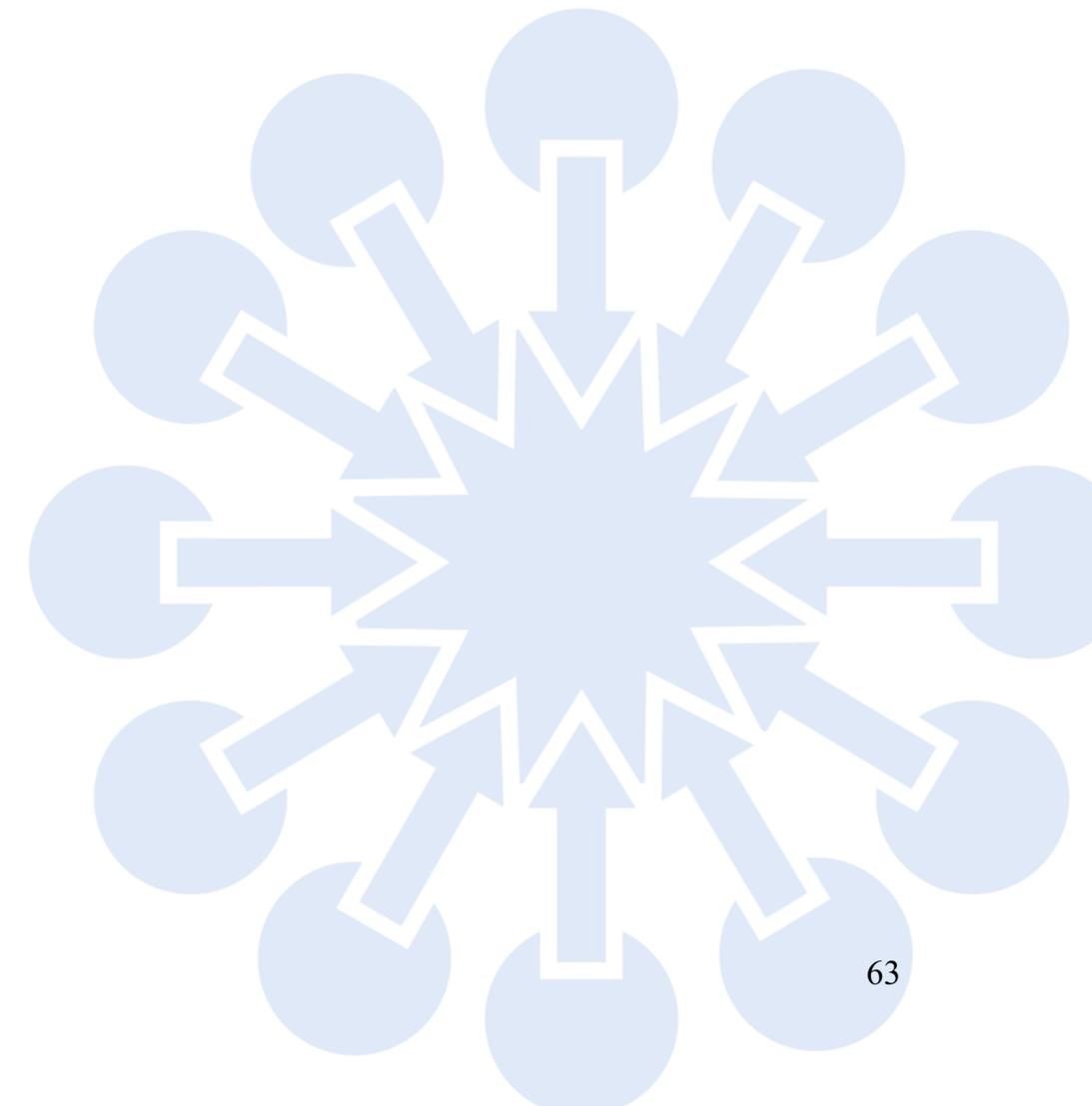
HSPG level unless stated otherwise

None

Key Insights

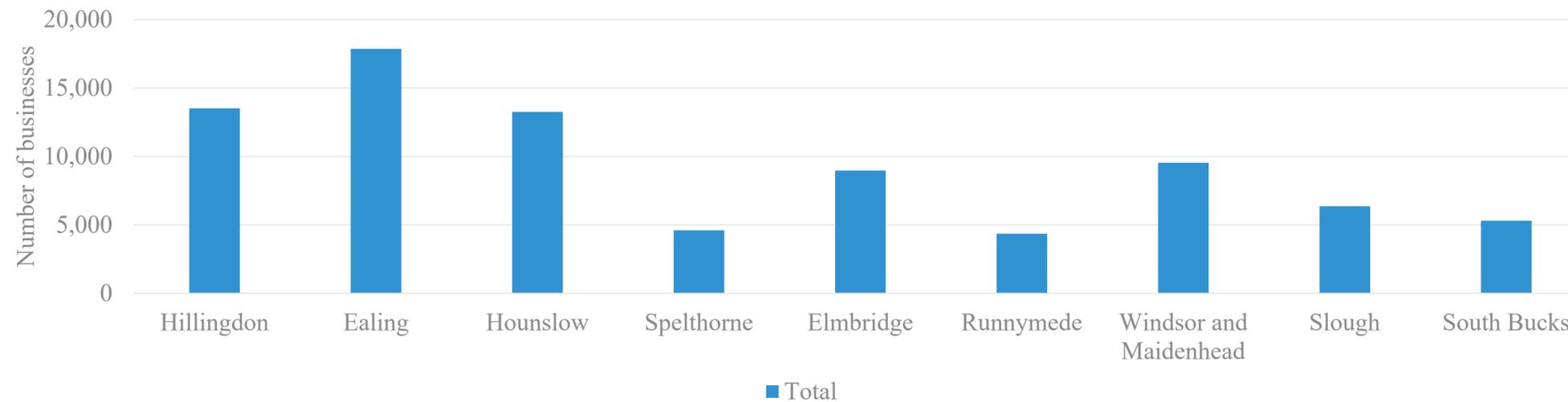
There were no sectors across the HSPG sub-region which were both declining in employment but also competitive with regards to their performance against the sector and national trends.

Business demographics

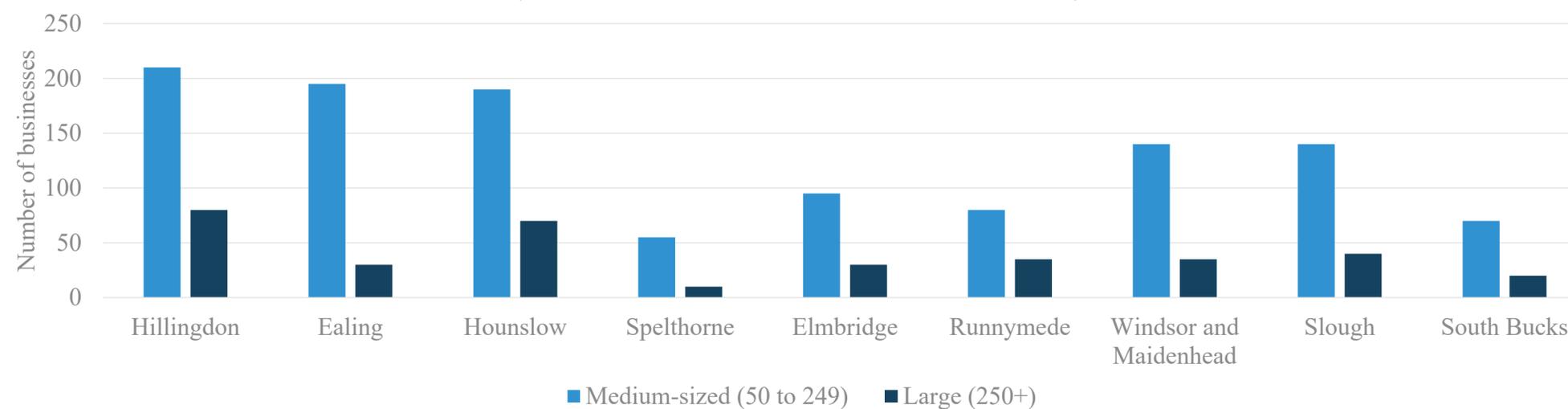


The London Boroughs have the highest number of private businesses

Total number of private business businesses, by local authority, 2019 (Source: UK Business Counts, ONS)



Number of medium and large private businesses, by Local Authority, 2019 (Source: UK Business Counts, ONS)

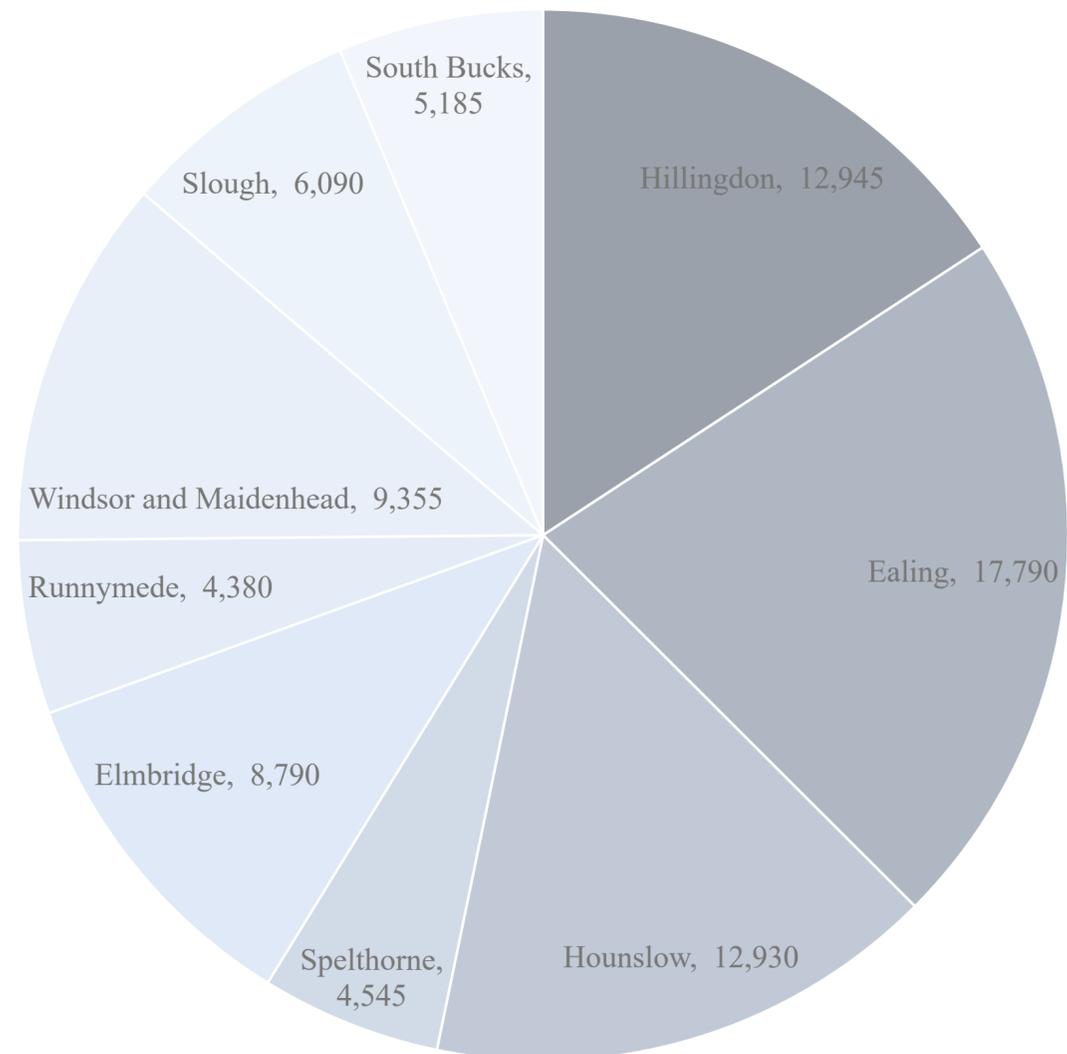


Key insights:

- Ealing has the highest number of businesses, followed by Hillingdon and Hounslow
- However, Hillingdon is home to the highest number of both medium and large sized businesses, whereas Ealing is home to one of the smallest number of large businesses across all localities
- Runnymede has a relatively high proportion of large businesses as compared to its overall number of businesses

London boroughs have more SMEs than the rest of the local authorities

Number of SMEs in the private and public sectors, by Local Authority, 2018 (Source: UK Business Counts)

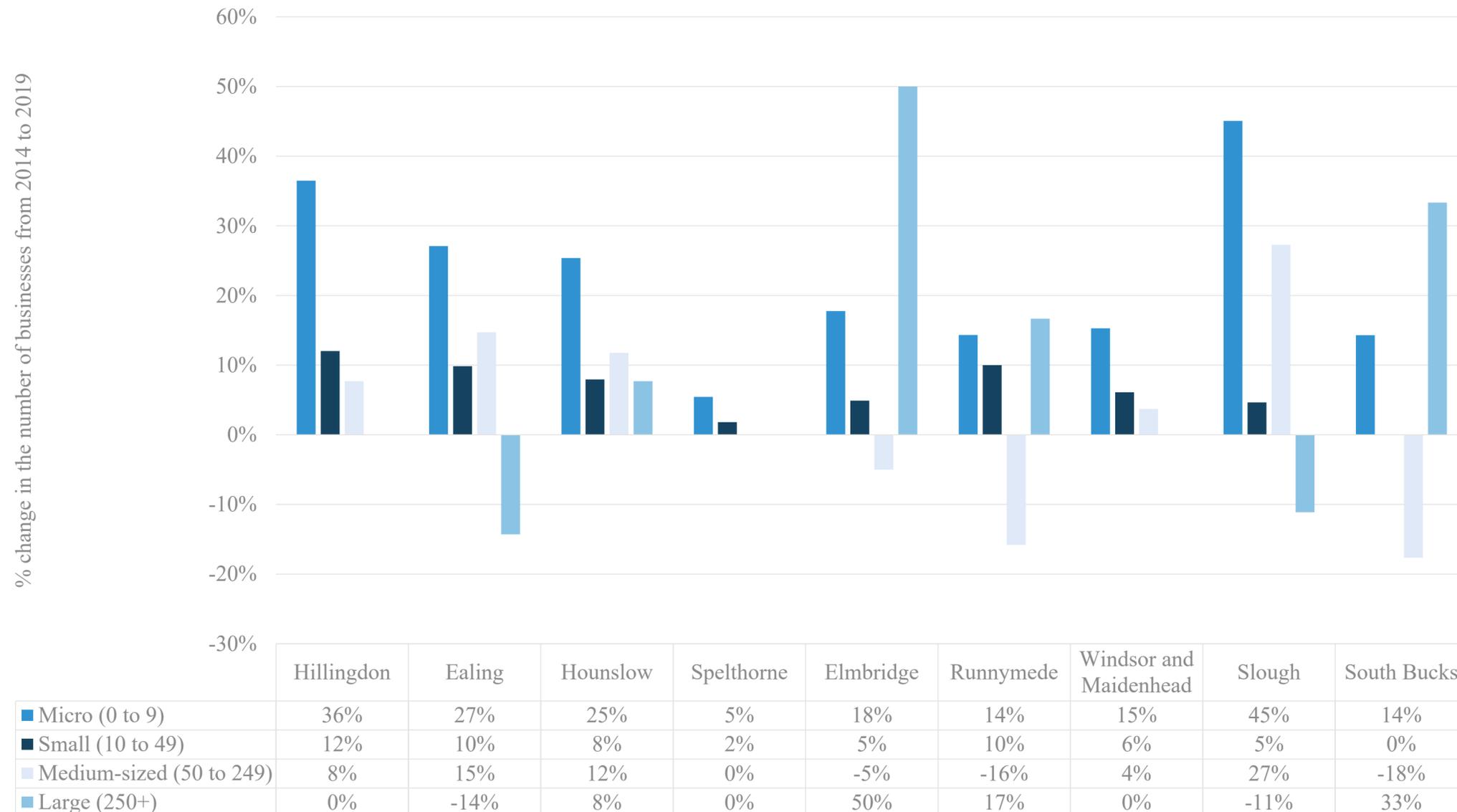


Key insights:

- The London boroughs have 53% of the SMEs in the area, with Ealing having the highest proportion at 22%.
- Of the non-London boroughs, Windsor and Maidenhead have the most SMEs, whilst Runnymede has the least.

Over the past six years, private micro- and small-businesses have grown, whereas medium- and large-businesses have a mixed picture

Percentage change in the number of private businesses, by local authority, by size of business, 2014-2019 (Source: UK Business Counts, ONS)

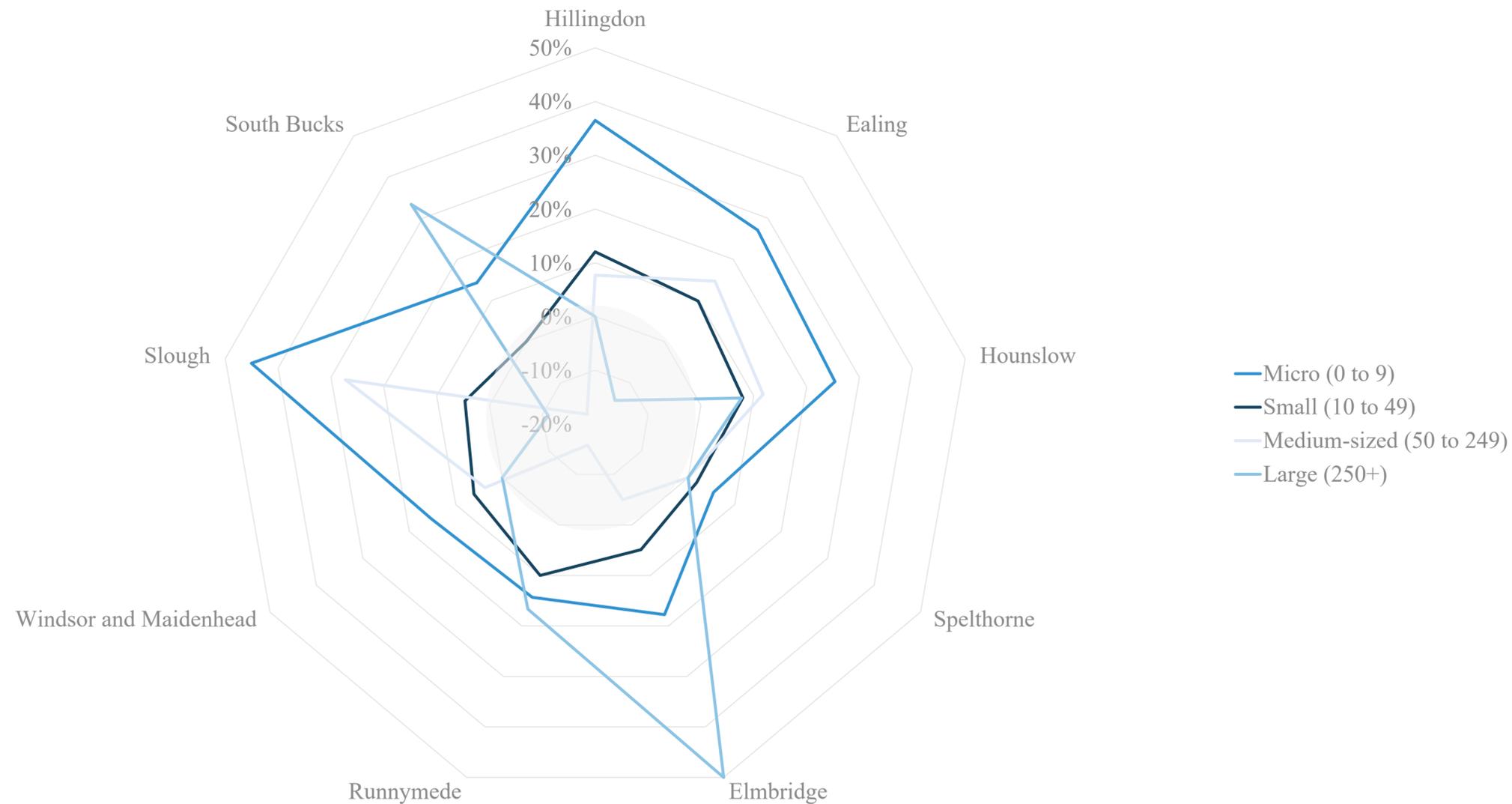


Key insights:

- The number of private micro businesses has increased across all localities, as well as the total number of private large businesses (accounting for increases and decreases).
- Increase in total number of all sizes of private business in Hillingdon, Hounslow, Spelthorne and Windsor & Maidenhead potentially showing economic attractiveness
- South Bucks has a large percentage decrease in number of medium businesses (-18 percent), Elmbridge is home to the highest positive percentage change in the number of private large businesses growing from 20 in 2014 to 30 in 2019
- Slough has attracted the highest number of micro businesses, but need to understand whether these are start-ups looking to grow or self-employment
- There does not appear to be a clear relationship between average rents (See slide 52) and business growth.

Private micro- and small-businesses are growing, while large and medium-sized businesses have a mixed story

Percentage change in the number of private businesses, by local authority, by size of business, 2014-2019 (Source: UK Business Counts, ONS)

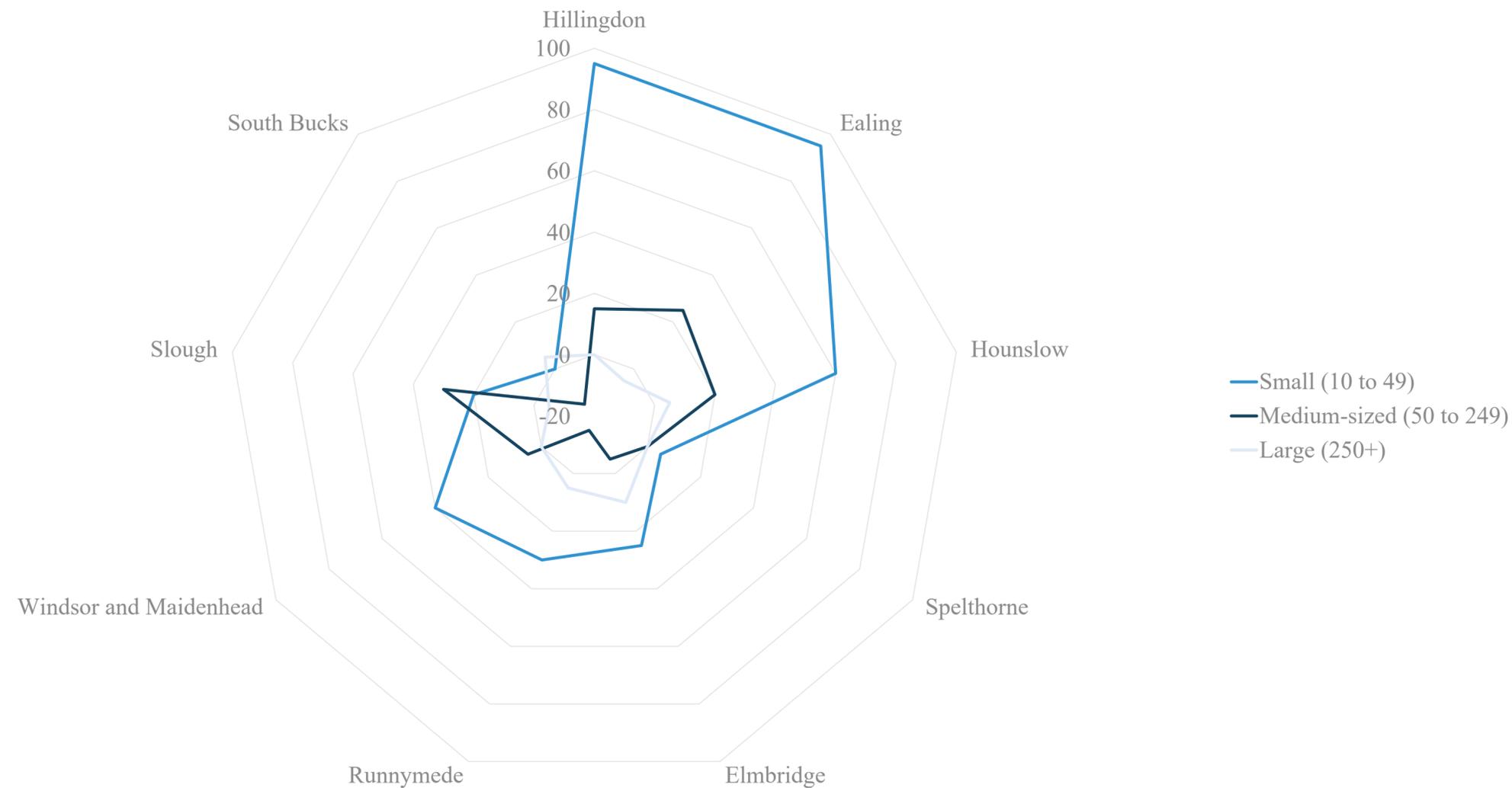


Key insights:

- Large businesses number has either significantly increased (South Bucks, Hounslow, Runnymede) or significantly decreased (Slough and Spelthorne), +/- 20% or more
- SMEs have remained stable – overall +/- 10%
- Micro business have grown overall - +30%, highest in Slough and Hillingdon.

Small businesses represents the highest proportion of new private business, and they grew most in London Boroughs

Real change in the number of private businesses, by Local Authority, by size of business, 2014-2019 (Source: UK Business Counts, ONS)

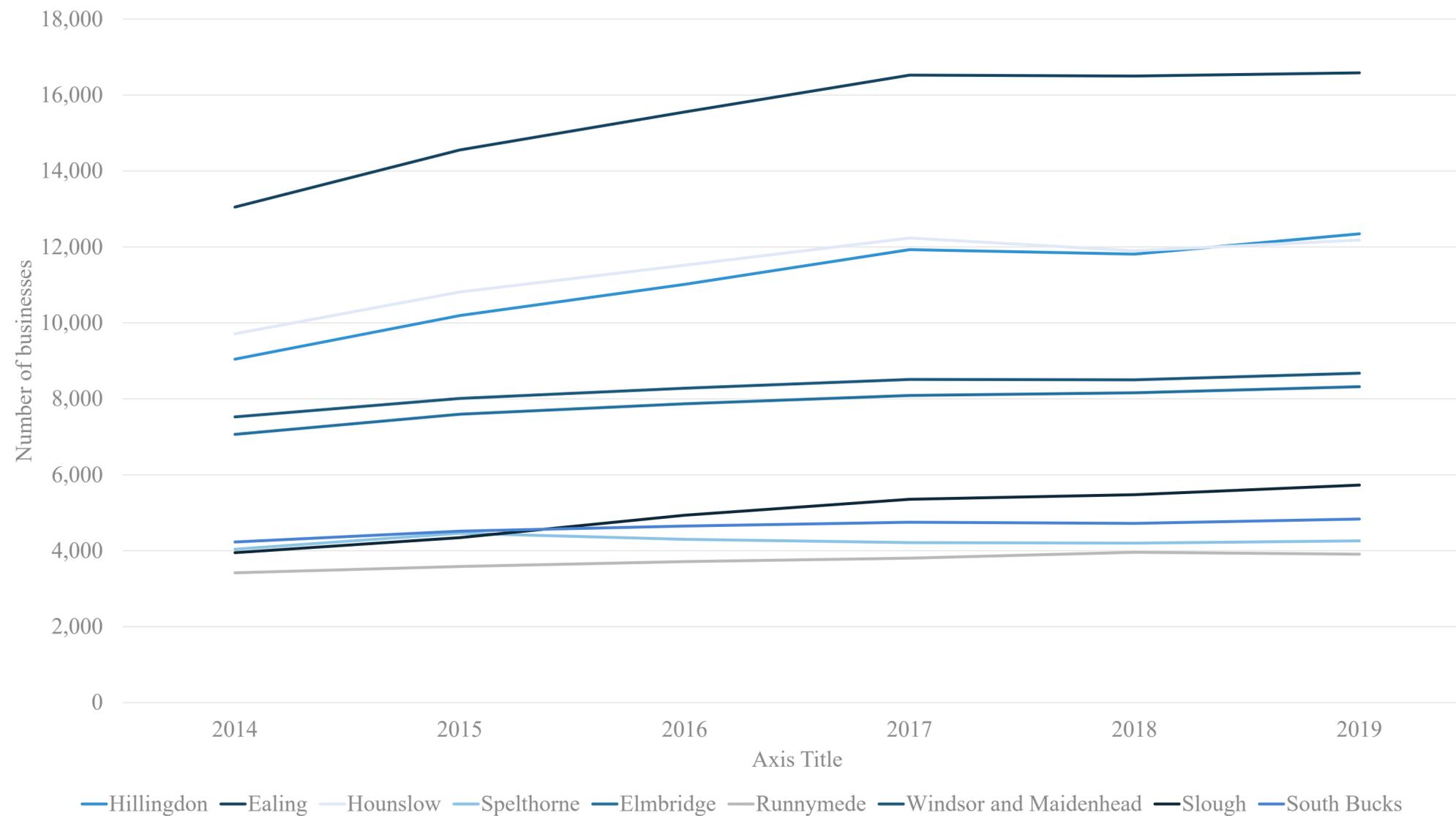


Key insights:

- The number of private small businesses has significantly increased (mostly in Hillingdon, Ealing and Hounslow)
- The real change in the number of private medium and large businesses lies around zero, showing that some local authorities are more attractive than others but overall HSPG is not performing well in attracting new businesses as a “region”
- Potentially, medium and large private businesses are moving from one local authority to another, rather than new businesses locating in the area

Slough may offer the most appropriate business environment for micro businesses

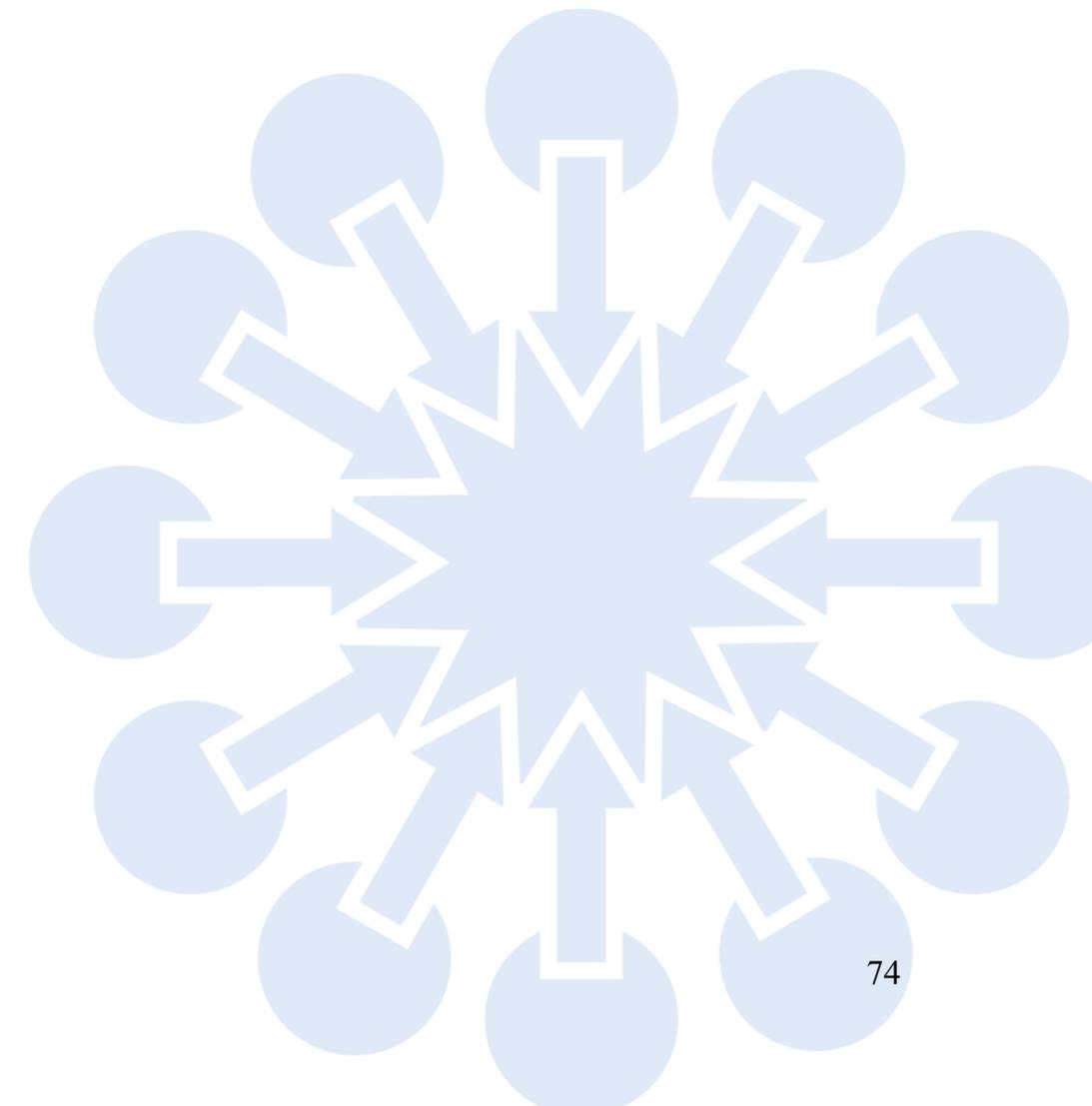
Change in the number of private micro businesses (0-9 employees), by Local Authority, 2014-2019 (Source: UK Business Counts)



Key insights:

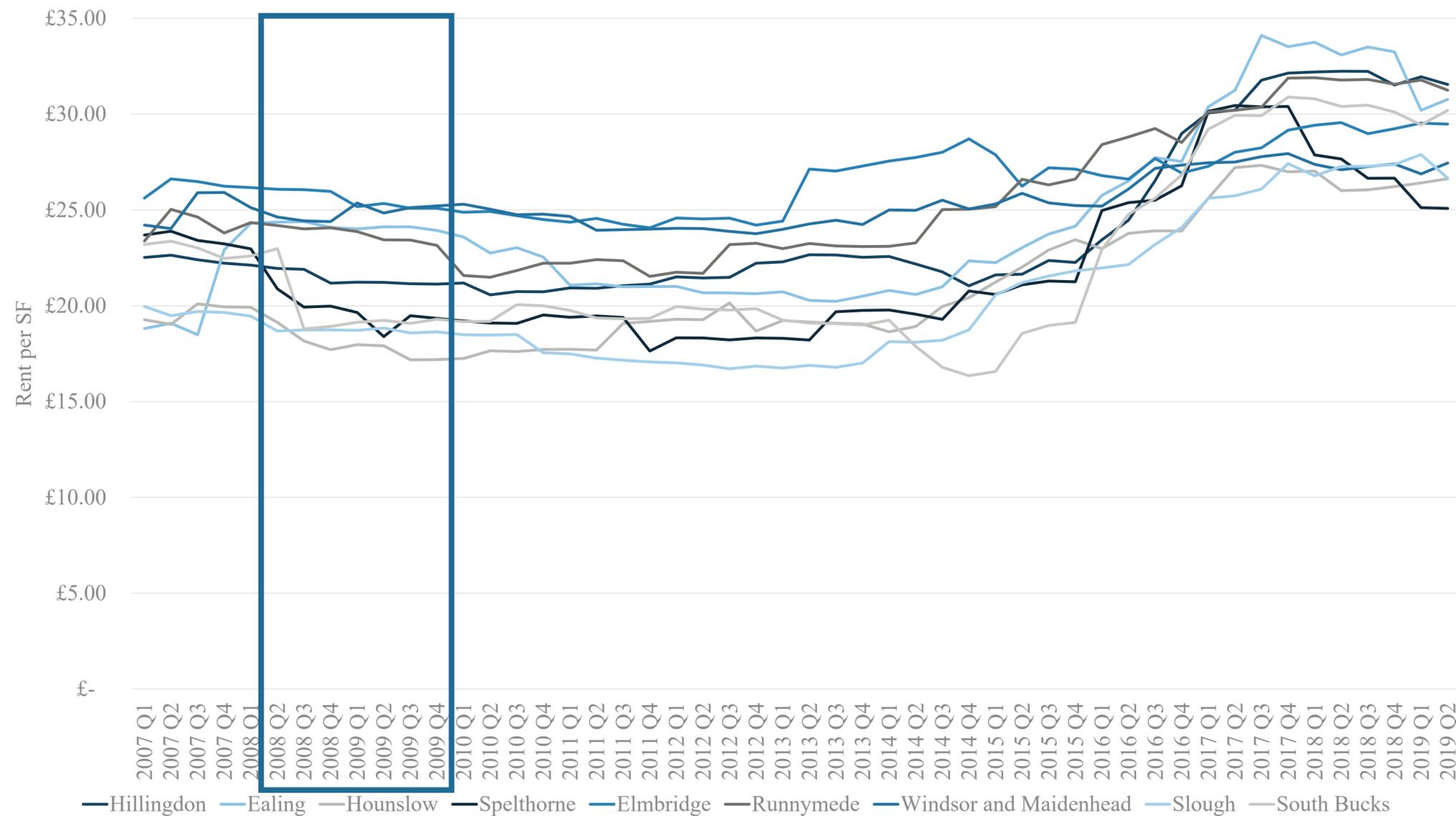
- Slough has experienced the highest growth rate in private micro businesses lately (average growth rate 2014-2019: 8 percent): it has been ranked 7th best place to start a small business in 2018 (Informi), first in the HSPG area
- Over the period 2014-2019, Spelthorne has experienced the lowest growth rate (1 percent annual growth rate on average)
- Overall micro businesses are increasing across localities

Property market



Ealing is attractive, Spelthorne drops but an overall increase across localities since 2007

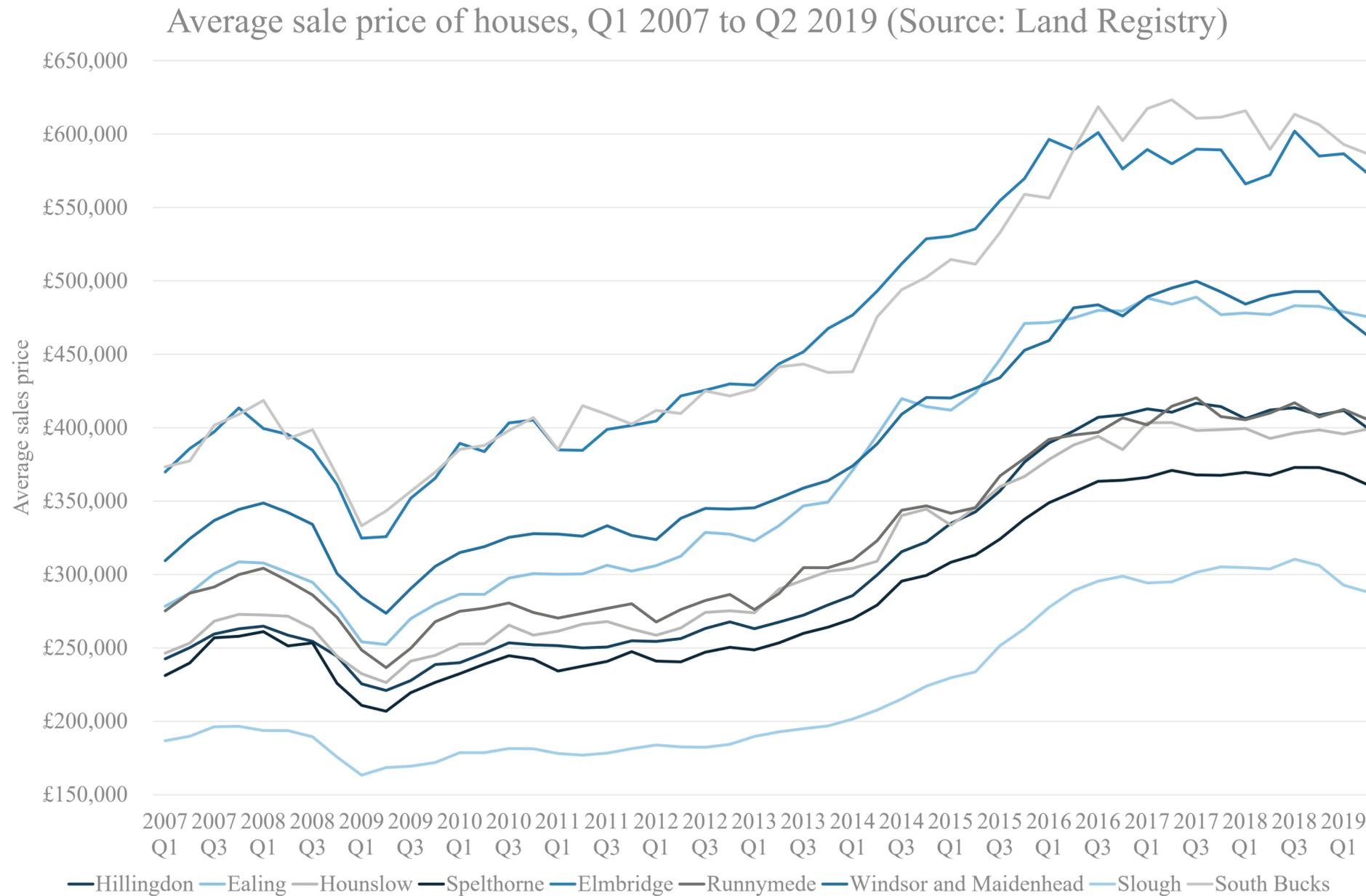
Office rent per square foot, including direct leases and subleases, Q1 2007 to Q2 2019 (Source: CoStar)



Key insights:

- Overall there has been an increase in the office rent across all localities
- Ealing has experienced the highest growth since 2007 – being the cheapest locality in 2007 and becoming the third most expensive locality in 2019
- Spelthorne is the least expensive local authority in 2019, with rent price which significantly dropped in the last 2 years
- Recession hit from 2008 Q2 to 2009 Q4. Spelthorne was the worst hit by the recession as well as Runnymede, all others were relatively stable.
- The average growth rate since post-recession (from Q1 2010) across HSPG is 38%
- The lowest growth (2010-2019) happened in Elmbridge (18%) and Windsor & Maidenhead (8%)
- The highest growth happened in South Bucks (58%)

Stagnation of house prices since 2016 across all localities



Key insights:

- An overall increase across all localities
- 2009-2016: growth period and then since 2016 relatively stagnating market
- South Bucks and Elmbridge, followed by Ealing are the most expensive localities, Slough the least
- The % growth from 2007 to 2019 across HSPG is 57%, with the highest growth experienced in Ealing (71%) and the lowest in Runnymede (47%)

House price growth has outstripped commercial property price growth

% change in property market prices between Q3 2009 and Q2 2019 (Source: Land Registry)

	Hillingdon	Ealing	Hounslow	Spelthorne	Elmbridge	Runnymede	Windsor and Maidenhead	Slough	South Bucks	HSPG
% change in office rent per square foot	40%	64%	38%	6%	15%	34%	13%	34%	30%	30%
% change in average sale price of houses	65%	71%	62%	56%	55%	47%	49%	54%	57%	57%

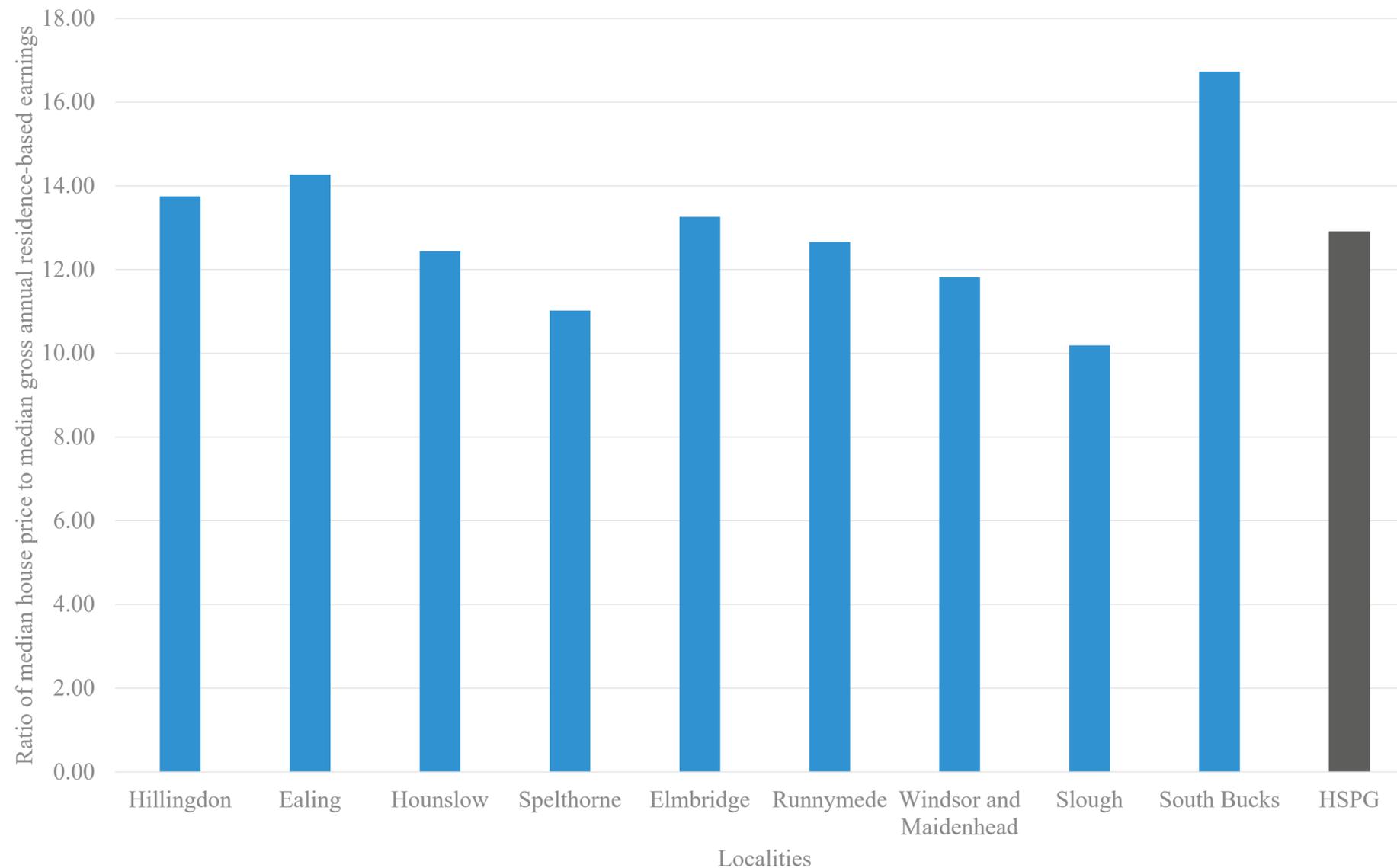
Key insights:

- Housing property prices increased at a higher rate than office spaces, showing the attractiveness of these localities as homes rather than workplace – relatively well connected to London
- Ealing as experienced the higher growth – the largest population and business count of HSPG – both in the office and property market

The differential between housing and commercial property prices (and future returns) alongside policies such as Permitted Development, means that developers may be incentivised to provide housing over commercial in certain areas.

House price affordability is low in the area, linked with London market

Ratio of median house price to median gross annual residence-based earnings, by Local Authority District, 2018 (Source: ONS House Price Statistics; Annual Survey of Hours and Earnings)



Key insights:

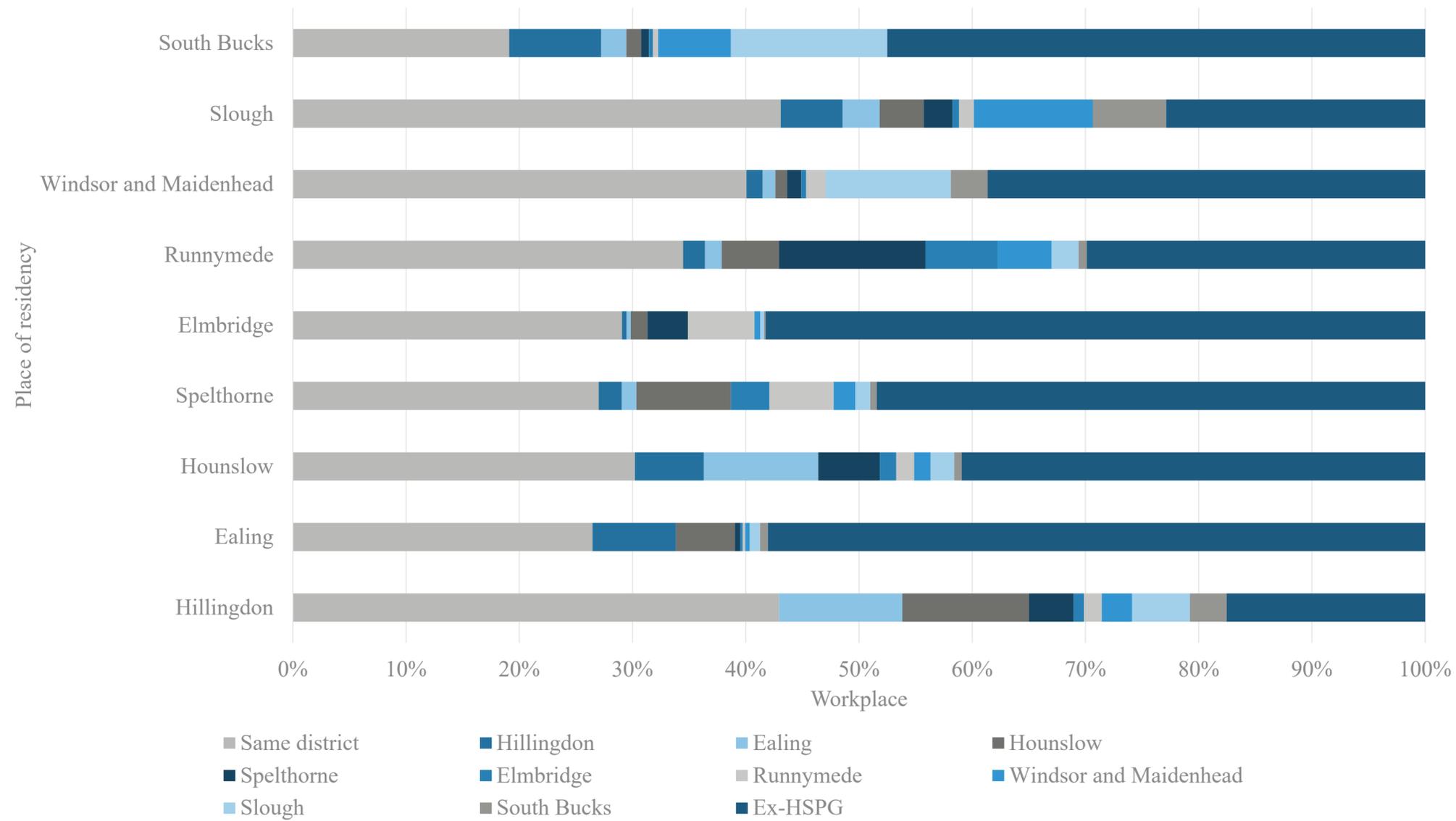
- South Bucks has the lowest affordability, then followed by Ealing.
- Slough has the highest affordability, with average house price roughly 10 times the average wage
- The ratio is on average 1 to 12.9 in HSPG

Travel to work



HSPG localities not the home for more than half of its workers

Location of usual residence and place of work, 2011 (Source: Census, ONS)
 (All usual residents aged 16 and over in employment the week before the census)

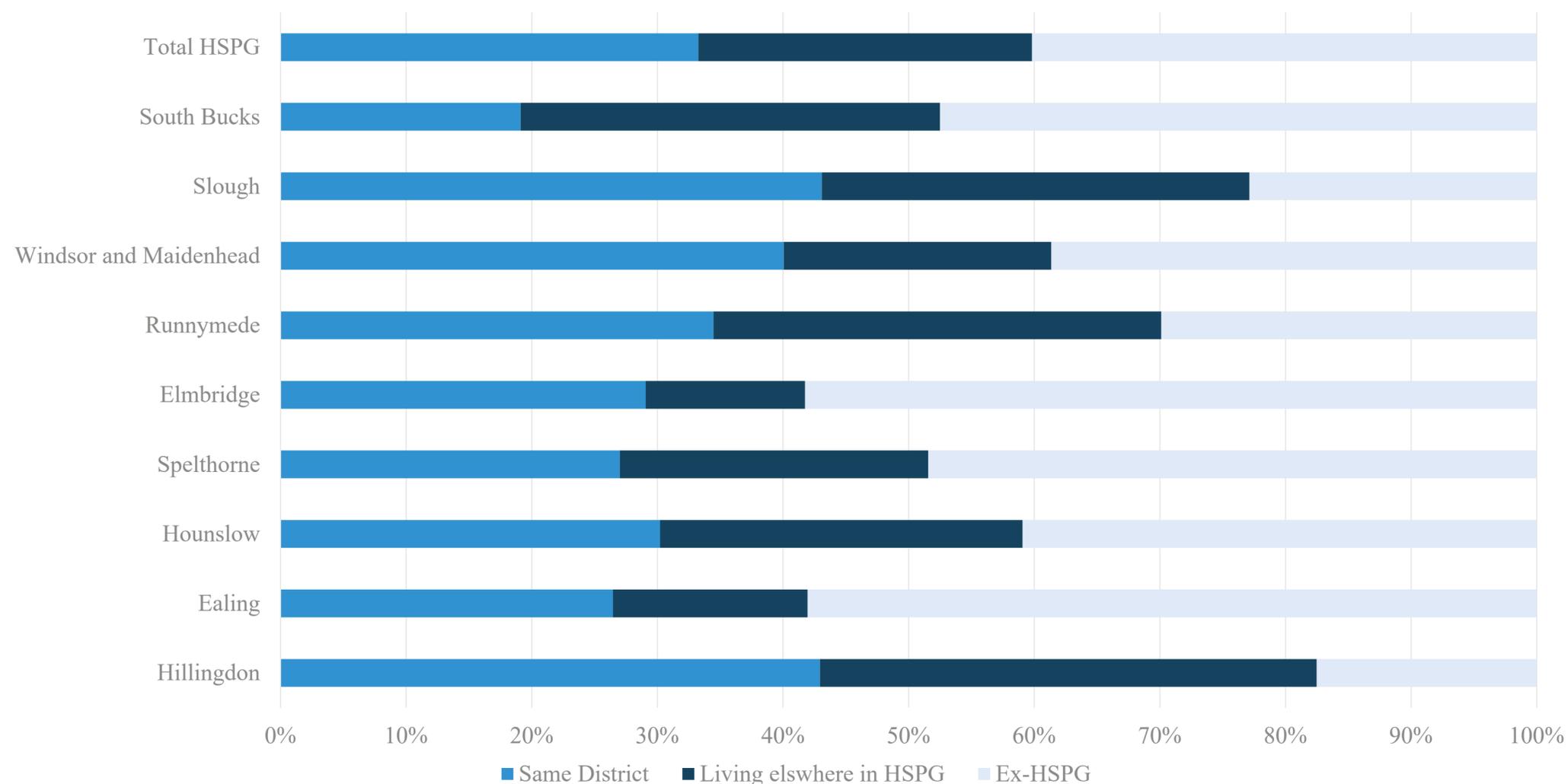


Key insights:

- Three local authorities are both home and workplace for 40% or more residents: Slough, Windsor & Maidenhead, and Hillingdon
- A significant part of South Bucks workers live in Slough (14%), we have the same trend for Runnymede worker living in Spelthorne (13%)
- Most of the workers in Elmbridge live outside the HSPG area (ex-HSPG)

Slightly more than third of HSPG workers live and work in the same district

Location of usual residence and place of work, 2011 (Source: census, ONS)
 (all usual residents aged 16 and over in employment the week before the census)



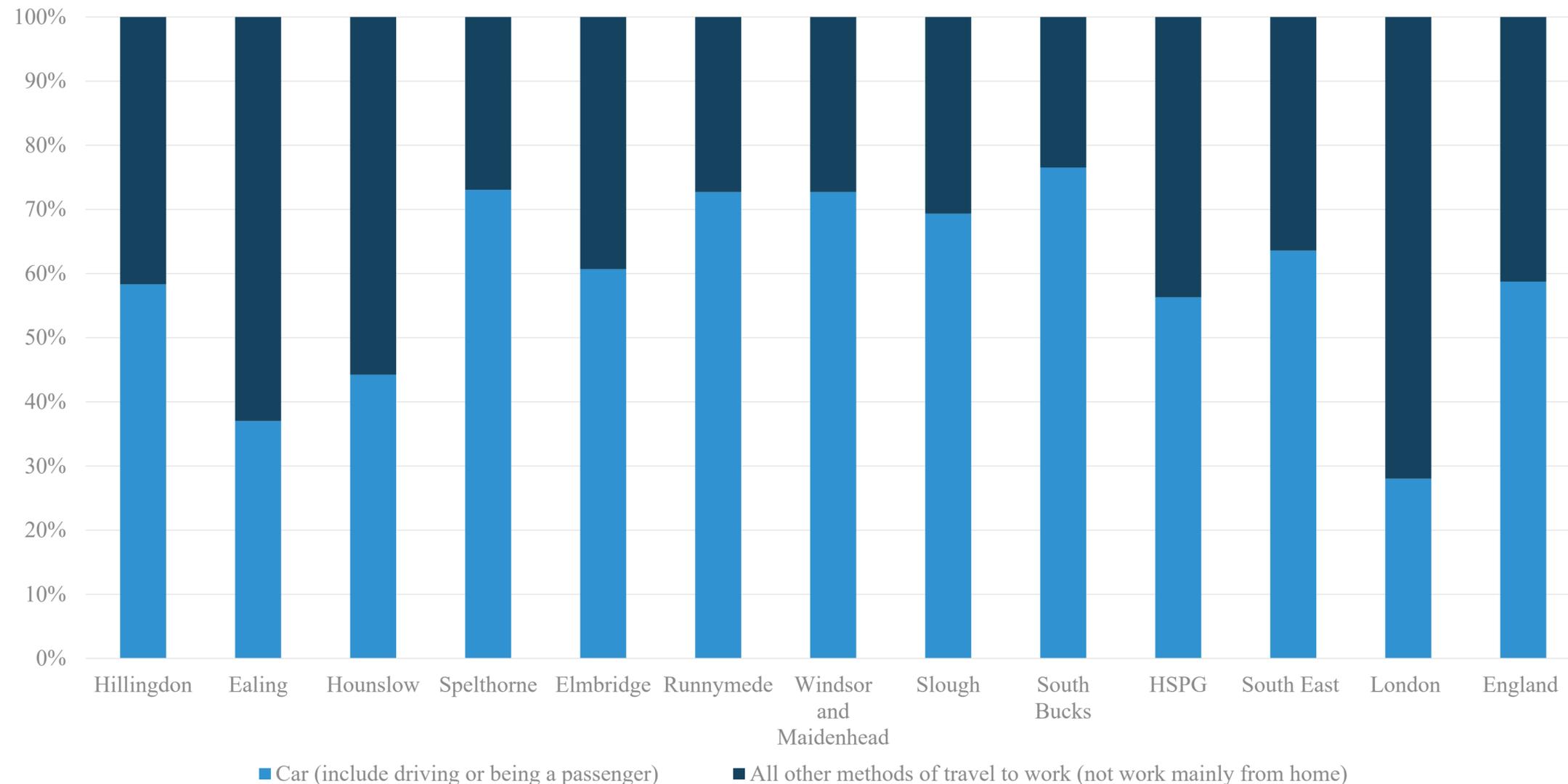
Key insights:

- Overall, more than one-third of HSPG workers live and work in the same district, more than one-third live outside HSPG and the rest in other HSPG districts
- South Bucks is the area with the least number of workers living in the district, showing heavy commuting, mostly from outside HSPG
- Elmbridge and Ealing have the highest number of workers living outside HSPG, making it the key locations for improving public transportation
- Slough and Hillingdon have the highest number of worker living and working in the same district

More than half of the commuting across HSPG is done by personal car

ARUP

Travel to work by transport mode, by Local Authority, region and country, 2011 (Source: Census, ONS)

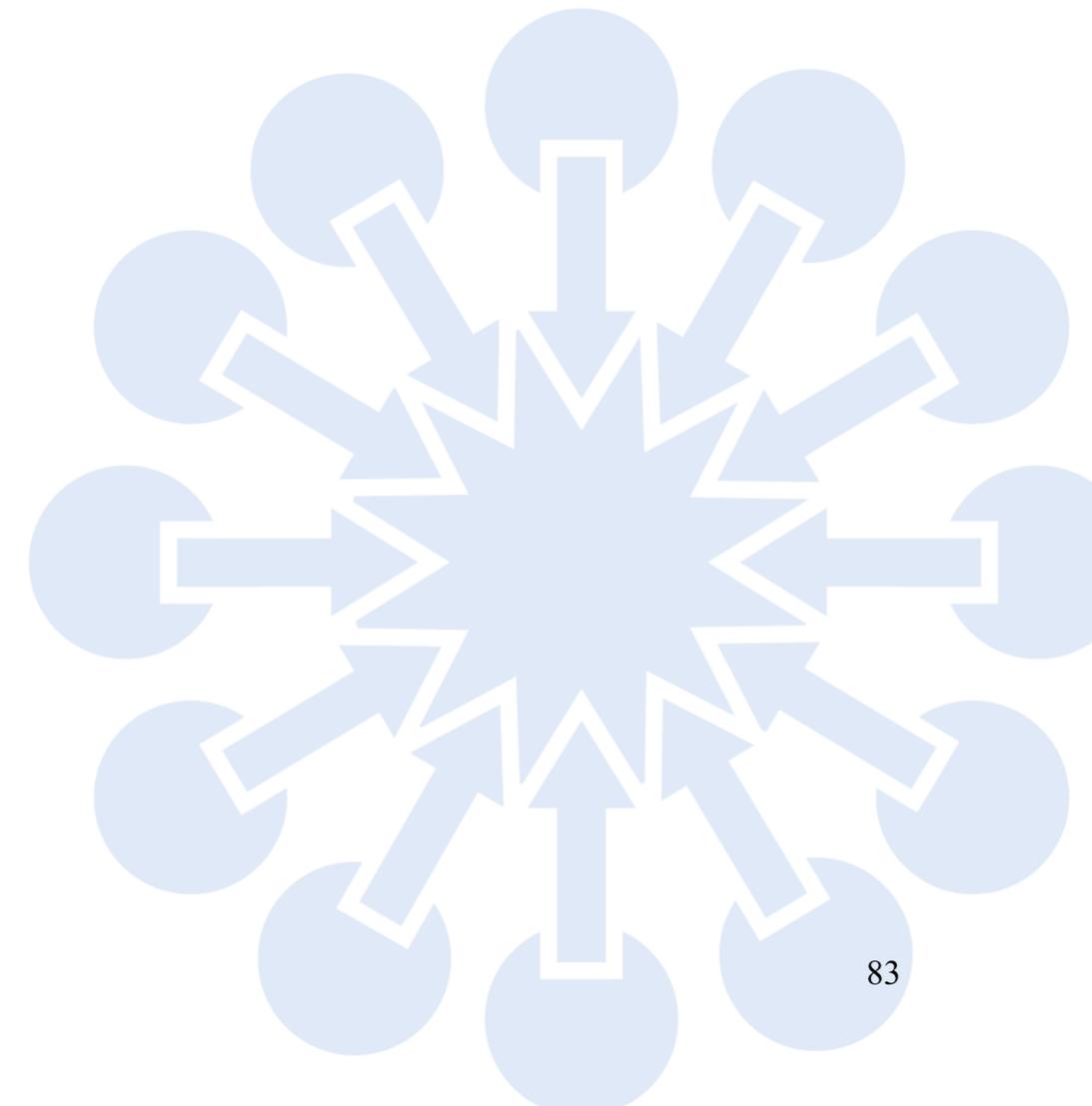


Key insights:

- South Bucks is the most car-intensive localities, likely due to limited rail coverage and because most of the workers does not live and work in the same districts and even live outside HSPG
- Ealing and Hounslow are the least car-intensive local authorities compared to the rest of the HSPG area, however travel mode by car is still relatively high given public transport coverage and accessibility.

In order to meet future sustainability goals, both improvements in low-emissions vehicles as well as modal shift will be important for managing sustainable transport across the sub-region. Those local authorities with strong TfL public transport links have the highest level of non-car commuting, offering systemic opportunities for linking with public transport systems.

Digital Connectivity



Connectivity – Access to Broadband less than 10mbps: rural areas are less well-connected

Data:

The darker the area, the greater proportion of premises with access to slow broadband (lowest levels of connectivity). The white areas are areas with too few premises to analyse.

Key insights:

- The more rural areas are more likely to have slower broadband, especially around South Bucks and Windsor and Maidenhead
- Unsurprisingly, the west side of Heathrow is less well-connected than the East side closer to London
- *Quick note to substantiate the analysis: the data is more significant in denser areas, where more premises were recorded*

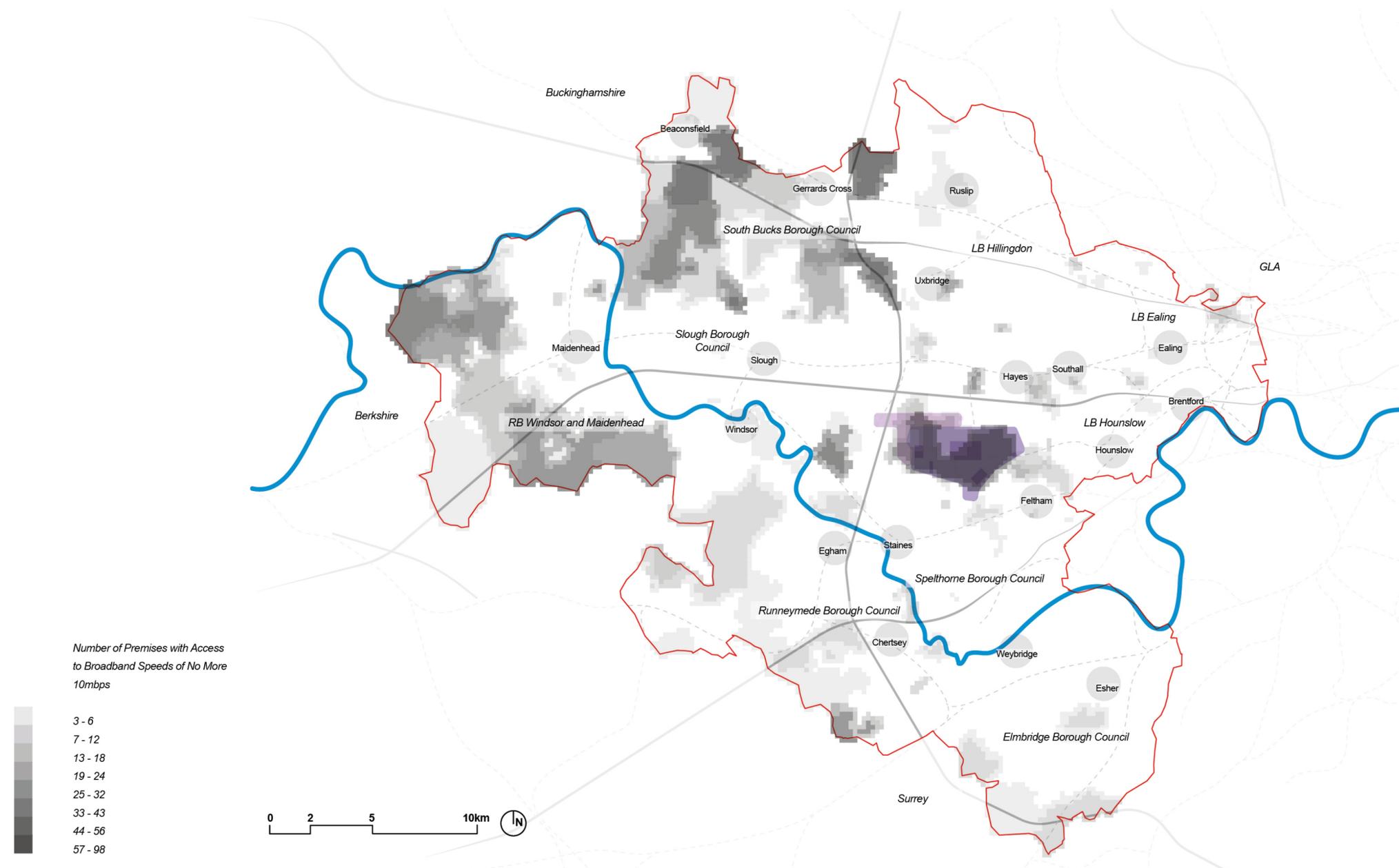


FIGURE XX DIGITAL CONNECTIVITY - NUMBER OF PREMISES WITH ACCESS TO BROADBAND NO FASTER THAN 10MBPS

Connectivity – Access to Superfast Broadband: very much complementary to the earlier map, the closer from London, the higher access to Superfast Broadband

Data:

Access to superfast broadbands, from red (low access) to green (high access)

Key insights:

- Map very much complementary to the slow connection map: the closer to London, the higher access to superfast broadband is
- Low connectivity around Elmbridge whereas strategic employment site in Brooklands (West part to Elmbridge)

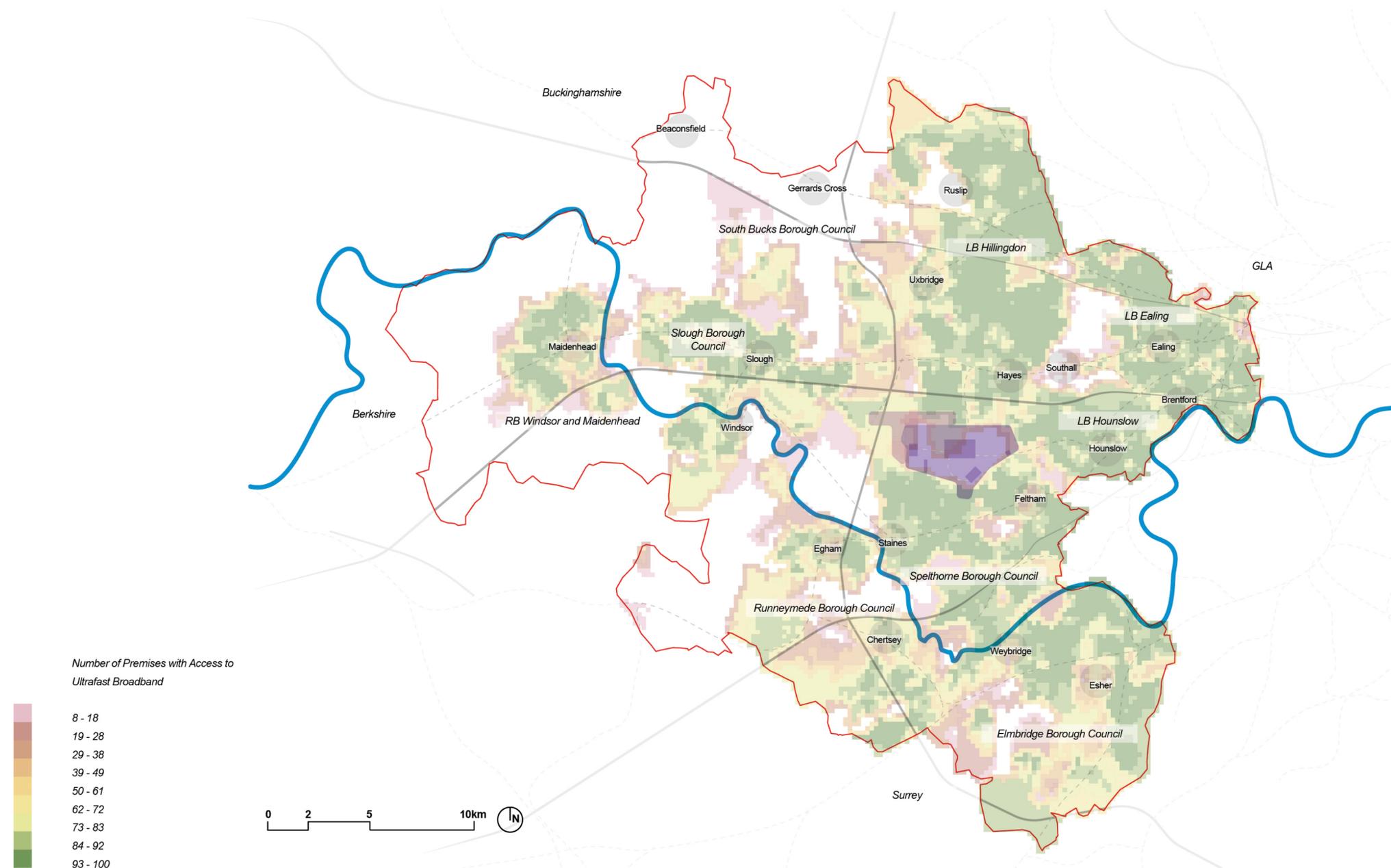


FIGURE XX DIGITAL CONNECTIVITY - NUMBER OF PREMISES WITH ACCESS TO SUPERFAST BROADBAND

Connectivity general: showing complementarity – like a puzzle

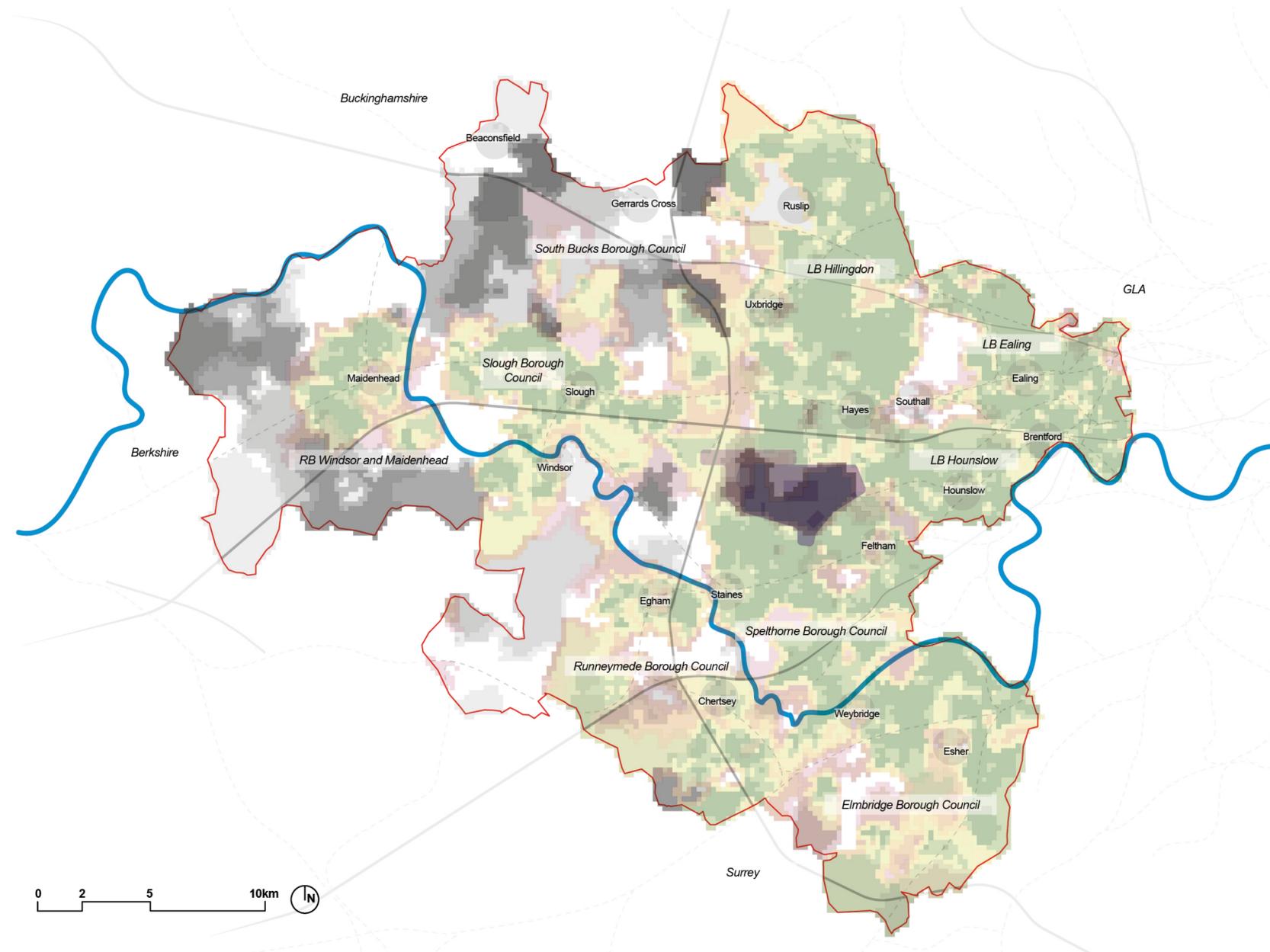


FIGURE XX DIGITAL CONNECTIVITY - COMBINATION

JEBIS

JEBIS 1.0 (Dec 2018 Report)

JEBIS 1.1 (Aug 2019 Update)

The data provided in this section is for reference only and is directly extracted from the JEBIS 1.0 and 1.1.

JEBIS 1.0 (Dec 2018 Report)

Jobs and floorspace growth

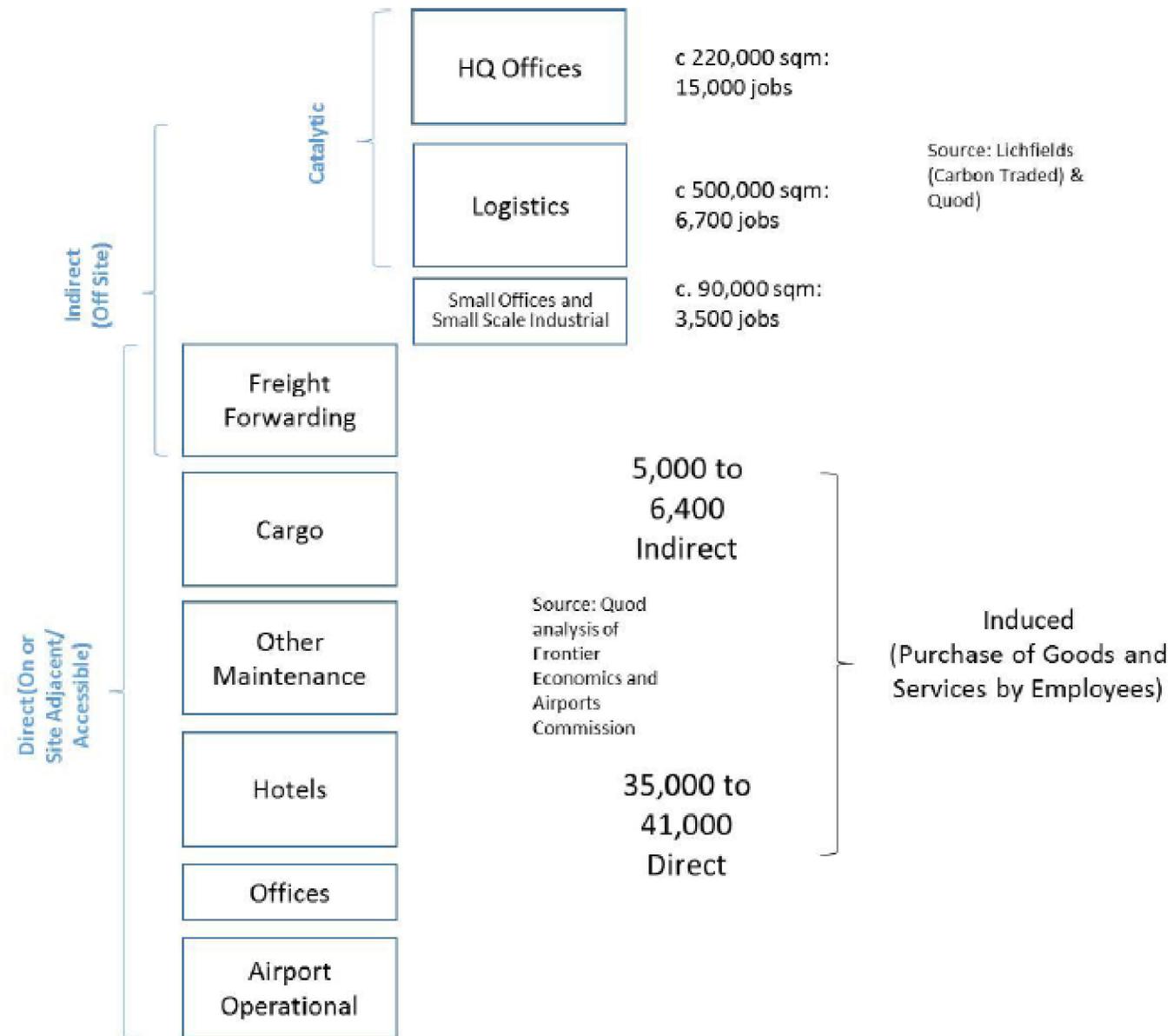


Figure 10: Indicative sectoral employment floorspace breakdown

Jobs growth over baseline by sector

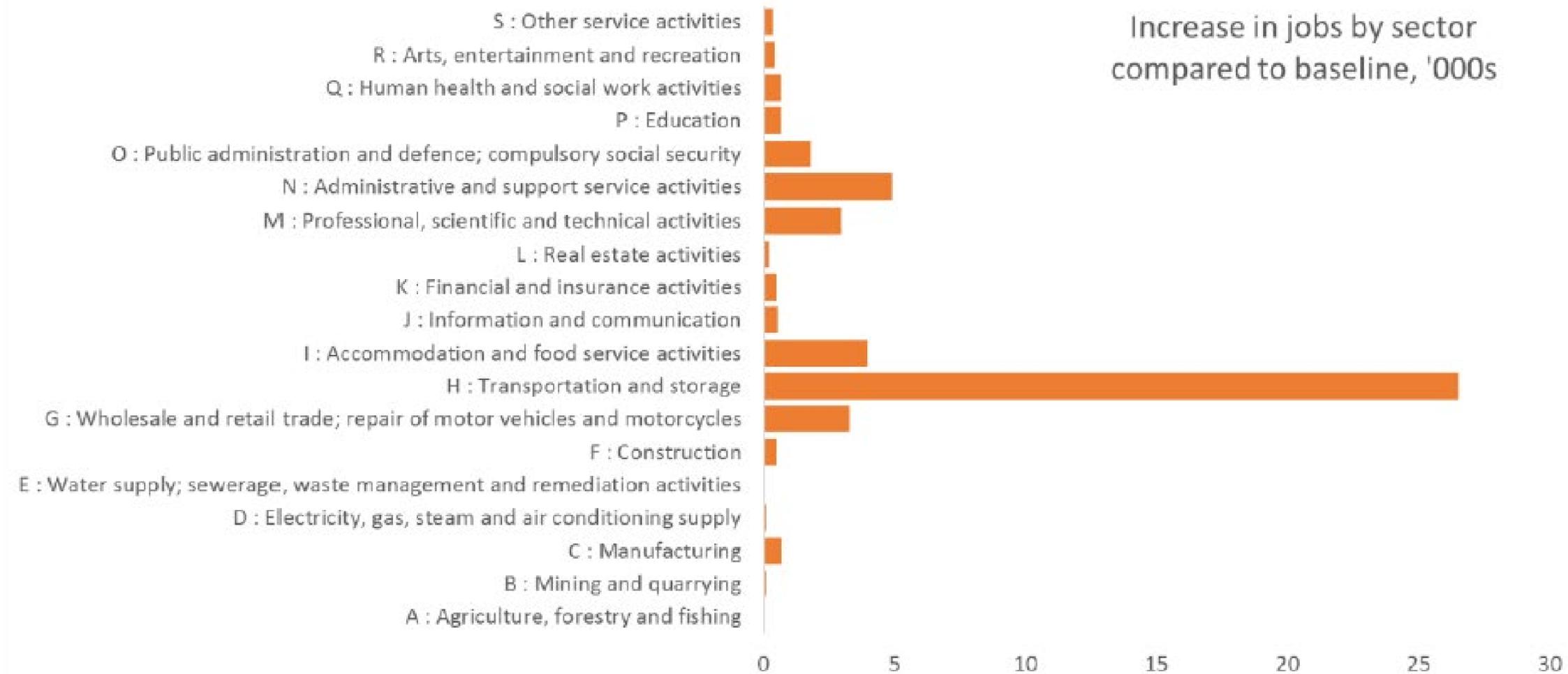
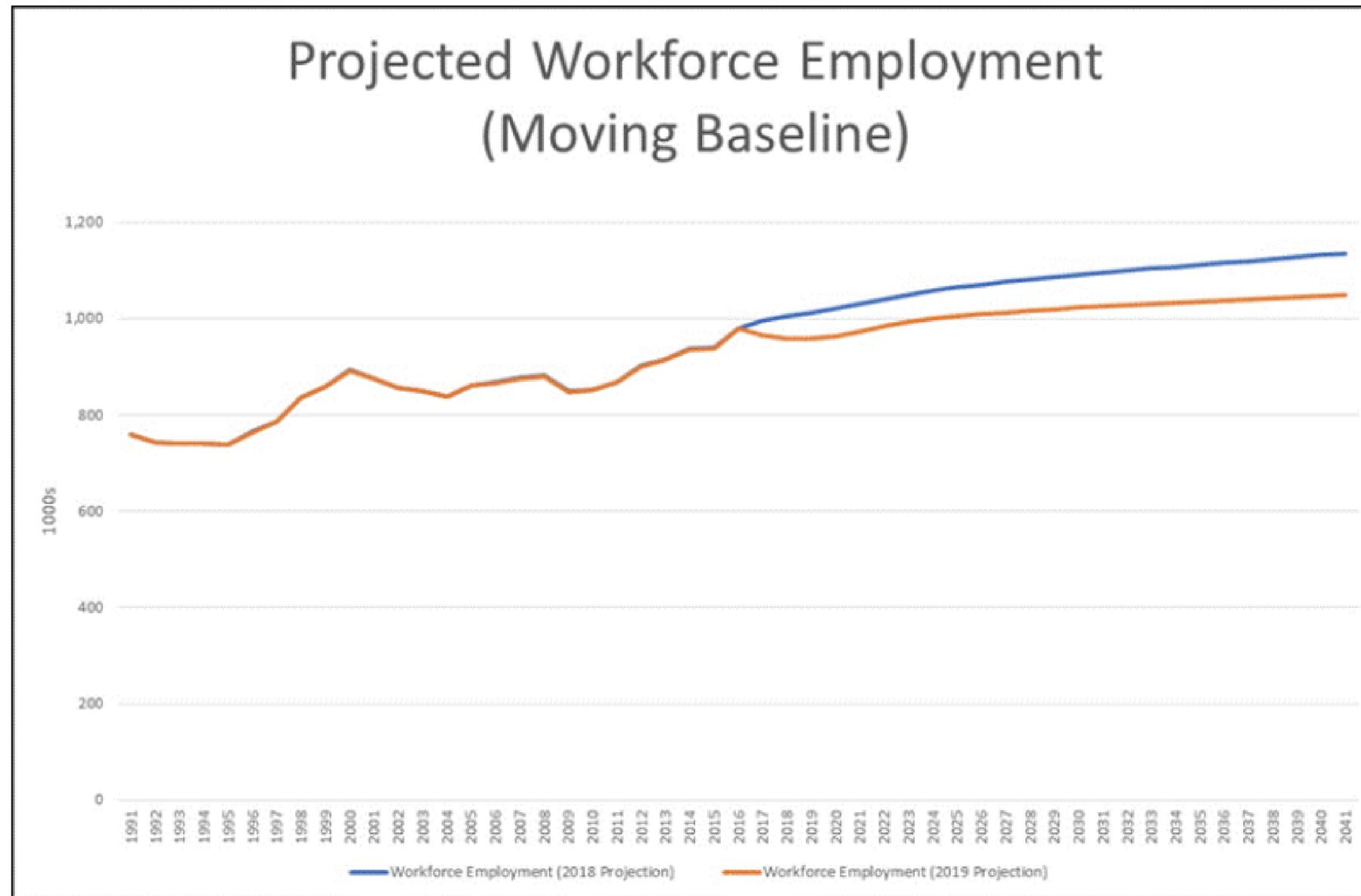


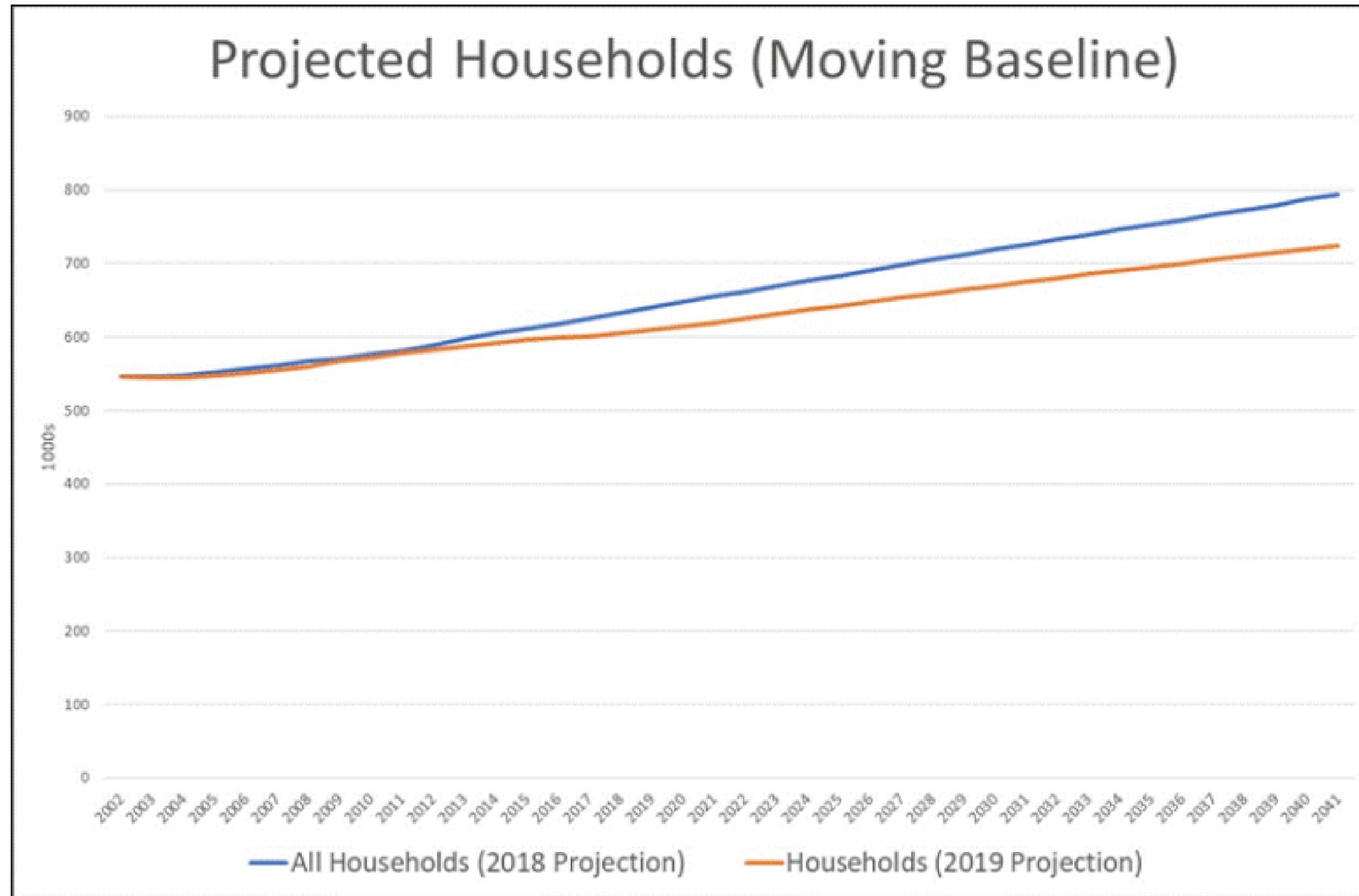
Figure 8: Employment Growth as a result of Heathrow by sector
(Source: Oxford Economics)

JEBIS 1.1 (Aug 2019 Update)

Employment projection



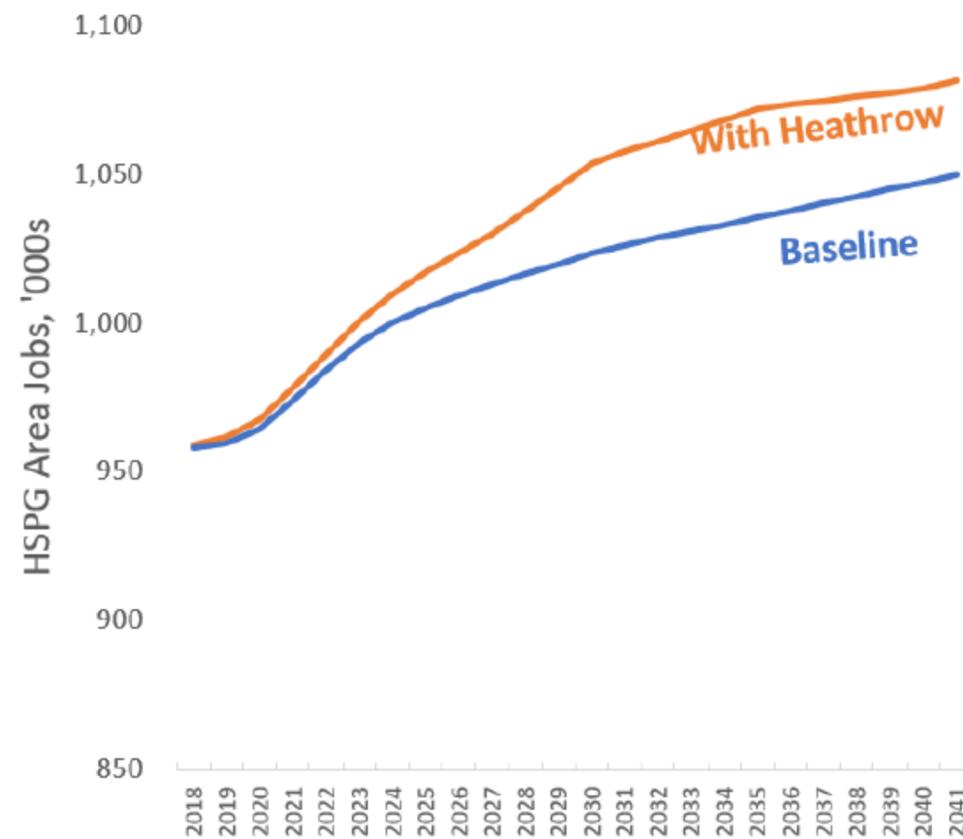
Household projections



Source: Oxford Economics, 2018, 2019

Employment growth (baseline and additional central case)

Figure 5: Oxford Economics (2019) Modelled Employment Growth (baseline and additional, central case scenario, rounded)



Employment growth 2018-2041	Baseline	Additional in Heathrow central case
Ealing	3,800	500
Hillingdon	19,400	18,900
Hounslow	25,200	10,700
Elmbridge	7,900	100
Runnymede	9,600	200
Slough	9,100	100
South Bucks	3,800	100
Spelthorne	3,300	200
Windsor & Maidenhead	9,000	100

Workplace-based. Direct, indirect and induced

Forecast population and household growth (existing and additional, central scenario)

Figure 6: Oxford Economics (2019) modelled population growth (baseline and additional, central case scenario)

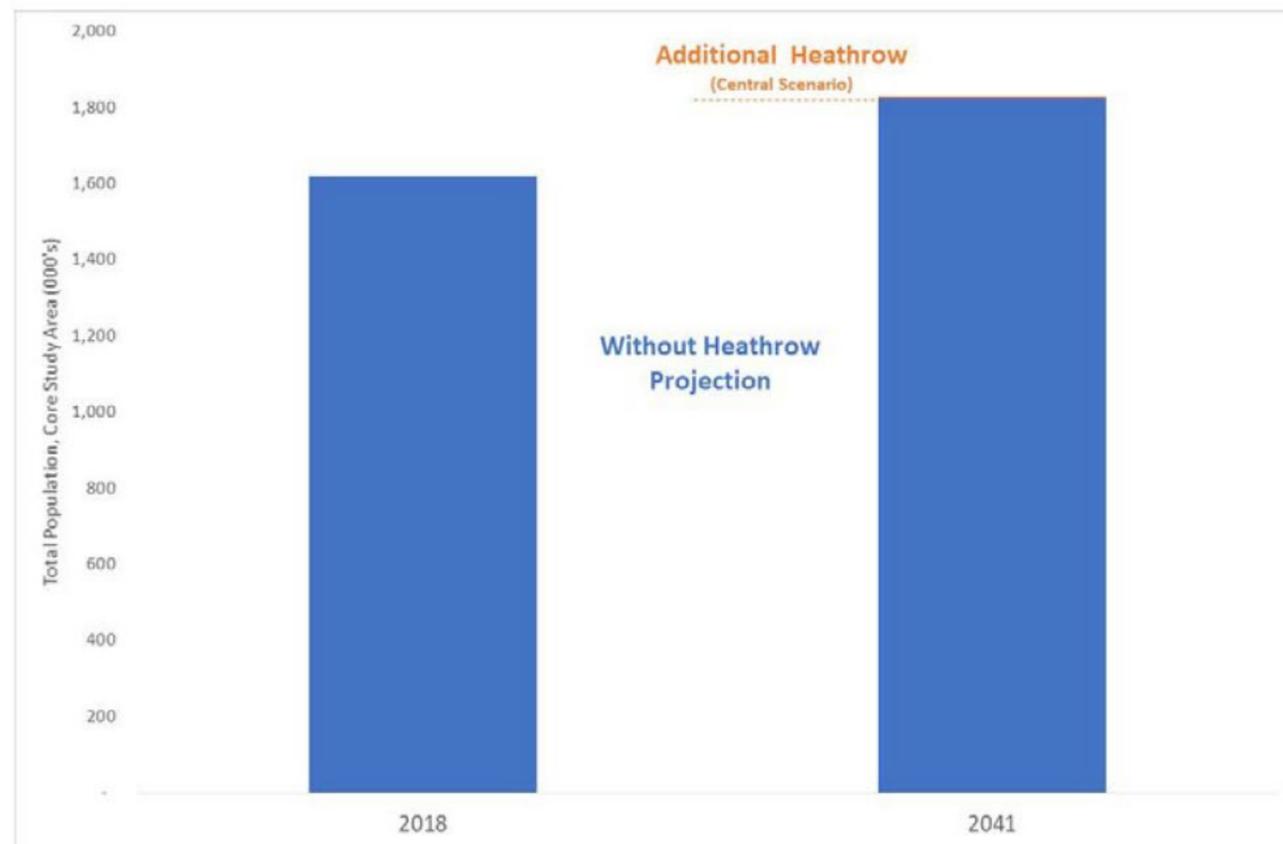
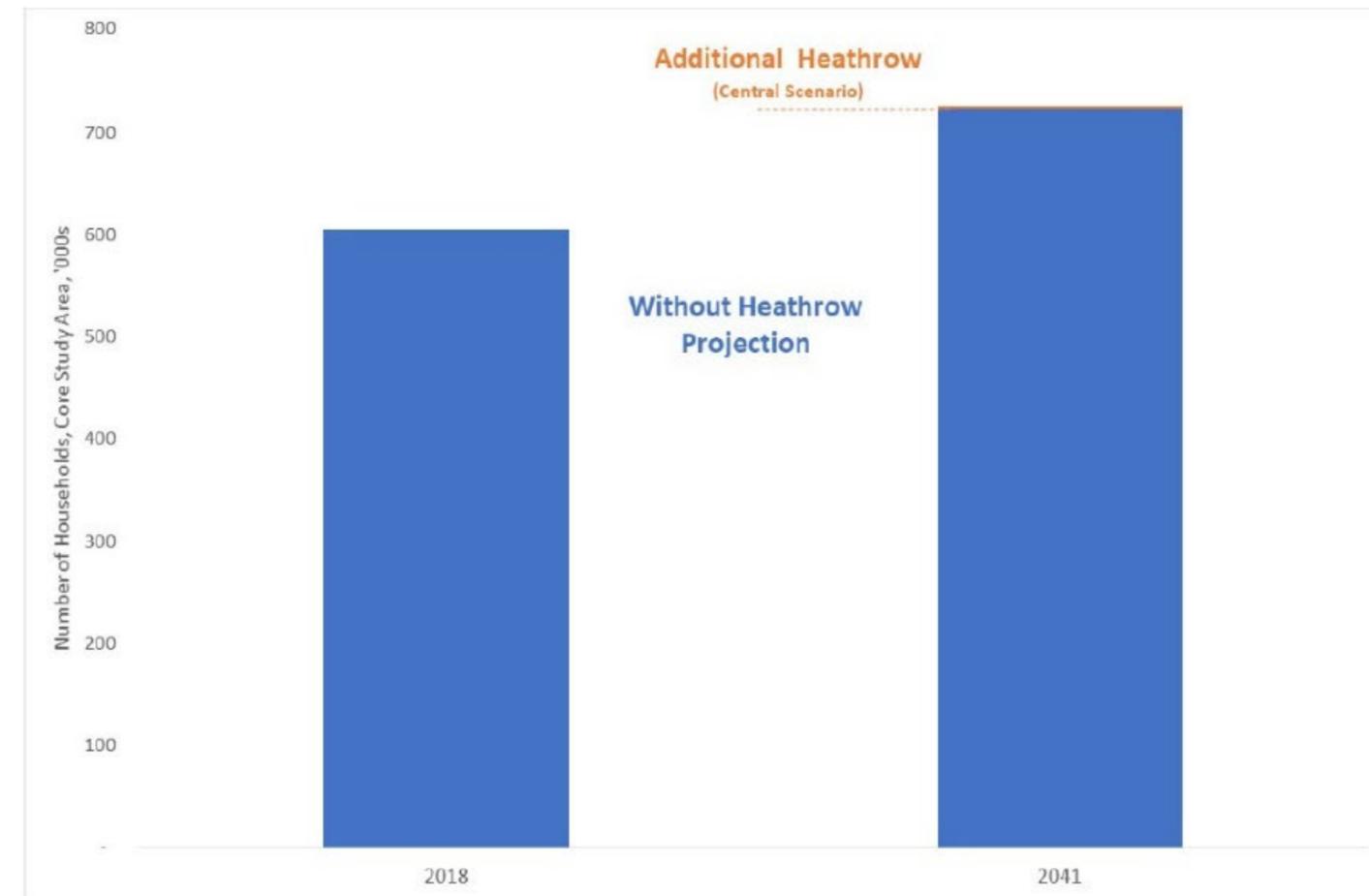


Figure 8: Oxford Economics modelled number of households (2018 to 2041)



Forecast population growth and household growth

Figure 7: Oxford Economics (2019) modelled annual population growth

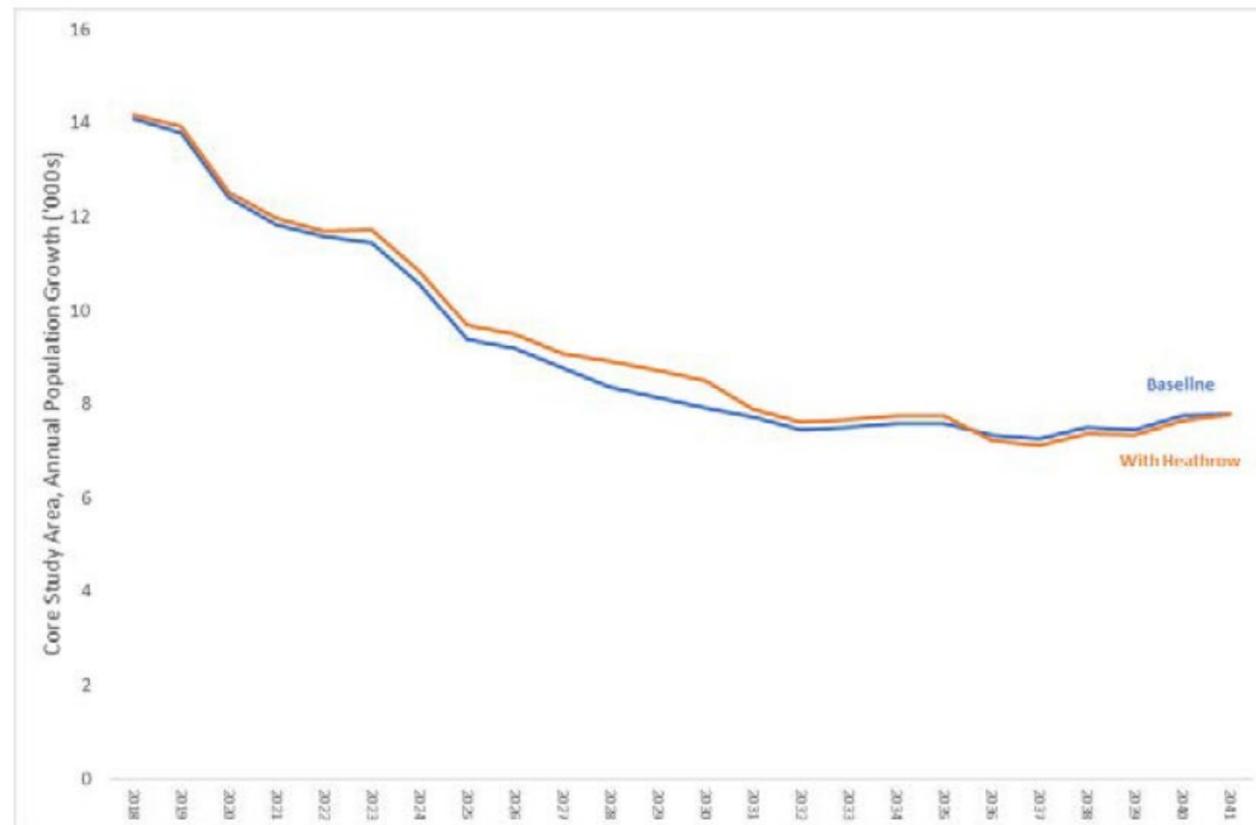
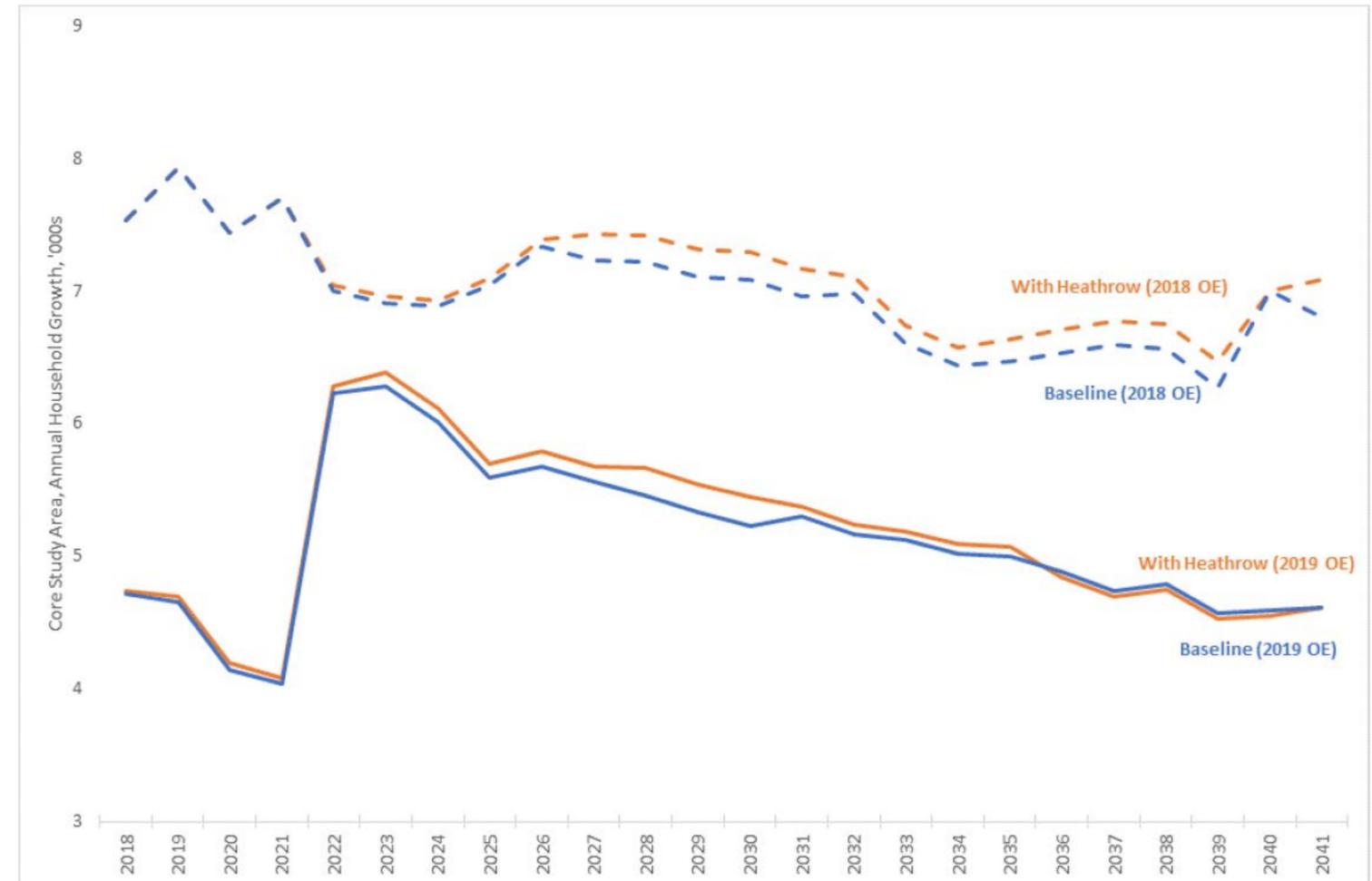
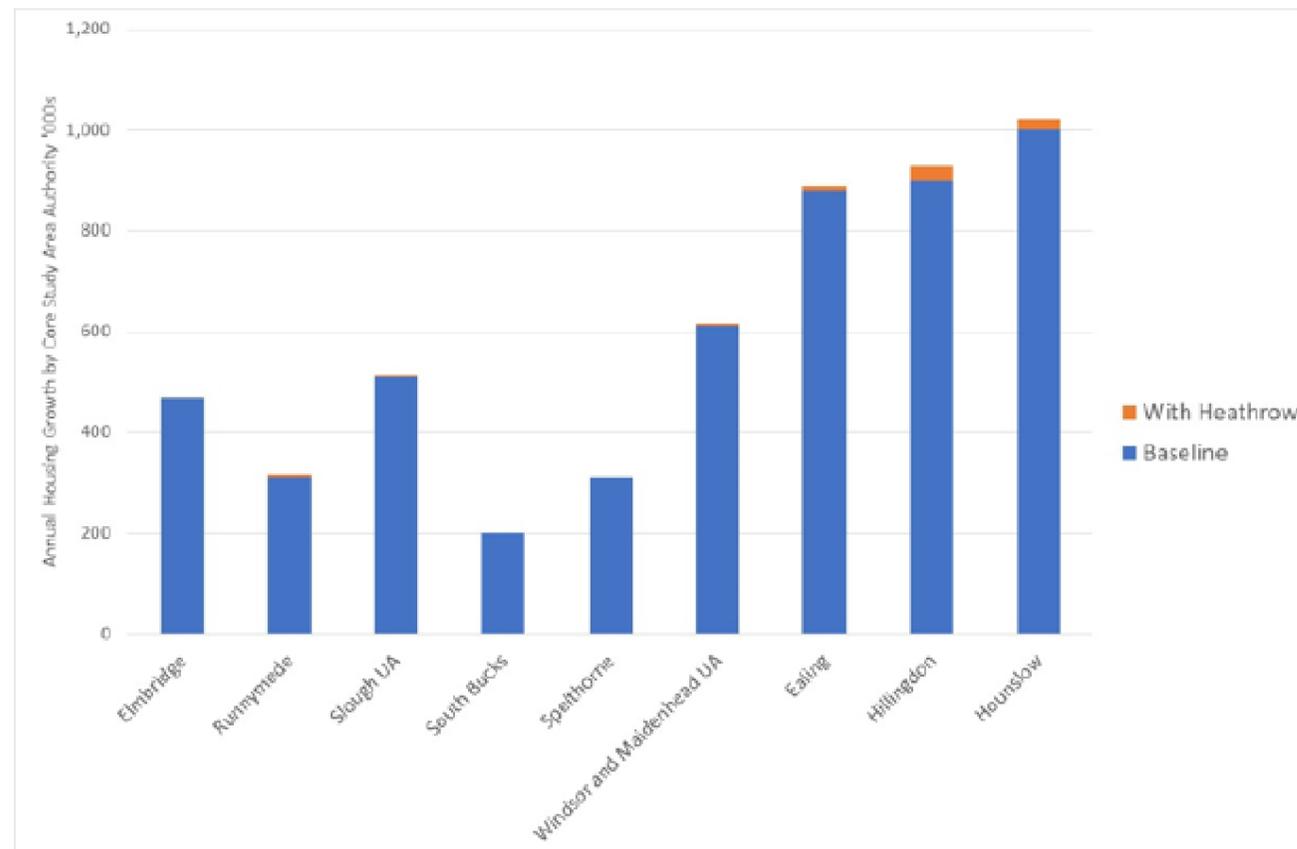


Figure 9: Oxford Economics modelled annual household growth (2018 to 2041), 2018 and 2019 Projections



Forecast household growth by district

Figure 10: Oxford Economics modelled average annual household growth by district, 2011-41 (Rounded)



Annual Household Growth 2018-2041 (Rounded)	Baseline	Additional in Heathrow central case
Ealing	880	<10
Hillingdon	900	30
Hounslow	1,000	20
Elmbridge	470	<5
Runnymede	310	<5
Slough	510	<5
South Bucks	200	<5
Spelthorne	310	<5
Windsor & Maidenhead	610	<5

Forecast employment

Oxford Economics Summary Projections

Employment (Workforce Jobs '000s)

Baseline

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	75	72	72	75	77	78	79	79
Runnymede	64	66	68	71	73	74	76	76
Slough UA	87	89	90	94	96	97	98	98
South Bucks	44	45	46	48	48	49	49	49
Spelthorne	46	41	41	42	43	44	44	44
Windsor and Maidenhead	92	87	87	90	92	94	96	96
Ealing	155	166	167	172	172	171	170	170
Hillingdon	198	211	211	220	224	227	230	230
Hounslow	178	181	183	193	198	202	206	206
Total	938	958	964	1,005	1,023	1,035	1,047	1,050

Central Scenario

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	75	72	72	75	77	78	79	79
Runnymede	64	66	68	71	73	74	76	76
Slough UA	87	89	90	94	96	97	98	98
South Bucks	44	45	46	48	49	49	49	49
Spelthorne	46	41	41	42	43	44	44	44
Windsor and Maidenhead	92	87	87	90	93	94	96	96
Ealing	155	166	167	172	172	172	171	170
Hillingdon	198	211	213	227	243	249	249	250
Hounslow	178	181	184	197	209	215	217	217
Total	938	959	967	1,017	1,053	1,072	1,079	1,081

Accelerated Scenario

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	75	72	72	75	77	78	79	80
Runnymede	64	66	68	71	73	74	76	76
Slough UA	87	89	90	94	96	97	98	98
South Bucks	44	45	46	48	49	49	49	49
Spelthorne	46	41	41	42	43	44	44	44
Windsor and Maidenhead	92	87	87	90	93	94	96	96
Ealing	155	166	167	172	173	172	171	171
Hillingdon	198	211	211	233	255	261	264	265
Hounslow	178	181	183	201	216	221	225	226
Total	938	958	964	1,027	1,073	1,091	1,103	1,105

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Forecast population

Population ('000s)

Baseline

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	136	138	140	145	149	153	156	157
Runnymede	85	87	89	93	96	99	102	103
Slough	146	150	154	160	163	167	170	171
South Bucks	69	71	72	74	75	77	78	78
Spelthorne	98	100	102	105	108	111	113	114
Windsor and Maidenhead	148	152	154	160	166	171	175	176
Ealing	344	345	350	360	366	370	375	376
Hillingdon	296	304	308	318	326	333	340	342
Hounslow	266	271	276	286	294	301	309	310
Total	1,589	1,619	1,645	1,700	1,743	1,780	1,818	1,826

Central

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	136	138	140	145	149	153	156	157
Runnymede	85	87	89	93	96	99	102	103
Slough	146	150	154	160	163	167	171	171
South Bucks	69	71	72	74	75	77	78	78
Spelthorne	98	100	102	105	108	111	113	114
Windsor and Maidenhead	148	152	154	160	166	171	175	176
Ealing	344	346	351	360	366	371	375	376
Hillingdon	296	304	308	318	327	335	342	343
Hounslow	266	271	276	286	295	302	310	311
Total	1,589	1,619	1,646	1,702	1,746	1,785	1,822	1,830

Accelerated

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	136	138	140	145	149	153	156	157
Runnymede	85	87	89	93	96	99	102	103
Slough	146	150	154	160	163	167	171	171
South Bucks	69	71	72	74	75	77	78	78
Spelthorne	98	100	102	105	108	111	114	114
Windsor and Maidenhead	148	152	154	160	166	171	175	176
Ealing	344	345	350	361	367	371	376	377
Hillingdon	296	304	308	319	329	337	344	346
Hounslow	266	271	276	286	295	303	310	312
Total	1,589	1,619	1,645	1,703	1,750	1,789	1,826	1,834

Forecast households

ARUP

Households ('000s)

Baseline

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	54	55	56	58	61	63	65	66
Runnymede	34	34	35	37	38	40	41	41
Slough	53	55	56	59	61	64	66	66
South Bucks	27	28	28	29	30	31	32	32
Spelthorne	40	41	41	42	44	46	47	48
Windsor and Maidenhead	60	61	63	66	69	72	75	75
Ealing	125	125	126	132	137	141	144	145
Hillingdon	106	108	108	113	118	122	127	128
Hounslow	98	100	101	107	112	117	122	123
Total	596	606	615	643	670	696	719	724

Central Scenario

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	54	55	56	58	61	63	65	66
Runnymede	34	34	35	37	38	40	41	41
Slough UA	53	55	56	59	61	64	66	66
South Bucks	27	28	28	29	30	31	32	32
Spelthorne	40	41	41	43	44	46	47	48
Windsor and Maidenhead	60	61	63	66	69	72	75	75
Ealing	125	125	126	132	137	141	144	145
Hillingdon	106	108	109	113	118	123	127	128
Hounslow	98	100	101	107	113	118	122	123
Total	596	606	615	643	672	698	721	726

Accelerated Scenario

	2015	2018	2020	2025	2030	2035	2040	2041
Elmbridge	54	55	56	58	61	63	65	66
Runnymede	34	34	35	37	38	40	41	42
Slough UA	53	55	56	59	61	64	66	66
South Bucks	27	28	28	29	30	31	32	32
Spelthorne	40	41	41	43	44	46	48	48
Windsor and Maidenhead	60	61	63	66	69	72	75	75
Ealing	125	125	126	132	137	141	145	145
Hillingdon	106	108	108	113	119	124	128	129
Hounslow	98	100	101	107	113	118	122	123
Total	596	606	615	644	673	699	722	727