



# Internet User Map Book



# Internet User Map Book (Sunderland / E08000024)

## List of Figures

- 1 Persons who would seek information on a local MP through the Internet on a smartphone
- 2 Persons who would seek information on council tax through the Internet on a desktop/ laptop/ tablet
- 3 Persons who would seek information on council tax through the Internet on a smartphone
- 4 Persons who would seek information on a holiday or journey through the Internet on a desktop/ laptop/ tablet
- 5 Persons who would seek information on a holiday or journey through the Internet on a smartphone
- 6 Persons who would seek information on a topic/ professional project through the Internet on a desktop/ laptop/ tablet
- 7 Persons who would seek information on a topic/ professional project through the Internet on a smartphone
- 8 Persons who indicate the Internet is important for information
- 9 Persons who indicate the Internet is important for entertainment
- 10 Persons indicating they are Interested in the Internet
- 11 Persons who use the Internet while travelling through a mobile/dongle
- 12 Persons who have found a job through the Internet
- 13 Persons who have saved money buying online
- 14 Persons who mostly use their mobile phone for Internet access
- 15 Persons who frequently buy products online
- 16 Persons who frequently pay bills online
- 17 Persons who frequently use online banking
- 18 Persons who frequently compare prices online
- 19 Persons who frequently order food or groceries online
- 20 Persons who frequently sell things online
- 21 Mobile phone ownership
- 22 Persons who use mobile phone for email
- 23 Persons who use mobile for posting videos and photos online
- 24 Persons who use mobile phone for navigation
- 25 Persons who use mobile phone for social networking
- 26 Persons who use mobile phone for apps
- 27 Persons who use mobile phone for browsing the Internet
- 28 Current Internet users
- 29 Ex Internet users
- 30 Internet non users
- 31 Households that have Internet access at present
- 32 Households that dont have Internet access but have had in past
- 33 Households that have never had Internet access
- 34 Households that have had Internet access for ten years or more
- 35 Householuds with in home wireless access through wifi
- 36 Households with a tablet computer
- 37 Households with an e reader
- 38 Households with a games console
- 39 Households with a smart TV

## Methodology

The Internet User Map Book presents small area estimates of likely responses to a range of questions derived from the Oxford Internet Survey (OXIS). This is an academic survey of Internet use in Britain, and has been run by the Oxford Internet Institute at the University of Oxford since 2003. The survey data used within this Map Book are from 2013. It is important to reiterate that the presented maps show estimates rather than counts of observed values, such as those that you might otherwise obtain through sources such as a population census.

For the purpose of estimation, the OXIS was profiled at the respondent level, with no aggregation to administrative geography. This retained the largest possible sample for analysis. The aim was to identify relationships in engagement patterns by categories of respondents in the OXIS. These respondent groups were formed by factors that have previously been shown to be good predictors of engagement with the Internet, including; age, rurality and socio-economic status. A decision tree model was applied to the OXIS data to calculate independent rates of engagement by these groups, as well as the statistical significance of these relationships, for any question of interest. The rates were then fitted to OAs by quantifying the structure of each OA by the identified groups, and estimating an overall rate based on this structure.

The predictors used in the models were kept constant and included age (5 categories), social grade (4 categories) and population density (5 categories). As such, this allowed for a theoretical maximum of 100 sub group estimates to be used in the calculation of OA level estimates. Results were validated by external profiling, including analysis by geodemographic classifications, comparisons against survey-derived statistics for more aggregate geography, mapping and visualisation. Estimates were also compared to those produced by a second independent team of researchers at the University of Oxford. Differences in terms of national, regional and local patterns were found to be minimal.

## About the team

**Alex Singleton** (@alexsingleton) is Professor of Geographic Information Science in the Department of Geography at the University of Liverpool. He is Director of the Geographic Data Science Lab and Deputy Director of the ESRC Consumer Data Research Centre (CDRC). His research interests explore how social and spatial complexities of individual behaviours can be represented and understood within a framework of quantitative social science and computer modelling.

**Dean Riddlesden** (@deanriddlesden) has a background in spatial planning; holding two masters degrees from the University of Liverpool. His research explores how use and engagement with the Internet are differentiated across space and societal groups. His work employs a range of statistical modelling and data mining techniques with new and innovative data sources. Dean currently works as a Data Scientist for Walgreens Boots Alliance.

**Mark Graham** (@geoplace) is an Associate Professor and Senior Research Fellow at the Oxford Internet Institute, a Research Fellow at Green Templeton College, and an Associate in the University of Oxford School of Geography and the Environment. His research focuses on ICT for Development, Internet and Information Geographies, and Economic Transparency.

**Grant Blank** (@oiioxford) is a Survey Research Fellow at the Oxford Internet Institute. He is a sociologist who studies the social and cultural impact of the Internet and other new communication media. He is also interested in cultural sociology, especially reviews and cultural evaluation.

To learn more about the work of the Liverpool team, visit [geographicdatascience.com](http://geographicdatascience.com), and the CDRC at [cdrc.ac.uk](http://cdrc.ac.uk). Information about the work of the Oxford team can be found by visiting [ci.oii.ox.ac.uk](http://ci.oii.ox.ac.uk) or [ci.oii.ox.ac.uk](http://ci.oii.ox.ac.uk).

## Acknowledgements

This research was funded as part of a number of ESRC grants including ES/L011840/1, ES/L003546/1 and ES/K00283X/1.

**To cite this project, please use the following reference “Singleton, A.D., Riddlesden, D., Blank, G., Graham, M. (2015) Internet User Map Book. University of Liverpool: Consumer Data Research Centre (CDRC). Available online: <http://data.cdrc.ac.uk>.”**

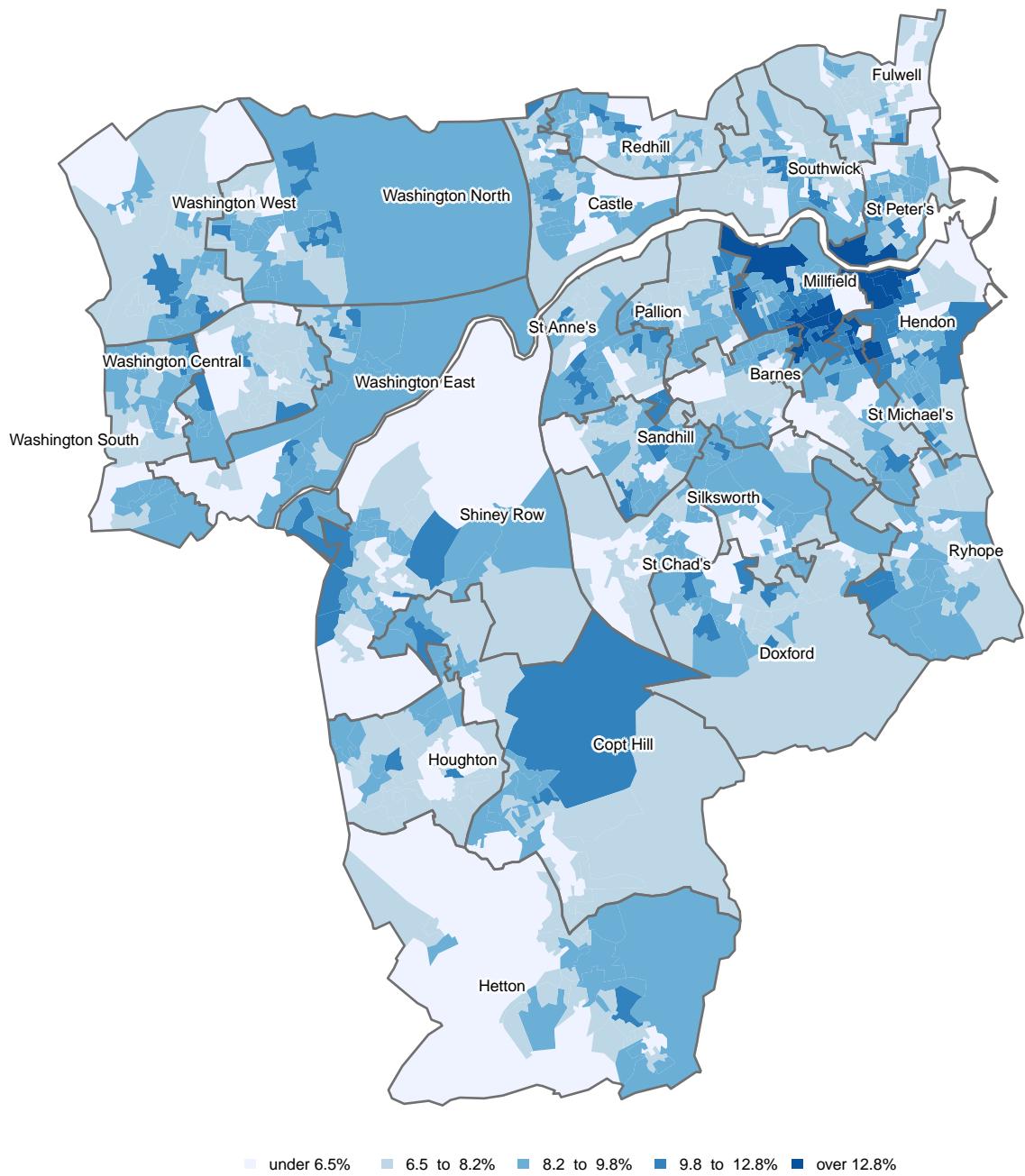


Figure 1: Persons who would seek information on a local MP through the Internet on a smartphone

Variable ID – OA1a2.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data. © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

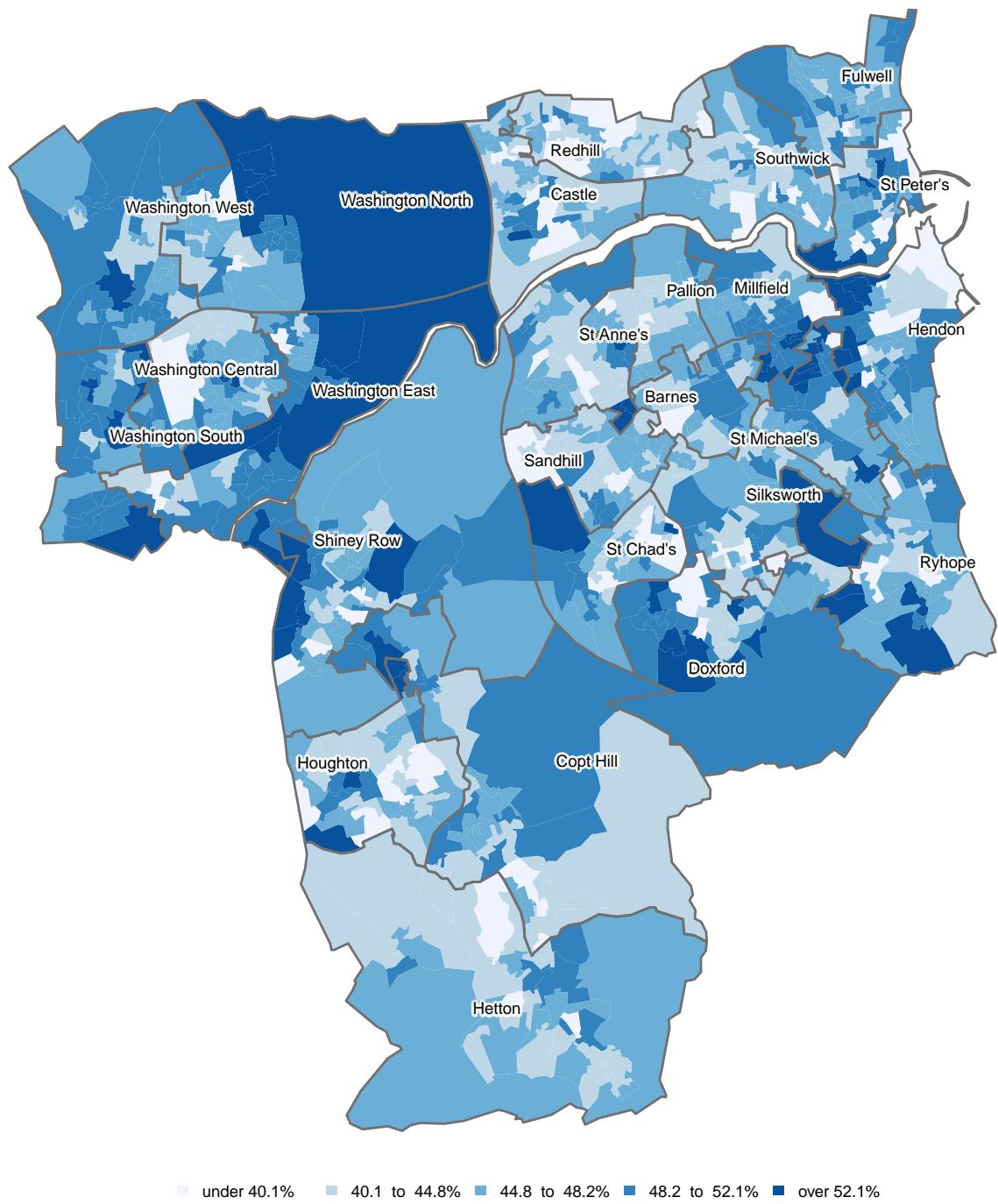


Figure 2: Persons who would seek information on council tax through the Internet on a desktop/ laptop/ tablet

Variable ID – QA1b1.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlestone — [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

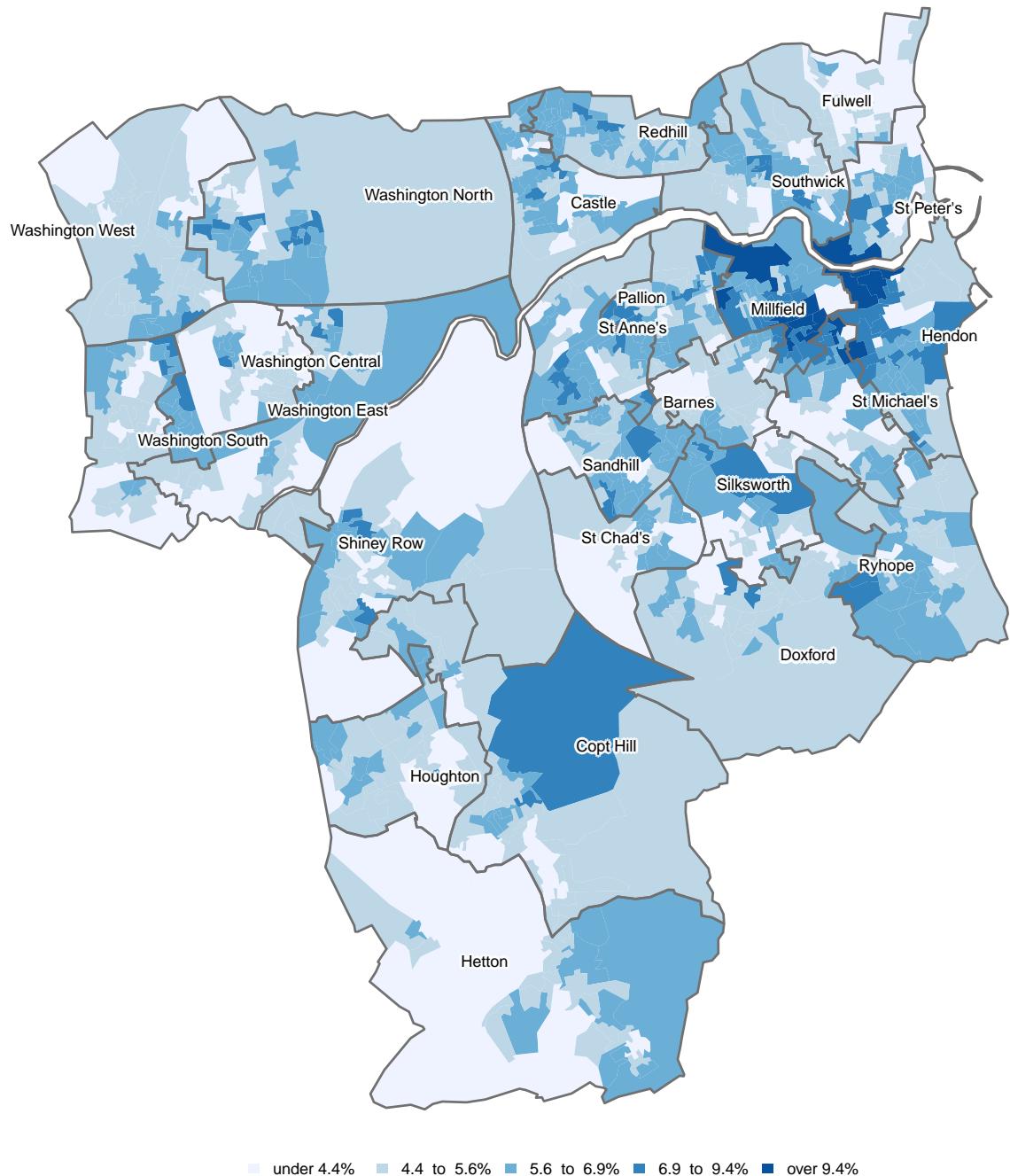


Figure 3: Persons who would seek information on council tax through the Internet on a smartphone

Variable ID – QA1b2.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdr.ac.uk](http://data.cdr.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

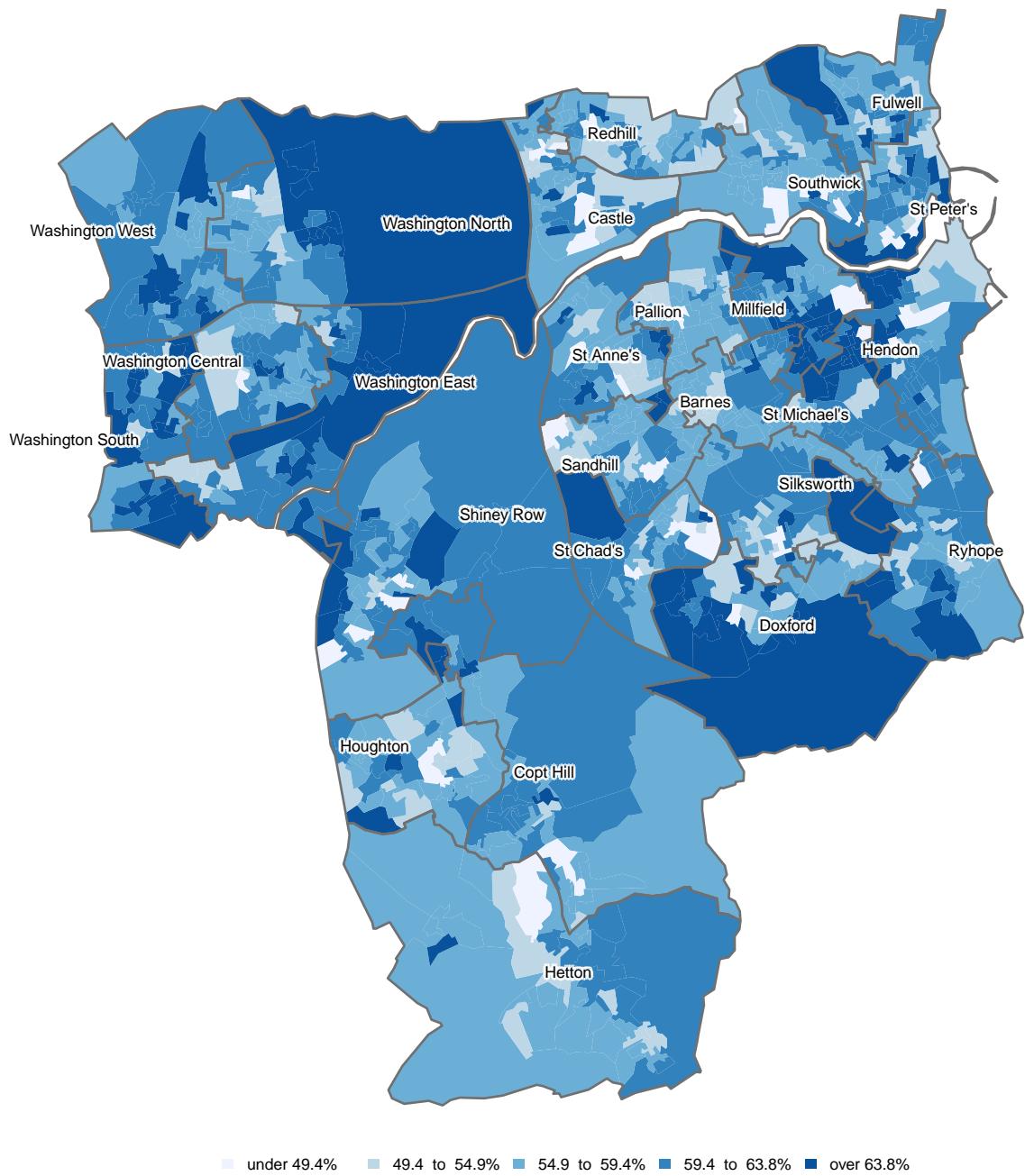


Figure 4: Persons who would seek information on a holiday or journey through the Internet on a desktop/laptop/ tablet

Variable ID – QA1c1.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – data.cdr.ac.uk  
 CC-BY-SA (creativecommons.org/licenses/by-sa/4.0/)

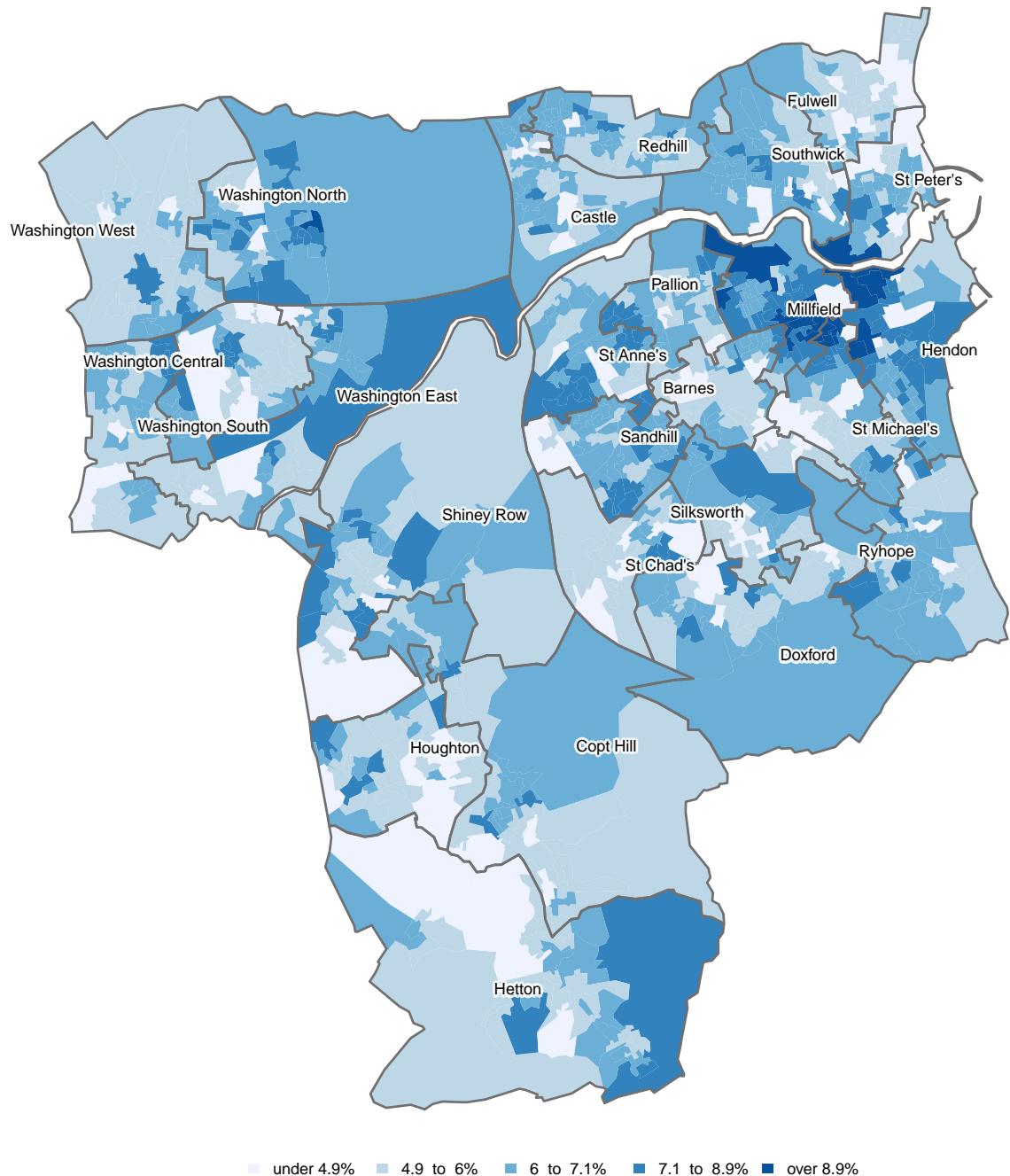


Figure 5: Persons who would seek information on a holiday or journey through the Internet on a smartphone

Variable ID – QA1c2.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdr.ac.uk](http://data.cdr.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

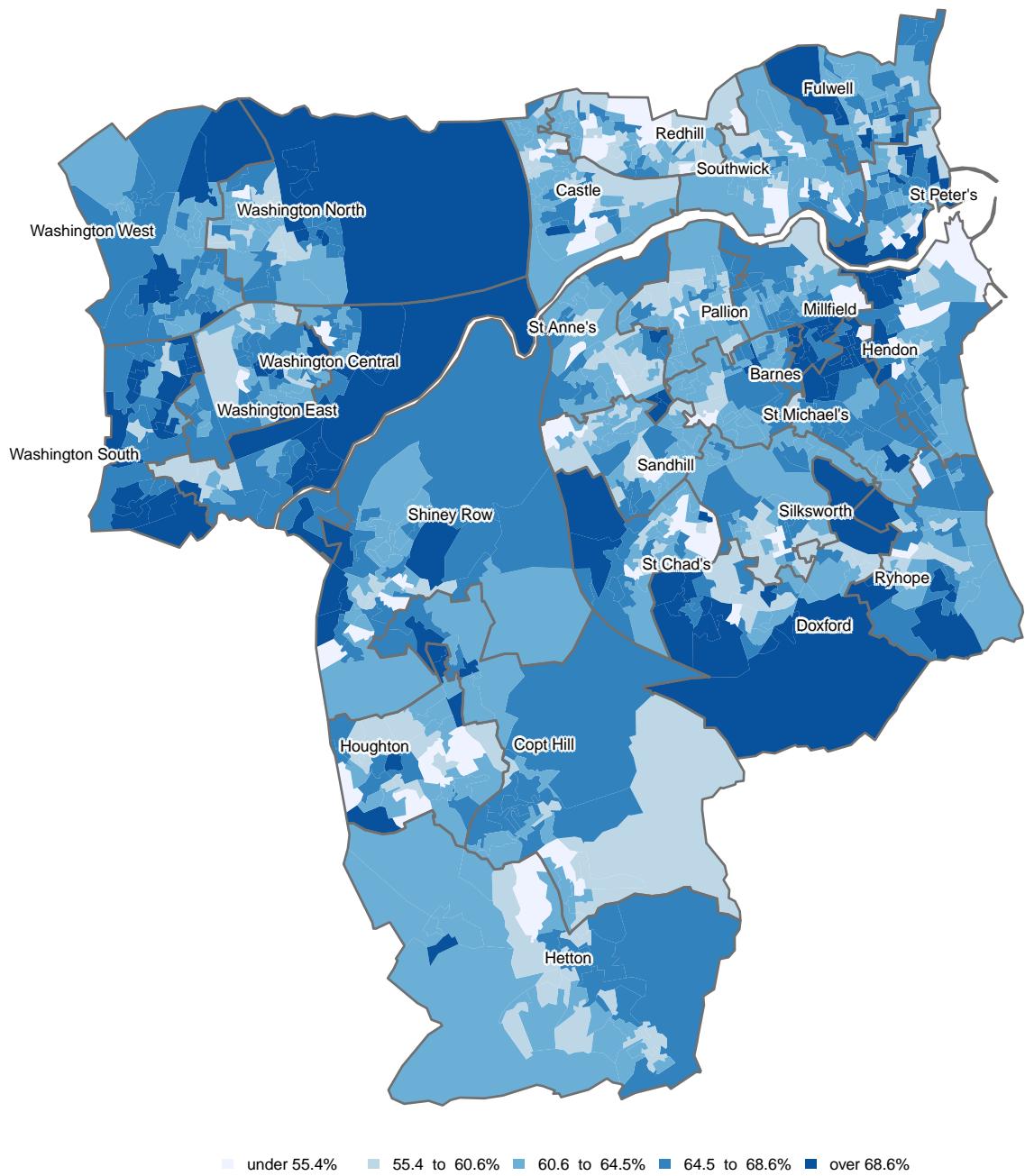


Figure 6: Persons who would seek information on a topic/ professional project through the Internet on a desktop/ laptop/ tablet

Variable ID – QA1f1.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdr.ac.uk](http://data.cdr.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

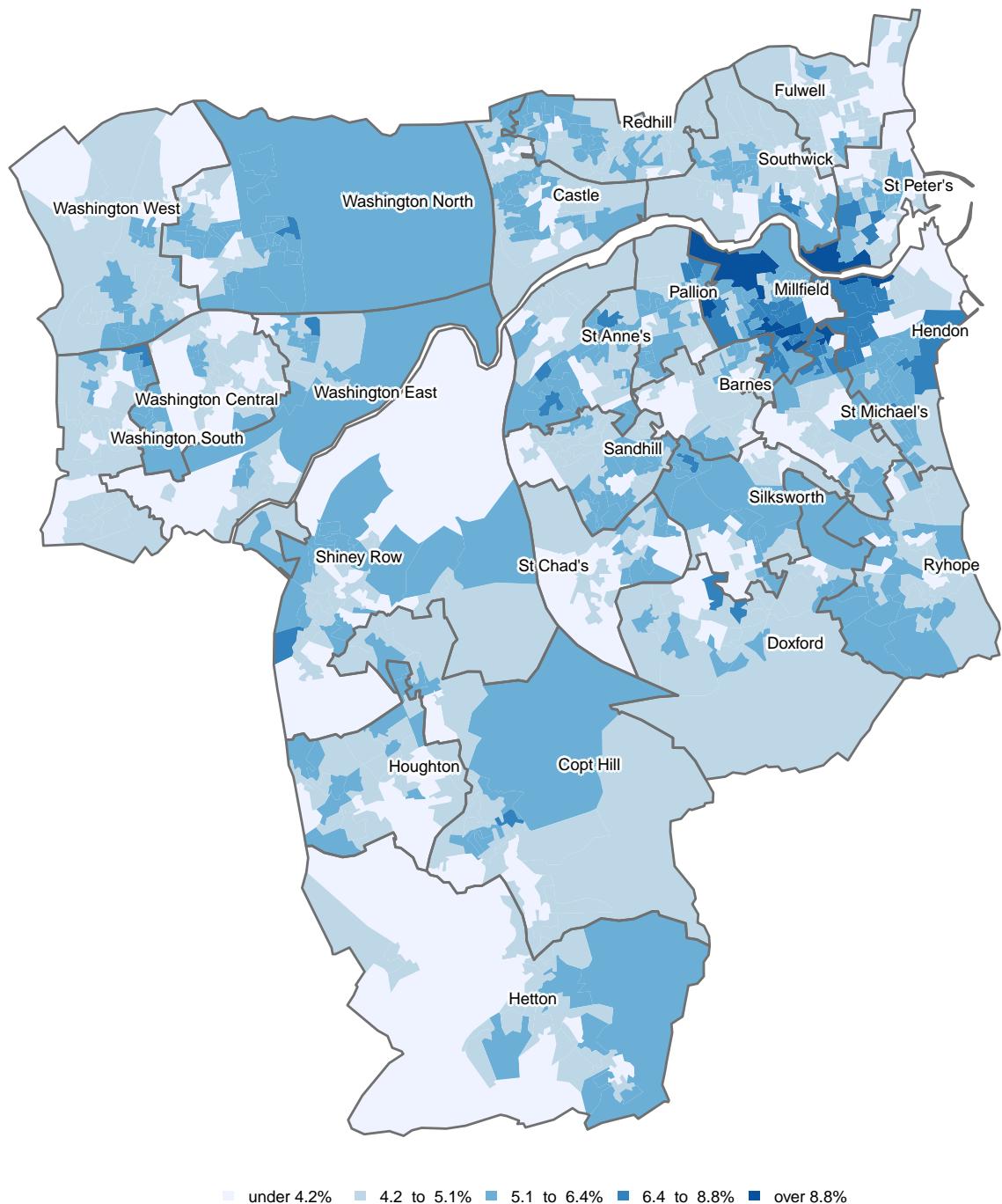


Figure 7: Persons who would seek information on a topic/ professional project through the Internet on a smartphone

Variable ID – OA1f2  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

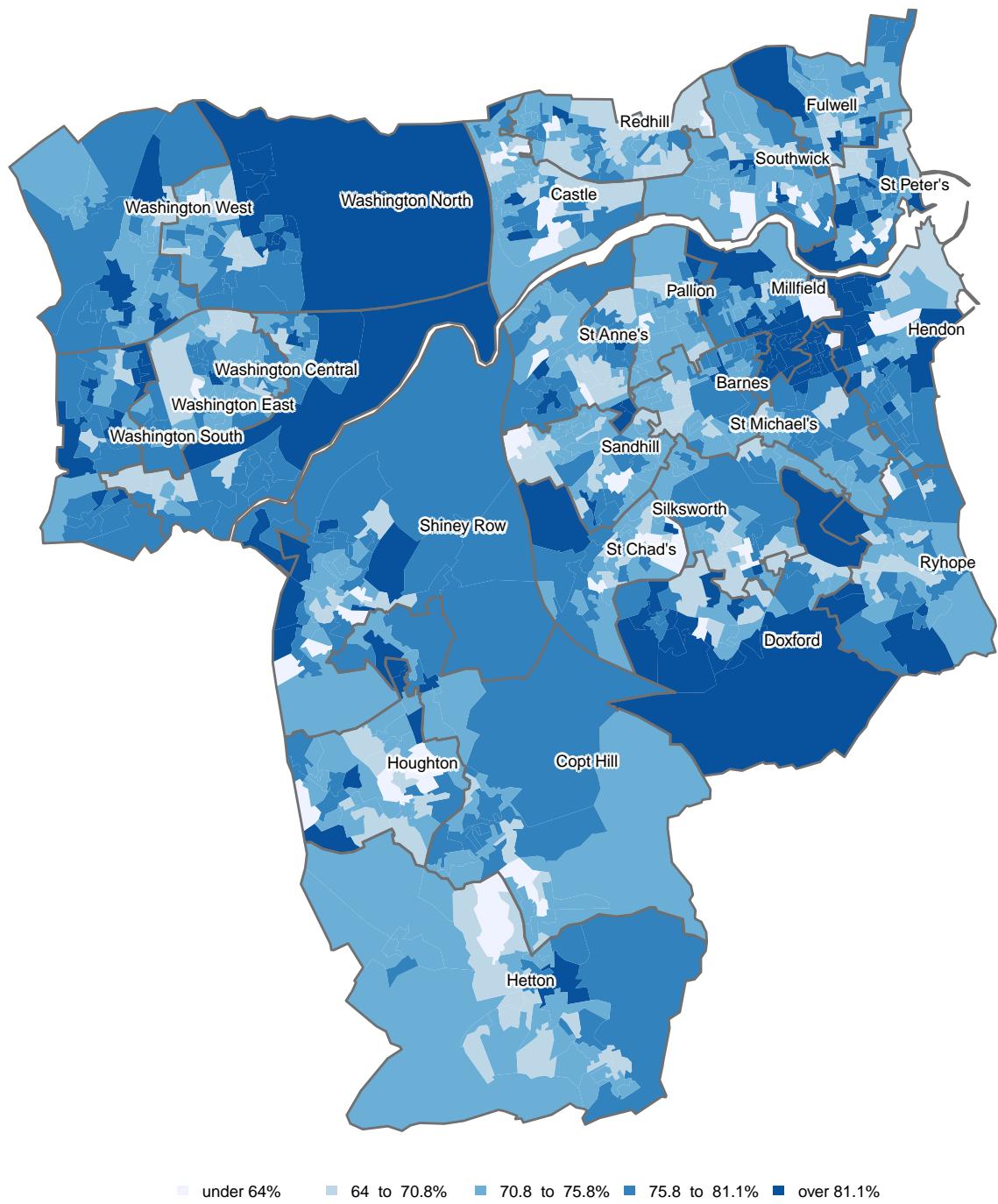


Figure 8: Persons who indicate the Internet is important for information

Variable ID – QA2c.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddleston — [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

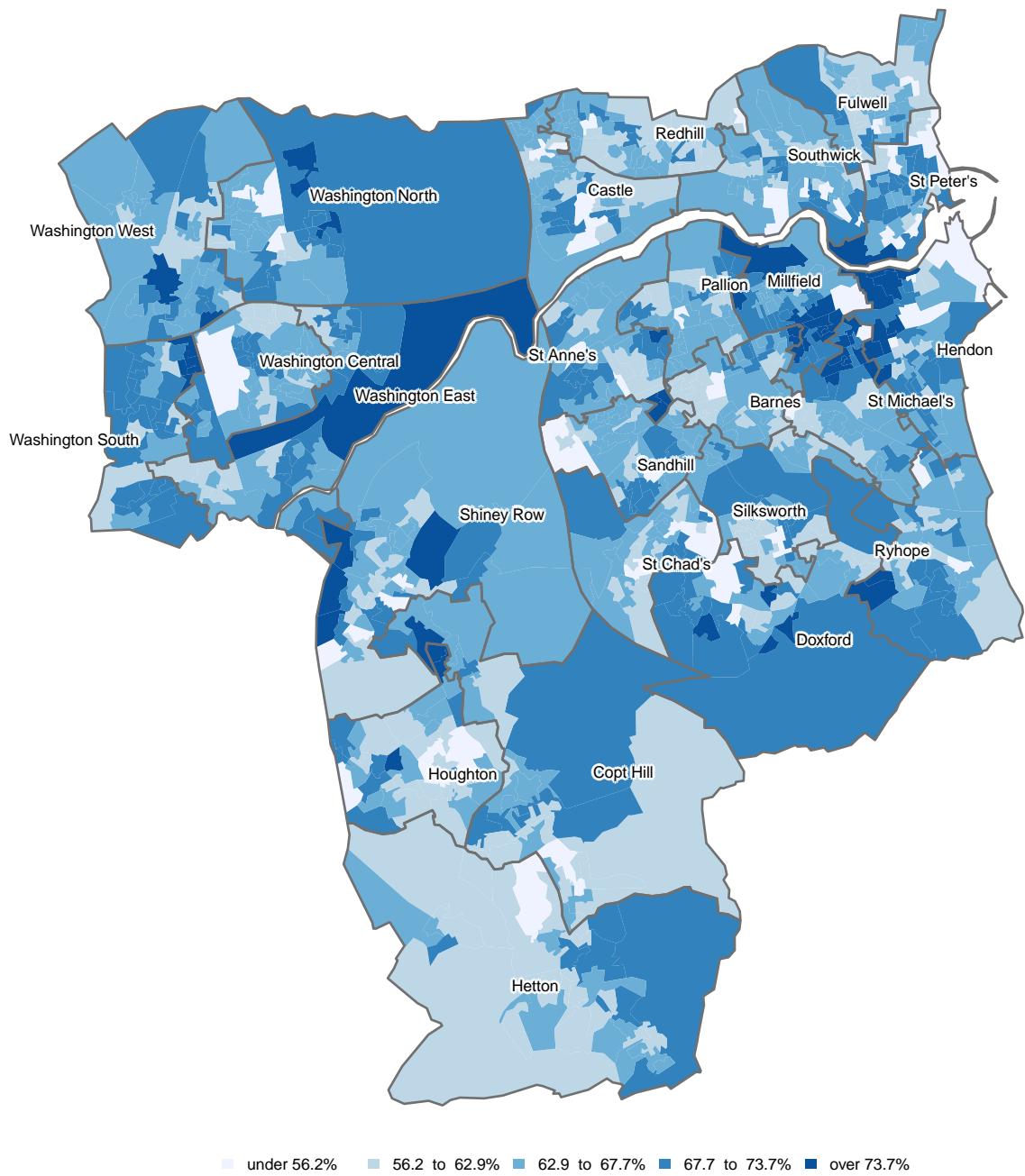


Figure 9: Persons who indicate the Internet is important for entertainment

Variable ID – OA3d.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data. © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

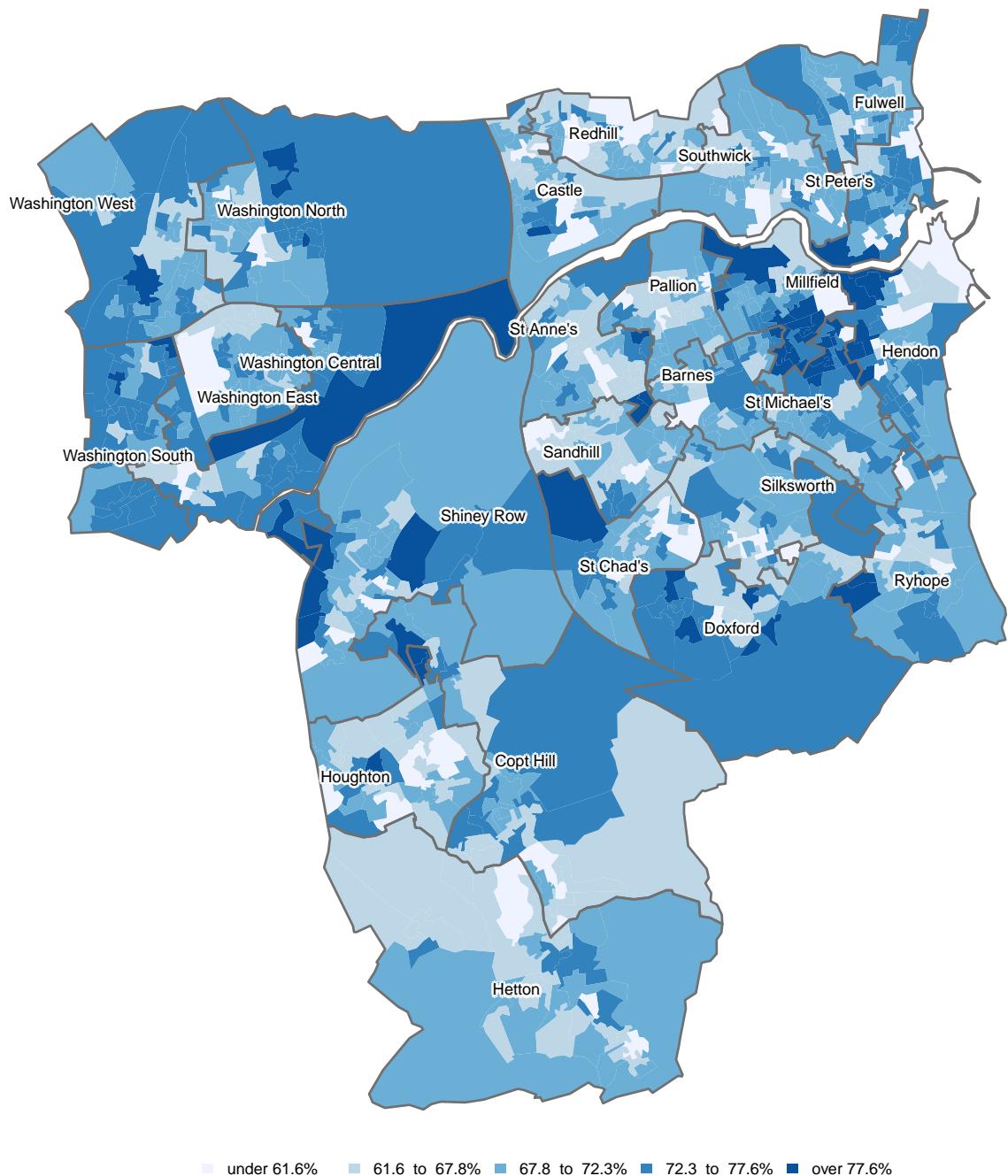


Figure 10: Persons indicating they are Interested in the Internet

Variable ID – QA9.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddlesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

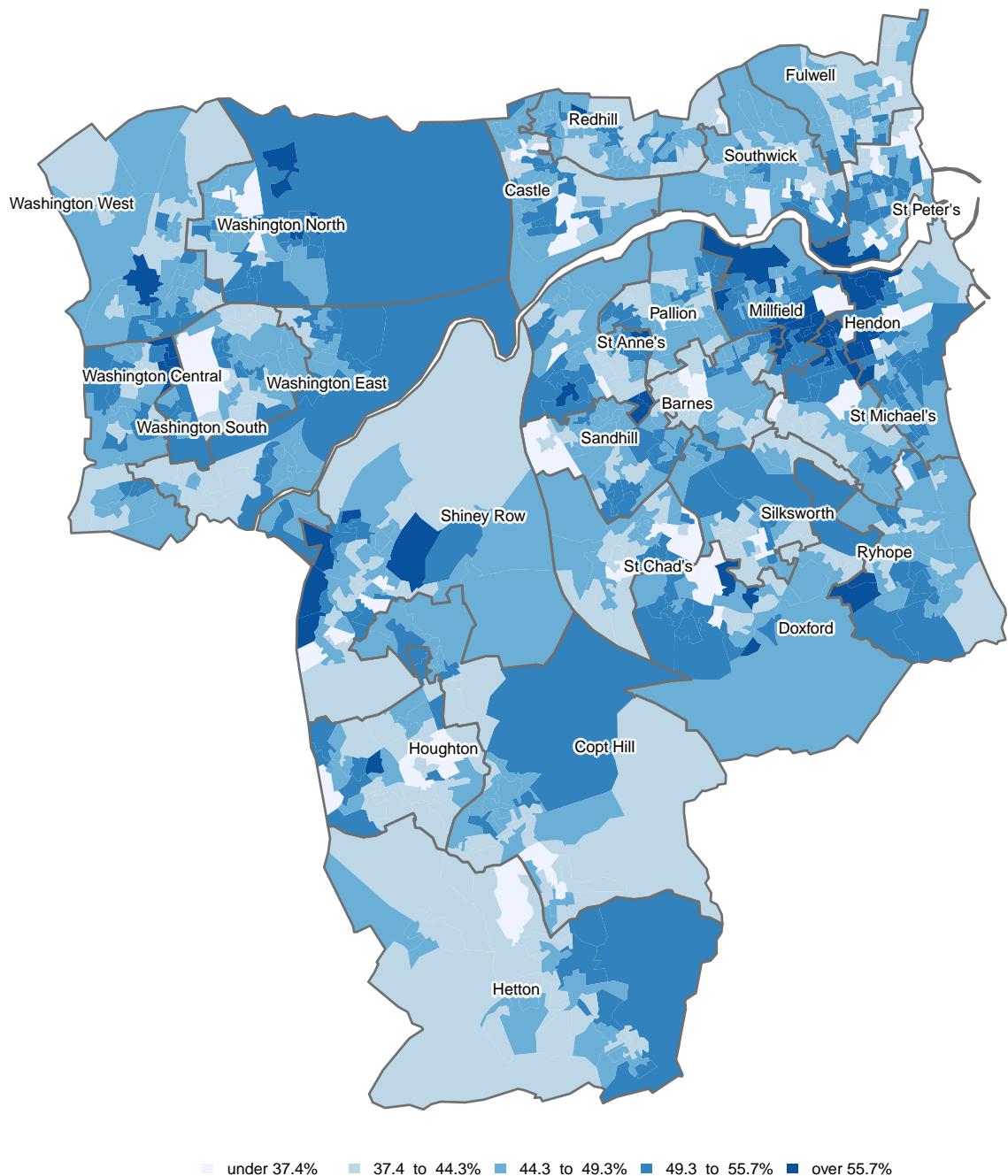


Figure 11: Persons who use the Internet while travelling through a mobile/dongle

Variable ID – QC1b.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

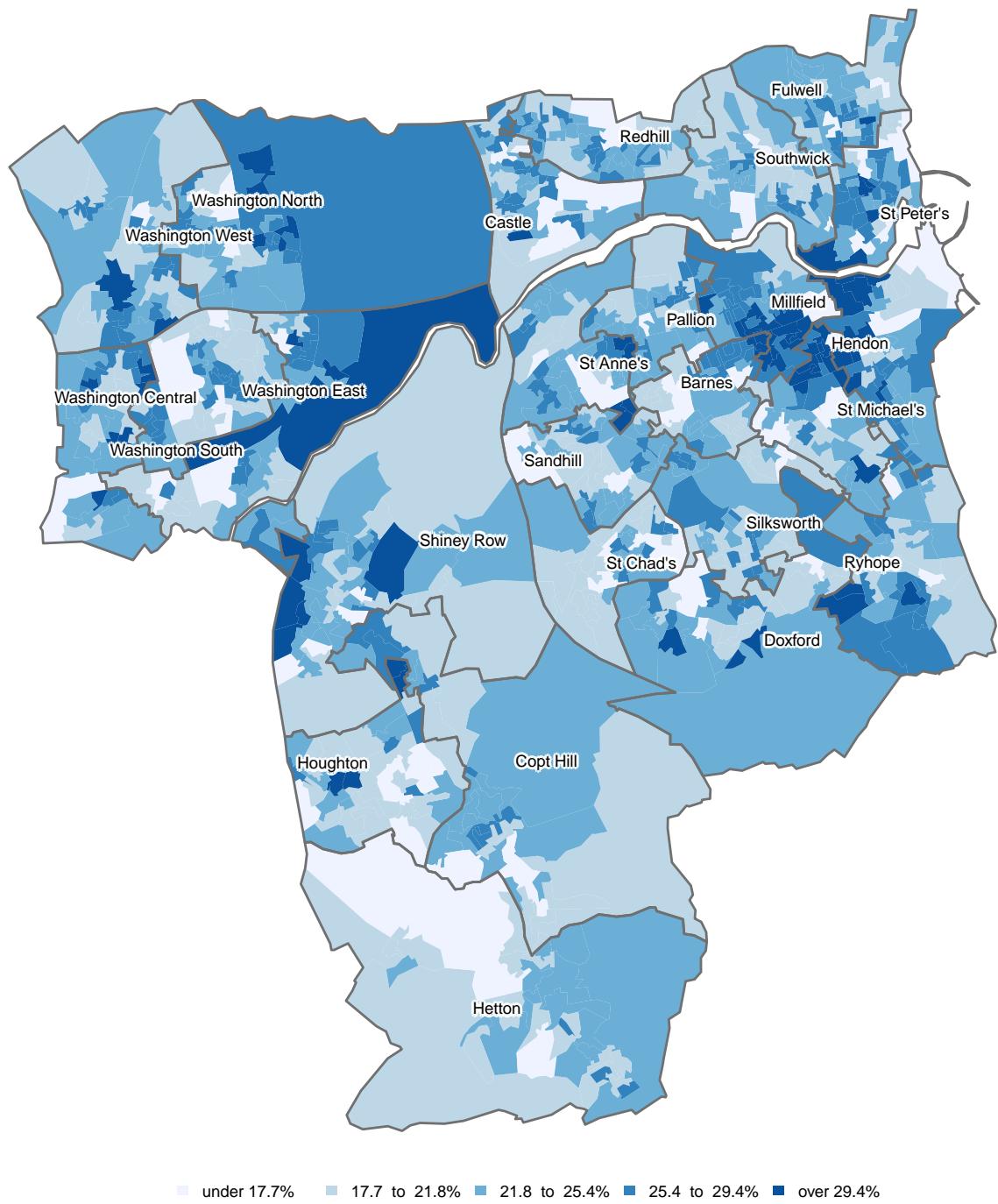


Figure 12: Persons who have found a job through the Internet

Variable ID – QC22a.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddleston – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

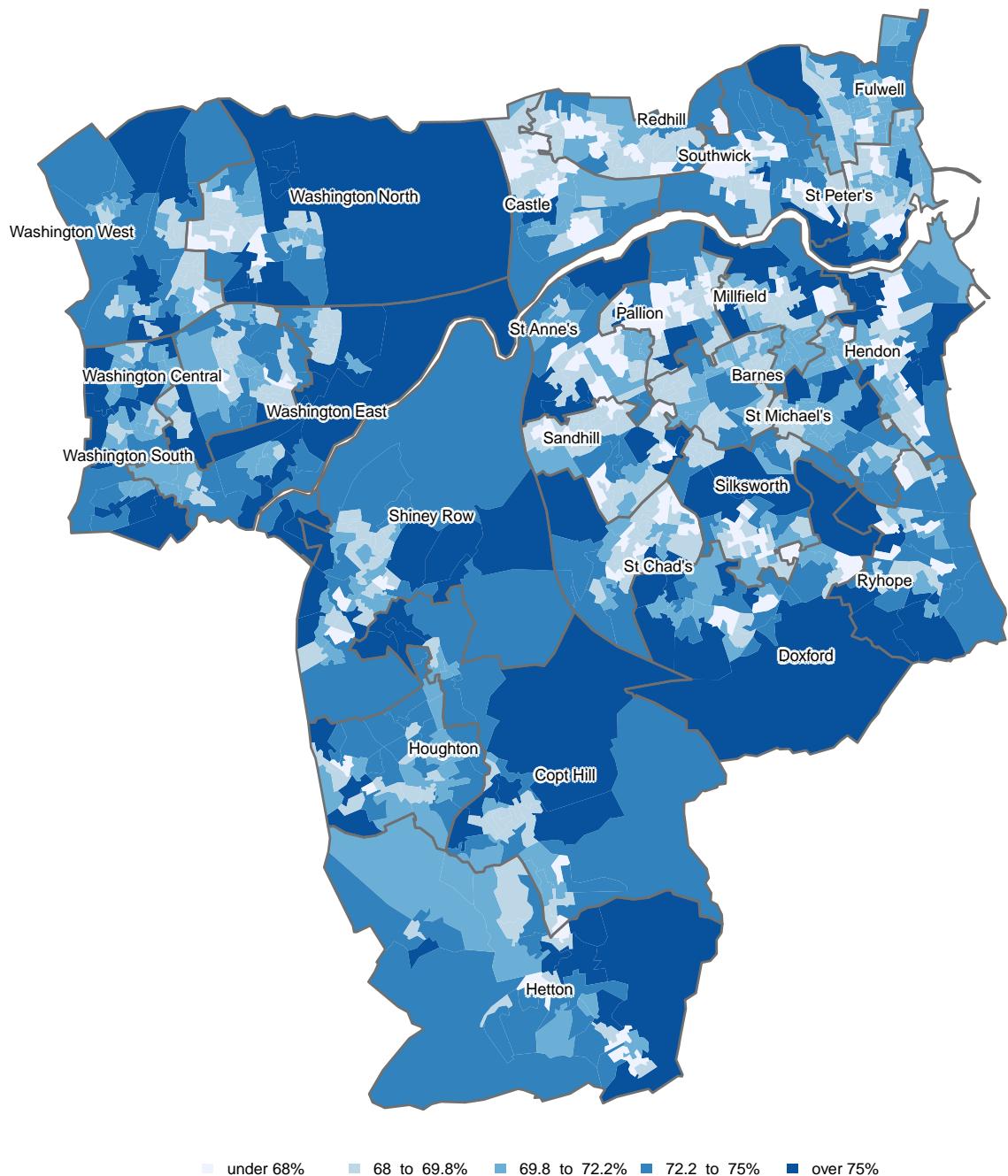


Figure 13: Persons who have saved money buying online

Variable ID – QC22b.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddlesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

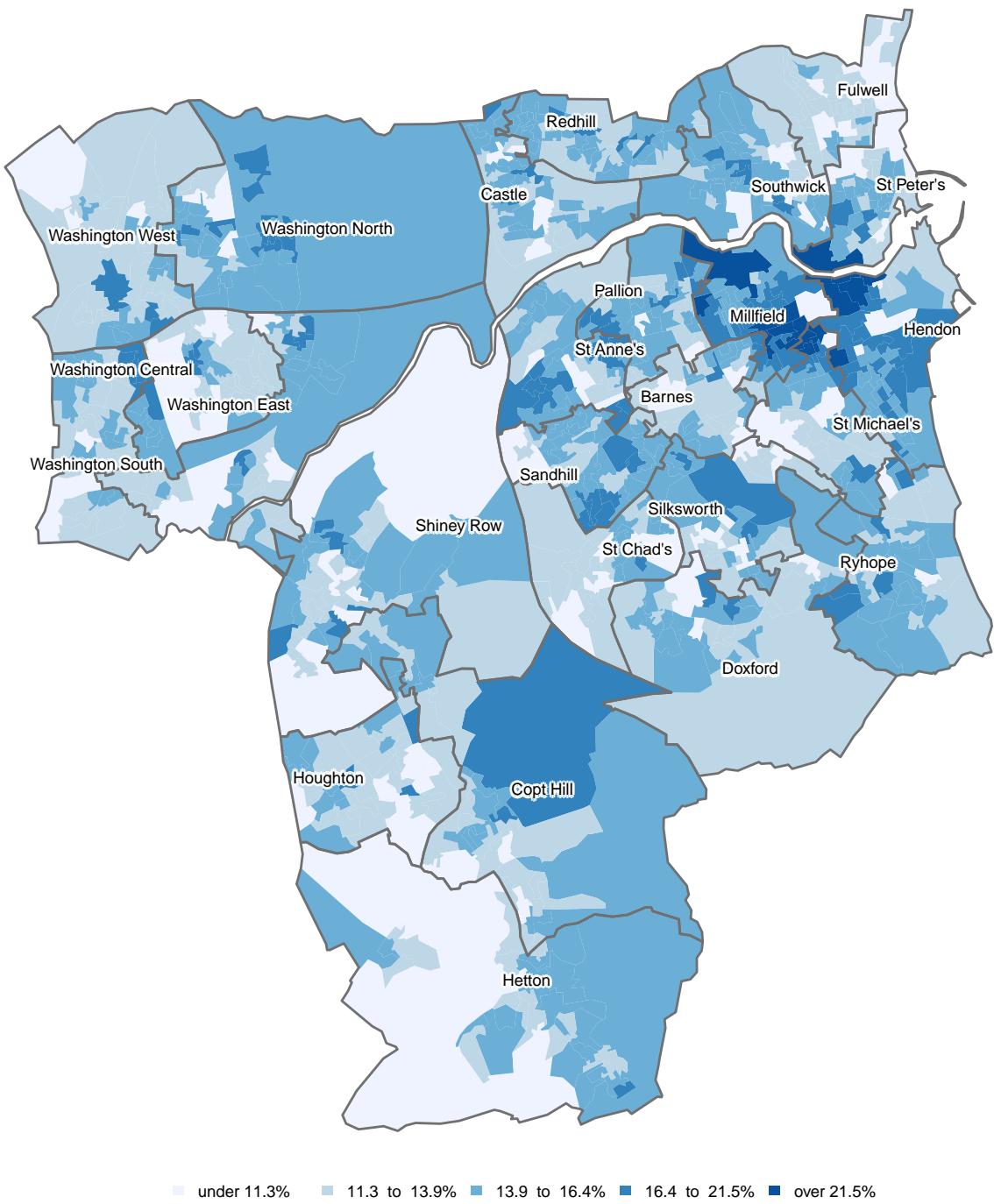


Figure 14: Persons who mostly use their mobile phone for Internet access

Variable ID – QC2a.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddleston – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

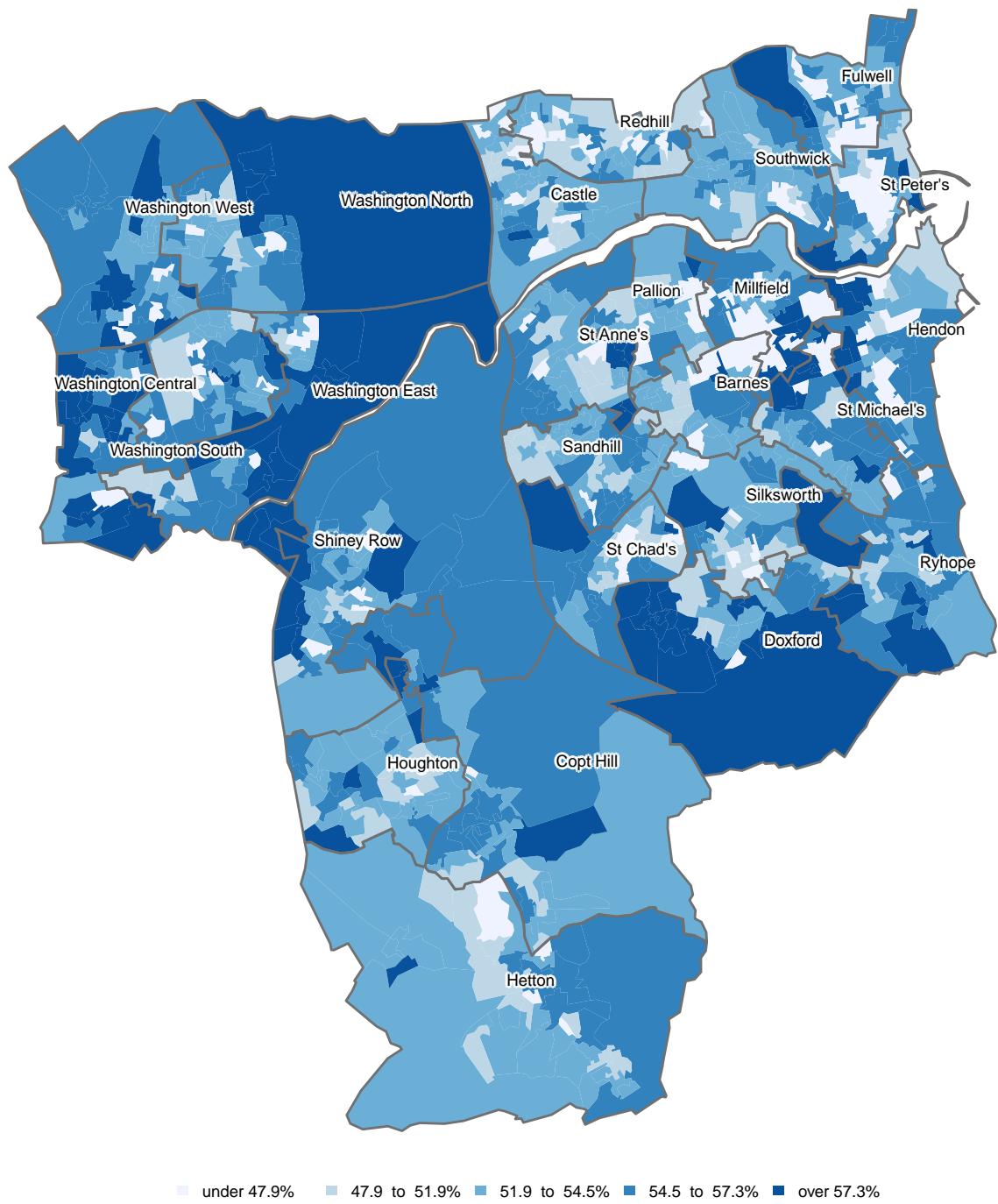


Figure 15: Persons who frequently buy products online

Variable ID – QC30b.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddleston – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

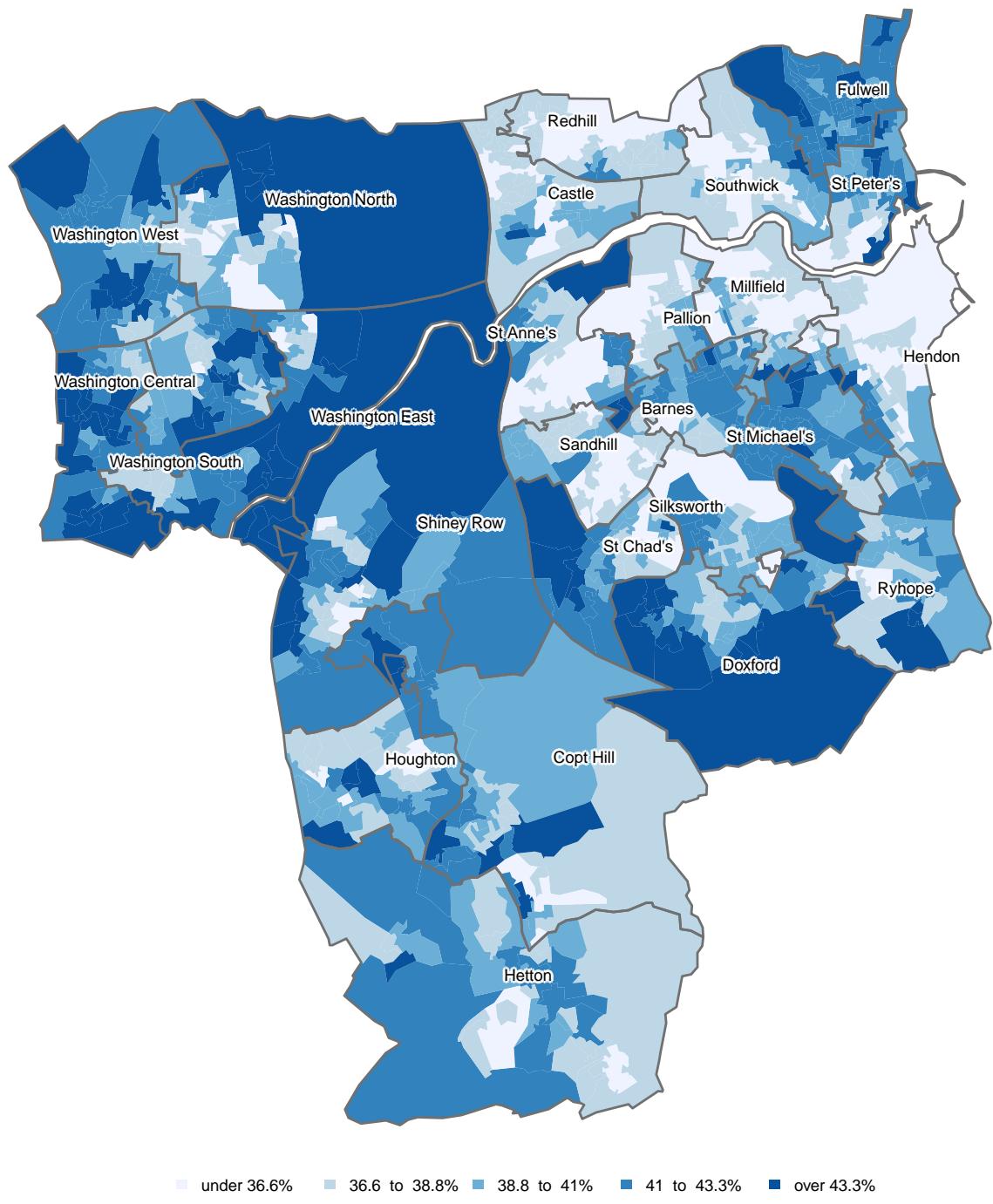


Figure 16: Persons who frequently pay bills online

Variable ID – QC30d.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlestone — [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

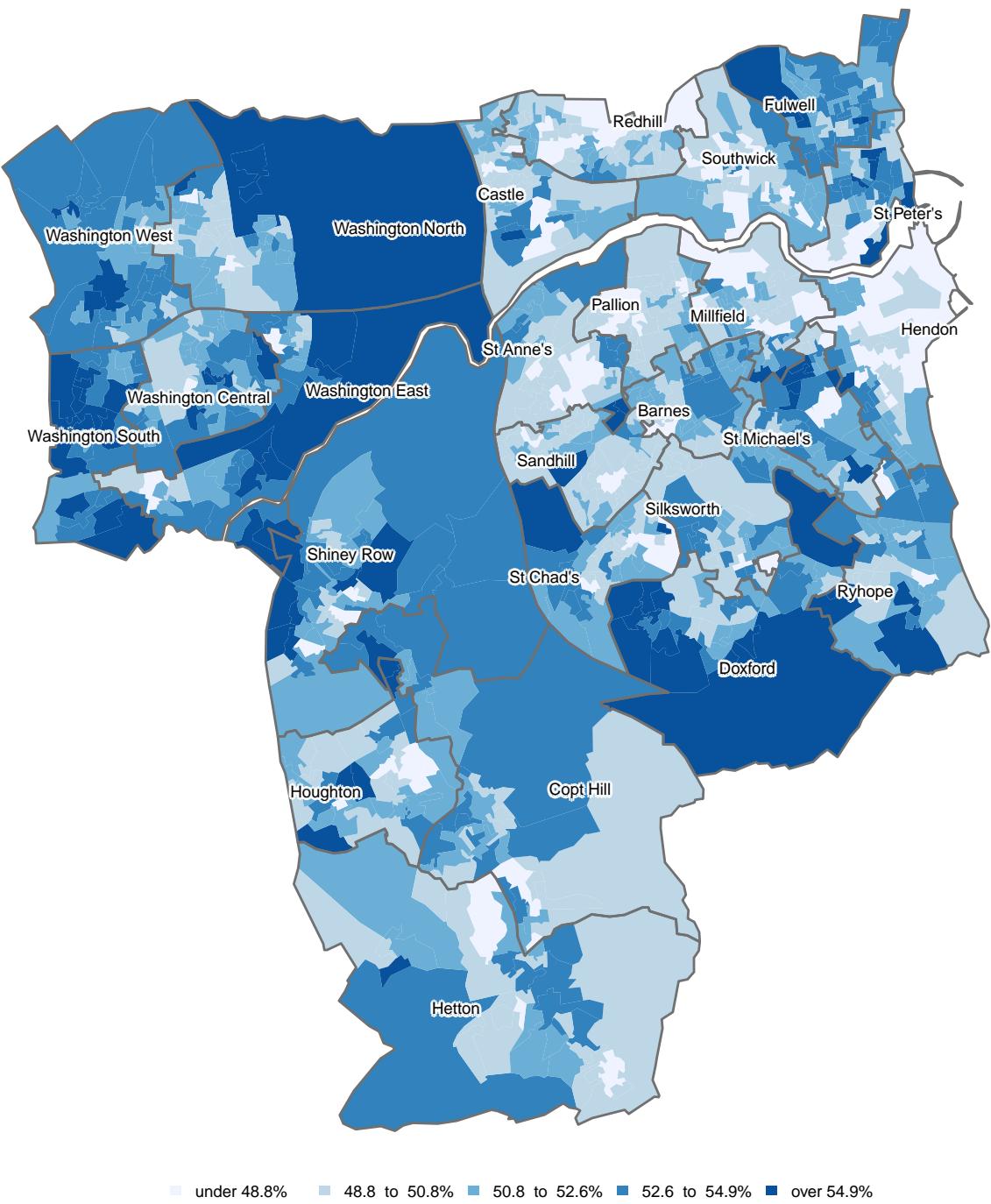


Figure 17: Persons who frequently use online banking

Variable ID – QC30e.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data (c) Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlestone – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

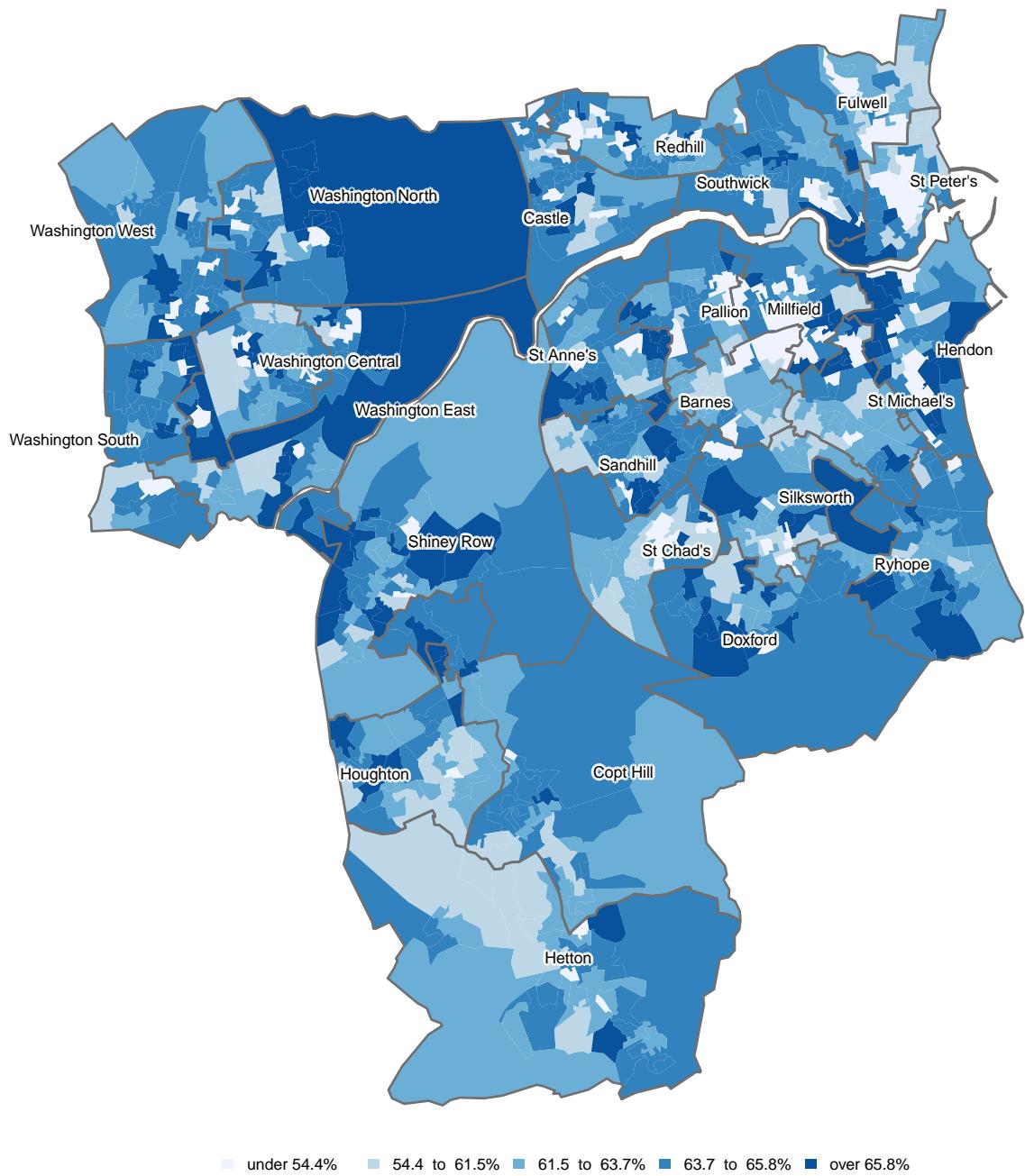


Figure 18: Persons who frequently compare prices online

Variable ID – OC30f.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data. © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

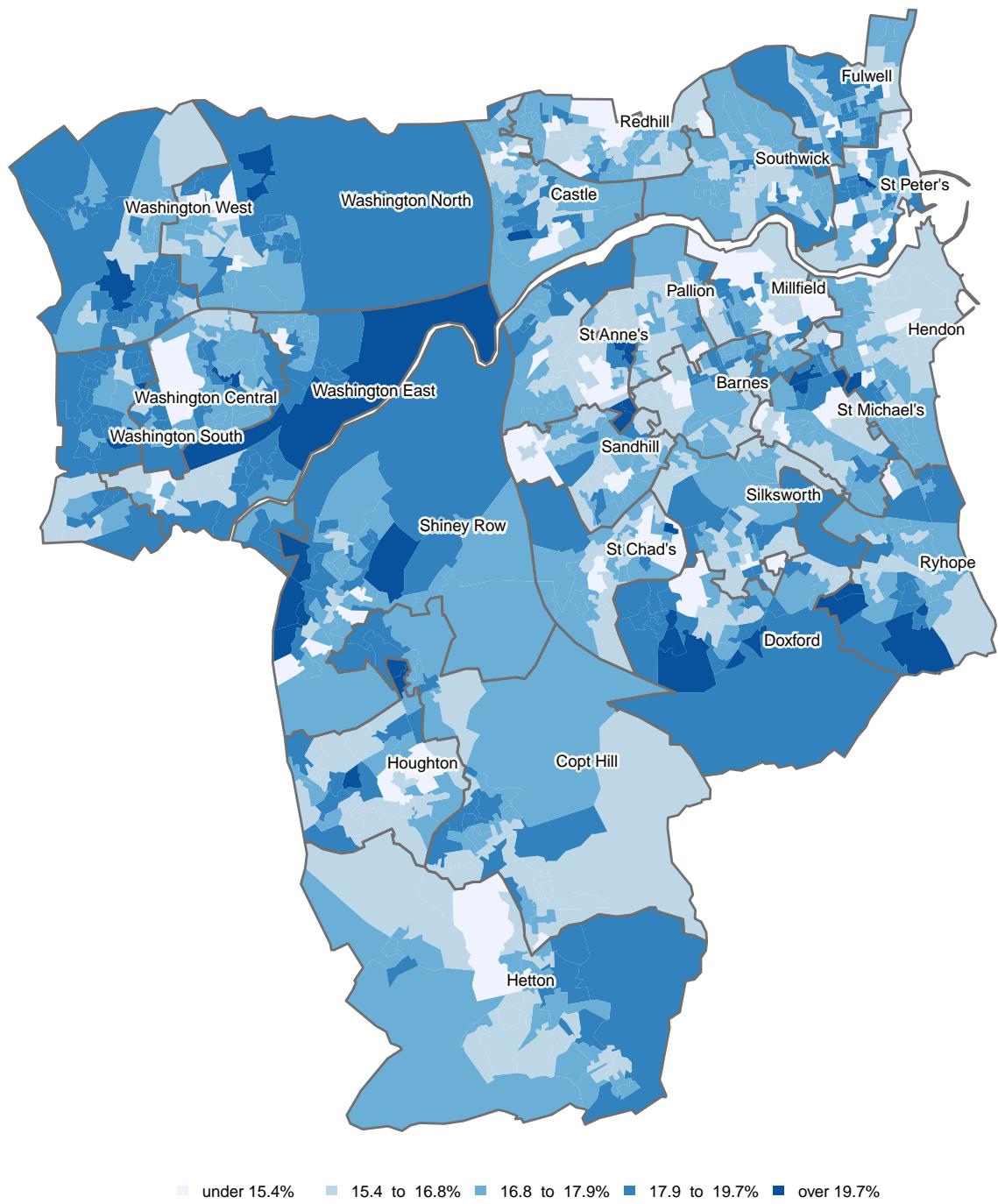


Figure 19: Persons who frequently order food or groceries online

Variable ID – QC30h.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddlestone — [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

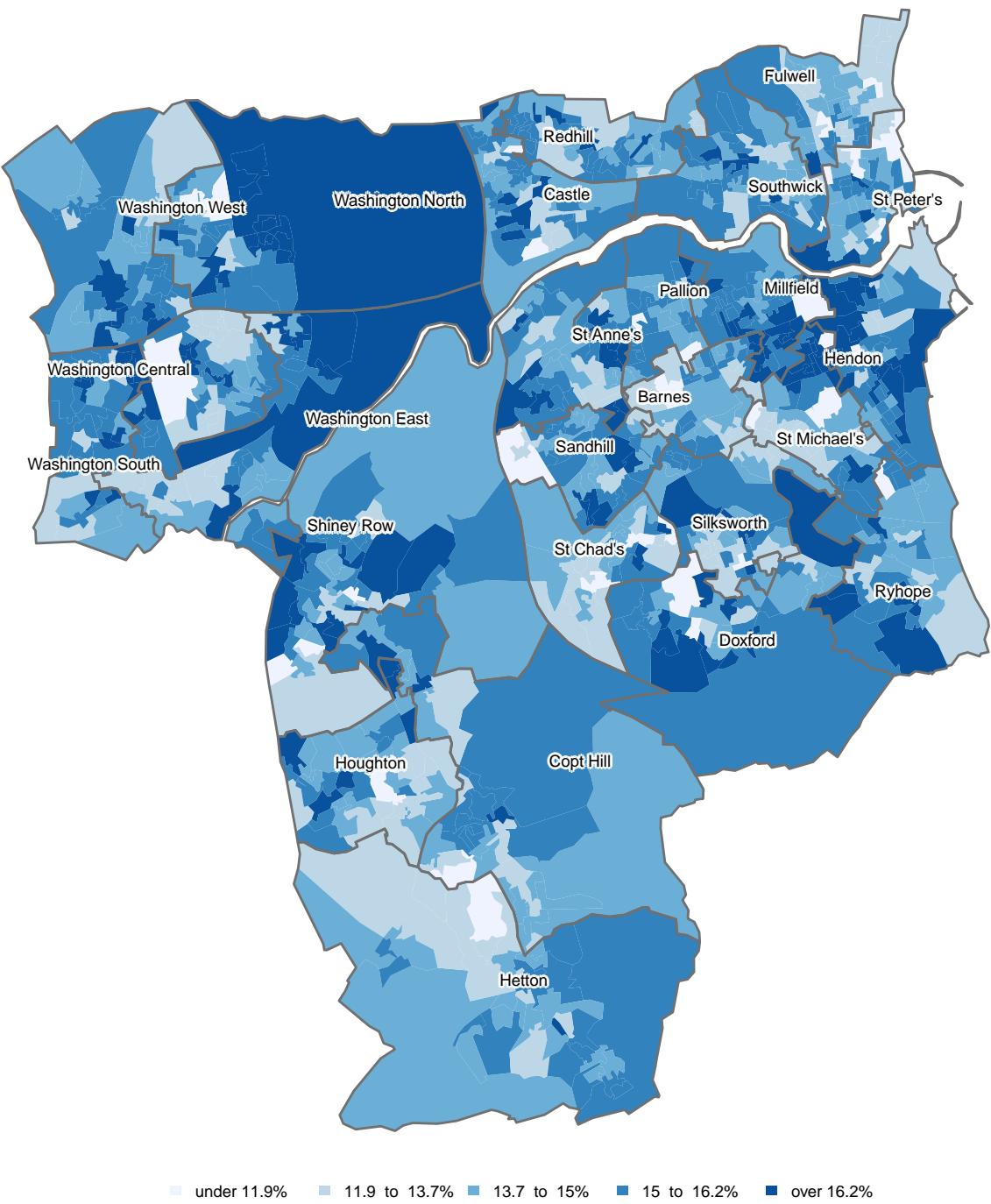


Figure 20: Persons who frequently sell things online

Variable ID – QC30i.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddleston — [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

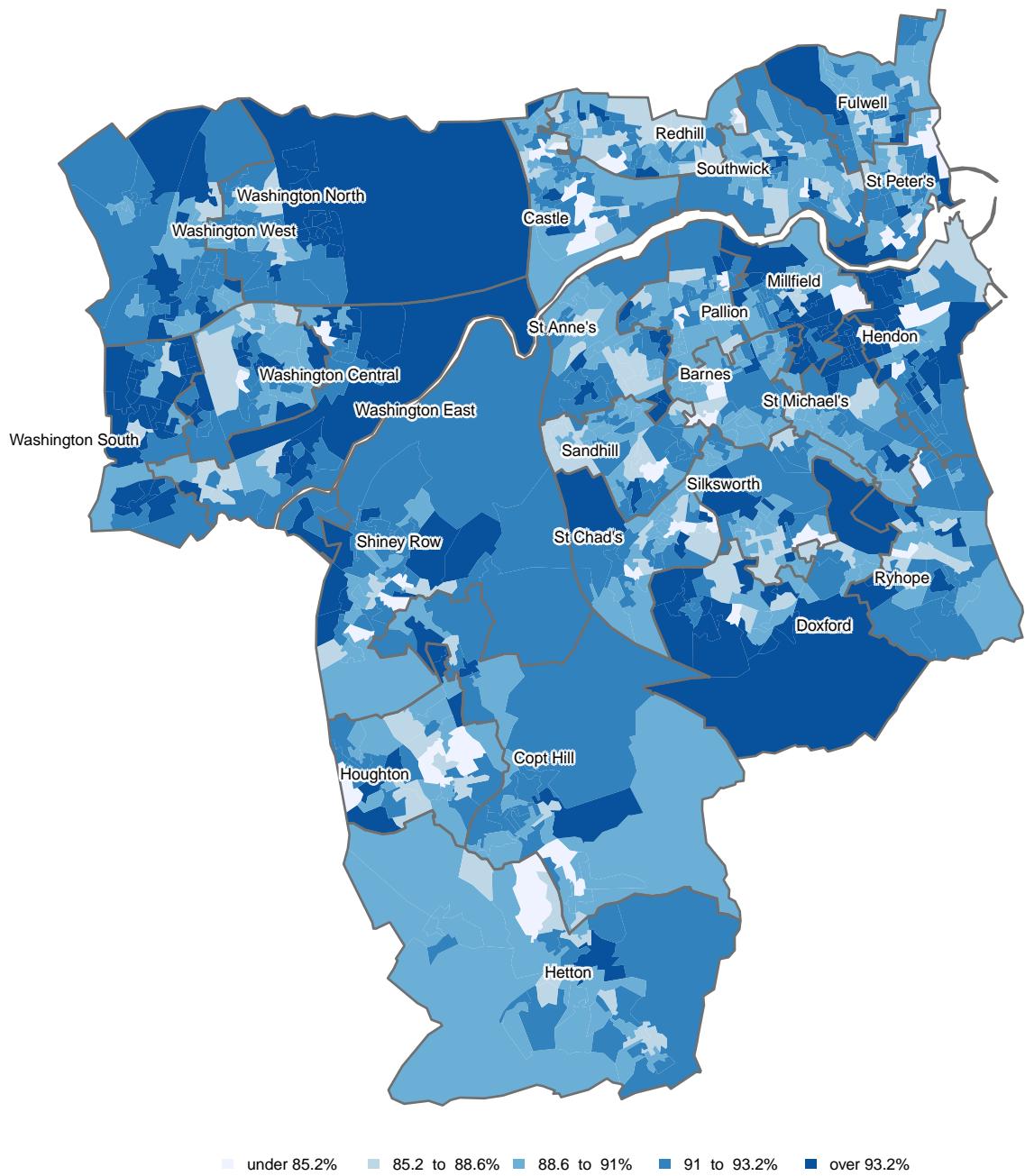


Figure 21: Mobile phone ownership

Variable ID – OH11.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data. © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddlesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

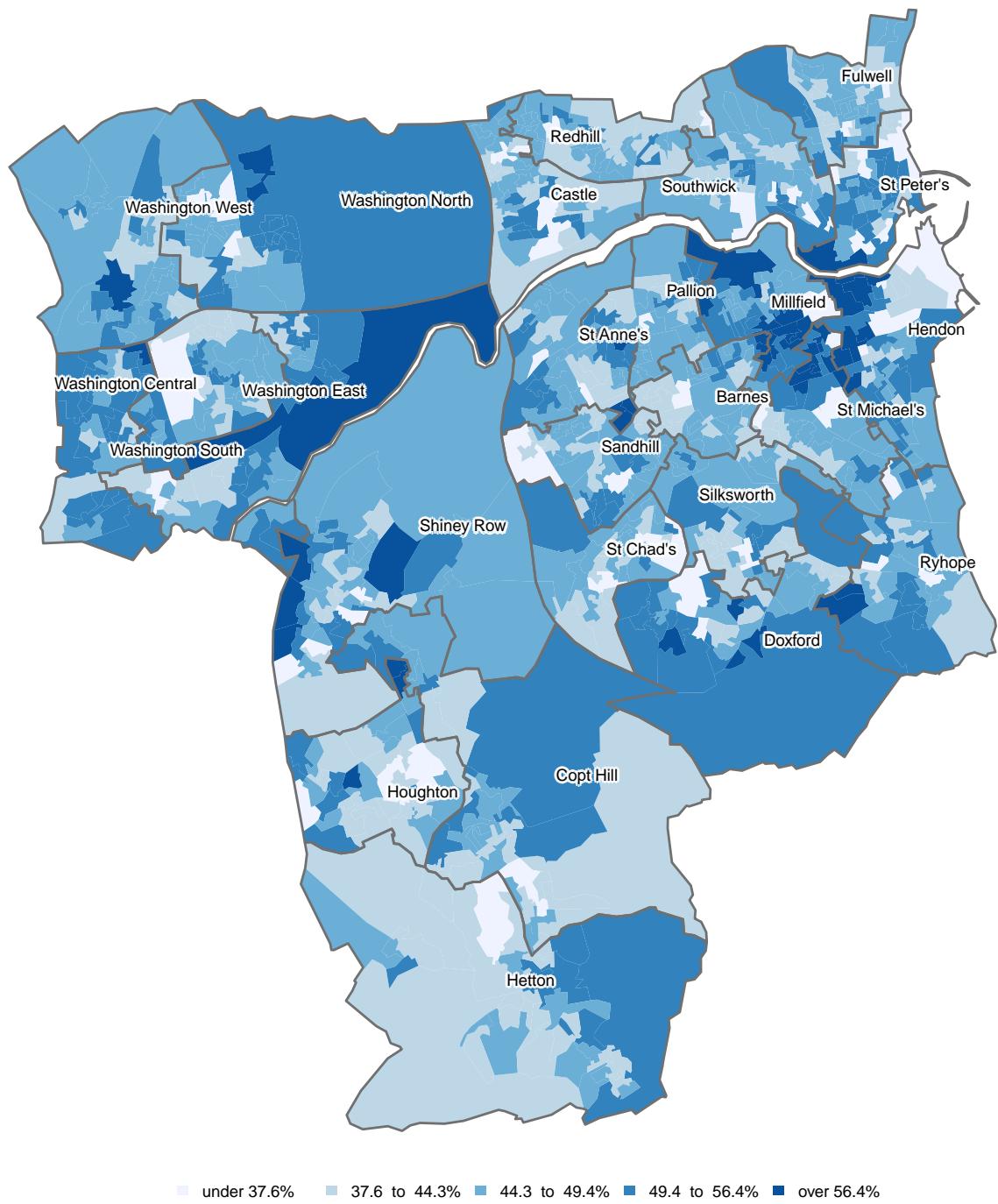


Figure 22: Persons who use mobile phone for email

Variable ID – QH12b.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddleston – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

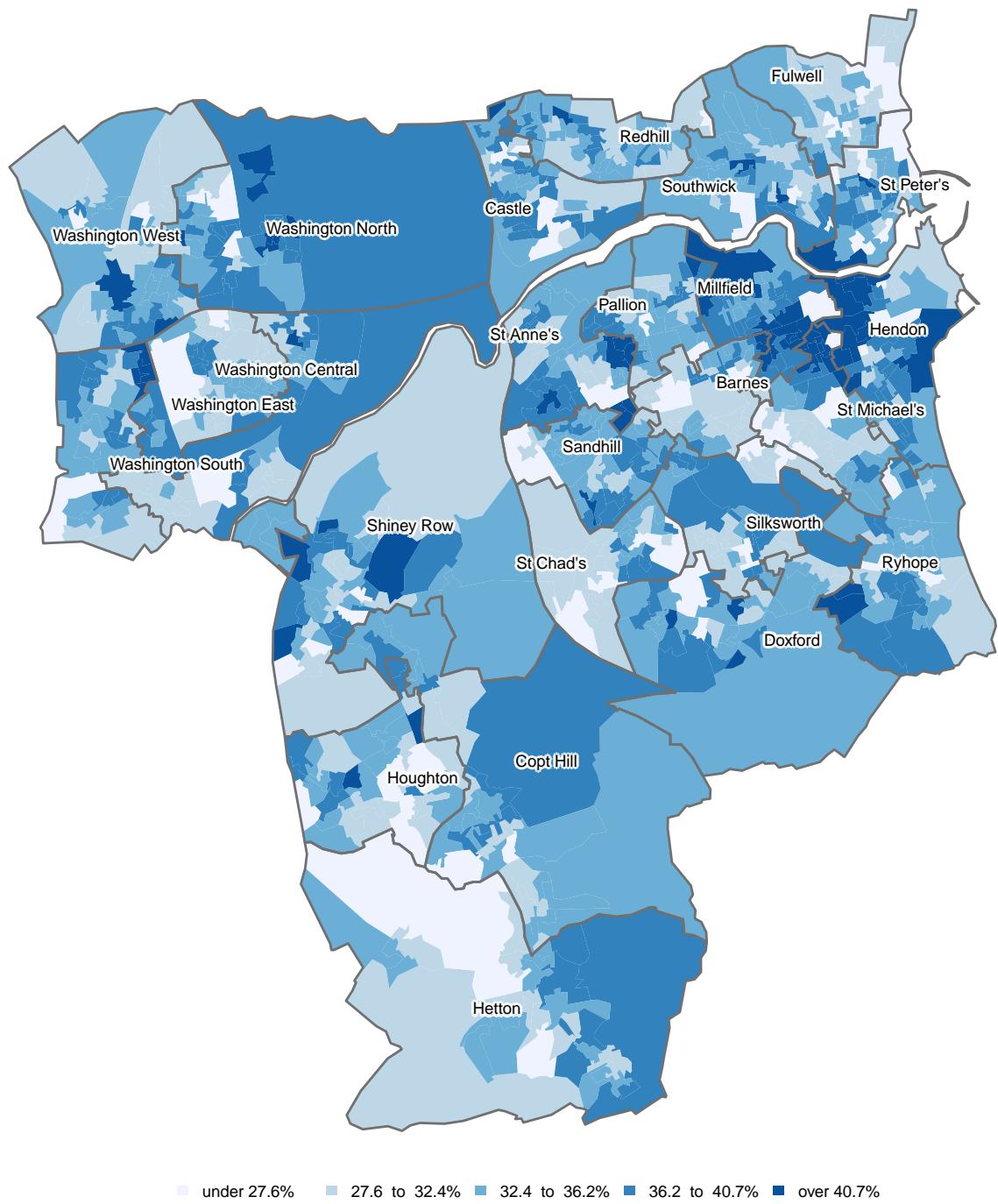


Figure 23: Persons who use mobile for posting videos and photos online

Variable ID – QH12e.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddleston – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

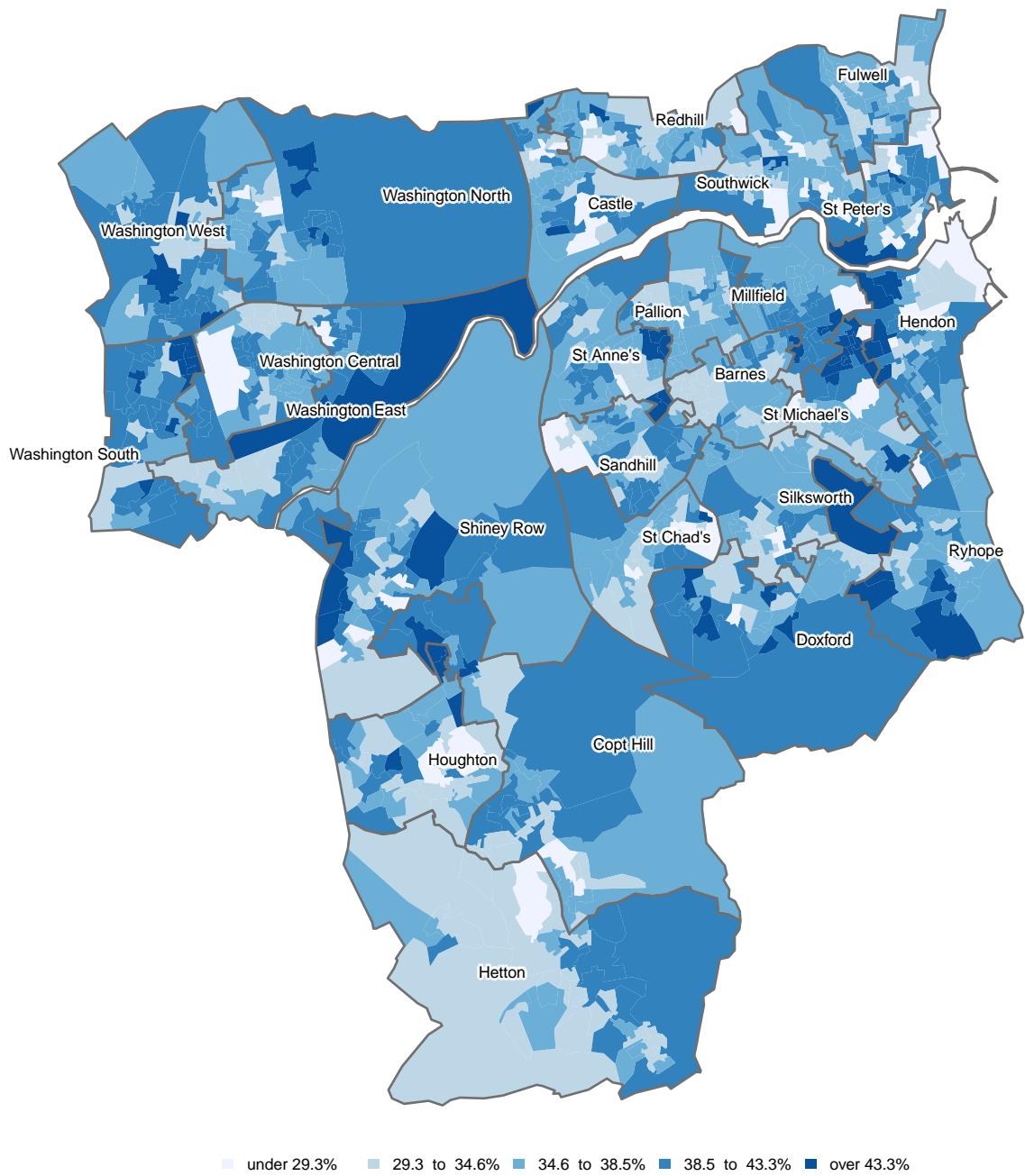


Figure 24: Persons who use mobile phone for navigation

Variable ID – OH12h.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data. © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

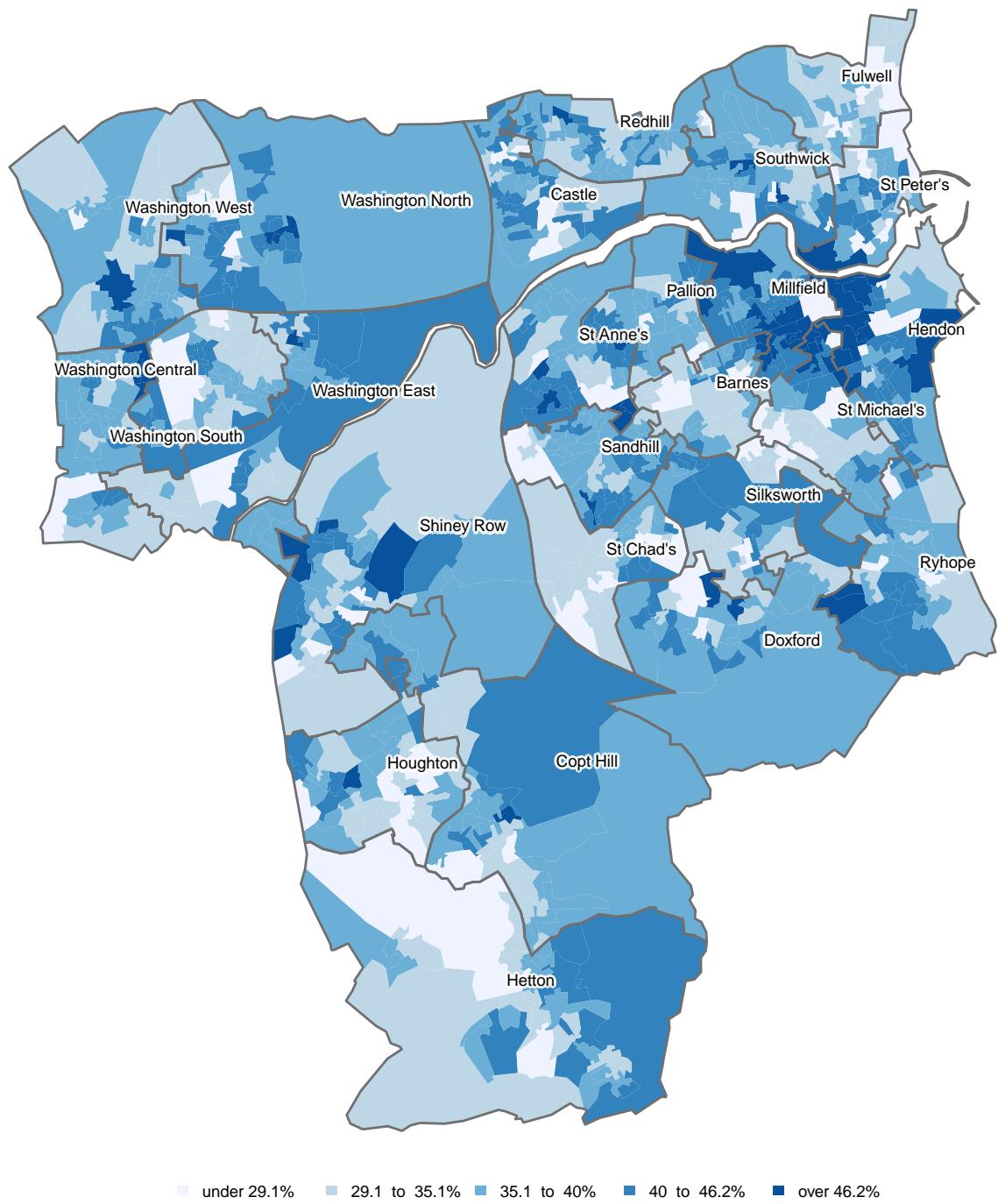


Figure 25: Persons who use mobile phone for social networking

Variable ID – QH12i.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddleston – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

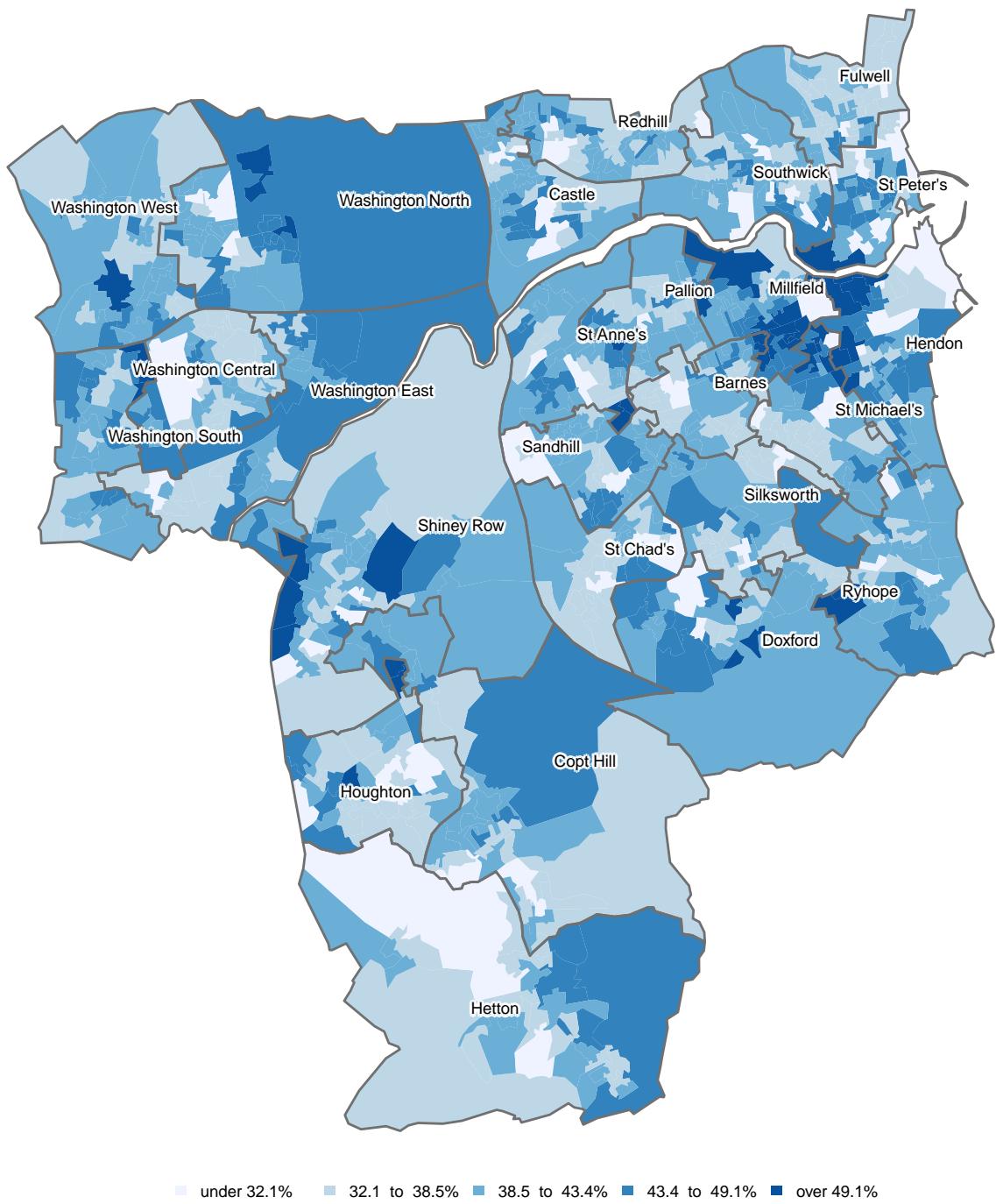


Figure 26: Persons who use mobile phone for apps

Variable ID – QH12j.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddleston — [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

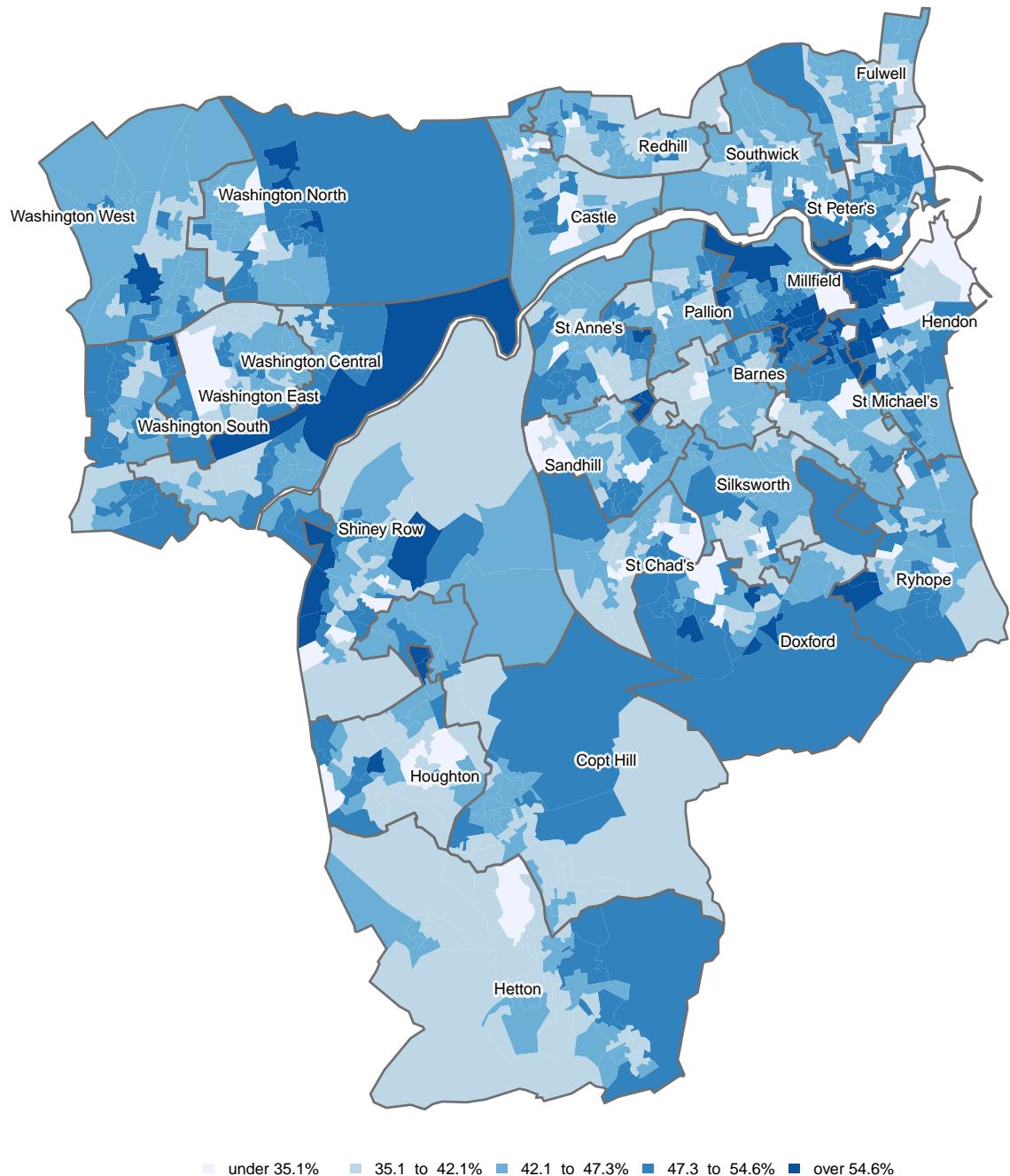


Figure 27: Persons who use mobile phone for browsing the Internet

Variable ID – QH12k.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddlesden – data.cdr.ac.uk  
CC-BY-SA (creativecommons.org/licenses/by-sa/4.0/)

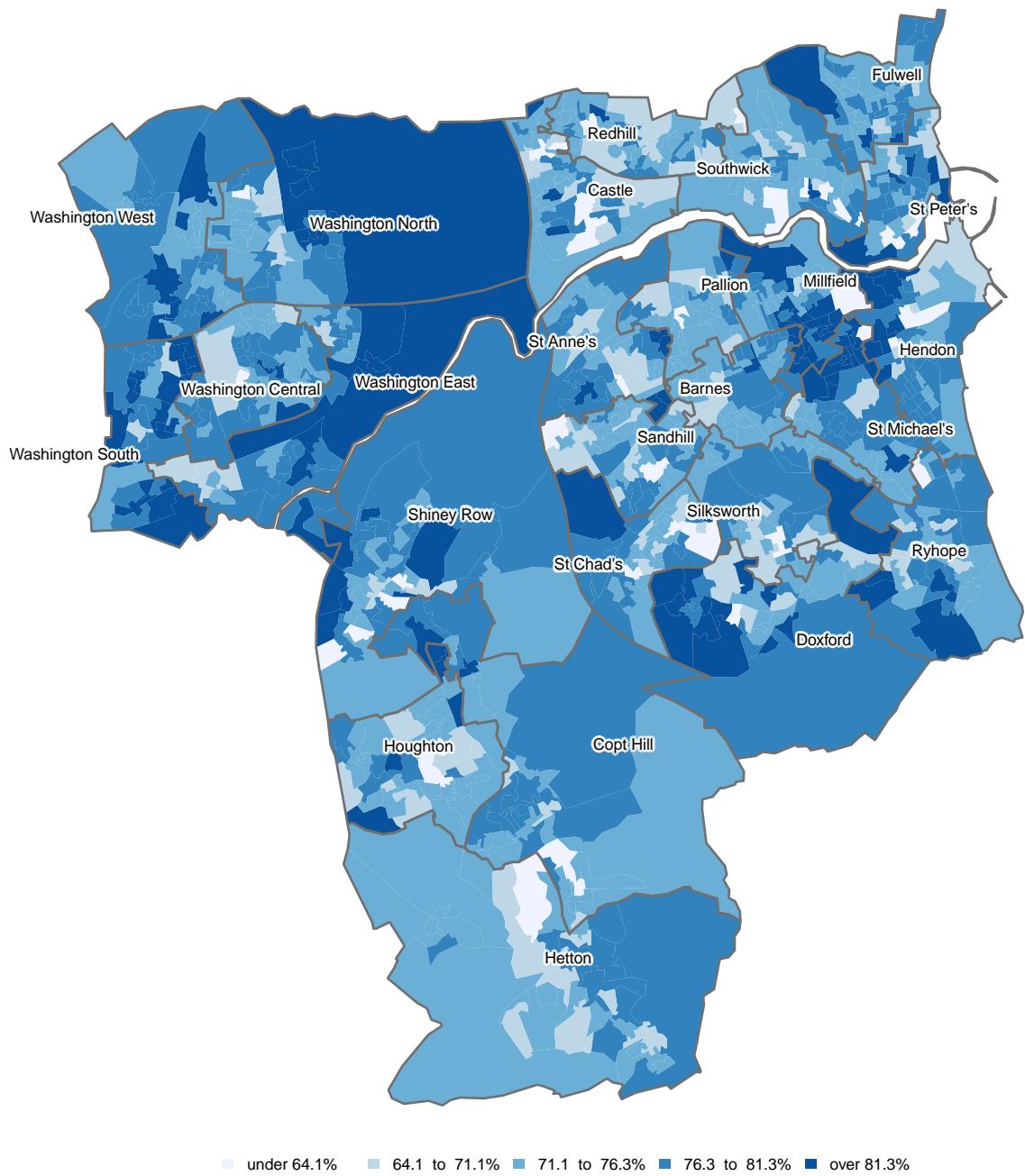


Figure 28: Current Internet users

Variable ID – OH13Current.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data. © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

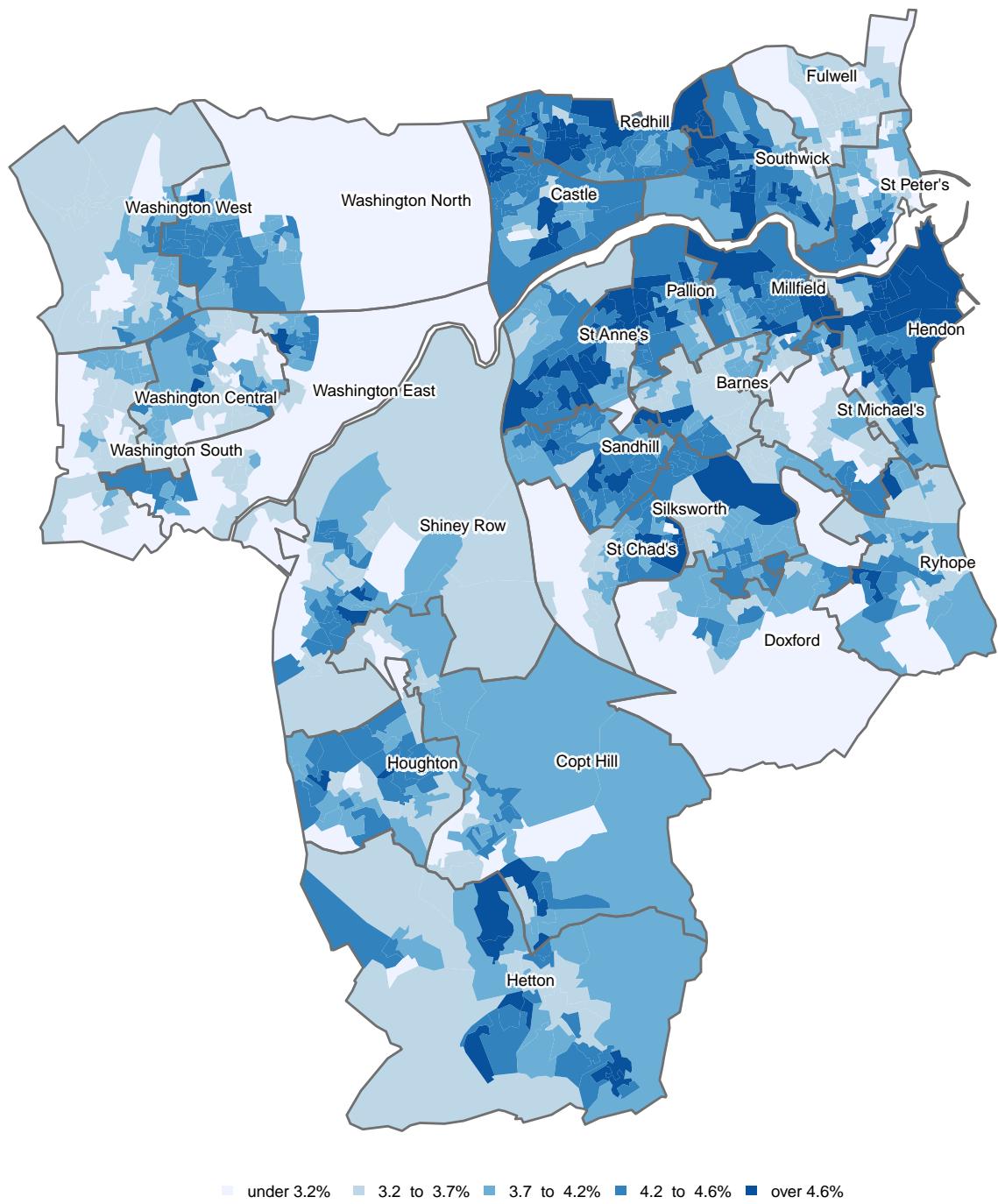


Figure 29: Ex Internet users

Variable ID – QH13Ex.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddleston – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

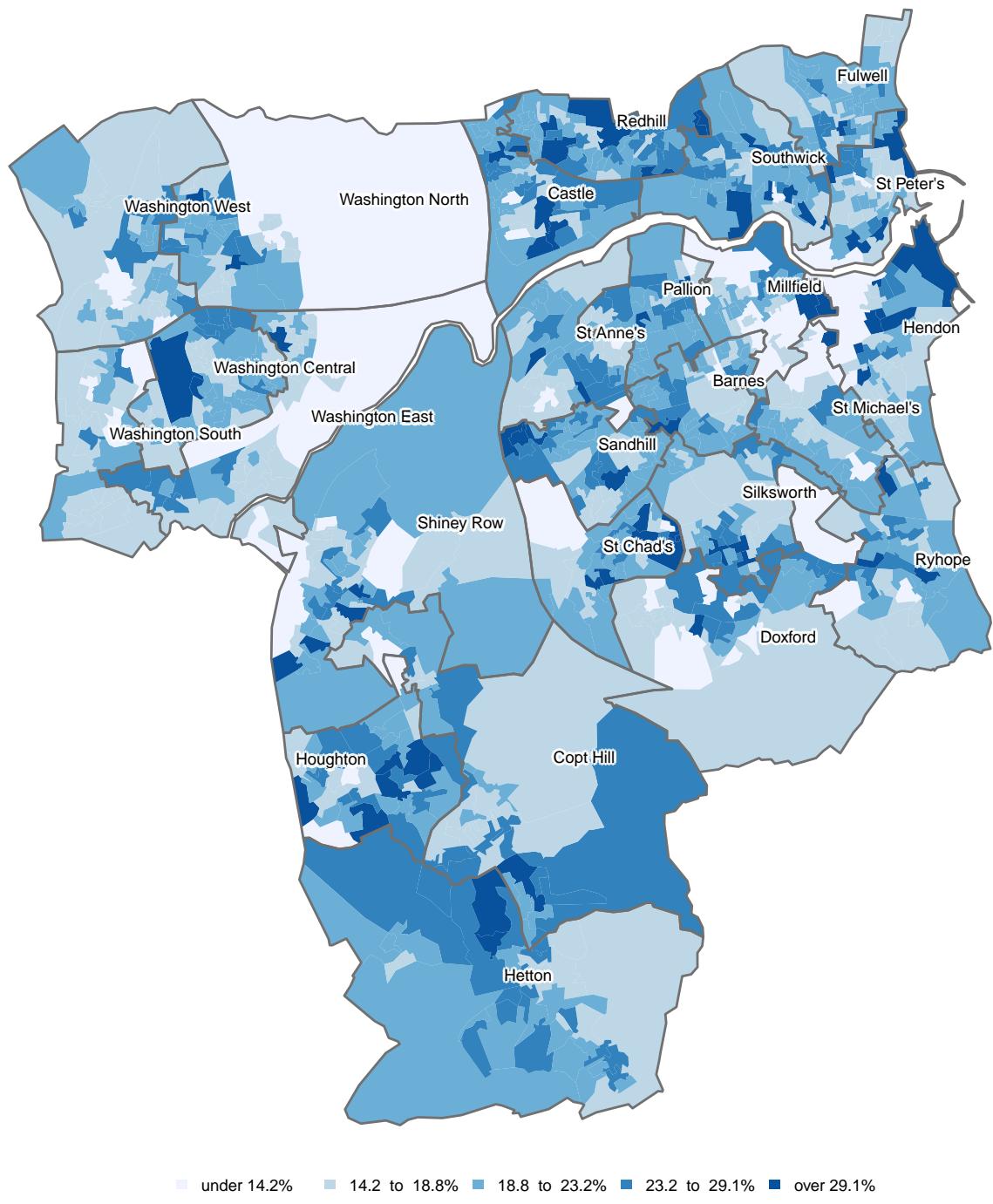


Figure 30: Internet non users

Variable ID – QH13Non.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddleston — [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

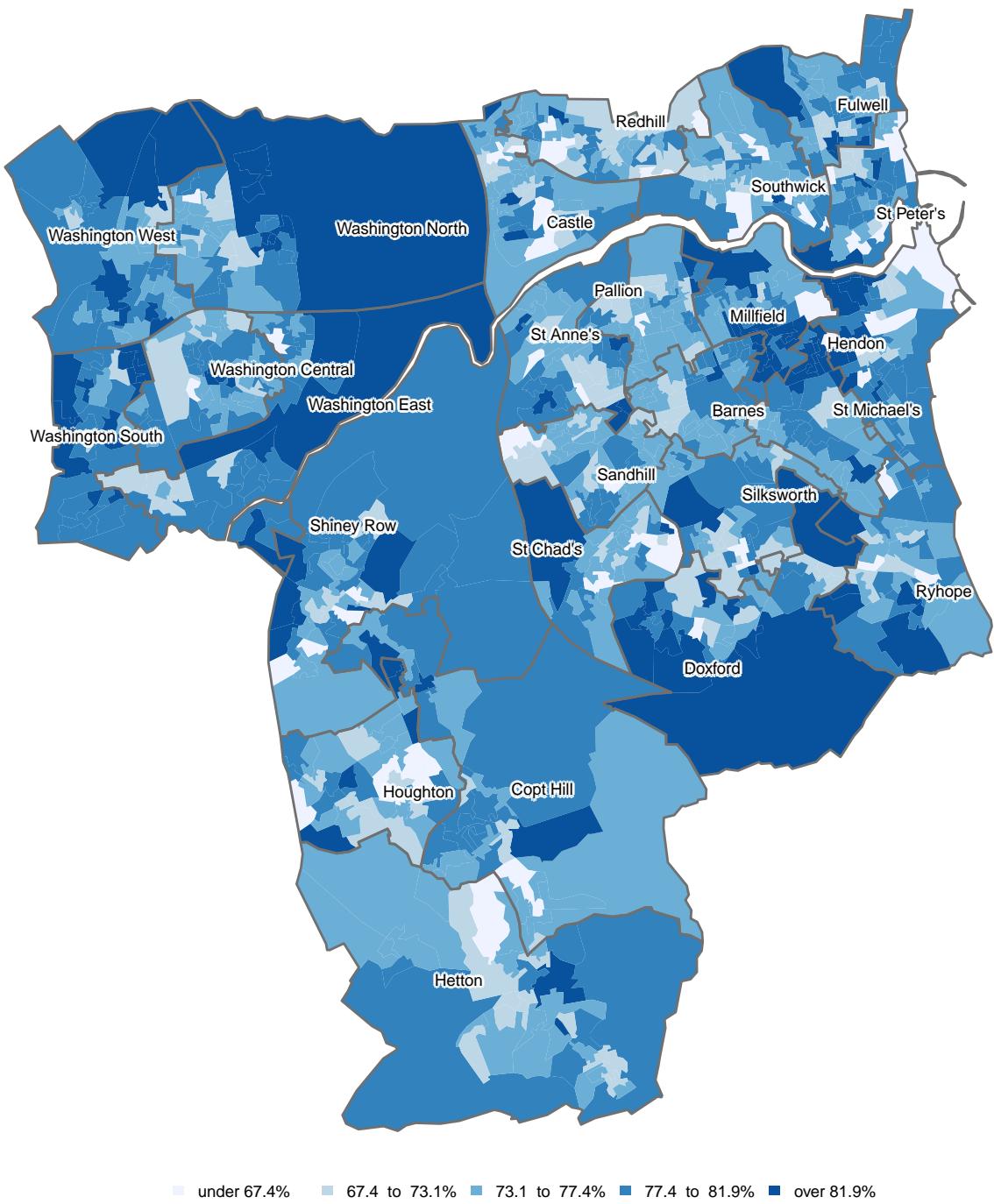


Figure 31: Households that have Internet access at present

Variable ID – QH1a.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data (c) Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddlestone – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
CC-BY-SA (creativecommons.org/licenses/by-sa/4.0/)

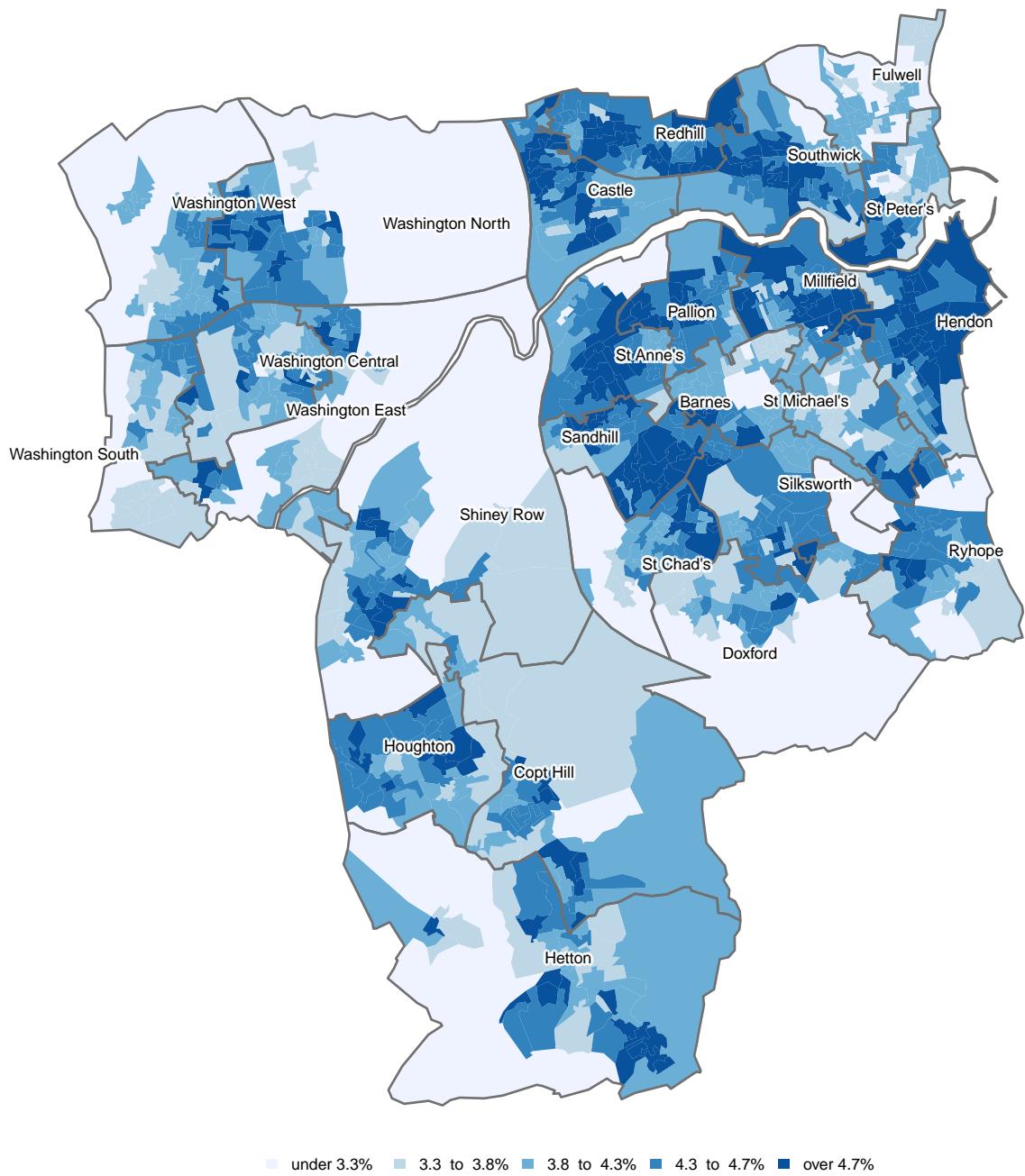


Figure 32: Households that dont have Internet access but have had in past

Variable ID – OH1b.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data. © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

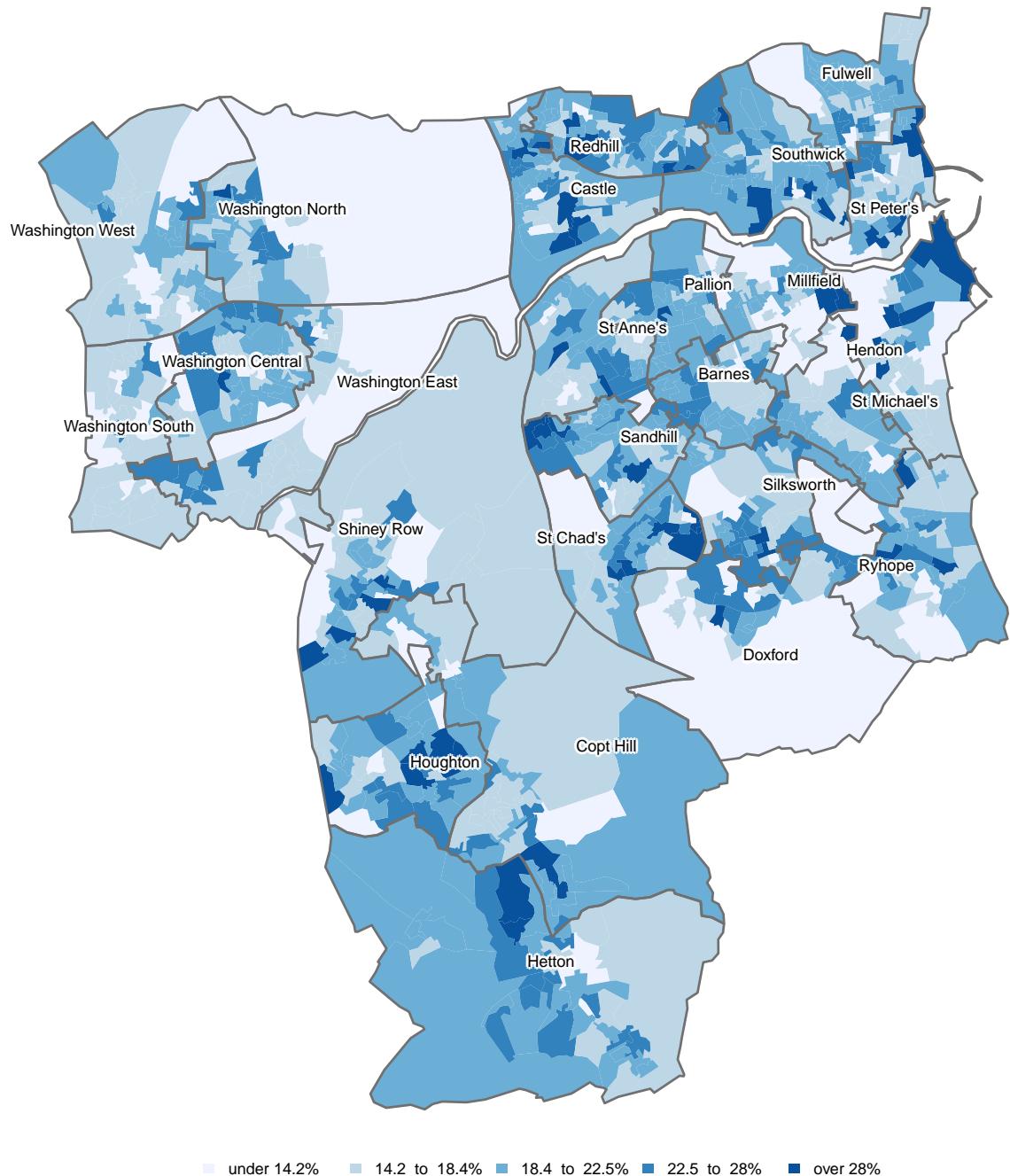


Figure 33: Households that have never had Internet access

Variable ID – QH1c.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdr.ac.uk](http://data.cdr.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

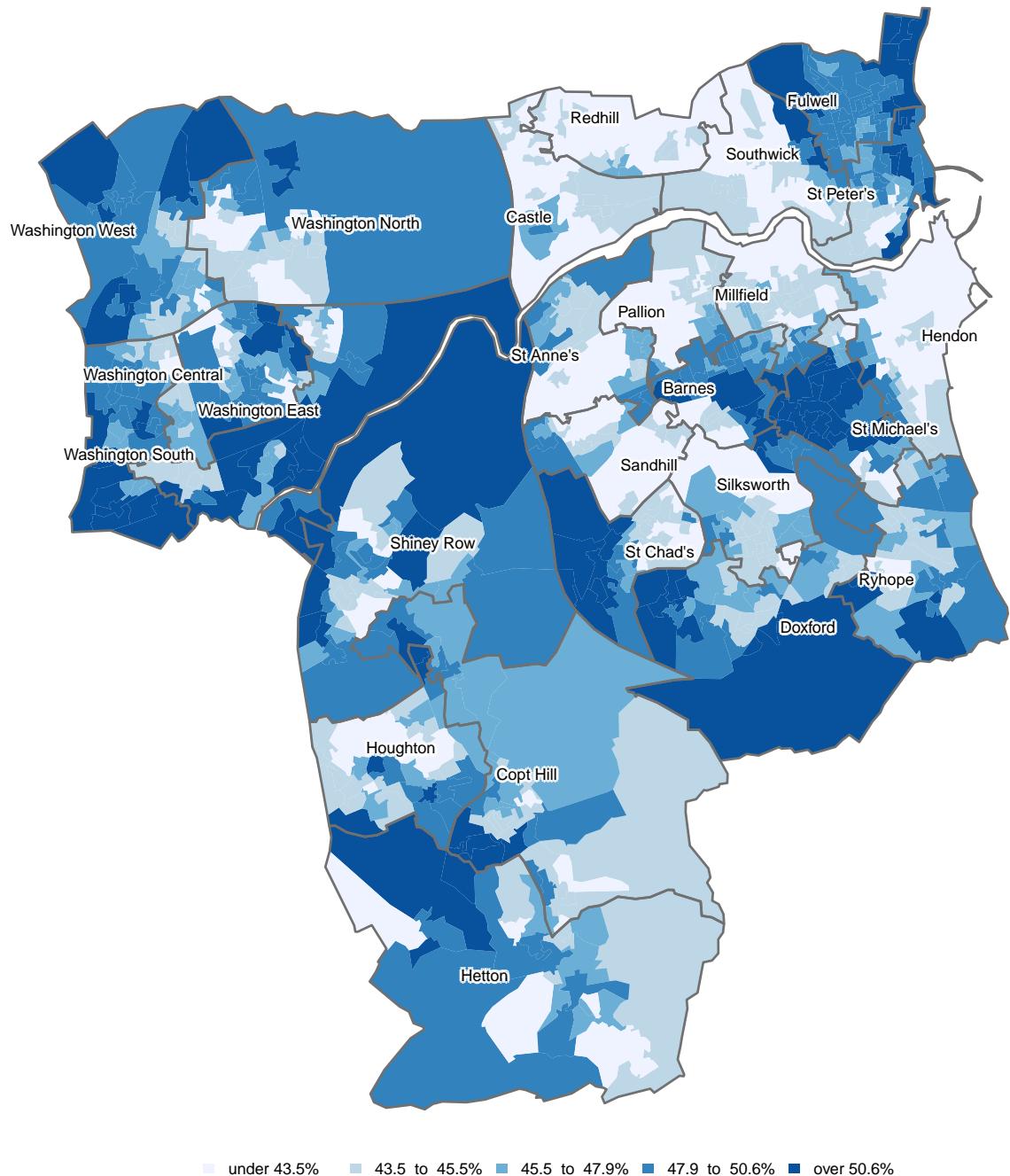


Figure 34: Households that have had Internet access for ten years or more

Variable ID – QH3.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdr.ac.uk](http://data.cdr.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

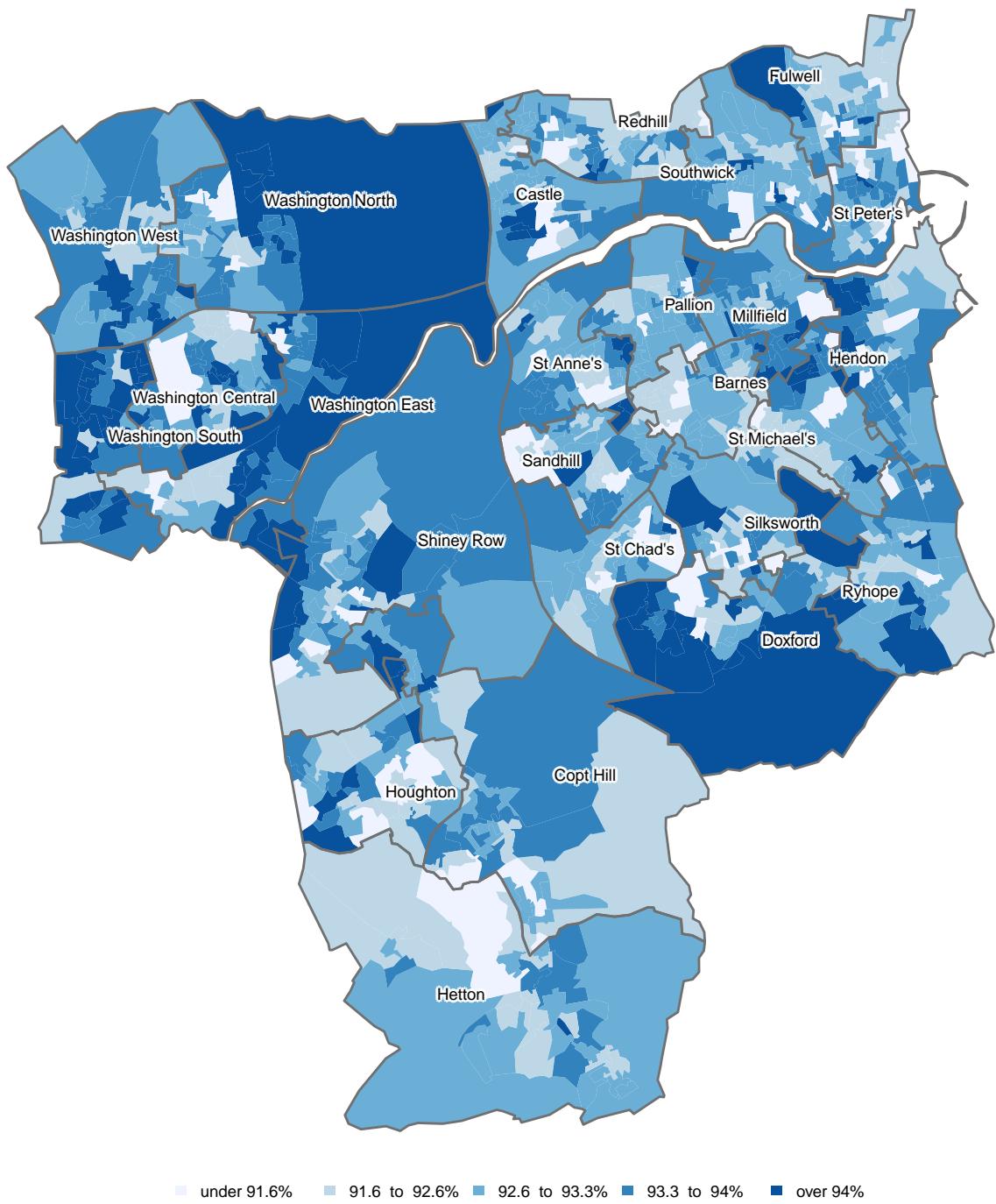


Figure 35: Householuds with in home wireless access through wifi

Variable ID – QH5.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddleston — [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

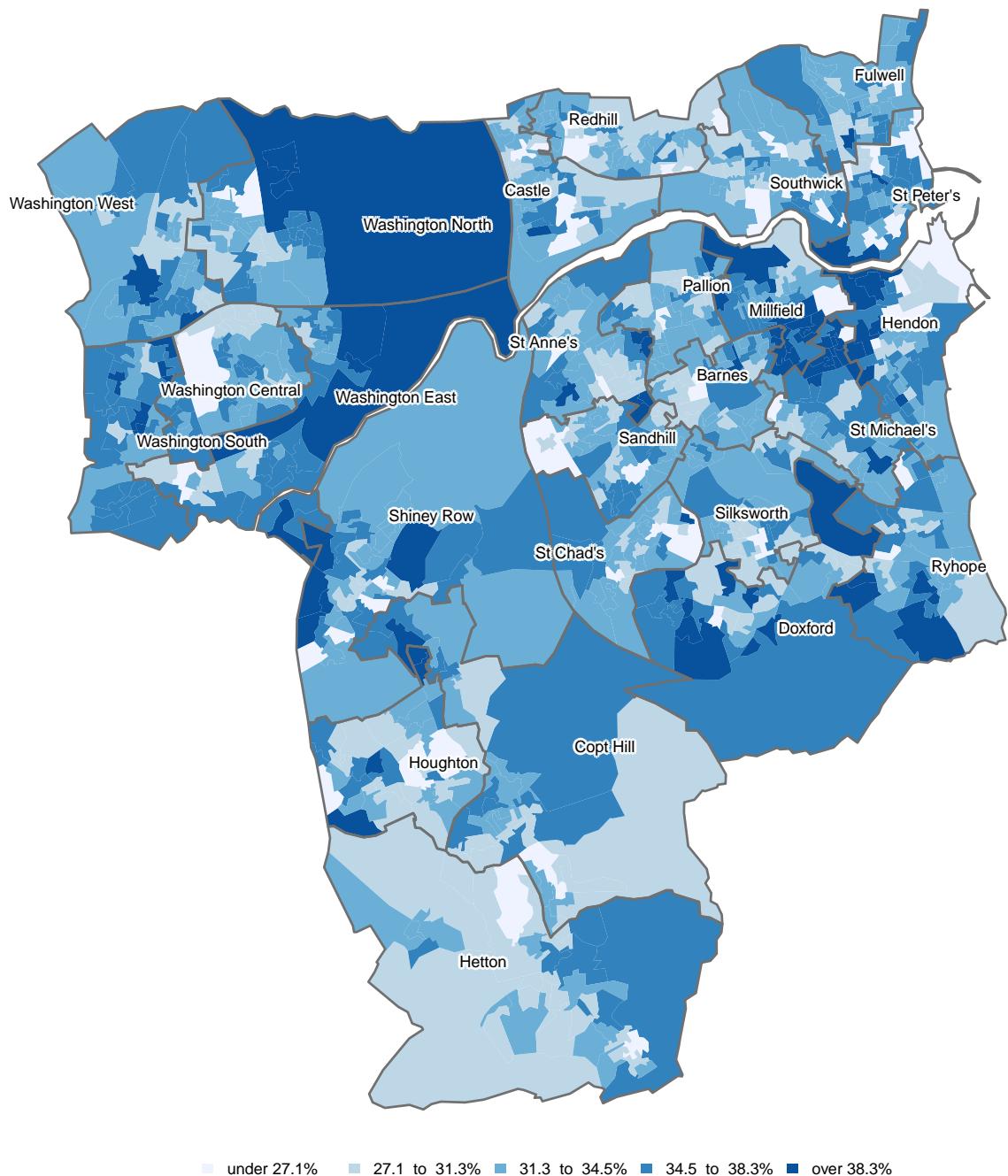


Figure 36: Households with a tablet computer

Variable ID – QH7.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

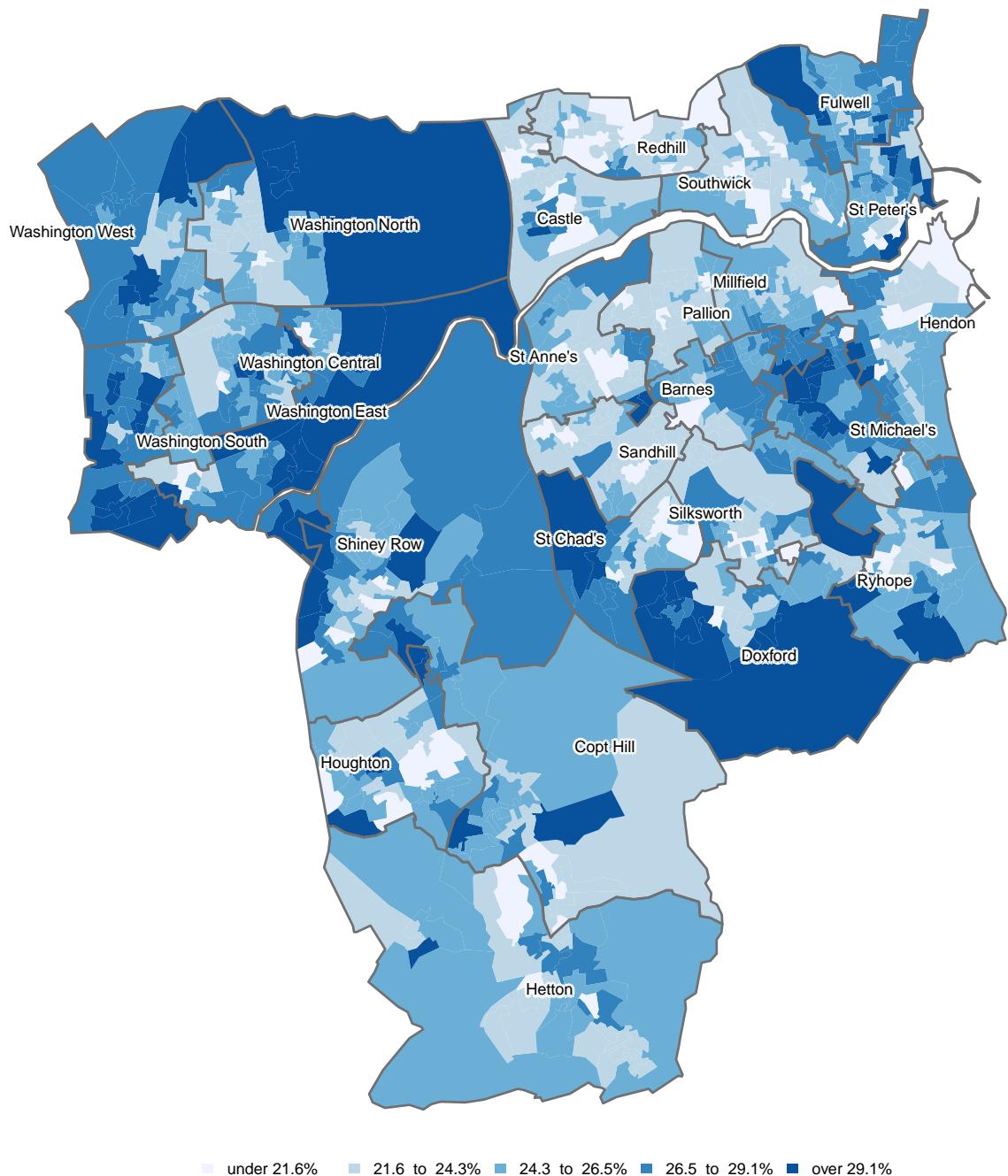


Figure 37: Households with an e reader

Variable ID – QH7g.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdrc.ac.uk](http://data.cdrc.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

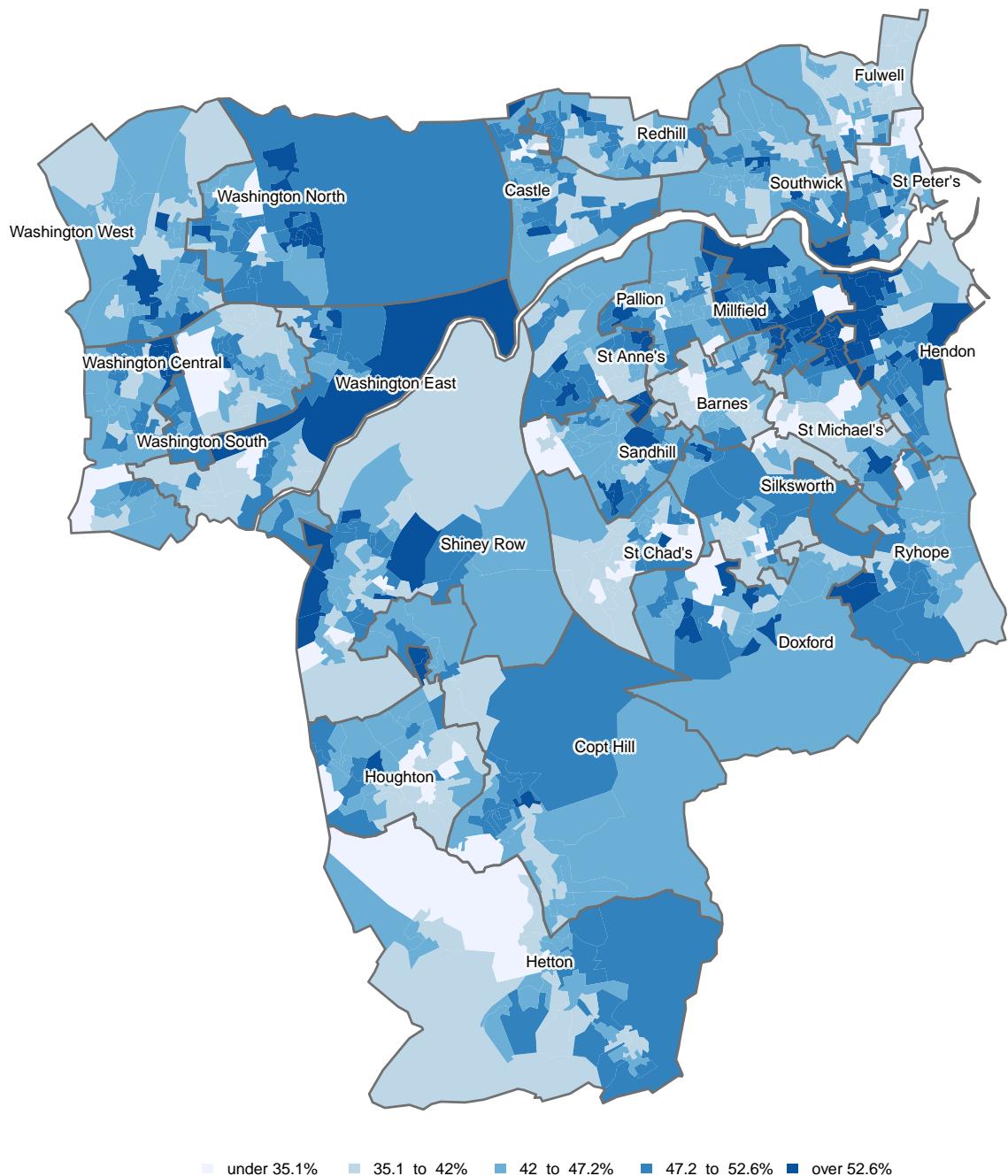


Figure 38: Households with a games console

Variable ID – QH7h.  
 Contains Oxford Internet Survey data.  
 Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
 Maps created by Alex Singleton and Dean Riddlesden – [data.cdr.ac.uk](http://data.cdr.ac.uk)  
 CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))

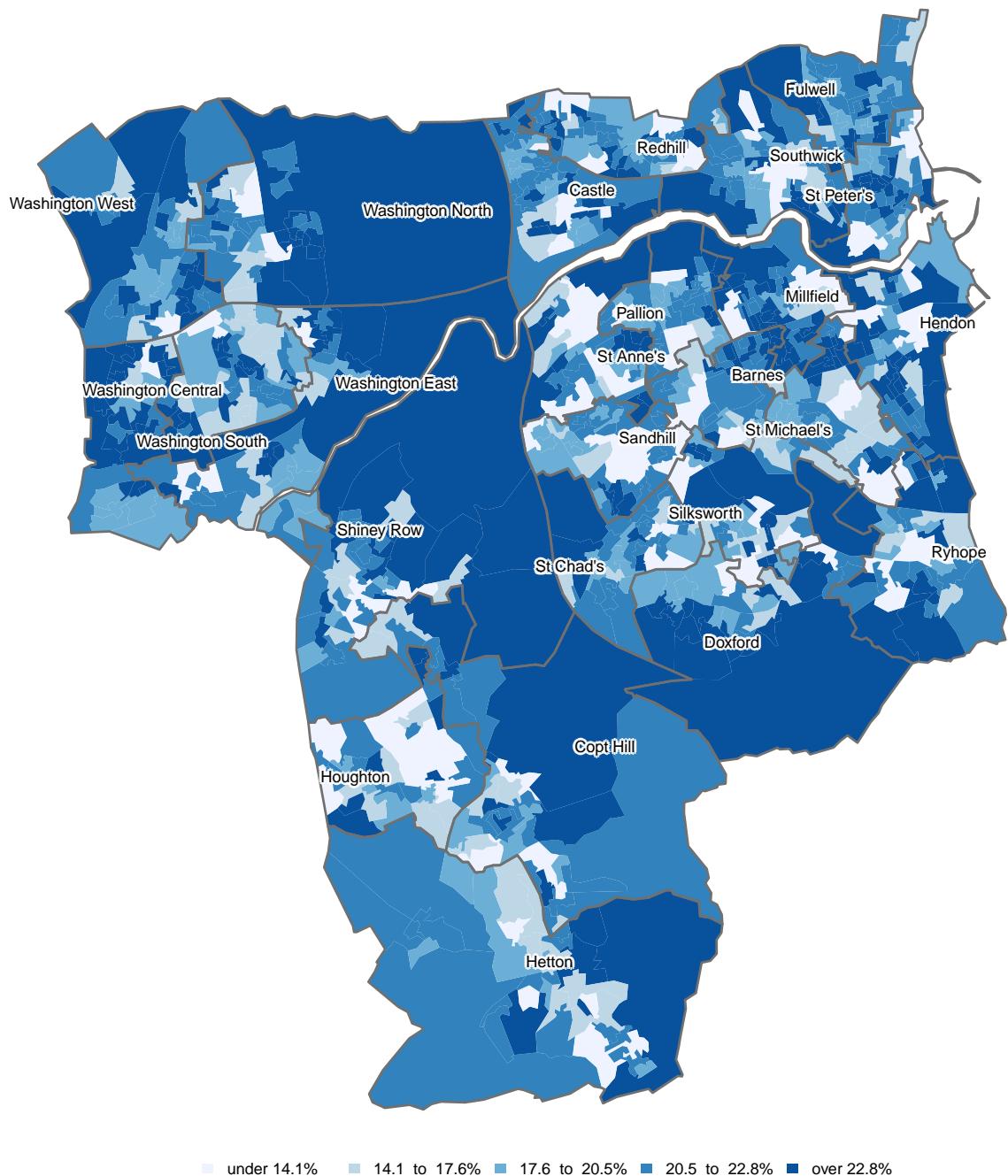


Figure 39: Households with a smart TV

Variable ID – QH7.  
Contains Oxford Internet Survey data.  
Contains Ordnance Survey data © Crown Copyright and Database Right 2015.  
Maps created by Alex Singleton and Dean Riddlesden – [data.cdr.ac.uk](http://data.cdr.ac.uk)  
CC-BY-SA ([creativecommons.org/licenses/by-sa/4.0/](http://creativecommons.org/licenses/by-sa/4.0/))