Vulnerability Strategy Demographics Analysis and Future Forecasts

April 2025

CONTENTS

GLOSSARY

Asset Management Period (AMP)
Currently a five-year regulatory period set by Ofwat that dictates the expected investment and prices that water companies in England and Wales can charge water customers and the performance targets and standards that they are expected to meet e.g. for areas such as resilience, environment, customer service and vulnerability. AMP 8 starts in April 2025 and runs to March 2030. Ofwat's decisions for AMP 8 for SSC are found here.

Application Programming Interface (API)
A set of rules and specifications that allow different software applications to communicate and exchange data.

Census geographies 2021
Census data is provided at a variety of geographies. The key ones for this report are:

- **Output Area (OA)** – the lowest level of geography typically consisting of between 40 and 250 households and a usually resident population of between 100 and 625 persons.
- **Lower Super Output Areas (LSOAs)** are made up of usually 4 or 5 OAs and comprise between 400 and 1,200 households with a usually resident population of between 1,000 and 3,000 persons.
- **Middle Output Areas (MSOAs)** are made up of usually 4 or 5 LSOAs and comprise between 2,000 and 6,000 households with a usually resident population of between 5,000 and 15,000 persons. MSOAs fit within local authority district boundaries.

CSV (Comma-Separated Values) file
Simple text file that stores data in a tabular format, where each line represents a data row and commas separate values within each row.

Data file is a computer file that stores information, such as text, numbers or images, for use by a computer application of system; it does not include instructions or code.

Data matching
The process of comparing data from different sources to identify records that refer to the same entity (like a person, business, or transaction) e.g. companies may match data with local councils to automatically enrol those eligible for a social tariff. Matching reduces the amount of personal information being transferred or exposed, which lowers the risk of misuse or breaches, compared to sharing.

Data sharing
The process of transferring or granting access to data from one entity (person, organisation, or system) to another. For example, to enable the provision of services to low income and vulnerable people/households.

Department for Work and Pensions (DWP)
Government department responsible for welfare, pensions and child maintenance policy. Administers the State Pension and a range of working age, disability and ill health benefits to around 20 million claimants and customers.

Digital exclusion
Refers to situation where individuals or groups lack the necessary access (incl. Internet access, access to devices, finances), skills, and capabilities (e.g. confidence) to fully participate in the digital world, hindering their ability to access information, services and opportunities.

Disabled
The Equality Act 2010 defines a person as 'disabled' if they have a physical or mental impairment that has a 'substantial' and 'long-term' negative effect on their ability to do normal daily activities.

Equivalised income
A measure of household income that takes account of the differences in a household's size and composition and thus is 'equivalised' or 'made equivalent' for all household sizes and compositions. It is used for the calculation of poverty indicators.

Graphical User Interface (GUI)
A visual interface that allows users to interact with electronic devices using graphical elements like icons, windows, and menus, instead of relying solely on text-based commands.

Households Below Average Income (HBAI)
The HBAI statistics, produced by the DWP, provide data on low-income households in the UK; 'low income' is defined as those with an equivalised income below 60% of the mean.

Independent Challenge Group (ICG)
Most, but not all water companies, have an independent group made up of expert members and key stakeholders. Their role and scope vary from company to company but typically includes scrutinising the quality of the company's research and engagement, ensuring the company's business plan and strategies reflect the needs and views of their customer base and communities and holding them to account to deliver on their promises and regulatory targets.

Index of Multiple Deprivation
The Index of Multiple Deprivation (IMD) is the official measure of relative deprivation in England and is part of the Indices of Deprivation. These show the relative levels of deprivation for a series of separate indicators at small area level (LSOA – see definition below) in England. The last Indices of Deprivation were published in 2019.

Inclusive by design
Refers to the creation of products, services, environments or experiences that are accessible and usable by the widest possible range of people, regardless of their abilities, backgrounds or circumstances. It aims to proactively consider and address the needs of diverse users throughout the design process.

Income
Primarily measured as disposable household income, which includes earnings, benefits, pension income and income from other sources, after deducting taxes (income tax, National Insurance and council tax). The After Housing Costs (AHC) measure deducts housing expenses (like rent, mortgage payments, and related costs) from total household income. The Before Housing Costs (BHC) measure does not deduct housing costs.

Needs codes
These are flags on a water company's Priority Services Register (see below) that highlight customers additional needs e.g. disability, illness or their adaptive service requirements. E.g. braille bills, large print, translation services.

Ofwat
Otherwise known as the Water Services Regulation Authority, is the economic regulator for the water and wastewater sectors in England and Wales. The water sector in England and Wales is regulated by multiple organisations, each with a specific focus; economic (Ofwat), environmental (Environment Agency), public health (Drinking Water Inspectorate), and consumer protection (all).

Ofwat minimum standards
Ofwat sets minimum standards that customers must meet to protect customers on low incomes and in vulnerable situations and ensure access to services. These are summarised on Ofwat's vulnerability page here.

Poverty measures
The two main approaches to understanding poverty detailed in this report are 'relative poverty' and 'absolute poverty'. '**Relative poverty**' refers to the situation in which individuals or households have incomes significantly lower than the median income in their society, leading to an inability to participate fully in typical economic, social and cultural activities. '**Absolute poverty**' refers to the situation in which individuals of households lack the basic necessities of life, such as food, clean water, shelter and clothing. In the UK, 'relative poverty' is defined as a household with an income below 60% of the median income in the current year. 'Absolute poverty' is defined as a household with an income below 60% of the median income in 2010-11, adjusted for inflation.

Priority Services Register (PSR)
A Priority Services Register is a water company's record of customers that need extra help – and the help they can expect to receive.

PSR categories
During AMP7 (2020-2025) SSC had four categories of PSR support, each with their own set of needs codes: communication, supply interruption, mobility/access, financial

PSR gap
The difference between the total number of people estimated to be eligible for a PSR service (as identified through the proxy indicators) and the number of people currently registered on SSC's PSR for each needs code.

Proxy indicator
For most needs codes, official direct data doesn't exist. Therefore, the research identified 'proxy indicators' from official sources of data to give an estimate of the number of people in the SSC area with a specific vulnerability that approximated to each of the needs' codes. The research also assigned a confidence rating to each indicator; in effect an assessment of the extent to which it represented the needs code being considered.

Shape file
A geospatial vector data format for geographic information system (GIS) software.

Service for All
Ofwat guidance for all water companies in England and Wales on how to support customers who need extra help accessing water and wastewater services.

URL (Uniform Resource Locator)
A unique web address that specifies the location of a resource on the internet, such as a webpage, image, or file.

Vulnerability
Consumers or communities that are significantly less able than a typical consumer to protect or represent their own interests; and/or significantly more likely to experience detriment, or for that detriment to be more substantial. In line with good practice, we adopt a risk-based approach to vulnerability, seeking as far as possible to identify and understand both permanent and transient factors that mean customers may face an increased risk of harm. Risk factors fall into three main categories:

- **Consumer personal characteristics** e.g. disability, living with physical or mental health issues, cognitive impairment, low literacy/numeracy levels, being a child, knowledge, skills, low confidence, not speaking English etc.
- **Consumers' situation** e.g. low income, living alone, being time-poor, being unemployed, bereavement, divorce, being a carer etc.
- The characteristics of a **community** e.g. low availability of transport, broadband and support services; pollution levels, high risk of flooding, etc.

The examples above are not exhaustive, nor do they indicate that a consumer or community in such circumstances will always experience detriment. However, these circumstances can make a customer more vulnerable to detriment and the likelihood and impact of the detriment tends to increase if consumers have more than one of these risk factors. The extent to which an individual is aware of their vulnerability may also impact the depth and likelihood of any detriment they suffer, and their ability to limit that impact. Importantly, not all customers with risk-factors are vulnerable in all situations.

The term '**financial vulnerability'** is typically used to describe someone whose circumstances make it difficult for them to manage their finances and pay their water bills. For example, being on a low income or unstable income e.g. zero hours contracts, or a mental or physical illness like anxiety or having cancer. It covers those in work and those not working. Financial vulnerability may be temporary e.g. following a job loss, divorce, or having to leave work due to caring responsibilities, or ongoing.

Webscraper A software application or script used to automatically extract data from websites.

EXECUTIVE SUMMARY

Sustainability First and Kelp have drafted this report for South Staffs and Cambridge Water (SSC) to support SSC's vulnerability strategy. The report provides:

- a detailed analysis of vulnerability in the South Staffs Water (SSW) and Cambridge Water (CW) supply regions
- a gap analysis of the number of consumers on SSC's Priority Services Register (PSR) compared to potential need in its supply areas
- projections of trends in non-financial vulnerability over the medium-term to 2030 (the end of Asset Management Period 8) and longer-term to 2035 and 2040 to inform the company's forward planning and long-term delivery strategy
- exploration of the impact of two different policy scenarios on future poverty levels in their areas
- guidance on how SSC can update the vulnerability profiles outlined in this report as new data becomes available
- recommendations for SSC's vulnerability strategy.

We have also provided an extensive data set, shape profiles, maps and supporting data files to accompany this report.

KEY FINDINGS AND RECOMMENDATIONS

Resourcing

1. **Levels of financial and non-financial vulnerability and the potential need for PSR services are high and expected to grow. This has implications for funding for SSC.** Using the Ofwat methodology for determining the number of households who require PSR support, up to 298,704 households (53.25%) in the South Staffs service area, and 71,583 households (50.77%) in the Cambridge service area are potentially eligible for registration on SSC's Priority Services Register. Overall, this is 370,287 households which at 52.75% across the two regions is broadly comparable to Ofwat's estimated 52% of households across England and Wales.

   Financial and non-financial vulnerability is generally higher in the South Staffs area than the Cambridge region. In South Staffs non-financial vulnerability is often higher, and financial vulnerability is significantly higher than the comparative figures for England. We encourage SSC to review how much it costs to serve different types of PSR customers so support services are appropriately funded.

   Table S1 below shows the number and proportion of people in the two regions for a small selection of vulnerability indicators by way of illustration. English proportions are given for comparison. Table S3 provides an overview summary of the key findings, with

arrows indicating whether the estimated levels of a particular needs code are the same, higher or lower than the national average.

Table S1: selected vulnerability indicators

Indicator[1]	No. in South Staffs	% of SS population	No. in Cambridge	% of Cam. population	% of England population
Hearing difficulties	144,500	10.5 %	34,300	9.6 %	10.5%
Mental health condition	197,200	14.3 %	40,400	11.3%	13.2%
Chronic/serious illness	209,200	15.1 %	30,300	8.5 %	12.1%
Diabetes	123,400	8.9 %	18,400	5.2 %	8.6%
Chronic kidney disease	67,200	4.9 %	8,300	2.3 %	4.8%
Over 75s (age)	122,100	8.8 %	28,100	7.9 %	8.0%
Universal Credit claimants	188,200	13.6 %	28,000	7.8 %	10.1%

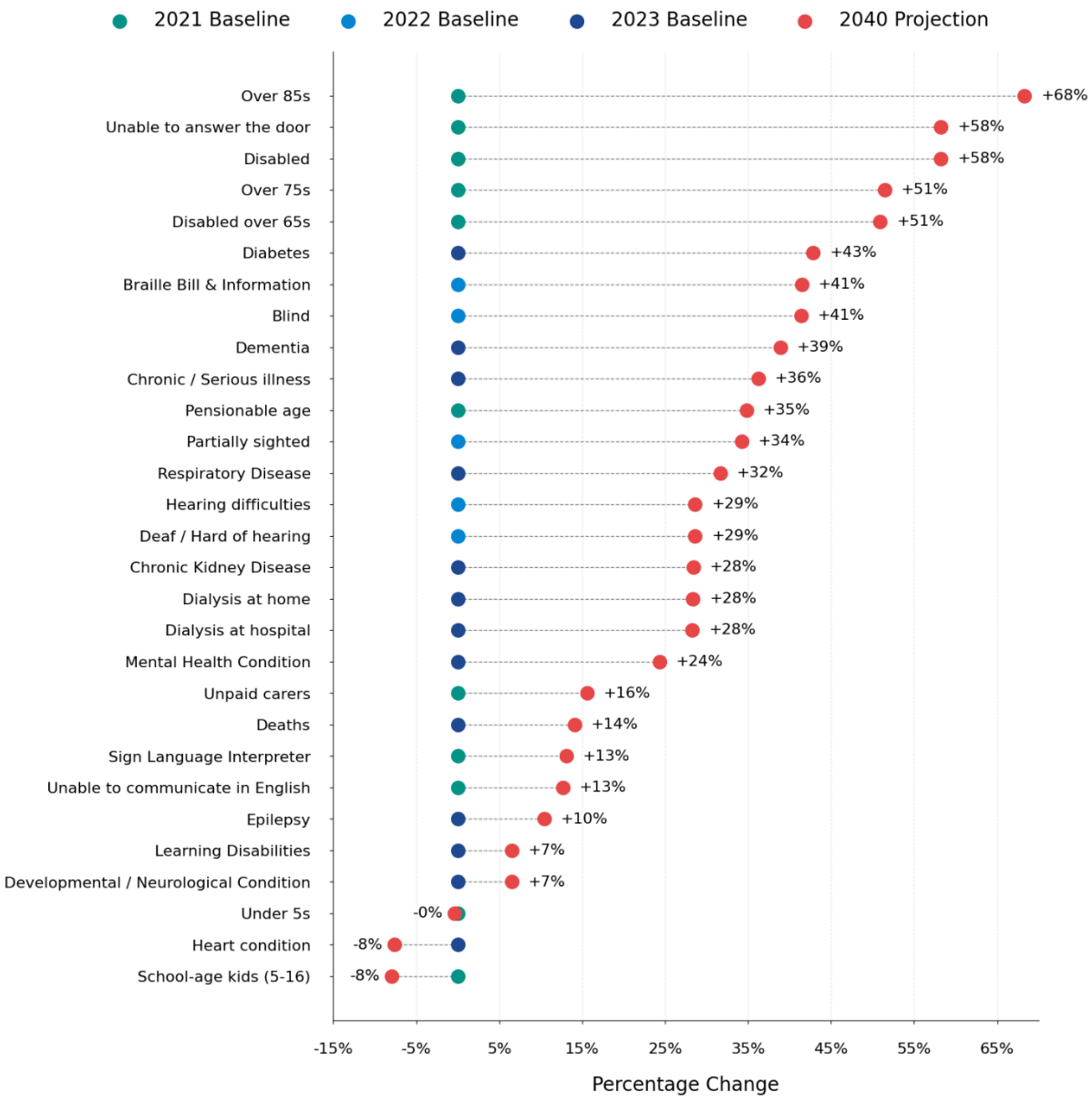
Baseline date for the individual indicators varies from 2021 to 2023

2. **SSC should prepare for a significant increase in access, communication and protection related needs in the future. This includes in the design and delivery of services, support staff, partnerships and associated vulnerability training and systems.** This is primarily due to a growing population, and an increasingly aging and disabled population alongside wider environmental and social change which is weakening household and community resilience.

   Non-financial vulnerabilities are projected to increase substantially between the current period and 2040. This is the case for all the vulnerabilities investigated, with the exception of heart disease and school age children (5-16), both of which are projected to decline by 8% from current numbers. The number of children under 5 is projected to stay roughly the same between now and 2040.

   Consistent with longer-term trends, during this AMP (2025-2030) the biggest percentage increases are expected in those who are disabled and may struggle to answer the door (28% growth for both groups), over 85s (25%) and over 75s (23%); blind and partially sighted people (15-18%), those with diabetes (18%), dementia (16%), and chronic or serious illness (15%). Many people may fall into multiple categories.

Table S2: Projections to 2024



3. **Providing financial projections is notoriously difficult. However, during AMP 8 (2025-30) even in the best-case scenario a sizeable number of households are likely to struggle to afford their water bills and would benefit from support. Customers impacted by upcoming cuts to disability and carer benefits, as well as large low-income families where there's a notable gap in support, may need especial consideration. It is essential that SSC ensures tailored support is available.**

   For example, our research provides projected rates for poverty to 2029/30 under two limited benefit policy scenarios: one assumes no change in policy, the other assumes three positive changes to benefits policy (in brief, scrapping the two-child benefit cap, uprating benefits in line with wage inflation and removing the freeze on Local Housing Allowance).

Under the pessimistic scenario, absolute poverty is projected to increase from 122,800 (22%) to 131,500 households (23.5%) by 2029/30 in the South Staffs area and from 19,800 (14%) to 21,900 households (15.5%) in the Cambridge area by 2029/30. Absolute poverty is defined as having an income below 60 per cent of the median income in 2010-11, adjusted for inflation - £15,180.

Under the optimistic scenario absolute poverty is projected to decline to 115,300 households (19%) in the South Staffs area while in the Cambridge area it will decline to 22,600 households (16.5%).

Since this modelling was undertaken in February 2025, we have had the UK Government's Spring Statement 2025 and the green paper Pathways to Work: Reforming Benefits and Support to Get Britain Working, which propose large cuts to disability benefits and carer support starting from 2026. This alongside increases in the cost of living – rises in water, energy and council tax bills; global economic uncertainty; and a downgrading of the UK's economic forecasts for 2025/26 means the pessimistic forecasts based on the 'no change' scenario are likely underestimates. At the time of writing no additional support is planned for low-income large families despite high need though this may change with the publication of Government's Child Poverty Strategy.

SSC will need to provide a tool kit of financial support to customers who are struggling or at risk of struggling to afford their water bills and carefully consider eligibility criteria. This includes preventative measures e.g. flexible billing and payment options to help with budgeting, payment breaks as needed, and price support which can be adapted dependent on upcoming decisions on a national single water social tariff.

We did not provide plausible projections for financial vulnerabilities to 2040 given the wide range of factors that can influence these.

Identifying vulnerability

4. **There's an important opportunity for SSC to improve the identification of customers with additional needs and in turn the quality of its service and customer satisfaction.**

For most of the needs codes, the research identified a significant gap between the number of people potentially eligible for PSR services and those already registered on SSC's Priority Services Register. It is important to appreciate that the number of people potentially eligible for a service represents a theoretical estimate or maximum. Some people may have multiple needs and be eligible for multiple services. Nevertheless, the gap analysis gives an indication of areas SSC may need to make particular effort in trying to reach eligible consumers and make them aware of the services provided. This might be, for example, through communication campaigns, working with intermediary organisations or focused outreach in areas with high concentrations of vulnerable groups (as shown in the small area analysis carried out by this research).

Table S3: Overview findings – showing baseline levels of different vulnerabilities, the estimated PSR gap and future forecasts

Understanding the data in Table S3

- The baseline date for the future forecasts for the individual indicators varies from 2021 to 2023 (more detail in the main report).
- The colour grading (green, amber, red) is based on maximum and minimum values in the column range and is a relative scale.
- In reality, all PSR risk factors including those in green are important, and SSC is expected to provide 'Service for All'.
- Arrow icons: upwards arrow: >0.5% higher than national average, right arrow: within 1% of national average (+/- 0.5%), downwards arrow: <-0.5% lower than national average.
- Home/people icons show whether it is a population or household baseline count. Note that all projection counts are population. With the population counts, we make the assumption that there is one person per household with a vulnerability, which may overestimate eligibility.

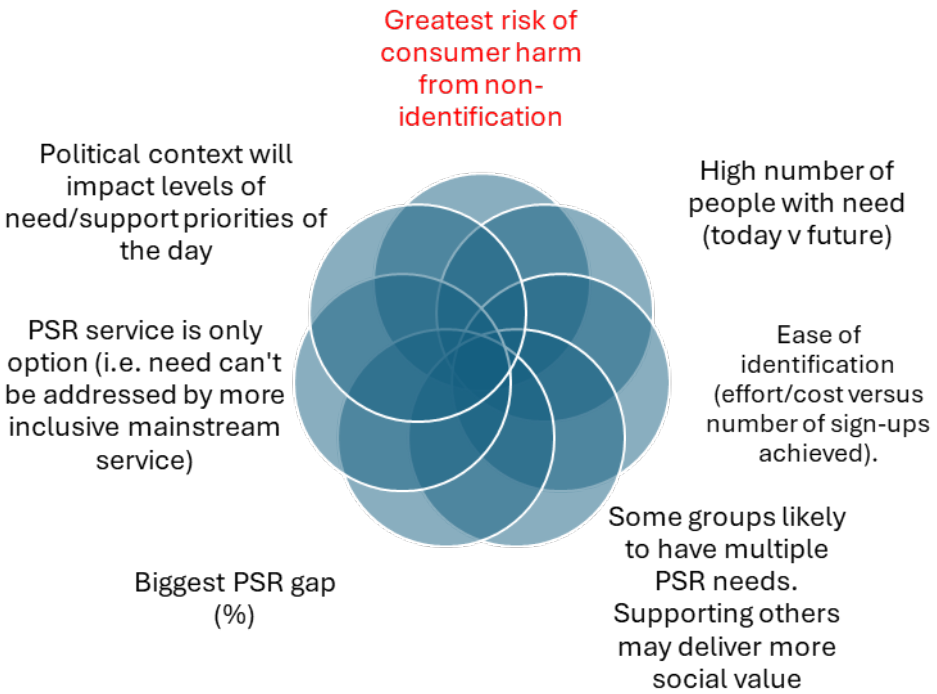
PSR needs code	Baseline estimate of PSR need (count)		Comparison to national prevalence (%)		Curent PSR gap (%)		2040 projections (population)		
	SSW	CAM	SSW	CAM	SSW	CAM	SSW (count)	CAM (count)	Change (%)
Blind	5,900	1,400	-0.10	-0.10	87.60	94.63	8,400	2,000	41
Chronic / Serious illness	209,200	30,300	3.00	-3.60	88.05	87.01	284,900	43,400	36
Chronic Kidney Disease	67,200	8,300	0.10	-2.50	99.98	99.99	86,200	11,300	28
Deaf/hard of hearing	3,100	700	-0.17	-0.17	n/a	n/a	4,000	1,000	29
Dementia	10,600	2,000	-1.45	-1.01	81.47	83.61	14,800	2,900	39
Diabetes	123,400	18,400	0.30	-3.40	99.96	99.99	176,200	27,600	43
Disabled	196,000	40,500	2.90	-3.30	98.97	99.13	404,700	85,100	51
Pensionable age	150,000	35,200	0.80	-1.20	86.24	87.36	349,100	81,000	35
Family - Young U5	65,400	14,400	1.00	-0.40	71.52	72.67	79,900	17,600	0
Hearing difficulties	144,500	34,300	0.00	-0.90	97.83	98.62	185,800	44,100	29
Learning disabilities	7,700	1,400	-1.60	-1.30	99.65	99.86	8,200	1,500	7
Mental Health Condition	197,200	40,400	1.10	-1.30	94.42	95.47	245,100	53,100	24
Partially sighted	38,400	9,300	-1.20	-1.40	92.46	5.72	51,600	12,500	34
Physical impairment / mobility issue	32,200	4,400	-0.10	-1.20	26.92	17.20	n/a	n/a	n/a
Unable to answer the door	113,700	18,600	0.90	-2.10	99.23	99.49	179,900	29,500	58
Unable to communicate in English	29,700	3,700	1.80	0.70	98.3	98.31	33,400	29,500	13
Unpaid carers	125,500	25,600	-0.70	-2.60	n/a	n/a	145,100	29,600	16
Universal credit claimants	188,200	28,000	3.50	-2.30	n/a	n/a	n/a	n/a	n/a
Pension credit claimants	33,100	4,300	0.60	-0.60	n/a	n/a	n/a	n/a	n/a
Job seeker allowence claimants	2,300	300	0.10	0.00	n/a	n/a	n/a	n/a	n/a
Employment and support allowance Claimants	34,100	5,600	0.60	-0.30	n/a	n/a	n/a	n/a	n/a
Housing benefit claimants	42,700	8,200	0.20	-0.60	n/a	n/a	n/a	n/a	n/a
Polish speakers	14,500	4,200	0.00	0.10	n/a	n/a	n/a	n/a	n/a
Panjabi speakers	30,900	200	1.70	-0.40	n/a	n/a	n/a	n/a	n/a
Over 85s	32,800	8,100	-0.50	-0.60	n/a	n/a	57,300	14,100	68
Living alone	163,500	40,600	-1.20	-1.70	n/a	n/a	n/a	n/a	n/a
Over 75s	122,100	28,200	0.80	-0.10	n/a	n/a	188,600	43,600	51
Water needed for religious practices	125,400	17,100	0.60	-3.70	99.84	99.89	n/a	n/a	n/a

5. **We encourage SSC to participate in the energy and water sector data sharing arrangements and support moves to a 'tell it once' Priority Services Register (PSR).** SSC's Independent Challenge Group (ICG) highlights that SSC is an outlier in that it does not participate in the existing cross sector data sharing arrangements which could help to substantially reduce its PSR gaps. In addition, we recommend SSC explore how it can improve data matching with other organisations especially local authorities e.g. South East Water is working with councils using powers under the Digital Economy Act to auto enrol eligible customers onto its social tariff.

6. **Given the size of the PSR gap across multiple needs codes, prioritisation becomes more important and more challenging. We outline below a framework for prioritisation for SSC to consider.**

   Not all PSR gaps are of equal concern. Just because someone is eligible for PSR services it does not mean that they need these services; and even where customers do need the service, the level of that need is likely to vary significantly. Ofwat has set an expectation that water companies should take steps to grow their PSRs and to prioritise those customers at greatest risk of harm. Beyond this, it is for SSC to strategically decide where to prioritise. It may wish to consider not just the absolute numbers and PSR gap but also the range of factors outlined below in Graphic 1.

Graphic 1: Factors to consider when prioritising which groups to target



Who is at greatest risk of harm and the type of support needed will vary dependent on the situation, e.g. during supply interruptions, heat waves. However, it is likely to include people with **chronic illnesses** that affects their day-to-day life such as kidney disease

and on dialysis, those with dementia, those who struggle with mobility/opening the door or those who require additional water (e.g. for bathing, cleaning) due to a health condition. Our analysis also found relatively high and growing levels of **disabled people** in SSC's area and a high PSR gap.

We also encourage SCC to identify **unpaid carers,** who are often disabled themselves and in both financial and non-financially vulnerable situations. As we outline in the main report supporting carers can be cost efficient and deliver significant social value, including reduced costs to health and social care services as well as enhancing community resilience.

Linked to the latter, we also recommend prioritising the identification of older pensioners - **over 75s and 85s - especially in lower income and rural areas**. Pensioners may be relatively easy to identify especially with data matching. We recommend their prioritisation on the basis of: the high and growing numbers of these groups; the high PSR gap identified; the greater propensity to have multiple PSR needs; and the higher risk of detriment especially when living alone, as increasing numbers of older people are.

SSC may also want to focus on identifying those with **mental health problems** for financial and non-financial support given: the high numbers of this group; the identified gap; the link between mental health, disability and those on low incomes; and pending disability benefits cuts which are likely to adversely hit many people with less visible conditions including depression and anxiety.

Ensuring services meet the needs of those with **hearing difficulties** is also an important group for SSC given the relatively high numbers, current PSR gap and the expected growth in people with this impairment. But it may be possible to meet this group's needs through more inclusively designed mainstream services (see Recommendation 14).

7. **Our analysis also identified priority communities to target awareness campaigns, services and build partnerships. There are opportunities for SSC to support place-based solutions to improve health and inclusion and tackle poverty. This includes dovetailing its work with existing energy network initiatives such as Warm Hubs and Centres for Warmth.**

   For example, in some SSC communities over 50% of the population speak Panjabi as their main language making these areas a particular priority for adapted communications.

   Our analysis of the South Staffs Water supply area shows there are extensive urban areas with high levels of financial vulnerability in Dudley and Walsall with pockets in Cannock, Tamworth, Lichfield and Burton on Trent. The average income of consumers in South Staffs is lower than that for England. Non-financial vulnerabilities are also often associated with these areas, plus further pockets in Sutton Coldfield and rural fringes.

The main areas of financial and non-financial vulnerability in the Cambridge supply area are found within certain urban areas of Cambridge, plus rural west and northern areas. The average income in the Cambridge supply area is higher than that for South Staffs and for England as a whole.

SSC can use the data and maps provided alongside this report to identify priority areas including overlaying financial and non-financial vulnerability or for targeted campaigns to reduce its PSR gaps.

8. **SSC should review how it identifies and supports customers at risk of falling into financial difficulty. The high levels of water debt of SSC's customers identified in this report suggests earlier intervention is needed by SSC to help prevent debt build up.**

   The research found 35,300 households (6.3%) in the South Staffs region and 2,200 households in the Cambridge region (1.5%) are in water debt – defined as those who are more than 12 months behind in paying their bills and excluding those with less than £25 of arrears. The median debt for those without a payment plan was particularly high (£1,360 in South Staffs and £2,490 in Cambridge). These households are a priority group to proactively contact to offer financial support for tackling both their water debt and likely wider debts.

   Water bills represent a much lower proportion of average household income than energy, yet these figures are high compared to energy. For example, the average size of median gas debt for households without a payment plan for Q3, 2024 was £1,324. We recommend that SSC continues to review its processes in line with Ofwat's Paying Fair Guidelines. SSC should also explore how it can take more proactive action earlier in the debt pathway and prevent payment difficulties before they occur. We are aware that SSC has a range of improvements in the pipeline that should help to address this. This could include better use of data to identify non-payment trends earlier and consideration of how it supports those on unstable incomes, e.g. zero hours contracts.

9. **We recommend SSC develops a vulnerability strategy and road map that brings together its approach to help and empower people with non-financial vulnerabilities with its approach to support customers in debt, or in or at risk of struggling to afford their water bills.** This is important given the high interrelationship between the two types of vulnerability which are often compounding, e.g. financial vulnerability and lack of resilience is often caused and compounded by ill health or caring responsibilities.

10. **We recommend that SSC reviews its partnerships strategy in light of the PSR gaps revealed by our analysis.** For example, it could further expand its partnerships with third party intermediaries and statutory agencies that support specific vulnerable households or who work in geographic areas with high concentrations of these house-

holds. There is particular value in SSC liaising with electricity and gas network companies in its area to improve coordination and dovetail initiatives.

11. **SSC may want to explore building on this analysis to develop an innovative simple new modelling tool, potentially using artificial intelligence, to automatically identify and update current and future need to inform decision making over time. We include some initial ideas in this report. There may also be other tools in the energy sector which SSC could help develop and support.**

Recording needs

12. **New vulnerability needs codes.**
    To meet current and changing vulnerability needs, we propose new PSR needs codes with associated service provision for: care leavers, people experiencing recent bereavement, those at risk of heat, unpaid carers, those in postal deprivation, people not online and whose main language is not English. The rationale for these is outlined on page 62. In addition, we recommend SSC captures data on those over 75 and 85, people living alone and in rural areas since these groups may be less resilient and warrant prioritisation of support, especially during incidents.

Service provision

In the spirit of Ofwat's 'Service for All Vulnerability Guidance', water companies are expected to make sure all customers can easily access information and key services and should seek to continuously improve the service they provide to customers who need extra help. Given the findings of this research, we recommend:

13. **SSC has a clear service offer and pathway for different groups with support available that reflects what people need and want.**

    This includes those with mental health problems (particularly given the high numbers impacted, the significant increase in their numbers over recent years and government priorities); dementia (given the projected rise over AMP8), and unpaid carers – especially younger and more elderly carers (who's social value to utilities to support resilience and society more widely is often undervalued). The report highlights good practice, including from other sectors. There may be value in updating the 'home visit' customer journey for those with additional needs, e.g. suffer anxiety, struggle to open the door as there has been little service innovation sector-wide in this area.

14. **Prioritise 'Inclusive by design' in its mainstream services.**
    This means making sure all of SSC's mainstream services, e.g. telephone, online, letters, are as accessible as they can be for the largest number of people possible without the need for tailored support. This is particularly important for SCC given the collectively high levels of communication needs (hearing, sight impairment, unable to speak English, learning difficulties). Furthermore, given the projected increase in vulnerabilities, 'Inclusive by design' would reduce the need for self-identification of vulnerability (which

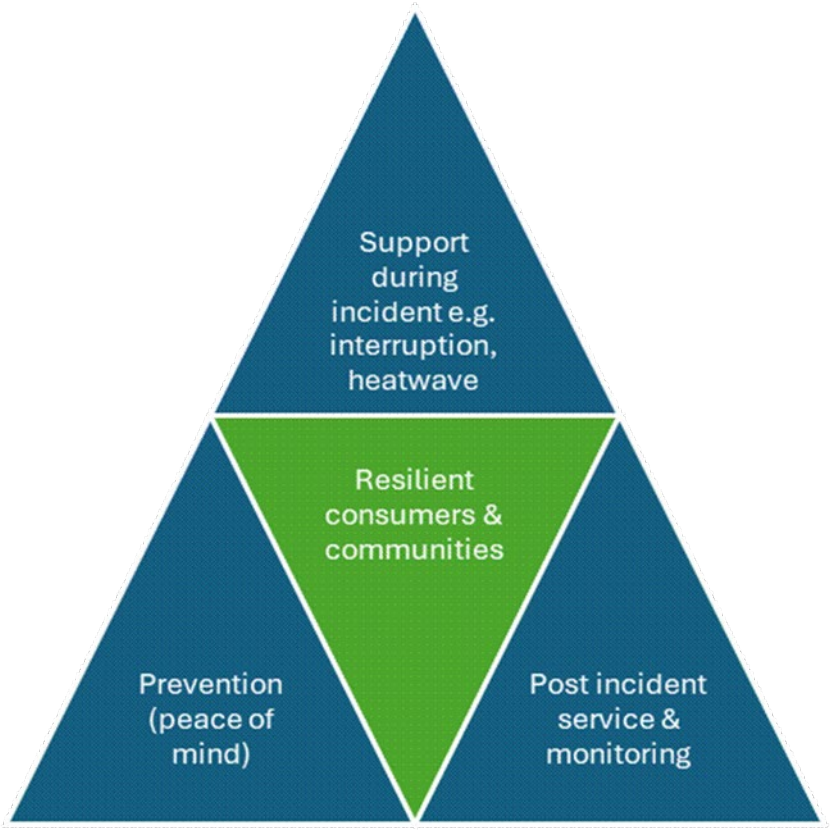
many people do not like to do or do not identify as vulnerable); help to improve customer service and reduce costs to serve of expensive bespoke services. Digital inequality is also expected to increase in the future. As a priority, we recommend:

- SSC makes sure its **website meets the highest accessibility standards**, in line with good practice using software such as Recite Me. Translation services should include the two most spoken languages by non-English speakers in SSC's area, Punjabi and Polish.
- Review and improve the **accessibility of its communication channels including telephone services and customer journeys** for those who are digitally excluded, have common sight impairments and the large and growing number of households with hearing problems.
- Introduce mechanisms to **understand the accessibility of its mainstream services** e.g. mystery shopping by customers with additional needs to understand where improvements can be made (opportunity to be industry leading).

15. **Consider how SSC can better support consumers to become more resilient to not just supply interruptions, but also flooding and heat waves, which are expected to increase in the future**.

    There's significant opportunity for innovation here. This is likely to be of growing importance as an increasingly aging and disabled population coincides with climate change, technological and social changes such as more people living alone or without support. Government policy is also shifting to a greater focus on 'hospital in the home' with people living independently for longer, including those with dementia.

Image S5: Supporting consumers and communities to be more resilient



We suggest several possible new services including: the appointment of a Customer or Community Resilience (or 'Stay Safe') lead; resilience audits (stay safe checks) for domestic and business customers supporting those who are most at risk (e.g. care homes and children's homes); preventative personal assistance plans; buddying or befriending scheme; and updated hot weather resilience support and tailored messaging.

INTRODUCTION

South Staffs Water (SSC) is currently carrying out several workstreams to develop the final version of its vulnerability strategy for submission to Ofwat at the end of June 2025. Building upon Impact's demographics report (to inform Price Review 2024) SSC wanted to further improve its socio-demographic profiling and horizon scanning to help make sure the strategy delivers positive outcomes for those with both non-financial and/or financial vulnerabilities in its regions (Impact, 2023).

SSC therefore asked Sustainability First, in partnership with data scientists Kelp, to:

1. Carry out a vulnerability horizon scan and situational gap analysis to:
    - Establish baseline proxy indicators for its existing Priority Service Register (PSR) needs codes and potential new PSR codes
    - Produce projections of the vulnerability indicators in the medium and long term
2. Identify the gap between SSC's current provision of PSR services and the potential future need for these services, as shown by the vulnerability indicators
3. Make recommendations based on the insights from the analysis for its future strategy and provide guidance for updating the demographic profiles.

The project, carried out from January to March 2025, is designed to provide a rich data source for underpinning decision making in SSC's vulnerability strategy and reflect its PR24 ambitions. This report and its accompanying dataset, maps and illustrative figures presents the results of our research.

RESEARCH METHODOLOGY

This chapter summarises the methodology we used to carry out the research. The approach was shared with SSC's Independent Challenge Group (ICG) Chair Matt Cole and CCW at a workshop on 5 March 2025. They made several recommendations and challenges which are outlined below. The findings were also shared with Matt Cole as part of an internal workshop with SSC's vulnerability team on 26 March 2025.

Recommendation/challenge	**Response**
Explore the potential to map/forecast children of school age (particularly important given government's focus on families); neurodiversity, pregnancy and end of life care and child poverty.	We have included children of school age. We did not include pregnancy, neurodiversity or end of life care as we could not identify robust data sets for these.
Consider how you can use water debt data especially the number of customers in arrears, amount of debt to map financial vulnerability	We have included a section on water debt data in the report and mapped water debt prevalence. See pages 59-61.
Carefully document, evidence and share the methodology. Be clear how dealt with people with multiple vulnerabilities to avoid overestimates.	We have outlined the methodology below and in the appendix in detail, including directly addressing issues such as overestimates / double counting and differences between household and population numbers.
Explain the confidence rating that was applied to each PSR code including detailed comments on quality of data.	Appendix 2 gives details of our reasoning for assigning a specific confidence rating to each proxy indicator.
SSC should be clear in the strategy about how you are using the data to inform the prioritisation of support and service design.	This is for SSC's strategy however the report includes some suggested recommendations as to how the data can inform prioritisation.
Be clear in the strategy about how SSC plan to close PSR gaps over time and how SSC will use third sector organisations to help with this (though they can't work for free).	This report includes recommendations and examples of good practice to help SSC close the PSR gaps. We also recommend greater use of 'inclusive by design' in mainstream services to reduce the need for bespoke services for some common communication and access needs and to enable the PSR to be used to focus on protecting groups at highest risk of harm or who require bespoke services.
Consider the Ofwat Innovation Project 'Support for All' led by Northumbrian Water which is developing a single PSR to build on their thinking.	Given the timeframes we have not been able to talk to CCW or Northumbrian Water about the

	detail of this project and how it relates to this research. But this can be captured in future updates to the live strategy.
Identify priority areas to target awareness campaigns for financial support.	We have identified areas with high levels of financial and non-financial vulnerability. These are included in this report and the associated documentation and maps provided to SSC.
Welcome the report going beyond current PSR needs codes to include new areas of vulnerability.	The analysis considered over 75s and 85s, care leavers, people experiencing recent bereavement, those at risk of heat, unpaid carers, people living alone, those in rural areas or suffering postal deprivation, people not online, and those whose main language is not English. We did not map all these areas due to time constraints and data availability but this could be further explored as a potential next step.
As a next step/or in a future project map community resilience e.g. Warm Hubs have been placed in areas with high levels of vulnerability and low levels of financial resilience.	We have identified priority communities that have high levels of both financial and non-financial vulnerability and would be good areas for place-based solutions or for SSC to offer services at existing warm hubs. There is potential to overlay this data with wider resilience data e.g. postal deprivation, remote areas, water use, climate and flooding mapping, alongside water companies own insight on asset resilience.
SSC is an outlier not participating in the energy and water sector data sharing arrangements and moves to a 'tell it once' Priority Services Register (PSR).	This is captured and included as a recommendation.
ICG Chair agrees there's value in SSC better integrating approach to supporting customers in debt and on low incomes (financial vulnerability) and non-financial vulnerability in the strategy, given interplay between the two.	Included in recommendations. We note Ofwat's research Exploring the customer service experiences of water and energy customers in vulnerable circumstances highlights the importance of this (Walnut December 2024)
Encourage SSC to better understand and review how much it costs to serve different types of customers.	Agree. This is especially important when considering funding and resources for changing future need.
Fund charity partners. Can't expect the voluntary sector to help without providing resource.	This has been included in the recommendations below to SSC linked to reviewing its partnership strategy.

1.1. Establish baseline vulnerability data

SSC provided a complete list of needs codes currently used for its Priority Services Register (PSR) database. We identified proxy indicators for the different PSR codes, where feasible. It was not possible to do this for all codes because of their characteristics, e.g. too broad or too specific, or because we could not find representative datasets. In total, we identified proxy indicators for 36 of SSC's 72 PSR codes. Additionally, we proposed new needs codes which are not currently used by SSC. We identified 11 proxy indicators for these additional PSR codes.

For each of the proxy indicators, we assigned a confidence rating to assess the robustness of the dataset, i.e. how well it represented the PSR code. We also assigned a priority level to each indicator according to both Ofwat's draft minimum standards[1] for priority services (see Appendix 1) and SSC's own assessment of priorities.

1.1.1. Population and household counts

The population and household counts within the two SSC service areas were derived from the Census (2021) population and household estimates for output areas (OAs) in England and Wales. Shapefiles of the two supply area boundaries were overlayed onto the OA boundaries to identify the OAs situated within or intersecting with the SSC area boundaries. For OAs that intersected with the boundaries, we calculated the proportion of each OA's area that fell within the supply area. This proportion was applied to the OA's total population and household counts to determine the count within the service area. One important caveat is that the approach assumes a uniform distribution of population and households across each OA. The adjusted counts for each OA were aggregated to produce overall estimates of population and households for both supply areas (see Table 1 below).

Table 1 Population and household counts for the South Staffs and Cambridge supply areas (to nearest 100)

Count	South Staffs	Cambridge	SSC Total
Population	1,380,700	358,000	1,738,600
Households	561,000	141,100	702,000

The data above is taken from the 2021 Census output area dataset. Population counts are estimates. Households are an estimated number of properties irrespective of occupancy, meaning that voids (or vacant dwellings and second home) are included in the counts. These are estimated by the ONS by cross-referencing census data with council-proprietary data. Across SSC areas the census reported only around 225 vacant / second homes properties in Cambridge, and 885 in South Staffs.

We note that recent changes by Ofwat in how water companies are required to count billed customers, including additional guidance on complex billing situations (i.e. multiple bills at the

[1] Priority services registers - a consultation on standards for water companies in England and Wales - Ofwat

same address) should, in theory, better align with the way households are counted in the census. Specifically, the census counts as 'households' any property where there is a single living arrangement (i.e., a single kitchen and living room, irrespective of the number of people living in the property). Where a property has multiple living arrangement (and potentially multiple bills), these are not counted as one, which may explain potential discrepancies with numbers of individual properties collected by SSC.

1.2.1 Assess the extent of vulnerability at small area level

The proxy indicators identified are available at different spatial resolutions, including Lower Layer Super Output Area (LSOA), Middle Layer Super Output Area (MSOA) and Local Authority District (LAD). We identified the OAs within the boundaries of each LSOA, MSOA or LAD and calculated the population and household counts residing within the SSC service area from this.

These proportions were applied to establish baseline vulnerability indicator data for each of the supply areas. Additionally, the total counts for the larger geographies (those for which data was only available at MSOA or LAD level) were distributed to LSOAs based on their population counts, thereby downscaling the proxy datasets—whether counts or prevalence measures—to the LSOA level.

We collated and processed more than 50 datasets for the baseline PSR vulnerability assessment. The data sets and maps are available in files accompanying this report. Summary data and maps are presented later in this report.

1.3. PSR Gap Analysis

We carried out a gap analysis out to assess the difference between the total number of people estimated to be eligible for a PSR service (as identified through the proxy indicators) and the number of people currently registered on SSC's PSR for each needs code.

1.3.1. Individual PSR Codes

For the analysis of individual PSR codes, SSC provided data on the number of people currently on the register for each code in the South Staffs and Cambridge service areas, as of January 2025. We then used the proxy indicators to estimate eligibility for each needs code (we were not able to identify proxy indicators for some of the needs codes, as reported above). It is worth noting that for proxy datasets which counted population rather than households, we assumed that only one person per household had a specific vulnerability. This may have led to an overestimate of eligibility.

1.3.2. Ofwat PSR eligibility estimate

In their Priority Service Register consultation, Ofwat estimated the total number of households in England and Wales that may be eligible for water companies' PSRs (Ofwat, 2024). Ofwat did this by generating a custom Census dataset which included information on household disability status, age composition and language proficiency. The analysis determined the total number of households that met at least one of the following conditions:

- Households with at least one disabled person
- Households with at least one person of pensionable age
- Households where no adults are proficient in English or Welsh.

The custom dataset was organised so that each household is represented by one observation, so in cases where multiple conditions were met, a household would not be counted more than once. Using this methodology Ofwat estimated that 52.24% of the water consumers in England and Wales would be eligible for a PSR service and suggested water companies should use this as a guideline for increasing the registration of consumers on their priority service registers.

As part of this study, we have also replicated Ofwat's methodology to obtain an estimate of the total PSR eligibility specific to the South Staffs and Cambridge supply areas. See page 77.

1.4. Projections

This section outlines the approach we used to project the baseline data relating to high and medium priority PSR codes according to SSC and Ofwat's draft priorities. The date of baseline data ranges from 2021 to 2023, and projections are made for 2030, 2035 and 2040 (where datasets allow). This data can be found in the 'projections data' files accompanying this report. Summary projections for the key vulnerability indicators are provided later in this report.

1.4.1. People and households

We have included data on the number of people per household for the PSR codes for which we have both population and households counts. However, only a small proportion of proxy indicator datasets provide data in both forms. It is worth mentioning that most research on vulnerabilities report 'people' rather than 'households' (although the Census notably focuses on households). Deriving a 'household count' from a 'people count' is likely to misrepresent the true distribution of vulnerabilities. The current national average number of people per household in the UK is 2.2 (GOV, 2023). This proportion is projected to remain similar through to 2040 (ONS, 2020b). This proportion could be used as a relatively blunt tool to quantitatively assess the distribution of current and projected households from the data provided on the number of vulnerable people.

1.4.2. Demographic change

We generated projections for various demographics by using the most up-to-date national ONS population projections (ONS, 2022a). This provides projections by age (ONS, 2022b), using a population baseline at OA level from the latest Census (2021). The calculated percentage population growth in England between 2021 and 2030, 2035 and 2040, was used to project population count within SSC's service areas (Table 2). Demographic categorisation by age was obtained from 2021 population estimates and projected using the percentage growth of individual age groups.

Table 2: Projected population growth (count and prevalence) across SSC's service areas

	2021		2030		2035		2040		Growth
	Prev[1]	Count	Prev	Count	Prev	Count	Prev	Count	2021-40
Population		1,738,724		1,874,692		1,918,856		1,958,846	
Over 65s	18%	319,024	20%	377,182	21%	410,042	22%	430,076	35%
Over 75s	9%	153,269	10%	189,195	11%	207,189	12%	232,111	51%
Over 85s	2%	42,429	3%	53,113	3%	66,809	4%	71,404	68%
Under 5s	7%	118,968	6%	114,579	6%	115,448	6%	117,077	0%

[1]Prev=Prevalence

ONS projections account for various factors that may affect future population trends, including migration patterns, mortality rates (which are expected to change due to higher future life expectancy) and fertility (i.e. natality rates). Although the proportionate population growth within the SSC area is likely to vary from national projections of population growth, the national projections were considered more reliable than the last set of ONS projections for local authorities in 2020 (ONS, 2020). The local authority projections were based on population counts up to mid-2018, and did not account for recent political and social changes such as Brexit and COVID-19, which are likely to have fundamentally shifted population dynamics.

Note: In future, it will be possible to use the next set of local authority population projections relevant to the SSC area, rather than national projections. The projections are due for release in May 2025 (See Guidance on updating these forecasts).

1.4.3. Health

Projections of the prevalence and number of people with various health conditions (chronic illnesses, diabetes, dementia, chronic kidney disease, dialysis, heart condition, respiratory diseases and mental health condition) were obtained from the REAL Centre demand model (REAL Centre, 2023). This combines epidemiological evidence with a microsimulation approach to estimate future health patterns (REAL Centre, ibid). The model uses primary care and hospital records along with mortality data to project the prevalence of chronic conditions, accounting for changes to key risk factors such as smoking, BMI, and blood pressure. The model also uses ONS population projections, which accounts for fertility, mortality and migration patterns.

The projections of specific health conditions to 2040 for the SSC area were calculated by applying national projections to the current (2023) baseline figures. For interim years (2030 and 2035), we assumed the annual change between 2023 and 2040 was linear. Further details of how projections were carried out for other specific health conditions and disabilities are given later in the relevant sections of this report.

NEEDS CODES AND PROXY INDICATORS

1.1 Assigning proxy indicators to PSR needs codes

SSC's PSR needs codes used during AMP7 fall into four broad categories:

1. Communication
2. Supply interruption
3. Mobility/access
4. Financial.

We identified proxy indicators for 36 of SSC's 72 PSR codes. We also proposed 11 further needs codes for analysis e.g. unpaid carers and identified proxy indicators for these.

For each of the proxy indicators, we assigned a confidence rating to reflect the robustness of the dataset, i.e. our assessment of how well it represented the PSR code being considered. Appendix 2 gives details of our reasoning for assigning a specific confidence rating to each proxy indicator.

Of the 47 PSR codes, we had high confidence in 25 of the codes, medium confidence in 13 and low confidence in nine.

We also assigned a priority status to each code. This considered Ofwat's non-exhaustive list of needs and services proposed in its November 2024 PSR consultation (see Appendix 1), plus SSC's own set of priorities. The following summarises the proxy indicators identified for each category of needs code, the extent of vulnerability for selected indicators within SSC's two water areas, and the distribution of vulnerability for certain indicators. Appendix 2 gives more details on the needs codes, the proxy indicators identified, and any caveats and limitations associated with the assignment of indicators to the needs codes.

1.2. Communication related needs codes

Table 3 below summarises the indicators identified for individual needs codes in the communication category.

Table 3: Communication needs codes and corresponding proxy indicators

PSR code	Priority	Dataset	Confidence
Blind	High	Sight Loss Data Tool: Estimated number of people with profound sight loss	High
Partially sighted	High	Sight Loss Data Tool: Estimated number of people with moderate sight loss	High
Hearing difficulties	High	Sight Loss Data Tool: Estimated number of people with moderate hearing loss	High
Deaf/hard of hearing	High	Sight Loss Data Tool: Estimated number of people with severe hearing loss	High
Bill explained over the phone	Medium	Lowest qualification	Low
Sign Language Interpreter	Medium	Main language (detailed)	High
Audio CD	Low	Sight Loss Data Tool	Low
Power of Attorney	Medium	Constituency data: Dementia, stroke or transient ischaemic attack & severe mental health disorder prevalence	Low
Contact 3rd party on my behalf	Medium	Unpaid carers	Medium
Nominee Service	Medium	Unpaid carers	Medium
Braille bill & information	Medium	Sight Loss Data Tool	Medium
Large Print Bill & Information	Medium	Sight Loss Data Tool	Low
Unable to communicate in English	High	Household language (main)	High
Mental Health Condition	Medium	Constituency data: Prevalence of Depression, Schizophrenia, bipolar disorder and psychoses	Medium
Learning Disabilities	High	Constituency data: Learning Disabilities prevalence	High

The following sections provide summary information on the prevalence of selected vulnerability indicators for SSC's two water regions for each category of indicator. A complete set of prevalence data for all the indicators investigated is provided in Appendix 3.

The following sections also include maps for selected indicators to show the distribution of numbers of vulnerable consumers within each of the two regions. A complete set of maps is provided in a separate file to this report (shape files are also provided to allow SSC to separately map the data, according to company preferences).

The maps are colour coded to show quantiles, e.g. octiles or deciles (divisions vary between the different indicators) within each water region, with the darkest colour showing LSOAs with the largest number of consumers with a particular vulnerability.

Note: It is important to appreciate that it is not possible to directly compare the maps across the two water regions since South Staffs has a much larger number of consumers than Cambridge. For example, there is a much higher concentration of consumers claiming Universal Credit in the LSOAs represented by the darkest colour in South Staffs than there is in the darkest colour in Cambridge.

1.2.1. Prevalence of communication vulnerabilities in the two water regions

There is a higher prevalence of all communication vulnerabilities in the South Staffs area compared to the Cambridge service area. The following highlights our key findings:

- **Hearing difficulties** affect a large portion of the population in both of SSC's areas. There's an estimated 10.5% of people in South Staffs (144,500 people) and 9.6% in Cambridge (34,300 people) having hearing difficulties. The comparative figure for England is 10.5% (6,060,000 people).
- **Sight loss** is usually defined as ranging from people with moderate impairment (partial sight) to those with severe impairment (blindness). 0.4 % of the South Staffs population (5,900 people) and 0.4% of Cambridge (1,400 people) are estimated to be blind, while 1.3% of the South Staffs population (17,400 people) and 0.9% of the Cambridge population (3,400 people) are partially sighted. If the definition of sight loss is extended to include people with mild sight loss the total proportion of people with sight loss rises to 2.8 % of the population in South Staffs (38,500 people) and 2.6 % of the population in Cambridge (9300 people)[2].

  In England, 0.5% of the population is registered blind or is partially sighted (269,500 people) (RNIB 2023), while 4% of the population (1.9 million people) is estimated to live with sight loss (NatCen, 2024). However, a much larger proportion (around 30–40% of the total UK population) are estimated to need reading glasses or some form of near vision correction (Optician). It is therefore important that SSC, as with all utilities, uses larger fonts and inclusively designed text in all its communications.

[2] The RNIB uses NHS data for its sight and hearing loss tool. The RNIB makes clear that being "registered" with a local social services department as 'sight impaired' or 'severely sight impaired' is optional (and likewise for hearing). In this sense, registration only indicates how many people went through an administrative process and is therefore likely to represent a significant under-estimate of the true extent of sight/hearing loss in a local area.

- **Mental health conditions** affect an estimated 14.3% of South Staffs (197,200 people) and 11.3% of Cambridge (40,400 people). Here we used the cumulative number of people registered as having depression or schizophrenia, bipolar disorder and psychoses. Together, for comparison, they represent 13.2% of people in England (7,623,800), with depression accounting for 7,098,000 people (as of 2023). Since the pandemic there has been a significant increase in people with mental health problems (not all necessarily all formally diagnosed). Mental health problems are becoming more common in the working age population. More than half of the rise in 16- to 64-year-olds claiming disability benefits since the pandemic is due to more claims relating to mental health or behavioural conditions**.** 1.3 million people claim disability benefits primarily for mental health or behavioural conditions – 44% of all claimants. A recent DWP survey suggests 86% of incapacity and disability benefit claimants report having a mental health condition (even if it is not their primary condition) (IFS, 2025).
- In South Staffs, an estimated 2.1% (29,700 people) are **unable to communicate in English**, compared to 1.0% (3,700 people) in Cambridge, and 0.3% in England (156,800 people) (as of 2021). This relates just to proficiency in English rather than, for example, as a result of a medical condition or speech impairment.

More detailed information on the prevalence of all the communication vulnerability indicators can be found in the 'projections section' of this report.

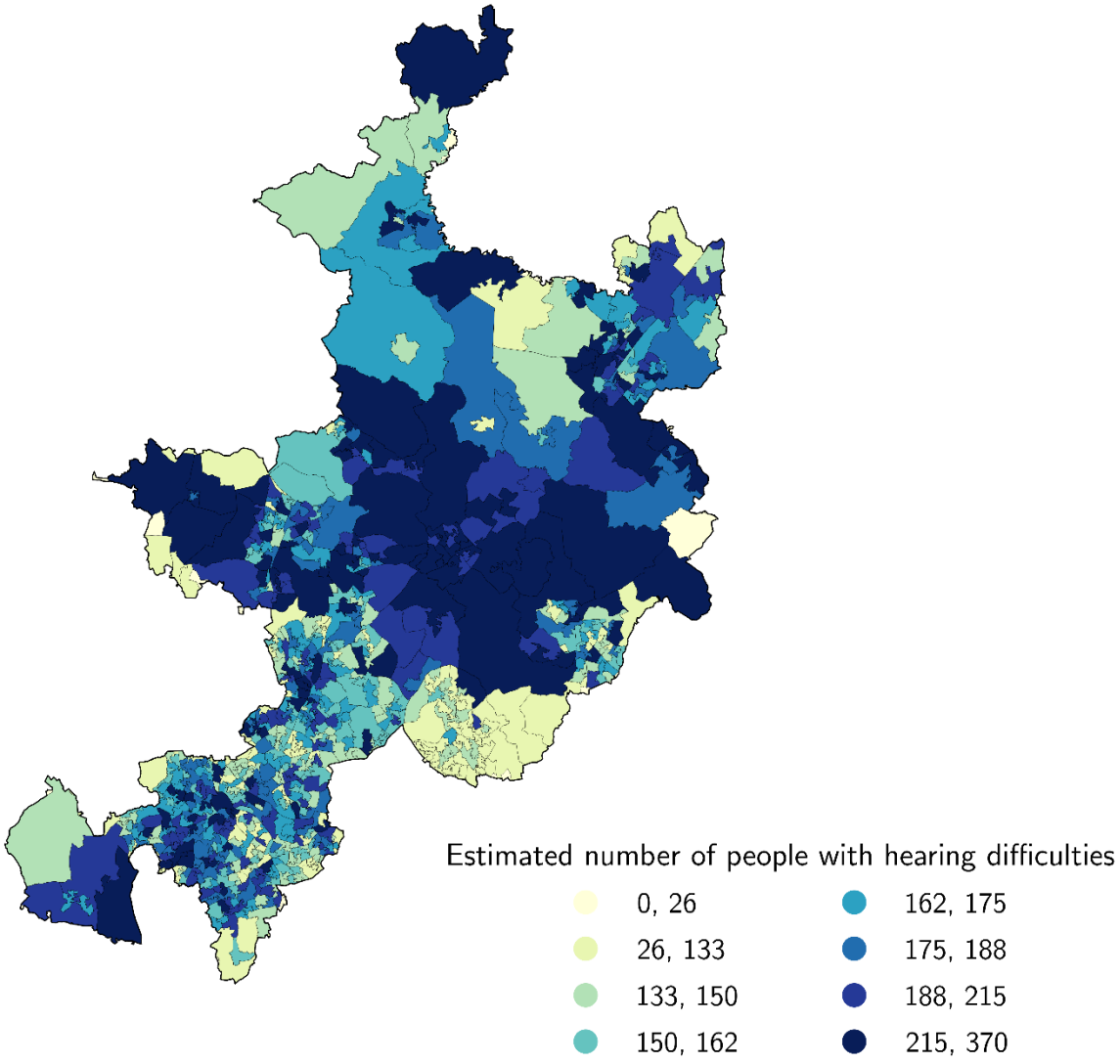
1.2.2. Distribution of communication vulnerabilities

Understanding the maps

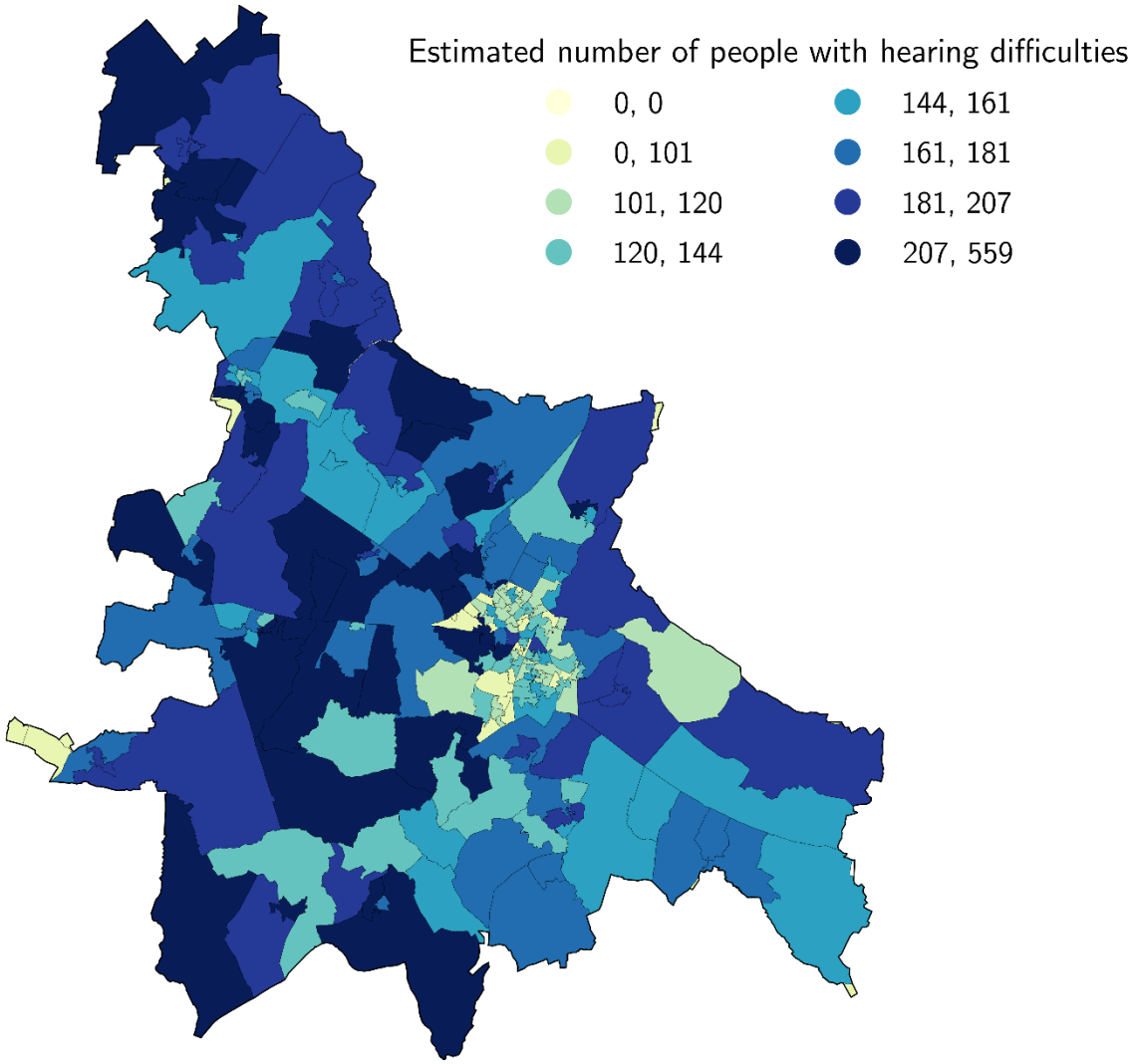
The following maps illustrate the distribution of key communication vulnerabilities at the LSOA level across two water supply regions. Each map represents the estimated number of individuals or households with a specific vulnerability within each LSOA in a supply area. The colour scheme is based on a quantile classification, meaning each colour represents an equal number of LSOAs. Different colours correspond to different ranges of vulnerability counts. For instance, in Map 1, the first colour class indicates LSOAs with between 0 and 93 individuals with hearing difficulties.

Note: rural areas always tend to stand out when compared with urban areas due to their larger geographic area.

Map 1: Distribution of people with hearing difficulties in South Staffs

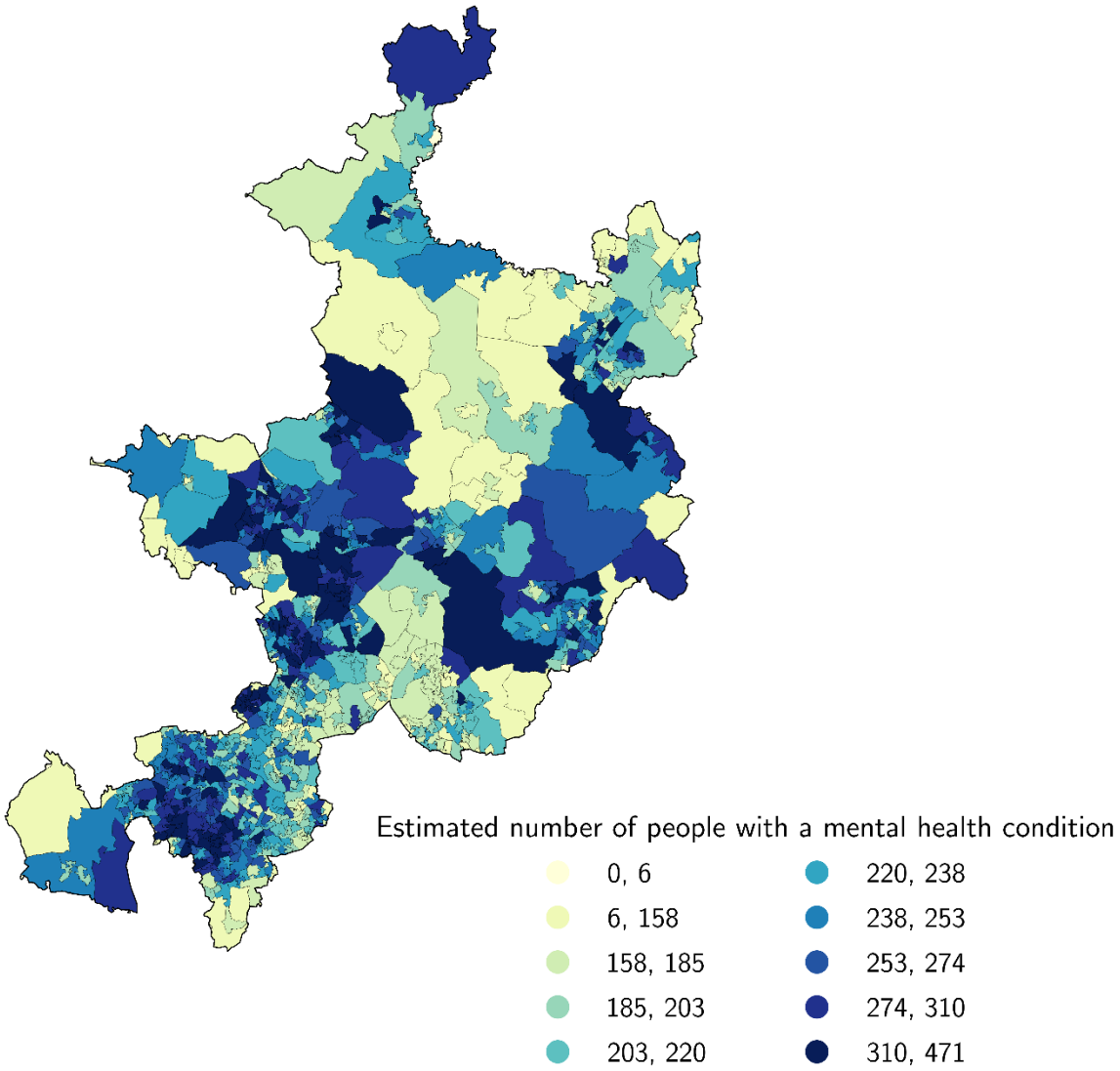


Map 2: Distribution of people with hearing difficulties in Cambridge



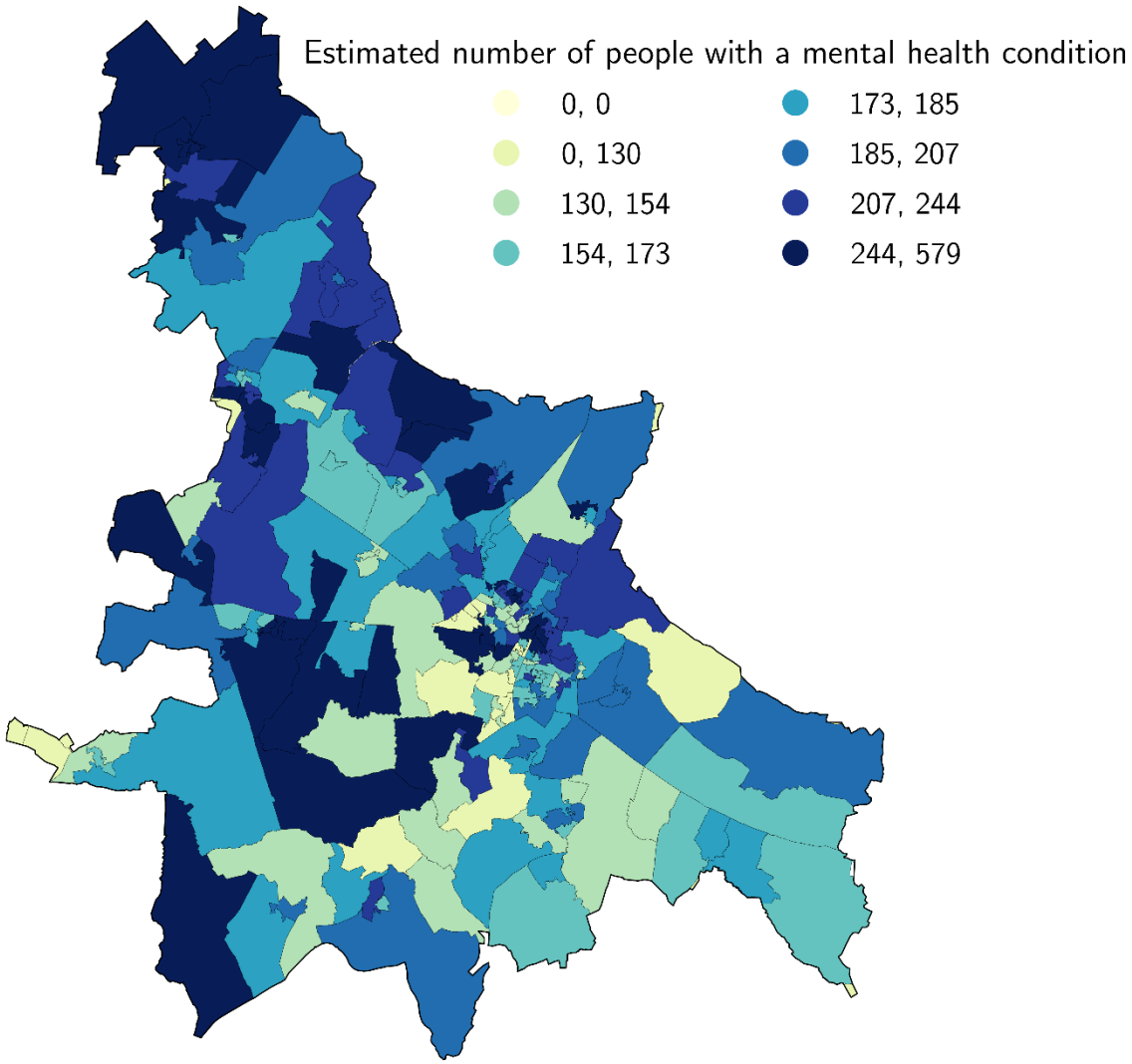
Map 2 suggests that while still high numbers overall, compared to South Staffs there are fewer areas with high numbers of people with hearing difficulties in the Cambridge area. The main concentrations are found in rural areas in the north of the region and within Cambridge itself.

Map 3: Distribution of people with mental health conditions in South Staffs



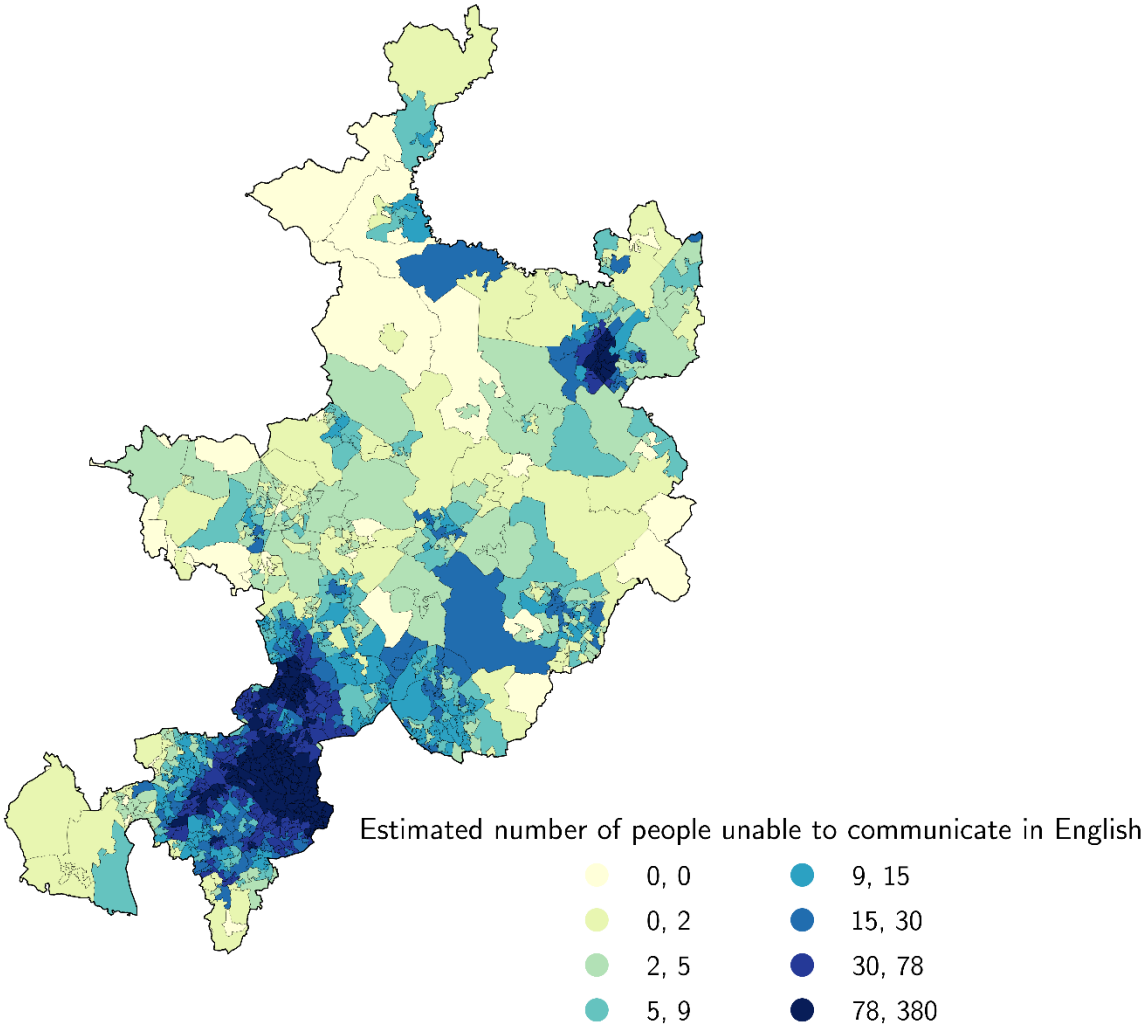
Map 3 shows that areas in South Staffs with high numbers of people with a mental health condition are found in the urban areas of Cradley Heath, Brierley Hill, Darlaston, Bloxwich and Brownhills and certain rural areas in the middle and northeast of the region.

Map 4: Distribution of people with mental health conditions in Cambridge



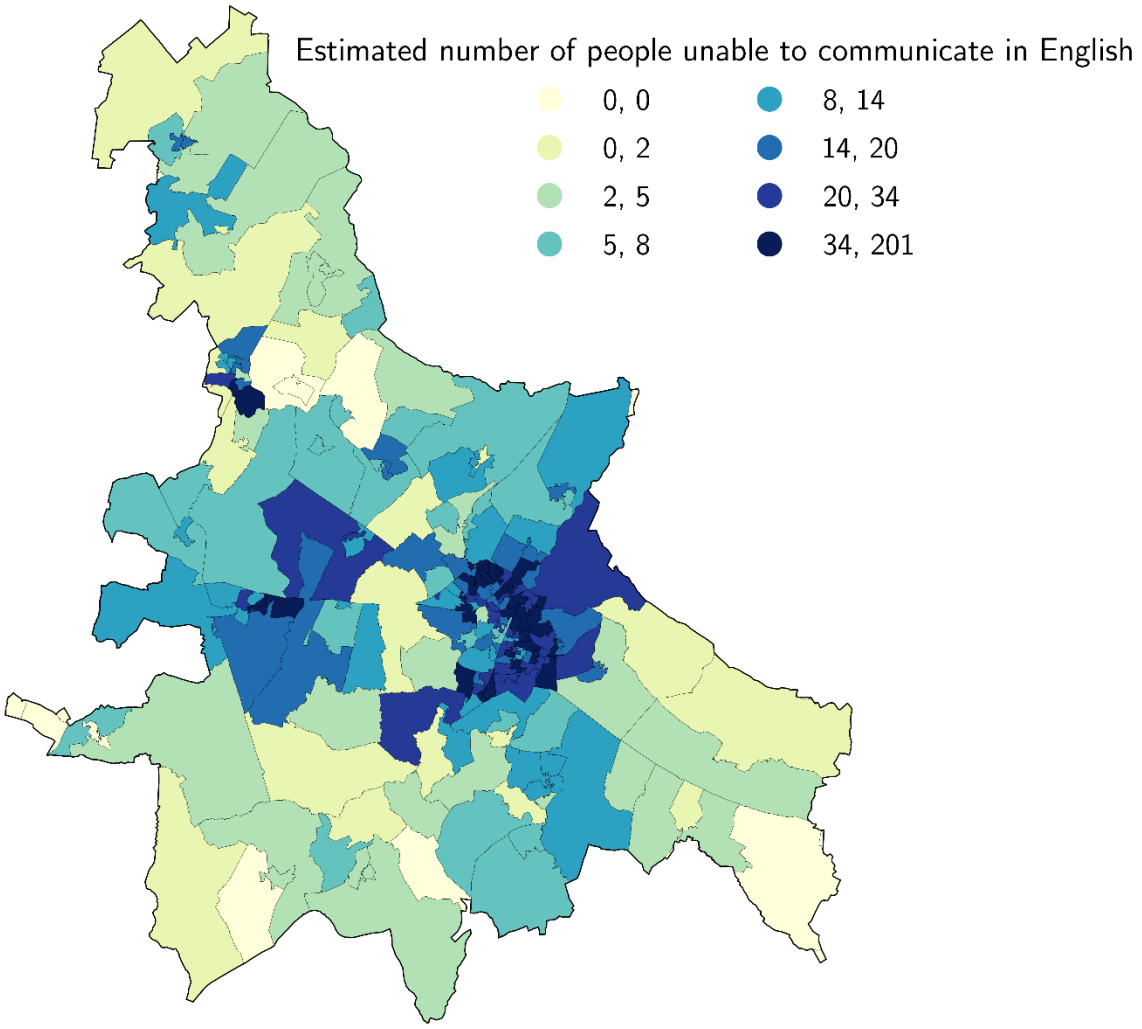
Map 4 shows that the main concentrations of people with a mental health condition in the Cambridge region are found in certain parts of Cambridge itself plus rural areas in the south west, west and north of the region.

Map 5: Distribution of people unable to communicate in English in South Staffs



Map 5 shows that the main concentrations of people unable to communicate in English in the South Staffs region are in Smethwick, Oldbury, West Bromwich, Walsall and Burton on Trent. These are all urban areas associated with large populations of people of Asian origin.

Map 6: Distribution of people unable to communicate in English in Cambridge



Map 6 shows that the main areas of people unable to communicate in English in the Cambridge area are found in Cambridge itself, plus pockets in St Ives and Cambourne.

A full set of maps for the communication vulnerabilities can be found in a file accompanying this report.

1.3. Supply interruption needs codes

Table 4 below summarises the indicators identified for individual needs codes in the 'supply interruption' category.

Table 4 Supply interruption needs codes and corresponding proxy indicators

PSR code	Priority	Dataset	Confidence
Chronic / serious illness	High	Constituency data: health conditions	Medium
Chronic Kidney Disease	High	Constituency data: Chronic Kidney Disease (CKD) prevalence	High
Dialysis at home	High	Constituency data: Chronic Kidney Disease (CKD) prevalence	Medium / High
Dialysis at hospital	High	Constituency data: Chronic Kidney Disease (CKD) prevalence	Medium / Low
Developmental / Neurological Condition	High	Constituency data: Learning Disabilities prevalence	High
Diabetes	High	Constituency data: Diabetes prevalence	High
Epilepsy	High	Constituency data: Epilepsy prevalence	High
Heart condition	High	Constituency data: Coronary Heart Disease and Heart Failure prevalence	High
Respiratory disease	Medium	Personal Independence Payment (PIP) respiratory disease claimants	Medium
Family with children under 5 (child under 5)	Medium	Age of youngest child in household	High
Pensionable age	Medium	Mid-year population estimates	High
Water needed for religious practices	Medium	Religion in England and Wales	Medium

1.3.1. Prevalence of 'supply interruption' vulnerabilities in the two water regions

The prevalence of vulnerabilities within the 'supply interruption' category represented some of the highest incidence of vulnerabilities across the four categories for both regions. South Staffs generally has a higher incidence of 'supply interruption' vulnerabilities than Cambridge.

- An estimated 15.1% of the South Staffs population (209,200 people) have a **chronic or serious illness** compared to 8.5% in Cambridge (30,300 people), and to England counts of 6,978,927 people, or 12.1% of the population (as of 2023).

- An estimated 150,000 households in South Staffs (or 27%) and 35,200 households in Cambridge (or 25%) have at least one person of **pensionable age** (aged over 65), compared to 6,147,800 (or 26.2 %) in England (as of 2021).
- It is estimated more people may **need water for religious practices** in South Staffs (9.1%, 125,400 people) than in Cambridge (4.8%, 17,100 people), compared to a count for England of 4,821,900 people (or 8.5% of the population) (as of 2021).
- **Diabetes** affects an estimated 8.9% of people in South Staffs (123,400 people) and 5.2% of people in Cambridge (18,400 people). An estimated 8.6% of adults (3.8m people) in England have diabetes (PHE, 2016). Incidence of diabetes in South Staffs is therefore similar to the national average whereas in Cambridge it is lower.
- An estimated 4.9% of people in South Staffs (67,200 people) and 2.3% of people in Cambridge (8,300 people) with **chronic kidney disease**. An estimated 4.8% of the population in the UK (3.25m people) has chronic kidney disease (stages 3-5), (KRUK, 2023)**.** Incidence of chronic heart disease is therefore similar to the national average in South Staffs whereas in Cambridge it is lower.

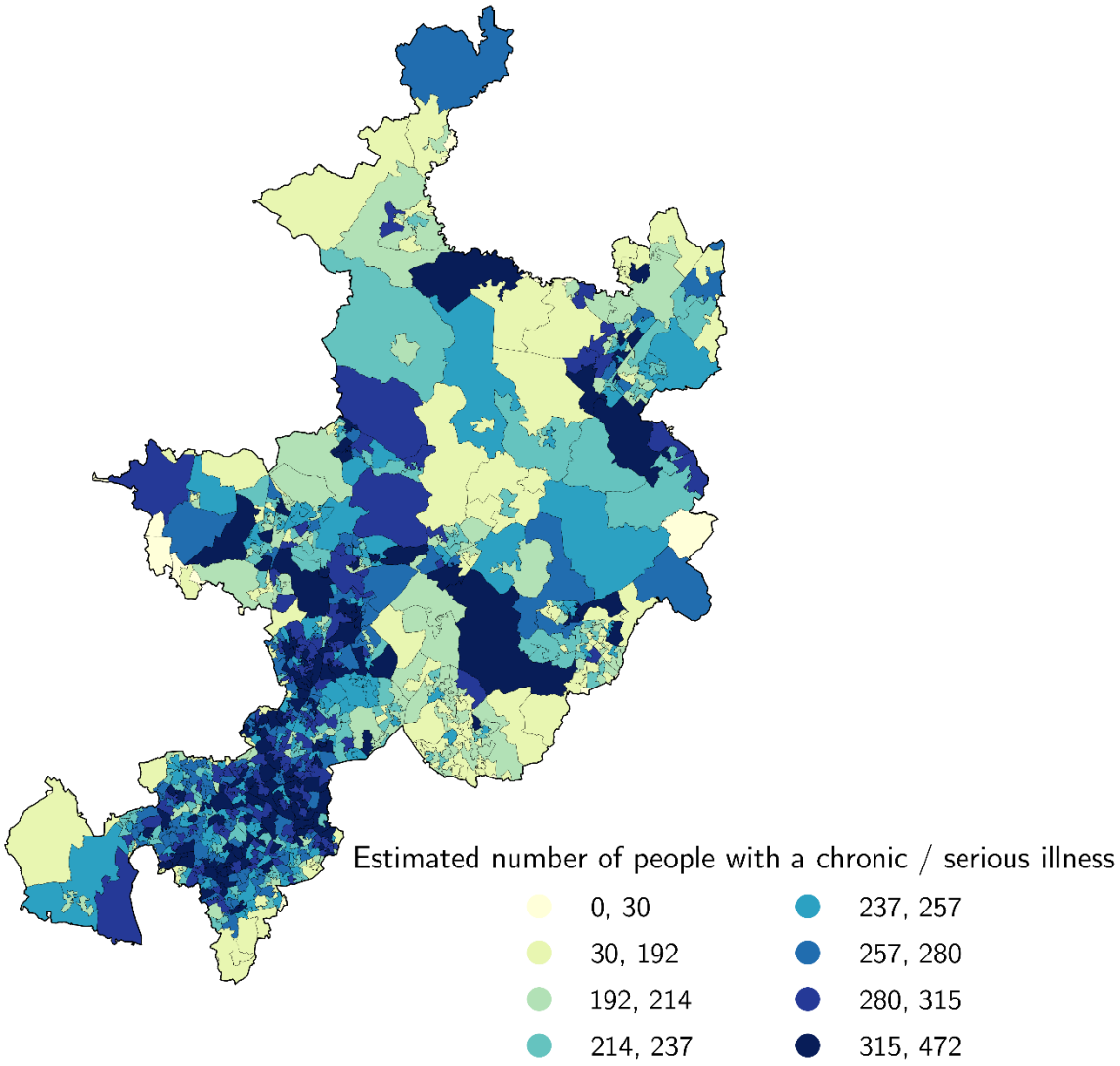
1.3.2. Distribution of 'supply interruption' vulnerabilities in the two water regions

The following maps show the distribution of a selected set of key 'supply interruption' vulnerabilities at LSOA level for the two water regions.

Note: rural areas always tend to stand out when compared with urban areas due to their larger geographic area.

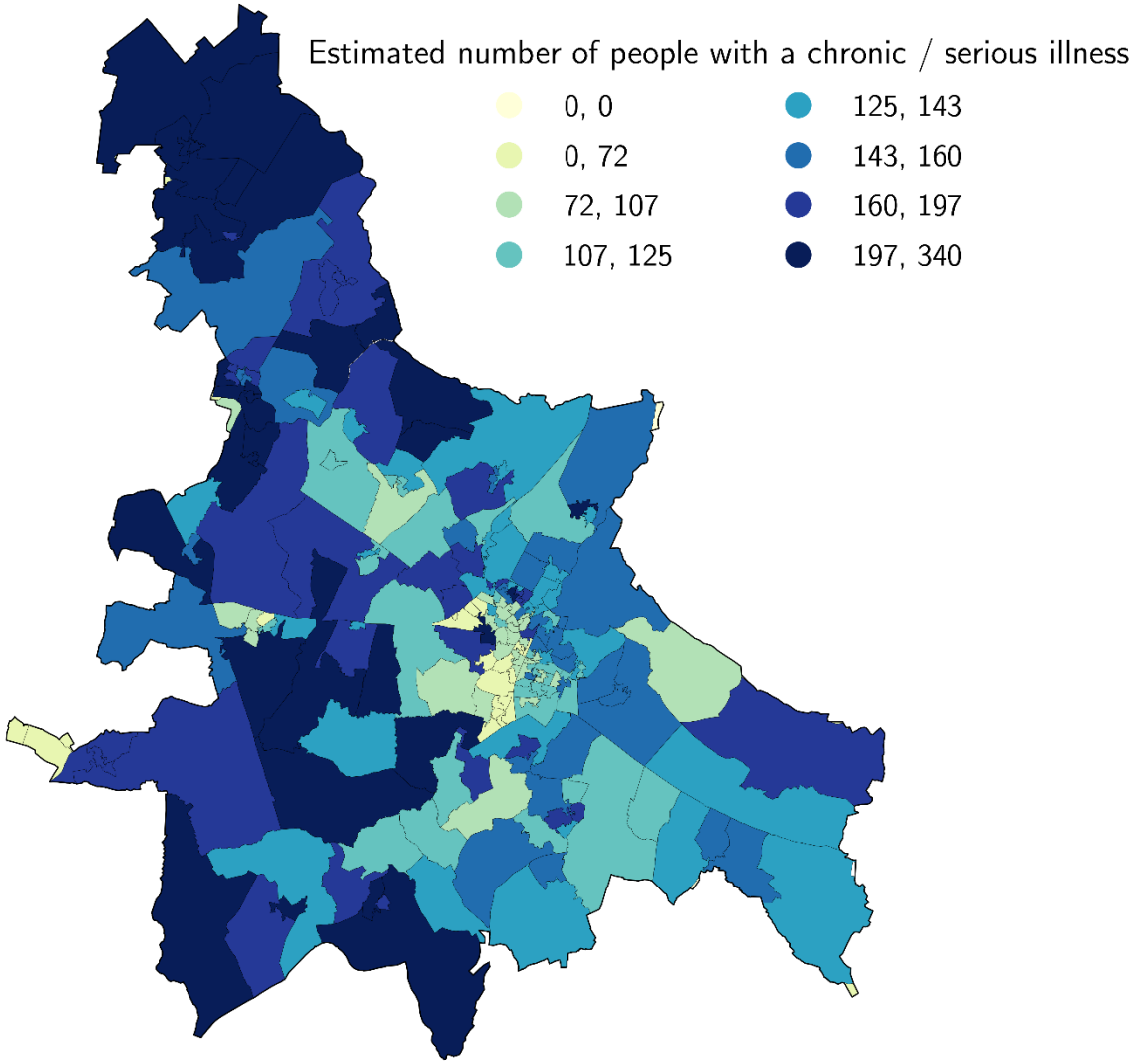
A full set of maps for the 'supply interruption' vulnerabilities can be found in a file accompanying this report.

Map 7: Distribution of people with chronic or serious illness in South Staffs



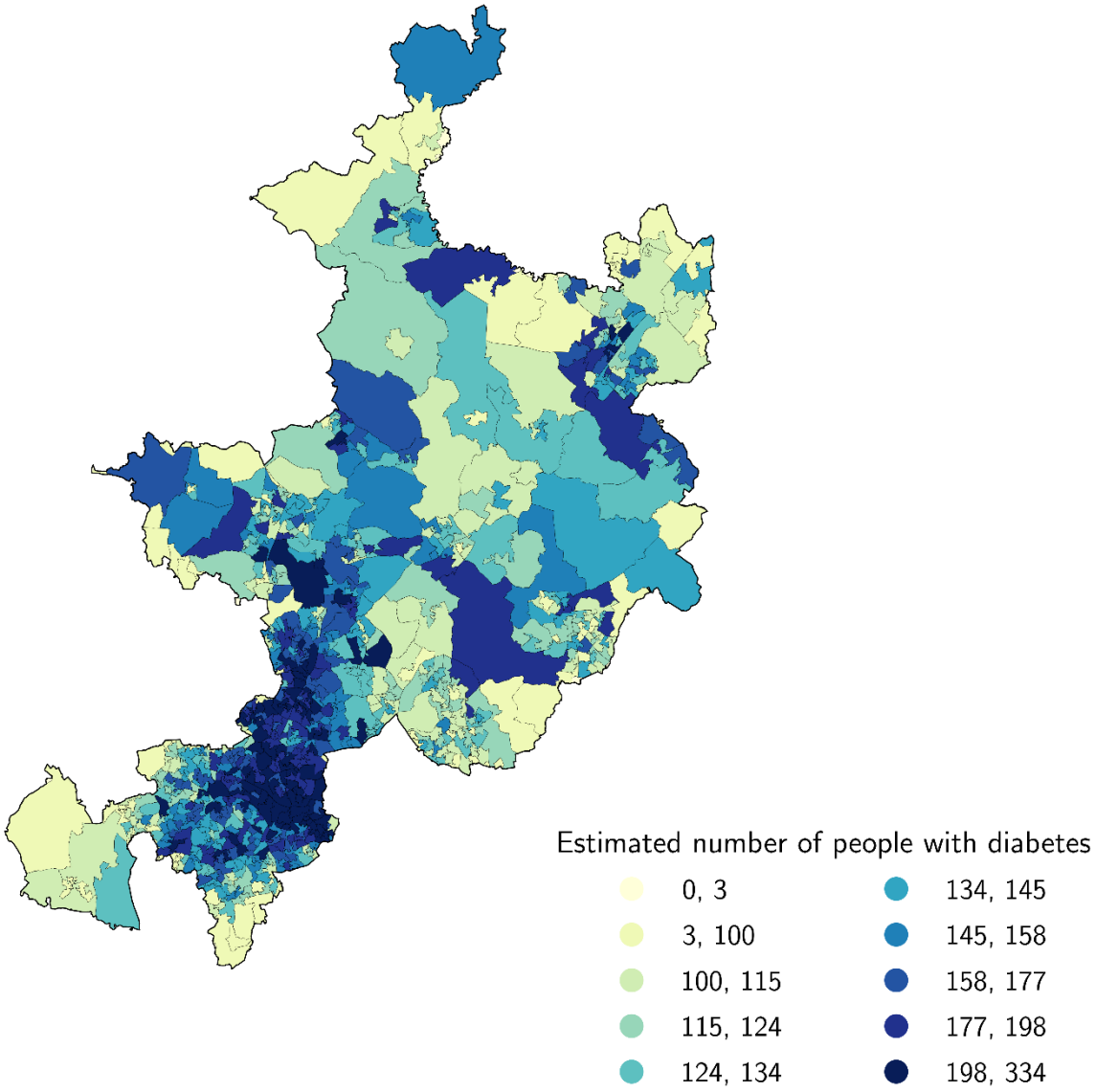
Map 7 shows that there are high numbers of people with a chronic or serious illness in various urban areas of Dudley, Wednesbury and Walsall and rural areas in the north of the region (Marchington), west of the region (one LSOA to the west of Wednesbury and several to the south east of Wednesbury), middle of the region (several LSOAs to the west of Sutton Coldfield) and east (the LSOA just north of Tamworth).

Map 8: Distribution of people with chronic or serious illness in Cambridge



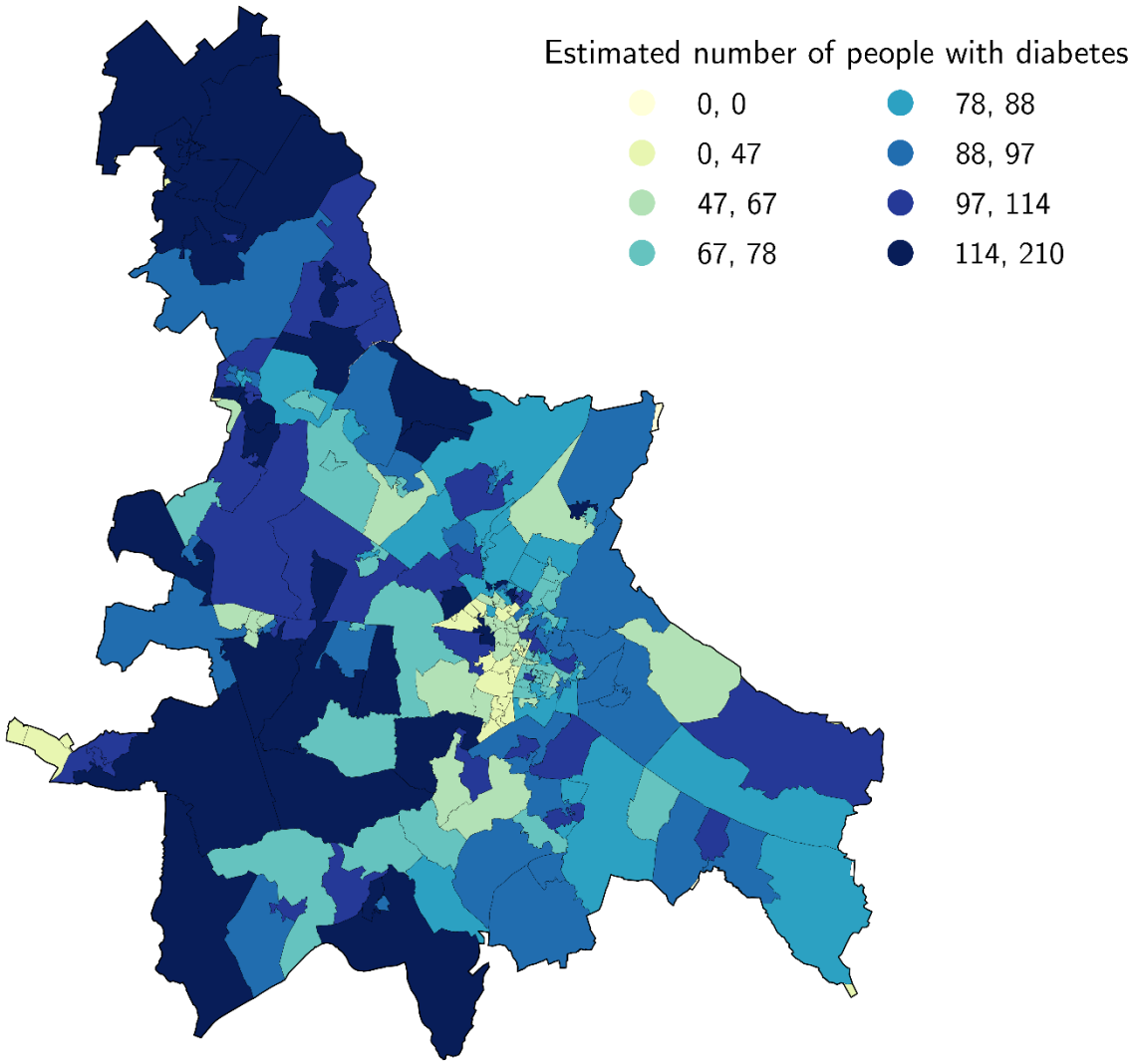
Map 8 suggests that the main concentrations of people with a chronic or serious illness are found in rural areas in the north, central area, west and southwest of the Cambridge region.

Map 9: Distribution of people with diabetes in South Staffs



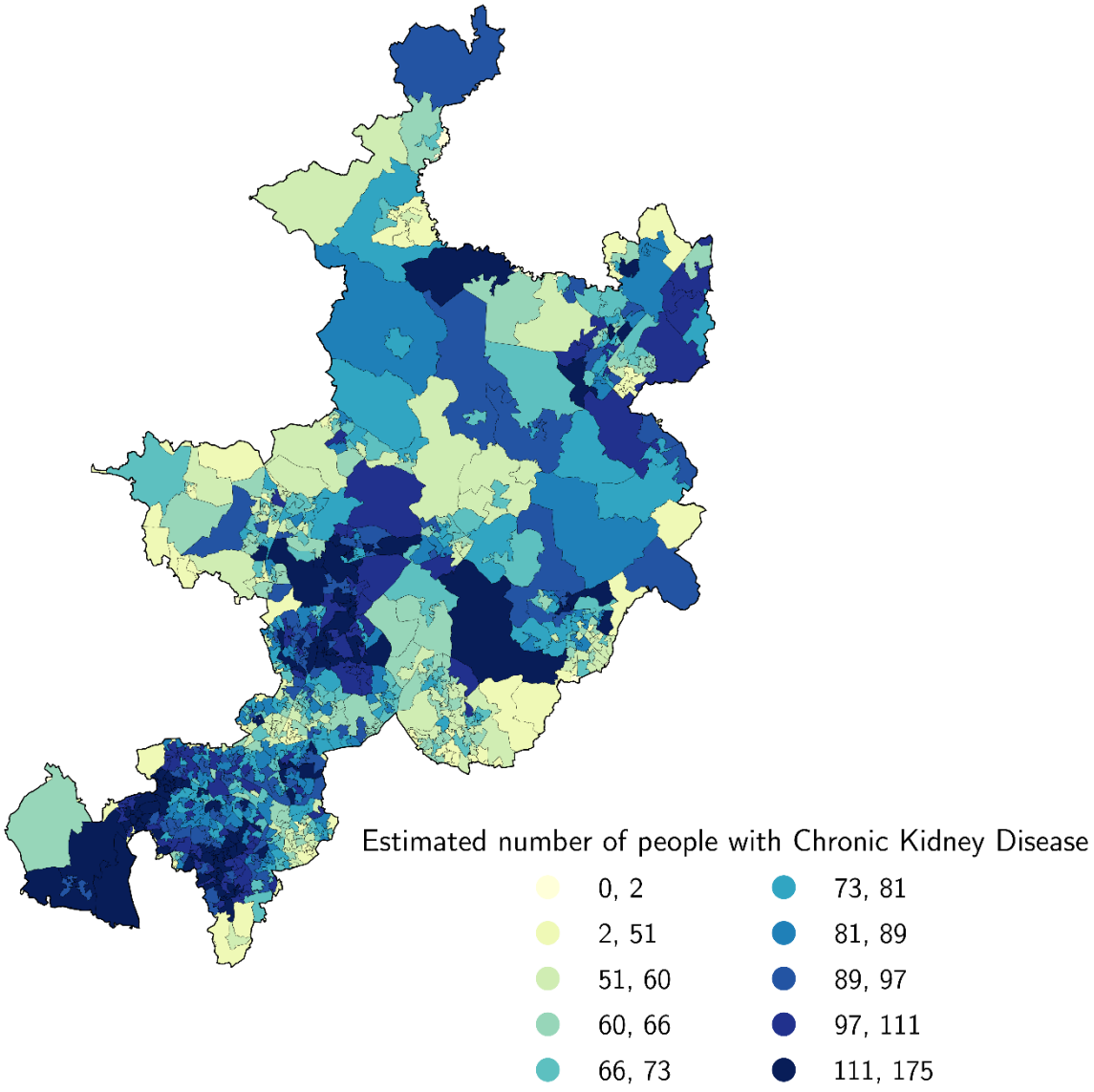
Map 9 shows that there are high concentrations of people with diabetes in the urban areas of Oldbury, Dudley and Walsall and a few rural areas to the north and east of Walsall.

Map 10: Distribution of people with diabetes in Cambridge



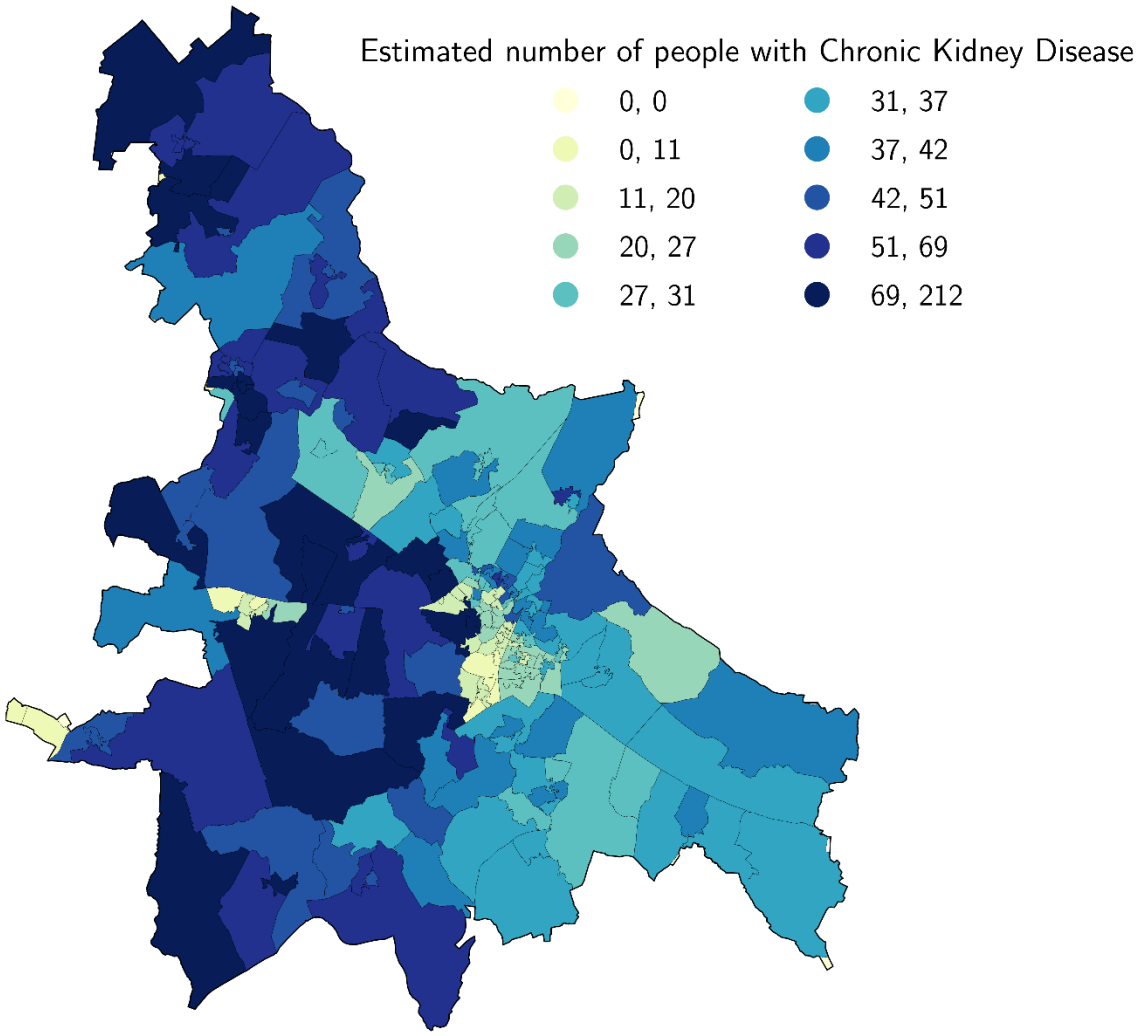
Map 10 suggests that the main concentrations of diabetes in Cambridge are found in rural areas in the southwest, west/centre and north of the region.

Map 11: Distribution of people with chronic kidney disease in South Staffs



Map 11 suggests that the main concentrations of people with chronic kidney disease are found in the urban areas of Cradley Heath and Walsall and the rural areas in the southwest, Marchington and central areas of South Staffs.

Map 12: Distribution of people with chronic kidney disease in Cambridge



Map 12 shows that the main concentrations of chronic kidney disease are found in rural areas in the north, southwest and west/central areas of the Cambridge region.

1.4. Mobility/access needs codes

Table 5 below summarises the indicators identified for individual needs codes in the mobility/access category.

Table 5: Mobility/access needs codes and corresponding proxy indicators

PSR code	Priority	Dataset	Confidence
Disabled	High	Census household disability status	High
Physical impairment / mobility issue	Medium	Disability Living Allowance (DLA) mobility award claimants	Medium
Extra time to answer door	Medium	Disability Living Allowance (DLA) mobility award claimants	Low
Unable to answer the door	High	Census household disability status: day-to-day activities limited a lot	Medium
Meter reading assistance	Low	Census household disability status	Low

1.4.1. Prevalence of mobility/access vulnerabilities in the two regions

There are notable differences between the South Staffs and Cambridge regions with respect to vulnerabilities in the mobility/access category. Overall, South Staffs shows a higher prevalence of vulnerabilities compared to Cambridge. Key findings include:

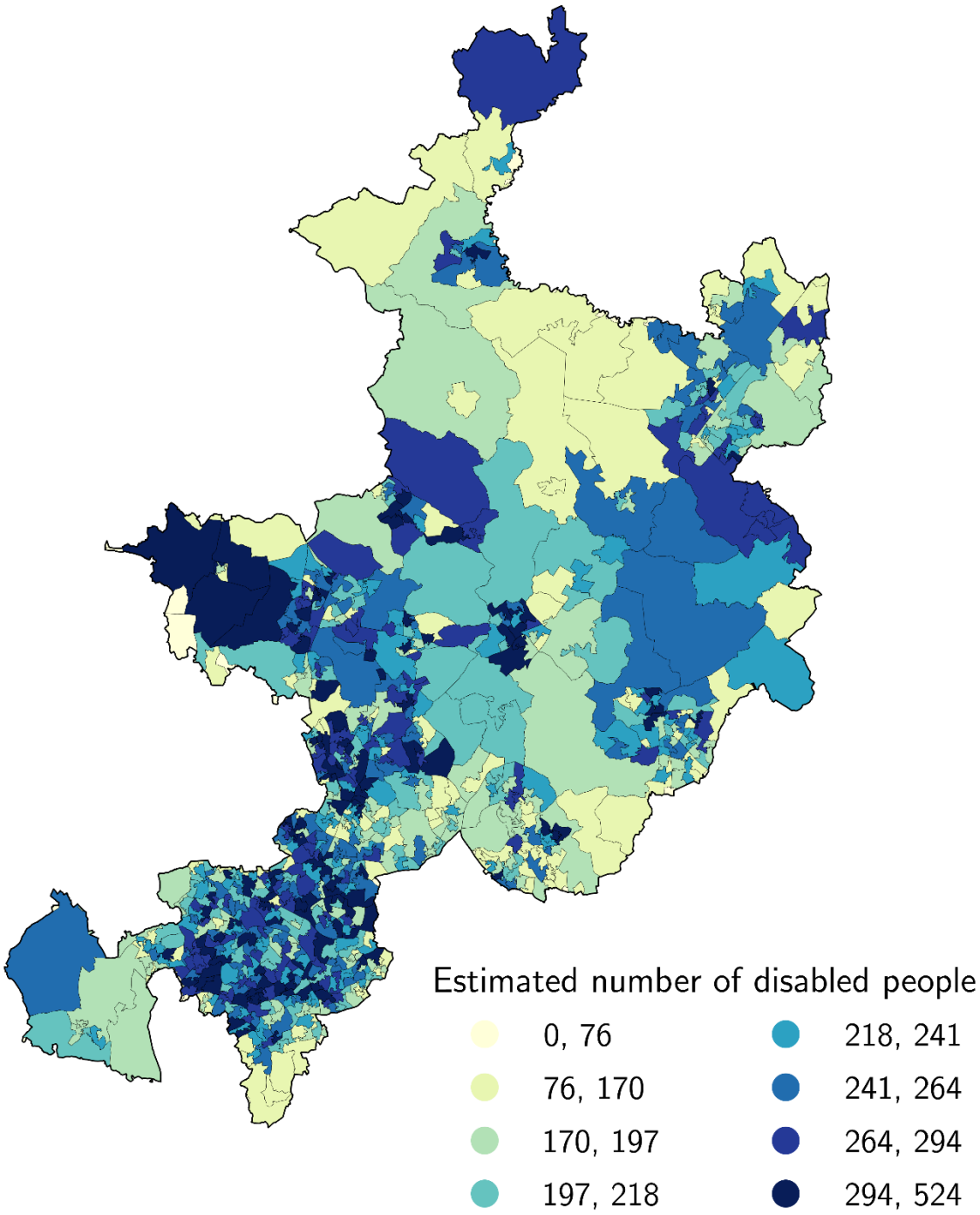
- It is estimated there are 200,000 households (34.9 %) in South Staffs with at least one **disabled person**, compared to 40,500 households in Cambridge (28.7 %). The definition of disability follows that of the Equality Act (2010), where people are disabled 'if they have a physical or mental impairment that has a substantial and long-term negative effect on their ability to carry out normal day-to-day activities'. In England, there are 7,507,900 households (32.0 %) with at least one disabled person as of 2021.
- We estimate that 8.2 % of people in South Staffs (113,700 people) and 5.2 % in Cambridge (18,629 people) may be **unable or really struggle to answer the door** due to mental health or physical disabilities that limit day-to-day activities a lot (as per definition on the Equality Act from 2010), compared to 7.3 % in England (or 4,140,400 people).
- An estimated 32,200 working age people in South Staffs (2.3 % of total population) and 4,400 in Cambridge (1.2 %) have a **physical impairment or mobility issues,** which may also reflect the number of people who **need extra time to answer the door.** This compares to 1,711,000 people of working age people in England (2.4 % of the population).

1.4.2. Distribution of mobility/access vulnerabilities in the two regions

The following maps show the distribution of selected key mobility/access vulnerabilities at LSOA level for the two water regions. **Note:** rural areas always tend to stand out when compared with urban areas due to their larger geographic area.

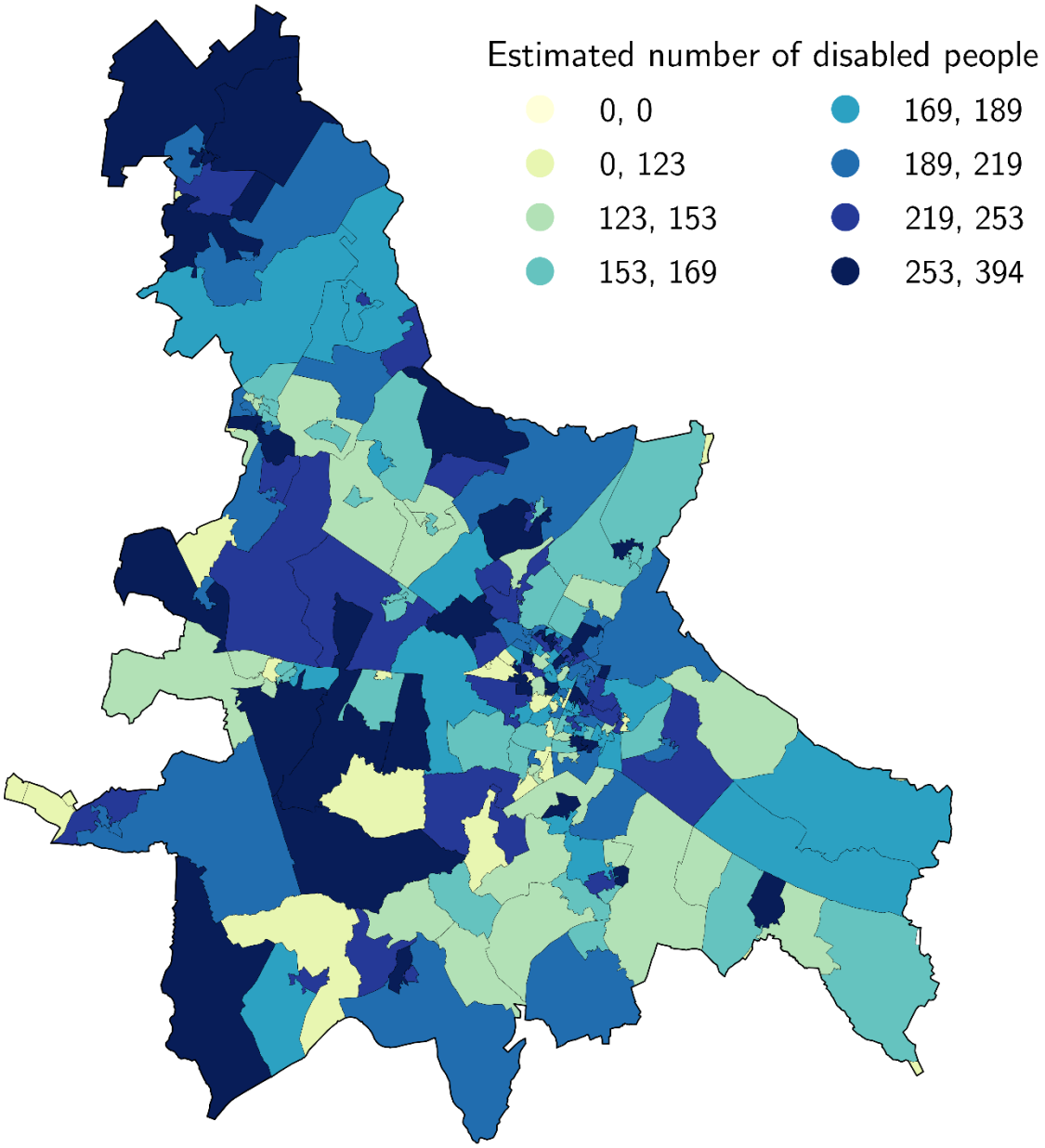
A full set of maps for the mobility/access vulnerabilities can be found in a file accompanying this report.

Map 13: Distribution of disabled people in South Staffs



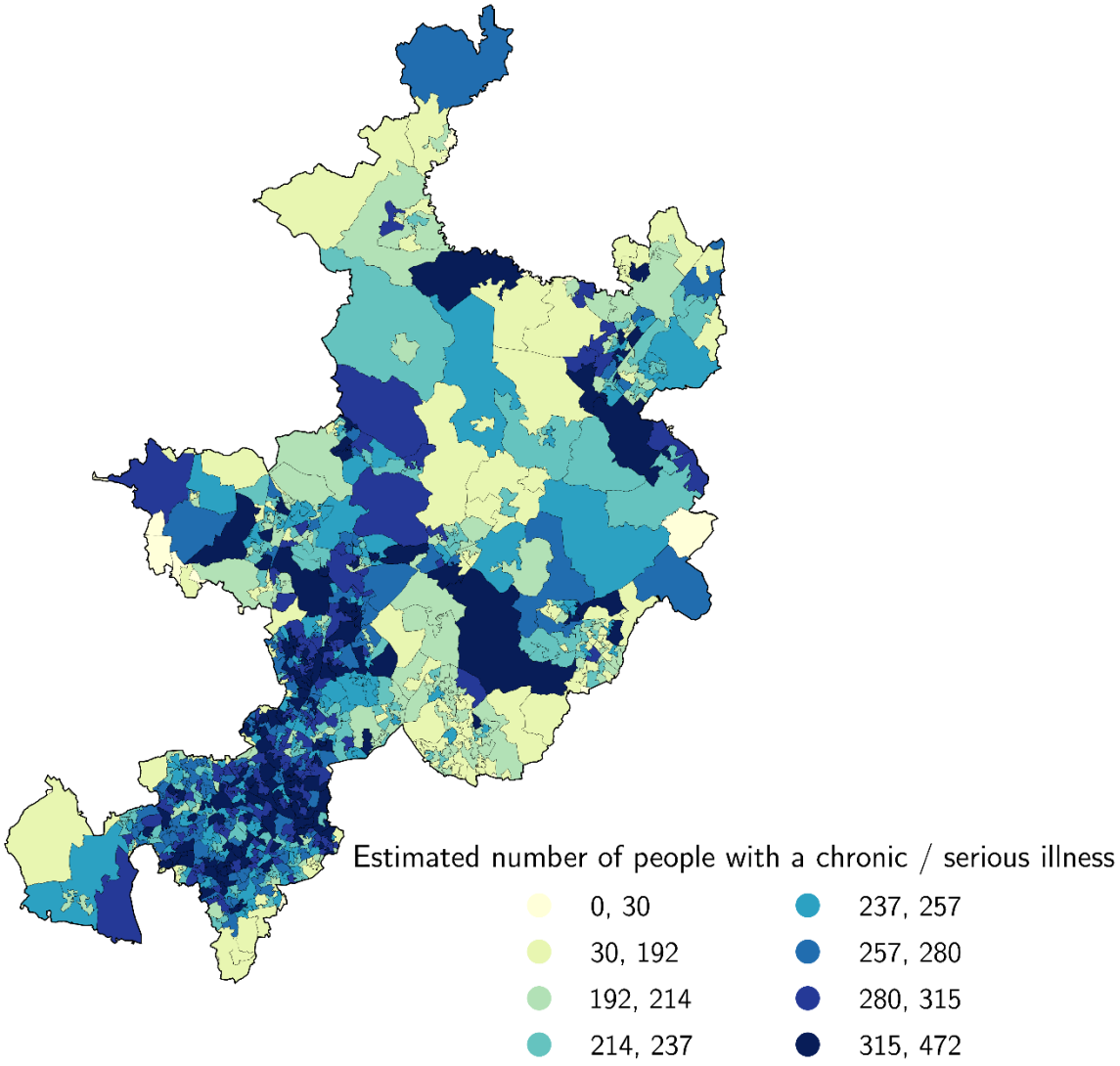
With respect to urban areas with high concentrations of disabled people, Map 13 shows that there are a wide number of LSOAs areas scattered around Dudley, a few in the north and south of Sutton Coldfield, several in Tamworth and Lichfield and one in Uttoxeter. There is also a high proportion of disabled people in certain rural areas to the west of the region around Penkridge.

Map 14: Distribution of disabled people in Cambridge



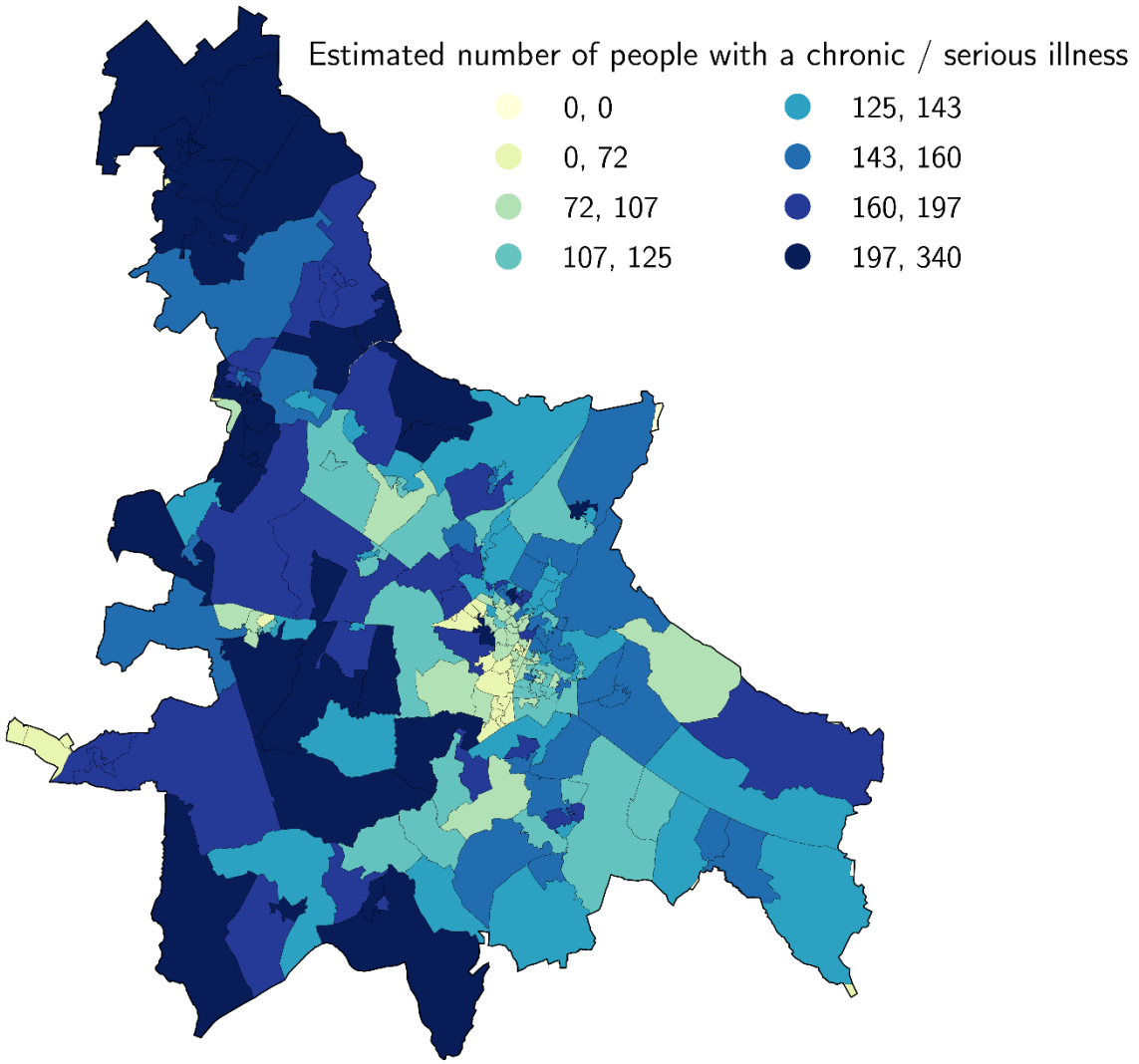
Map 14 shows that there are relatively high concentrations of disabled people in rural areas in the southwest, west/central area and north of the region, plus several in the south and the north of South Cambridgeshire. There are also urban pockets in Cambridge itself and St Ives.

Map 15: People with a chronic or serious illness in South Staffs



Map 15 shows that there are substantial concentrations of people with a chronic or serious illness in the urban areas of Dudley, Walsall and Burton on Trent. There are also high numbers in rural areas in the north, west, east and centre of the region.

Map 16: People with a chronic or serious illness in Cambridge



Map 16 shows that the main concentrations of people with a chronic or serious illness are found in the rural areas to the southwest, centre and north of the region plus a few urban pockets in Cambridge itself.

1.5. Financial vulnerabilities

The research was only able to identify one proxy indicator for those with financial vulnerabilities, although SSC lists 16 codes within this category. This was because the 15 remaining codes were services such as financial support tariffs which had complex eligibility criteria. We were not able to identify appropriate proxy indicators for these needs codes.

Table 6: Financial vulnerability needs code and corresponding proxy indicator

PSR code	Priority	Dataset	Confidence
Single Occupancy Assessed Charge (SOAC)	Medium	Household size and accommodation type	Medium

Note: SOAC is based on 'property type'

Because of the lack of appropriate datasets for SSC's financial vulnerability codes we have given a high-level overview of financial vulnerability by using data on means tested benefits, average incomes and water debt.

The number of people claiming means tested benefits gives a good indication of the level of deprivation in an area since eligibility for such benefits requires a household to have limited income and savings.

We decided against using the Index of Multiple Deprivation (IMD) or the 'income domain' within the IMD[3]. The most recent IMD was published in 2019 and is therefore fairly out of date, particularly given the subsequent impact of COVID-19 and the cost-of-living crisis. The previous government consulted upon updating the IMD but did not confirm its intentions as to when it might do this (DLUHC, 2022).

Given that the 'income domain' within the IMD is based on people claiming means tested benefits, we have used more up to date DWP data from 2024 on claimants of specific benefits. This includes:

- Universal Credit Claimants
- Housing Benefit Claimants
- Employment and Support Allowance Claimants
- Income Support Claimants
- Jobseeker Allowance claimants
- Pension Credit claimants

Note: Housing Benefit, Income Support, Employment and Support Allowance and Jobseeker's Allowance are 'legacy benefits' and are gradually being replaced by Universal Credit.

1.5.1. Prevalence of benefit claimants in the two water regions

The following presents the extent of people claiming a range of means tested benefits in the two water regions:

- 13.6% of people in South Staffs (188,215 people) compared to 7.8% in Cambridge (28,021 people) and 10.1% for England are **Universal Credit Claimants**.
- **Housing Benefit Claimants** account for an estimated 3.1% of the population in South Staffs (42,704 people), 2.3% in Cambridge (8,197 people) and 2.9% in England.

[3] The 'income domain' within the IMD is generally considered the most robust deprivation indicator and is based on a count of people claiming means tested benefits. It is weighted to account for around 50% of the full IMD.

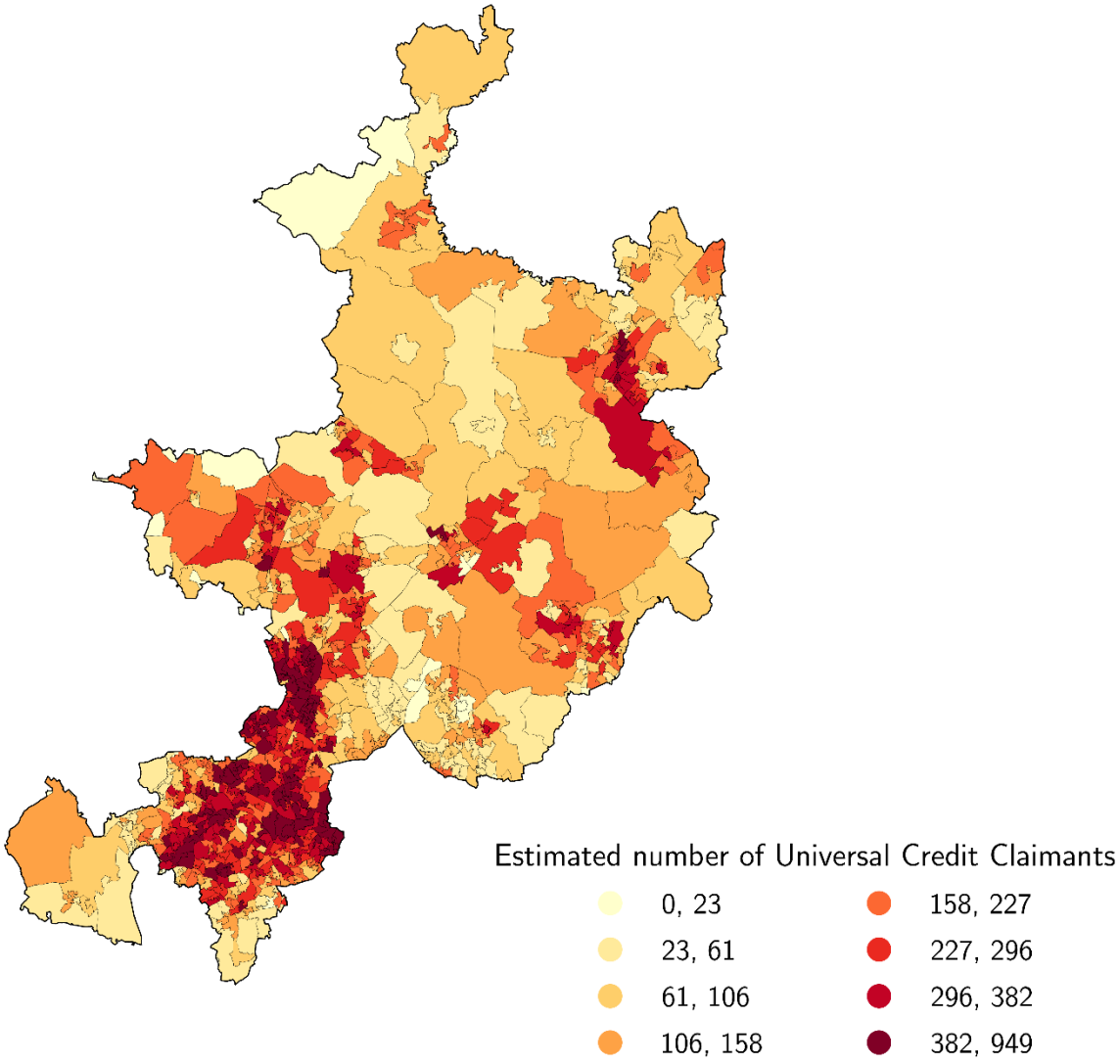
- An estimated 3.1% of people in South Staffs (42,704 people), 2.3% in Cambridge (8,197 people) and 2.9% in England are **Income Support Claimants**.
- **Employment and Support Allowance Claimants** make up 2.5% of the South Staffs population (34,057 people), 1.6% in Cambridge (5,565 people) and 1.9% in England.
- **Pension Credit Claimants** make up 2.4% of the South Staffs population (33,117 people), 1.2% in Cambridge (4,263 people) and 1.8% in England.
- **Jobseeker Allowance Claimants** make up 0.2% of the South Staffs population (2,346 people) 0.1% in Cambridge (335 people) and 0.1% in England.

It is clear that the proportion of people claiming means tested benefits is considerably higher in the South Staffs region than in Cambridge and the English average, reflecting the higher levels of deprivation in the region. Conversely, the proportion of people claiming means tested benefits in Cambridge is considerably lower than the English average, suggesting that the area is more prosperous than England as a whole.

1.5.2. Distribution of benefit claimants in the two water regions

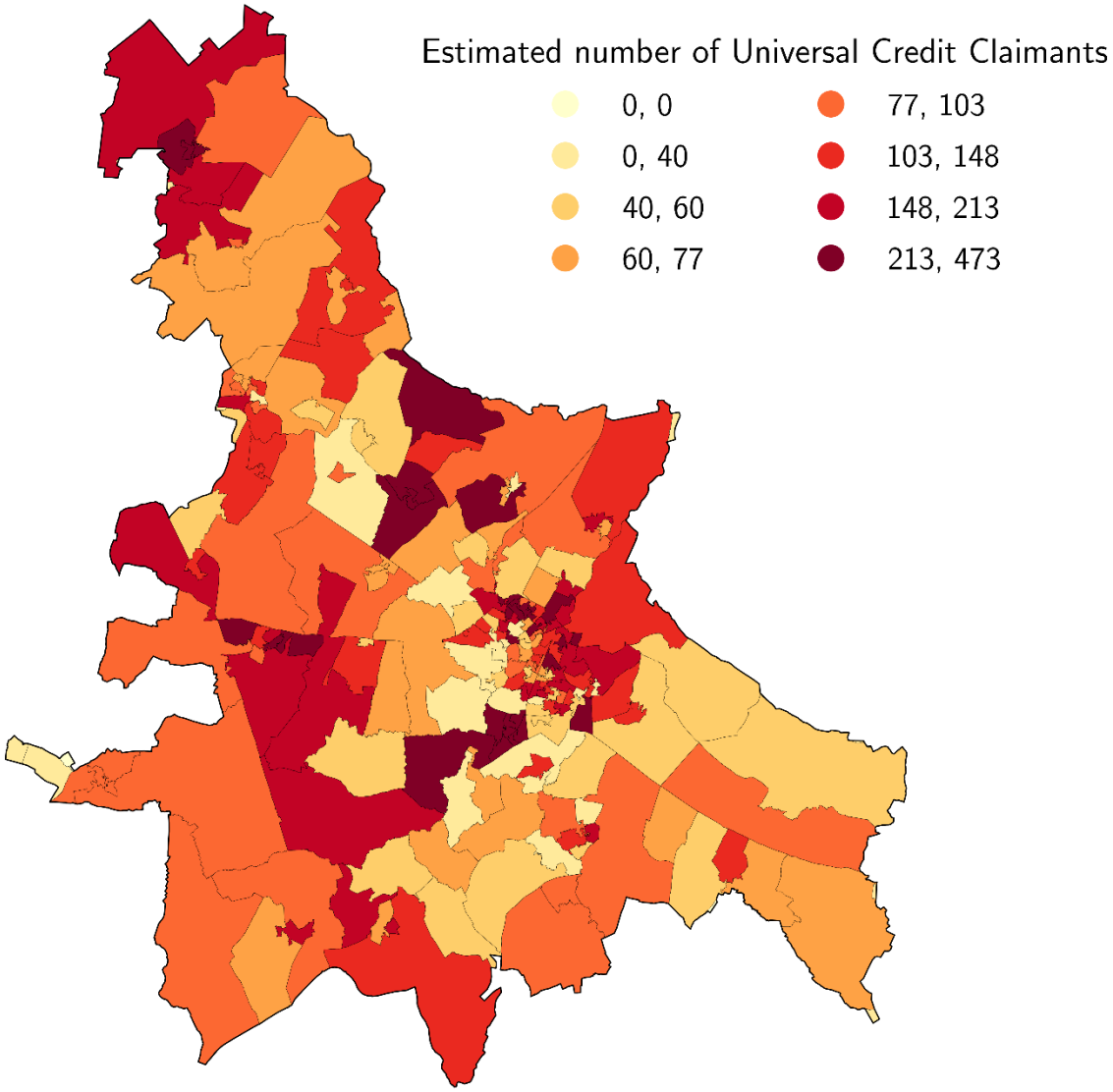
The following maps show the distribution of Universal Credit Claimants and Pension Credit claimants at LSOA level for the two water regions.

Map 17: Distribution of Universal Credit claimants in South Staffs



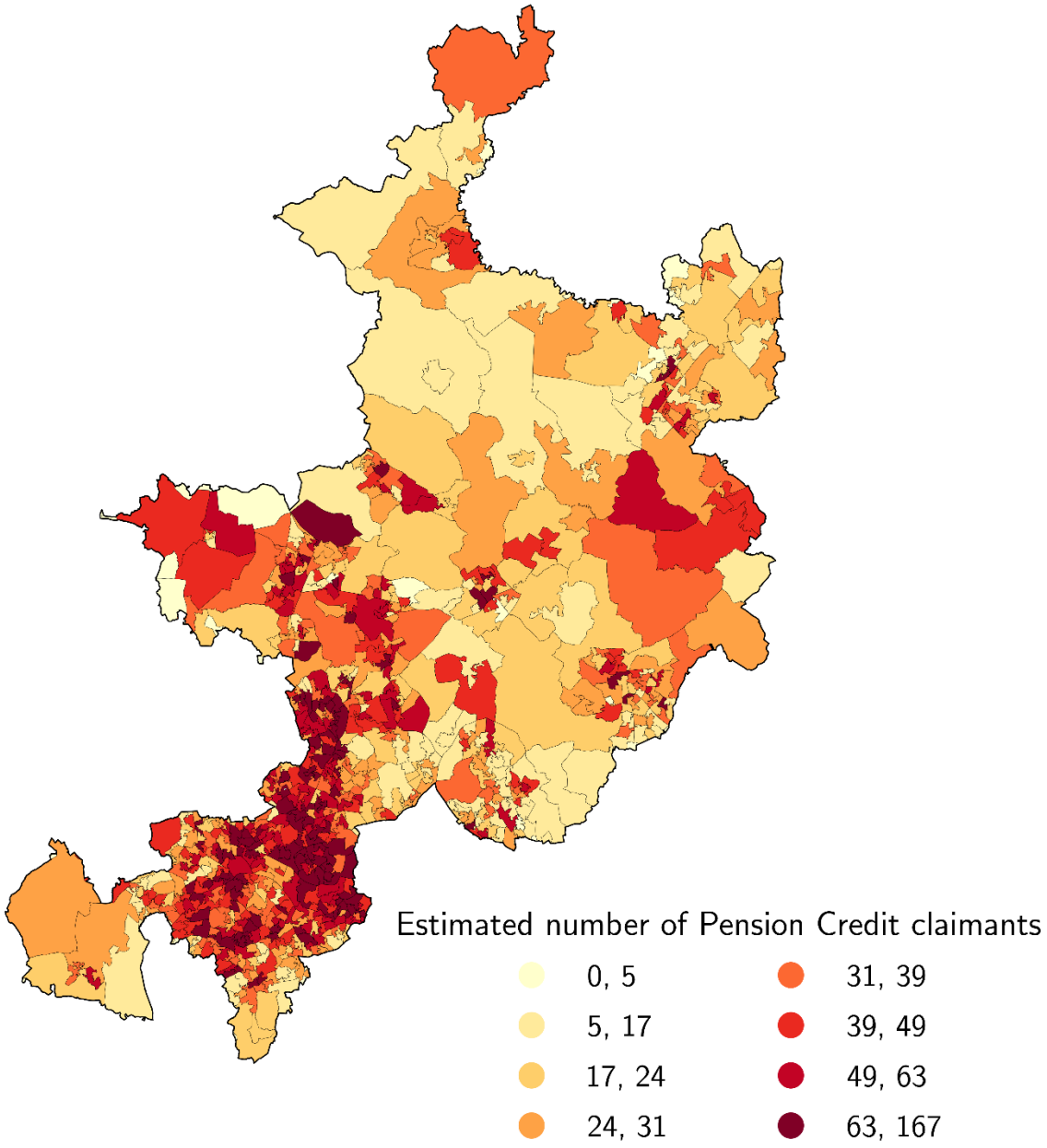
Map 17 shows that there are high concentrations of Universal Credit claimants in many urban areas in Dudley and Walsall, with small pockets in Brownhills, Lichfield and Burton on Trent. There do not appear to be any concentrations in rural areas of the region.

Map 18: Distribution of Universal Credit claimants in Cambridge



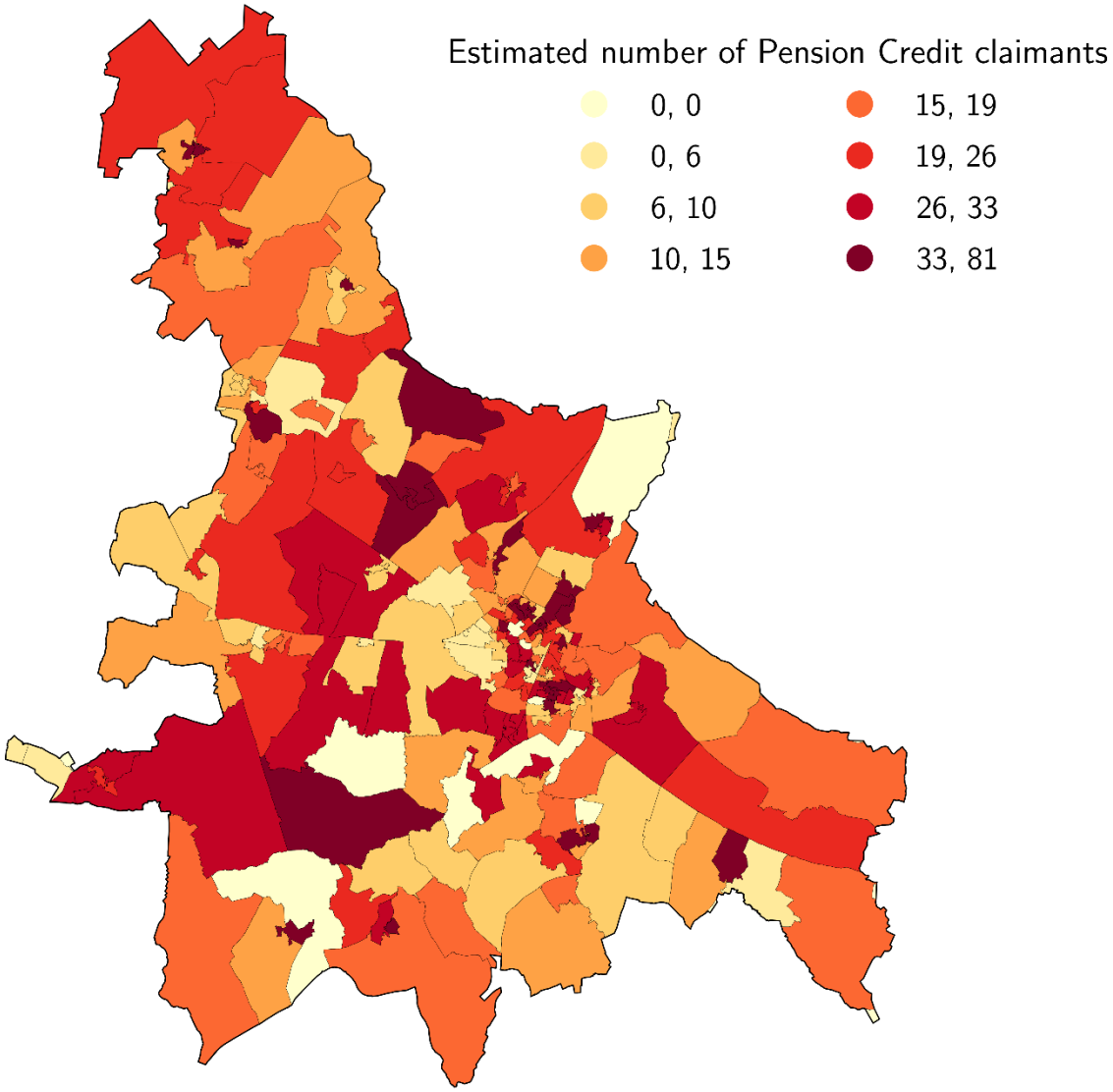
Map 18 shows that the main concentrations of Universal Credit claimants are in urban Cambridge itself plus some rural areas in the centre and north of the region.

Map 19: Distribution of Pension Credit claimants in South Staffs



Map 19 shows that as with the distribution of Universal Credit claimants, the main concentrations of Pension Credit claimants are found in the urban areas of Dudley and Walsall, with pockets in Sutton Coldfield, Tamworth, Lichfield and Burton on Trent. There also appear to be several LSOAs with high concentrations in the west of the region.

Map 20: Distribution of Pension Credit claimants in Cambridge



Map 20 shows that the main concentrations of Pension Credit claimants are in urban Cambridge and in a number of rural areas in the centre, south, southeast and north of the region.

1.5.3. Average income in the two water regions

We were not able to identify data sources for people on low incomes at small area level. However, we did identify a data source for 'mean equivalised household disposable income' for the financial year ending in 2020. These are:

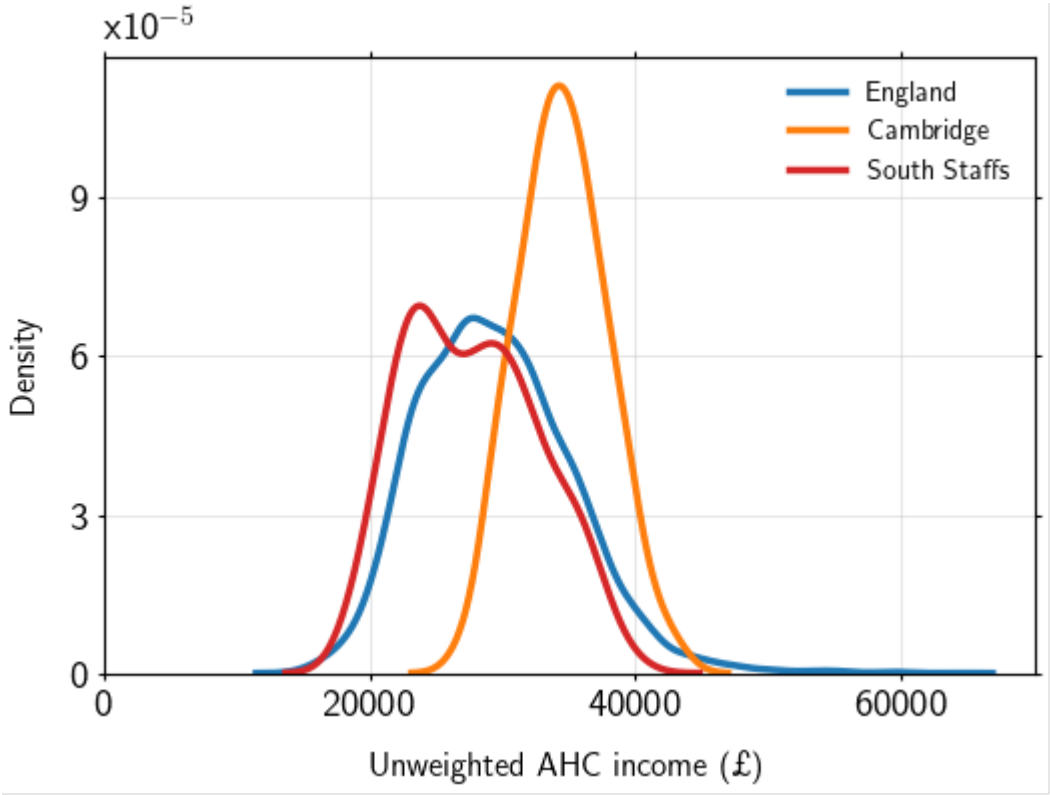
- **South Staffs**: £27,300 ± £6,500
- **Cambridge**: £35,000 ± £8,400
- **England**: £29,100 ± £7025

Figures quoted are After Housing Costs (AHC)

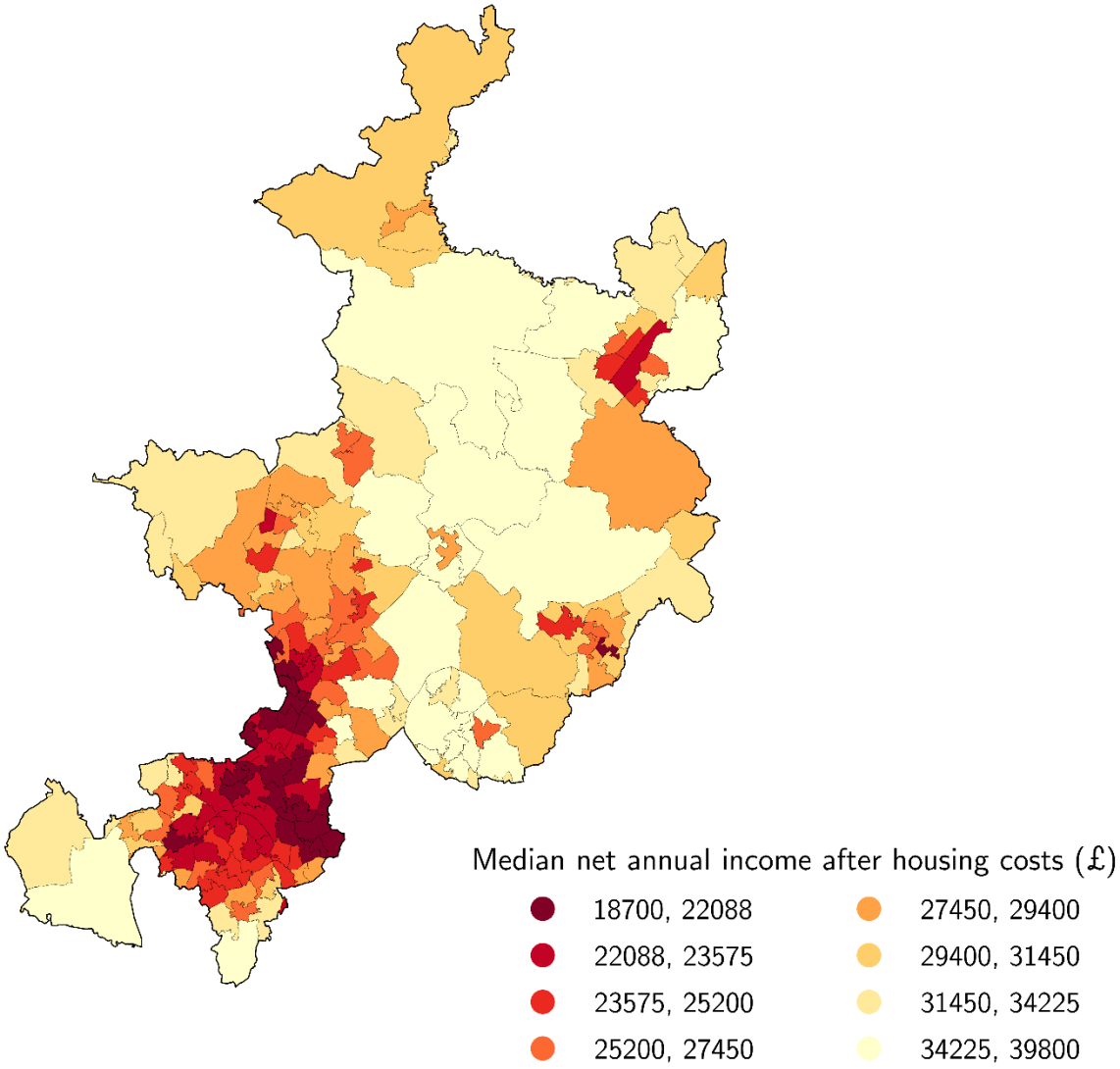
The margins of error are quite substantial for the mean figures shown. However, they suggest that average incomes are considerably lower in South Staffs than both Cambridge and England as a whole. This suggests that low income is pervasive across the South Staffs supply area.

The average income of consumers in the Cambridge supply area is considerably higher than that for England (assuming the mid-point for the incomes illustrated).

Figure 1: distribution of income in the two water supply areas and England

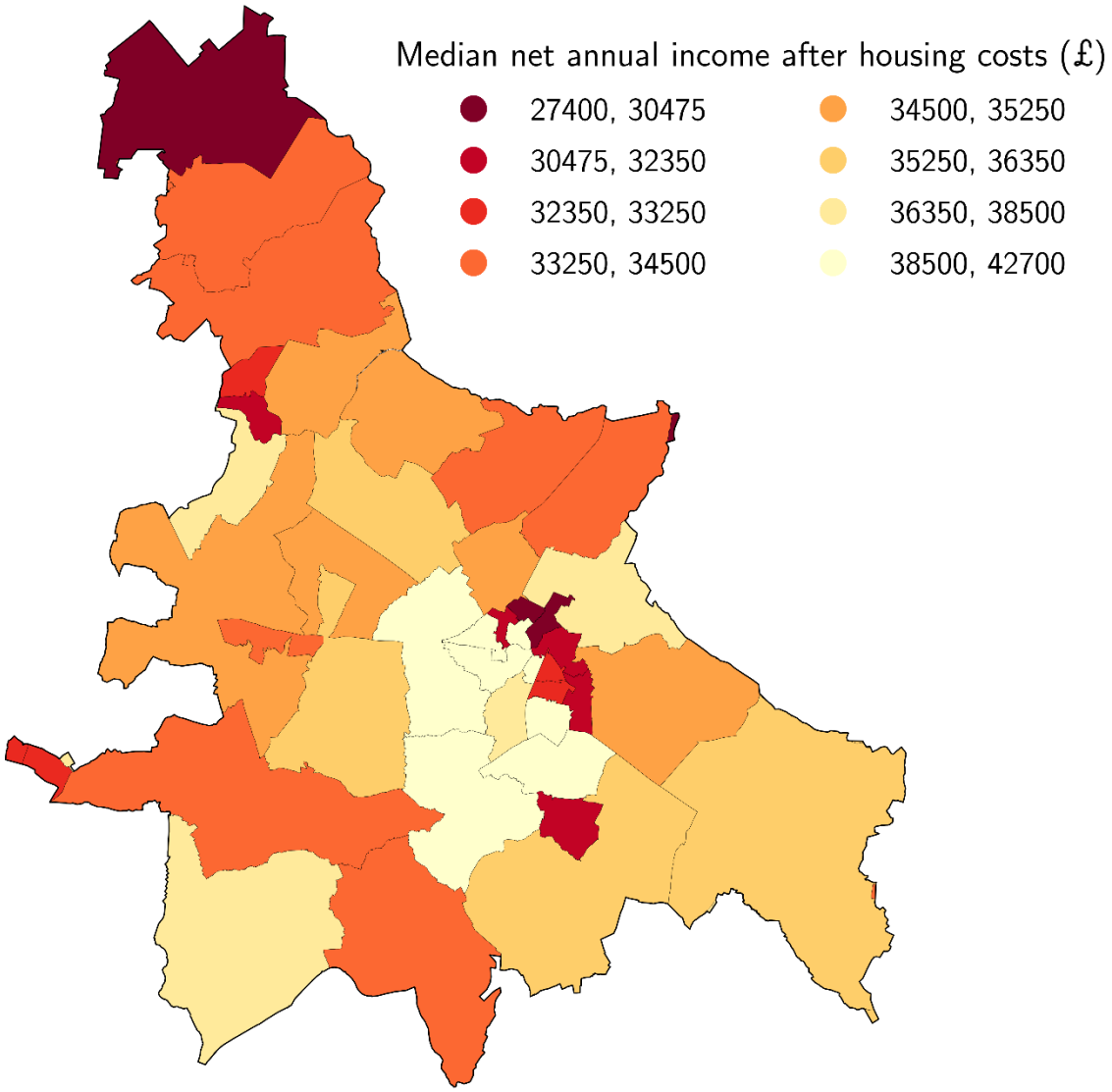


Map 21: The distribution of average incomes across the South Staffs region



Map 21 shows that the lowest average incomes are round in the urban areas in east Dudley, Walsall and a pocket in Tamworth. None of the lowest LSOAs are found in the rural areas of the region while the LSOAs with the highest average incomes are all rural.

Map 22: The distribution of average incomes across the Cambridge area



Map 22 shows that the LSOAs with the lowest average income are found in urban areas of Cambridge plus a rural LSOA in the far north of the region. It is notable, however, that the range of incomes in the lowest LSOAs in Cambridge is considerably higher than the range of incomes in the lowest LSOAs in South Staffs.

1.5.4. Debt levels in the two water regions

Table 7 below gives the level of water debt in the two SSC water regions.

Table 7: Water debt in South Staffs and Cambridge

	Cambridge	South Staffs
No of households in debt with payment plan[1]	539	6,523
% of all households	0.38	1.16
Size of median debt (£)	1,338	919
No. of households in debt without payment plan[2]	1,627	28,780
% of all households	1.15	5.13
Size of median debt (£)	2,492	1,355
Total no. of households in debt (with & without plan)	**2,166**	**35,303**
% of all households	**1.54**	**6.29**
Size of median debt (£)	**2,255**	**1296**
Size of mean debt (£)	**2,809**	**1,588**

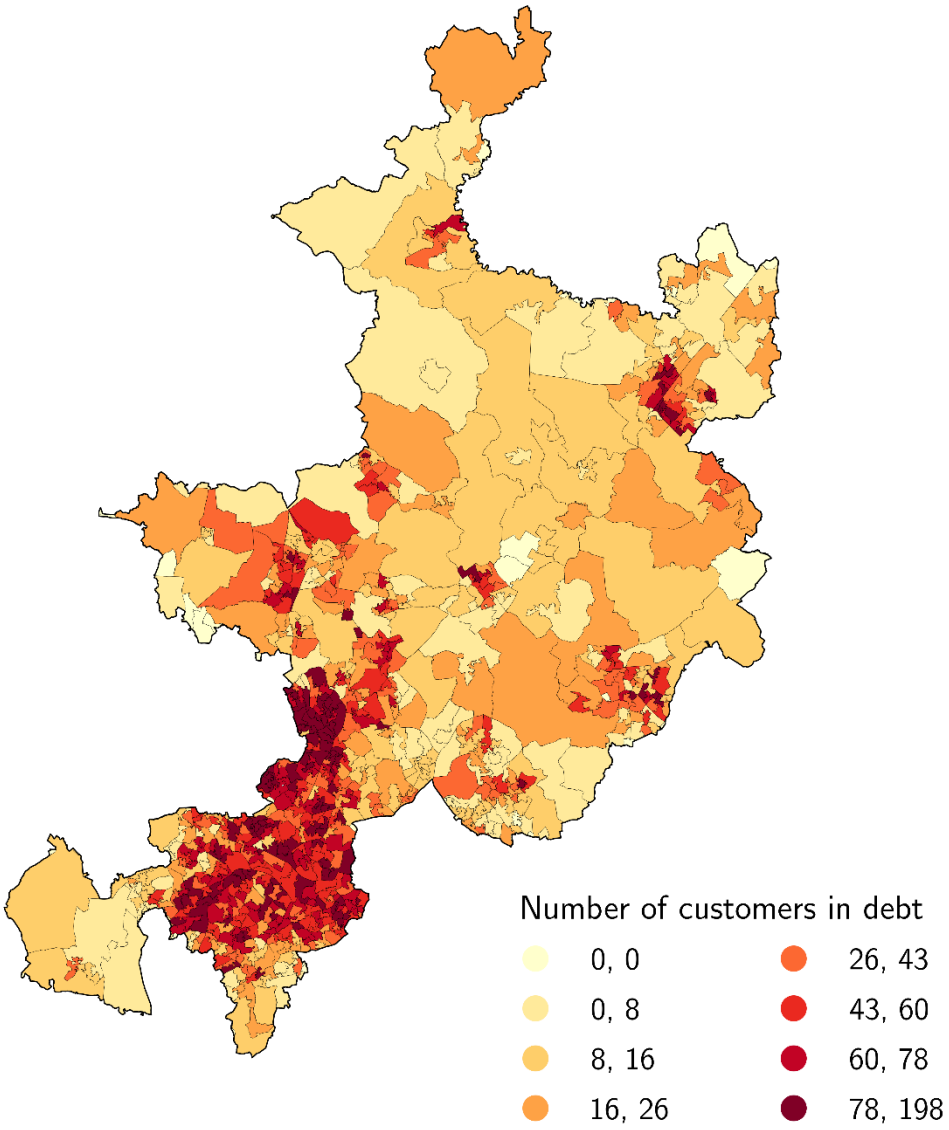
[1] Refers to households with over 12 months of arrears who have agreed a payment plan with SSC to pay off the debt. Accounts with less than £25 arrears were removed from the data set.
[2] Refers to households with over 12 months of arrears have not agreed a payment plan with SSC to pay off the debt. Accounts with less than £25 arrears were removed from the data set.

Table 7 shows that for households with water debt the number without a payment plan is much higher than that for those with a payment plan. Furthermore, the average size of median debt is unsurprisingly much higher for those without a payment plan than for those with a plan.

The size of median debt, both for those with and without a payment plan, is very high, given that water bills represent a much lower proportion of average household income than, for example, energy. The average size of median gas debt for households with a payment plan was £596 for Q3, 2024 while the equivalent figure for households without a payment plan was £1,324 (Ofgem, 2024).

SSC also provided us with details of consumer debt by LSOA. We have provided SSC with maps of the geographic distribution of those in debt, average debt and total debt as well as of water consumption, metered and un-metered consumers. Map 23 below shows the distribution of consumers in debt in the South Staffs region.

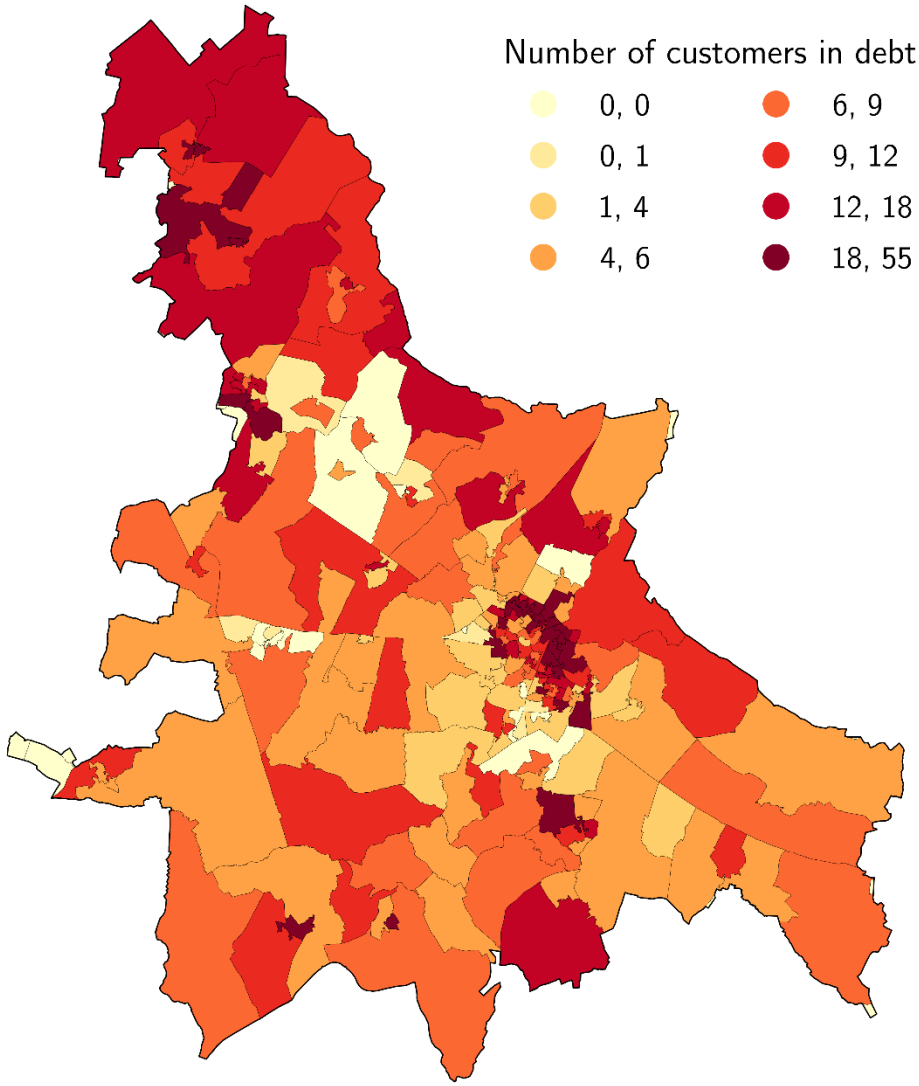
Map 23: Distribution of consumers in debt in South Staffs



Map 23 shows that the LSOAs with high levels of consumers in debt are generally found in the urban areas of Dudley and Walsall with pockets in Sutton Coldfield, Tamworth, Lichfield, Cannock and Burton on Trent. These LSOAs also appear to be those with high levels of low income consumers (see, for example, Map 17: Distribution of Universal Credit claimants).

Map 24 below shows the distribution of people with debt by LSOA for the Cambridge region.

Map 24: Distribution of consumers in debt in Cambridge



Map 24 shows that LSOAs with the highest number of consumers in debt are found in urban areas in Cambridge, St Ives, Cambourne and some rural areas to the north and south of Cambridge. Again, while the number of consumers with debt/LSOA is very low, Map 24 the size of debt collectively owed by those consumers is extremely high: £35,600 to £145,700 in the LSOAs with the highest level of debt.

1.6. New needs codes

We suggested a number of new needs codes that SSC could adopt to help with prioritisation of most at risk groups of consumers and to address potential gaps in the PSR given trends. SSC also suggested several needs codes that their outreach work suggested had an impact on vulnerable consumers.

1.6.1. Rationale for the new needs codes

Over 75 and 85

Utility companies have historically used households of pensionable age as a proxy for 'at risk older people', but many pensioners in their sixties do not require additional support. This may also be the case for people over 75 and over 85. However, with an aging population and a greater propensity for disability, medical conditions and frailty among these older age groups, we suggest SSC capture these higher risk groups among older people.

Unpaid carers

In recent years unpaid carers have been identified as a group disproportionately negatively impacted by the Covid-19 pandemic, the cost-of-living crisis and ill health. An aging population and increased prevalence of long-term health conditions is putting increasing demands on this group which includes child carers, older workers, and people of pensionable age who themselves may be vulnerable.

Unpaid carers are often on low incomes, unable to work or forced to work part-time due to caring responsibilities. Upcoming changes to health and social care policy are likely to result in more highly vulnerable people living at home, including during end-of-life care. The number of carers is also expected to increase in number. Supporting carers not only helps support the carer but also the 'cared for' person, building household and community resilience especially during incidents.

Research from Carers UK and the Centre for Care (Carers UK 2022) estimates the economic value of unpaid care at approximately £184.3 billion annually, marking a 29% increase since 2011. This figure is comparable to the entire annual budget of the NHS across the UK.

Living alone or isolated rural areas

Including a needs code for living alone or in isolated areas with no immediate neighbours is an Age UK recommendation (AgeUK). According to organisations such as Aging Without Children and the Centre for Aging Better, there are a growing number of people living alone without immediate support meaning they have nobody to rely on to help them access services or support them when things go wrong such as supply interruptions or flooding. A quarter of all people aged 50 and over now live alone and there has been a particularly large increase for men aged 65 and over. By 2043 it is predicted that almost 4.5m people aged 65 and over will live alone (Census, 2021).

These changes have an impact on access to social networks and informal care as we age and affect the types of community support needed. Older adults who live alone are also more likely to attend accident and emergency, visit their GP, have multiple long-term health conditions and have mental health conditions. There is likely very positive social return on investment from supporting this cohort of consumers.

Different languages

Where people do not speak English, understanding the language they speak enables SSC to tailor their communications appropriately. The growth in AI may enable automatic translation services.

Digital exclusion

We propose a digital exclusion needs code. Digital exclusion correlates strongly with social and economic exclusion (poverty, unemployment), and intersects with a range of characteristics including age, disability, geography, educational attainment, literacy and language, housing circumstances. Digital exclusion is not only experienced by people in later life. Age (over 65 years) remains the strongest predictor of not being online or only using the internet for very few things, but – across all adult ages – there is a well-evidenced link between living in poverty and experiencing digital exclusion (Good Things Foundation 2024).

Access to technology is a great enabler for those with disabilities who can use it. Lack of access to technology and digital can make it harder to access services, advice, information, seek redress when problems occur and stay safe during incidents. The main barriers people face are not being able to afford to access the internet to get connected or stay connected (not having sufficient data connectivity, not having a suitable device), and not having the skills, confidence, and support to use the internet.

A person's digital capability is hugely dependent on their skills and motivation to safely and confidently navigate the online world as well as having the 'hardware' to do so. Some people experience all these barriers together. Some can afford data and a device, but lack skills; others may have the skills, but not be able to afford data connectivity or afford a device. Digital exclusion can therefore be a useful proxy for multiple vulnerabilities and higher risk groups who may require an outward-bound phone call or face to face contact including during water supply interruptions.

Organisations such as the Good Things Foundation are forecasting a widening gap between those who are digitally engaged, and those experiencing exclusion. The Research Institute for Disabled Customers (RIDC) reminds us that just because people can use technology and digital services now, this may change as they age which is increasingly important with our aging population.

At risk of heat

Water companies can play an important role in supporting consumers during heatwaves, helping to raise awareness of protective behaviours and interventions. Where heatwaves coincide with water shortages companies have to balance messages promoting water saving with those to ensure more vulnerable customers continue to use enough water (for cooling, drinking) to stay healthy and comfortable.

Certain demographics and urban areas with heat retaining infrastructure and lack of access to green spaces and water, are at greater risk of exposure to heat. While cold-related health risks will continue, heat-related health risks are projected to increase, potentially substantially. Temperatures that may cause inconvenience for most healthy adults can pose a significant health risk to individuals with chronic health conditions and older adults – thus heat is often referred to as the 'silent killer'. The impacts of climate change on health are likely to exacerbate health inequalities, impacting disadvantaged and vulnerable communities the most (UKHSA). Given the importance of water to health during hot weather, water companies' role will inevitably grow here.

Care leavers

Care leavers are identified to be at a higher risk of experiencing mental health issues, often struggle with unemployment and low incomes, and report lower wellbeing compared to their non-care-experienced peers. Many care leavers experience the 'care cliff' at 18, leading to a decrease in the access they have to services. As they transition into independent living, care leavers can face a number of practical challenges, often with little emotional, financial and personal support. This includes lack of support with practical challenges of paying for a water bill, budgeting, water efficiency and accessing services (Research in Practice, 2024). The Children's Commissioner calls for all parties to play their part including "utility companies offering discounts or waivers on bills" (Children's Commissioner, 2023).

Bereavement

It's important that SSC provides sensitive and compassionate support to customers experiencing grief, recognising the potential knock-on impacts on mental, physical and financial health. According to Cruse, almost three in ten bereaved people said the contacting all the relevant companies of a loved-one's death was not straightforward. Many said it was time consuming and stressful (39 per cent), upsetting (30 per cent) and traumatic (16 per cent) (Cruse). There is much water companies can do to ensure customers do not fall into financial difficulties following a bereavement and opportunities to tailor service design and delivery for bereaved consumers.

Cruse is calling for a Bereavement Standard making it easier to close the accounts of someone who dies. This includes:

- An agreed timeframe for companies to respond to bereavement enquiries and settle outstanding customer balances.

- A dedicated bereavement customer care channels for each company, and appropriately trained customer care staff, to handle such cases and avoid customers waiting on calls.
- The standardisation of paperwork needed to close an account, with a view to accepting digital documents (incl. death certificates) whenever possible.

Postal deprivation

In 2020, Citizens Advice research uncovered that seven million people across the UK had struggled to access their post at some point in the preceding decade. The latest research published in 2024 has found the problem is only getting worse. Three million people have faced financial losses because of post exclusion.

- Letters continue to play a vital part in our communications infrastructure. UK public services still rely heavily on post, even in the face of declining letter volumes overall as we transition to digital communication. 77% of UK adults received important information, like benefits paperwork, court documents, bills or ID through the post in the six months leading up to June 2023.
- People experiencing homelessness, victims and survivors of domestic abuse and those from a Gypsy, Roma and Traveller community are disproportionately impacted by post exclusion. And people who experience post exclusion are also more likely to be on a lower income, disabled, younger, from a Black, Asian or Minority Ethnic background and renting.
- People lacking a secure address are likely to be managing tight budgets, dealing with historic debts, lack of access to credit and low incomes. They may need to engage with the benefits system or receive offers of financial support via the post.
- It is important that all our customers can receive their bills on time and any postal communication outlining the support we can offer, both financial and wider PSR services.

Table 8 below gives details of the potential new needs codes we agreed with SSC to investigate for this analysis. As with existing needs codes we assigned a priority level to each code. We also assigned a confidence level with respect to the extent to which the proxy indicator reflected the needs code. Further details of the codes and caveats associated with the proxies identified can be found in Appendix 2.

Table 8: Proposed new needs codes and corresponding proxy indicators

PSR code	Priority	Dataset	Confidence
Over 75s	Medium	Mid-year population estimates	High
Over 85s	High	Mid-year population estimates	High
Unpaid carers	Medium	Unpaid carers in England and Wales	High
People living alone	Medium	Household composition by age	High
Living in remote rural area	Medium	Population Statistics for Rural England	High
Different languages	Medium	Main Language (Detailed)	High
Digitally excluded	Medium	Digital Propensity Index	High
At risk of heat	Medium	Neighbourhoods vulnerable to heat in England	Low
Care leavers	Medium	Children looked after in England, including adoption	Low
Postal deprivation	Low	The English Indices of Deprivation	Low
Bereavement	Medium	Death Registrations	High

We also proposed three further indicators: **'living in an area without support services' (generally associated, but not uniquely, with rural areas), refugees and asylum seekers and people experiencing financial / domestic abuse.** However, we could not find appropriate proxy indicators at small area level for these codes (see Appendix 2).

In addition, CCW and the company's ICG Chair suggested SSC consider the following additional needs codes:

- **Children of school age (particularly important given the government's focus on families)**
- **Neurodiversity**
- **Pregnancy**
- **End of life care.**

We were unable to find proxies for end-of-life care, pregnancy, and neurodiversity that would be appropriate for mapping (i.e. any sub-national geographic level), but we were able to obtain the number of current school age children (5-16) at LSOA level, projecting this to 2040 (Table 13).

1.6.2. Prevalence of vulnerabilities for new needs codes

The following summarises key findings from the new needs codes we reviewed.

Communication and access needs

- Other than English, **Punjabi** is the most prevalent main language in South Staffs, representing 2.2 % of the population (30,900 people). In certain LSOAs, over 50% of the population speak Panjabi as their main language. 0.5% of the UK population (273,000 people) speaks Punjabi. The proportion of Punjabi speakers in South Staffs is therefore considerably higher than the national average.
- In Cambridge, **Polish** is the largest main language group (after English) at 1.2 % of the population (4,200 people). This is also the most commonly spoken main language, after English, in England at 1.1% of the population (591,000 people).
- **Bereavement** affected an estimated 1.8% of the South Staffs population (24,418 people) and 1.1% in Cambridge (3,931 people).

Supply Interruptions

- An estimated 11.8% of people in South Staffs (163,534 people) and 11.3% of Cambridge (40,560 people) are **living alone.** The equivalent figure for England is 13%.
- **Unpaid Carers** (defined as people who provide any unpaid care) account for an estimated 9.1% of people in South Staffs (125,549 people) and 7.2% in Cambridge (25,605 people). The equivalent figure for England is 9.8%. This suggests the proportion in South Staffs is similar to the national average whereas it is significantly lower in Cambridge.
- 8.8% of the South Staffs population is **over 75** (122,084 people). The corresponding figure for Cambridge is 7.9% (28,168 people). The equivalent figure for England is 8%.
- 2.4% of the South Staffs population is **over 85** (32,839 people). The corresponding figure for Cambridge is 2.3% (8,103 people). The equivalent figure for England is 2.9%

GAP ANALYSIS

1.1. Estimating the gap between those eligible and those receiving priority services

We carried out a gap analysis to assess the extent to which SSC's priority services are reaching the number of people potentially eligible for these services. We did this by comparing the number of people currently registered with SSC for each priority service with the total number potentially eligible, as revealed by the proxy indicators identified in Section 3 above.

Note: for proxy datasets which counted population rather than households, we assumed that only one person per household had a specific vulnerability. This may have led to an overestimate of eligibility – see caveats for each dataset in Appendix 2.

It is important to appreciate that the number of people potentially eligible for a service represents a theoretical estimate or maximum. Many people eligible for services may use an alternative service or mechanism to meet their need, or do not find their need is of sufficient concern to require tailored support, e.g. some may benefit from a spoken bill, but choose to get a family member to support them or use digital software to read their bill. In addition, well designed inclusive services, including accessible websites and communications, can reduce the need for bespoke PSR services.

However, many may not be aware of their eligibility and could be subject to considerable detriment or even danger because of their lack of awareness, e.g. those dependent on water for medical reasons.

The gap analysis therefore gives an indication of where SSC may need to make particular effort in trying to reach eligible consumers and make them aware of the services provided. This might be, for example, through communication campaigns, working with intermediary organisations or reaching out in areas with high concentrations of vulnerable groups (as shown in the small area analysis carried out by this research).

Tables 9 – 12 below show the gap analysis for each category of needs codes, that is for those for which suitable proxies were identified. The needs codes are ranked according to the size of the gap (largest to lowest) between the number of people receiving a service and those potentially eligible in the South Staffs region, as indicated by the proxy indicator.

The rankings for the Cambridge region are generally similar to those for South Staffs, although there are two outliers – there's a notably larger PSR gap for deaf and hard of hearing, and sign language interpreter in Cambridge than the South Staffs area.

Table 9 below shows the gap analysis for the communication needs codes investigated. The needs codes are ordered from largest to smallest gap for the South Staffs region within this category. The ranks are generally the same for the Cambridge water region, although they occasionally differ.

Table 9: Gap analysis for SSC's two water regions: communication needs codes

Needs code	SS no. on PSR	SS no. potentially eligible	South Staffs gap: no.	SS gap: %	Cam. no. on PSR	Cam. no. potentially eligible	Cam. gap: no.	Cam. gap: %
Bill explained over phone[2]	331	298,840	298,509	99.9	67	44,079	44,012	99.9
Nominee Service	299	125,549	125,250	99.8	33	25,605	25,572	99.9
Learning disabilities	27	7,704	7,677	99.7	2	1,363	1,361	99.9
Power of Attorney	1,165	233,092	231,927	99.5	208	50,115	49,907	99.6
Contact 3rd party on my behalf	645	125,549	124,904	99.5	98	25,605	25,507	99.6
Hearing difficulties	3,136	144,470	141,334	97.8	473	34,299	33,826	98.6
Unable to comm. in English	505	29,660	29,155	98.3	63	3,723	3,660	98.3
Mental health condition	11,005	197,155	186,150	94.4	1,830	40,353	38,523	95.5
Blind	734	5,918	5,184	87.6	110	2,049	1,939	94.6
Large print bill & information	1,431	17,392	15,961	91.8	203	3,392	3,189	94.0
Braille bill & information	64	725	661	91.2	6	143	137	95.8
Partially sighted	2,899	38,448	35,549	92.5	398	3,392	2994	88.3
Deaf/hard of hearing	5,231	3,093	-2,138	0	813	748	-65	0
Sign language interpreter	67	69	133	66	6	21	15	71.4

[1] Rounded to nearest one decimal place.

[2] Many people are likely to use a range of alternative services to this one. This is therefore unlikely to represent a significant gap in provision.

Table 10 below shows the gap analysis for the supply interruption needs codes investigated. The needs codes are ordered from largest to smallest gap for the South Staffs region. The ranks are comparable between the regions.

Table 10: Gap analysis for SSC's two water regions: supply interruption needs codes

Needs code	SS no. on PSR	SS no. potentially eligible	South Staffs gap: no.	SS gap: %	Cam. no. on PSR	Cam. no. potentially eligible	Cam. gap: no.	Cam. gap: %
Chronic kidney disease	16	67,174	67,158	100	1	8,306	8,305	100
Diabetes	55	123,357	123,302	100	2	18440	18,438	100
Epilepsy	8	12,502	12,494	99.9	1	2,183	2,182	100
Respiratory disease	5	3,334	3,329	99.9	-	347	347	100
Water: religious practices	205	125,415	125,210	99.8	18	17,073	17,055	99.9
Chronic / serious illness	24,990	209,153	184,163	88.1	3,938	30,316	26,378	87
Of pensionable age	20,640	149,982	129,342	86.2	4,455	35,246	30,791	87.4
Dialysis at hospital	124	532	408	76.7	24	70	46	65.6
Family: young < 5	18,632	65,426	46,794	71.5	3,932	14,387	10,455	72.7
Dvlp/neurological condition	3,340	7,704	4,364	56.7	557	1,363	806	59.1
Heart condition	24,990	49,052	24,062	49.1	3,938	8804	4866	55.3
Phys. impair./mobility issue	23,533	32,202	8,669	26.9	3,649	4,407	758	17.2
Dialysis at home[1]	239	113	- 126		39	15	- 24	

[1] The eligibility for dialysis was estimated by applying national proportions to the prevalence of CKD. However, evidence suggests more people use dialysis in hospital than at home, even though more are people registered on SSC's 'dialysis at home' than on its 'dialysis at hospital' PSR needs codes. This gives rise to the anomalous negative figure – see further explanation below.

The anomalous data for dialysis arises from the fact that only 0.95% of people with CKD are also on dialysis in England. From this reduced dataset, we calculated 17.5% had dialysis at home, and the remainder had dialysis at hospital (proportions given in KCUK (2025) and NFK (2024)). These are national figures that may vary geographically. The figures in Table 10 above are therefore representative of people on dialysis rather than exact estimates. Nonetheless, while there are fewer people estimated to have home dialysis than those registered with SSC (hence the negative number), the total number of people estimated to be on dialysis (home + hospital) is greater than those registered with SSC. This indicates that there may currently be some people missing in the register.

Table 11 below shows the gap analysis for the mobility/access needs codes investigated. The needs codes are ordered from largest to smallest gap for South Staffs. The ranks are the same for the Cambridge water region.

Table 11: Gap analysis for SSC's two water regions: mobility/access needs codes

Needs code	SS no. on PSR	SS no. potentially eligible	South Staffs gap: no.	SS gap: %	Cam. no. on PSR	Cam. no. potentially eligible	Cam. gap: no.	Cam. gap: %
Unable to answer the door	874	113,701	112,827	99.2	95	18,629	18,534	99.5
Disabled	2,022	195,998	193,976	99.0	350	40,460	40,110	99.1
Meter reading assistance	3,285	195,998	192,713	98.3	604	40,460	39,856	98.5
Extra time to answer door	11,950	32,202	20,252	62.9	1,654	4,407	2,753	62.5
Physical impairment / mobility issue	23,533	32,202	8,669	26.9	3,649	4,407	758	17.2

Table 12 below shows the gap analysis for the one financial needs code we were able to identify a proxy for, namely Single Occupancy Assessed Charge (SOAC).

Table 12: Gap analysis for SSC's two water regions: Single Occupancy Assessed Charge

Needs code	SS no. on PSR	SS no. potentially eligible	South Staffs gap: no.	SS gap: %	Cam. no. on PSR	Cam. no. potentially eligible	Cam. gap: no.	Cam. gap: %
SOAC	1,429	46,647	45,218	96.9	9	8,759	8,750	99.9

1.1.1 Summary of gap analysis findings

Tables 9 – 12 shows that while overall levels of vulnerability are higher in the South Staffs area, the PSR gaps for the most part are marginally higher in the Cambridge area (the exceptions being physical impairment/mobility issues, extra time to answer the door and kidney dialysis).

The gaps were particularly high (at least 99%) for the following needs codes:

- Chronic health conditions: Chronic Kidney Disease, Diabetes, Epilepsy
- Communication: nominee services, power of attorney

The gaps were also very high (85-95%) for these needs codes:

- Mental health conditions (94-95%)
- Pensionable age eligibility (86%)
- Chronic/serious illnesses (88%)

The gaps were substantial (50-80%) for the following codes:

- Developmental/neurological conditions (57%)
- Heart conditions (49%)
- Families with children under 5 (72%)

The gaps for the following codes were more modest (below 30%):

- Physical impairments/mobility issues (17%)
- Registered deaf/hard of hearing (3-24%) (though of note 'hearing difficulties' PSR gap is substantially higher at over 97% for both regions).
- Sign language interpreters (just 2.9%)

1.2 Implications of gap analysis for SSC's vulnerability strategy

Ofwat expects water companies to grow their PSRs beyond the levels achieved during the 2020 - 25 period. For most of the needs codes, the analysis identified a significant gap between the number of households potentially eligible for PSR services and those registered on the PSR. This represents an important opportunity for SSC to improve the identification of customers with additional needs and in turn the quality of its service and consumer satisfaction.

1.2.1 Identifying vulnerability

Ofwat's Service For All vulnerability guidance requires that companies have systems in place to effectively identify customers who may have extra help or support needs. Companies are expected to make all reasonable endeavours towards having a comprehensive picture of PSR service requirements of individual customers in their regions and to make consistent progress in this area. The PSR gap estimates in this report can be used as a guide to inform SSC's PSR targets and to measure progress.

In line with good practice, we recommend that SSC:

- Makes it easy for consumers to self-refer onto the PSR e.g. via a more *accessible* website, face to face, by phone, email, letter and other media. This includes for transient and financial needs (these are not options on the current online form for example).
- Ensure call centre and field staff are appropriately trained and have the soft skills to sensitively use every available touch point with customers to identify long-term and temporary vulnerability.
- Have systems in place to enable employees to easily record additional needs, including out in the field, e.g. Wales & West Utilities has a PSR app for field staff so they can easily record customer vulnerability when identified during a home visit. This was informed by employee feedback on the barriers to them recording vulnerability.
- Make third party referrals from a friend, family member or carer easy to complete.
- Establish reciprocal partnership arrangements with trusted charities and support organisations including councils and health professionals who work with those with additional needs to hand hold consumers (not just sign-post) onto the PSR and financial support, e.g. British Gas has a partnership with CLIC Sargent to deliver a referral and support package to help families who have children with cancer; this helps to prevent problems and to support those struggling with the financial impact of cancer to prevent them falling into payment difficulties.

- Most water and energy network companies have outreach programmes in place to identify customers with additional needs – meeting people where they congregate, particularly with respect to harder to reach groups. e.g. Scottish Power Energy Networks worked alongside flu jab surgeries to identify vulnerable and hard to reach customers in an initiative named 'Jab and Jabber'.
- Have clear systems in place to keep records up to date. SSC should set clear PSR identification and data refresh targets and report progress against those as part of SSC's consumer vulnerability strategy. Data checking frequency must meet Ofwat's minimum standards. As a minimum, all companies should: achieve actual contact with 35% of households on the PSR every two years; and attempt contact with 90% of households on the PSR every two years.
- Monitor the effectiveness of different referral routes and adapt the approach accordingly.
- These PSR gap figures provide a guide and baseline against which SSC's progress can be measured.

1.2.3 Partnership strategy

SSC has a large number of partnerships. We recommend it reviews its partnerships in light of the PSR gaps revealed by our analysis:

- Clarify the aims of its partnership strategy e.g. raise awareness of PSR and financial support, increase referrals onto the PSR of particular groups.
- Systematically map which organisations are supporting customers with additional needs in its area so it has an up-to-date picture for its communities. Many partnerships evolve organically rather than strategically. SSC should have a clear rationale for different partnerships it has in place and how new partnerships develop.
- Partnerships should be geographically distributed in the communities identified in this report with the highest need.
- Prioritise partnerships and your engagement levels with organisations e.g. provide information only versus active referral relationships, e.g. EDF Energy France has established a network with social workers to help identify and support customers in vulnerable situations. E.ON. Germany's Unemployment Link means they work in partnership with welfare organisations and Job Centres, so that when a customer becomes unemployed they can proactively support them in managing their energy use, and in reducing or preventing energy debts.
- Work with third parties to develop mechanisms that help them to support SSC and are mutually beneficial, e.g. with training, remuneration, incentives, dedicated freephone hotline to named members of SSC staff. Ensure partners are funded fairly to support you.
- Set up mechanisms to monitor partnerships' effectiveness and impact including the number of referrals onto the PSR and support services.
- Consider a stakeholder satisfaction metric for interested and impacted groups working with consumers in vulnerable situations.

There is particular value in SSC liaising with electricity and gas network companies in its area to improve coordination and dovetail initiatives. These companies are incentivised through innovation funds to improve awareness of the PSR and identification of PSR households.

1.2.4 Awareness raising of extra help

To support identification of customers eligible for the PSR we recommend SSC baseline PSR awareness in its area and monitor progress against this.

Given the size of the potential gap across multiple vulnerabilities, it is important SSC continues to carry out region-wide PSR awareness raising campaigns across both of its areas. This includes joint campaigns with the energy sector. Good practice companies advertise support available via a wide range of communication channels.

In some of SSC's communities over 50% of the population speak Panjabi as their main language making these areas a particular priority for adapted communications.

Alongside this though we suggest more tailored messaging and creative approaches. There's a wide range of initiatives that have been piloted by different utilities that SSC can explore. E.g. scores of projects in energy network companies Vulnerability and Carbon Monoxide (VCMA) reports.

1.2.5 Data matching/sharing

We encourage SSC to participate in the energy and water sector data sharing arrangements and support moves to a 'tell it once' Priority Services Register (PSR). SSC's Independent Challenge Group highlights that SSC is an outlier here not participating in the existing arrangements which could help to substantially reduce its PSR gap.

If SSC participates in data sharing, it is likely to see a significant increase in numbers signed up to its PSR. This may also change the picture of vulnerability gaps across different PSR needs codes dependent on initiatives by other energy companies in SSC's patch as they have different priorities.

In addition, we recommend SSC explore how it can improve data matching with other organisations especially local authorities. E.g. South East Water is working with councils using powers under the Digital Economy Act to auto enrol eligible customers onto its social tariff. This is to reduce the communication burden on customers who need extra help and ensure those in need directly receive financial support.

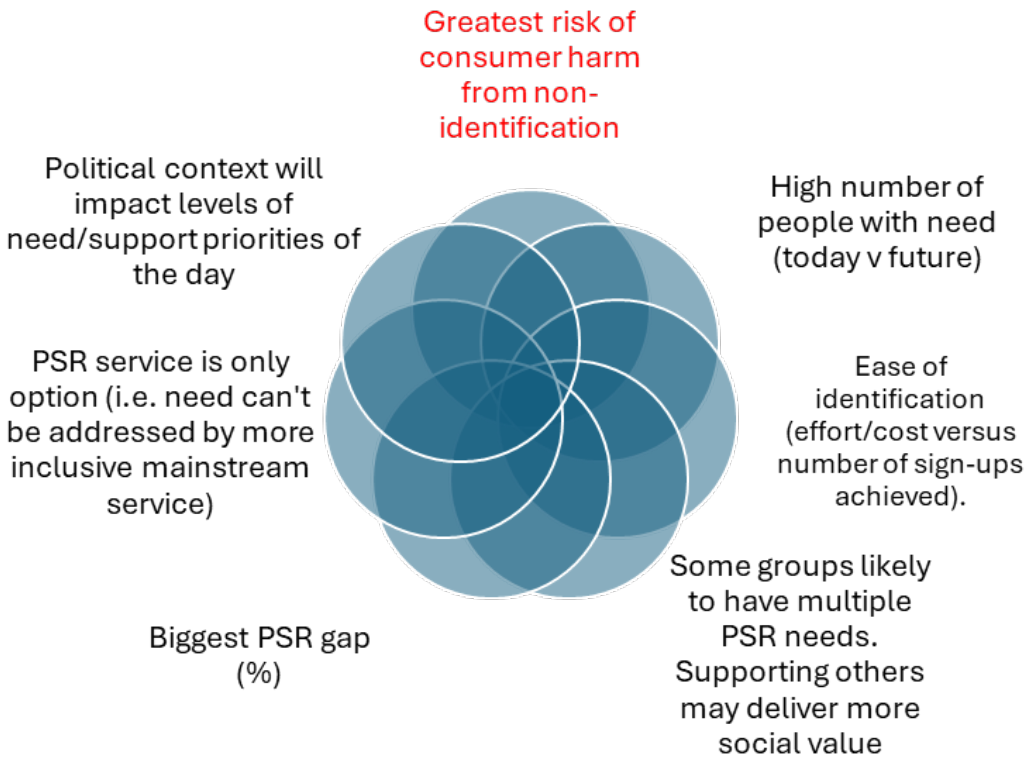
1.2.6 Prioritisation

Just because someone is eligible for PSR services it does not mean that they need these services; and even where customers do need the service, the level of that need is likely to vary significantly.

That said, it is clear that levels of vulnerability are very high in SSC's region and given the size of the PSR gap across multiple needs codes, prioritisation becomes more important and more challenging.

Ofwat has set an expectation that water companies should be mindful to prioritise those customers at greatest risk of harm. Beyond this, where to prioritise is a strategic decision for SSC taking into consideration not just the absolute numbers and PSR gap but a range of factors outlined below in Graphic 1.

Graphic 1: Factors to consider when prioritising which groups to target



Target groups at highest risk of harm and those that support them

Who is at greatest risk of harm and the support service needed may vary dependent on the situation but is likely to include those with chronic illnesses that affects their day-to-day life such as kidney disease and on dialysis, with dementia, who struggle with mobility / opening the door, or require additional water (e.g. for bathing, cleaning) due to a health condition.

We query if there's a need sector-wide to better understand health conditions that result in high water need and use, e.g. those with incontinence and with cerebral palsy may have higher water use, and being without water can cause significant distress.

Unpaid carers

We also encourage SCC to identify unpaid carers who support those who are long-term ill and are often themselves in both financial and non-financially vulnerable situations. Carers UK reports that 28% of carers are disabled (compared with 18% of non-carers) (Carers UK April 2025).

Supporting carers (especially very young and very old carers) can deliver significant social value, including reduced costs to health and social care services as well as enhancing community resilience. Identifying carers will also help to close the PSR gap of other needs codes e.g. nominee services and power of attorney as well as help identify those they care for.

Mental health

SSC may also want to prioritise those with mental health problems given the high numbers, identified gap and link between mental health, disability and those on low incomes.

Targeting over 75s and 85s especially in lower income and rural areas

Linked to prioritising those at greatest risk of harm, we also recommend prioritising the identification of older pensioners - over 75s and 85s - especially in lower income and rural areas. Pensioners may be relatively easy to identify especially with data matching and are a priority given: the high and growing numbers; the high PSR gap identified; the greater propensity for these age groups to have multiple PSR needs; and higher risk of detriment especially when living alone as increasing numbers of older people are.

1.2.7 Improve the inclusivity of its mainstream service.

This means making sure that all of SSC's mainstream services e.g. telephone, online, letters, are as accessible as possible for the largest number of people without the need for tailored support. This is particularly important given the collectively high levels of communication needs (hearing, sight impairment, unable to speak English, learning difficulties). Also given projected increases in vulnerabilities. 'Inclusive by design' reduces the need for self-identification of vulnerability (many people do not self-identify as vulnerable (Walnut December 2024); help improve customer service and reduce costs to serve of expensive bespoke services. Digital inequality is expected to increase in the future. As a priority we recommend:

- SSC ensures its **website meets the highest accessibility standards**, including in line with good practice using software such as Recite Me. Translation services should include the two most spoken languages by non-English speakers in SSC's area, Punjabi and Polish. This is a relatively 'quick win'.
- Review and improve the **accessibility of its communication channels including telephone services and customer journeys** for those who are digitally excluded households, have common sight impairments and the large and growing number of households with hearing problems.
- Introduce mechanisms to **understand the accessibility of its mainstream services** e.g. mystery shopping by customers with additional needs to understand where improvements can be made (opportunity to be industry leading).

1.2.8 Training

We recommend SSC review its vulnerability training, including refresher training for call centre and field staff in light of this analysis. This is to ensure its employees are trained to identify high risk groups and those with significant vulnerability gaps. This includes transient vulnerabilities, which are not captured on the list above, e.g.

- Barclays' Community Wings training module helped staff recognise, understand, and appropriately respond to the additional needs of customers.
- A number of companies are dementia friendly organisations.
- Given high levels of need consider the 'Louder than Words' Charter Mark accreditation awarded by Royal National Institute for Deaf People (RNID)
- Many utilities also achieve BSI Kitemark™ certification. BS ISO 22458 is an international standard that aims to increase positive outcomes for vulnerable consumers when dealing with service providers and the standard gives organisations practical advice for providing an inclusive service to consumers in vulnerable situations at all stages of delivery.

2.2. Ofwat PSR eligibility estimate

In their consultation on priority services for water companies, Ofwat estimated the total number of people in England and Wales that may be eligible for water companies' priority service registers (Ofwat, 2024). They did this by generating a custom Census dataset which included information on household disability status, age and language proficiency. The analysis determined the total number of households that met at least one of these conditions:

- Households with at least one disabled person
- Households with at least one person of pensionable age
- Households where no adults are proficient in English or Welsh

The custom dataset was organised so that each household was represented by one observation, so in cases where multiple conditions were met, a household would not be counted more than once.

To obtain an estimate of the total PSR eligibility for the South Staffs and Cambridge supply areas, we replicated the approach used in Ofwat's consultation. We first found the number of households within each local authority district that approximately corresponded to SSC's two water regions and where at least one condition was met. We then downscaled the local authority data to obtain estimates of the number of households within the service area that met one of the three conditions used by the Ofwat methodology.

This found that up to 298,704 households (53.25%) in the South Staffs service area, and 71,583 households (50.77%) in the Cambridge service area are potentially eligible to be registered on SSC's Priority Services Register. Overall, this is **370,287** households which at **52.75%** across the two regions is broadly comparable to Ofwat's estimated 52.24% of households across England and Wales.

VULNERABILITY PROJECTIONS

1.1. Population change

As stated in the methodology section, demographic projections for SSC's two water regions were generated from the ONS's most recent population projections by age for England, with baseline data derived from the 2021 Census (ONS, 2022a). The proportionate growth by age group in England for 2030, 2035 was applied to SSC service areas (see Table 13 below).

We understand that population growth is likely to vary between South Staffs and Cambridge. For this reason, we applied projections for the combined population of the two regions.

As explained in the methodology section, we decided to use national growth data, rather than local authority growth data, because the latter is only available for 2019. It is therefore out of date and doesn't reflect significant subsequent events likely to affect population trends such as COVID-19 and implementation of Brexit.

Table 13 below gives the projected population growth by age for SSC's two regions combined.

Table 13: Projected population growth in the combined SSC service regions as a proportion of the population

	2021		2030		2035		2040		Growth of
	% of total popn	Count	% of total popn	Count	% of total popn	Count	% of total popn	Count	indicator 2021-2040 %
Population		1,738,724		1,874,692		1,918,856		1,958,846	14%
Over 65s	18%	319,024	20%	377,182	21%	410,042	22%	430,076	51%
Over 75s	9%	153,269	10%	189,195	11%	207,189	12%	232,111	51%
Over 85s	2%	42,429	3%	53,113	3%	66,809	4%	71,404	68%
Children 5-16	15%	256,991	13%	249,101	12%	239,233	12%	236,612	-8%
Under 5s	6%	97,878	6%	95,314	5%	96,019	5%	97,467	0%
Deaths	1%	16,477	<1%	16,740	1%	17,795	1%	18,763	14%

Figure 2 below shows the above data in graph form.

The total population of the two service areas is projected to increase by 220,000 people by 2040 - an increase of 14% from a baseline of 1,740,000.

Figure 2: Population growth by age group in the SSC service regions

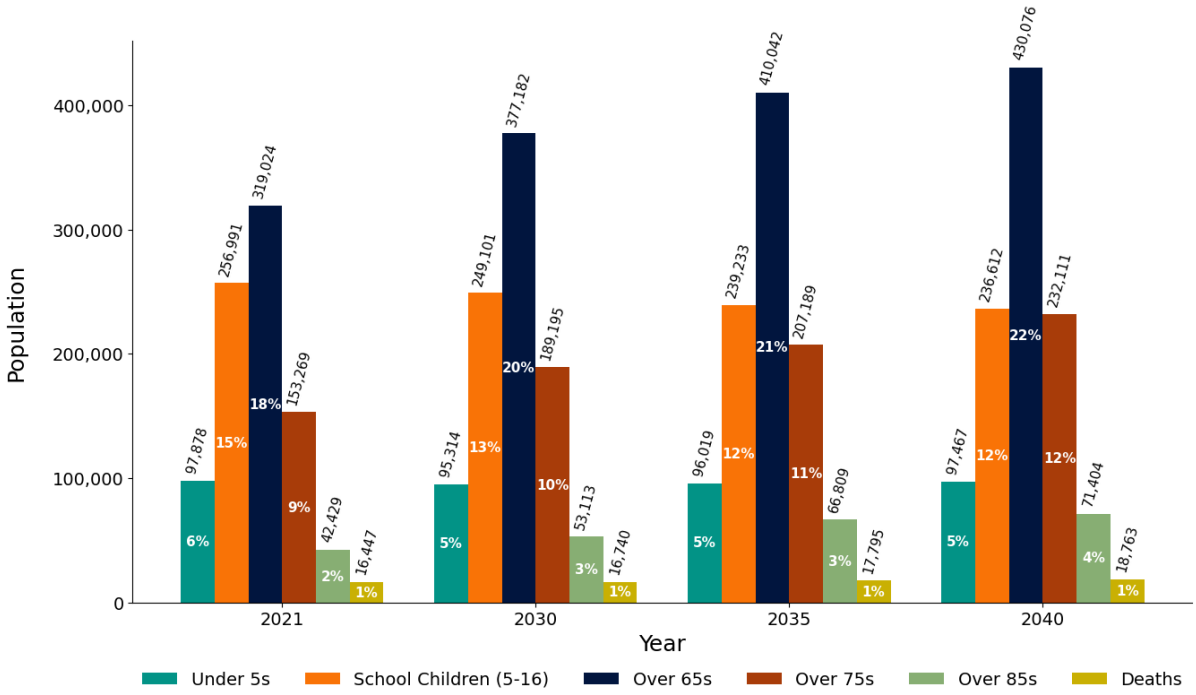


Table 13 and Figure 2 show that all the older age groups will grow in both numbers and as a proportion of the total population, reflecting the national trend of an aging society. Conversely, both the number of children aged 5 to 16 and the proportion of the population they represent is projected to decrease. However, the number of children under 5 while projected to decline from 2021 to 2030, is projected to increase slightly from 2030 to 2035 and again to 2040. Nevertheless, the latter is still slightly lower than the current number of under 5 children.

2. Vulnerability projections

We have generated projections for all the proxy indicators we identified as corresponding with the PSR high and medium needs codes (as defined by Ofwat and SSC). We have also generated projections for some of our proposed additional needs codes (several of which are shown in the population projections above). Baseline data ranges from 2021 to 2023, and as with the population projections, we have generated projections to 2030, 2035, and 2040.

Figures 3, 4 and 5 below present a summary of our findings for all the indicators investigated. The data upon which the diagrams are based is given in Appendix 3. The graphs show the projected growth, as a percentage, for each indicator in SSC's two areas combined in the medium to long term.

The diagrams show that the population of people with various vulnerabilities is projected to increase for almost all the vulnerabilities, except for people with a heart condition which is pro-

jected to decrease in the medium to long term. As well as the aging population trend already referred to, there are likely to be substantial increases (over 25%) in the number of disabled people, people with diabetes, people with dementia, people with chronic illness, people with sight difficulties (or blind), people with respiratory disease, people with hearing difficulties and people with kidney disease by 2040.

We discuss the factors that contribute to these trends below in figures 3 to 5.

Figure 3: Projected trends of vulnerability indicators in SSC to 2030

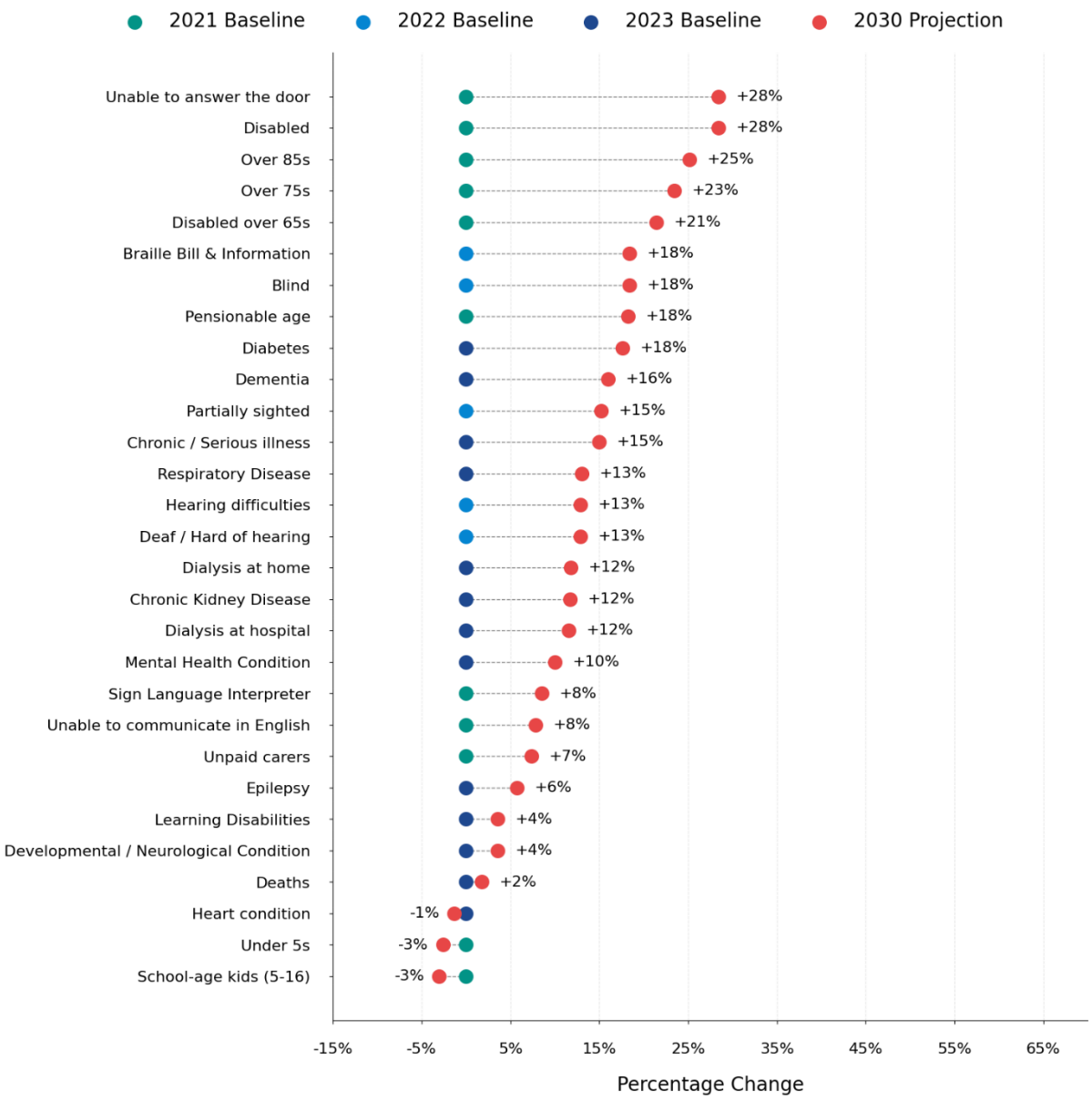


Figure 4: Projected trends of vulnerability indicators in SSC to 2035

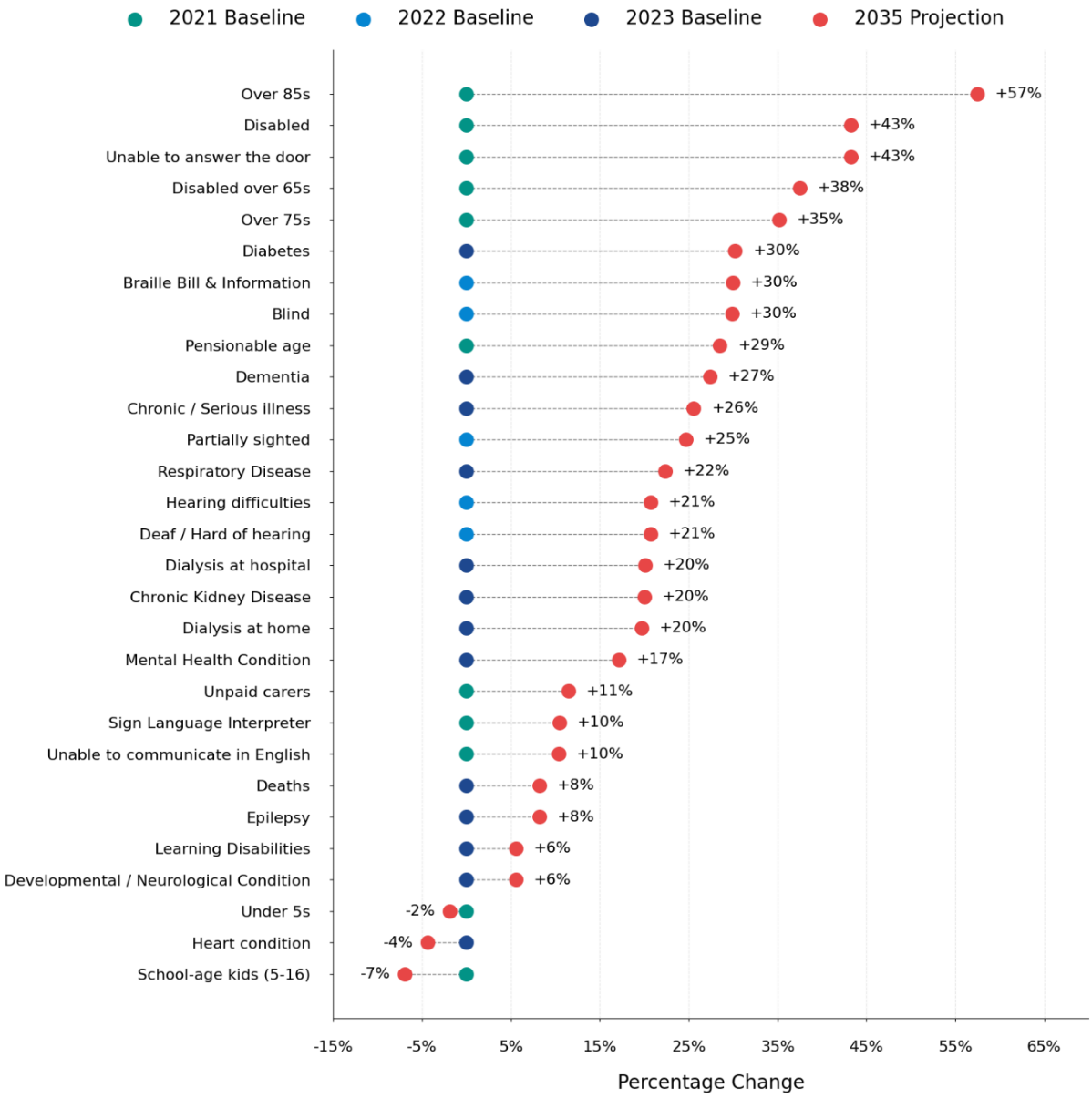
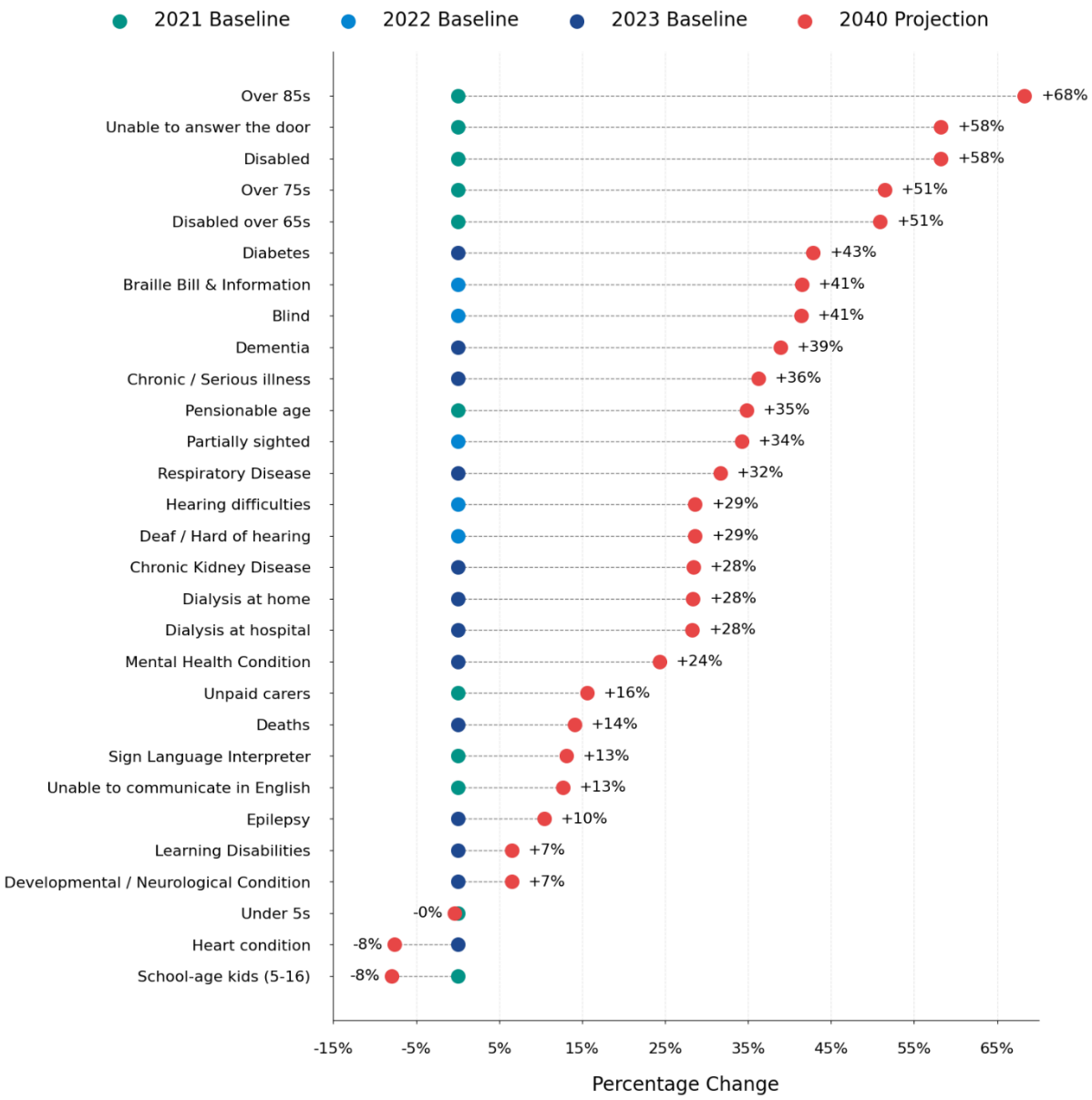


Figure 5: Projected trends of vulnerability indicators in SSC to 2040



2.1.1. Health indicator projections

As stated in the methodology section, we used the REAL Centre's analysis to generate projections to 2040 for South Staffs (South Staffs and Cambridge figures are combined) for people with various health conditions, including chronic illnesses, diabetes, dementia, Chronic Kidney Disease (CKD), dialysis, heart condition, respiratory diseases and mental health conditions. For the interim years (2030 and 2035), we assumed there was a linear annual change between 2023 and 2040.

The following outlines our approach to producing projections for the other health conditions.

Epilepsy - we did not find any specific projections for epilepsy. We therefore used national projections for the whole population for England and assumed that epilepsy would grow at the same rate.

Learning disabilities - we used national projections to determine our projections for learning disabilities, as cited in a Richmond upon Thames learning disability report (Richmond upon Thames, 2023). This provides a national projected population for people aged 16-64 and for those over 65.

The report projects a moderate increase in learning disabilities in England over the next decade, with an estimated 2-3% rise for ages 18-64 (reaching 194,194 people by 2030) and a 17% increase for those aged 65+ (reaching 35,075 by 2030). We used these proportions to calculate the growth of people with learning difficulties in the two South Staffs regions. The report also gives projections of the number of people with learning difficulties up to 2040. We were thus able to calculate the national percentage growth for 2035 and 2040 and applied these proportions to the two SSC regions.

Table 14 below gives the projections for health conditions in the two SSC water regions combined (see Appendix 3 for more detailed breakdowns).

Table 14: Health condition projections

	2023		2030		2035		2040		Growth of	Growth of
	Prev	Count	Prev	Count	Prev	Count	Prev	Count	indicator 2023-40 %	indicator 2023-40 (counts)
Diabetes	8%	141,797	9%	166,810	10%	184,676	10%	202,543	43%	60,746
Dementia	1%	12,584	1%	14,597	1%	16,035	1%	17,475	39%	4,891
Chronic illness	14%	241,002	15%	276,992	16%	302,633	17%	328,263	36%	87,262
Respiratory Disease[2]	2%	32,373	2%	36,588	2%	39,599	2%	42,609	32%	10,237
CKD	4%	75,480	5%	84,304	5%	90,607	5%	96,909	28%	21,429
Dialysis[1]	< 1%	730	< 1%	809	< 1%	870	< 1%	930	28%	205
Mental Health Cond.[5]	14%	237,508	14%	261,282	15%	278,265	15%	295,246	24%	57,738
Epilepsy[3]	1%	14,685	1%	15,522	1%	15,888	1%	16,218	10%	1,533
Learning Disability[4]	1%	9,067	1%	9,385	1%	9,571	< 1%	9,659	7%	592
Heart Condition	3%	57,856	3%	57,063	3%	55,327	3%	53,430	-8%	-4,426

[1] Cumulative numbers of people projected to need dialysis at home and at hospital

[2]Used COPD growth projections to generate projections for all respiratory diseases

[3]Projections based on overall projected population growth in England

[4]These projections are equivalent to the needs codes for developmental/neurological condition

[5] Depression growth projections used to generate projections for all mental health conditions

Diabetes cases are projected to increase 53% (an additional 61,000 people) by 2040, from a baseline of 142,700 in the two South Staffs water regions (see Table A3.2 in Appendix 3). In the UK, 2 million additional people (from a 2019 baseline) are projected to have diabetes by 2040. This growth reflects both demographic changes and increasing age-specific prevalence, influenced by factors such as obesity rates and population aging.

Dementia cases are projected to increase 48% (an additional 5,000 people) by 2040 from a baseline of 12,700 in the two South Staffs water regions. This growth occurs despite evidence that suggests age-specific rates of dementia is falling. The increase is primarily driven by population aging, as the probability of developing dementia rises significantly with age. The number of people aged 70 and older is growing substantially in England and the two South Staffs water regions (see Table 10 above).

Chronic Kidney Disease (CKD) cases are projected to increase by 35% (an additional 21,500 people) by 2040 from a baseline of 76,000 in the two South Staffs water regions. This growth is almost entirely attributable to population aging rather than changes in age-specific prevalence, reflecting the strong association between kidney disease and advancing age. The number of people on dialysis forms only a small proportion of CKD cases. Nevertheless, this is also expected to grow by 35% from the current level of 720 people (dialysis at home and in the hospital) to 936 by 2040 (see Table A3.2 in Appendix 3).

Mental health conditions were projected using Anxiety and Depression projections as a proxy. Mental health conditions are projected to increase 24% (an additional 58,000 people) by 2040 from a baseline of 240,000 across the two water regions. This condition commonly allows for remission and affects a broad age range, including both working age and retired adults. The projected increase reflects both population growth and changing patterns of diagnosis and treatment.

Respiratory Disease was projected using Chronic Obstructive Pulmonary Disease (COPD) as a proxy, given that COPD prevalence accounts for around 60% of all respiratory diseases captured by PIP within the two SSC service areas. COPD is projected to increase 39% (an additional 10,000 people) by 2040, from a baseline of 32,400 in the two service areas (see Table A3.2 in Appendix 3). Like many chronic conditions, this growth is primarily driven by demographic changes rather than increases in age-specific prevalence, though historical smoking patterns continue to influence these projections. This is despite the overall decline in people who regularly smoke.

Heart Condition was projected using Coronary Heart Disease (CHD) as a proxy. CHD is the only condition among the vulnerability indicators we assessed that is projected to decrease in prevalence. CHD is expected to fall from affecting 6.6% of the population aged 30 years and older in 2019 to 5.3% by 2040 across England. Assuming a reduction of prevalence of 0.6% per year, and taking into account ONS projections for England, this equates to a decrease of about 8% by 2040, which would lead to a decrease of 4,000 people across the two service areas from a baseline of 58,300 (see Fig. 4 above and Table A3.2 in Appendix 3).

Epilepsy projections, as stated above, are solely based on projections for the growth of the English population as a whole. This suggests the number of people with epilepsy will grow by 12.5% across the two South Staffs region (an additional 1,000 people) by 2040, from a baseline

of 14,810. Given the method for calculating the growth of people with epilepsy, the prevalence is projected to remain unchanged between 2021 and 2040.

Chronic Illnesses projections were obtained by combining the projected count for four different indicators: COPD, CKD and diabetes (as described above), plus people with severe asthma. The REAL Centre report states that asthma is the only illness among those under analysis that is expected to increase in prevalence by 2040, although it did not provide future prevalence figures (REAL Centre, 2024). Therefore, the number of people with severe asthma was projected using the calculated population growth of about 10.4% from the 2023 population baseline. We estimate that there will be around 87,000 more people with chronic illnesses by 2040 across the two service areas from a baseline of 241,000 (see Table A3.2 in Appendix 3).

Learning Disability is projected to increase by 0.42% / year – a growth of 6.5% between the 2023 baseline and 2040 across all age categories in England. This would suggest there will be over 500 more people with learning disabilities across the two service areas by 2040, from a baseline of 9,100.

2.1.2. Sensory impairment and communication projections

Sight loss - We produced projections for people that are blind, partially sighted, deaf, hard of hearing, or that use/know braille, from the Royal National Institute of Blind People' Sight Loss Data Tool (RNIB, 2022). This combines a systematic data synthesis approach with population-based modelling at local authority level.

We combined detailed prevalence data with demographic forecasts to estimate future numbers of people with sensory impairments. Base prevalence rates were derived from multiple sources: the National Eye Health Epidemiological Model (NEHEM) for sight conditions, and Davis studies and POPPI data for hearing impairments (Davis, 1995). The approximately 600 different combinations accounting for age, gender, severity, and specific conditions, were then applied to ONS population projections.

We used the actual baseline population count (2022) and the projected count (2032) provided in the dataset within the service areas to obtain an annual percentage of population growth for blind people (2.3%/ year) and partially sighted people (1.9%/ year). This annual figure was applied to the baseline population count, projecting an overall growth of 41% (blind people) and 34% (partially sighted) by 2040 from 2022 levels. The same percentage growth of blind people was applied to people that use braille, due to the underlying dataset being the same (See Fig. 3 and Table A3.2 in Appendix 3).

Hearing loss - While the RNID report provides a baseline population count for deaf and people with hearing difficulties, it does not provide future projections. We used national projections from the Royal National Institute of Deaf People (RNID) report (RNID, 2020). This estimated that by 2035, 15.6 million people in England will live with hearing loss, up from 11 million in 2015. This equates to prevalence increasing by about 2.5% per year. Combined with population growth, this translates to a 25.3% population growth by 2040 from the baseline population count in 2021. The same growth trajectory was applied to population count in the two SSC service areas.

Unable to communicate in English - For people that are unable to communicate in English or who use any type of sign language system, no projections were found in the literature. Given that they represent a relatively small proportion of the population, we assumed unchanged prevalence up to 2040, and national population projections growth was applied to the baseline population count in 2021. Note: this relates just to proficiency in English rather than, for example, as a result of a medical condition or speech impairment.

Table 15 below gives the projections for sensory and communication conditions in the two SSC water regions combined (see Appendix 3 for more detailed breakdowns).

Table 15: Sensory and communication projections

	2021/ 2022		2030		2035		2040		Growth of	Growth of
	Prev	Count	Prev	Count	Prev	Count	Prev	Count	Indicator 2021/22-2040 %	Indicator 2021/22-2040 (counts)
Braille Bill & Info	< 1%	451	< 1%	534	< 1%	586	< 1%	638	41%	187
Blind	< 1%	7,355	< 1%	8,708	< 1%	9,554	< 1%	10,400	41%	3,045
Partially Sighted	3%	47,754	3%	55,013	3%	59,550	3%	64,086	34%	16,332
Hearing Difficulties	10%	178,769	11%	201,776	11%	215,774	20%	229,932	29%	51,163
Deaf	< 1%	3,841	< 1%	4,355	< 1%	4,636	< 1%	4,940	29%	1,099
Unable comm in English	2%	33,383	2%	35,994	2%	36,841	2%	37,609	13%	4,226
Any sign language	< 1%	153	< 1%	166	< 1%	169	<1%	173	13%	20

The projected increase in **blind** and **partially sighted** people, and therefore also of people using **braille,** is primarily driven by demographic changes, particularly the growth in the elderly population in England from 7.5 million to 10.8 million people aged 70+ by 2040. This demographic shift, combined with rising rates of underlying conditions like diabetes and improved detection methods, is expected to increase the number of people with sight loss from 1.88 million to 2.27 million by 2032 (RNIB, 2022). The number of people using braille was obtained directly from the number of blind/ severe sight loss people from the RNIB dataset (See Appendix 2). This outlines that 7% of people that are blind also use braille.

These projections are considered conservative as they maintain constant age-specific prevalence rates, only accounting for population changes rather than potential increases in underlying risk factors or environmental impacts. With these projections, we estimate there will be around an additional 5,000 blind people and 7,000 partially sighted people by 2040 across the

two service areas, from baselines of 12,400 and 20,800 respectively (see Table A3.2 in Appendix 3).

The projected increase in **deaf** and people with **hearing difficulties** is attributed to the aging population in the UK, with those aged 65 and over expected to account for 23% of the total population by 2035. This growth is significant as age-related hearing loss is the single biggest cause of hearing impairment, with 71.1% of over-70s having some form of hearing loss (RNIB, 2022. The projections are based on comprehensive prevalence studies applied to ONS population estimates (Davis, 1995). These suggest an additional 2,000 deaf people and over 86,000 people with hearing difficulties across the two service areas by 2040, from baselines of 6,500 and 301,00, respectively (see Fig.3 and Table A3.2 in Appendix 3).

2.1.3. Disability and care projections

Disabled people - Projections of disabled people were generated from research reported in a House of Commons study (House of Commons Library, 2024). This estimated the proportion of disabled people grew from 19% in 2019 to 24% in 2022. This represents a growth rate of 0.5%/year. We assumed growth continued at this rate into the future. This translates to 20% prevalence in 2021 to 33% in 2040. This prevalence was applied to the most updated ONS projections for England. They suggest that the number of disabled people is a projected to increase by 58% by 2040 from a 2021 baseline.

Disabled people over 65 - Disabled people over 65 were calculated directly from 65+ ONS population estimates for the two service areas. According to the House of Commons study, 45% of people over 65 in 2022 were disabled (House of Commons Library, 2024). We applied this proportion to the 2021 population estimates baseline to get the number of disabled people over 65. According to the Personal Social Service Research Unit (PSSRU), the number of disabled people over 65 is projected to rise 67% in the period 2015-2040, from 3.5 million to 5.69 million (PSSRU, 2018). Assuming a linear annual increase of 2.68%, the projected increase from the 2021 baseline to 2040 would be around 51%.

Unpaid carers - We generated projections for unpaid carers by using research carried out by the Joseph Rowntree Foundation (JRF, 2024). This estimated there will be an additional 990,000 people providing unpaid care in England in 2035 from the 9.3 million people in 2022, a 10.6% growth. The research used the Understanding Society survey (2010-2022) alongside ONS population projections to estimate future care provision trends. Their definition of unpaid carers includes anyone providing care inside or outside their household, regardless of hours spent caring. This methodology accounts for demographic shifts, such as the aging population, while maintaining consistent care provision rates within age and gender groups.

We calculated the annual percentage growth for the period 2022-2035 and applied this rate to the baseline count from the 2021 census.

Table 16 below gives the projections for disability and care conditions in the two SSC water regions combined (see Appendix 3 for more detailed breakdowns).

Table 16: Disability and care projections as a proportion of SSC's total population

	2021/2024		2030		2035		2040		Growth of	Growth of
	Prev	Count	Prev	Count	Prev	Count	Prev	Count	Indicator 2021-2040 %	Indicator 2021-2040 (counts)
Disabled	18%	309,492	21%	397,512	23%	443,409	25%	489,740	58%	180,248
Unable answer door	8%	132,330	9%	169,965	10%	189,589	11%	209,399	58%	77,069
Disabled over 65s	8%	143,561	9%	174,311	10%	197,425	11%	216,662	51%	73,101
Unpaid carers	9%	151,154	9%	162,310	9%	168,506	9%	174,704	16%	23,550

[1]DWP Attendance allowance claimants' data projected from 2024

According to the PSSRU report (2018), the increasing number of **disabled** people in England is driven by both demographic changes and underlying health trends. Our projections suggest an increased prevalence of disabled people in 2040 to 25% across the two service areas, an additional 180,000 people from the baseline of 309,500 (see Fig. 3 & Table A3.2 in Appendix 3).

Similarly, people **unable or who are likely to struggle to answer the door** is projected to increase in prevalence, amounting to an additional 77,000 people from the 2021 count of 132,300 (see Fig. 3 and Table A3.2 in Appendix 3). However, policy changes such as 'hospital in the home' could further increase this number.

The number of **disabled people over 65** is also set to increase for similar reasons, including the number of years spent with a disability, primarily linked to increased life expectancy. Our projections suggest that the prevalence of disabled over 65 will increase to 11% by 2040, with an additional 73,000 disabled people over 65 from a baseline of 148,300 across the two SSC service areas.

The projected increase in **unpaid carers** is driven primarily by demographic changes, particularly the aging population (JFR, 2024). Our projections maintain a consistent prevalence rate of 9% for unpaid carers across the two water service areas from the baseline through to 2040. The absolute number of unpaid carers is projected to increase from 151,154 at baseline to 174,704 by 2040, representing a total growth of approximately 23,550 people or 15.6% over this period. This increase directly reflects overall population growth rather than a change in the proportion of people providing unpaid care. The JRF analysis suggests that nationally, changing work patterns and caring responsibilities will likely increase the number of carers as a proportion of the population as well as increased numbers due to a growing population. However, as couldn't identify robust future carer projections, our modelling assumes the prevalence rate will remain stable. This is likely an underestimate.

Policy Horizon Scan

Government policy change will affect the levels of financial and non-financial vulnerability in SSC's areas. SSC should consider the changing context when updating its strategy. Below we outline some of the known short-to medium term changes that are relevant to SSC's consumer vulnerability strategy over AMP 8.

2.1.4. Non-financial vulnerability

Changes to health and social care during the next AMP (2025-2030) will likely result in more vulnerable people living at home and a greater focus on tackling the causes of ill health and health inequality.

Labour in its manifesto committed to tackle the social determinants of ill health. It included a pledge to create a National Care Service with the intention to improve integration of NHS and social care services. This is largely interpreted as having a stronger focus on community-based care and people living independently for longer in their own homes, including those with dementia.

The Darzi Review of the NHS also stressed the need for a much greater focus on prevention in healthcare policy, and to tackle health inequalities such as poverty. The increase in community-based care is likely to result in an increase in the number of very vulnerable consumers and carers supporting customers (whether paid or unpaid) in their homes. SSC will need to ensure its BAU services, especially during water supply interruptions and home visits, are ready for this shift. Generally, policy making is placing a stronger focus on prevention than mitigation.

Tackling mental health issues, especially in young people, remains high on the agenda.

Mental health has been high on the agenda since the COVID-19 pandemic and remains so, especially with regards to younger people and given concerns about non-working long-term sick. In Labour's manifesto it committed to recruiting an additional 8,500 mental health professionals over five years to reduce waiting times and improve access to care; and setting up Young Futures Hubs - establishment of open-access mental health hubs in every community to provide support for children and young people. There may be partnership opportunities here. However, organisations such as MIND argue that benefits cuts outlined in the Spring Statement 2025 will cut support for many sufferers and increase mental health problems.

2.1.5. Financial vulnerability

Context

In the short-term the cost of living is expected to rise:

- **Household water bills** have gone up in SSC's regions 2025-26

SSC region	2024/25 Average bill £	2025/26 Average bill £	Change yr-on-yr	% change yr-on-yr
Cambridge region	£163	£203	£40	24%
South Staffs region	£178	£224	£46	26%

- **Gas and electricity bills**
  As of April 1, 2025, the UK's energy price cap increased by approximately £111 per year, bringing the average annual energy bill for a typical household to £1,849. This 6.4% rise reflects higher wholesale energy prices and marks the third consecutive increase in the cap. There's significant variation in forecasts on future energy bills, but most experts think that while there will be some fluctuations, they will remain high until at least 2030 despite Government promises.

- **Council tax is increasing across SSC's areas.**
  - In South Staffordshire a Band D property's Council Tax has risen from £2,115.31 in 2024/25 to £2,219.66 in 2025/26, marking an increase of £104.35, or approximately 4.93%. This total comprises contributions to various authorities.
  - In Cambridge, the total Council Tax for a Band D property has increased from £2,248.95 in 2024/25 to £2,355.41 in 2025/26, an increase of £106.46, or approximately 4.73%.
- **Broadband and phone** bill rises depend on a person's provider and contract start date. The cost of a **TV licence** is also going up by £5 to £174.50.

Policy impact

The following government policy changes have implications for the level of poverty in SSC's areas. In addition, the types of groups who are likely to be struggling, or will struggle more, and therefore prioritisation of financial support and eligibility criteria 2025-30.

Pensioners: Changes to Winter Fuel Payments cut incomes for some pensioners winter 2024/25, but the pensions triple lock increased support from April 2025.

According to the BBC, in April 2025, the earnings link meant the state pension increased by 4.1%, making it worth: £230.25 a week for the full, new flat-rate state pension (for those who reached state pension age after April 2016) - a rise of £472 a year. It is £176.45 a week for the full, old basic state pension, external (for those who reached state pension age before April

2016) - a rise of £363 a year. This will arguably offset losses from the unpopular move to means test £200/£300 Winter Fuel Payments.

Working poor and younger people: Government reforms if introduced should increase incomes for the working poor, especially younger people in the medium term.

The Labour government has a strong focus on helping the in-work poor and making work pay. The Employment Rights Bill should increase incomes and job security, ending zero hours contracts and improving sick pay. The Low Pay Commission is expected to make recommendations to deliver a 'genuine living wage' and has been asked by government to narrow the gap between the National Minimum Wage (for 18–20-year-olds) and the National Living Wage (for those aged 21 and older), as a first step towards implementing a single adult rate.

There are also moves to introduce a living wage for paid social carers in England as well as the strengthening rights to equal pay for disabled people and black, Asian and minority ethnic workers which should lead to an increase in wages. Labour's 'Plan to Get Britain Working' is expected to include a guarantee of training or employment for all young people.

The government has suggested the squeeze in living costs will be, to some extent, offset by its decision to increase the minimum wage in April 2025. According to the BBC, the Low Pay Commission estimates that in 2024, external there were around 1.9 million jobs paid at or below the minimum wage, equivalent to around 6.5% of all jobs. Those in this group will benefit from the increase to both the National Living Wage (for those 21 and over) from £11.44 to £12.21 per hour and the National Minimum Wage (for those aged 18 to 20) from £8.60 to £10 per hour from today. For someone working full time on the National Living Wage, this is equivalent to an annual increase of £1,400 a year in pay.

However, the Office for Budget Responsibility (OBR) has forecast, external that the government's decision to increase employer's National Insurance contributions from 6 April, will put downward pressure on the pay of most workers, contributing to a stalling of average inflation-adjusted earnings in 2026 and 2027.

Families on low incomes: In England, the current policy landscape offers little additional support for families especially large families on low incomes, though this may change in the future.

Labour's decision to retain the two-child benefit cap is a disappointment to many poverty campaigners and negatively impacts 1.6 million UK children in large families. JRF estimates that reversing the two-child limit would lift 540,000 children out of absolute poverty. While the UK Government has set up a Child Poverty Taskforce and will publish a Child Poverty Strategy shortly (Spring 2025), beyond 'making work pay' at the time of writing we identified little additional support planned for low-income families. That said, the UK government's Child Poverty Strategy is expected to have a strong focus on tackling the causes of poverty. Generally, there are growing calls to tackle child poverty and SSC may want to consider how it can play its part here. Certainly, it's financial support for large low-income families with relatively high water use is valuable.

Disabled people and carers – recommended priority group:
Prior to the government's Spring Statement 2025 there was already a gap in financial and wider support for disabled people and unpaid carers. Upcoming benefits cuts are likely to exacerbate this especially for those with less visible disabilities e.g. mental health problems, neurodivergent conditions and learning difficulties, chronic pain and energy limiting disorders.

There appears to be a gap in financial help to properly address the rising extra costs paid by disabled people, which can lead to severe harm. Scope's Disability Price Tag - the additional amount of money a disabled household needs to equal the standard of living of a non-Disabled household - currently stands at £1,010 per month.

The UK Government's Spring Statement 2025 announced significant reforms to disability and health benefits, which are projected to have profound effects on disabled individuals and their carers and will start to take effect from April 2026.

- **Personal Independence Payment (PIP) Reforms**: The government plans to tighten eligibility criteria for PIP. By its' own estimates in 2029/2030 they expect 370,000 current recipients to lose entitlement (when they have an award review) and 430,000 future PIP recipients who do not get the PIP who would otherwise have been entitled, will not receive it. The average loss is £4,500 per year. (Gov April 2025)
- **Universal Credit (UC) Adjustments**: Changes to the health element of UC include a freeze in the rate for existing recipients and a 50% reduction for new claimants. These measures are projected to affect over 2.25 million current recipients, leading to an average annual loss of £500, while 730,000 future recipients could lose around £3,000 per year. The UK Government argues that some 3.9 million households not on the UC Health element are expected to gain from the increase in the standard allowance (an average gain of £265 per year). (Gov April 2025). Carers UK argues that increasing the Universal Credit Standard Allowance by £14 a week (£5 above inflation) by 2029/30,6, will not compensate for the loss of income set out above.
- **Carer's Allowance Reductions**: The reforms are set to decrease spending on Carer's Allowance by £500 million by 2029-30, potentially resulting in 150,000 carers losing their current or future entitlements. These will come into effect in November 2026. This change is particularly concerning given that PIP serves as a "gateway" benefit; reductions in PIP eligibility directly affect carers' benefits. SSC, may want to review its eligibility criteria for financial support considering these changes to ensure they are sufficiently flexible e.g. commit to continue to support those impacted on social tariffs.

Financial strain on households
Households where both the disabled individual loses PIP and the carer loses Carer's Allowance could face combined annual losses. Carers UK estimates that families which lose eligibility to PIP and Carer's Allowance will stand to lose over £8,000 a year (Carers UK April 2025). The Joseph Rowntree Foundation has also modelled an example of the financial impact on a household losing PIP, Carer's Allowance and UC. They estimate that a family's income of two adults would be over £1,000 a month lower than it would be under the current system because of losing all three benefits, a reduction of 55%, equating to over £12,000 per year. (JRF, March 2025).

It is important to note that the Government's Pathways to Work Green Paper (March 2025) sets out that people who will never be able to work due to having the most severe and life-long health condition will no longer need to be reassessed for PIP. This should help to protect family incomes for those who have the most serious health conditions.

Longer-term the position of some carers may change. In its Green Paper, the government has said it will review the impacts on benefits for unpaid carers as part of its wider consideration of responses to the consultation as it develops its detailed proposals for change.

The UK Government could take the opportunity to do much more for unpaid carers, particularly around enabling and supporting unpaid carers to remain part of the workforce where they are able to do so. Disabled people and unpaid carers are an especial priority group for financial and non-financial vulnerability given their numbers in SSC's area given their high risk of harm; relatively high numbers; the PSR gap and these wider policy changes.

National single social tariff (SST)

In England and Wales, social tariffs and water price support are currently managed individually by each water company, leading to variations in eligibility criteria and the level of support provided. There are discussions underway between government, water companies and interested parties to develop a national single water social tariff. That is a discounted rate offered by water companies to assist low-income or vulnerable households in affording their water bills. How this is designed e.g. level of support, eligibility criteria and how it is funded will impact levels of water poverty in SSC's area and have knock-on impacts for the design of its wider financial support package and affordability toolkit. The formal consultation on this is expected summer 2025 with the SST taking effect when setting charges 2026-27.

2.1.6. Financial vulnerability projections

Providing financial projections is notoriously difficult. However, during AMP 8 (2025-30) even in the best-case scenario it is safe to say that a sizeable number of households are likely to continue to struggle to afford their water bills and would benefit from support.

It should be noted that the projections below were carried out prior to the government's Spring Statement (2025). The forecasts are likely to be more pessimistic now given the benefits changes above; increases in the cost of living outlined; economic uncertainty and the downgrading of economic growth in the UK by the Office of Budget Responsibility (OBR).

The OBR halved its forecast for GDP growth in 2025, from 2.0% to 1.0%, but of note, it slightly raised its forecasts for subsequent years, as shown in the chart below. The OBR says the risks to their GDP growth forecasts are "substantial", with "significant uncertainty" surrounding domestic and international economic developments. The OBR estimates that the level of GDP will be 0.2% higher overall (not per year) because of government policies by 2029/30. More positively, the OBR also forecasts that living standards will rise modestly on average in coming years.

We did not provide plausible projections for financial vulnerabilities to 2040, given the wide range of factors that can influence these.

Poverty projections for SSC's areas

We generated projections of people in low income households by using the optimistic and pessimistic scenarios outlined in the Resolution Foundation's Living Standard Outlook report (Resolution Foundation, 2024). The pessimistic scenario assumes current economic trends and existing policies. The optimistic scenario assumes changes to three social security policies: removing the two child benefit cap, uprating benefits in line with wage inflation and removing the freeze on the Local Housing Allowance. The Resolution Foundation research generates projections of households on low incomes/in poverty (using two definitions of poverty: 'relative' and 'absolute' poverty[4]) under the two scenarios, provided as a percentage change. To obtain projections for Cambridge and South Staffs supply regions, we applied these percentage changes to the baseline data for each region.

We sourced baseline data for the percentage of individuals living in low income households (i.e. in poverty) from the Department for Work and Pensions (DWP) Households Below Average Income (HBAI) statistics (DWP, 2024). The data is available as 3-year averages from 1994/97 to 2020/23. We used data for the most recent 3-year period, which finishes in the financial year ending 2022/23.

To obtain estimates of the proportion of individuals living in low income households within the South Staffs and Cambridge supply areas, data for England is downloaded at the regional-scale. Cambridge is situated within the East of England and South Staffs is situated between East and West Midlands. For the latter, we determined the number of households in each SSC region by identifying the OAs within each region. Where they intersect with the region boundary, the OA is assigned to the region it has the most area within. The proportion of people in low income households for each region is then applied to the number of households within the supply areas to obtain baseline estimates.

2.1.7. Current levels of poverty

South Staffs: 122,800 households (22% of all households ± 1.5 %) in absolute poverty and 150,600 households (27% of all households ± 1.5 %) in relative poverty.

Cambridge: 19,800 households (14% of all households ± 1.5 %) and 25,400 households (18% of all households ± 1.5 %) in absolute and relatively poverty respectively.

South Staffs therefore has a much higher proportion of households in absolute and relative poverty than Cambridge, reinforcing the findings outlined above on average incomes.

Table 17 below shows the changes to absolute and relative poverty under the optimistic and pessimistic scenarios.

[4] 'Relative poverty' is defined as households with an income below 60% of the median income in the current year. 'Absolute poverty' is defined as having an income below 60% of the median income in 2010-11, adjusted for inflation.

Table 17: Changes to poverty levels from current to 2029/30 under two policy scenarios

	Absolute Poverty		Relative Poverty	
	South Staffs	**Cambridge**	**South Staffs**	**Cambridge**
Baseline (2024)	22 %	14 %	27 %	18 %
Optimistic scenario*	19 %	11 %	26.5 %	17.5 %
Pessimistic scenario*	23.5 %	15.5 %	29 %	14 %

2.1.8. Poverty projections: pessimistic scenario

Under the pessimistic scenario, which assumes no policy changes, at the national level relative poverty is projected to increase by 2% and absolute poverty by 1.5% from 2022/23 to 2029/30.

South Staffs: The number of households in relative poverty is projected to increase from 150,600 (27%) to **161,800 (29%)** by 2029/30. Absolute poverty is projected to increase from 122,800 (22%) to **131,500 (23.5%)** by 2029/30.

Cambridge: The number of households in relative poverty is projected to increase from 25,400 (18%) to **28,000 (20%)** by 2029/30, and absolute poverty from 19,800 (14%) to **21,900 (15.5%)** by 2029/30.

Since this analysis was carried out (which is based on the Resolution Foundation's 2024 methodology), the Government recently outlined its intention to make substantial cuts to benefits in the UK. It is therefore quite possible that the above figures represent under-estimates of poverty levels in 2029/30 (in that sense, more pessimistic than the 'pessimistic scenario'). Should the Resolution Foundation update its modelling of future income trends once details of the changes to benefit levels have taken place, their analysis can be applied to data for the two SSC water supply areas.

2.1.9. Poverty projections: optimistic scenario

Removing the two-child limit, benefit cap and Local Housing Allowance freeze in 2025/26 would immediately reduce the number of people in relative poverty by 1.5% at the national level (Clegg & Corlett, 2024). The proportion of people living in relative poverty is projected to increase again between 2025/26 and 2029/30 by 0.5%. The proportion of people in absolute poverty will decrease by a further 1.5% by 2029/30 (Clegg & Corlett, 2024).

Impact of optimistic scenario in South Staffs

Immediate reduction in relative poverty by 2025/26 to **146,900 households (26%)** and in absolute poverty to **119,000 households (20.5%)**.

By 2029/30, relative poverty is projected to rise by 0.5% to **149,700 households (26.5%)** while absolute poverty is projected to further decline to **115,300 households (19%).**

Impact of optimistic scenario in Cambridge

Immediate reduction in relative poverty by 2025/26 to **24,300 households (16.5%)** and absolute poverty to **23,300 households (17.5%)**.

By 2029/30, relative poverty is projected to rise by 0.5% to **24,900 households (17%)** while absolute poverty is projected to further decline to **22,600 households (16.5%)**.

Post Spring Statement 2025

As noted, recent policy changes and the uncertain economic climate mean that these forecasts are likely to be over-optimistic.

The Department for Work and Pensions estimates that its benefit reforms will push an additional 250,000 individuals, including 50,000 children, into relative poverty by 2029-30. But it stressed that the assessment did not take account of the potential impact of its plan to increase spending on employment support for disabled people by £1bn a year by 2029-30. It also did not take into account government plans to pay an additional premium on the health element of UC for those with severe, life-long health conditions, who would never be expected to work.

The Resolution Foundation estimates that bringing together recent policy changes and increases in water, energy and council tax bills, that the disposable income of a typical working-age household is projected to fall by 1 per cent – or £400 – in real-terms this financial year, while households across the poorest half of the country are set for an even sharper 2 per cent fall (equivalent to £300). This will represent the first year of a five-year period that will see incomes fall a total of 3 per cent – or £500 –for the bottom half of the income distribution. Decreases in incomes will be significantly higher for any households facing benefits cuts.

2.2. People per household

For certain PSR needs codes we can provide data on the proportion of people per household to show how these vulnerabilities are distributed at the household level. This was only possible for those codes for which there are proxy indicators that provide data at both individual and household level (see Fig. 5 below). A detailed list of proxy data available at both individual and household levels is available in the metadata file accompanying this report. The available proxy indicators are:

Disabled: There are 1.31 ± 0.16 and 1.34 ± 0.39 disabled people per household (definition of disabled as above) in Cambridge and South Staffs, respectively.

Unable to answer the door: There are 0.45 ± 0.13 and 0.57 ± 0.13 people unable to answer the door per household (definition of as in 1.3.3) in Cambridge and South Staffs, respectively.

Pensionable age: There are 1.22 ± 0.14 and 1.22 ± 0.15 people of pensionable age in Cambridge and South Staffs, respectively.

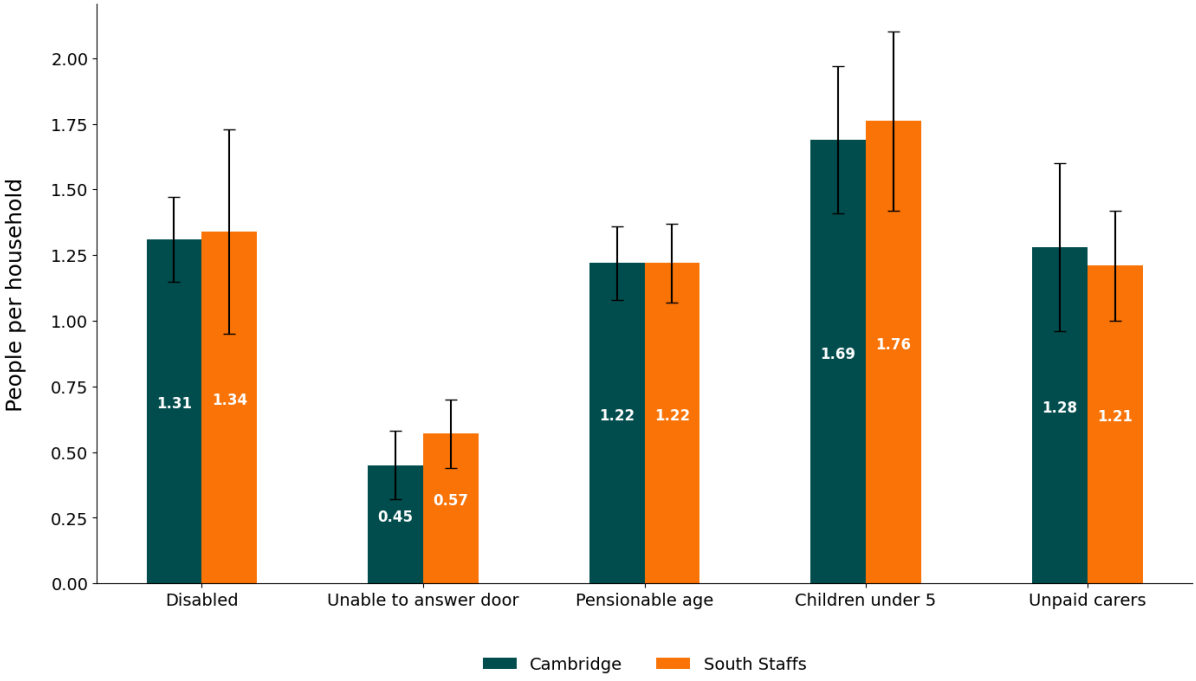
Children under 5: There are 1.69 ± 0.28 and 1.76 ± 0.34 children under 5 per household in Cambridge and South Staffs, respectively.

Unpaid carers: There are 1.28 ± 0.32 and 1.21 ± 0.21 disabled people per household (definition of disabled as above) in Cambridge and South Staffs, respectively.

The numbers represented as ± indicate the standard deviations (std). A higher standard deviation indicates higher variability within each service area, which is commonly linked to a more

heterogeneous spatial distribution. Note that the number of disabled people and people unable to answer the door is divided by the number of households that have 1 or more disabled people, irrespective of their disability status (as detailed in the Equality Act 2010 discussed above). This explains why the proportion of people unable to answer the door is less than 1 (see Figure 6 below).

Figure 6: People per household and variability within Cambridge and South Staffs



The lines at the top of the bars indicate the variability of the people per household ratio within the service areas. Shorter lines indicate a smaller variability, hence a more homogenous geographical distribution. Longer lines indicate that there is higher spatial variability within each service area.

2.3. Analysis and future projections: implications for SSC's vulnerability strategy

2.3.1. Resourcing

- **Levels of financial and non-financial vulnerability and the potential need for PSR services are high and expected to grow. This has implications for funding for SSC.**

- **SSC should prepare for a significant increase in access, communication and protection related needs in the future. This includes in the design and delivery of services, support staff, partnerships and associated vulnerability training and systems.** This is primarily due to a growing population, and an increasingly aging and disabled population alongside wider environmental and social change which is weakening household and community resilience.

- **There will also continue to be high need for financial support.** The longer-term affordability picture is very uncertain. But even in the best-case economic scenario considered there remain a sizeable number of households who will struggle to afford their water bills and there is unlikely to be a significant decline in need. Any approach will need to adapt to government decisions on a national single social tariff.

2.3.2. Identification

- **SSC should review how it identifies and supports customers at risk of falling into financial difficulty. The high levels of water debt of SSC's customers identified in this report suggests earlier intervention is needed by SSC to help prevent debt build-up.**

  The research found 35,300 households (6.3%) in the South Staffs region and 2,200 households in the Cambridge region (1.5%) are in water debt – defined as those who are more than 12 months behind in paying their bills. The median debt for those without a payment plan was particularly high (£1,360 in South Staffs and £2,490 in Cambridge). These households are a priority group to proactively contact to offer financial support for tackling both their water debt and likely wider debts.

  Water bills represent a much lower proportion of average household income than energy, yet these figures are high compared to energy. For example, the average size of median gas debt for households without a payment plan for Q3, 2024 was £1,324. We recommend that SSC continues to review its processes in line with Ofwat's Paying Fair Guidelines. SSC should explore how it can take more proactive action earlier in the debt pathway and prevent payment difficulties before they occur. We are aware that SSC has a range of improvements in the pipeline that should help to address this. This could include better use of data to identify non-payment trends earlier and consideration of how it supports those on unstable incomes, e.g. zero hours contracts.

- **Given government policy changes alongside insight on levels of need and PSR gaps, SSC may want to consider low-income disabled households, unpaid carers, low-income large families as particular priority groups for targeting financial support.**

  In the short-term the cost of living is forecast to increase. Against this context, Government policy changes are expected to result in an increase in incomes for pensioners and the working poor including zero hours contract workers, younger people and those on the lowest incomes. However, some disabled people (especially those with less visible disabilities e.g. mental health problems and chronic pain) and some carers will end up worse off because of government benefit cuts which will start to come into effect in 2026. At the time of writing no additional support is planned for low-income large families despite high need though this may change with the publication of Government's

Child Poverty Strategy. Dependent on developments, SSC may want to consider particularly targeting these groups of consumers with financial support.

- **Our analysis also identified priority communities to target awareness campaigns, services and build partnerships. There are opportunities for SSC to support place-based solutions to improve health and inclusion and tackle poverty. This includes dovetailing its work with existing energy network initiatives such as Warm Hubs and Centres for Warmth.**

  In some SSC communities over 50% of the population speak Panjabi as their main language making these areas a particular priority for adapted communications.

  Our analysis of the South Staffs supply area shows there are extensive urban areas with high levels of financial vulnerability in Dudley and Walsall with pockets in Cannock, Tamworth, Lichfield and Burton on Trent. Average incomes are also lower in the supply area than those for England. Non-financial vulnerabilities are also often associated with these areas, plus further pockets in Sutton Coldfield and rural fringes.

  The main areas of financial and non-financial vulnerability in the Cambridge supply area are found within certain urban areas of Cambridge, plus rural west and northern areas. The average income is higher than that for South Staffs and for England as a whole.

  SSC can use the data and maps provided alongside this report to identify priority areas.

  SSC will also need to continue to work with other utilities and third sector organisations to raise awareness of its financial support available for people struggling to afford their bills.

2.3.3. Recording needs

- **New vulnerability needs codes.** To meet current and changing vulnerability needs, we propose new PSR needs codes with associated service provision for: care leavers, people experiencing recent bereavement, those at risk of heat, unpaid carers, those in postal deprivation, people not online and whose main language is not English. In addition, we recommend SSC captures data on those over 75 and 85, people living alone and in rural areas since these groups may be less resilient and warrant prioritisation of support, especially during incidents.

2.3.4. Service provision

In the spirit of Ofwat's 'Service for All Vulnerability Guidance', water companies are expected to make sure all customers can easily access information and key services and should seek to continuously improve the service they provide to customers who need extra help. Given the findings of this research, we recommend:

- **Prioritising 'Inclusive by design' in its mainstream services.**
  This means making sure all of SSC's mainstream services, e.g. telephone, online, letters, are as accessible as they can be for the largest number of people possible without the need for tailored support. This is particularly important for SSC because its supply areas have high and growing levels of communication needs (hearing, sight impairment, unable to speak English). Furthermore, given the projected increase in most vulnerabilities, 'Inclusive by design' would reduce the need for self-identification of vulnerability (which many people do not like to do or do not identify as vulnerable); help to improve customer service and reduce costs to serve of expensive bespoke services.

  Some organisations such as the Good Things Foundation suggest that digital exclusion and inequality could also increase due to the shift to digital by default services; rising costs of connectivity and devices, skills and confidence gaps, and aging populations with those previously digitally literate no longer able to use technology, As a priority we recommend:

  - SSC makes sure its **website meets the highest accessibility standards**, in line with good practice using software such as Recite Me. Translation services should include the two most spoken languages by non-English speakers in SSC's area, Punjabi and Polish.
  - Review and improve the **accessibility of its communication channels including telephone services and customer journeys** for those who are digitally excluded, have common sight impairments and the large and growing number of households with hearing problems.
  - Introduce mechanisms to **understand the accessibility of its mainstream services** e.g. mystery shopping by customers with additional needs to understand where improvements can be made (opportunity to be industry leading).

- **Review its PSR service offer and customer pathways for different groups with support available that reflects what people need and want.** This includes those with mental health problems (particularly given the high numbers impacted, the significant increase in their numbers over recent years and government policy decisions); dementia (given the projected rise over AMP8), and unpaid carers – especially younger and more elderly carers (who's social value to utilities to support resilience and society more widely is often undervalued). For example, SSC could:

  - **Bereavement services:** Work with relevant stakeholders to develop and roll out best practice bereavement services to support affected customers and employees. Examples of good practice include bereavement charity, Cruse's Bereaved

Customers' First four Ps,[5] ACAS also has a Managing Bereavement in the Workplace guide.[6] Cruse advocates that: all employees should receive bereavement leave; all employers to have a bereavement policy in place; and all line managers and HR professionals to be trained in bereavement in the workplace.

- **Unpaid carers:** Expand support services for unpaid carers given their important social role, including supporting companies in ensuring customers are protected and treated fairly. As part of this approach review nominee schemes and power of attorney processes. New services could include a Carers' Club (including a young carers club); an in-house employee carers' network; engagement with carers to identify and develop services that could support them and those they care for. The Carers Trust outlines how employers can help young carers[7]. Carers UK offers a consultancy and innovation service to help companies.[8]

- **Support for people with mental health problems:** Make sure that services being offered for customers and employees with mental health problems (including those suffering from anxiety or burnout) are up to date and follow good practice. This is important given the substantial increase in the number of customers who are suffering from mental health problems and projected increases for the future.

  Money and Mental Health report that half of people with mental health problems have serious difficulties using the phone to carry out essential admin. Sitting for hours on hold can be overwhelming. They therefore call for an increase webchat capacity and the range of topics that can be tackled through webchat and for companies to offer call backs. This is especially important where face to face services are not available.[9]

  Example good practice guides include: Money Advice Trust's vulnerability mental health and the energy sector guide to help identify and support customers[10].

  SSC may want to consider adopting a similar scheme to BT's Protective Partnership. This allows a customer to nominate a third party who will be contacted if

[5] Bereaved Customers First, Cruse Bereavement Care: https://www.cruse.org.uk/bereaved-customers-first

[6] Managing bereavement in the workplace – a good practice guide. ACAS. Available at: https://www.benenden.co.uk/media/4001/managing-bereavement-in-the-workplace-a-good-practice-guide.pdf

[7] https://carers.org/young-carers-action-day-2021/ycad-employers

[8] https://www.carersuk.org/

[9] Urgent-Covid-19-Customer-Support-Standards.Money and Mental Health. Available at: https://www.moneyandmentalhealth.org/wp-content/uploads/2020/04/Urgent-Covid-19-Customer-Support-Standards.pdf

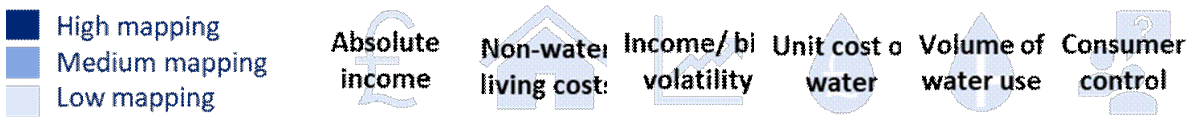
[10] Vulnerability, mental health, and the energy sector. Money Advice Trust. Available at: https://www.moneyadvicetrust.org/media/documents/Energy_UK_report_FINAL.pdf

the company can't get in touch with the customer or the bill goes unpaid. The person isn't liable for the bill, but it means the customer doesn't receive chaser communications. This may be especially valuable for customers at risk of hospitalisation or suffering from recurrent mental health problems.

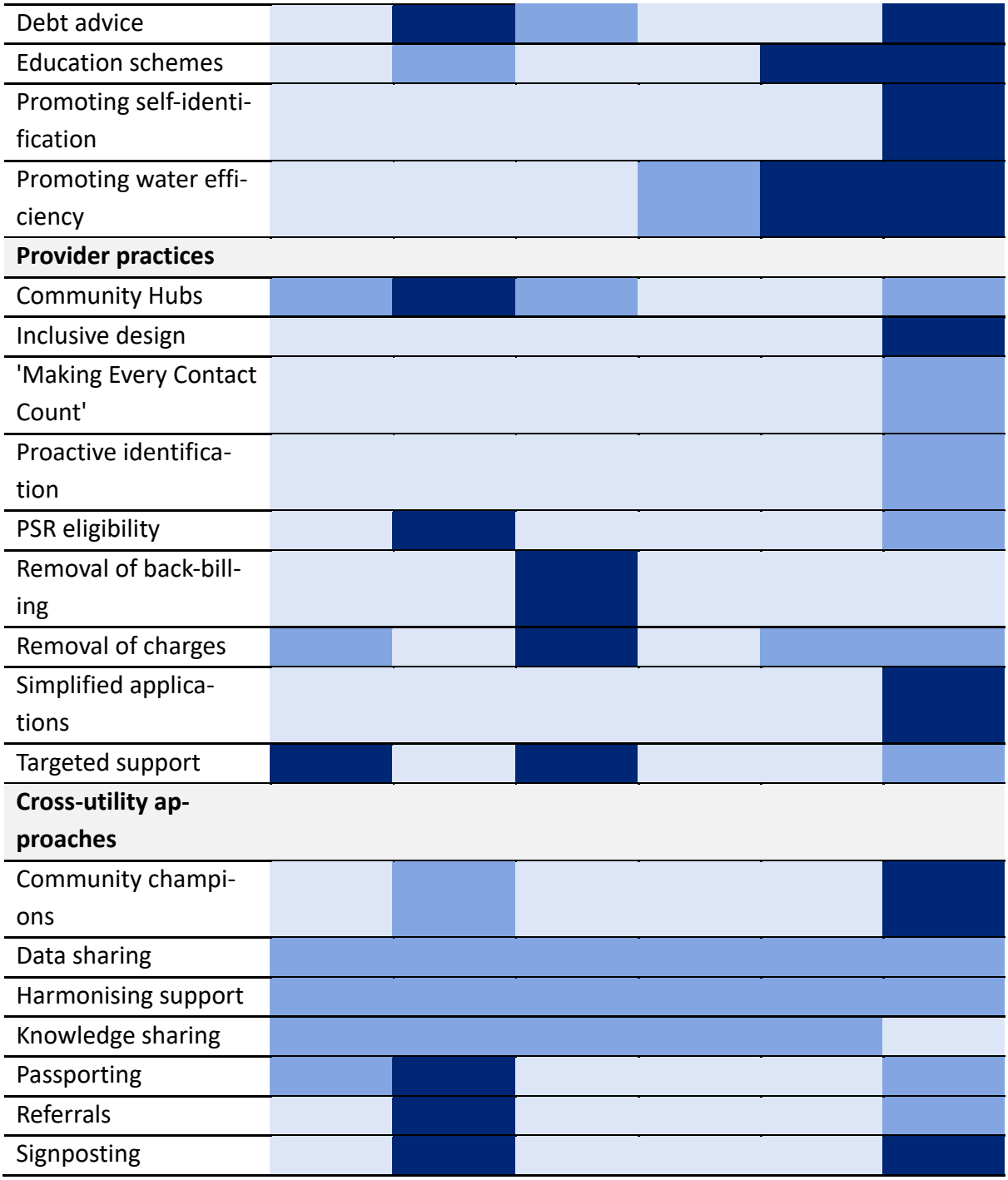
- **Longer term there's an opportunity for SSC to update its home visit pathway**. Currently SSC offers knock-and wait service, a password scheme, and the offer of a someone such as a carer being present. Longer-term SSC could explore how technology could improve the customer experience. For example, companies could develop Uber-like services so customers with smart phones can track the driver's arrival, have a photo of them, their name, and vehicle make and licence plate number plus key information**.** This would increase safety and peace of mind for those who suffer with anxiety. For elderly people with poor mobility knowing when the driver will arrive enables them appropriate time to be near the door to let them in.

- **SSC will need to provide a tool kit of financial support to customers who are struggling or at risk of struggling to afford their water bills.** This includes preventative measures e.g. flexible billing and payment options to help with budgeting, payment breaks as needed, and price support which can be adapted dependent on upcoming decisions on a national single social tariff. We refer SSC to Sustainability First and CEPA's good practice affordability checklist, developed for UKWIR (Sustainability First 2020 p.78) - see below.

Graphic 2: Affordability toolkit' mapped against the key drivers of water poverty (Source Sustainability First and CEPA for UKWIR)



	Absolute income	Non-water living cost	Income/ bi volatility	Unit cost o water	Volume of water use	Consumer control
Bill reduction / income support						
Benefits entitlement checks	High		Medium			Medium
Bill caps	Medium		High	High		
Charitable trusts	High	Medium				Medium
Percentage bill reductions	Medium			High		
Rising block tariffs	Medium			High	Medium	
Single Person Status Discount	Medium			High		
Social tariffs	Medium			High		
Water Charges Reduction Scheme	Medium			High		
WaterSure	Medium		Medium	High	Medium	
Financial management						
Debt write-off	Medium	High	High			
Financial management support		Medium	High			High
Flexible payments			High			Medium
Payment holidays			High			Medium
Payment matching	Medium		High			High
Water Direct			Medium			Medium
Water efficiency						
Efficient appliance provision					High	High
Equity release					High	High
Free leak repairs			Medium		High	Medium
Network leakage repairs				High		
Retrofits			Medium		High	Medium
Water audits and 'health checks'			Medium		High	High
Informational / behavioural change						



- **Consider how SSC can better support consumers to become more resilient to not just supply interruptions, but also flooding and heat waves, which are expected to increase in the future.** There's significant opportunity for innovation here. This is likely to be of growing importance as an increasingly aging and disabled population coincides with climate change, technological and social changes such as more people living alone or without support. Government policy is also shifting to a greater focus on 'hospital in the home' with people living independently and with carers for longer, including those

with dementia. For example, SSC could:

- Nominate a dedicated Customer or Community Resilience (or 'Stay Safe') Lead to develop strategic services to empower domestic and business customers to play their part in supporting resilience and to keep customers safe via activity before, during and after incidents. Services might include:
  - **a.** Resilience audits for domestic and business customers and preventative personal assistance plans.
  - **b.** Expanding partnerships that help on the ground during incidents. Ofwat's review of water companies' service during the Beast from the East interruptions in 2018 concluded that companies needed to have more 'on the ground' activity in order to be inclusive and reach everybody (in particular to inform those consumers who do not use social media or the internet).
  - **c.** Set up a 'buddying or befriending scheme' should customers in vulnerable situations, especially those living alone or in isolated areas, have a water supply interruption or be flooded. Buddies would liaise with the companies as needed and could contact vulnerable customers by phone or a home visit to check on any support requirements.

- **Improve services before, during and after heatwaves to support customers and communities in vulnerable situations.** These could include:
  - Hot weather audits and support for care homes, hospitals, hospices and children's homes, sheltered housing, domiciliary care. AgeUK reports that Care Quality Commission guidance says that care providers – in residential or domiciliary care – 'must be able to respond to and manage major incidents and emergency situations', including floods.
  - Piloting vulnerability friendly messaging so that water efficiency messages during hot weather don't result in those at risk during hot weather, overly rationing water to a point where it jeopardising their health and comfort.
  - Hot weather resilience packs and information, learning from international experience.
  - Developing community networks to help to protect their neighbours, friends, relatives, and themselves against avoidable health problems during spells of very hot weather[11].
  - Set up Community Cooling stations - cities like Phoenix or Barcelona, water utilities partner in setting up "cooling centres" with AC and hydration during heatwaves. Set up free water Refilling Points and Fountains in parks and areas. Our maps shared with SSC include Neighbourhoods vulnerable to heat in England which could be used to target community support.

[11] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/88866##8/Heatwave_plan_for_England_2020.pdf

GUIDANCE ON UPDATING DEMOGRAPHIC PROFILES

We have provided the most up-to-date data for the various proxy indicators outlined in this report. However, to make sure that the baseline estimate of PSR eligibility remains relevant, it is essential to regularly update these data sources. This section provides a step-by-step guide for SSC to monitor data updates, process and downscale new data, and integrate these updates into the relevant data directories.

Monitoring data updates

To maintain an accurate and up-to-date demographic profile, SSC should periodically check for new data releases from the relevant sources. The following steps outline best practices for monitoring updates:

- The datasets used in this analysis have been downloaded from various sources. A full list of sources, including URLs, is provided in the metadata file.
- Many datasets are updated annually, while others may have longer update cycles (e.g. the Census is updated every 10 years). The metadata file includes the update frequency as well as the likely next date for each dataset update used in this analysis.
- Calendar reminders can be set up to check for new releases at appropriate intervals.
- When new data becomes available, download the latest version from the official source. Ensure that metadata, definitions, and methodology remain consistent with previous releases to maintain comparability. If changes to data collection methods have occurred, document these changes and assess their impact on comparability.

Processing and downscaling data

After obtaining new datasets, processing is required to align them with the methodology used in the original analysis. This may involve reformatting, filtering and downscaling data to the appropriate geographic level.

Python scripts can be provided which can be used to perform the processing and downscaling outlined below.

- Identify the geographic level of the dataset. Download the population/household shapefile for the relevant geography from the 'data_processing' directory.
- Identify whether the data is presented as population/household prevalence or count.
- If data is presented as prevalence (percentage of population), convert to count using estimates of total population/households within the data shapefiles.
    - Vulnerability count = (prevalence * population or household count) / 100
- Merge the shapefile with the dataset; matching the geography codes.
- Within the shapefile, locate columns titled 'population proportion' or household proportion' (depending on the whether the dataset is at household or population level).

- Calculate the vulnerability count for each geography within a service area by multiplying by the household or population proportion
    - Vulnerability count within service area = Vulnerability count * population or household proportion within service area
- **If the dataset is already at the LSOA level**, this is the final processed dataset. Proceed to **Updating Data Directories** section.
- For datasets at larger geographies apply a downscaling procedure to allocate data accurately to LSOAs.
- Download the 'xx_lsoa_proportions.shp' file (where **xx** is the larger geography).
- Merge this file with the original dataset, matching the larger geography codes, then identify the 'lsoa_proportion' column.
- Multiply the lsoa_proportion column by the vulnerability count for the larger geography. This distributes data proportionally across LSOAs.

Updating data directories

Data should be integrated into existing directories to ensure that they reflect the most up-to-date information.

- Within the CSV and shapefiles (provided in the baseline data folder), replace the previous version of the data corresponding to the specific PSR code with the updated data.
- The metadata file can be used to find the lookup code corresponding to the PSR code. Replace the relevant column within the dataset.
- You may wish to retain previous versions of datasets to allow for comparison and rollback if needed.
- Revise metadata files to reflect changes including the update date and any changes to source and methodology. This may mean previous versions are not directly comparable. The sources of data should make it clear whether this is the case. Some data sources might provide backdated data for previous years based on the new methodology.

Future research and innovation opportunities

This project has identified key areas for future research, particularly in enhancing the monitoring and mapping of PSR needs codes and future projections. While we have provided the instructions for SSC to update their PSR eligibility estimates when new data becomes available, we acknowledge the potential challenges associated with maintaining and integrating these updates effectively. To address these challenges, we see significant value in developing a dedicated tool for SSC that would:

1. Facilitate the seamless integration of updated data, ensuring that PSR eligibility estimates remain up to date.
2. Enable continuous monitoring of changes and emerging trends in vulnerability.
3. Identify geographic and demographic hotspots where vulnerability is increasing.

4. Provide projections of future changes learning from past trends to support proactive decision making.

However, developing this tool is beyond the scope of the current project, given the computational demands of such work. Since this work would require substantial development effort, we see value in a longer-term innovation opportunity rather than an immediate deliverable. Our (current) concept for this tool potentially involves a Graphical User Interface (GUI) that allows users to upload data in CSV format. Users would then specify key details such as the date, resolution and boundary (i.e. company supply area). The tool would automatically generate interactive maps at LSOA level, displaying either baseline vulnerability or changes relative to the most recent data update within the boundary. Additionally, the interface would provide summary statistics for supply areas and highlight hotspots with the highest growth or prevalence of specific vulnerabilities, which the user can download for further analysis.

This tool could also be expanded to incorporate forecasting capabilities, leveraging existing models, national projections or performing a trend-based analysis when multiple years of data are available. Another potential avenue to explore is the use of web scrapers or Application Programming Interface (API) calls to access data from sources that provide programmatic access. At this stage, these proposals are just a 'proof of concept'. We have yet to explore the feasibility and costs associated with production of the tool and support requirements.

Beyond SSC, such a tool could serve a broader purpose as a sector-wide resource, allowing companies to streamline the process of updating and assessing baseline PSR vulnerability. By automating data integration and analysis, this tool would improve efficiency, ensure consistency and enhance the ability to respond to evolving customer needs.

Beyond this tool, we believe that there is an opportunity for SSC to collect their own proprietary data to enhance and inform future investigations. Notably, the current lack of dataset at household level may hinder SCC's ability to make informed decisions about various aspects of water supply and interruption. SCC may wish to consider carrying out recurrent surveys to assess how the population of vulnerable people changes within the service areas over time. This would enable effective and up-to-date mapping of current vulnerabilities, as well as provide useful data to make more accurate future projections.

REFERENCES

1. AgeUK, Older people and power loss, floods and storms Reducing risk, building resilience. rb_feb16_older_people_and_power_loss_floods_and_storms.pdf
2. Carers UK (2022) Valuing Carers 2021/22: the value of unpaid care in the UK
3. Census (2021). Census. Online resource: https://www.ons.gov.uk/census
4. Children's Commissioner (2023). Supporting care leavers. Supporting care leavers | Children's Commissioner for England
5. Cruse. Bereaved Customers First
6. Davis, A.C. (1995). Hearing in Adults: the prevalence and distribution of hearing loss in the British adult population. MRC Institute of Hearing Research. London: Whurr Publishers Ltd. ISBN 1-897635-14-3.
7. Good Things Foundation (2024). Solving digital exclusion in a cost of living crisis: our House of Lords submission. Solving Digital Exclusion in a Cost of Living Crisis | Good Things Foundation
8. GOV (2023). Chapter 1: Profile of households and dwellings. Online resource: https://www.gov.uk/government/statistics/chapters-for-english-housing-survey-2022-to-2023-headline-report/chapter-1-profile-of-households-and-dwellings#:~:text=In%202022%2D23%2C%20the%20mean,had%20the%20smallest%2C%201.8%20persons.
9. House of Commons Library (2024). Uk disability statistics: prevalence and life experiences. Online resource: https://commonslibrary.parliament.uk/research-briefings/cbp-9602/
10. Impact (2023). South Staffs and Cambridge Water Demographic Profile of the Region. ttps://www.south-staffs-water.co.uk/media/lyjcwp2p/ssc13_demographics_report-1.pdf
11. Institute of Fiscal Studies (March 2025), The role of changing health in rising health related benefit claims. Eduin Latimer Sam Ray-Chaudhuri Tom Water. IFS Report - The role of changing health in rising health-related benefit claims - final for press
12. Joseph Rowntree Foundation - JRF (2024). The future of care needs: a whole system approach. Online source: https://www.jrf.org.uk/sites/default/files/pdfs/the-future-of-care-needs-a-whole-systems-approach-92ca214fa22ec5906c3babf7a8d3e743.pdf
13. Ofgem (2024). Debt and arrears indicators: www.ofgem.gov.uk/publications/debt-and-arrears-indicators
14. ONS (2022a). Principal projections - England Summary. Online resource: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/tablea14principalprojectionenglandsummary

15. ONS (2022b). National population projections by single year of age - 2022-based. Online resource: https://www.nomisweb.co.uk/query/construct/summary.asp?reset=yes&mode=construct&dataset=2009&version=0&anal=1

16. ONS (2018). Population projections for local authorities: Table 2. Online resource: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/2018based

17. ONS (2020a). Principal projections - England population in age groups. Online source: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/tablea24principalprojectionenglandpopulationinagegroups

18. PSSRU (2018). Projections of Demand and Expenditure on Adult Social Care 2015 to 2040. Online resource: https://www.pssru.ac.uk/pub/5421.pdf?t

19. REAL Centre (2023) - Health in 2040: projected patterns of illness in England. Online resource: https://www.health.org.uk/sites/default/files/upload/publications/2023/Projected%20patterns%20of%20illness%20in%20England_WEB.pdf

20. REAL Centre (2024) - Health in 2040 results updated for new population projections. Online resource: https://www.health.org.uk/sites/default/files/2024-04/Health%20in%202040%20addendum.pdf?t

21. Research in Practice (2024). Meeting the mental health and wellbeing needs of care leavers. The mental health and wellbeing needs of care leavers | Research in Practice

22. Richmond upon Thames (2023). Learning Disability Strategy - The Big Plan 2023-2028. Online resource: https://www.richmond.gov.uk/media/v0yni51d/big_plan_learning_disability_strategy.pdf?t

23. RNIB (2022). Sight Loss Data Tool. Online resource: https://www.rnib.org.uk/professionals/health-social-care-education-professionals/knowledge-and-research-hub/sight-loss-data-tool/

24. RNIB (2023). Registered blind and partially sighted people and CVI England 22-23. Online: https://www.rnib.org.uk/professionals/health-social-care-education-professionals/knowledge-and-research-hub/reports-and-insight/registered-blind-and-partially-sighted-people-and-cvi-england-22-23/

25. RNID (2020). Hearing matters. Online resource: https://rnid.org.uk/wp-content/uploads/2020/05/Hearing-Matters-Report.pdf?t

26. Sustainability First and CEPA for UKWIR (2020) Defining water poverty and evaluating existing information and approaches to reduce water poverty

27. UKHSA. Health Effects of Climate Change (HECC) in the UK: 2023 report. HECC 2023 report. Chapter 2: Temperature effects on mortality in a changing climate

28. ONS (2020b). Online resource: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/householdprojectionsforengland

29. Kidney Care UK (KCUK, 2025) Key Facts About Kidneys. Online: https://kidneycareuk.org/kidney-disease-information/about-kidney-health/facts-about-kidneys/

30. NKF (2024) Increasing Home Dialysis in the UK – Three years on. Online: https://www.kidney.org.uk/Handlers/Download.ashx?IDMF=510dcba3-62a9-40ed-be61-e1171619e977

31. WALNUT (December 2024) - Exploring the customer service experiences of water and energy customers in vulnerable circumstances. Report for Ofwat and Ofgem. Welcome to our new PowerPoint template 2.0

APPENDIX 1: Ofwat draft minimum standards for PSR needs codes and services included in SSC's current PSR codes

Needs		Services	
N1	Of pensionable age	S1	Delivery of alternative water supplies during an interruption
N2	Are disabled	S2	Knock and wait facilities (where visiting staff know to allow extra time for customers to answer the door);
N3	Have an illness which affects their day-to-day life	S3	Additional communications or contact around outages or incidents
N4	Are pregnant or live with children aged 5 and under	S4	Additional metering support or services by the company
N5	Have a mental health condition	S5	Support for transport to hospital or other evacuation measures
N6	Have a hearing or sight condition	S6	Alternative communication formats such as braille, audio information, large print, etc
N7	Have a poor sense of taste or smell	S7	Arrangement of additional presence during visits
N8	Are unable to or have difficulties in communicating in English or Welsh	S8	Third party billing support (where a trusted contact is allowed to manage a customer's account on their behalf)
N9	Have a cognitive impairment, developmental conditions or dementia	S9	Password facilities (where staff use a password when dealing with a customer)
N10	Require additional showering or bathing due to a health condition	S10	Signposting to other support and services, both within and outside the company
N11	Have physical impairments	S11	Priority contact before or during actual or potential outages to understand impact and / or ask if further support needed

APPENDIX 2: Needs codes and proxy indicators

The table below shows the PSR needs codes and associated proxy indicators, alongside the SSC priority (High/ Medium/ Low). We assigned a level of confidence (High/ Medium/ Low) to each dataset according to our assessment of the extent to which it represented the needs code. Rows with a coloured background indicate PSR codes that were outlined by Ofwat in their PSR consultation document.

PSR Code	Dataset	SSC / Ofwat Priority	Dataset Confidence	Comments on dataset
Sensory Impairment				
Blind	**Sight Loss Data Tool**: People with severe sight loss (blindness)	High	High	This dataset directly represents the needs code, showing the total number of people with severe sight loss/blindness. For the PSR gap analysis, we assumed that there was only one person per household with severe sight loss, which may overestimate the eligibility.
Partially sighted	**Sight Loss Data Tool**: People living with moderate sight loss (partial sight)	High	High	For the PSR gap analysis, we assumed that there was only one person per household with severe sight loss, which may overestimate the eligibility.
Hearing difficulties	**Sight Loss Data Tool**: People living with moderate or severe hearing impairments	High	High	For the PSR gap analysis, we assumed that there was only one person per household with moderate or severe hearing impairments, which may overestimate the eligibility.
Deaf/hard of hearing	**Sight Loss Data Tool**: People who are profoundly hearing impaired	High	High	For the PSR gap analysis, we assumed that there was only one person per household with severe sight loss, which may overestimate the eligibility. Additionally, we didn't know what level of hearing difficulties will motivate people to state 'hearing difficulties' rather than deaf/hard of hearing so there may be some overlap.
Mobility and Physical Disabilities				

Disabled	**Census**: Number of households with at least one person disabled under the equality act	High	High	
Unable to answer the door	**Census**: Number of disabled people in households / People whose activities are limited a lot	High	Medium	This dataset estimates the number of people who assessed their day-to-day activities as being limited a lot by physical/mental health condition. This dataset may not sufficiently represent the people registered on this PSR code. Furthermore, for the PSR gap analysis, we assumed that there was only one person per household.
Physical impairment / mobility issue	**Disability Living Allowance (DLA):** Mobility award claimants	Medium	Medium	This dataset shows the total number of working age people claiming DLA mobility awards. Given that this dataset only considers working age people, it will not capture the total number of people eligible for this PSR code and is therefore likely to underestimate eligibility.
Extra time to answer door	**Disability Living Allowance (DLA):** Mobility award claimants	Medium	Low	As above
Disabled over 65s	**Attendance Allowance (AA) claimants**	Medium	Low	This dataset is a broad representation of people over 65 that have a disability or health condition requiring help from others, overlapping with several proxy indicators used for other PSR codes. AA does not cover mobility needs.
Chronic and Serious Illnesses				
Dementia	**Constituency data**: Dementia prevalence	High	High	
Chronic Kidney Disease	**Constituency data**: Chronic Kidney Disease (CKD) prevalence	High	High	

Diabetes	**Constituency data**: Diabetes prevalence	High	High	
Epilepsy	**Constituency data**: Epilepsy prevalence	High	High	
Heart condition	**Constituency data**: Coronary Heart Disease and Heart Failure prevalence	High	High	
Chronic / Serious illness	**Constituency data**: Sum of people with COPD, Chronic kidney disease, severe asthma and type 2 diabetes	High	Medium	The eligibility calculation combined data on prevalence of various health conditions. However, this may not capture the full range of people with a chronic/serious illness. Furthermore, Type 2 diabetes is estimated from 90% of people with diabetes[1], and severe asthma from 3.6% of people that have asthma[2]. Use the numbers with caution, and just as an indication of 'possible presence'.
Dialysis at home	**Constituency data**: Chronic Kidney Disease (CKD) prevalence | Applied national prevalence of people with CKD doing dialysis at home	High	Medium / High	This PSR code was obtained by multiplying the number of people with CKD by the proportion of people in dialysis in the UK (~0.95%)[3]. Of these, around 17.5% of people have dialysis at home[4]. The figures provided are only representative and must be used with caution, and just as an indication of 'possible presence'.
Dialysis at hospital	**Constituency data**: Chronic Kidney Disease (CKD) prevalence | Applied national prevalence of people with CKD doing dialysis at hospital	High	Medium / Low	This PSR code was obtained by multiplying the number of people with CKD by the proportion of people in dialysis in the UK (~0.95%)[3]. Of these, around 82.5% of people do dialysis at hospital[4]. The figures provided are only representative and must be used with caution, and just as an indication of 'possible presence'.
Respiratory Disease	**Personal Independence Payment (PIP)**: Respiratory disease claimants	Medium	Medium	This dataset only captures working age people with respiratory disease, so it is likely to be an underestimation of the total number of people with respiratory conditions who are eligible for this needs code.

Mental Health and Cognitive Conditions				
Learning Disabilities	**Constituency data**: Learning Disabilities prevalence	High	High	
Developmental / Neurological Condition	**Constituency data**: Learning Disabilities prevalence	High	High	
Mental Health Condition	**Constituency data**: Depression and Schizophrenia, bipolar disorder and psychosis prevalence (converted to population count)	Medium	Medium	The variables in this dataset may not capture the full range of people who are eligible for this PSR code (i.e., people with anxiety, agoraphobia, and other mental health conditions or mental health problems without a formal diagnosis).
Language and Communication				
Unable to communicate in English	**Census**: Proficiency in English | Main language not English - Cannot speak English	High	High	
Sign Language Interpreter	**Census**: Main Language (Detailed) | Any sign communication system	High	High	
Braille Bill & Information	**Sight Loss Data Tool:** People with severe sight loss (blindness) | Proportion of braille users	Medium	Medium	This variable was obtained by applying the national 7% of blind people that use braille to the count of blind people in the service areas[5]. These numbers therefore just given an indication of 'possible presence'.
Bill explained	**Census**: Highest level of qualification | No qualification	Medium	Low	There are several scenarios in which bills may be explained over the phones, includ-

over the phone				ing elderly people and people with disabilities. However, these groups are already captured in other PSR codes, so felt that this dataset choice was a potential compromise. Not all people who are potentially eligible will want this. Use with caution.
Large Print Bill & Information	**Sight Loss Data Tool:** People living with mild and moderate sight loss (partial sight)	Medium	Low	This is based on our understanding of the type of people who could potentially require this service. It is likely to overestimate the true number of people eligible for this PSR code, since not all partially sighted people will require this service.
Contact 3rd party on my behalf	**Census**: Unpaid carers	Medium	Medium	This dataset may not fully capture those eligible for the nominee service PSR code. Unpaid carers may be just one of the possible ones. We looked at advocacy services data but found none (publicly) available.
Nominee Service	**Census**: Unpaid carers	Medium	Medium	As above.
Audio CD	**Sight Loss Data Tool**: People with severe sight loss (blindness)	Low	Low	This is based on our understanding of people who could potentially be eligible for this service, although it is likely to overestimate eligibility. We already have other PSR codes that cover other illnesses. This is arguably a dated service and it's unclear if it continues to reflect customer service preferences.
Power of Attorney	**Constituency data**: Prevalence of Dementia & stroke, or transient ischaemic attack & depression & other severe mental health disorders (summed population counts)	Medium	Low	This dataset may not capture the range of customers eligible for this PSR code. Other datasets were explored (i.e., the OPG), but no publicly available datasets were found

Meter Reading Assistance	**Census**: Number of households with at least one disabled person	Low	Low	This dataset may be too broad as a proxy indicator for this PSR code. We considered using a combination of PIP and AA data, but this would have given rise to the same issue.
Demographics and Social Factors				
Pensionable age	**Census**: Household composition by age | Sum of 'One-person household: Aged 66 years and over', 'Single family household: All aged 66 years and over', and 'Other household types: Other, including all full-time students and all aged 66 years and over'	Medium	High	
Over 75s	**ONS Estimates**: Mid-year population estimates	Medium	High	
Over 85s	**ONS Estimates**: Mid-year population estimates	High	High	
Family with children under 5	**Census**: Age of youngest child in household | Youngest dependent child: Aged 0 to 4 years	Medium	High	
School-age kids (5-16)	**ONS Estimates**: Mid-year population estimates	Medium	High	

Unpaid carers	**Census**: Unpaid carers | Sum of people that provide any unpaid care (> 0 hours)	Medium	High	While this dataset is the same for the PSR codes 'Contact 3rd party on my behalf', and 'Nominee Service', we have more confidence it captures this specific (proposed) new PSR code
People living alone	**Census**: Household size | 1 person in household	Medium	High	
Living in remote rural area	**Population Statistics for Rural England**: People living in any rural setting according to the 2011 Rural-Urban classification	Medium	High	
Different languages	**Census**: Main Language (Detailed) | | Sum of people speaking the top 5 non-English languages	Medium	High	
Special Water Needs				
Water needed for religious practices	**Census:** Religion | Sum of people of Muslim and Hindu religions	Medium	Medium	The census captures the count of people of different religions, but it is difficult to determine whether these people actually follow religious practices. Hence, the dataset is useful to outline areas where these religions are most prevalent, hence presenting a higher likelihood of being practiced.
Skin condition eczema	**Personal Independence Payment (PIP):** Skin disease claimants | Eczema	Medium	High	
Financial and Social Vulnerability				

Bereave-ment	**ONS Statistics**: Death Registrations	Medium	High	
Digitally excluded	**ONS Statistics**: Digital Propensity In-dex	Medium	High	
At risk of heat	**Friends of the Earth - Manchester Uni**: Neighbourhoods vul-nerable to heat in Eng-land	Medium	Low	This is more of a community at risk of heat metric and does not capture the different health conditions that are vulnerable to heat. Those these two data sets could be overlayed.
Single Oc-cupant As-sess Charge (SOAC)	**Census**: Households size and accommodation type	Medium	Medium	
Care leav-ers	**ONS Statistics**: Children ceasing to be looked after in England	Medium	Low	The coverage of this dataset is limited. It is only available for parts of the SSW ser-vice area, and a single LAD within the CAM area
Postal dep-rivation	**ONS Statistics**: The English Indices of Deprivation	Low	Low	This dataset is an overall deprivation rank, but access to the post office is included in the deprivation assessment of an area

1. https://www.diabetes.org.uk/about-us/about-the-charity/our-strategy/statistics
2. https://www.asthmaandlung.org.uk/sites/default/files/2023-03/auk-severe-asthma-gh-final.pdf
3. https://kidneycareuk.org/kidney-disease-information/about-kidney-health/facts-about-kidneys/
4. https://www.kidney.org.uk/Handlers/Download.ashx?IDMF=510dcba3-62a9-40ed-be61-e1171619e977
5. https://www.rnib.org.uk/professionals/health-social-care-education-professionals/knowledge-and-research-hub/reports-and-insight/reading-and-braille-research/

The table below lists the PSR codes removed from the analysis due to lack of datasets at an appropriate geographical scale and/or because they were either too specific or too broad to be represented by a single proxy indicator. Rows with a coloured background indicate PSR codes that are Ofwat priorities.

Category	Excluded PSR Codes
Communication	Speech impairment
	Audio CD
	Poor sense of taste/smell
Supply Interruption	Temp post hospital recovery
	Medicine in fridge
	Oxygen tanks kept at house
	Oxygen concentrator
	Nebuliser or apnoea monitor
	Heart or lung ventilator
	Medically dependant on water
	Stair lift hoist or elec bed
	Temp life changes
	Restricted hand movement
	Shower/ bath required for condition
	Young adult households
Originally proposed by Sustainability First	Living in area without support services
	Refugees and asylum seekers
	Financial/ domestic abuse
Financial (current SSC codes)	Aquacare Plus
	BDS
	Charitable Trust
	Company Pensioner
	COVID 19 Payment Break
	COVID19 Assure Temp Tariff
	Lite
	Low Value Plans
	Revive
	SoLow
	Water Direct (DWP)
	Essential Saver customer groups 1 to 3
	Watersure
	Watersure CAM
	Watersure Family
	Watersure Medical
	Watersure Medical Long Term

APPENDIX 3: Vulnerability projections for SSC – detailed tables

Table A3.1 Population projections for existing and proposed needs codes

PSR code	Service Area	Baseline Year	Baseline Value	2030	2035	2040
Blind	SS	2022	5,918	7,007	7,687	8,368
	CAM	2022	1,437	1,701	1,867	2,032
	SSC	2022	7,355	8,708	9,554	10,400
Partially sighted	SS	2022	38,448	44,292	47,945	51,597
	CAM	2022	9,306	10,721	11,605	12,489
	SSC	2022	47,754	55,013	59,550	64,086
Hearing difficulties	SS	2022	144,470	163,063	174,375	185,817
	CAM	2022	34,299	38,713	41,399	44,115
	SSC	2022	178,769	201,776	215,774	229,932
Deaf / Hard of hearing	SS	2022	3,093	3,491	3,733	3,978
	CAM	2022	748	844	903	962
	SSC	2022	3,841	4,335	4,636	4,940
Disabled	SS	2021	255,726	328,454	366,379	404,661
	CAM	2021	53,766	69,057	77,031	85,079
	SSC	2021	309,492	397,511	443,410	489,740
Unable to answer the door	SS	2021	113,701	146,038	162,899	179,920
	CAM	2021	18,629	23,927	26,690	29,479
	SSC	2021	132,330	169,965	189,589	209,399
Dementia	SS	2023	10,632	12,333	13,548	14,764
	CAM	2023	1,952	2,264	2,487	2,711
	SSC	2023	12,584	14,597	16,035	17,475
Chronic Kidney Disease	SS	2023	67,174	75,027	80,636	86,245
	CAM	2023	8,306	9,277	9,971	10,664
	SSC	2023	75,480	84,304	90,607	96,909
Diabetes	SS	2023	123,357	145,117	160,660	176,203

	CAM	2023	18,440	21,693	24,016	26,340
	SSC	2023	141,797	166,810	184,676	202,543
Epilepsy	SS	2023	12,502	13,215	13,526	13,807
	CAM	2023	2,183	2,307	2,362	2,411
	SSC	2023	14,685	15,522	15,888	16,218
Heart condition	SS	2023	49,052	48,380	46,908	45,300
	CAM	2023	8,804	8,683	8,419	8,130
	SSC	2023	57,856	57,063	55,327	53,430
Chronic / Serious illness	SS	2023	209,153	240,374	262,620	284,859
	CAM	2023	31,848	36,619	40,012	43,404
	SSC	2023	241,001	276,993	302,632	328,263
Dialysis at home	SS	2023	113	126	135	145
	CAM	2023	14	16	17	18
	SSC	2023	127	142	152	163
Dialysis at hospital	SS	2023	532	594	639	683
	CAM	2023	66	73	79	84
	SSC	2023	598	667	718	767
Learning Disabilities	SS	2023	7,704	7,974	8,132	8,207
	CAM	2023	1,363	1,411	1,439	1,452
	SSC	2023	9,067	9,385	9,571	9,659
Developmental / Neurological Condition	SS	2023	7,704	7,974	8,132	8,207
	CAM	2023	1,363	1,411	1,439	1,452
	SSC	2023	9,067	9,385	9,571	9,659
Unable to communicate in English	SS	2021	29,660	31,979	32,733	33,415
	CAM	2021	3,723	4,014	4,109	4,194
	SSC	2021	33,383	35,993	36,842	37,609
Sign Language Interpreter	SS	2021	133	144	147	150
	CAM	2021	20	22	22	23
	SSC	2021	153	166	169	173

Disabled over 65s	SS	2021	116,521	141,480	160,240	175,854
	CAM	2021	27,040	32,831	37,185	40,808
	SSC	2021	143,561	174,311	197,425	216,662
Respiratory Disease	SS	2023	27,580	31,171	33,736	36,301
	CAM	2023	4,793	5,417	5,863	6,309
	SSC	2023	32,373	36,588	39,599	42,610
Mental Health Condition	SS	2023	197,155	216,890	230,987	245,083
	CAM	2023	40,353	44,392	47,278	50,163
	SSC	2023	237,508	261,282	278,265	295,246
Braille Bill & Information	SS	2022	369	437	479	522
	CAM	2022	82	97	107	116
	SSC	2022	451	534	586	638
Pensionable age	SS	2021	258,936	306,140	332,810	349,072
	CAM	2021	60,088	71,042	77,231	81,005
	SSC	2021	319,024	377,182	410,041	430,077
Over 75s	SS	2021	124,509	153,694	168,311	188,556
	CAM	2021	28,760	35,501	38,878	43,554
	SSC	2021	153,269	189,195	207,189	232,110
Over 85s	SS	2021	34,076	42,656	53,656	57,346
	CAM	2021	8,353	10,456	13,153	14,057
	SSC	2021	42,429	53,112	66,809	71,403
Under 5s	SS	2021	80,230	78,128	78,706	79,893
	CAM	2021	17,648	17,186	17,313	17,574
	SSC	2021	97,878	95,314	96,019	97,467
School-age kids (5-16)	SS	2021	209,634	203,198	195,148	193,010
	CAM	2021	47,357	45,903	44,085	43,602
	SSC	2021	256,991	249,101	239,233	236,612
Unpaid carers	SS	2021	125,549	134,815	139,962	145,110
	CAM	2021	25,605	27,495	28,544	29,594
	SSC	2021	151,154	162,310	168,506	174,704

Deaths	SS	2023	13,698	13,942	14,821	15,627
	CAM	2023	2,749	2,798	2,974	3,136
	SSC	2023	16,447	16,740	17,795	18,763

Table A3.2 Projected population count and prevalence for existing and proposed needs codes (South Staffs and Cambridge combined)

PSR code	Baseline Year	Baseline Value	Baseline prev (%)	2030	2030 prev (%)	2035	2035 prev (%)	2040	2040 prev (%)
Blind	7,355	0.42	8,708	0.46	9,554	0.5	10,400	0.53	7,355
Braille Bill & Information	451	0.03	534	0.03	586	0.03	638	0.03	451
Care leavers	526	0.03	570	0.03	608	0.03	645	0.03	526
Chronic / Serious illness	241,001	13.6	276,993	14.78	302,632	15.77	328,263	16.76	241,001
Chronic Kidney Disease	75,480	4.26	84,304	4.5	90,607	4.72	96,909	4.95	75,480
Deaf / Hard of hearing	3,841	0.22	4,335	0.23	4,636	0.24	4,940	0.25	3,841
Deaths	16,447	0.93	16,740	0.89	17,795	0.93	18,763	0.96	16,447
Dementia	12,584	0.71	14,597	0.78	16,035	0.84	17,475	0.89	12,584
Developmental / Neurological Condition	9,067	0.51	9,385	0.5	9,571	0.5	9,659	0.49	9,067
Diabetes	141,797	8	166,810	8.9	184,676	9.62	202,543	10.34	141,797
Dialysis at home	127	0.01	142	0.01	152	0.01	163	0.01	127
Dialysis at hospital	598	0.03	667	0.04	718	0.04	767	0.04	598
Disabled	309,492	17.8	397,511	21.2	443,410	23.11	489,740	25	309,492
Disabled over 65s	143,561	8.26	174,311	9.3	197,425	10.29	216,662	11.06	143,561
Epilepsy	14,685	0.83	15,522	0.83	15,888	0.83	16,218	0.83	14,685
Hearing difficulties	178,769	10.18	201,776	10.76	215,774	11.24	229,932	11.74	178,769
Heart condition	57,856	3.27	57,063	3.04	55,327	2.88	53,430	2.73	57,856
Learning Disabilities	9,067	0.51	9,385	0.5	9,571	0.5	9,659	0.49	9,067
Mental Health Condition	237,508	13.41	261,282	13.94	278,265	14.5	295,246	15.07	237,508

Over 75s	153,269	8.82	189,195	10.09	207,189	10.8	232,110	11.85	153,269
Over 85s	42,429	2.44	53,112	2.83	66,809	3.48	71,403	3.65	42,429
Partially sighted	47,754	2.72	55,013	2.93	59,550	3.1	64,086	3.27	47,754
Pensionable age	319,024	18.35	377,182	20.12	410,041	21.37	430,077	21.96	319,024
Respiratory Disease	32,373	1.83	36,588	1.95	39,599	2.06	42,610	2.18	32,373
School-age kids (5-16)	256,991	14.78	249,101	13.29	239,233	12.47	236,612	12.08	256,991
Sign Language Interpreter	153	0.01	166	0.01	169	0.01	173	0.01	153
Unable to answer the door	132,330	7.61	169,965	9.07	189,589	9.88	209,399	10.69	132,330
Unable to communicate in English	33,383	1.92	35,993	1.92	36,842	1.92	37,609	1.92	33,383
Under 5s	97,878	5.63	95,314	5.08	96,019	5	97,467	4.98	97,878

REPORT AUTHORS

Sustainability First

Sustainability First is an independent charity and think tank that promotes change in the water and energy sectors for a fairer, more sustainable future. We are passionate about protecting and repairing the environment and promoting fairness for all, including future generations. We do this by undertaking research, convening policy discussions, making complex issues accessible to engage the public, promote unheard and under-represented voices, and develop solutions to influence government policies, legislation, regulation, and business practices. We will always act as critical friends, holding companies, government bodies, and regulators accountable, in the public and planet's interests. The authors of this report are Sustainability First Associates Zoe McLeod and William Baker.

KELP

Kelp is a data science consulting company founded in 2024 by Davide Lomeo and Megan James, two PhD Researchers at King's College London, with the vision to help companies make the most out of data by adopting rigorous academic approaches to data science.

Megan is a data scientist with extensive experience in machine learning, spatial data analysis and predictive modelling, with a focus on uncertainty quantification. As a PhD researcher at King's College London, her work focuses on developing statistical and empirical models to generate robust projections of regional- to global- scale glacier change, utilising tools such as Python, R and Linux systems. During this time, Megan has contributed to international modelling initiatives, including the EU-funded Horizon 2020 project PROTECT and the Global Glacier Modelling Intercomparison Project.

Davide is a PhD researcher in Earth Observation Science at King's College London. He has attained a BSc in Physical Geography with Geocomputation and Spatial Analysis, and an MSc in Applied Computational Science and Engineering. Davide has over 8 years of experience in data science, including data mining, predictive analysis, machine learning, deep learning, and spatial data science, including spatial modelling and GIS. During this time Davide has collaborated internationally with some of the most influential institutions in the US, UK, and Australia, including Imperial College London, Cornell University, UNSW Sydney, as well as the governments of Kenya and Botswana. Some recent projects Davide has worked on include modelling the economic shocks of extreme weather events across the US, investigating the impact of low water quality to animal mass mortality events in Botswana, and recently developed a water quality monitoring tool for cyanobacteria in global lakes.