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BRE Client Report

BRE Integrated Dwelling Level Housing Stock Modelling and Database for North Somerset Council

Prepared for: **Howard Evans, Head of Private Sector Housing**

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Executive summary

- North Somerset commissioned BRE to undertake a series of modelling exercises on their housing stock which required BRE to produce an integrated stock model which includes Local Land and Property Gazetteer (LLPG), Tenancy Deposit Scheme (TDS), benefits, Houses in Multiple Occupation (HMO), enforcement and energy efficiency scheme data provided by North Somerset. The BRE models also integrate Energy Performance Certificate (EPC)[1] data. As a result of this 49,245 addresses have had their imputed energy characteristics replaced with observed characteristics from the EPC data for the purposes of the energy model. The use of this observed data will lead to more accurate energy models for these cases, which account for 49.5% of the total stock in North Somerset.
- This report describes the work and the results obtained from the integrated model and Housing Stock Condition Database (HSCD). Access to the HSCD is also provided to the council to enable them to obtain specific information whenever required.
- The detailed housing stock information provided in this report will facilitate the delivery of North Somerset's housing strategy and enable a targeted intervention approach to improving housing. In addition to this there are also several relevant government policies – the Housing Act 2004, Housing Strategy Policy, Local Authority Housing Statistics (LAHS) and the Energy Companies Obligation (ECO).
- The main aims of this work were to provide estimates of:
    - The percentage of dwellings with the presence of each of the Housing Standards Variables[2] for North Somerset overall and broken down by tenure and then mapped by Census Output Area (COA) (private sector stock only)
    - Information relating to LAHS reporting for the private sector stock - category 1 hazards and information on estimated EPC ratings (based on SimpleSAP)
    - Energy efficiency variables for the private sector stock (wall and loft insulation)
    - Energy planning variables (SimpleCO_2, energy and heat demand, energy and heat cost)
    - Improvement scenarios
    - Additional modelling analysis to determine the estimated potential costs required to improve SimpleSAP ratings to a Band C
    - Specialist Analysis of the Private Rented Sector including HMOs and Selective Licensing

[1] EPCs are an indication of how energy efficient a building is - with a rating from A (very efficient) to G (inefficient). They are required whenever a property is built, sold, or rented.

[2] Presence of a HHSRS category 1 hazard, presence of a category 1 hazard for excess cold, presence of a category 1 hazard for falls, dwellings in disrepair, fuel poverty (10% and Low Income High Cost definitions), dwelling occupied by a low income household and SimpleSAP rating.

- BRE Housing Stock Models were used to provide such estimates at dwelling level and focussing on private sector housing. The Housing Standards Variables provide North Somerset with detailed information on the likely condition of the stock and the geographical distribution of properties of interest.
- A stock modelling approach has been developed and used by BRE for many years and the most recent models (v5) have been updated to make use of the results of the 2018 English Housing Survey (EHS)[3]. The models also make use of Experian and Ordnance Survey (OS) data. OS AddressBase Plus is used as a basis for the list of all dwellings in the authority and applying improved geo-modelling[4] is used to determine the dwelling type and floor area from OS Mastermap. The energy model that lies at the heart of the modelling process are based on the 2012 version of SAP[5], and the methods for imputing the inputs to this model incorporate information sources from additional sources. These include the age of postcodes (to improve dwelling age data) and data from Xoserve to determine whether the dwelling is on the gas network. These dwelling level models are used to estimate the likelihood of a particular dwelling meeting the criteria for each of the Housing Standards Variables. These outputs can then be mapped to provide the authority with a geographical distribution of each of the variables which can then be used to target resources for improving the housing stock.
- Furthermore, North Somerset provided additional sources of "local data" – LLPG, TDS, benefits, HMO, enforcement and energy efficiency data. Energy Performance Certificate (EPC) data is also integrated by BRE. These data sets were then incorporated into the BRE Housing Stock Model to produce an integrated Housing Stock Condition Database (HSCD).
- The headline results are provided on the following page:

[3] 2018 is the latest available data. Prior to the v5 models EHS 2015 data was used.

[4] The OS data has been used to update a number of the model inputs – the main value of the OS data is the ability to determine the dwelling type with much greater confidence – see **Appendix B** for more information.

[5] Note that the carbon emission factors applied are the updated factors published in the SAP10.1 consultation[5] which take into account the reduction in carbon emissions from grid electricity in recent years. Only the carbon emission factors from SAP10.1 have been used in the modelling; the energy cost prices use the existing SAP12 figures.

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Headline results for North Somerset

There are 99,406 dwellings in North Somerset, 71% are estimated to be owner occupied, 20% private rented and 10% social rented.

8,644 dwellings in the private sector estimated to have category 1 Housing Health and Safety Rating System (HHSRS) hazards. This equates to just below 10% of properties. *See full results*

2,175 dwellings in the private rented sector have category 1 HHSRS hazards. This equates to 11% of properties in the private rented sector. *See full results*

The highest concentrations of all HHSRS hazards in the private sector are found in Blagdon and Churchill, Winford and Wrington. *See full results*

The highest concentrations of fuel poverty (Low Income High Costs definition) in the private sector are found in Weston-super-Mare South Ward, Weston-super-Mare Central and Blagdon and Churchill and for excess cold the highest concentrations are in Blagdon and Churchill, Winford and Wrington. *See full results*

The average SimpleSAP rating for all private sector dwellings in North Somerset is 60, which is worse than both England (62) and South West (61). For owner occupied stock the figure is 60 and for private rented stock it is 63. *See full results*

Maps by Census Output Area (COA) have been provided for the above Housing Standards Variables. *See maps*

The total cost of mitigating category 1 hazards in North Somerset's private sector stock is estimated to be £42.6 million – with £31.9 million in the owner occupied sector, and £10.7 million in the private rented sector. *See full results*

There are an estimated 1,832 HMOs in North Somerset. *See full results*

6.5% (5,863) of *private sector* dwellings and 5.2% (1,011) of *private rented* dwellings in North Somerset are estimated to have an EPC (based on SimpleSAP) rating below band E. *See full results*

In the private sector stock, there are an estimated 18,916 dwellings with un-insulated cavity walls and 11,028 dwellings with less than 100mm of loft insulation. *See full results*

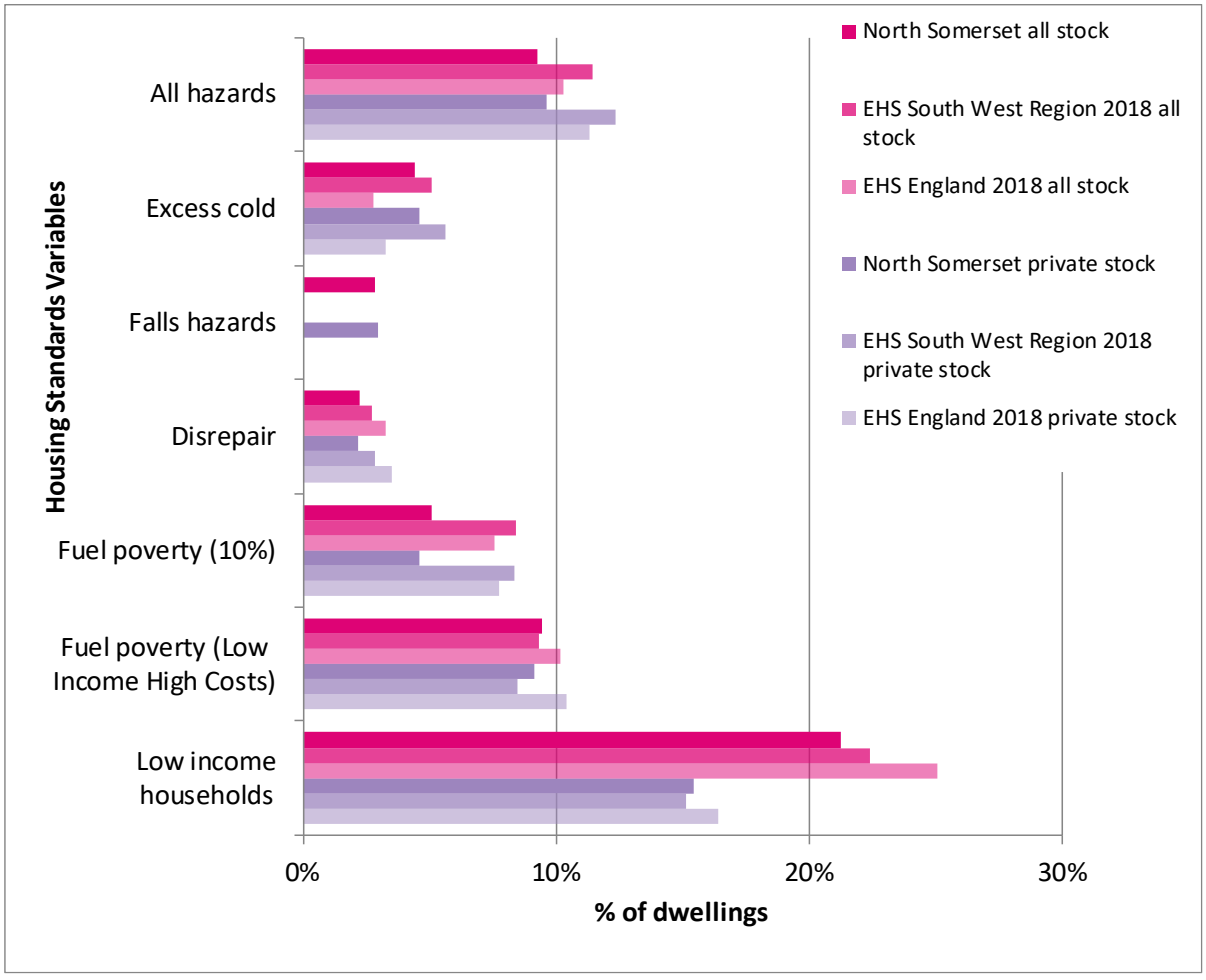
Analysis of the energy efficiency variables indicates that the owner-occupied stock has the highest average figures for the majority of variables (SimpleCO_2, energy and heat demand, energy and heat cost). *See full results*

An improvement scenario involving a package of work with low cost measures, a heat pump, double glazing, solid wall insulation and photovoltaics provides high levels of savings – around a -61% reduction in carbon emissions. However, simply implementing low cost measures and heating would provide a reduction of around -18%. *See full results*

Key illustrations of headline results

- The table below shows the results for 7 of the Housing Standards Variables in North Somerset compared to regional data and England (EHS 2018) - split into all stock and private sector stock. The data shows that the performance of the housing stock in North Somerset compared to the EHS England average is mixed with North Somerset performing slightly better for all hazards, disrepair, fuel poverty (LIHC and 10% definitions), but worse for excess cold and low income households. Compared to the regional average the picture is slightly different with North Somerset performing better for all hazards, excess cold, disrepair, fuel poverty (10% definition), but worse for fuel poverty (LIHC definition) and low income households. Therefore, this data suggests that within the region North Somerset's housing is in relatively good condition but is home to a relatively high proportion of people on low incomes.

Estimates of the percentage of dwellings with the presence of each of the Housing Standards Variables criteria assessed by the housing stock models and HSCD for all stock and private sector stock – North Somerset compared to the South West and England (EHS 2018)



N.B. 2018 Regional & England data no longer includes Falls Hazards as a separate variable

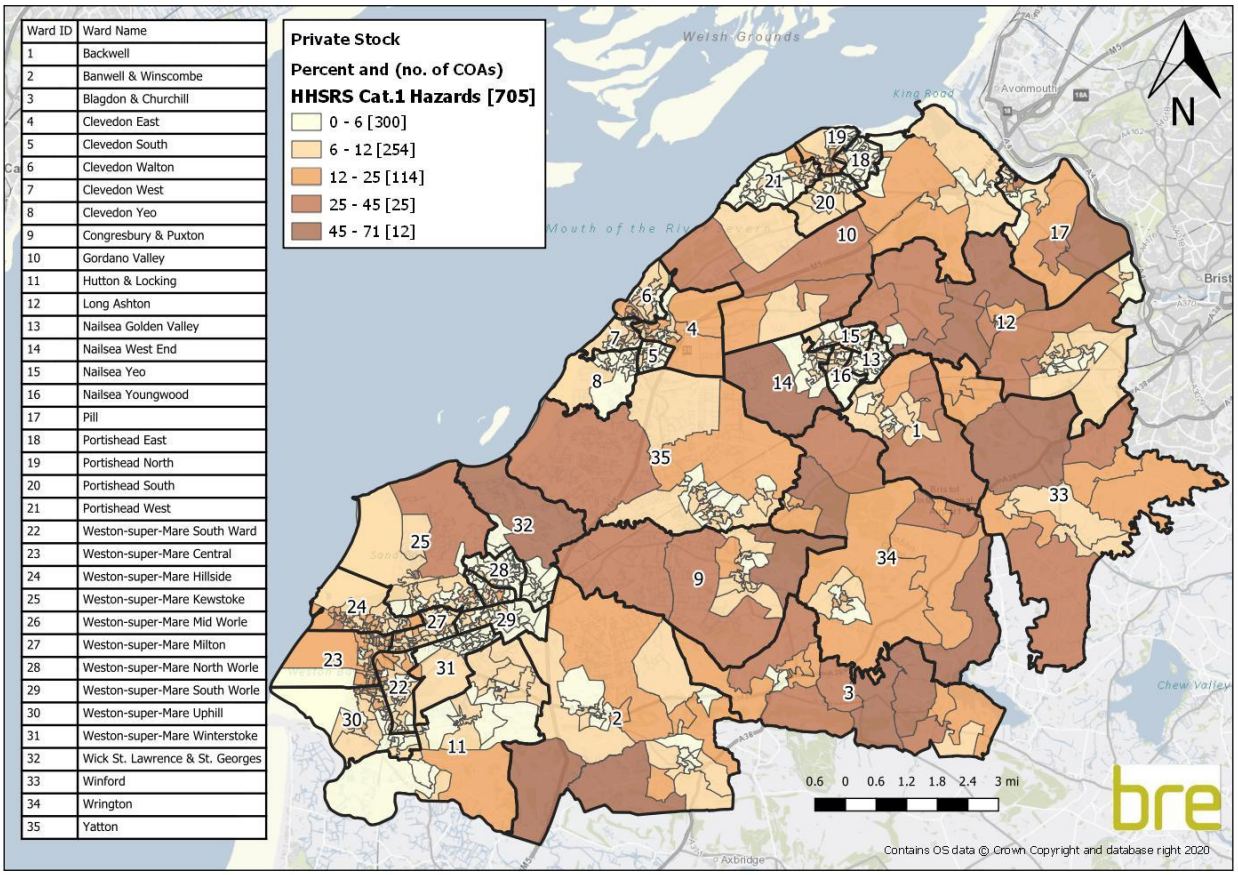
- The table below shows the number and percentage of North Somerset's private rented stock falling into each of the EPC ratings bands (based on SimpleSAP). The number of private rented dwellings in North Somerset with a rating below band E (i.e. bands F and G), is estimated to be 1,011 (5.2%). Compared to England, there are a greater proportion of dwellings in band C, E and F, the same proportion in band G and a lower proportion in band D.

Number and percentage of North Somerset's private rented stock falling into each of the EPC ratings bands (based on SimpleSAP)

	North Somerset		2018 EHS England
	Count	Percent	Percent
(92-100) A	0	0.0%	1.5%
(81-91) B	235	1.2%	
(69-80) C	6,600	33.9%	31.1%
(55-68) D	8,799	45.2%	48.5%
(39-54) E	2,837	14.6%	13.8%
(21-38) F	777	4.0%	3.8%
(1-20) G	234	1.2%	1.2%

- The map overleaf shows the distribution of category 1 hazards, as defined by the Housing Health and Safety Rating System (HHSRS). Although there are category 1 hazards found across the area, the highest concentrations are mainly found in the south east of North Somerset, in particular the wards of Blagdon and Churchill, Winford and Wrington.

Percentage of private sector dwellings in North Somerset with the presence of a HHSRS category 1 hazard. N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

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1 Introduction

North Somerset commissioned BRE to undertake a series of modelling exercises on their housing stock. BRE have integrated data provided by the authority into the models to produce an integrated database and corresponding report. This report describes the modelling work and provides details of the results obtained from the integrated dwelling level model and database.

North Somerset provided Local Land and Property Gazetteer (LLPG), Tenancy Deposit Scheme (TDS), benefits, Houses in Multiple Occupation (HMO), enforcement and energy efficiency scheme data for integration. The BRE Model also integrates Energy Performance Certificate (EPC) data and, as a result of this 49245 addresses have had their imputed energy characteristics replaced with observed characteristics from the EPC data for the purposes of the Energy Model. The use of this observed data will lead to more accurate Energy Models for these records, which account for 49.5% of the total housing stock in North Somerset.

The BRE Housing Stock Model data is provided to the council via the online Housing Stock Condition Database (HSCD) to enable them to obtain specific information whenever required.

The BRE Housing Stock Models provide the council with dwelling level information on various Housing Standards Variables, focussing on private sector housing. These variables provide North Somerset with detailed information on the likely condition of the stock and the geographical distribution of properties of interest. These properties are likely to be suitable targets for energy efficiency improvements or other forms of intervention, such as mitigating Housing Health and Safety Rating System (HHSRS) hazards. The variables are split into categories related to house condition, energy efficiency and household vulnerability as shown in **Table 1** (see **Appendix A** for full definitions).

Table 1: Housing Standards Variables split into categories

Housing Standards Variable	House condition variables	Energy efficiency variables	Household vulnerability variables
Presence of HHSRS cat 1 hazard	✓		
Presence of cat 1 hazard for excess cold	✓	✓	
Presence of cat 1 hazard for falls	✓		
Dwellings in disrepair	✓		
Fuel Poverty (10% & Low income, High cost definitions)			✓
Dwellings occupied by low income households			✓
SimpleSAP rating		✓	

N.B. Presence of category 1 hazard for falls does NOT include the hazard of falling between levels

The single variables shown in **Table 1** can also be brought together within the HSCD to provide powerful information on the housing stock; for example, dwellings suffering from excess cold and also occupied by households on a low income. This enables council officers to explore the stock and to assess the likely scope of any programmes they might wish to implement.

The information in this report includes estimates relating to the Department for Levelling Up, Housing and Communities (DLUHC, formerly MHCLG) Local Authority Housing Statistics (LAHS) reporting of costs of mitigating hazards, numbers of Houses in Multiple Occupation (HMOs) as well as providing information relating to estimated Energy Performance Certificate (EPC) ratings (based on SimpleSAP).

The Housing Standards Variables and other information are derived from the BRE Dwelling Level Stock Models. These Models have been used for many years to provide key Housing Standards Variables to local authorities. The most recent models have been updated to make use of the results of the 2018 English Housing Survey (EHS)[6]. The models also make use of Experian and Ordnance Survey (OS) data. OS AddressBase Plus is used as a basis for the list of all residential dwellings in the authority. OS Mastermap is also linked to OS AddressBase to allow dwelling type and floor area to be determined through geographical modelling[7]. Other national data sources used by the Model include the age of postcodes (to improve dwelling age data) and data from Xoserve to determine whether the dwelling is on the gas network. These dwelling level models are used to estimate the likelihood of a dwelling meeting the criteria for each of the Housing Standards Variables. These outputs can then be mapped to provide the authority with a geographical distribution of each of the variables which can then be used to target resources for improving the housing stock.

As described above, in this particular case, the database was further enhanced by the addition of local data sources which were identified by North Somerset. These local data sources were incorporated into the stock models to produce the integrated database.

The information in the HSCD can be used to ensure the council meets various policy and reporting requirements. For example, local housing authorities are required to review housing conditions in their districts in accordance with the Housing Act 2004[8].

Furthermore, having this information available will also help to facilitate the delivery of North Somerset's housing strategy. It will enable a targeted intervention approach to improving housing; therefore, allowing the council to concentrate their resources on housing in the poorest condition or with the greatest health impact.

[6] 2018 is the latest available data. Prior to the v5 models EHS 2015 data was used.

[7] The OS data has been used to update a number of the model inputs – the main value of the OS data is the ability to determine the dwelling type with much greater confidence – see **Appendix B** for more information.

[8] http://www.legislation.gov.uk/ukpga/2004/34/contents

1.1 Project aims

The main purpose of this project was to provide data on key private sector housing variables for North Somerset. The main aims were therefore to provide estimates of:

- The percentage of dwellings with the presence of each of the Housing Standards Variables[9] for North Somerset overall and broken down by tenure and then mapped by Census Output Area (COA) (private sector stock only)
- Information relating to LAHS reporting for the private sector stock - category 1 hazards and information on estimated EPC ratings (based on SimpleSAP)
- Energy efficiency variables for the private sector stock (wall and loft insulation)
- Energy planning variables (SimpleCO_2, energy and heat demand, energy and heat cost)
- Improvement scenarios
- Additional modelling analysis to determine the estimated potential costs required to improve SimpleSAP ratings to a Band C
- Specialist Analysis of the Private Rented Sector including HMOs and Selective Licensing

This report looks firstly at the policy background and why such information is important for local authorities. Secondly, it provides a brief description of the overall stock modelling approach and the integration of the local data sources. Finally, this report provides the modelling results for North Somerset covering each of the main aims above.

[9] Presence of a HHSRS category 1 hazard, presence of a category 1 hazard for excess cold, presence of a category 1 hazard for falls, dwellings in disrepair, fuel poverty (10% and Low Income High Cost definitions), dwelling occupied by a low income household and SimpleSAP rating.

2 Policy background

The detailed housing stock information provided in this report will facilitate the delivery of North Somerset's housing strategy and enable a targeted intervention approach to improving housing. This strategy needs to be set in the context of relevant government policy and legislative requirements. These policies either require reporting of housing-related data by local authorities, or the use of such data to assist in meeting policy requirements. The main policies and legislative requirements are summarised in the following sub-sections.

2.1 Housing Act 2004

The Housing Act 2004[8] requires local housing authorities to review housing statistics in their district. The requirements of the Act are wide-ranging and also refer to other legislation which between them covers the following:

- Dwellings that fail to meet the minimum standard for housings (i.e. dwellings with HHSRS category 1 hazards)
- Houses in Multiple Occupation (HMOs)
- Selective licensing of other houses
- Demolition and slum clearance
- The need for provision of assistance with housing renewal
- The need to assist with adaptation of dwellings for disabled persons

2.2 Key housing strategy policy areas and legislation

2.2.1 Private rented sector

In the report "Laying the Foundations: A Housing Strategy for England"[10] Chapters 4 and 5 focus on the private rented sector and empty homes.

New measures are being developed to deal with rogue landlords and to encourage local authorities to make full use of enforcement powers for tackling dangerous and poorly maintained dwellings. The report encourages working closely with landlords whilst still operating a robust enforcement regime (e.g. Landlord Forums and Panels across the country).

There has been significant growth in the private rented sector in North Somerset in the 10 years between 2001 and 2011 - from 8% of the total stock in 2001 to 17% in 2011[11] - so that 9% of the stock has changed over that time period to now be private rented. This is the same as the change of 9% seen in England as a whole. The analysis for this current report estimates that 20% of the stock in North Somerset is now privately rented, implying a further increase since 2011.

[10] Laying the Foundations: A Housing Strategy for England, CLG, 2011

[11] https://www.ons.gov.uk/census#censusdataandbackground

2.2.2 Health inequalities

The government's white paper "Choosing Health"[12] states that the key to success in health inequalities will be effective local partnerships led by local government and the NHS working to a common purpose and reflecting local needs. Housing is a key determinant of health, and poor housing conditions continue to cause preventable deaths and contribute to health inequalities[13]. An example in this area is the work carried out by Liverpool City Council in partnership with Liverpool Primary Care Trust – the "Healthy Homes Programme". This has identified over 3,800 hazards and led to an estimated £4.8 million investment by landlords, delivering sustainable health improvements and enhancing community wellbeing.

2.2.3 Integrated care

It has been recognised by central government that to fully address the health needs of the population, services need to become more integrated and there needs to be better communication between different providers. Housing is a key aspect of this:

"Many people with mental and physical disabilities, complex needs, long-term conditions and terminal illness also need to access different health care, social care, housing and other services, such as education, and often simultaneously"[14].

It is therefore essential that departments providing or regulating housing work with other council departments and health organisations to provide services that are integrated and take full account of the needs of the individual.

2.2.4 Public Health Outcomes Framework

The Public Health Outcomes Framework "Healthy lives, healthy people: Improving outcomes and supporting transparency"[15] sets out desired outcomes for public health and how they will be measured. Many of the measurements have links to housing, some of the more relevant being:

- Falls and injuries in over 65's
- Fuel poverty
- Excess winter deaths

There have been minor indicator changes for 2019-2022, incorporating moderate to severe falls.

2.2.5 Joint Strategic Needs Assessment (JSNA) and Joint Health and Wellbeing Strategies

The JSNA and joint health and wellbeing strategy allow health and wellbeing boards to analyse the health needs of their local population and to decide how to make best use of collective resources to achieve the priorities that are formed from these. The Department of Health document "Joint Strategic Needs Assessment and joint health and wellbeing strategies explained - Commissioning for populations" says

[12] Choosing Health: Making healthy choices easier, Department of Health, 2004

[13] The health impacts of poor private sector housing, LACORS, 2010

[14] Integrated Care: Our Shared Commitment, Department of Health, 2013

[15] Healthy lives, healthy people: Improving outcomes and supporting transparency, Department of Health, 2013

"This will ensure better integration between public health and services such as housing and education that have considerable impact on the wider determinants of health"[16].

2.2.6 Energy Act 2011

The Energy Act 2011 requires that from 2016 reasonable requests by tenants for energy efficiency improvements will not be able to be refused. Furthermore, since 1 April 2018 it became unlawful for landlords to grant a new tenancy or renew an existing tenancy for a property that does not reach a minimum energy efficiency standard (MEES) of Energy Performance Certificate rating band E[17]. While there will be various caveats to these powers, they provide a new minimum standard for rented accommodation. If the EPC rating is an F or G, the landlord must improve the rating to a minimum of EPC E or register an exemption (if applicable) before they are able to let the property. Since 1 April 2020, the regulations also apply to all domestic rented properties regardless of whether there has been a change in tenancy (again exemptions may apply but these must be registered by the landlord on the PRS exemptions register).

2.2.7 Empty homes

The need to bring empty private sector dwellings back into use is a key government objective that is part of a wider strategy to tackle housing affordability. It is generally accepted that in a time of housing shortage, empty dwellings represent a wasted resource.

Empty homes brought back into use will qualify for the New Homes Bonus where, for the following 4 years, the government will match the Council Tax raised on long term empty properties brought back into use. This was previously set at 5 years in 2017-19 and 6 years prior to that. Between 2012-15, £100 million of capital funding was available from within the Affordable Homes Programme to tackle problematic[18] empty homes. There is no longer any separate funding for empty homes under the 2015-18 Affordable Homes Programme[19]. Since 2013, councils have been able to charge a 50% premium on the Council Tax bills of owners of homes empty for 2 years or more. 291 out of 326 councils applied an empty homes premium in 2017 to 2018[20]. Furthermore, local authorities have a range of powers and incentives at their disposal to bring empty homes back into use. These include, Empty Dwelling Management Orders, Council Tax exemptions and premiums, and measures to secure the improvement of empty properties[21].

The Affordable Homes Programme was replaced by the Shared Ownership and Affordable Homes Programme (2016-2021), supporting increased home ownership and aiming to expand supply of

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[16] Joint Strategic Needs Assessment and joint health and wellbeing strategies explained: Commissioning for populations, Department of Health, 2011

[17] https://www.gov.uk/government/publications/the-private-rented-property-minimum-standard-landlord-guidance-documents

[18] Properties that are likely to remain empty without direct financial support from government.

[19] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/343896/affordable-homes-15-18-framework.pdf

[20] https://www.gov.uk/government/news/government-boosts-councils-powers-to-help-bring-empty-homes-back-into-use

[21] https://commonslibrary.parliament.uk/research-briefings/sn03012/

affordable homes in England. A total of £4.7 billion is available for the development of Shared Ownership and other affordable homes.[22]

There are several issues with private sector vacant dwellings including the transient nature of vacant dwellings and their difficulty of identification. Properties are being continually bought and sold, let, and modernised, which means that at any given time a proportion of the stock will be naturally vacant. The only dwellings that tend to be of most interest to local authorities are those that are not turning over in the normal way.

Whilst the data provided by this project cannot necessarily assist with the actual identification of empty homes, the HSCD would be the logical place for such information to be stored should it be gathered from other sources.

The latest available information for North Somerset for 2020, collected by DLUHC[23], identifies 2,002 vacant dwellings across all tenures. This represents a vacancy rate of approximately 2% in North Somerset. In 2019 the number of vacant dwellings was 1,730, and 5 years ago in 2015 the figure was 1,460. Furthermore, around 599 (1%) dwellings are long-term vacant (6 months or more) in North Somerset (2020 figures).

2.3 Other policy areas

The following policy areas, whilst not directly relating to environmental health services, will influence demand and local authorities will need to be aware of the possible impact in their area.

2.3.1 The Housing and Planning Act 2016

The Housing and Planning Act 2016[24] introduced legislation for government to implement the sale of higher value local authority homes, starter homes, pay to stay and several other measures, mainly intended to promote home ownership and boost levels of housebuilding in England. The following policy changes will have a significant impact on the way councils deliver their Housing Services:

- Extension of the Right-to-Buy scheme to housing associations through a voluntary agreement, funded by the sale of higher value council properties when they become vacant
- The ending of lifetime tenancies – all new tenants will have to sign tenancies for a fixed term up to 10 years although there will be exemptions for people with disabilities and victims of domestic abuse, and families with children under nine years old can have a tenancy that lasts until the child's 19th birthday
- Changes to planning measures so that the government can intervene where councils have not adopted a Local Plan
- To replace the need for social rented and intermediate housing on new sites with the provision of Starter Homes that are sold at a reduced cost to first time buyers
- Changing the definition of 'affordable homes' to include starter homes
- Increasing the site size threshold before affordable housing can be requested

[22] https://www.gov.uk/government/collections/shared-ownership-and-affordable-homes-programme-2016-to-2021-guidance

[23] https://www.gov.uk/government/collections/dwelling-stock-including-vacants

[24] http://www.legislation.gov.uk/ukpga/2016/22/contents/enacted/data.htm

The Act also includes a package of measures to help tackle rogue landlords in the private rented sector. This includes:

- Allowing local authorities to apply for a banning order to prevent a particular landlord/letting agent from continuing to operate where they have committed certain housing offences
- Creating a national database of rogue landlords/letting agents, which will be maintained by local authorities
- Allowing tenants or local authorities to apply for a rent repayment order where a landlord has committed certain offences (for example continuing to operate while subject to a banning order or ignoring an improvement notice). If successful, the tenant (or the authority if the tenant was receiving universal credit) may be repaid up to a maximum of 12 months' rent
- Introducing a new regime giving local authorities an alternative to prosecution for offences committed under the Housing Act 2004, including all HMO offences. Effectively, local authorities have a choice whether to prosecute or impose a penalty with a maximum fine of £30,000. The local authority can also retain the money recovered, which is not currently the case with fines imposed in the magistrates' court

2.3.2 The Welfare Reform and Work Act 2016 and the Welfare Reform Act 2012

The Welfare Reform and Work Act 2016[25] gained royal assent in March 2016. The Act introduces a duty to report to Parliament on progress made towards achieving full employment and the three million apprenticeships target in England. The Act also ensures reporting on the effect of support for troubled families and provision for social mobility, the benefit cap, social security and tax credits, loans for mortgage interest, and social housing rents. These include the following:

- Overall reduction in benefits – a four year freeze on several social security benefits
- Benefit cap reduction – the total amount of benefit which a family on out of work benefits can be entitled to in a year will not exceed £20,000 for couples and lone parents, and £13,400 for single claimants, except in Greater London where the cap is set at £23,000 and £15,410 respectively
- Local Housing Allowance rent cap – this is the locally agreed maximum benefit threshold for a dwelling or household type within a defined geographical area. Therefore, if rises in rent outstrip growth in income, renters may find it increasingly difficult to pay
- A 1% reduction in social rents per year for 4 years to reduce the housing benefit bill

In addition, the Welfare Reform Act 2012[26] (which is in parts amended by the 2016 Act discussed above) covers areas of environmental health services – in particular, the sections relating to the under occupation of social housing, and the benefit cap. Whilst this will mainly affect tenants in the social rented sector it will undoubtedly have an impact on private sector services. Social tenants may find themselves being displaced into the private sector, increasing demand in this area, and the tenants of Registered Providers (RP's) and some private landlords may have greater trouble affording rent payments. If tenants are in arrears on their rental payments, then authorities may be met with reluctance from landlords when requiring improvements to properties.

2.3.3 Localism Act 2011

The Localism Act allows social housing providers to offer fixed term, rather than secure lifetime, tenancies. As with the Welfare Reform Act, this has a greater direct impact on the social rented sector,

[25] http://www.legislation.gov.uk/ukpga/2016/7/contents/enacted

[26] http://www.legislation.gov.uk/ukpga/2012/5/contents/enacted

however, there is some concern this may lead to greater turnover of tenancies meaning such that some traditional social tenants may find themselves in the private rented sector.

Both of these policy changes above may increase the number of vulnerable persons in private sector properties. If this occurs any properties in this sector in poor condition are likely to have a far greater negative impact on the health of those occupiers.

2.3.4 Potential increase in private rented sector properties

Policies such as the Build to Rent and the New Homes Bonus are aimed at increasing the supply of properties. As the private rented sector is already growing, it is reasonable to assume that many of the new properties being built will be rented to private tenants. Local authorities will need to be aware of the potential impact on the demand for their services and how their perception of their local area may have to change if large numbers of properties are built.

2.4 Local Authority Housing Statistics (LAHS)[27] and EPC ratings

The purpose of these statistics is twofold – firstly to provide central government with data with which to inform and monitor government strategies, policies and objectives as well as contributing to national statistics on housing, secondly, to the local authorities themselves to help manage their housing stock. Local authorities are required to complete an annual return which covers a wide range of housing-related issues. Of particular relevance to this current project is “Section F: Condition of dwelling stock” which, amongst other things, requests the following information:

- Estimates of the number of HMOs and the number of mandatory licensable HMOs

Whilst the LAHS no longer requires reporting of total number of dwellings and number of private sector dwellings with category 1 HHSRS hazards and the estimated costs of mitigating these, this information is still of use to understand the extent of these hazards within a local authority.

The LAHS no longer requires reporting of average EPC ratings of the private sector stock and the proportion below a certain rating; however, this information remains pertinent due to the Energy Act 2011. Under this act, from 1 April 2018 landlords must ensure that their properties meet a minimum energy efficiency standard when they grant a tenancy to new or existing tenants - which has been set at band E [28, 29]. Since 1 April 2020, landlords can no longer continue letting a property which is already let if it has an EPC rating of F or G[30]. Furthermore, since 1 April 2016, tenants in F and G rated dwellings may legally request an upgrade to the dwelling to a minimum of a band E. Results relating to LAHS statistics and EPC ratings can be found in **Section 4.3**.

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[27] https://www.gov.uk/government/publications/completing-local-authority-housing-statistics-2012-to-2013-guidance-notes

[28] http://www.legislation.gov.uk/uksi/2015/962/contents/made

[29] Although landlords will still be able to rent out F and G rated properties after this date, they will not be able to renew or sign a new contract.

[30] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794253/domestic-prs-minimum-standard-guidance.pdf

2.5 The Energy Company Obligation (ECO)

The Energy Companies Obligation (ECO) requires energy companies to assist in the installation of energy efficiency measures in Great Britain to low income and vulnerable households or those living in hard-to-treat (HTT) properties. Under the ECO, energy companies are obliged to meet targets expressed as carbon or costs saved. There have been several ECO schemes to date:

- ECO1 - ran from January 2013 to March 2015
- ECO2 - launched on 1 April 2015 and ended on 31 March 2017
- ECO2t - was an 18 month extension to the ECO2 scheme until September 2018[31, 32] as a transition period between the end of ECO2 and a new scheme.
- ECO3[33]- launched in October 2018 and ended on 31 March 2022, although between 1 April 2022 and 30 June 2022 an 'ECO3 interim delivery period' was devised
- ECO4 – launched in July 2022 and extends until 31 March 2026

Previous scheme – ECO3

ECO3 had 4 phases, the last of which terminated in March 2022. However, with the exception of new and replacement oil/LPG heating systems, measures were able to continue to be installed under the ECO3 scheme in what the government termed the 'ECO3 interim delivery period' which was designed to bridge the gap between ECO4 officially ending and ECO4 commencing. The scheme focusses on Affordable Warmth (the Carbon Emissions Reduction Obligation – CERO – has been removed) so that low income and vulnerable households are the recipients of the main benefits. The scope of the Affordable Warmth group will be expanded to include other benefits (e.g. Child Benefit, Personal Independence Payment, etc.).

In terms of measures and improvements, the focus is on replacing electric storage heaters with central heating, improving 17,000 solid wall dwellings every year, replacing broken heating systems (maximum of 35,000 per year), encouraging the replacement of heating systems only when also installing certain types of insulation. In addition, Renewable Heat Incentive measures would not be eligible under ECO3, and suppliers will be able to meet up to 10 – 20% of their obligation through "innovative measures".

Energy companies can also use the local authority Flexible Eligibility mechanism to achieve up to 25% of their obligation – allowing councils to outline personal criteria to maximise inclusion of vulnerable people in funding for domestic heating and insulation upgrades.

The results for the basic energy efficiency variables are covered in this report and assist in the identification of dwellings which may benefit from energy efficiency improvements. Such information also

[31] Energy Company Obligation (ECO): Help to Heat: https://www.gov.uk/government/consultations/energy-company-obligation-eco-help-to-heat

[32] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/586266/ECO_Transition_Final_Stage_IA__For_Publication_.pdf

[33] https://www.gov.uk/government/consultations/energy-company-obligation-eco3-2018-to-2022

provides a valuable contribution to the evidence base increasingly being required to support competitive funding bids to central government for housing improvements.

Current scheme – ECO4

ECO4 aligns with the new Sustainable Warmth Strategy for England, and the Low Income and Low Energy Efficiency (LILEE) metric[34] and will continue to operate as a supplier obligation.

The main objective for this phase of the scheme is to improve the least energy efficient housing stock occupied by low income and vulnerable households. This will contribute to progressing towards the target of improving as many fuel poor homes as reasonably practical to EPC band C by 2030, with an interim milestone of band D by 2025. ECO4 aims to focus more on owner occupied households which aligns better with other policies aimed at decarbonising the housing stock.

2.6 The Green Homes Grant (GHG)

The Department for Business, Energy and Industrial Strategy (BEIS) launched the Green Homes Grant (GHG) in September 2020 which enables homeowners and residential landlords to apply for up to £5,000 of funding towards the cost of installing energy efficient improvements to the home. Under the GHG, improvements could include insulation to reduce energy use or installing low-carbon heating to reduce the amount of CO_2 produced by a dwelling. The vouchers scheme closed to new applicants on March 2021[35]. Furthermore, £200m of funding is available for the installation of eligible measures under the Local Authority Delivery (LAD) competition[36] to support low income households (an annual income of no more than £30,000) living in the least energy efficient properties (i.e. EPC Bands E, F or G).

2.7 Sustainable Warmth – Local Authority Delivery and Home Upgrade Grant

Sustainable Warmth[37] brings together the two fuel poverty schemes, Local Authority Delivery (LAD) and Home Upgrade Grant (HUG), into a single local authority funding opportunity. The LAD funding provides a total of £200 million and is designed to support low-income homes heated by mains gas. HUG funding totals £150 million for low-income households which are off-gas grid.

2.8 Heat and Buildings Strategy

The Heat and Buildings Strategy[38] was published in October 2021 and outlines the Government's ambition to decarbonise buildings through energy efficiency measures and low-carbon heating technologies in order to support their Net Zero goals.

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[34] Fuel poverty trends 2021 – GOV.UK (www.gov.uk)

[35] Green Homes Grant: make energy improvements to your home – GOV.UK (www.gov.uk)

[36] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/919905/green-homes-grant-la-delivery.pdf

[37] Apply for the Sustainable Warmth competition – GOV.UK (www.gov.uk)

[38] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1032119/heat-buildings-strategy.pdf

The Government aims to have no new gas boilers sold by 2035 and plans to work with industry to reduce the cost of heat pumps by 25-50% or more by 2025. By 2030, they hope that heat-pumps will be similar in price to boilers and plan to support early-switchers with Boiler Upgrade Scheme grants of up to £5000. The Government recognised that we currently do not have the capacity to support such a rapid heating transition and so it announced a £60m heat pump innovation fund to support its reiterated objective to install 600,000 heat pumps per year by 2028. They also plan to invest £336 million over 2022/23 to 2024/25 into a broader Heat Network Transformation Programme to develop low-carbon heat networks and enable local areas to deploy heat network zoning.

3 Overview of the BRE Dwelling Level Housing Stock Modelling approach

3.1 Overview

This section provides a simplified overview of the BRE dwelling level housing stock modelling approach. More detail on the methodology is provided in **Appendix B**.

A stock modelling approach has been developed and used by BRE for many years and dwelling level models are used to estimate the likelihood of a particular dwelling meeting the criteria for each of the Housing Standard Variables (and other outputs of interest). These outputs can then be mapped to provide the council with a geographical distribution of each of the variables which can then be used to target resources for improving the housing stock. The process is made up of a variety of data sources, calculations, and models.

The models are principally informed by the DLUHC English Housing Survey (EHS)[39]. The EHS dataset is used to identify patterns in the housing stock for those which fail a given indicator, for example HHSRS. This knowledge can be applied, using statistical methods, to impute Housing Standards Variables and energy characteristics from other data available at dwelling level which cover the whole of England. To model the energy efficiency of dwellings, BRE have developed a variant of the BREDEM[40] software, named "SimpleCO$_2$", that can calculate energy outputs from a reduced set of input variables.

The modelled dwelling level data provided for North Somerset makes significant use of the Experian UK Consumer Dynamics Database of dwelling and household indicators, as well as OS datasets as inputs to the models.

North Somerset also provided additional sources of local data which were incorporated into the BRE Housing Stock Model and Database, as well as the EPC data, to produce an integrated housing stock model and database. The additional data provided and how it was used is as follows:

- **EPC data –** EPCs contain data on key dwelling energy characteristics (e.g. wall type and insulation, loft insulation, heating types etc.) and where these were available, they were used in preference to the modelled data. It should be noted that to comply with bulk EPC data licensing requirements the EPC data is only used to inform the energy efficiency aspects of the model.
- **LLPG data –** the Unique Property Reference Number (UPRN) from the LLPG was used to uniquely identify all properties, while the address details from the LLPG were used to merge the BRE Models and the EPC data using address matching.

[39] The most recent survey used in the housing stock models is 2018.

[40] Building Research Establishment Domestic Energy Model, BRE are the original developers of this model which calculates the energy costs of a dwelling based on measures of building characteristics (assuming a standard heating and living regime). The model has a number of outputs including an estimate of the SAP rating and carbon emissions.

- **Tenure data –** the council provided lists of addresses subject to mandatory HMO licensing, addresses of private rented properties eligible for city-wide selective licensing, and a combined list of addresses owned by social landlords. This data was used to inform the tenure variable.
- **Benefits data –** this provides a list of addresses in receipt of various benefits. This was matched into the BRE Model using the UPRN and these addresses were assigned to low income households. The BRE Low Income Households Model was then used to assign the remaining low income households since housing and council tax reductions are only a proportion of total low income households.
- **HMO data –** the council provided a list of HMOs and licensed HMOs which were added to the modelled HMOs.
- **Enforcement data –** the council provided lists of addresses where category 1 hazards were found and the council issued an enforcement notice. This data was used to help inform the condition of the housing stock, as it was assumed that where an enforcement notice was issued the hazard(s) had been fixed and the property was free from disrepair.

Figure 1 shows a simplified flow diagram of the overall BRE housing stock modelling approach and how the additional data is incorporated to produce the integrated Housing Stock Condition Database (HSCD).

The process is made up of a series of data sources and models which, combined with various imputation and regression techniques and the application of other formulae, make up the final database. The database is essentially the main output of the modelling and provides information on the Housing Standards Variables and other data requirements (e.g. energy efficiency variables). More detailed information on the data sources and models is provided in **Appendix B**, but to summarise:

The data sources are:
EHS, EPC, Experian, Ordnance Survey (OS) MasterMap, other local data (if available).

The Models are:
SimpleSAP, Fuel Poverty, HHSRS (all hazards, falls hazards and excess cold), Disrepair and Low Income Households.

The data sources and models are linked as shown in the flow diagram and the modelling process itself can be divided into “energy inputs” and “other inputs”, which are summarised as follows:

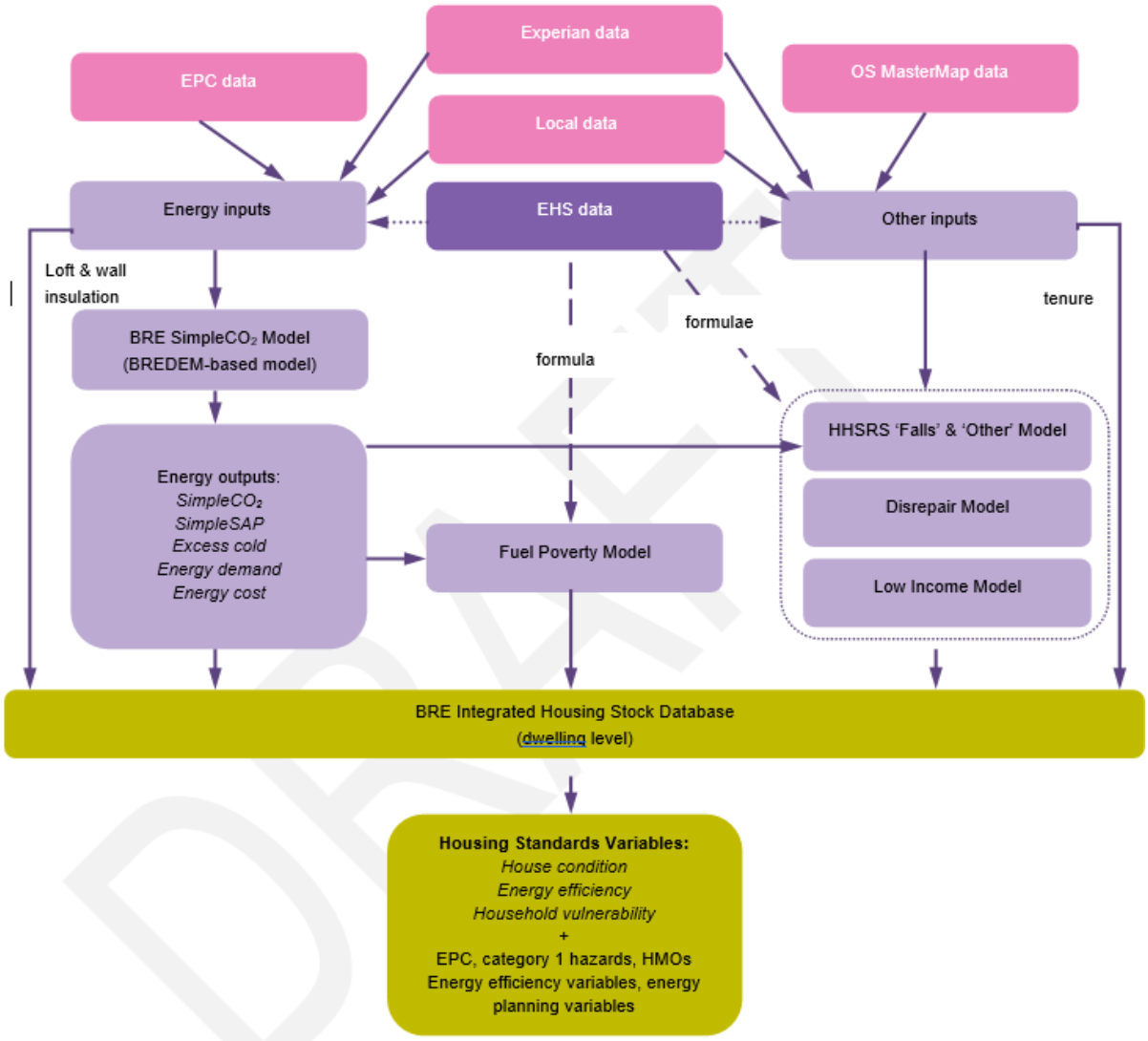
Energy inputs - are developed from Experian, EPC, and other local data sources (if available). The EHS data is used to impute (using cold deck imputation[41]) and interpolate where there are gaps in the data. The “energy inputs” are then fed into the SimpleCO_2 Model to produce the “energy outputs” for the database plus information on excess cold for the HHSRS Model and information on energy costs for the Fuel Poverty Model.

Other inputs – are developed from Experian, OS MasterMap, and other local data sources. The EHS data is used to impute (using cold deck imputation[41]) and interpolate where there are gaps in the data. The “other inputs” are then fed into the HHSRS, Disrepair, and Low Income Models (note that tenure data

[41] Cold deck imputation is a process of assigning values in accordance with their known proportions in the stock.

is fed directly into the database). Information from the EHS also feeds into the Fuel Poverty, HHSRS, Disrepair and Low Income Models.

Figure 1: Simplified flow diagram of overall BRE housing stock modelling approach (N.B. the EHS data is only used to inform the mathematical algorithms of the model – it does not provide data)



3.2 Breakdown of the housing stock by tenure - validation

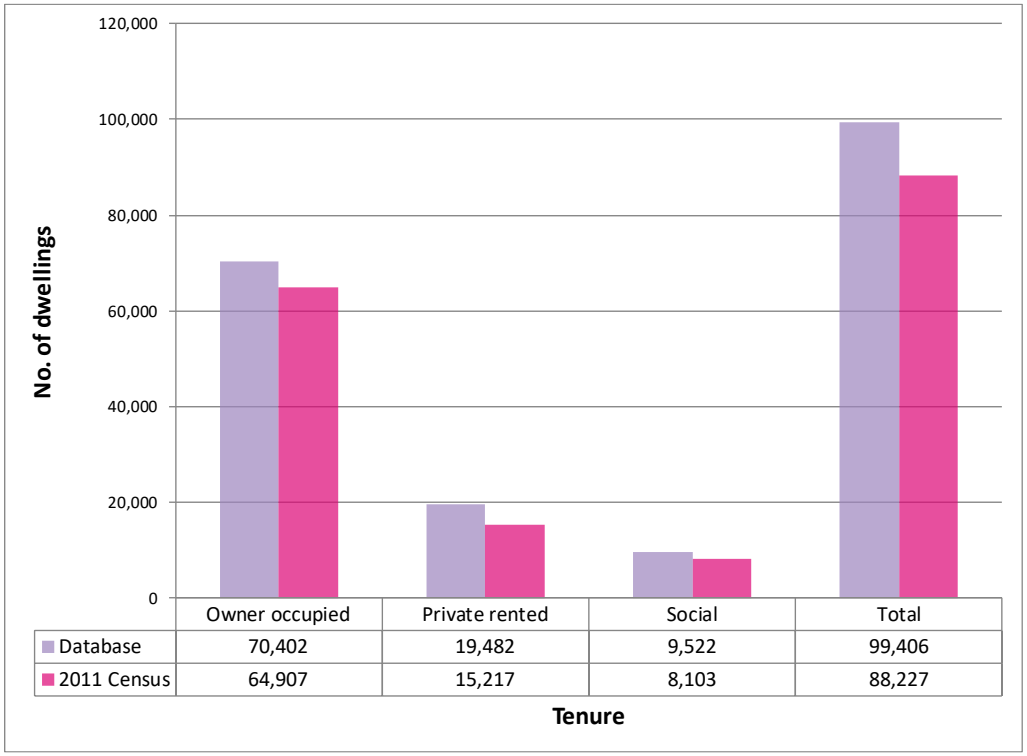
Providing the results split by tenure is useful since it can influence how resources and improvement policies are targeted. This report is particularly focussed on private sector stock which is made up of owner occupied and private rented dwellings. The remainder of the housing stock consists of social housing.

The total number of dwellings in North Somerset from the integrated housing stock condition database is based on LLPG data; therefore the model is based on this value. The tenure split within the integrated database is derived from the purchased Experian tenure variable for addresses where tenure has not been supplied by the council.

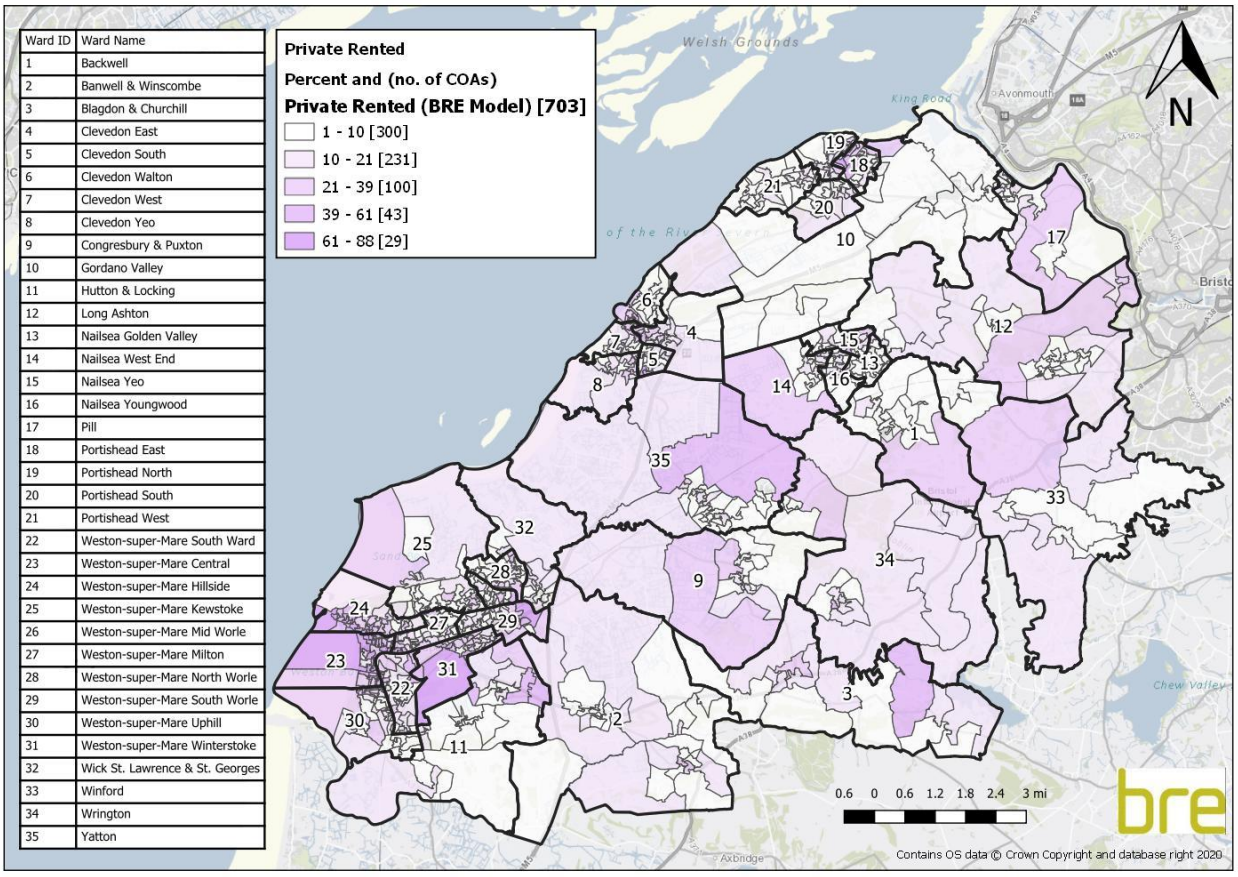
Since it is possible for private rented dwellings to become owner occupied and vice versa relatively easily, it is difficult to accurately predict the actual tenure split at any given point in time. A validation process was undertaken to compare the tenure split from the database to the 2011 Census figures[42]. The results of the validation exercise show the differences between the tenure split from the database compared to the Census figures. There has been a noticeable increase in the size of the stock, mainly comprised of increases in the size of the owner occupied and private rented tenures (see **Figure 2**). Furthermore, **Maps 1** and **2** show the geographical distributions of the private rented sector which look similar, again giving confidence that the integrated database provides a good overview of the housing stock in North Somerset.

[42] http://www.ons.gov.uk/ons/datasets-and-tables/index.html

Figure 2: Tenure split – comparison of BRE Housing Stock Condition Database outputs with 2011 Census figures for North Somerset

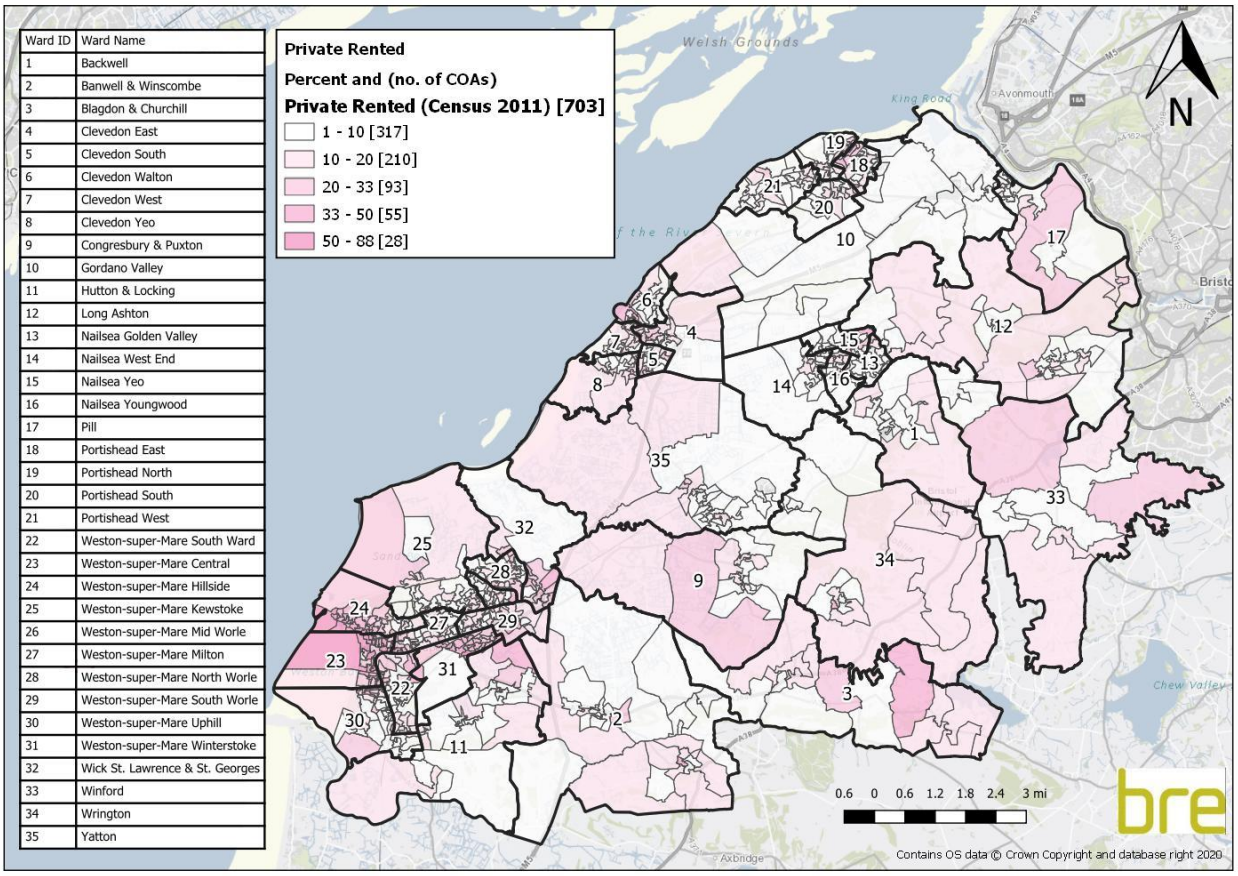


Map 1: Distribution of estimated percentage of private rented dwellings in North Somerset – based on database. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 2: Distribution of estimated percentage of private rented dwellings in North Somerset – based on 2011 Census Data (Neighbourhood Statistics). *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

3.2.1 Other national datasets relating to tenure

In addition to the Census data there are other national datasets available which provide information on tenure; these are DLUHC returns[43] and Office for National Statistics (ONS) data[44]. These datasets are not used directly in the model but are reported here for the purposes of comparison.

The DLUHC returns provide estimates of the tenure split by private sector and social sector only, with the former being based on projections from the 2011 census as a starting point, and the latter being based on Local Authority Housing Statistics. The tenure split used in the BRE Housing Stock Model is compared to this at an early stage of the project in order to ensure the tenure split is consistent[45].

[43] https://www.gov.uk/government/statistical-data-sets/live-tables-on-dwelling-stock-including-vacants

[44] https://www.ons.gov.uk/peoplepopulationandcommunity/housing/articles/researchoutputssubnationaldwellingstockbytenureestimatesengland2012to2015/2017-12-04#methodology

[45] This comparison is checked early in the project through email correspondence with the authority.

The ONS data provides subnational (local authority level) data on the dwelling stock broken down into tenure. The ONS split between owner occupied and private rented stock is based on their Annual Population Survey (APS)[46] which is then benchmarked to the DLUHC returns. The APS is based on "persons who regard the sample address as their main address and also those who have lived in the dwelling for more than 6 consecutive months, even if they do not regard this as their principal dwelling". This methodology may under-estimate the proportion of private rented dwellings for several reasons:

1. By only including those people who have lived in a dwelling for more than 6 consecutive months, the number of private rented households may be under-estimated as there tends to be a higher turnover in this sector.
2. By only including persons who regard the sample address as their main address there are two groups where this may have an impact on the estimated figures:
    a. Students renting away from home who assume their parents' address to be their main residence.
    b. Commuter areas where households may have a city flat during the week and also have a suburban family home which they class as their first residence. Commuter towns close to large cities may also have higher levels of private rented stock with a high turnover of tenants near rail stations for example.

In addition, the ONS dataset uses EHS data but this is limited to using the occupancy rate to allow for vacant dwellings as their APS is based on individuals and therefore does not account for vacant dwellings.

It is important to note that the ONS data is not an official statistic and that a disclaimer[47] must be used when reproducing the data (note that the "***dwelling stock by tenure***" in the disclaimer refers to the DLUHC returns data).

Table 2 shows the latest tenure splits from the DLUHC data for North Somerset. Since the ONS data is benchmarked to the DLUHC returns, the figures for the private sector stock match. Both the numbers and the proportions are similar to the BRE model estimates, however the slightly higher levels of private rented stock estimated by the BRE model may be a result of students reporting their parents' address elsewhere as their main residence.

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46 https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/methodologies/annualpopulationsurveyapsqmi

47 ONS Disclaimer: *"We have published these Research outputs to provide an indication of the tenure breakdown of dwellings within the private sector at the subnational level. Research Outputs are produced to provide information about new methods and data sources being investigated. Official statistics on private dwellings by tenure are currently only available at the country level. Statistics on* ***dwelling stock by tenure***[43] *are available for local authorities but do not provide a breakdown of owner-occupied and privately rented dwellings. These statistics are subject to marginal error as they are estimates based on a survey, therefore users should refer to the coefficient of variation (CV) and confidence intervals when making interpretations."*

As previously mentioned in **Section 2.2.1** the proportion of private rented stock in North Somerset from the 2011 Census figures[48] was 17%, and the BRE Database figure of 20% ties in with this given that there is likely to have been an increase in the private rented stock since 2011.

Table 2: Comparison of DLUHC, ONS and BRE Database figures on tenure split for North Somerset

Tenure	Number of dwellings			% of all stock		
	2017 DLUHC	2017 ONS	BRE Database	2017 DLUHC	2017 ONS	BRE Database
Owner occupied	86,310	70,541	70,402	90%	74%	71%
Private rented		15,769	19,482		17%	20%
Social	9,290	-	9,522	10%	-	10%

N.B. DLUHC data does not break down private sector into owner occupied and private rented stock and ONS data does not provide an estimate for social stock

[48] http://www.ons.gov.uk/ons/datasets-and-tables/index.html

4 Results from the BRE Dwelling Level Housing Stock Models and Housing Stock Condition Database (HSCD)

As described in the previous section, the housing stock modelling process consists of a series of different stock models with the main output being the HSCD. The results in this section have been obtained from interrogating the database at the level of the local authority as a whole to give a useful overview for North Somerset. Information at ward level, however, is provided in the maps, in **Section 4.2.4** and can also be obtained from the HSCD which has been supplied as part of this project (see **Appendix C** for instructions). The HSCD can be interrogated at local authority, ward, medium super output area (MSOA), lower super output area (LSOA), census output area (COA), postcode or dwelling level.

The first sub-section below provides a map of the wards in North Somerset. The results are then displayed in the following sub-sections:

- Housing Standards Variables:
  - North Somerset – regional and national comparisons
  - Housing Standards Variables by tenure for North Somerset
  - Housing Standards Variables mapped by COA for North Somerset private sector stock
  - Ward level results for the Housing Standards Variables
- Information relating to LAHS reporting and EPC ratings:
  - Category 1 hazards
  - HMOs
  - Estimated EPC ratings (based on SimpleSAP)
- Energy efficiency variables for North Somerset (wall and loft insulation)
- Energy planning variables for North Somerset
- Improvement scenarios
- Estimated costs to improve the EPC rating of the stock

4.1 Overview of North Somerset

Map 3 below shows the 35 wards in North Somerset. The data in the report is separated into wards and then further divided into Census Output Areas (COAs). These typically comprise around 125 households and usually include whole postcodes, which have populations that are largely similar. Where the COAs are smaller in size on the map this typically represents a more densely populated area since each COA represents a similar number of dwellings.

It should be noted that some residential addresses are not considered suitable for modelling, and these have been removed. These include caravans and house boats which, whilst covered by the EHS, are quite uncommon, and the energy models and other key variables were not developed with dwellings such as these in mind. Residential institutions (e.g., care homes) have also been removed as it is not entirely appropriate to apply the usual models to these dwellings. The removal of these addresses may result in a COA not appearing to contain any dwellings since all c.125 households are made up of caravans for example.

Map 3: The wards in North Somerset

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
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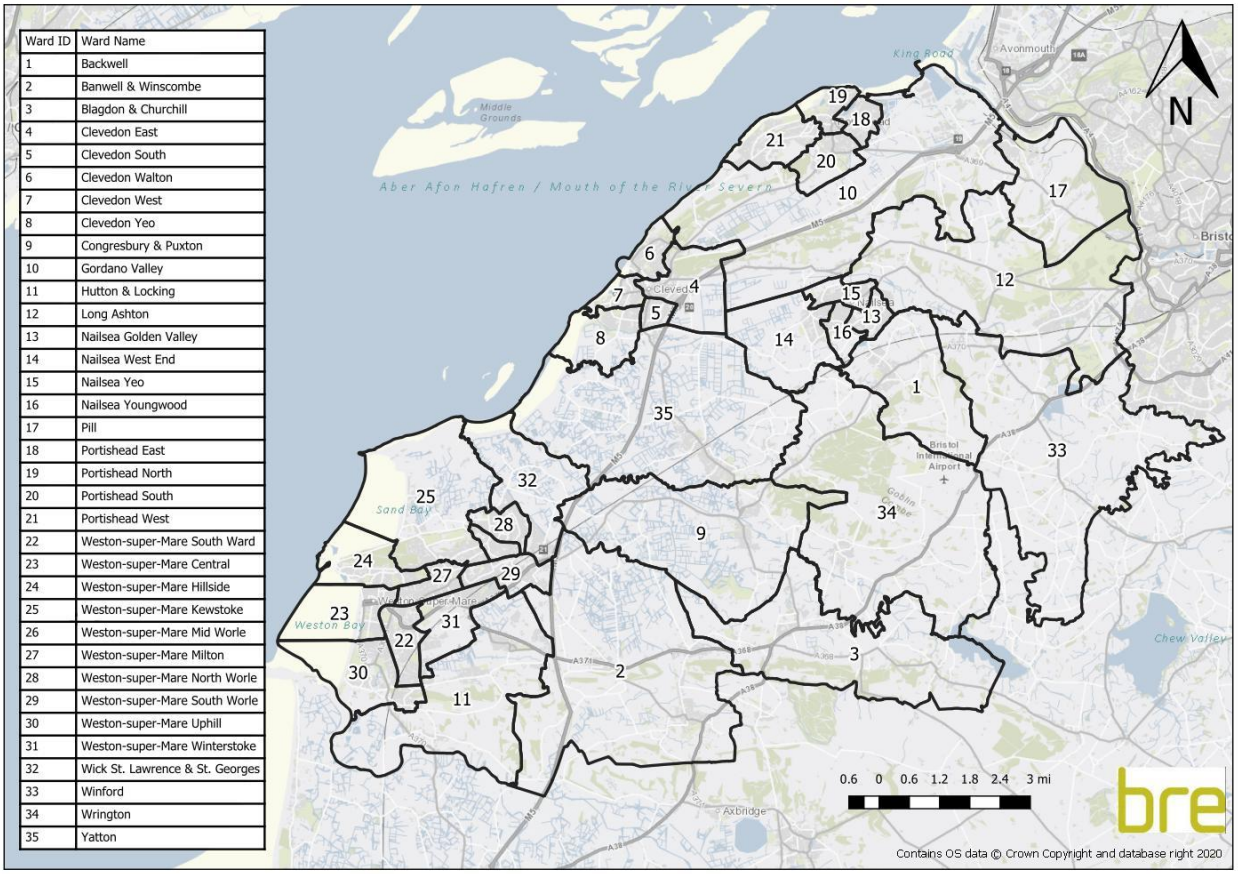
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton



4.2 Housing Standards Variables

4.2.1 North Somerset – regional and national comparisons

Table 3 and **Figure 3** show the results for each of the Housing Standards Variables in North Somerset compared to the South West region and to England (EHS 2018) and split into all stock and private sector stock. **Figure 4** shows the results of the SimpleSAP ratings.

For all stock, the performance of the housing stock in North Somerset compared to the EHS England average is mixed. North Somerset performs slightly better for all hazards (9% compared to 10%), disrepair (2% compared to 3%), fuel poverty 10% definition (5% compared to 8%), fuel poverty LIHC definition (9% compared to 10%), but worse for excess cold (4% compared to 3%), and low income households (21% compared to 25%).

When comparing North Somerset to the South West region, the picture is slightly different with North Somerset performing better for all hazards (9% compared to 12%), excess cold (4% compared to 6%), disrepair (2% compared to 3%), fuel poverty 10% definition (5% compared to 8%) and similarly for fuel poverty LIHC (both 9%), but worse for low income households (21% compared to 15%).

For the private sector stock, the performance of North Somerset compared to the EHS England average figures shows that North Somerset performs slightly better for all hazards (9% compared to 11%), disrepair (2% compared to 4%), fuel poverty 10% definition (5% compared to 8%) and fuel poverty LIHC definition (9% compared to 10%), but worse for excess cold (4% compared to 3%) and low income households (21% compared to 16%).

Compared to the regional average, the private sector stock in North Somerset performs slightly better for all hazards (10% compared to 12%), excess cold (5% compared to 6%), disrepair (2% compared to 3%) and fuel poverty (%% compared to 8%). This stock performs similarly for fuel poverty LIHC definition (both 9%) and worse for low income households (23% compared to 15%).

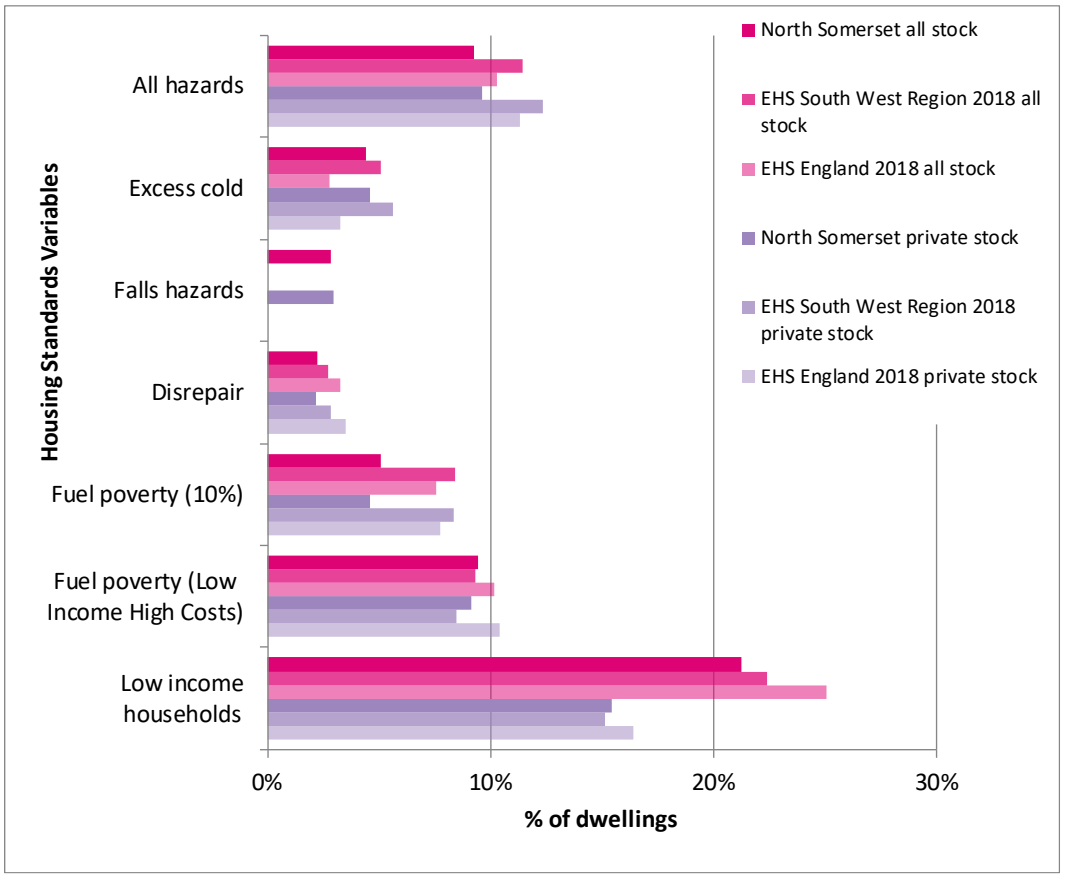
The average SimpleSAP ratings in North Somerset (**Figure 4**) are slightly lower than both the England averages and the regional averages, for both all stock and the private sector stock.

Table 3: Estimates of the numbers and percentage of dwellings with the presence of each of the Housing Standards Variables assessed by the Housing Stock Models and HSCD for all stock and private sector stock – North Somerset compared to the South West and England (EHS 2018)

Variable		All stock				Private sector stock			
		North Somerset (no.)	North Somerset (%)	2018 EHS Regional (%)	2018 EHS England (%)	North Somerset (no.)	North Somerset (%)	2018 EHS Regional (%)	2018 EHS England (%)
No. of dwellings		99,406	-	-	-	89,884	-	-	-
HHSRS category 1 hazards	All hazards	9,201	9%	11%	10%	8,644	10%	12%	11%
	Excess cold	4,385	4%	5%	3%	4,155	5%	6%	3%
	Falls hazards	2,802	3%	(-)*	(-)*	2,652	3%	(-)*	(-)*
Disrepair		2,193	2%	3%	3%	1,978	2%	3%	4%
Fuel poverty (10%)		5,064	5%	8%	8%	4,132	5%	8%	8%
Fuel poverty (Low Income High Costs)		9,390	9%	9%	10%	8,206	9%	9%	10%
Low income households		21,133	21%	22%	25%	13,875	15%	15%	16%

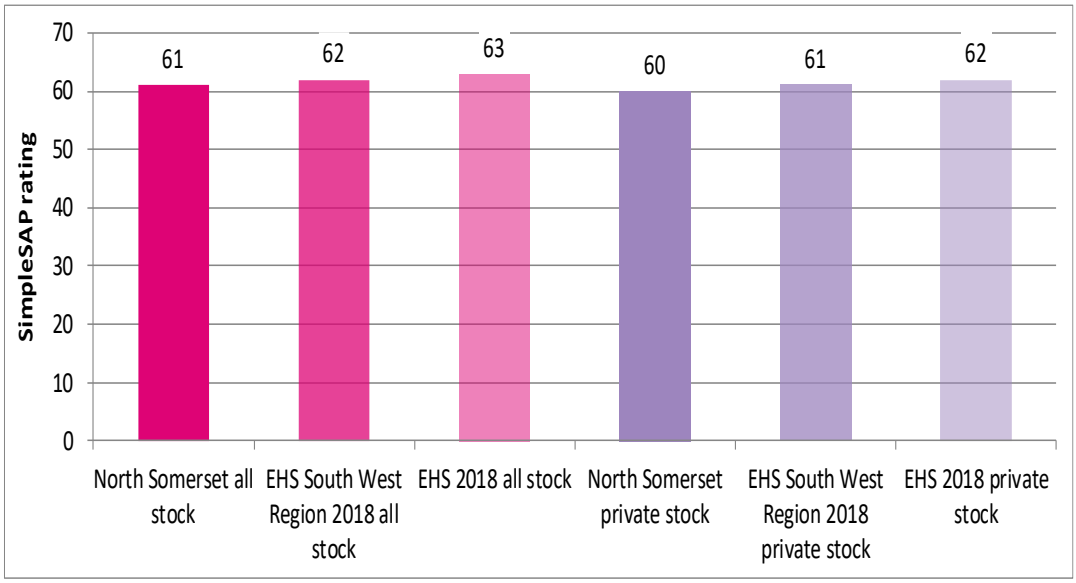
*N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards. *2018 EHS Regional & England data no longer includes Falls Hazards as a separate variable.*

Figure 3: Estimates of the percentage of dwellings with the presence of each pf the Housing Standards Variables assessed by the Housing Stock Models and HSCD for all stock and private sector stock – North Somerset compared to the South West and England (EHS 2018)



*N.B. *2018 EHS Regional & England data no longer includes Falls Hazards as a separate variable*

Figure 4: Average SimpleSAP ratings for all stock and private sector stock – North Somerset compared to the South West and England (EHS 2018)



4.2.2 Housing Standards Variables by tenure – North Somerset

The private sector stock can be further split by tenure – owner occupied and private rented - with the difference between total private sector stock and total housing stock being the social housing stock. **Table 4** and **Figure 5** below show the results for each of the Housing Standards Variables split by tenure and **Figure 6** shows the SimpleSAP ratings by tenure.

The social stock is generally better than the private sector stock across most variables including SimpleSAP. Social stock tends be more thermally efficient than the private stock partly due to the prevalence of flats, and partly due to being better insulated owing to the requirements placed on social housing providers, for example through the Decent Homes Programme. As would be expected, the social stock is significantly worse than the private sector stock for the low income households variable. For fuel poverty, however, the social tenure has the highest levels for the 10% definition, but the private rented tenure has the highest levels for the Low income High Costs definition.

The social data should be treated with some caution as the social rented stock, particularly when largely comprising stock owned by a single landlord, is more difficult to model than the private sector. This is because the decisions of an individual property owner usually only affect a single dwelling out of the thousands of private sector stock whereas the policies and decisions of a single landlord can have a very great effect on a large proportion of the social stock. The social rented results are therefore best considered as a benchmark which takes account of the age, type, size, and tenure against which the landlord's own data could be compared.

Focusing on the tenures within the private sector stock, the private rented stock and the owner-occupied stock have similar levels of falls hazards. The owner-occupied stock has slightly higher levels of excess cold, but lower levels of all hazards, disrepair, fuel poverty (10%) and fuel poverty (Low Income High Costs definition). The private rented stock has a much higher proportion of low income households compared to the owner-occupied stock.

Table 4: Estimates of the numbers and percentage of dwellings with the presence of each of the Housing Standards Variables assessed by the Housing Stock Models and HSCD by tenure for North Somerset

Variable		Private sector stock				Social stock	
		Owner occupied		Private rented			
		No.	%	No.	%	No.	%
No. of dwellings		70,402	-	19,482	-	9,522	-
HHSRS category 1 hazards	All hazards	6,469	9%	2,175	11%	557	6%
	Excess cold	3,454	5%	701	4%	230	2%
	Falls hazards	2,070	3%	582	3%	150	2%
Disrepair		1,285	2%	693	4%	215	2%
Fuel poverty (10%)		3,134	4%	998	5%	932	10%
Fuel poverty (Low Income High Costs)		5,173	7%	3,033	16%	1,184	12%
Low income households		7,562	11%	6,313	32%	7,258	76%

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

Figure 5: Estimates of the percentage of dwellings with the presence of each of the Housing Standards Variables assessed by the Housing Stock Models and HSCD by tenure for North Somerset

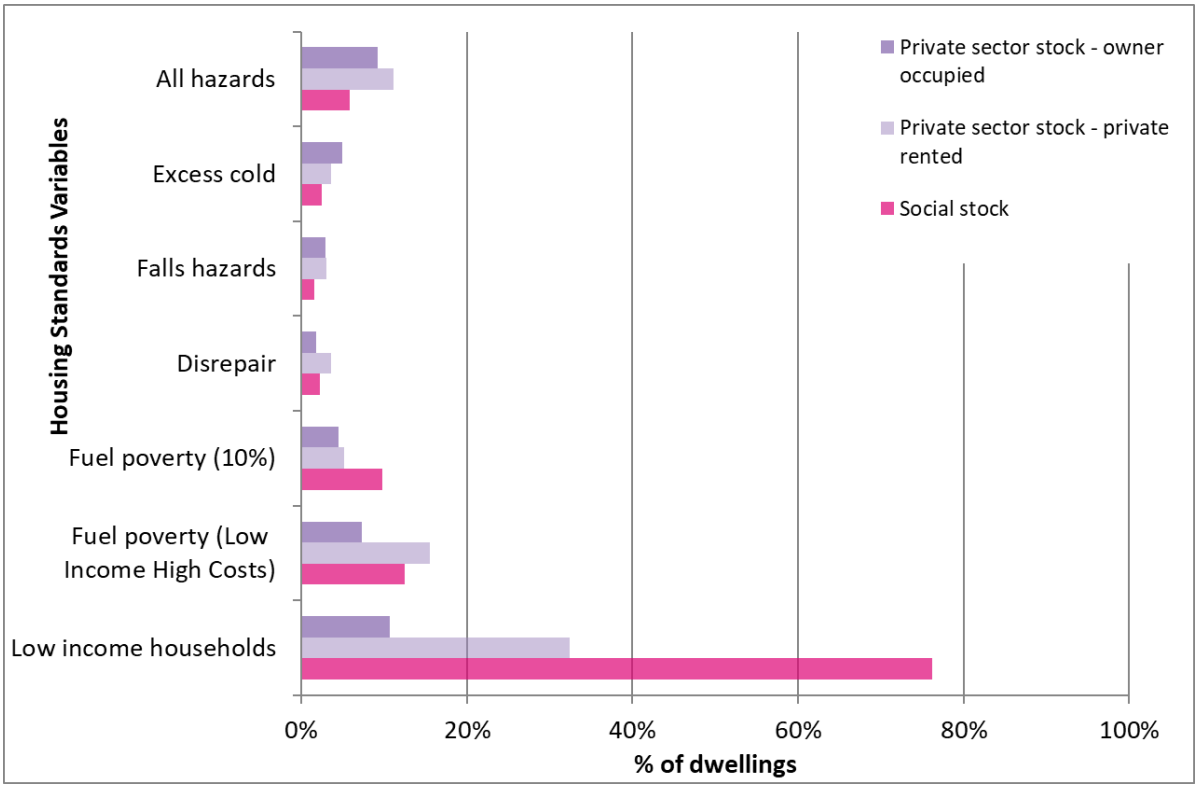


Figure 6: Average SimpleSAP ratings by tenure for North Somerset

4.2.3 Housing Standards Variables mapped by Census Output Area (COA) – North Somerset private sector stock

Some of the Housing Standards Variables are also provided in map form below along with a brief description of each variable[49], thus enabling quick observation of the geographical distribution of properties of interest. The maps show the percentages of private sector dwellings in each Census Output Area (COA) that are estimated to have each of the Housing Standards Variables.

The ranges shown in the map keys are defined based on the Jenks' Natural Breaks algorithm of the COA statistics[50]. The outputs in the lightest and darkest colours on the maps show the extreme ends of the range, highlighting the best and the worst areas.

Maps at COA level are provided for the following variables in **Map 4** to **Map 12** below:

- **HHSRS**
  - The presence of a category 1 HHSRS hazard
  - The presence of a category 1 hazard for excess cold
  - The presence of a category 1 hazard for falls
- **Levels of disrepair**

[49] See **Appendix A** for full definitions.

[50] The natural breaks classification method is a data clustering method determining the best arrangement of values into different classes. It is achieved through minimising each class's average deviation from the class mean while maximising each class's deviation from the means of the other groups. The method seeks to reduce the variance within classes and maximise variance between classes thus ensuring groups are distinctive.

- **Levels of fuel poverty** (Low Income High Costs and 10% definitions)
- **Low income households**
  - Dwellings occupied by low income households
  - Dwellings with a category 1 excess cold hazard that are occupied by a low income household
- **The average SimpleSAP[51] rating**

In addition, maps have been provided for HMOs, EPC ratings (based on SimpleSAP), energy efficiency variables (uninsulated cavity walls, solid walls, loft insulation) and energy planning variables (energy demand/cost and heat demand/cost).

These maps are extremely useful in showing the geographical distribution for single variables. Maps can also be produced for a combination of variables, such as dwellings with an excess cold hazard which are also occupied by low income households, as shown in **Map 11**. **Appendix D** provides close up maps for each variable, focussing on the north and the south of North Somerset.

The maps are produced at COA level, which is typically made up of 125 households, usually including whole postcodes and having similar sized populations. Using the first map below (**Map 4**) as an example, it can be seen that each ward is split into several COAs and, in this instance there are 12 COAs that have 45 - 71% of private sector dwellings estimated to have the presence of a category 1 hazard. Each COA is assigned to a category corresponding to a colour (the darker the COA, the higher the value). In the legend of the maps, values are greater than the lower bound and less than or equal to the upper bound.

The maps also highlight the differences between areas, showing that the results for some areas are much worse than for others and these are the specific areas which might warrant attention. The maps also show that even within wards there can be large differences between the results at COA level.

4.2.3.1 HHSRS

The Housing Health and Safety Rating System (HHSRS) is a risk-based evaluation tool to help local authorities identify and protect against potential risks and hazards to health and safety from any deficiencies identified in dwellings. It was introduced under the Housing Act 2004[8] and applies to residential properties in England and Wales.

The HHSRS assesses 29 categories of housing hazard. Each hazard has a weighting which will help determine whether the property is rated as having a category 1 (serious) hazard[52].

The HHSRS category 1 hazards map (**Map 4**) shows that there are concentrations of high levels of category 1 hazards scattered across the area but with higher concentrations towards east, south and south east North Somerset. The data behind the map shows that the wards with the highest levels overall

[51] Important note: Whilst it is possible to provide “SimpleSAP” ratings from the "SimpleCO_2” software, under no circumstances must these be referred to as “SAP” as the input data is insufficient to produce an estimate of SAP or even RdSAP for an individual dwelling that meets the standards required by these methodologies.

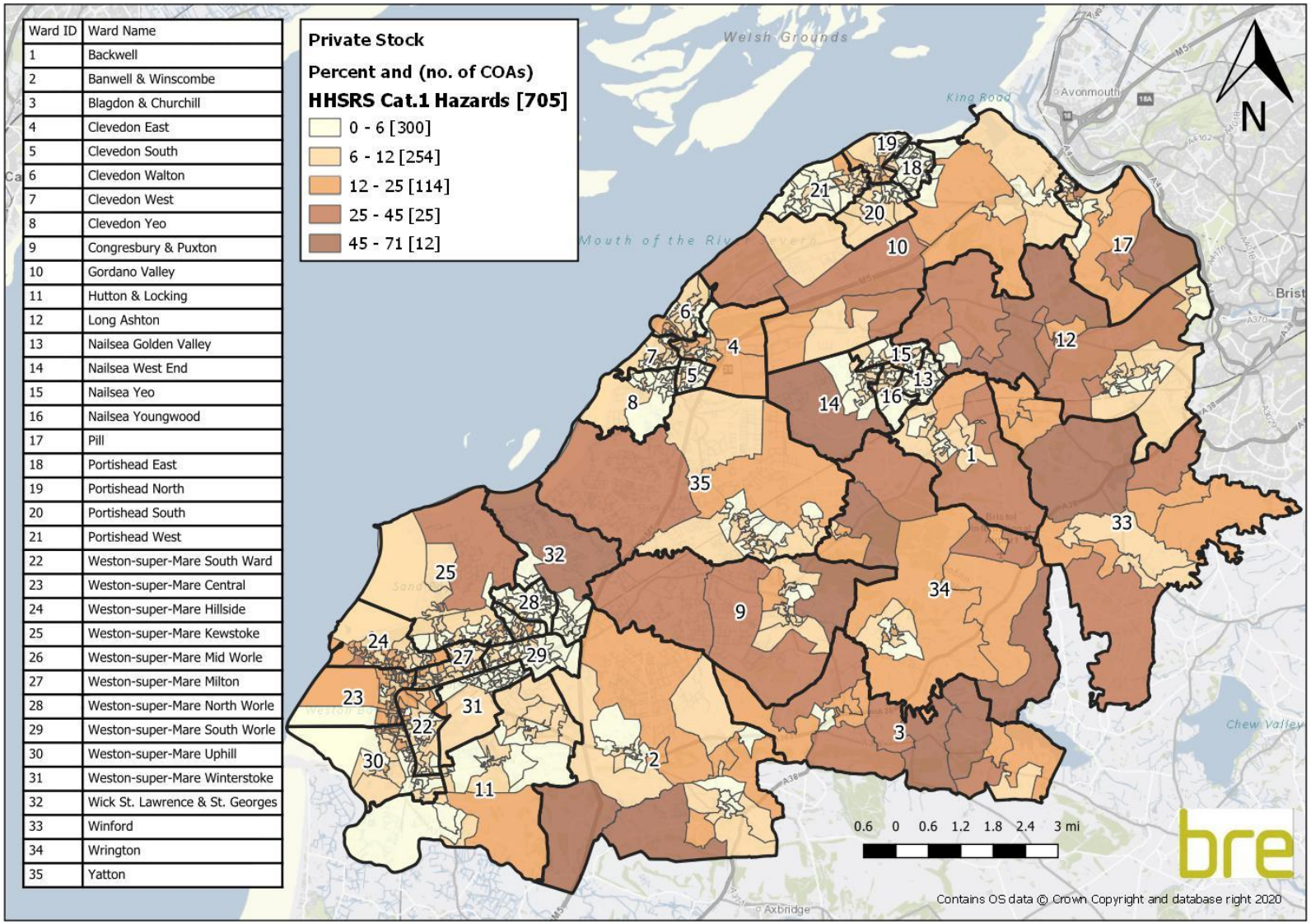
[52] Housing Health and Safety Rating System Operating Guidance, ODPM, 2006

are Blagdon and Churchill, Winford and Wrington. **Maps D.1** focusses in on the north of North Somerset and it can be seen that the highest concentrations of hazards are in the west of Nailsea west end, south Wrington and south of Long Ashton. **Map D.2** focusses in on the south of North Somerset where levels are generally higher than the northern wards; such as to the south of Banwell & Winscombe, the north of Wick St. Lawrence & St. Georges, central Blagdon & Churchill and the south east of Wrington.

Looking at the hazard of excess cold in North Somerset there are again higher concentrations scattered across the area but with slightly higher levels towards the centre, the east and the south east of North Somerset– see **Map 5**. The data behind the map shows that the highest levels overall are in central Blagdon and Churchill, Winford and Wrington but there are also higher concentrations elsewhere – for example in the wards of Wick St. Lawrence & St. Georges and Nailsea West End. **Maps D.3** and **D.4** look more closely at the north and south of North Somerset, and show that it is the north and east of Blagdon and Churchill, the north of Winford and the north and east of Wrington where the highest concentrations of excess cold are located. These maps also show there are pockets of excess cold in other parts of North Somerset including Long Ashton, Yatton and Nailsea West End.

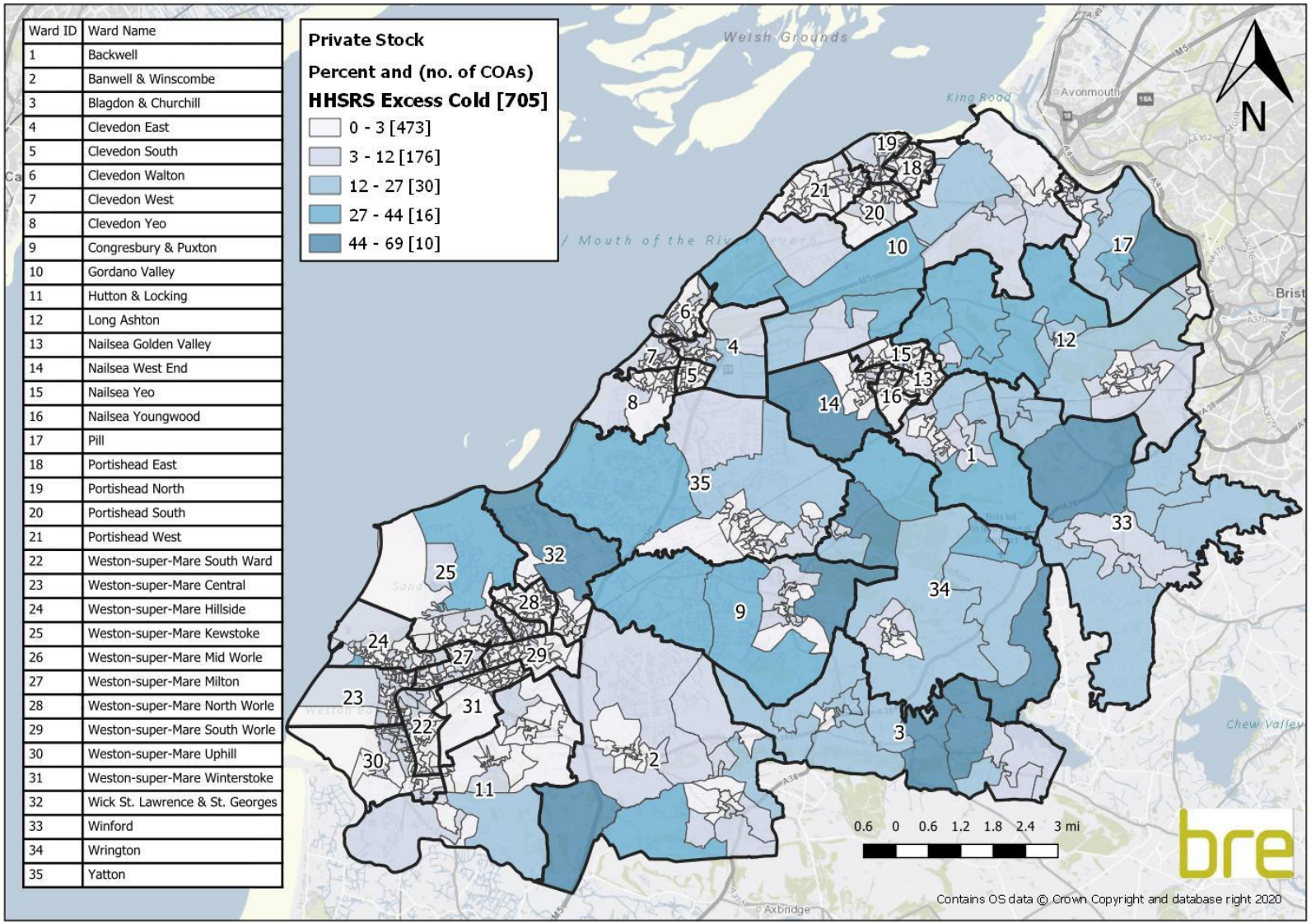
The distribution of falls hazards is shown in **Map 6** which indicates that the high concentrations are scattered across the district, with some of the highest concentrations found across the more urban parts of North Somerset. The data behind this shows that the wards with the highest levels of falls hazards are Weston-super-Mare Milton, Clevedon East and Weston-super-Mare Central. **Maps D.5** and **D.6** zoom in on the north and south of North Somerset respectively. Some of the highest levels found are in the east of Weston-super-Mare Hillside and in the west of Clevedon East, as well as pockets in Winford, Portishead South and Portishead North, Backwell, Nailsea Yeo and Hutton and Locking.

Map 4: Percentage of private sector dwellings in North Somerset with the presence of a HHSRS category 1 hazard. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 5: Percentage of private sector dwellings in North Somerset with the presence of a HHSRS category 1 hazard for excess cold. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
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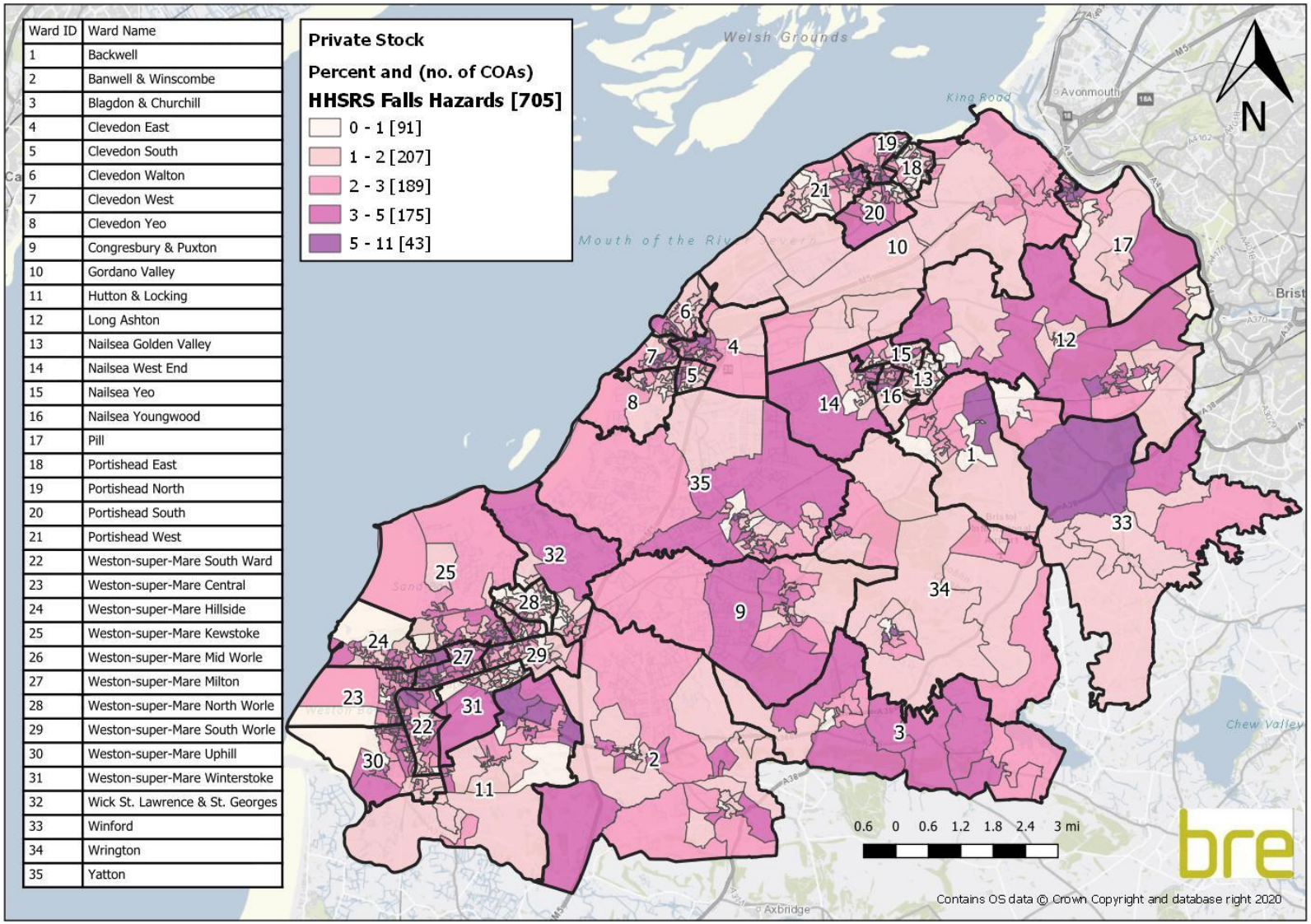
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 6: Percentage of private sector dwellings in North Somerset with the presence of a HHSRS category 1 hazard for falls. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
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5	Clevedon South
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8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
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20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

4.2.3.2 Disrepair

The disrepair variable used in this report is based on the disrepair component of the Decent Homes Standard[53,54]. A dwelling fails the disrepair component if:

- One or more key building components are old and, because of their condition, need replacing or major repair; or
- Two or more other building components are old and, because of their condition, need replacement or major repair.

Key building components are those which, if in poor condition, could have an immediate impact on the integrity of the building and cause further deterioration in other components. They are the external components plus internal components that have potential safety implications and include:

- External walls
- Roof structure and covering
- Windows/doors
- Chimneys
- Central heating boilers
- Electrics

If any of these components are old, and need replacing or require major repair, then the dwelling is not in a reasonable state of repair.

Other building components are those that have a less immediate impact on the integrity of the dwelling. Their combined effect is therefore considered, with a dwelling failing the disrepair standard if two or more elements are old and need replacing or require immediate major repair.

Map 7 shows the distribution of dwellings estimated to be in disrepair in North Somerset and indicates that there are pockets of high levels of disrepair across the area, but particularly in the more urban parts of North Somerset such as Weston-super-Mare. The data behind the map shows that the highest levels overall are in the wards of Weston-super-Mare Central, Weston-super-Mare Hillside and Clevedon Walton. **Maps D.7** and **D.8** zoom in on the north and south of North Somerset and show that the highest levels of disrepair in the north are found in the southern parts of Clevedon Walton, Pill, southern Nailsea West End and north and south Long Ashton. In the south, the highest levels of disrepair are found in the northern parts of Weston-super-Mare Central and the southern parts of Weston-super-Mare Hillside, as well as parts of Weston-super-Mare South Ward, the east of Yatton and the south of Backwell and Winscombe.

[53] https://www.gov.uk/government/publications/a-decent-home-definition-and-guidance

[54] There are 4 components to the Decent Homes Standard – HHSRS, disrepair, modernisation, and thermal comfort

Map 7: Percentage of private sector dwellings in North Somerset in disrepair. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
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31	Weston-super-Mare Winterstoke
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33	Winford
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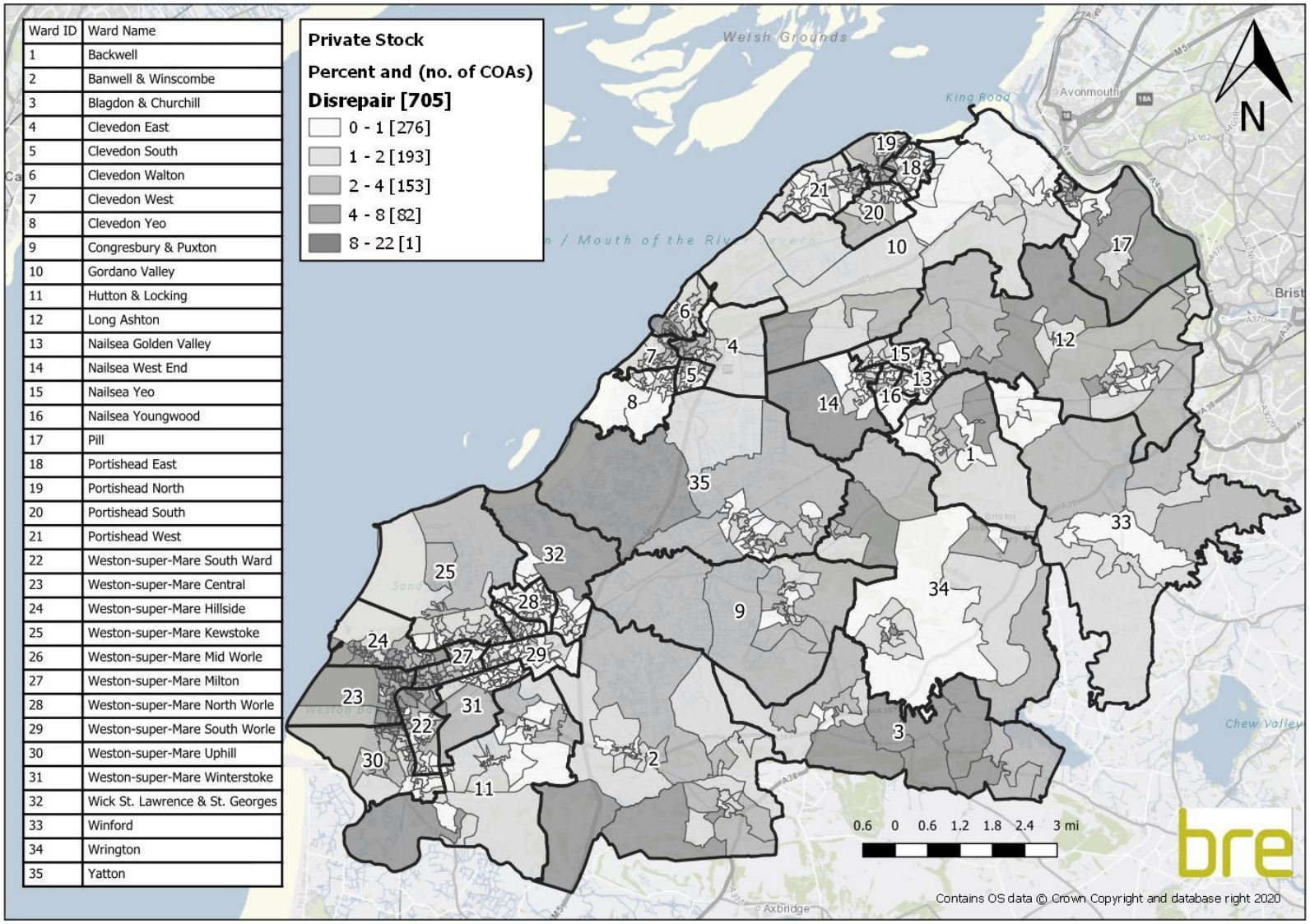
35	Yatton

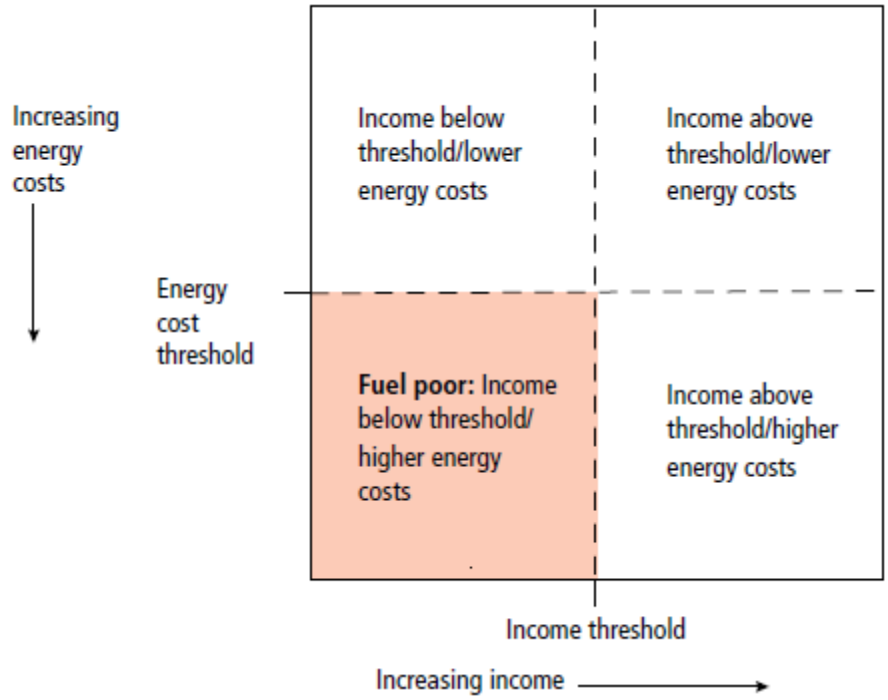


4.2.3.3 Fuel poverty

The current fuel poverty definition is known as the Low Income High Costs variable. This is a dual variable which firstly provides an indication of the number of households in fuel poverty and secondly an indication of the cost (in £) to remove households from fuel poverty – this cost is referred to as the Fuel Poverty Gap[55].

A household is said to be in fuel poverty if they have required fuel costs that are above average (the national median level) and were they to spend that amount they would be left with a residual income below the official poverty line (see the shaded area in **Figure 7** below). For the purposes of this report this is termed "fuel poverty (Low Income High Costs)".

Figure 7: A representation of the Low Income High Costs definition of fuel poverty[56]



As the Low Income High Cost fuel poverty variable is a relative measure, it provides a steady trend in the number of fuel poor households over time. A change in income will only have an impact on fuel poverty if households with low incomes and high costs see relatively larger income changes (increases or decreases) than the overall average change in income.

In contrast, the fuel poverty gap is more responsive to changes in energy prices and the economy, therefore providing a clearer measure of the depth of fuel poverty among those fuel poor households. This measure is therefore more useful for identifying trends in fuel poverty over time.

[55] DECC, Annual Fuel Poverty Statistics Report, 2016 – England (National Statistics), 20 June 2016

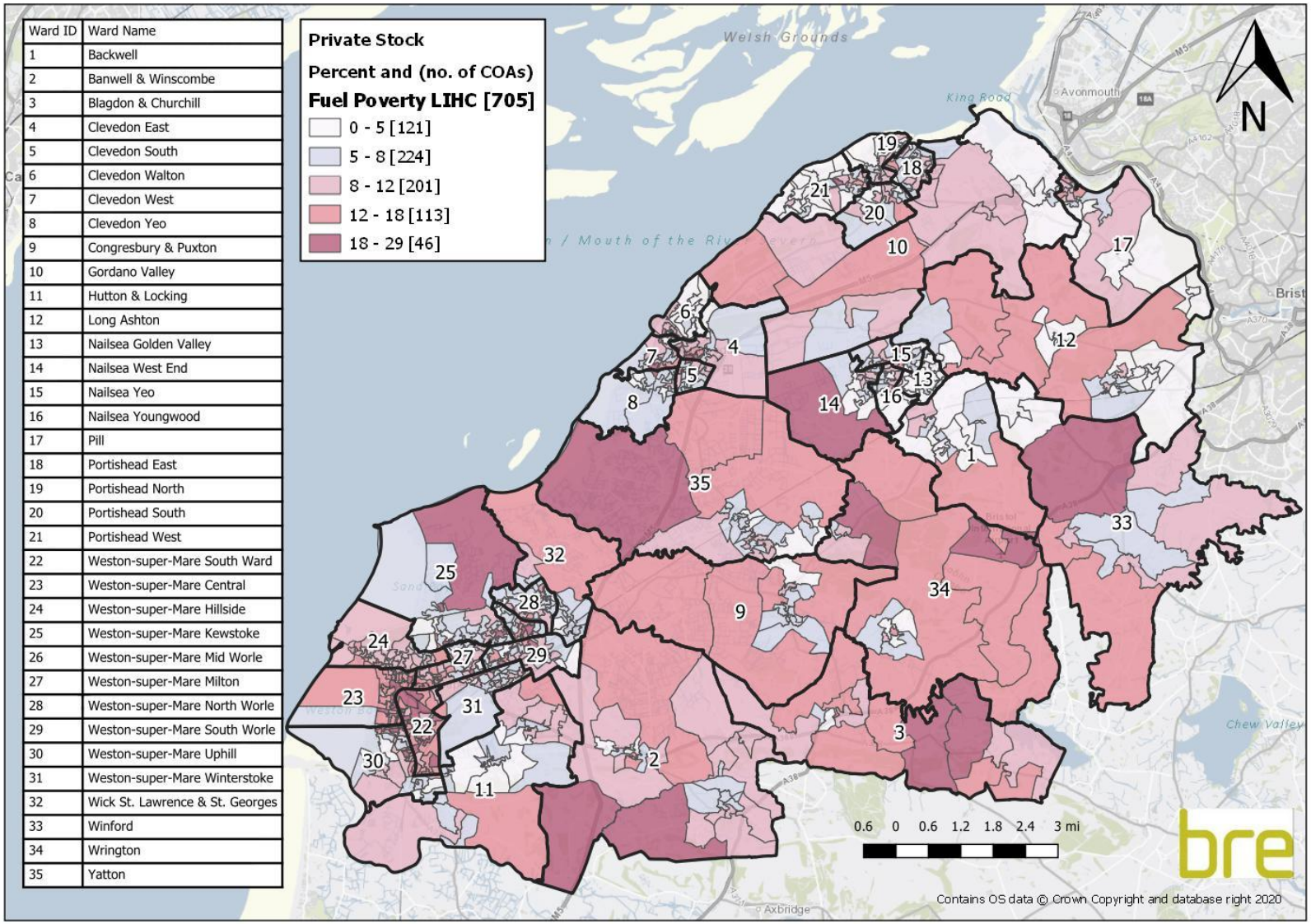
[56] Hills J, Getting the measure of fuel poverty – Final Report of the Fuel Poverty Review, London: LSE, 2012

Map 8 shows that, based on the Low Income High Costs definition, there are households in fuel poverty across the area, although mainly towards the south and around Weston-super-Mare. The wards with the highest concentrations overall are Weston-super-Mare South Ward, Weston-super-Mare Central and Blagdon and Churchill. **Maps D.9** and **D.10** focus in on the north and south of North Somerset, and show that although it is the south with the highest concentrations overall, there are still parts in the north of North Somerset that have high levels of fuel poor households including the north of Winford, south of Nailsea West End, and parts of the east and west of Wrington.

For completeness of information, and comparison with previous data, this report also includes an analysis of fuel poverty using the original definition. This states that a household is said to be in fuel poverty if it spends more than 10% of its income on fuel to maintain an adequate level of warmth (defined as 21^{o}C for the main living area, and 18^{o}C for other occupied rooms in the 2012 Hills Fuel Poverty Review[56]). For the purposes of this report this is referred to as “fuel poverty (10% definition)”.

Map 9, **Maps D.11** and **D.12** show the distribution of households in fuel poverty using the 10% definition. Both this indicator, and the LIHC, show a similar distribution of homes that are likely to be in fuel poverty, with two exceptions. The 10% definition has identified the east of Long Ashton and the north, east and west of Wick St. Lawrence and St. George’s as having higher levels of fuel poverty than the LIHC has identified. However, for the most part the 10% definition shows the areas suffering from the highest levels of fuel poverty to be the same as that of the LIHC definition.

Map 8: Percentage of private sector dwellings in North Somerset occupied by households in fuel poverty - Low Income High Costs definition. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



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27	Weston-super-Mare Milton
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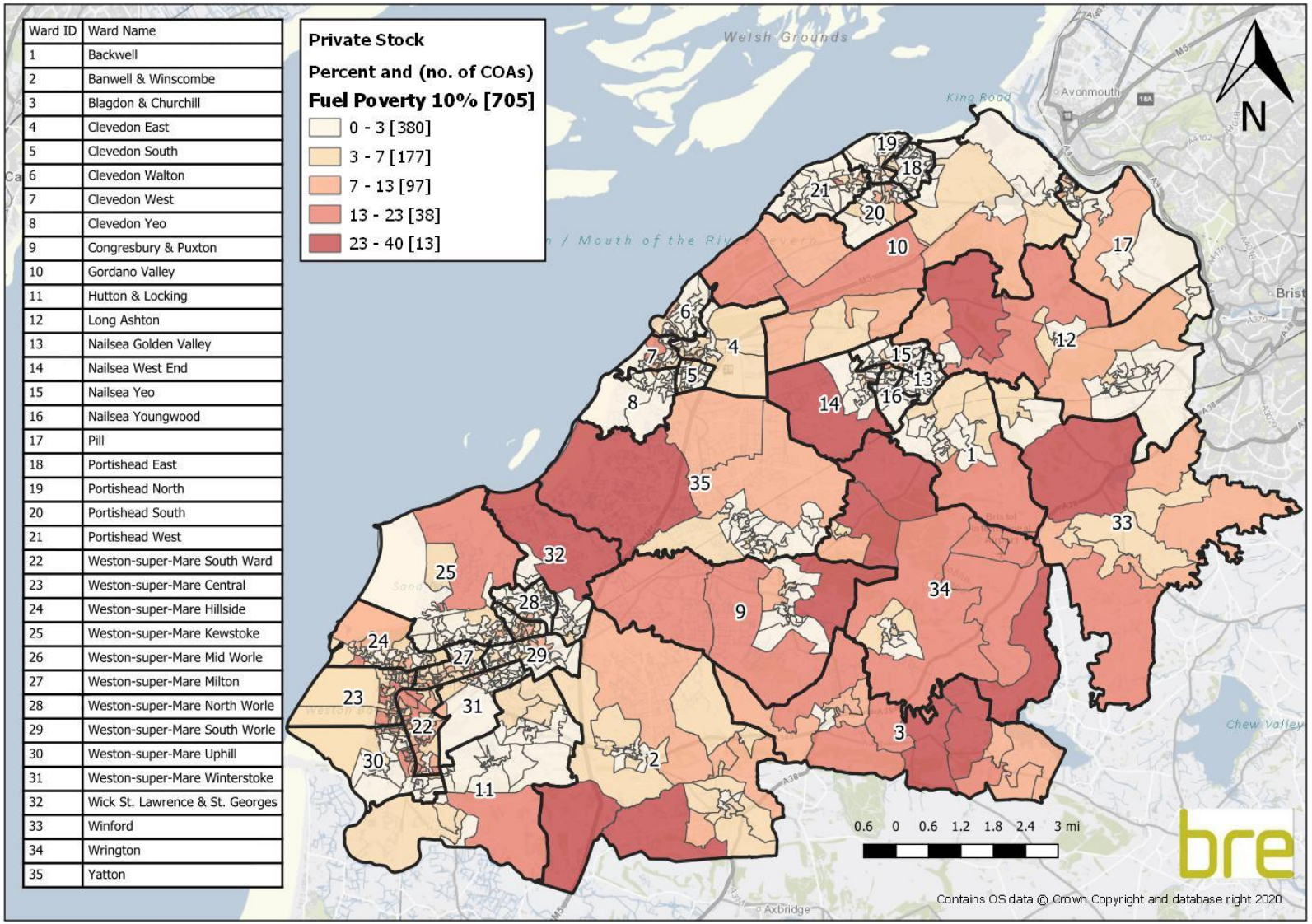
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 9: Percentage of private sector dwellings in North Somerset occupied by households in fuel poverty – 10% definition. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
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24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

4.2.3.4 Low income households

A low income household is defined as a household in receipt of:

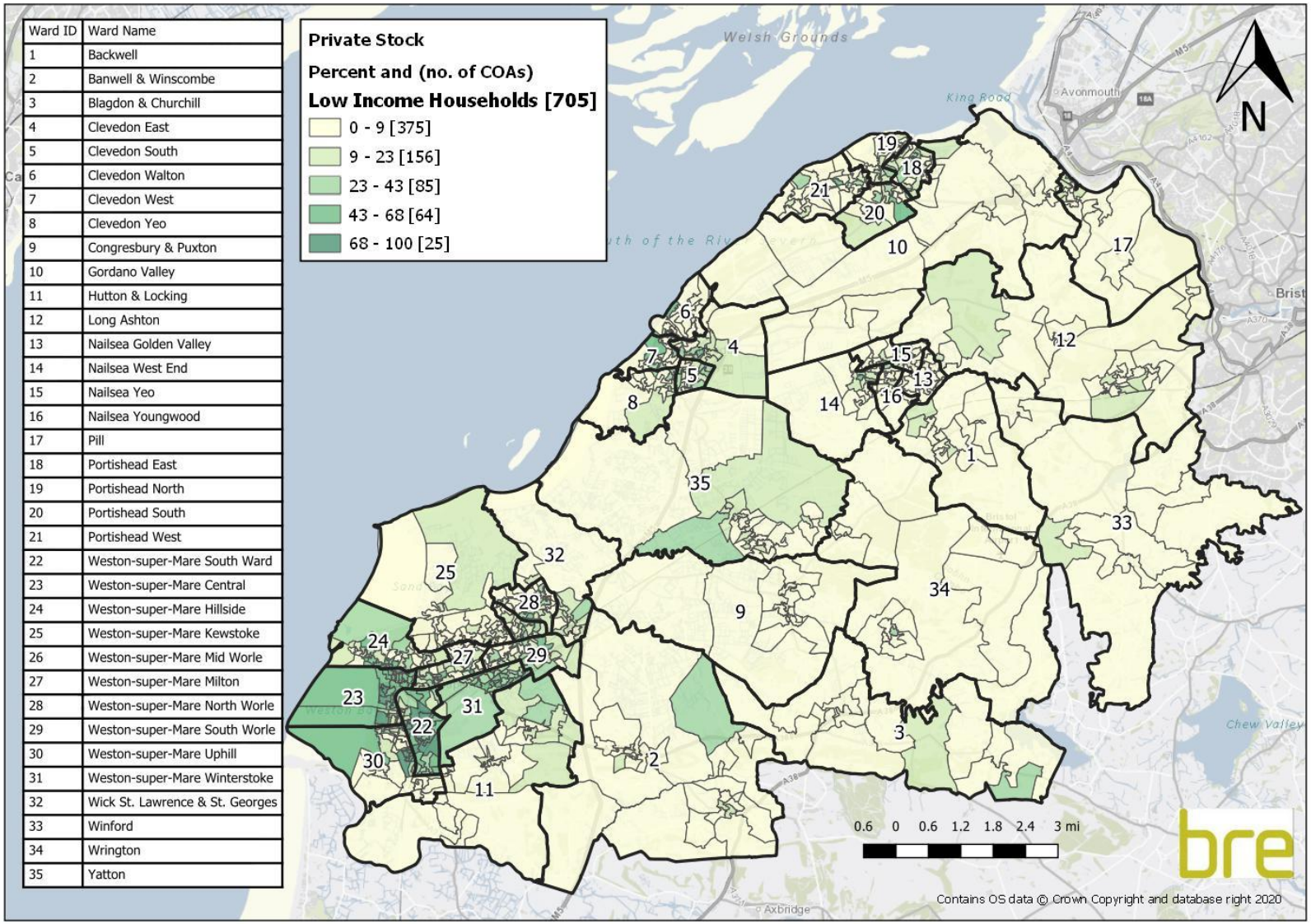
- Means tested benefits or tax credits with a relevant income below the threshold of £16,105
- Attendance allowance
- Disability living allowance
- Personal Independence Payment
- Industrial injuries disablement benefit
- War disablement pension
- Income support or income-based Job Seekers Allowance/incapacity benefit that included an income support component
- Income based Employment and Support Allowance
- Universal Credit
- Housing related benefits that help pay towards rent
- Any household on a low income that has had their income imputed up to their basic income support entitlement
- Pension credit
- Child tax credit
- Working tax credit

For child tax credit and working tax credit, the household is only considered a low income household if it has a relevant income of less than £16,105.

Map 10 clearly shows that concentrations of low income households are clustered around the centre and west of Weston-super-Mare. The highest levels overall are found in Weston-super-Mare Central, Weston-super-Mare South Ward and Weston-super-Mare Winterstoke. **Map D. 13** and **Map D. 14** provide more detail on the north and south, which clearly shows that the more urban parts of North Somerset are home to the highest concentrations of low income households, especially all areas of Weston-super-Mare except Weston-super-Mare Kewstoke, as well as Clevedon, Nailsea and Portishead.

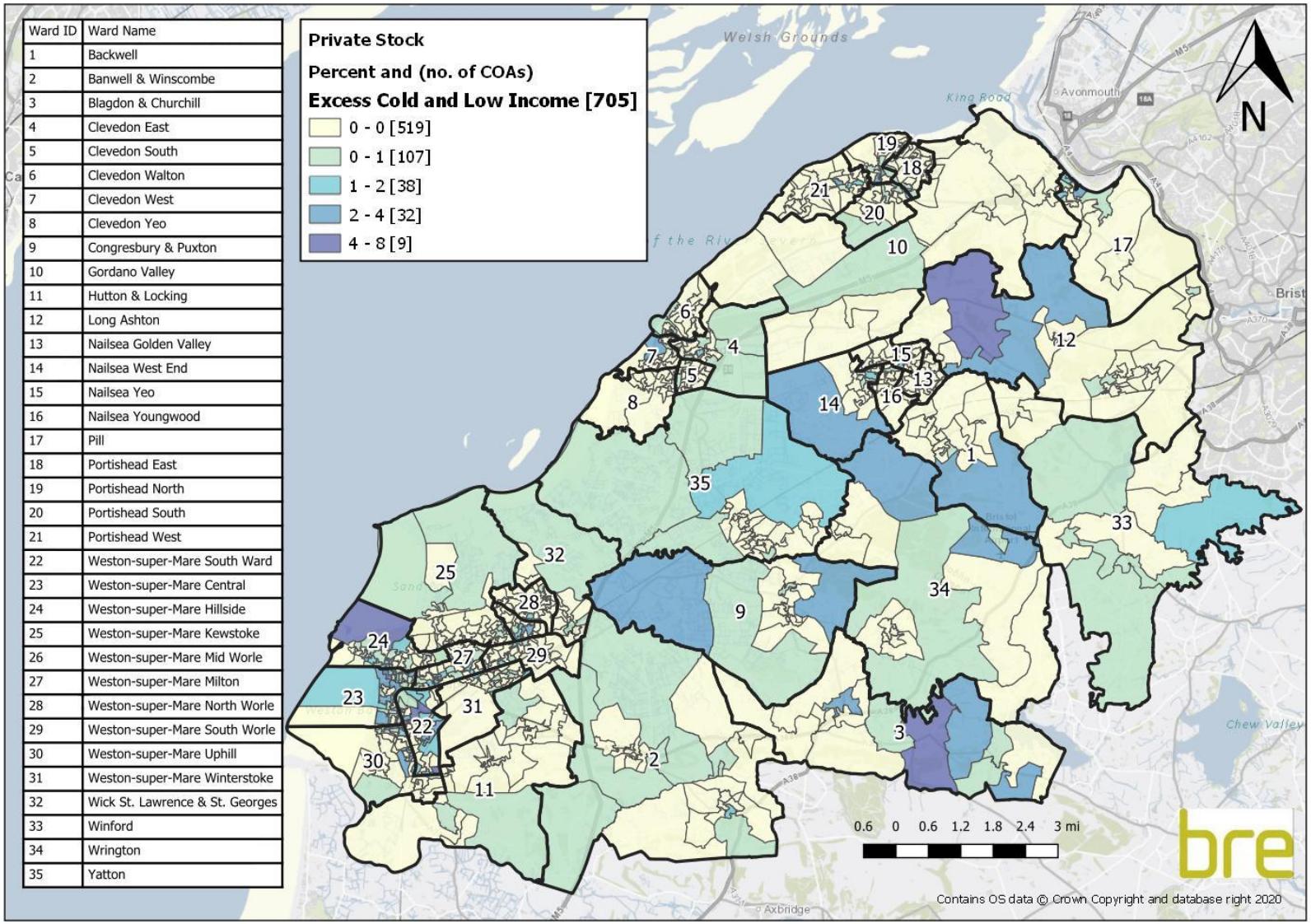
Map 11 provides an additional layer of information, with the data for low income households being combined with HHSRS excess cold data. This provides a vital picture of where vulnerable people are likely to be living in poor housing. The map indicates that there are pockets of both low income and excess cold mainly towards the centre and north of Weston-super-Mare Central and Weston-super-Mare Hillside. There are also high levels of low income and excess cold in north and central Blagdon & Churchill, which is possibly a result of the more rural setting leading to higher instances of detached, older, and less efficient homes. **Maps D.15** and **D.16** zoom in to provide more detail on the north and south areas and show that there pockets of low income and excess cold homes across the area.

Map 10: Percentage of private sector dwellings in North Somerset occupied by low income households. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 11: Percentage of private sector dwellings in North Somerset with both the presence of a HHSRS category 1 hazard for excess cold and occupied by low income households. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



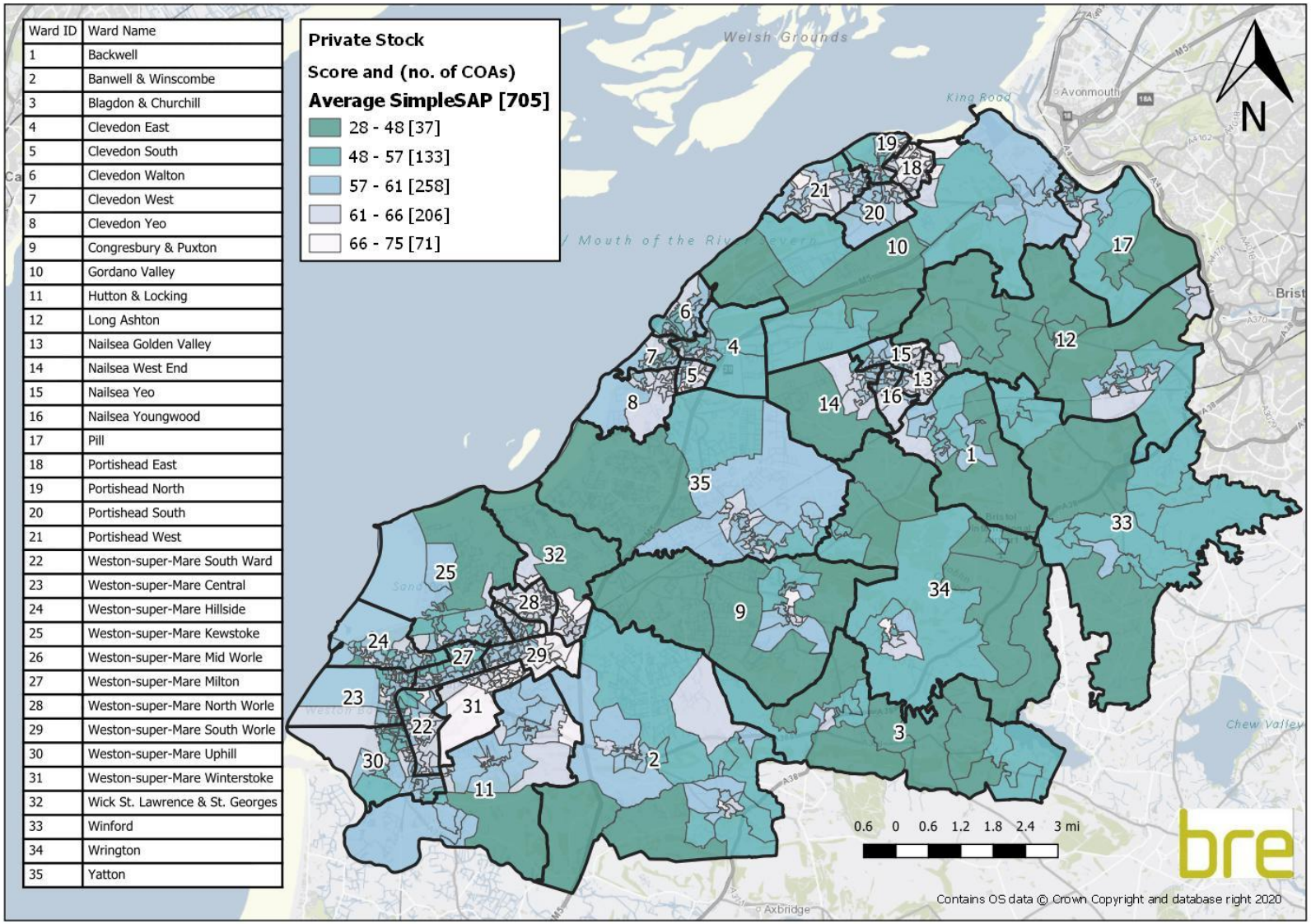
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

4.2.3.5 SimpleSAP

The average SimpleSAP map (**Map 12**) shows that areas with lower average SimpleSAP ratings are clustered throughout the area with noticeable tendency towards the more rural parts of North Somerset. Whilst no particular ward obviously dominates, the data behind the map shows that the wards with the lowest average SimpleSAP ratings are Blagdon and Churchill, Winford and Gordano Valley. **Maps D.17** and **D.18** provide more details for the north and south of North Somerset, and show a clear urban/rural divide in the SimpleSAP scores, the more urban areas of Weston-super-Mare, Clevedon, Nailsea and Portishead have the better performing housing stock, whereas the rural areas have the worst performing stock. This is generally to be expected as in rural areas there are likely to be higher numbers of larger, detached homes compared to more urban areas that will likely have more flats and terraced housing.

Lower SimpleSAP ratings can occur in areas with larger, older homes where little work has been done by the occupiers to improve energy performance. The size of the home itself is not a factor in SimpleSAP, but these homes are more likely to be semi-detached or detached, and therefore have larger heat loss areas.

Map 12: Average SimpleSAP ratings per dwelling in North Somerset private sector stock. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

4.2.4 Ward level results for the Housing Standards Variables

The previous maps have provided a visual representation of the Housing Standards Variables at Census Output Area (COA) level. The following tables provide the complete set of figures at ward level for each of the variables; firstly, for the total stock (**Table 5**) and secondly, for the private sector stock (**Table 6**), owner occupied sector stock (**Table 7**) and private rented sector stock (**Table 8**). This allows a direct comparison between the wards in North Somerset.

Table 5: *Total stock* – number and percentage of dwellings for each of the Housing Standards Variables, and average SimpleSAP ratings by ward.

Ward	Dwellings	HHSRS category 1 hazards			Disrepair	Fuel poverty		Low income households	Average SimpleSAP
		All hazards	Excess cold	Falls hazards		10%	LIHC		
Backwell	1,941	258 (13%)	181 (9%)	57 (3%)	44 (2%)	69 (4%)	117 (6%)	100 (5%)	56
Banwell and Winscombe	3,508	377 (11%)	234 (7%)	94 (3%)	87 (2%)	246 (7%)	345 (10%)	369 (11%)	58
Blagdon and Churchill	1,770	408 (23%)	334 (19%)	56 (3%)	56 (3%)	227 (13%)	242 (14%)	115 (6%)	51
Clevedon East	2,156	213 (10%)	82 (4%)	77 (4%)	58 (3%)	109 (5%)	226 (10%)	486 (23%)	59
Clevedon South	1,981	98 (5%)	18 (1%)	50 (3%)	22 (1%)	65 (3%)	156 (8%)	400 (20%)	63
Clevedon Walton	2,152	212 (10%)	70 (3%)	68 (3%)	73 (3%)	59 (3%)	133 (6%)	170 (8%)	59
Clevedon West	2,079	200 (10%)	83 (4%)	70 (3%)	64 (3%)	146 (7%)	210 (10%)	569 (27%)	60
Clevedon Yeo	1,905	86 (5%)	22 (1%)	44 (2%)	14 (1%)	46 (2%)	136 (7%)	220 (12%)	63
Congresbury and Puxton	1,781	248 (14%)	172 (10%)	51 (3%)	42 (2%)	123 (7%)	162 (9%)	159 (9%)	57
Gordano Valley	1,787	286 (16%)	216 (12%)	47 (3%)	37 (2%)	125 (7%)	158 (9%)	25 (1%)	54
Hutton and Locking	3,527	257 (7%)	83 (2%)	115 (3%)	67 (2%)	119 (3%)	279 (8%)	382 (11%)	62
Long Ashton	3,858	541 (14%)	362 (9%)	118 (3%)	86 (2%)	157 (4%)	246 (6%)	295 (8%)	57
Nailsea Golden Valley	1,723	58 (3%)	13 (1%)	25 (1%)	11 (1%)	9 (1%)	62 (4%)	41 (2%)	64
Nailsea West End	1,774	174 (10%)	102 (6%)	51 (3%)	32 (2%)	88 (5%)	138 (8%)	332 (19%)	60
Nailsea Yeo	2,142	163 (8%)	70 (3%)	60 (3%)	36 (2%)	90 (4%)	197 (9%)	392 (18%)	61
Nailsea Youngwood	1,592	102 (6%)	26 (2%)	49 (3%)	21 (1%)	32 (2%)	111 (7%)	74 (5%)	61
Pill	2,001	306 (15%)	218 (11%)	71 (4%)	50 (2%)	107 (5%)	194 (10%)	380 (19%)	56
Portishead East	3,659	126 (3%)	23 (1%)	64 (2%)	26 (1%)	65 (2%)	322 (9%)	743 (20%)	70

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards but this

dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

Table 5 cont.: *Total stock* – number and percentage of dwellings for each of the Housing Standards Variables, and average SimpleSAP ratings by ward.

Ward	Dwellings	HHSRS category 1 hazards			Disrepair	Fuel poverty		Low income households	Average SimpleSAP
		All hazards	Excess cold	Falls hazards		10%	LIHC		
Portishead North	2,401	160 (7%)	65 (3%)	64 (3%)	41 (2%)	81 (3%)	180 (7%)	376 (16%)	62
Portishead South	2,023	121 (6%)	40 (2%)	53 (3%)	34 (2%)	97 (5%)	159 (8%)	388 (19%)	61
Portishead West	4,008	213 (5%)	66 (2%)	89 (2%)	59 (1%)	93 (2%)	252 (6%)	457 (11%)	62
Weston-super-Mare Central	5,421	696 (13%)	168 (3%)	189 (3%)	270 (5%)	459 (8%)	856 (16%)	3,280 (61%)	59
Weston-super-Mare Hillside	5,112	659 (13%)	225 (4%)	153 (3%)	226 (4%)	321 (6%)	547 (11%)	1,824 (36%)	59
Weston-super-Mare Kewstoke	3,987	324 (8%)	129 (3%)	124 (3%)	85 (2%)	142 (4%)	325 (8%)	513 (13%)	59
Weston-super-Mare Mid Worle	2,081	136 (7%)	54 (3%)	51 (2%)	31 (1%)	140 (7%)	239 (11%)	589 (28%)	62
Weston-super-Mare Milton	4,301	420 (10%)	145 (3%)	175 (4%)	135 (3%)	272 (6%)	484 (11%)	943 (22%)	59
Weston-super-Mare North Worle	3,500	124 (4%)	17 (0%)	66 (2%)	20 (1%)	106 (3%)	303 (9%)	678 (19%)	65
Weston-super-Mare South Ward	4,245	310 (7%)	100 (2%)	109 (3%)	113 (3%)	422 (10%)	668 (16%)	2,770 (65%)	63
Weston-super-Mare South Worle	3,809	212 (6%)	55 (1%)	102 (3%)	40 (1%)	132 (3%)	349 (9%)	783 (21%)	65
Weston-super-Mare Uphill	3,979	363 (9%)	130 (3%)	132 (3%)	114 (3%)	199 (5%)	410 (10%)	859 (22%)	59
Weston-super-Mare Winterstoke	3,642	146 (4%)	15 (0%)	80 (2%)	27 (1%)	86 (2%)	293 (8%)	1,478 (41%)	69
Wick St Lawrence and St Georges	2,045	105 (5%)	58 (3%)	36 (2%)	10 (0%)	59 (3%)	156 (8%)	267 (13%)	65
Winford	1,854	380 (20%)	321 (17%)	50 (3%)	43 (2%)	193 (10%)	196 (11%)	102 (6%)	52
Wrington	1,911	349 (18%)	282 (15%)	51 (3%)	45 (2%)	198 (10%)	204 (11%)	134 (7%)	54
Yatton	3,751	370 (10%)	206 (5%)	111 (3%)	74 (2%)	182 (5%)	335 (9%)	440 (12%)	60

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

Table 6: *Private sector stock* – number and percentage of dwellings for each of the Housing Standards Variables, and average SimpleSAP ratings by ward.

Ward	Dwellings	HHSRS category 1 hazards			Disrepair	Fuel poverty		Low income households	Average SimpleSAP
		All hazards	Excess cold	Falls hazards		10%	LIHC		
Backwell	1,841	251 (14%)	178 (10%)	55 (3%)	41 (2%)	66 (4%)	109 (6%)	67 (4%)	56
Banwell and Winscombe	3,201	365 (11%)	232 (7%)	89 (3%)	79 (2%)	232 (7%)	318 (10%)	209 (7%)	58
Blagdon and Churchill	1,716	404 (24%)	332 (19%)	55 (3%)	55 (3%)	225 (13%)	237 (14%)	87 (5%)	51
Clevedon East	1,901	192 (10%)	70 (4%)	74 (4%)	52 (3%)	75 (4%)	191 (10%)	273 (14%)	59
Clevedon South	1,862	96 (5%)	17 (1%)	49 (3%)	21 (1%)	54 (3%)	145 (8%)	304 (16%)	63
Clevedon Walton	2,057	201 (10%)	66 (3%)	66 (3%)	69 (3%)	51 (2%)	123 (6%)	125 (6%)	59
Clevedon West	1,701	169 (10%)	69 (4%)	61 (4%)	51 (3%)	97 (6%)	162 (10%)	303 (18%)	59
Clevedon Yeo	1,871	86 (5%)	22 (1%)	44 (2%)	14 (1%)	44 (2%)	133 (7%)	198 (11%)	63
Congresbury and Puxton	1,642	241 (15%)	169 (10%)	49 (3%)	40 (2%)	109 (7%)	147 (9%)	64 (4%)	57
Gordano Valley	1,745	284 (16%)	216 (12%)	46 (3%)	36 (2%)	124 (7%)	155 (9%)	16 (1%)	54
Hutton and Locking	3,396	250 (7%)	80 (2%)	113 (3%)	65 (2%)	109 (3%)	267 (8%)	287 (8%)	62
Long Ashton	3,733	531 (14%)	357 (10%)	116 (3%)	84 (2%)	145 (4%)	235 (6%)	229 (6%)	57
Nailsea Golden Valley	1,715	58 (3%)	13 (1%)	25 (1%)	11 (1%)	9 (1%)	62 (4%)	40 (2%)	64
Nailsea West End	1,575	163 (10%)	96 (6%)	48 (3%)	29 (2%)	71 (5%)	124 (8%)	164 (10%)	59
Nailsea Yeo	1,880	150 (8%)	66 (4%)	56 (3%)	32 (2%)	67 (4%)	162 (9%)	197 (10%)	60
Nailsea Youngwood	1,571	102 (6%)	26 (2%)	49 (3%)	21 (1%)	31 (2%)	110 (7%)	62 (4%)	61
Pill	1,700	293 (17%)	214 (13%)	64 (4%)	42 (2%)	77 (5%)	147 (9%)	161 (9%)	55
Portishead East	3,512	124 (4%)	23 (1%)	63 (2%)	26 (1%)	52 (1%)	305 (9%)	649 (18%)	70

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

Table 6 cont.: *Private sector stock* – number and percentage of dwellings for each of the Housing Standards Variables, and average SimpleSAP ratings by ward.

Ward	Dwellings	HHSRS category 1 hazards			Disrepair	Fuel poverty		Low income households	Average SimpleSAP
		All hazards	Excess cold	Falls hazards		10%	LIHC		
Portishead North	2,234	155 (7%)	64 (3%)	62 (3%)	38 (2%)	61 (3%)	160 (7%)	240 (11%)	61
Portishead South	1,808	111 (6%)	35 (2%)	50 (3%)	29 (2%)	70 (4%)	130 (7%)	220 (12%)	61
Portishead West	3,623	191 (5%)	57 (2%)	83 (2%)	50 (1%)	57 (2%)	201 (6%)	185 (5%)	62
Weston-super-Mare Central	4,765	652 (14%)	147 (3%)	181 (4%)	254 (5%)	376 (8%)	775 (16%)	2,674 (56%)	59
Weston-super-Mare Hillside	4,533	598 (13%)	191 (4%)	145 (3%)	208 (5%)	259 (6%)	488 (11%)	1,316 (29%)	59
Weston-super-Mare Kewstoke	3,606	301 (8%)	118 (3%)	118 (3%)	76 (2%)	111 (3%)	283 (8%)	194 (5%)	59
Weston-super-Mare Mid Worle	1,701	115 (7%)	44 (3%)	46 (3%)	24 (1%)	94 (6%)	180 (11%)	282 (17%)	62
Weston-super-Mare Milton	3,840	392 (10%)	136 (4%)	167 (4%)	121 (3%)	217 (6%)	416 (11%)	541 (14%)	58
Weston-super-Mare North Worle	3,278	118 (4%)	16 (0%)	64 (2%)	18 (1%)	91 (3%)	277 (8%)	500 (15%)	64
Weston-super-Mare South Ward	1,987	188 (9%)	61 (3%)	69 (3%)	61 (3%)	196 (10%)	356 (18%)	974 (49%)	61
Weston-super-Mare South Worle	3,666	208 (6%)	55 (2%)	100 (3%)	38 (1%)	125 (3%)	331 (9%)	688 (19%)	65
Weston-super-Mare Uphill	3,525	337 (10%)	121 (3%)	124 (4%)	102 (3%)	159 (5%)	351 (10%)	501 (14%)	58
Weston-super-Mare Winterstoke	3,567	143 (4%)	14 (0%)	79 (2%)	27 (1%)	81 (2%)	284 (8%)	1,420 (40%)	69
Wick St Lawrence and St Georges	2,000	102 (5%)	55 (3%)	36 (2%)	10 (1%)	56 (3%)	151 (8%)	255 (13%)	65
Winford	1,833	377 (21%)	318 (17%)	50 (3%)	43 (2%)	191 (10%)	193 (11%)	96 (5%)	52
Wrington	1,804	339 (19%)	276 (15%)	49 (3%)	42 (2%)	186 (10%)	193 (11%)	62 (3%)	54
Yatton	3,495	357 (10%)	201 (6%)	107 (3%)	69 (2%)	164 (5%)	305 (9%)	292 (8%)	59

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

Table 7: *Owner occupied sector stock* – number and percentage of dwellings for each of the Housing Standards Variables, and average SimpleSAP ratings by ward.

Ward	Dwellings	HHSRS category 1 hazards			Disrepair	Fuel poverty		Low income households	Average SimpleSAP
		All hazards	Excess cold	Falls hazards		10%	LIHC		
Backwell	1,717	227 (13%)	159 (9%)	51 (3%)	37 (2%)	55 (3%)	86 (5%)	53 (3%)	56
Banwell and Winscombe	2,809	311 (11%)	203 (7%)	78 (3%)	65 (2%)	203 (7%)	238 (8%)	168 (6%)	58
Blagdon and Churchill	1,434	333 (23%)	276 (19%)	46 (3%)	44 (3%)	194 (14%)	168 (12%)	68 (5%)	51
Clevedon East	1,454	139 (10%)	56 (4%)	58 (4%)	35 (2%)	57 (4%)	120 (8%)	181 (12%)	58
Clevedon South	1,504	78 (5%)	15 (1%)	42 (3%)	17 (1%)	45 (3%)	105 (7%)	227 (15%)	63
Clevedon Walton	1,672	156 (9%)	57 (3%)	53 (3%)	49 (3%)	34 (2%)	71 (4%)	93 (6%)	59
Clevedon West	1,347	125 (9%)	54 (4%)	50 (4%)	35 (3%)	74 (5%)	103 (8%)	204 (15%)	58
Clevedon Yeo	1,503	66 (4%)	18 (1%)	35 (2%)	11 (1%)	35 (2%)	85 (6%)	129 (9%)	63
Congresbury and Puxton	1,425	210 (15%)	150 (11%)	42 (3%)	33 (2%)	93 (7%)	112 (8%)	41 (3%)	56
Gordano Valley	1,628	261 (16%)	200 (12%)	43 (3%)	32 (2%)	111 (7%)	127 (8%)	13 (1%)	54
Hutton and Locking	2,822	200 (7%)	70 (2%)	90 (3%)	47 (2%)	92 (3%)	188 (7%)	161 (6%)	61
Long Ashton	3,346	468 (14%)	316 (9%)	104 (3%)	72 (2%)	121 (4%)	177 (5%)	183 (5%)	57
Nailsea Golden Valley	1,607	53 (3%)	13 (1%)	23 (1%)	10 (1%)	8 (0%)	52 (3%)	31 (2%)	64
Nailsea West End	1,401	143 (10%)	85 (6%)	43 (3%)	25 (2%)	61 (4%)	96 (7%)	120 (9%)	59
Nailsea Yeo	1,528	107 (7%)	42 (3%)	47 (3%)	23 (2%)	47 (3%)	106 (7%)	137 (9%)	60
Nailsea Youngwood	1,391	88 (6%)	25 (2%)	42 (3%)	17 (1%)	26 (2%)	77 (6%)	46 (3%)	61
Pill	1,494	260 (17%)	196 (13%)	57 (4%)	35 (2%)	64 (4%)	109 (7%)	124 (8%)	55
Portishead East	2,483	75 (3%)	17 (1%)	43 (2%)	11 (0%)	33 (1%)	193 (8%)	417 (17%)	69

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

Table 7 cont.: *Owner occupied sector stock* – number and percentage of dwellings for each of the Housing Standards Variables, and average SimpleSAP ratings by ward.

Ward	Dwellings	HHSRS category 1 hazards			Disrepair	Fuel poverty		Low income households	Average SimpleSAP
		All hazards	Excess cold	Falls hazards		10%	LIHC		
Portishead North	1,835	124 (7%)	53 (3%)	53 (3%)	30 (2%)	43 (2%)	112 (6%)	152 (8%)	61
Portishead South	1,635	98 (6%)	30 (2%)	45 (3%)	25 (2%)	59 (4%)	102 (6%)	177 (11%)	61
Portishead West	3,310	178 (5%)	57 (2%)	76 (2%)	43 (1%)	48 (1%)	163 (5%)	123 (4%)	62
Weston-super-Mare Central	1,619	199 (12%)	53 (3%)	74 (5%)	70 (4%)	174 (11%)	219 (14%)	812 (50%)	57
Weston-super-Mare Hillside	2,214	255 (12%)	98 (4%)	74 (3%)	78 (4%)	139 (6%)	172 (8%)	423 (19%)	58
Weston-super-Mare Kewstoke	3,134	256 (8%)	108 (3%)	101 (3%)	61 (2%)	93 (3%)	209 (7%)	108 (3%)	58
Weston-super-Mare Mid Worle	1,362	79 (6%)	26 (2%)	38 (3%)	17 (1%)	72 (5%)	118 (9%)	196 (14%)	62
Weston-super-Mare Milton	3,067	305 (10%)	122 (4%)	142 (5%)	86 (3%)	171 (6%)	278 (9%)	373 (12%)	57
Weston-super-Mare North Worle	2,785	94 (3%)	14 (1%)	52 (2%)	13 (0%)	73 (3%)	197 (7%)	356 (13%)	64
Weston-super-Mare South Ward	1,158	115 (10%)	47 (4%)	44 (4%)	32 (3%)	133 (11%)	162 (14%)	485 (42%)	59
Weston-super-Mare South Worle	2,791	160 (6%)	49 (2%)	77 (3%)	27 (1%)	100 (4%)	210 (8%)	410 (15%)	63
Weston-super-Mare Uphill	2,806	249 (9%)	98 (3%)	100 (4%)	69 (2%)	110 (4%)	223 (8%)	256 (9%)	58
Weston-super-Mare Winterstoke	2,269	70 (3%)	12 (1%)	43 (2%)	7 (0%)	60 (3%)	162 (7%)	782 (34%)	68
Wick St Lawrence and St Georges	1,788	89 (5%)	47 (3%)	32 (2%)	8 (0%)	48 (3%)	127 (7%)	189 (11%)	65
Winford	1,586	317 (20%)	274 (17%)	43 (3%)	34 (2%)	161 (10%)	144 (9%)	67 (4%)	52
Wrington	1,513	286 (19%)	239 (16%)	40 (3%)	33 (2%)	160 (11%)	133 (9%)	40 (3%)	53
Yatton	2,965	295 (10%)	175 (6%)	89 (3%)	54 (2%)	137 (5%)	229 (8%)	217 (7%)	59

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

Table 8: *Private rented sector stock* – number and percentage of dwellings for each of the Housing Standards Variables, and average SimpleSAP ratings by ward.

Ward	Dwellings	HHSRS category 1 hazards			Disrepair	Fuel poverty		Low income households	Average SimpleSAP
		All hazards	Excess cold	Falls hazards		10%	LIHC		
Backwell	124	24 (19%)	19 (15%)	4 (3%)	4 (3%)	11 (9%)	23 (19%)	14 (11%)	55
Banwell and Winscombe	392	54 (14%)	29 (7%)	11 (3%)	14 (4%)	29 (7%)	80 (20%)	41 (10%)	58
Blagdon and Churchill	282	71 (25%)	56 (20%)	9 (3%)	11 (4%)	31 (11%)	69 (24%)	19 (7%)	51
Clevedon East	447	53 (12%)	14 (3%)	16 (4%)	17 (4%)	18 (4%)	71 (16%)	92 (21%)	61
Clevedon South	358	18 (5%)	2 (1%)	7 (2%)	4 (1%)	9 (3%)	40 (11%)	77 (22%)	66
Clevedon Walton	385	45 (12%)	9 (2%)	13 (3%)	20 (5%)	17 (4%)	52 (14%)	32 (8%)	60
Clevedon West	354	44 (12%)	15 (4%)	11 (3%)	16 (5%)	23 (6%)	59 (17%)	99 (28%)	63
Clevedon Yeo	368	20 (5%)	4 (1%)	9 (2%)	3 (1%)	9 (2%)	48 (13%)	69 (19%)	63
Congresbury and Puxton	217	31 (14%)	19 (9%)	7 (3%)	7 (3%)	16 (7%)	35 (16%)	23 (11%)	59
Gordano Valley	117	23 (20%)	16 (14%)	3 (3%)	4 (3%)	13 (11%)	28 (24%)	3 (3%)	55
Hutton and Locking	574	50 (9%)	10 (2%)	23 (4%)	18 (3%)	17 (3%)	79 (14%)	126 (22%)	66
Long Ashton	387	63 (16%)	41 (11%)	12 (3%)	12 (3%)	24 (6%)	58 (15%)	46 (12%)	59
Nailsea Golden Valley	108	5 (5%)	0 (0%)	2 (2%)	1 (1%)	1 (1%)	10 (9%)	9 (8%)	65
Nailsea West End	174	20 (11%)	11 (6%)	5 (3%)	4 (2%)	10 (6%)	28 (16%)	44 (25%)	61
Nailsea Yeo	352	43 (12%)	24 (7%)	9 (3%)	9 (3%)	20 (6%)	56 (16%)	60 (17%)	61
Nailsea Youngwood	180	14 (8%)	1 (1%)	7 (4%)	4 (2%)	5 (3%)	33 (18%)	16 (9%)	61
Pill	206	33 (16%)	18 (9%)	7 (3%)	7 (3%)	13 (6%)	38 (18%)	37 (18%)	58
Portishead East	1,029	49 (5%)	6 (1%)	20 (2%)	15 (1%)	19 (2%)	112 (11%)	232 (23%)	73

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

Table 8 cont.: *Private rented sector stock* – number and percentage of dwellings for each of the Housing Standards Variables, and average SimpleSAP ratings by ward.

Ward	Dwellings	HHSRS category 1 hazards			Disrepair	Fuel poverty		Low income households	Average SimpleSAP
		All hazards	Excess cold	Falls hazards		10%	LIHC		
Portishead North	399	31 (8%)	11 (3%)	9 (2%)	8 (2%)	18 (5%)	48 (12%)	88 (22%)	64
Portishead South	173	13 (8%)	5 (3%)	5 (3%)	4 (2%)	11 (6%)	28 (16%)	43 (25%)	62
Portishead West	313	13 (4%)	0 (0%)	7 (2%)	7 (2%)	9 (3%)	38 (12%)	62 (20%)	65
Weston-super-Mare Central	3,146	453 (14%)	94 (3%)	107 (3%)	184 (6%)	202 (6%)	556 (18%)	1,862 (59%)	59
Weston-super-Mare Hillside	2,319	343 (15%)	93 (4%)	71 (3%)	130 (6%)	120 (5%)	316 (14%)	893 (39%)	60
Weston-super-Mare Kewstoke	472	45 (10%)	10 (2%)	17 (4%)	15 (3%)	18 (4%)	74 (16%)	86 (18%)	62
Weston-super-Mare Mid Worle	339	36 (11%)	18 (5%)	8 (2%)	7 (2%)	22 (6%)	62 (18%)	86 (25%)	61
Weston-super-Mare Milton	773	87 (11%)	14 (2%)	25 (3%)	35 (5%)	46 (6%)	138 (18%)	168 (22%)	63
Weston-super-Mare North Worle	493	24 (5%)	2 (0%)	12 (2%)	5 (1%)	18 (4%)	80 (16%)	144 (29%)	65
Weston-super-Mare South Ward	829	73 (9%)	14 (2%)	25 (3%)	29 (3%)	63 (8%)	194 (23%)	489 (59%)	63
Weston-super-Mare South Worle	875	48 (5%)	6 (1%)	23 (3%)	11 (1%)	25 (3%)	121 (14%)	278 (32%)	69
Weston-super-Mare Uphill	719	88 (12%)	23 (3%)	24 (3%)	33 (5%)	49 (7%)	128 (18%)	245 (34%)	61
Weston-super-Mare Winterstoke	1,298	73 (6%)	2 (0%)	36 (3%)	20 (2%)	21 (2%)	122 (9%)	638 (49%)	71
Wick St Lawrence and St Georges	212	13 (6%)	8 (4%)	4 (2%)	2 (1%)	8 (4%)	24 (11%)	66 (31%)	67
Winford	247	60 (24%)	44 (18%)	7 (3%)	9 (4%)	30 (12%)	49 (20%)	29 (12%)	54
Wrington	291	53 (18%)	37 (13%)	9 (3%)	9 (3%)	26 (9%)	60 (21%)	22 (8%)	56
Yatton	530	62 (12%)	26 (5%)	18 (3%)	15 (3%)	27 (5%)	76 (14%)	75 (14%)	64

N.B. the information on hazards refers to the number of dwellings with a hazard of the stated type. Because of this there is likely to be some overlap – for example, some dwellings are likely to have excess cold and falls hazards, but this dwelling would only be represented once under 'all hazards'. The number of dwellings under 'all hazards' can therefore be less than the sum of the excess cold plus falls hazards.

4.3 Information relating to LAHS reporting and EPC ratings

4.3.1 Cost of mitigating category 1 hazards in the North Somerset private sector stock

Table 9 shows the total number of dwellings with HHSRS category 1 hazards in North Somerset's private sector stock, the average cost of mitigating hazards per dwelling and the total cost for mitigating all hazards within those dwellings. The costs are based on the average cost of mitigating category 1 hazards for the region using EHS 2018 data. The EHS costs are determined following a surveyor's assessment of the hazard. For each hazard, the surveyor is given a range of common treatments that they can specify in order to treat the hazard. Where quantities are required, the surveyor may specify them. The treatment recommended by the surveyor is then costed using a standard set of prices.

Table 9: Estimated costs to mitigate all category 1 hazards in private sector stock, split into tenure

Tenure	No. of hazards	Total cost (£)
Private Sector	8,644	42,580,344
Owner occupied	6,469	31,866,294
Private rented	2,175	10,714,050

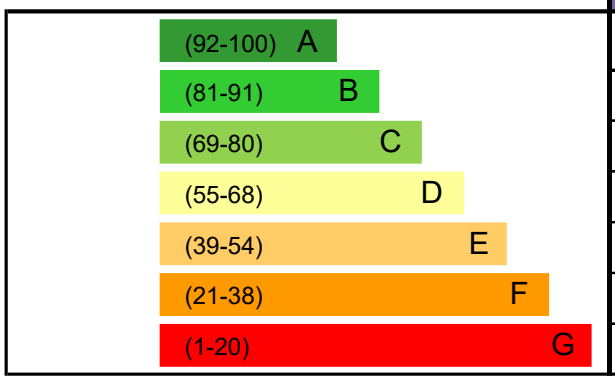
4.3.2 EPC ratings in the North Somerset private sector stock

An Energy Performance Certificate (EPC) is required whenever a new building is constructed, or an existing building is sold or rented out. An EPC is a measure of the energy efficiency performance of a building and is rated from band A – G, with A representing the best performance. The EPC ratings correspond to a range of SAP ratings from 1 – 100, with 100 being the best. It is possible, therefore, to give a dwelling an EPC rating based on the SAP rating.

Figure 8 below shows the bands A – G and corresponding SAP ratings in brackets. The first two columns show the number and percentage of North Somerset's private sector stock falling into each of the EPC ratings bands. The third column shows the comparable figures for the private sector stock in England.

The estimated average SimpleSAP for the private sector stock in North Somerset is 60 which corresponds to an EPC rating of D. The number of private sector dwellings with an EPC rating below band E is estimated to be 5,863 (6.5%). North Somerset has a higher proportion of dwellings in bands E, F and G and lower proportions in bands C and D compared to the average in England.

Figure 8: Number and percentage of North Somerset's *private sector stock* falling into each of the EPC ratings bands (based on SimpleSAP), compared to England (EHS) figures *N.B. England figures report band A and B together*



	North Somerset		2018 EHS England
	Count	Percent	Percent
(92-100) A	0	0.0%	1.2%
(81-91) B	642	0.7%	
(69-80) C	22,841	25.4%	28.9%
(55-68) D	44,887	49.9%	51.7%
(39-54) E	15,651	17.4%	13.6%
(21-38) F	4,507	5.0%	3.7%
(1-20) G	1,356	1.5%	0.9%

Under the Energy Act 2011, since 1 April 2018 landlords must ensure that when they grant a tenancy to a new or existing tenant, their properties must meet a minimum energy efficiency standard – this is currently set at band E[17, 57]. Since 1 April 2020, landlords can no longer continue letting a property which is already let if it has an EPC rating of F or G[58].

Figure 9 shows the breakdown of SimpleSAP results into the A – G bands for the private rented stock only and compared to the figures for this tenure in England as a whole. The number of private rented dwellings in North Somerset with a rating below band E (i.e. bands F and G), is estimated to be 1,011 (5.2%). Compared to England, there are a greater proportion of dwellings in band C, E and F, the same proportion in band G and a lower proportion in band D.

The distribution of dwellings with EPC ratings below band E is shown in **Map 13**, and maps zooming in on each of the areas of North Somerset are provided in **Map D. 23** and **Map D. 24**. These are for the private rented stock only, since this is affected by the new rules on minimum standards. Under the legislation these properties are not eligible to be rented out under new or renewed tenancies, and existing tenancies from 1 April 2020.

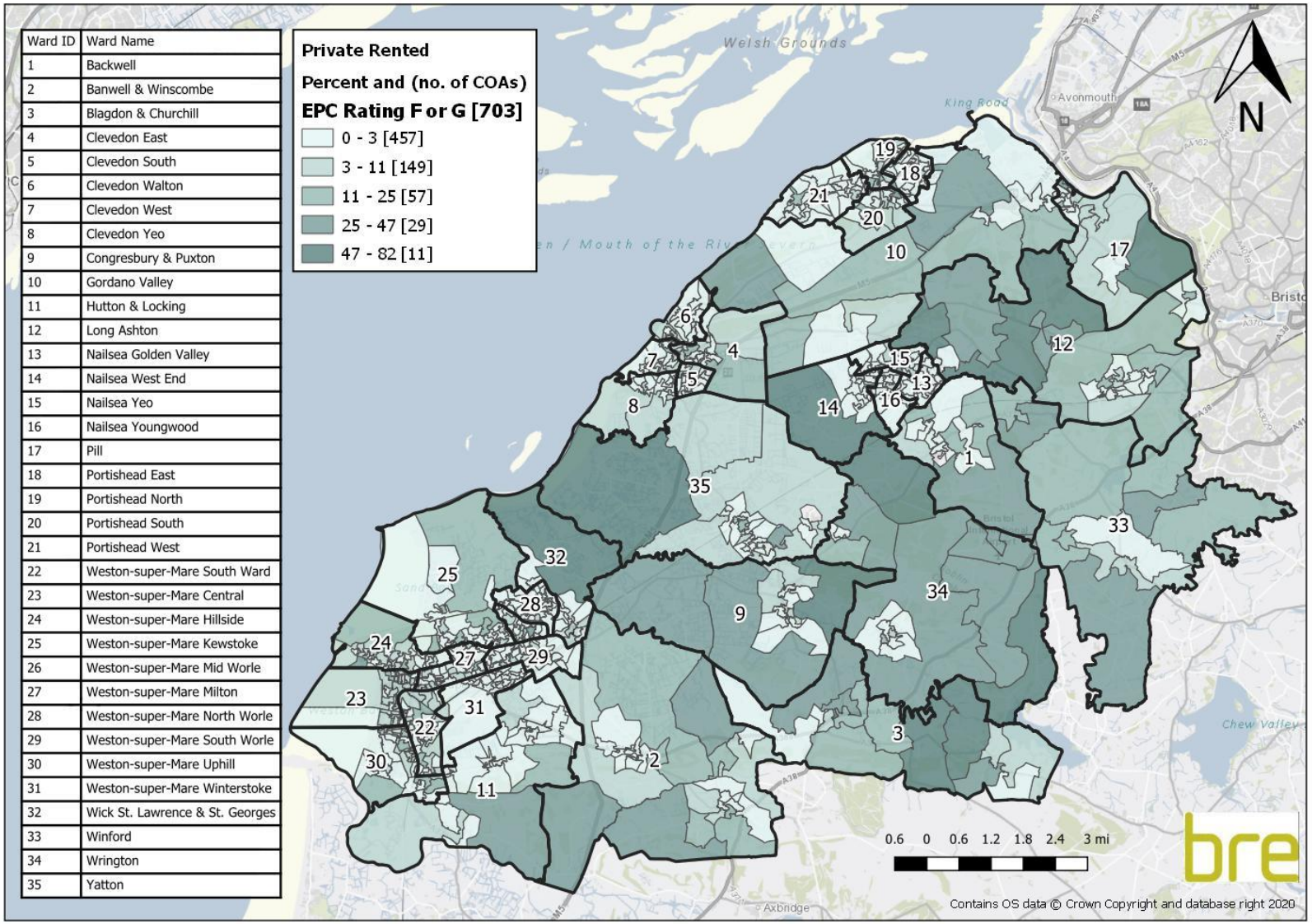
Figure 9: Number and percentage of North Somerset's *private rented stock* falling into each of the EPC ratings bands (based on SimpleSAP), compared to England (EHS) figures *N.B. England figures report band A and B together*

	North Somerset		2018 EHS England
	Count	Percent	Percent
(92-100) A	0	0.0%	1.5%
(81-91) B	235	1.2%	
(69-80) C	6,600	33.9%	31.1%
(55-68) D	8,799	45.2%	48.5%
(39-54) E	2,837	14.6%	13.8%
(21-38) F	777	4.0%	3.8%
(1-20) G	234	1.2%	1.2%

[57] Although landlords will still be able to rent out F and G rated properties after this date, they will not be able to renew or sign a new contract.

[58] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794253/domestic-prs-minimum-standard-guidance.pdf

Map 13: Distribution of dwellings with F or G EPC ratings in the private rented stock. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

4.4 Energy efficiency variables for North Somerset

Section 2.5 provides an overview of the ECO policy – two of the main energy efficiency improvements that falls under these policies are insulation of cavity walls and lofts. An understanding of the numbers and geographical distribution of dwellings which would be suitable for such improvements is a useful step in targeting resources in North Somerset. The BRE Models have been used to determine the following variables for North Somerset:

- Wall type and presence of cavity wall insulation
  - Solid wall
  - Insulated cavity wall
  - Un-insulated cavity wall

- Presence and level of loft insulation
  - No loft
  - Loft with no insulation
  - Level of loft insulation – 50, 100, 150, 200, 250+ mm loft insulation

Table 10 and **Table 11** show the modelled results in terms of the numbers and percentages of dwellings in North Somerset's private sector stock for walls and lofts respectively (ward level data can be obtained from the housing stock condition database supplied alongside this report). They also show the percentage figures for the South West region and for England overall to enable comparison. The results indicate that a proportion of the private sector stock in North Somerset could benefit from energy efficiency improvements with an estimated 18,916 dwellings (21%) having un-insulated cavity walls. Furthermore, there are an estimated 11,028 dwellings (12% of North Somerset's private sector stock) which have less than 100mm of loft insulation with 4,006 (4%) having no loft insulation at all. In North Somerset, it is estimated that 78% of the housing stock have cavity walls; whilst this is higher than the regional and national figures, there are still opportunities for implementing ECO in dwellings without cavity wall insulation which still represent over a quarter of the housing stock (27%). These types of dwellings are likely to be of particular interest to ECO and Green Homes Grant (GHG) Local Authority Delivery (LAD) providers and the distribution of these dwellings is shown in **Map 14** to **Map 16** with maps zooming in on the urban area of North Somerset provided in **Appendix D**.

Map 14 shows that the prevalence of un-insulated cavities is distributed fairly evenly across North Somerset. **Map D. 25** and **Map D. 26** zoom in on the northern and southern parts of North Somerset, respectively, to provide more detail.

Map 15 shows that solid walls are distributed fairly evenly throughout the area, although there are concentrations around Weston-super-Mare, Long Ashton and Blagdon and Churchill. **Map D. 27** and **Map D. 28** zoom in on both the north and south of the North Somerset area to provide more detail.

Map 16 shows that areas with lower levels of loft insulation (100mm or less) are most concentrated in areas around Weston-super-Mare such as Weston-super-Mare Kewstoke, Weston-super-Mare Central, Weston-super-Mare Milton and Weston-super-Mare Uphill. There are also pockets in areas such as central Blagdon & Churchill and north east and west Winford. **Map D. 29** and **Map D. 30** show the north and south of the North Somerset area in more detail.

Table 10: Estimates of the numbers and percentage of dwellings for each of the energy efficiency variables for walls assessed for the private sector stock in North Somerset and compared to the South West region and national figure (EHS 2018)

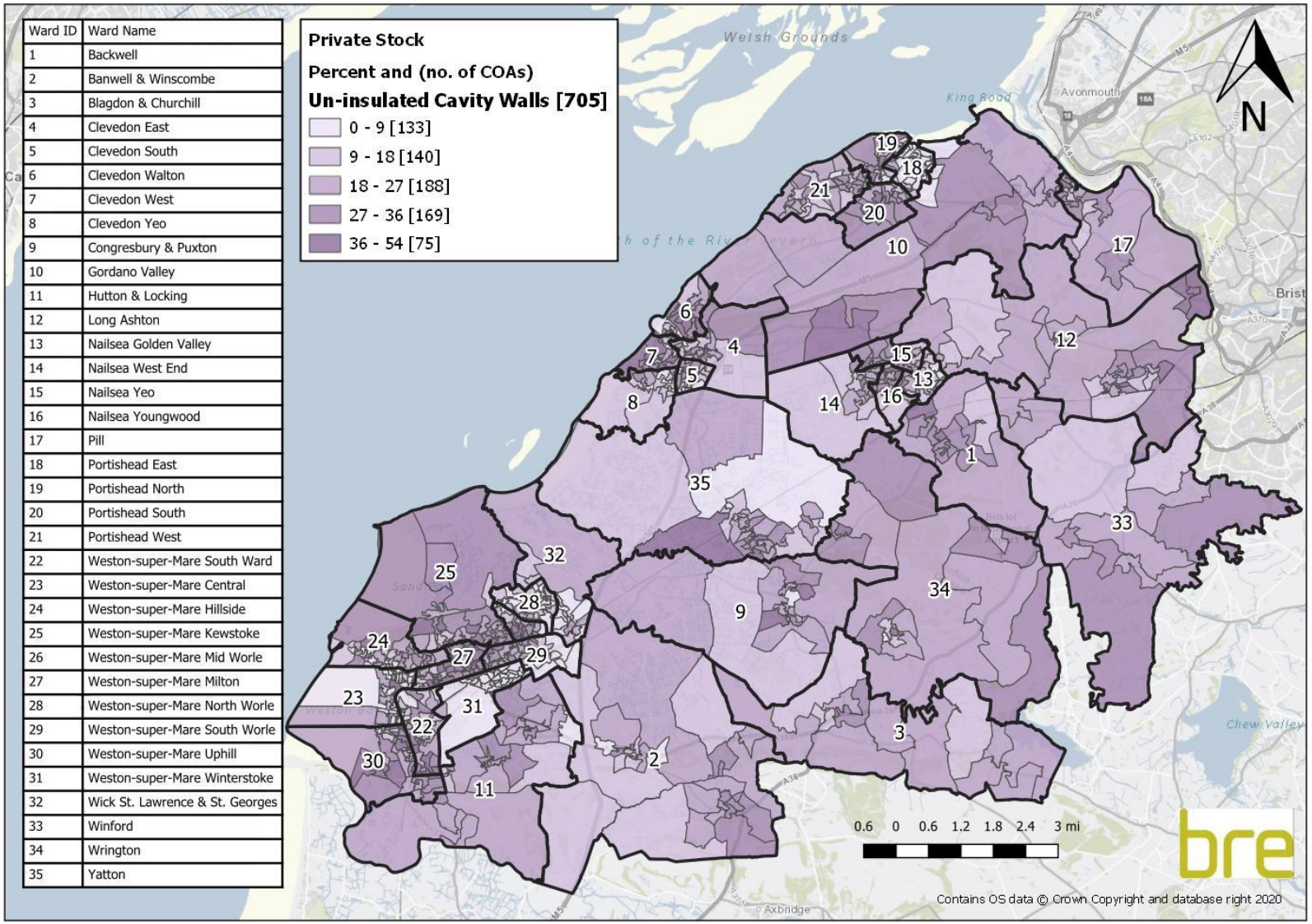
Variable		Private stock		2018 EHS Regional (private stock)	2018 EHS England (private stock)
		No.	%	%	%
No. of private sector dwellings		89,884	-	-	-
Wall type	Solid	18,101	20%	29%	31%
	Insulated cavity	51,105	57%	44%	45%
	Un-insulated cavity	18,916	21%	23%	22%
% of cavity walls only that are uninsulated		-	27%	34%	32%

N.B. the different wall types do not add up to the total number of private sector dwellings due to the small number of timber-frame and stone buildings

Table 11: Estimates of the numbers and percentage of dwellings for each of the energy efficiency variables for lofts assessed for the private sector stock in North Somerset and compared to the South West region and national figure (EHS 2018)

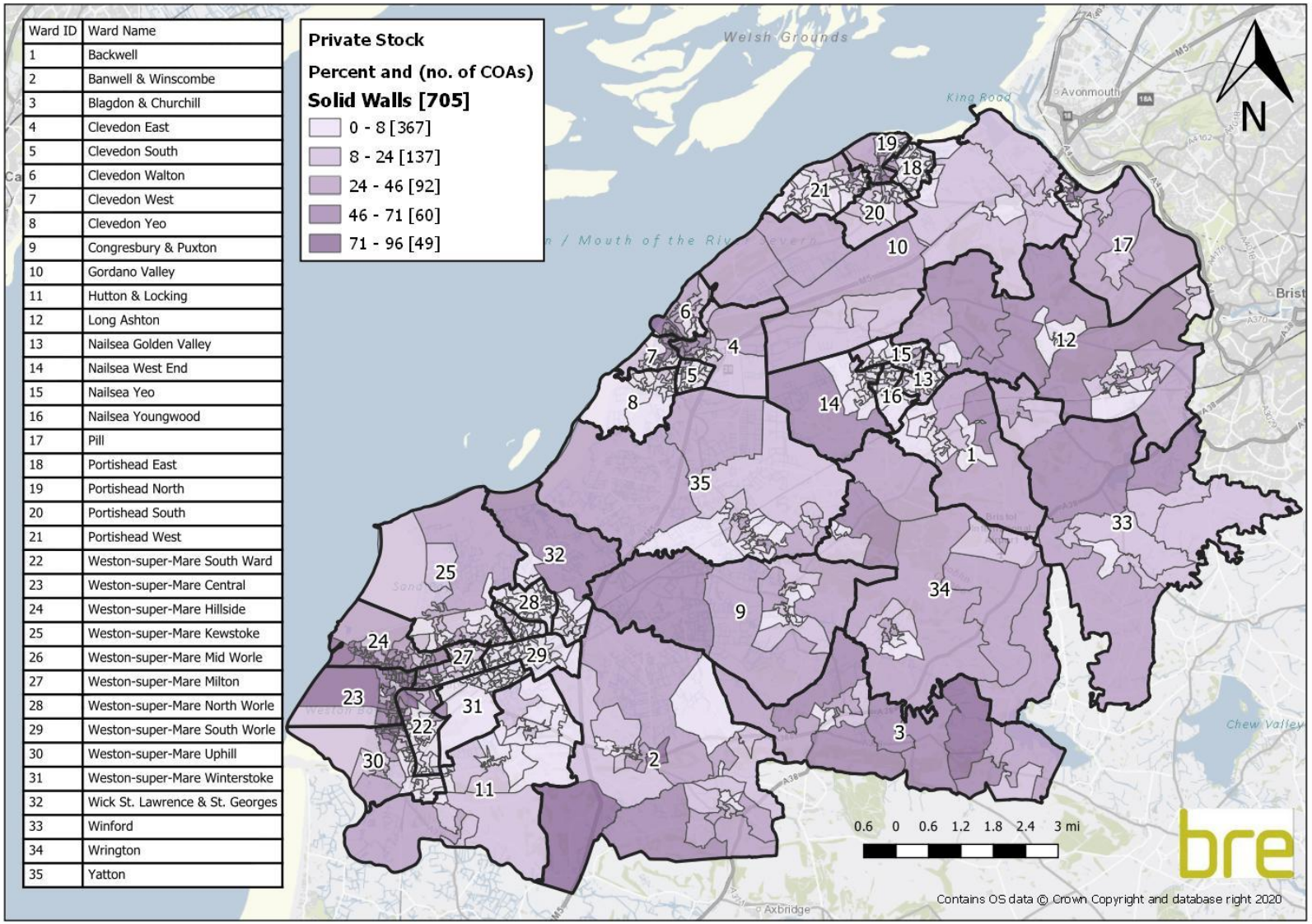
Variable		Private stock		2018 EHS Regional (private stock)	2018 EHS England (private stock)
		No.	%	%	%
No. of private sector dwellings		89,884	-	-	-
Level of loft insulation	No loft	13,559	15%	7%	9%
	No insulation	4,006	4%	3%	3%
	50mm	7,022	8%	6%	6%
	100mm	15,018	17%	22%	25%
	150mm	10,436	12%	19%	19%
	200mm	14,806	16%	15%	14%
	250+mm	25,037	28%	27%	24%
Less than 100mm		11,028	12%	9%	9%

Map 14: Energy efficiency variables - percentage of private sector dwellings in North Somerset with un-insulated cavity walls. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 15: Energy efficiency variables - percentage of private sector dwellings in North Somerset with solid walls. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
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13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
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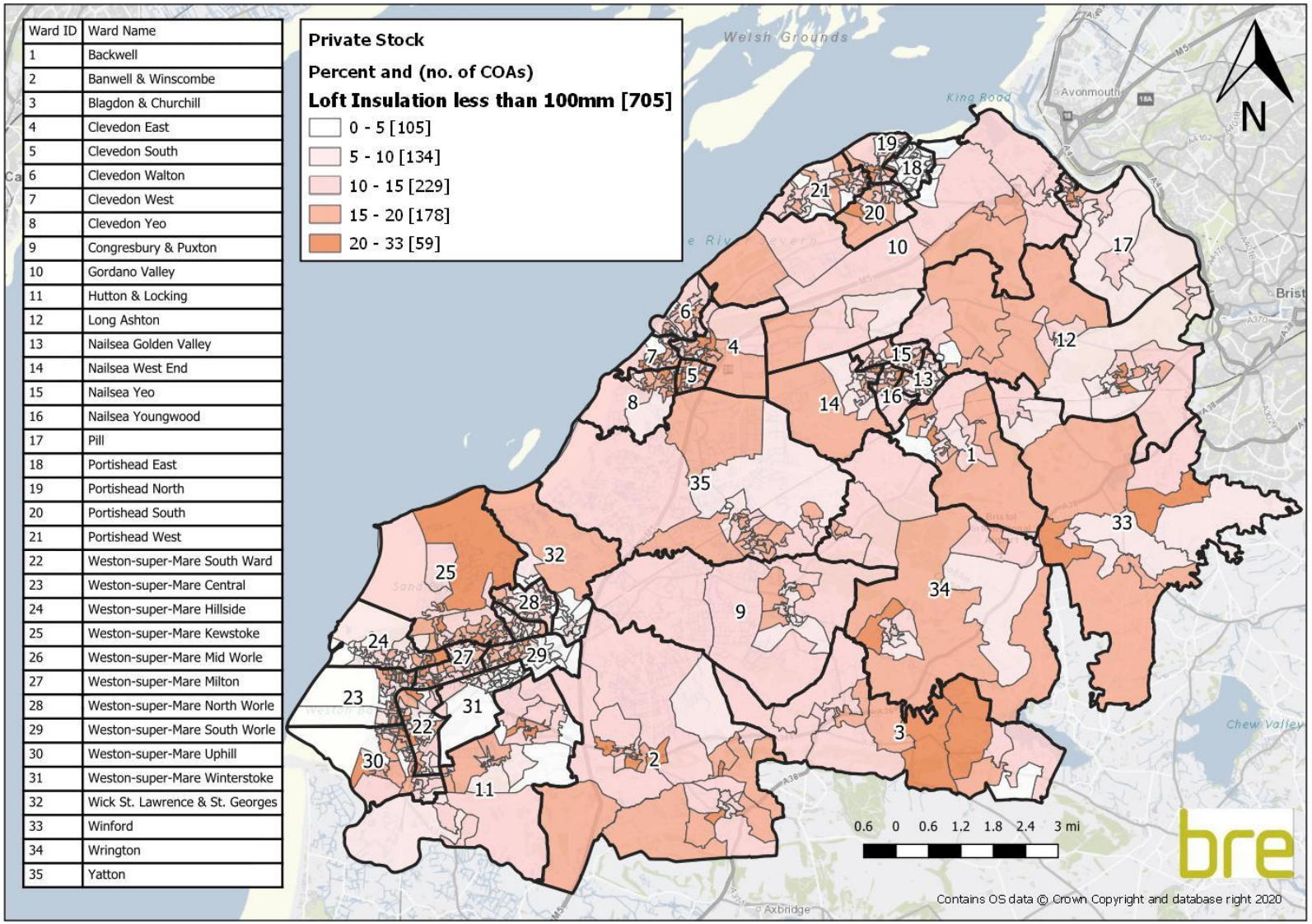
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 16: Energy efficiency variables – percentage of private sector dwellings in North Somerset with less than 100mm or no loft insulation. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



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27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

4.5 Energy planning variables for North Somerset

In addition to the energy efficiency Housing Standards Variables, the "energy outputs" part of the housing stock modelling approach (see **Figure 1**) provides the database with estimates of a number of other energy efficiency variables. These variables are: SimpleSAP, notional SimpleCO_2, notional energy demand and cost, notional heat demand and cost. **Table 12** shows the energy efficiency variables in terms of the average figure per dwelling in North Somerset, split by tenure. It is clear that the owner-occupied stock has the highest average figures for the majority of the variables which may, in part, be due to owner occupied dwellings being larger than those in the other tenures. Such information provides a useful picture of the local housing stock and can also be useful in planning infrastructure projects such as district heating schemes, or for projects seeking to lever in ECO or Sustainable Warmth related funding.

Table 12: Modelled data for average energy efficiency variables per dwelling by tenure in North Somerset

Variable	Tenure		
	Owner occupied	Private rented	Social
No. of dwellings	70,402	19,482	9,522
SimpleSAP	60	63	64
SimpleCO_2 (t/yr)	5.07	3.12	2.70
Energy demand (kWh/yr)	23,629	15,463	13,489
Energy cost (£/yr)	1,132	801	714
Electricity demand (KWh)	1,826	1,960	2,071
Electricity cost (£)	202	205	204
Heat demand (kWh/yr)	13,936	8,921	7,465
Heat cost (£/yr)	749	472	393

N.B. the carbon emission factors applied are the updated factors published in the SAP10.1 consultation

Map 17 shows the average SimpleCO_2 per year for North Somerset and **Map 18** and **Map 19** show the average total energy demand and the average total energy cost per year. These maps show similar patterns since higher energy demand is generally likely to result in higher energy costs and carbon emissions. In general energy demand and cost seems to be higher in the more rural parts of North Somerset. This may be a result of there being larger detached houses in these areas.

Map 20 and **Map 21** show the average total heat demand and the average total heating cost per year for North Somerset. These show a similar pattern to the energy demand and energy cost maps.

Map D. 31 to **Map D. 40** focus in on the northern and southern parts of the North Somerset area for the average simple CO2, average total energy demand, average total energy cost, average total heat demand and average total heating cost per year.

Map 17: Average Simple CO2 (tonnes/year) – private sector stock. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
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5	Clevedon South
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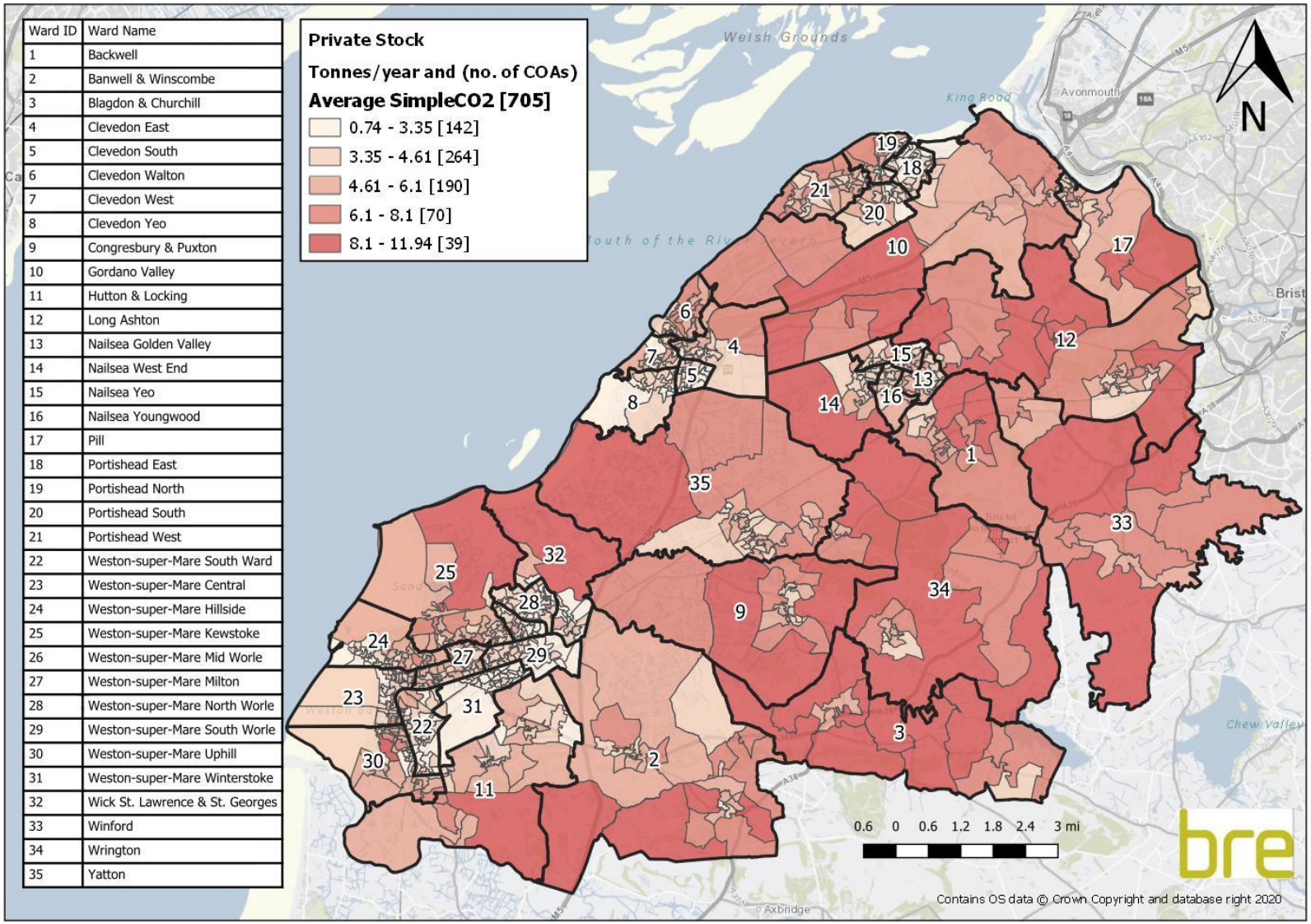
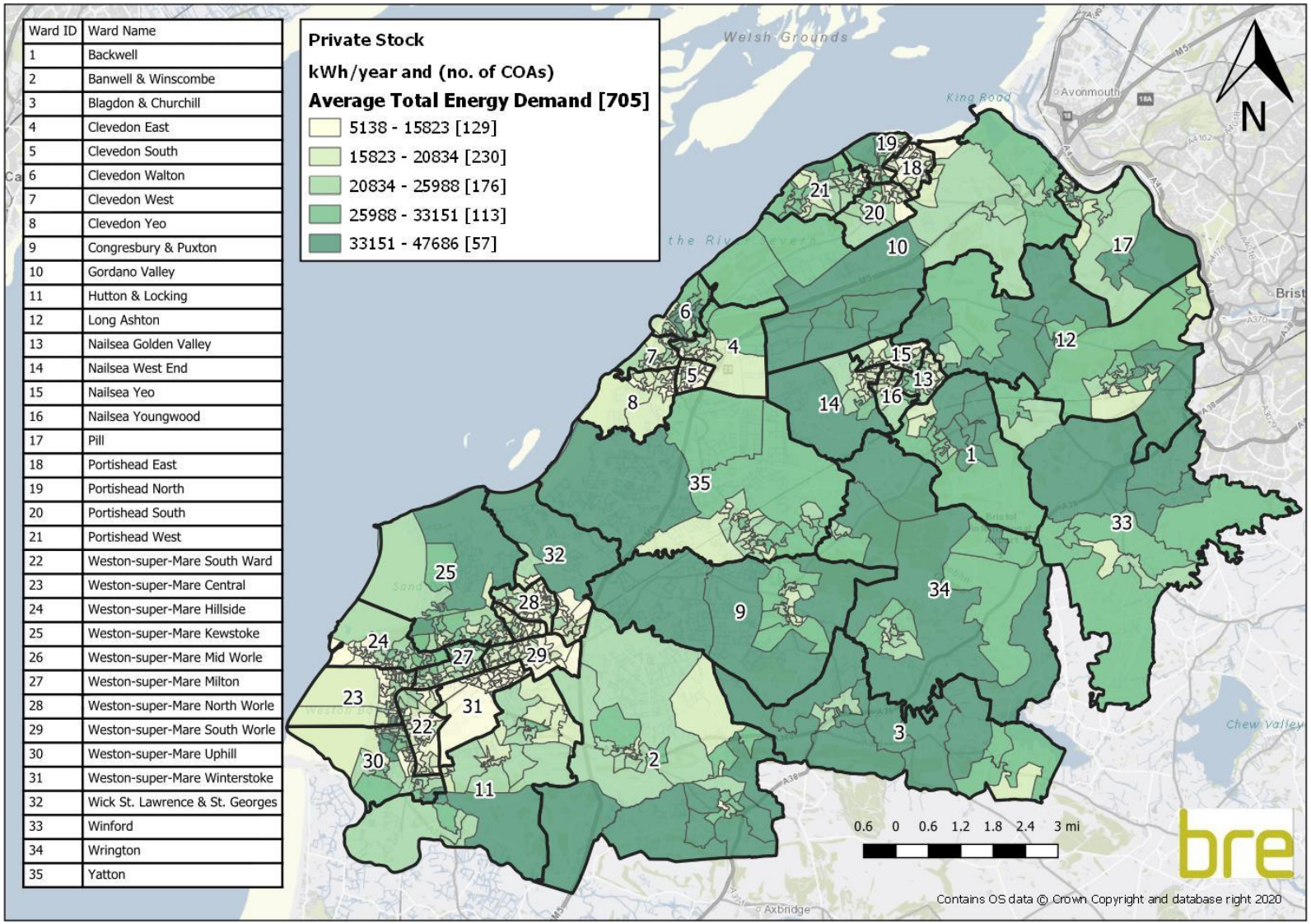
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

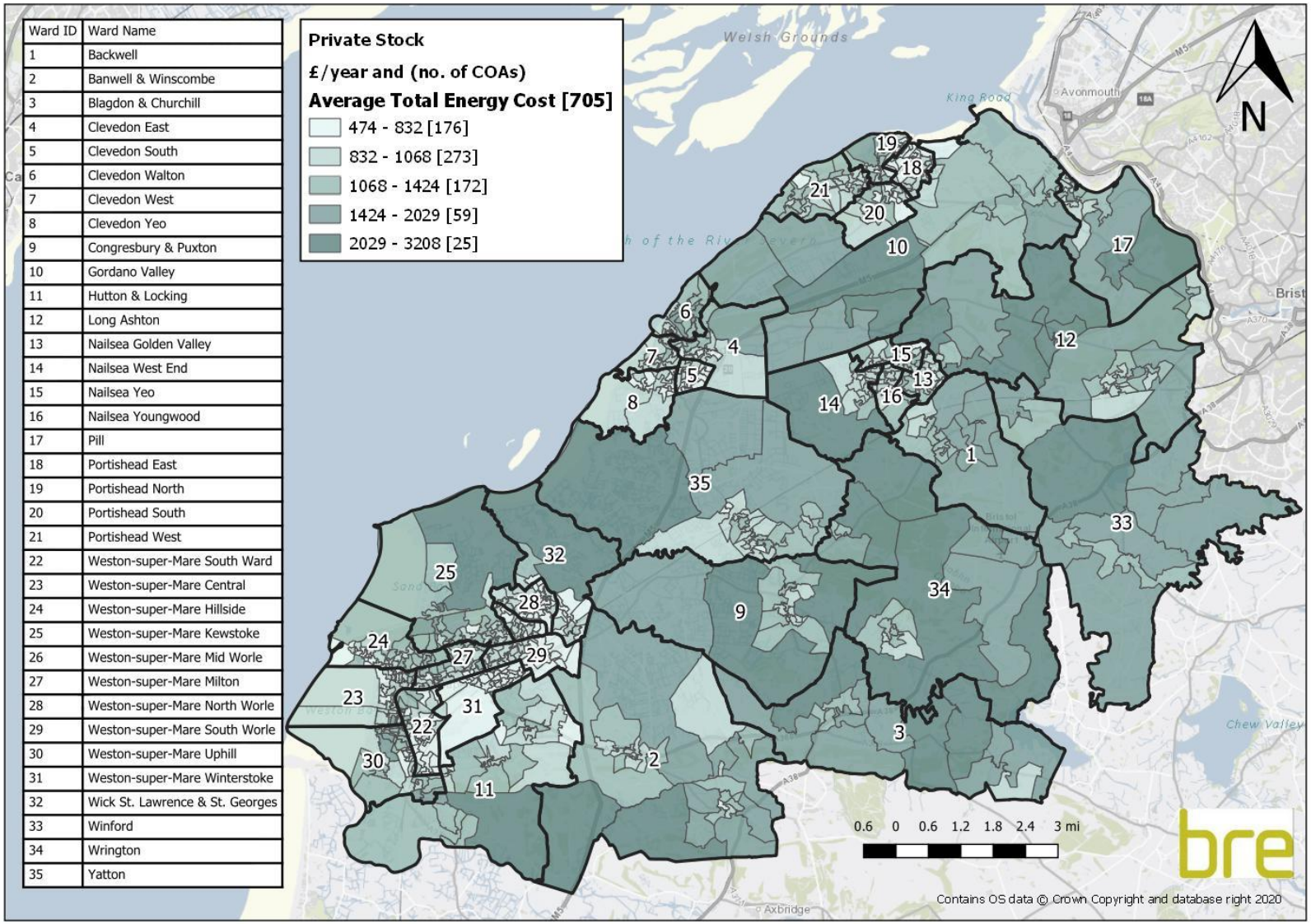


Map 18: Average total energy demand (kWh/year) – private sector stock. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



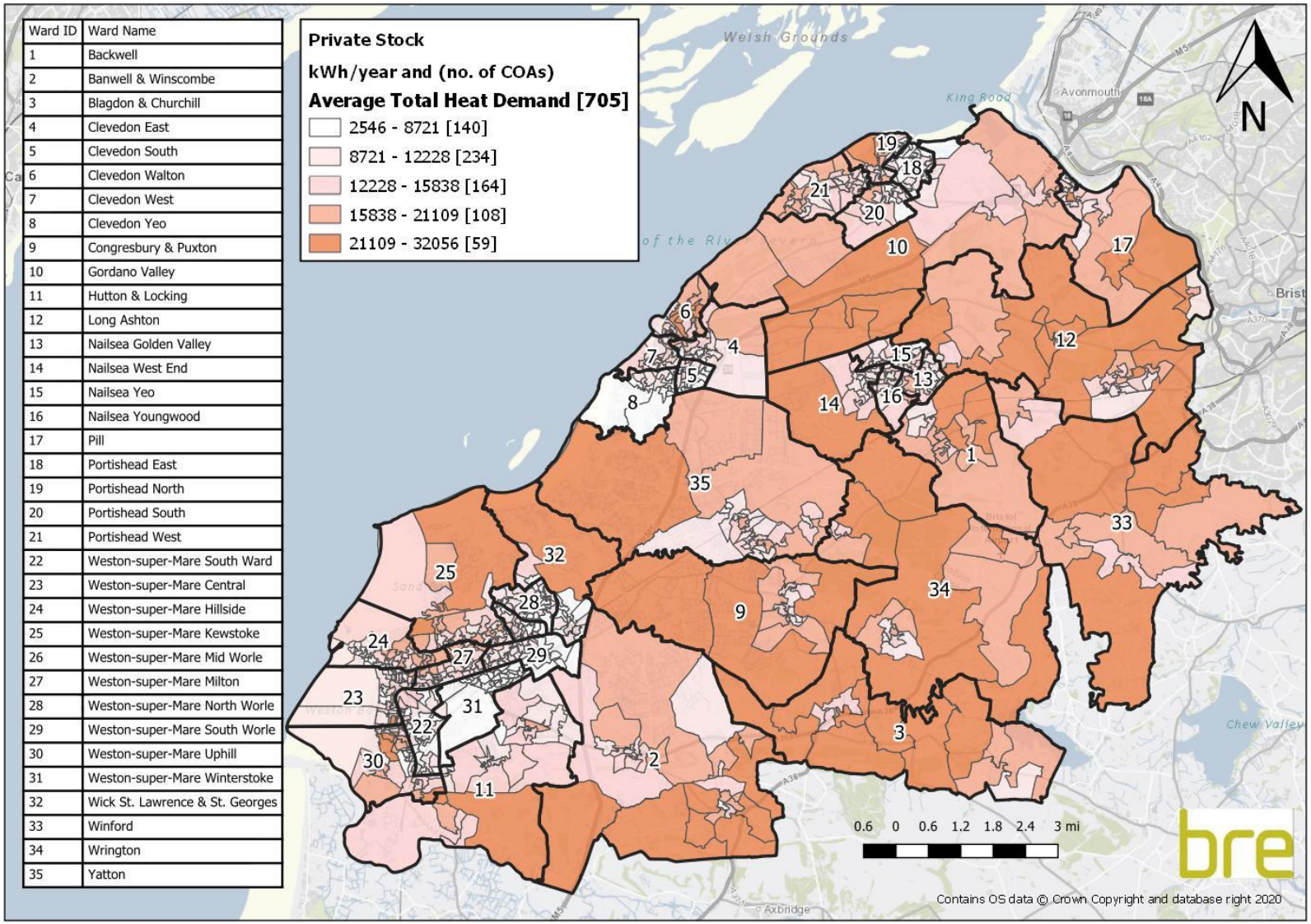
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 19: Average total energy cost (£/year) – private sector stock. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

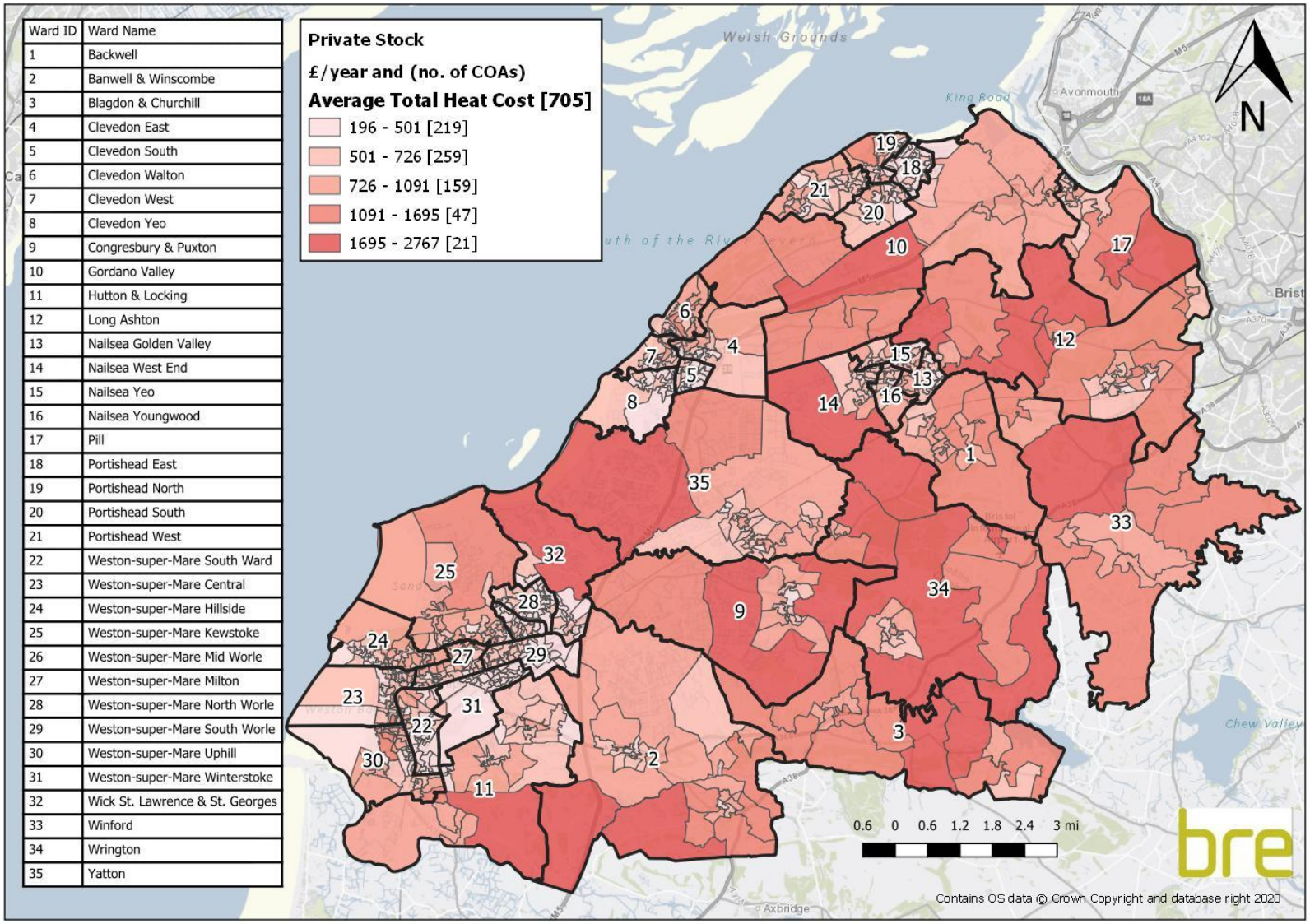
Map 20: Average total heat demand (kWh/year) – private sector stock. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 21: Average total heat cost (£/year) – private sector stock. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton



4.6 Improvement scenarios for North Somerset

For strategic planning purposes it is helpful for local authorities to have some idea as to what energy efficiency improvements could be made to the local housing stock, what the impact of those improvements would be, and what they would cost. A total of eight improvement scenarios - examining the possibilities of improving the energy efficiency of the stock - have been produced. The improvement scenarios use various combinations of the following measures:

- Low cost measures (LCM)
- Double glazing (DG)
- Solid wall insulation (SW)
- Heating (H)
- Heat pumps (HP)
- Photovoltaics (PV)

Eight scenarios were constructed which use various combinations of these measures and have been selected by BRE as representative of likely packages of work undertaken to improve a property. The eight scenarios are as follows:

- Scenario 1: Low cost measures
- Scenario 2: Low cost measures + double glazing
- Scenario 3: low cost measures + double glazing + solid wall insulation
- Scenario 4: Low cost measures + heating
- Scenario 5: Low cost measures + heating + double glazing + solid wall insulation
- Scenario 6: Low cost measures + heat pump + double glazing + solid wall insulation
- Scenario 7: Low cost measures + heat pump + double glazing + solid wall insulation + photovoltaics
- Scenario 8: Photovoltaics

The details of the individual measures are as follows:

Low cost measures:

- Where the dwelling has a loft but there is less than 200mm of loft insulation, add loft insulation to bring the level to 250mm
- Where the dwelling has un-insulated cavity walls, insulate them
- Where the dwelling has an un-insulated hot water cylinder, insulate it with a jacket
- Where the heating system does not have the most effective controls, upgrade to a fully controlled system (programmer, roomstat and TRVs)

Double glazing:
The dwelling will be upgraded to have double glazing throughout.

Solid wall insulation:
Where the dwelling has solid walls, these will be insulated with external wall insulation.

Heating:
A heating system deemed to be inefficient will be replaced by a more efficient one where possible. The method for determining which systems should be replaced and what they need to be replaced with is complex, but in summary the following factors are considered:

- Whether the dwelling is on the gas network
- The current heating system

- The current fuel
- The size of the dwelling

Heat pumps:
This measure involves installing a heat pump to replace the existing heating system. As opposed to the heating scenario above, all dwellings are switched to heat pumps for this case, regardless of the efficiency of the existing heating system. All dwellings are also assumed to be suitable for heat pump installation, where the assumed efficiency modelled is the SAP 12 default of 175%. This is likely to be a conservative estimate and actual efficiencies may be higher.

Photovoltaics:
This involves installing 2.5kWp photovoltaic panels. As for solar hot water, the methodology assumes all dwellings are suitable, thus resulting in an over-estimate of the savings available.

The savings estimated from each scenario are calculated by comparing them to the baseline situation for each of the energy variables (shown in **Section 4.5**,**Table 12**) and a revised SimpleSAP rating and energy consumption figures are calculated for each scenario. Note that the carbon emission factors applied are the updated factors published in the SAP10.1 consultation[59] which consider the reduction in carbon emissions from grid electricity in recent years. Only the carbon emission factors from SAP10.1 have been used in the modelling; the energy cost prices use the existing SAP12 figures.

Table 13 shows the impact of each of the improvement scenarios on the energy variables considered in the stock model and **Figure 10** focusses on the change in energy cost, compared to the baseline, which can be expected from each of the scenarios and **Figure 11** focusses on the Change in estimated SimpleCO_2 emissions by scenario, including percentage change compared to the baseline, which can be expected from each of the scenarios. It can be seen that scenario 7, which is based on the package of work with low cost measures, a heat pump, double glazing, solid wall insulation and photovoltaics, provides some of the greatest savings as follows:

- 1% reduction in average annual heating cost
- -24% reduction in average annual energy cost
- -79% reduction in average annual SimpleCO_2 emissions
- 9 point improvement in average SimpleSAP rating

It is interesting to note, however, that scenario 4, which only involves low cost measures and heating, still offers reasonable levels of savings for a lower cost.

The results provided here are for the total housing stock in North Somerset; however, more detailed results can be generated at ward or dwelling level by using the Housing Stock Condition Database (HSCD) provided as part of this project.

[59] https://www.bregroup.com/wp-content/uploads/2019/11/SAP-10.1-08-11-2019_1.pdf - *see Table 12*

Table 13: Results of the improvement scenarios analysis – showing the average change in energy output variables compared to the baseline for the total housing stock in North Somerset

Scenario	Improvement measure(s)	Average improvement per property compared to baseline					
		(SimpleSAP points)	(%)				
		SimpleSAP	SimpleCO$_2$ (tonnes/year)	Energy demand (kWh/year)	Energy cost (£/year)	Heat demand (kWh/year)	Heat cost (£/year)
-	(Baseline)	61	4.46	21,058	1,027	12,333	660
1	LCM	+3	-9%	-9%	-8%	-12%	-12%
2	LCM + DG	+3	-10%	-10%	-8%	-13%	-13%
3	LCM + DG + SWI	+5	-17%	-16%	-14%	-21%	-21%
4	LCM + Heating	+5	-18%	-18%	-15%	-13%	-20%
5	LCM + Heating + DG +SWI	+7	-25%	-25%	-20%	-22%	-29%
6	LCM + Heat Pumps + DG + SWI	+3	-75%	-61%	-8%	-23%	-1%
7	LCM + Heat Pumps + DG + SWI + PV	+9	-79%	-61%	-24%	-23%	-1%
8	PV	+7	-4%	0%	-17%	0%	0%

N.B. The carbon emission factors applied are the updated factors published in the SAP10.1 consultation.

Figure 10: Change in energy cost by scenario, including percentage change compared to the baseline

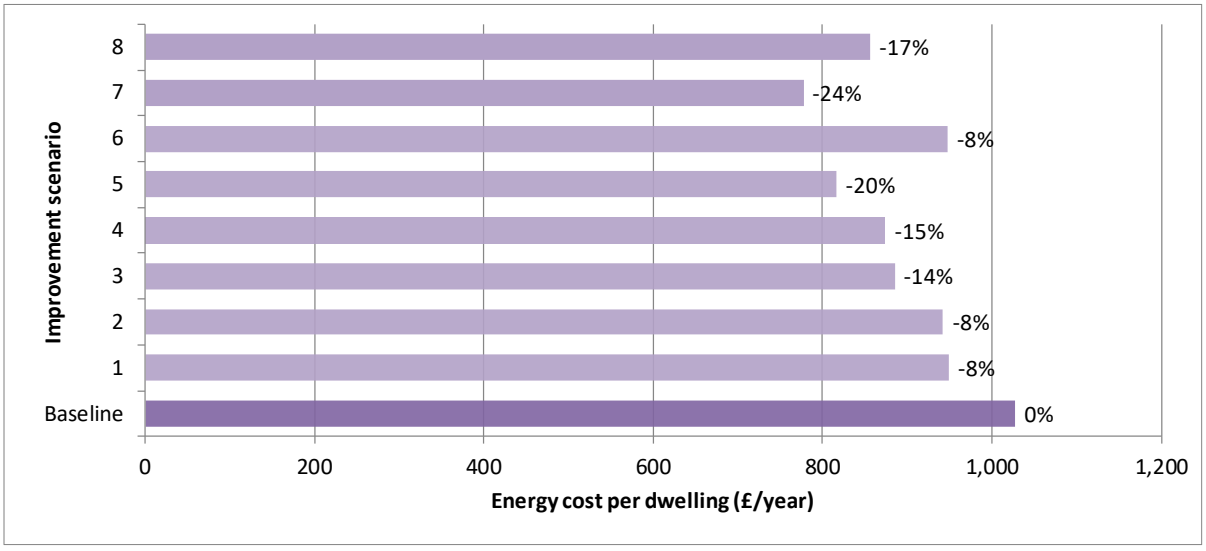
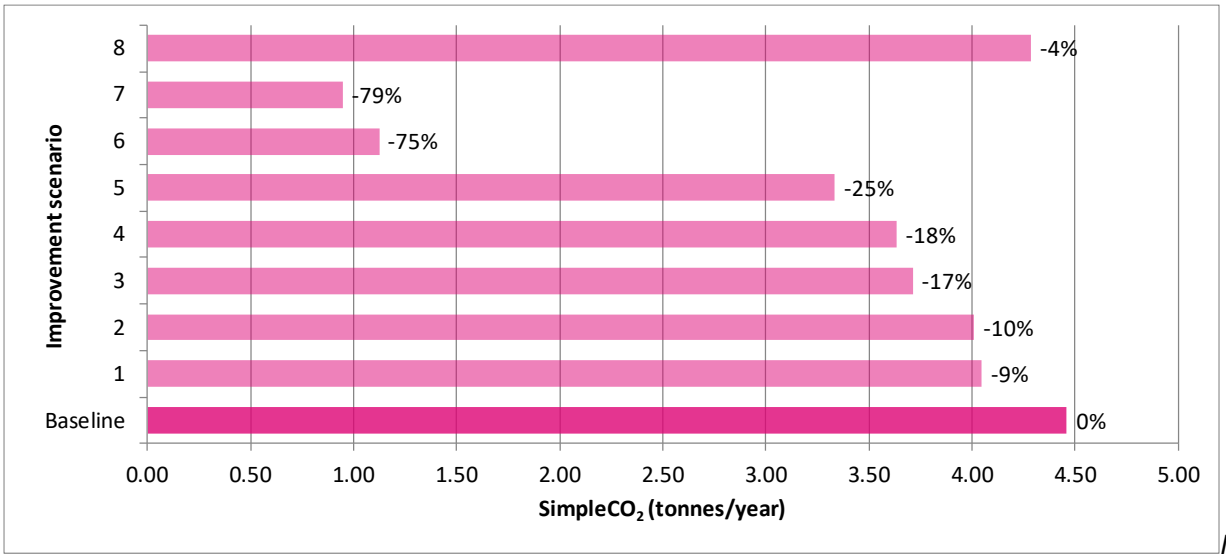


Figure 11: Change in estimated SimpleCO_2 emissions by scenario, including percentage change compared to the baseline



N.B. The carbon emission factors applied are the updated factors published in the SAP10.1 consultation

The differences in the heating and heat pumps scenarios will be of particular interest given the drive from Government to switch heating fuels away from gas to low carbon alternatives, such as heat pumps.

There are several considerations when comparing the results:

- The heating scenario is only applied to dwellings deemed to have an inefficient heating system whereas the heat pump scenario has been applied to all dwellings.
- Installation of a heat pump when a dwelling has an efficient central gas heating system may result in a lower SimpleSAP rating, as the cost of electricity is currently higher than mains gas.
- While heat pumps will generally have a positive reduction in in carbon emissions, switching to a more expensive heating fuel may have an impact on levels of fuel poverty.
- Installation of PV, along with heat pumps suggests a positive way to reduce both carbon emissions and fuel costs to the household.

4.7 Estimated costs to improve the EPC rating of the stock

North Somerset council requested additional scenario modelling analysis to be undertaken to determine the work required, and the estimated potential costs required to improve SimpleSAP ratings to the equivalent of an EPC rating of C.

To do this, the improvement scenarios detailed in the previous section have been used. Each improvement scenario produces a new estimated SimpleSAP rating for each dwelling, which can then be converted into an EPC band. In addition, indicative costs for each of the scenarios have also been applied for each dwelling. The cost of individual improvement scenarios will vary depending on the dwelling requirements; for example, looking at low cost measures, some dwellings may require all low cost measure to be applied, others may already have cavity wall insulation and therefore only need loft insulation improvements to be considered and costed.

To establish the point at which an EPC band C is reached, each scenario is applied to individual dwellings up to the point where that dwelling reaches a SimpleSAP equivalent to the EPC rating of C. The estimated

cost of each of the improvement measures required to achieve the equivalent EPC C for each dwelling is then applied.

Table 14 shows the results of the additional scenario modelling analysis. The scenarios are grouped into those using low cost measures plus non-heating improvements, scenarios using low cost measures plus heating improvements, and photovoltaics as a separate scenario. The baseline situation shows that 30,394 dwellings (27%) in North Somerset already have an estimated SimpleSAP rating of the equivalent of an EPC rating of C and therefore do not need further measures to be applied. If scenario 1 is applied, then this increases to 33,668 dwellings (29%) estimated to reach a SimpleSAP rating of the equivalent of an EPC C. If scenario 2 is applied, then this increases to an estimated 34,796 dwellings (30%). Scenario 7 shows the greatest improvement, although an estimated 29% of dwellings are still not able to achieve a SimpleSAP rating of 69 based on these scenarios.

Going through **Table 14** in more detail, the number of dwellings each additional measure in the scenario is applied to in order to achieve a SimpleSAP rating of the equivalent of an EPC C varies for each scenario. For example, scenario 1 requires 3,274 dwellings have low cost measures installed, whereas for scenario 2 an additional 1,128 dwellings have double glazing installed.

The average cost per dwelling for each additional measure is also shown in the table. For example, in the case of scenario 2, the average cost per dwelling to install double glazing is £1,730 and in scenario 3, the average cost per dwelling to install solid wall insulation is £7,166. It is important to note that these are average costs based on all the dwellings that these measures are applied to, and the actual cost per measure for an individual dwelling could vary significantly from this average.

The total cost shows the sum of the estimated cost modelled for the improvements applied to each individual dwelling. For example, in scenario 1 the total cost for installing low cost measures is £5.79m; looking at scenario 2, the total cost for installing double glazing is £3.17m. Finally, the cumulative total cost is the estimated total cost of implementing all elements for each scenario, again modelled at individual dwelling level rather than applying averages. Using scenarios 1 and 2 as examples again, the cumulative cost to implement both low cost measure and double glazing is the sum of the total cost of each individual measure (i.e. £5.79m and £3.17m to give £8.96 cumulative total cost for scenario 2).

Table 14: Results of analysis showing estimates of numbers and proportion of dwellings reaching a SimpleSAP rating of 69 under each scenario, and estimated cost information

Scenario	Count of dwellings reaching EPC C equivalent	% of total dwellings reaching EPC C equivalent	No. of dwellings each additonal measure is applied to	Avg cost per dwelling for each additional measure	Total cost of each additional measure (£M)	Cumulative total cost (£M)
0. Baseline	30,394	27%	-	-	-	-
1. Low Cost Measures (LCM)	33,668	29%	3,274	413	5.79	5.79
2. LCM + Double Glazing (DG)	34,796	30%	1,128	1,730	3.17	8.96
3. LCM + DG + Solid Wall Insulation (SWI)	41,962	37%	7,166	7,512	53.99	62.95
4. LCM + Heating	42,958	38%	9,290	2,313	26.09	31.88
5. LCM + Heating + Double Glazing (DG)	44,460	39%	1,502	3,655	4.03	35.91
6. LCM + Heat Pump + DG + SWI	54,465	48%	10,005	9,280	71.08	106.99
7. LCM + Heat Pump + DG + SWI + Photovoltaics	80,829	71%	26,364	12,280	242.35	349.34
8. Photovoltaics	60,032	53%	29,638	11,600	696.37	1,045.71

(N.B. scenarios are grouped into those using low cost measures plus non-heating improvements, scenarios using low cost measures plus heating improvements, and photovoltaics)

Figure 12 to **Figure 14** show the results for each set of scenarios for an EPC of Band A, B or C, again grouped into low costs measures plus non-heating improvements, those using low cost measures plus heating improvements, and photovoltaics separately – all compared to the baseline situation. They show

the number of dwellings estimated to achieve an EPC of either Band A, B or C when each scenario is applied. For example, in **Error! Reference source not found.**, scenario 1 shows that 33,668 dwellings can reach an EPC of Band C or better. This equates to 29% of the total dwellings in North Somerset.

Figure 12: Number of dwellings with an EPC of Band A, B or C – low cost measures plus non-heating improvement scenarios

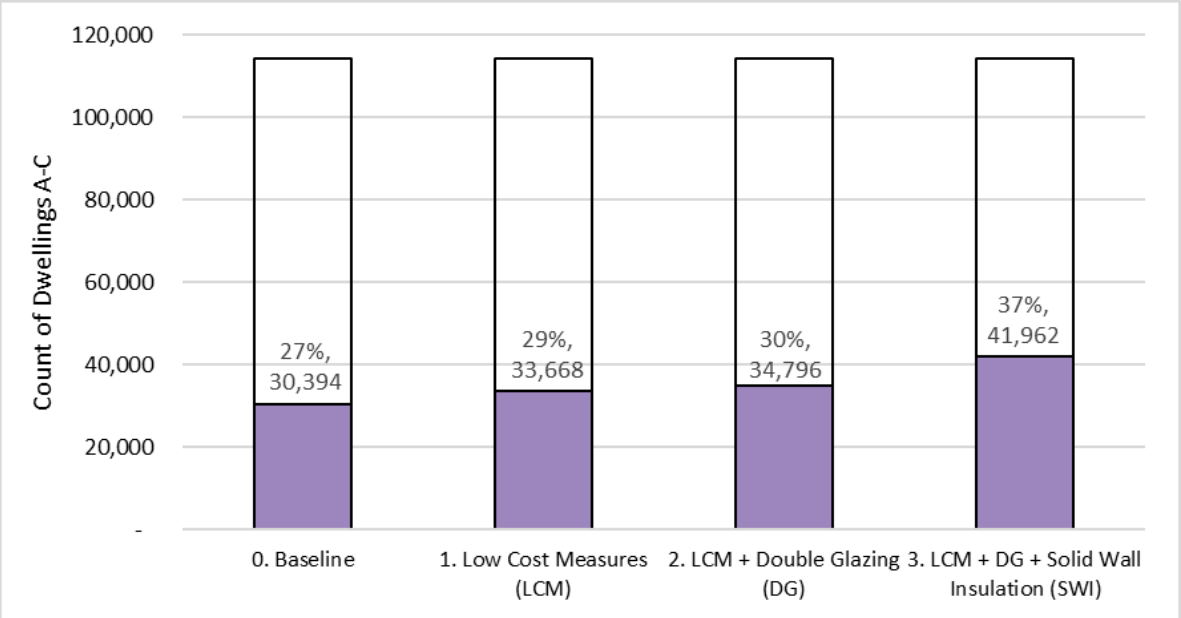


Figure 13: Number of dwellings with an EPC of Band A, B or C – low cost measures plus heating improvement scenarios

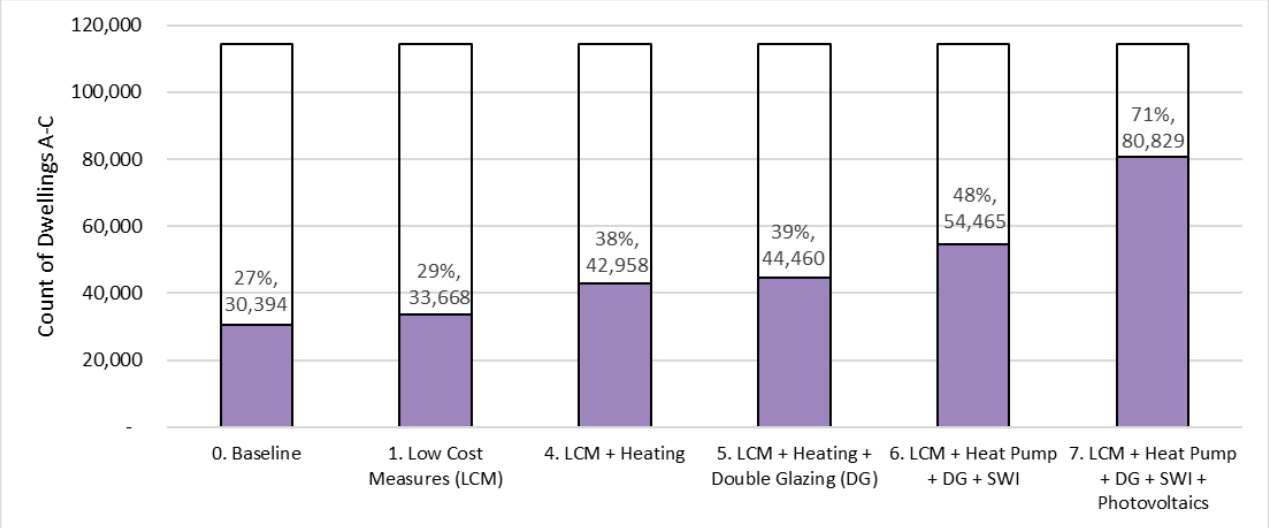
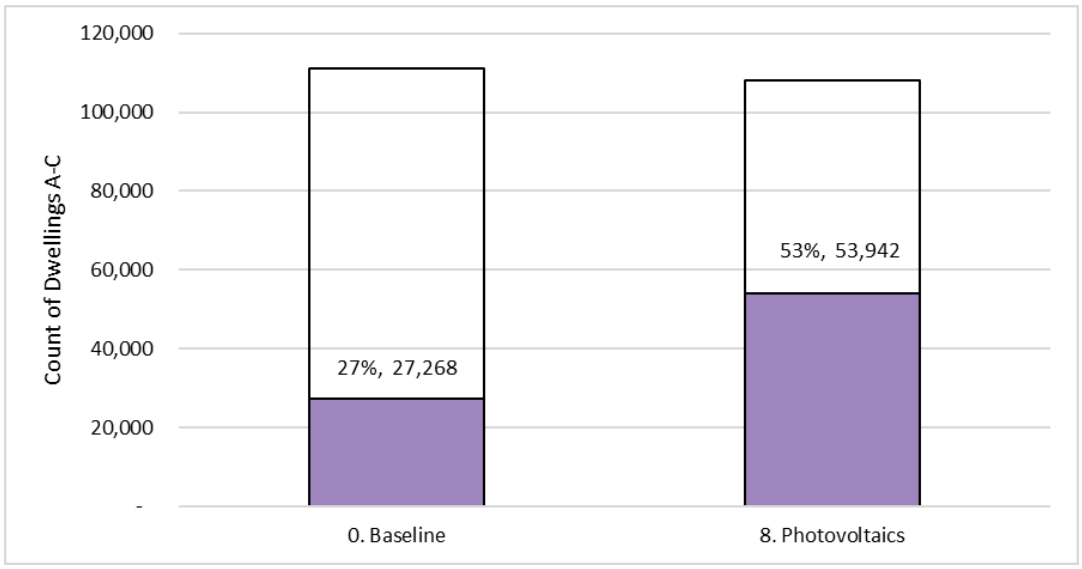


Figure 14: Number of dwellings with an EPC of Band A, B or C – photovoltaics scenario



5 Private rented sector analysis

This section provides additional analysis for the private rented sector in North Somerset. It covers the following analysis:

- Houses in Multiple Occupation (HMOs), this data has been reviewed and an assessment made of category 1 hazards and disrepair in HMOs in North Somerset.
- Analysis of the private rented sector, including size of the sector and distribution of private rented dwellings, assessment of category 1 hazards and disrepair and analysis of social factors and their distribution, including deprivation and migration.

5.1 Houses in Multiple Occupation (HMOs) in the North Somerset private sector stock

The Housing Act 2004 introduced a new set of definitions for HMOs in England from 6 April 2006[60]. The definition is a complex one and the bullet points below, which are adapted from web pages provided by the National HMO Network[61], provide a summary:

- An entire house or flat which is let to 3 or more tenants who form 2 or more households and who share a kitchen, bathroom, or toilet
- A house which has been converted entirely into bedsits or other non-self-contained accommodation and which is let to 3 or more tenants who form two or more households and who share kitchen, bathroom, or toilet facilities
- A converted house which contains one or more flats which are not wholly self-contained (i.e. the flat does not contain within it a kitchen, bathroom, and toilet) and which is occupied by 3 or more tenants who form two or more households
- A building which is converted entirely into self-contained flats if the conversion did not meet the standards of the 1991 Building Regulations and more than one-third of the flats are let on short-term tenancies

The recently published “Houses in Multiple Occupation and residential property licensing reform”[62] provides guidance to local authorities on changes to rules on licensing HMOs. From 1 October 2018, mandatory licensing of HMOs was extended to cover all relevant HMOs regardless of the number of storeys (compared to the previous definition which limited this to buildings of 3 or more storeys). Purpose built flats will only require a licence where there are fewer than 3 flats in the block. The requirement for the HMO to

[60] See Sections 254-258 of the Housing Act (http://www.legislation.gov.uk/ukpga/2004/34/contents)

[61] National HMO Network http://www.nationalhmonetwork.com/definition.php

[62] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/670536/HMO_licensing_reforms_response.pdf

be occupied by five or more persons in two or more households will remain[63]. From 1 October 2018, the extension came into effect and those dwellings that falls under the new definition will require a licence.

To be classified as an HMO the property must be used as the tenants' only or main residence and it should be used solely or mainly to house tenants. Properties let to students and migrant workers will be treated as their only or main residence and the same will apply to properties which are used as domestic refuges.

The LAHS requires estimates of the number of HMOs and the number of mandatory licensable HMOs.

- Number of private sector HMOs
    - Modelled using specific criteria from a number of Experian data sources and information derived from the SimpleCO$_2$ model. The criteria include privately rented dwellings with 3 or more bedrooms occupied by male/female/mixed home sharers, mixed occupancy dwellings or classified as the following Experian Mosaic classifications:
        - Renting a room
        - Career Builders
        - Flexible Workforce
        - Bus Route Renters
        - Learners and earners
        - Student scene
- Number of mandatory licensable HMOs under the Government's new definition, as of 1 October 2018
    - This has been modelled using the above criteria for HMOs plus the dwelling must have 4 or more bedrooms. This will apply to both houses and converted flats.[64]
    - Purpose built flats where there are up to two flats in the block and one or both have 4 or more bedrooms.

In order to estimate the number of potential licensable HMOs, the data provided by the council has been integrated into the BRE model to provide a list of known licensable HMO addresses. This is used alongside our HMO Model that provides additional addresses which the modelling suggests have the potential to be an HMO based on various criteria. This therefore provides a list of known licensable HMOs (provided by the council) as well as a list of other properties which may have the potential to be a licensable HMO. Consequently, the tables below indicate where the HMOs are likely to be located, however, it is important to clarify that this is modelled data and as such provides an informed indication of where HMOs may be found.

Table 15 summarises the results for the private sector stock in North Somerset, while **Table 16** shows the numbers of HMOs (total and licensable) by ward as well as the percentage of private sector dwellings

[63] In addition, new mandatory licence conditions will be introduced relating to national minimum sleeping room sizes and provision of waste disposal.

[64] While there is no available information on shared criteria to inform the model, the Experian data sources and the information derived from the SimpleCO$_2$ model give an indication of household characteristics and energy demand, which is subsequently used to infer the number of occupants and hence the likelihood of a dwelling being an HMO.

which are HMOs at ward level. Weston-super-Mare Central has the highest number of HMOs (563 HMOs, 18% of private rented stock in that ward), followed by Weston-super-Mare Hillside (181 HMOs, 8% of private rented stock in that ward) and Portishead East (138 HMOs, 13% of private rented stock in that ward).

Table 15: Summary of HMOs within the North Somerset private sector stock. Of this 151 are known licensable HMOs taken from the data provided by the council, and the remaining are potential licensable HMOs generated by the HMO model.

North Somerset	No. of private sector dwellings	HMOs	Mandatory Licensing Scheme HMOs
	89,884	1,832	526

Table 16: Number (and % of private rented stock) of HMOs and licensable HMOs by ward

Ward	Dwellings - private rented stock	HMOs	Mandatory Licensable HMOs
Backwell	124	5 (4%)	2 (2%)
Banwell and Winscombe	392	23 (6%)	8 (2%)
Blagdon and Churchill	282	28 (10%)	18 (6%)
Clevedon East	447	44 (10%)	10 (2%)
Clevedon South	358	17 (5%)	1 (0%)
Clevedon Walton	385	32 (8%)	8 (2%)
Clevedon West	354	18 (5%)	3 (1%)
Clevedon Yeo	368	8 (2%)	0 (0%)
Congresbury and Puxton	217	22 (10%)	13 (6%)
Gordano Valley	117	14 (12%)	9 (8%)
Hutton and Locking	574	39 (7%)	9 (2%)
Long Ashton	387	31 (8%)	16 (4%)
Nailsea Golden Valley	108	10 (9%)	2 (2%)
Nailsea West End	174	9 (5%)	2 (1%)
Nailsea Yeo	352	15 (4%)	0 (0%)
Nailsea Youngwood	180	18 (10%)	2 (1%)
Pill	206	20 (10%)	5 (2%)

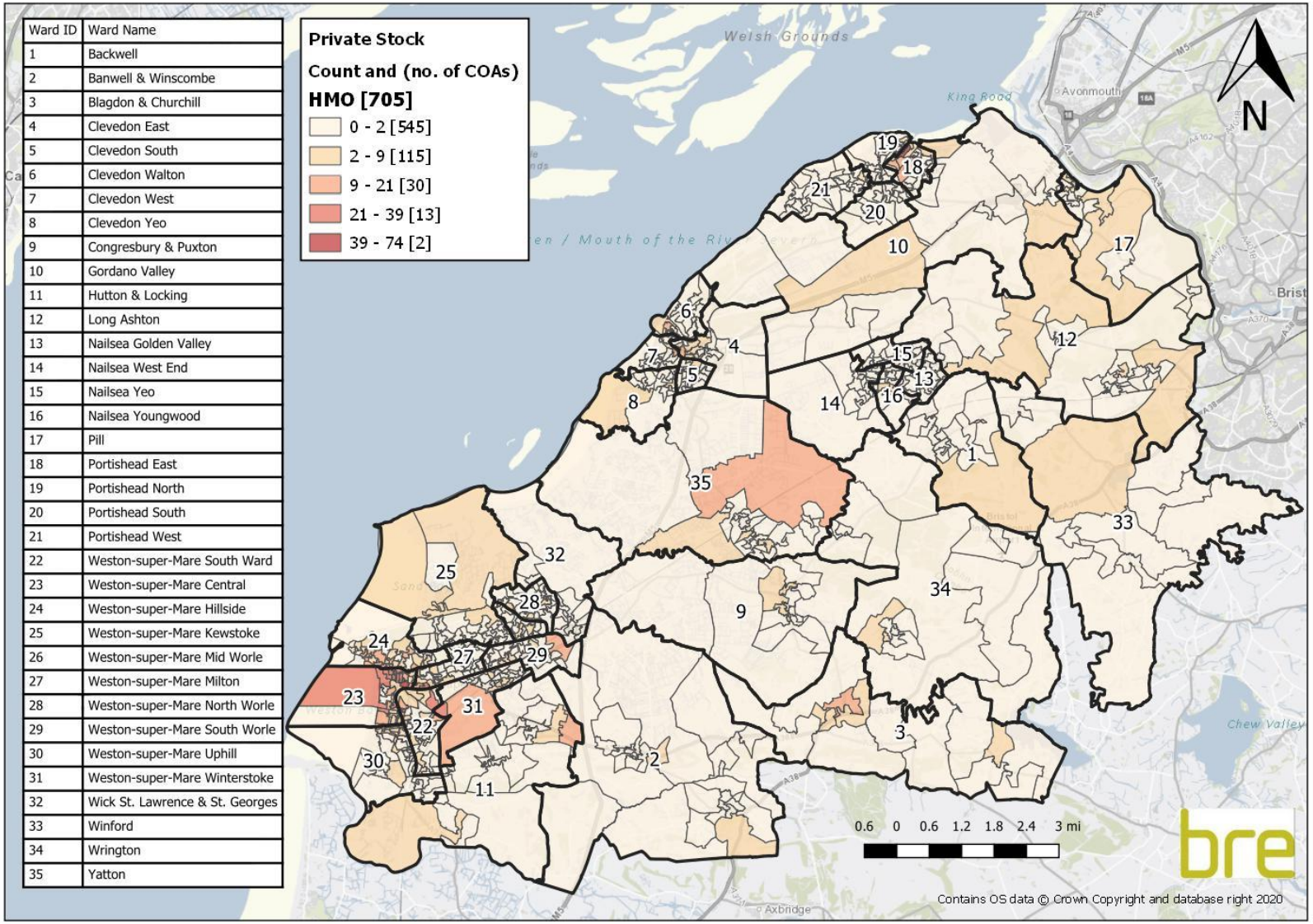
Table 16 cont: Number (and % of private rented stock) of HMOs and licensable HMOs by ward

Ward	Dwellings - private rented stock	HMOs	Mandatory Licensable HMOs
Portishead East	1,029	138 (13%)	70 (7%)
Portishead North	399	31 (8%)	1 (0%)
Portishead South	173	7 (4%)	1 (1%)
Portishead West	313	15 (5%)	5 (2%)
Weston-super-Mare Central	3,146	563 (18%)	151 (5%)
Weston-super-Mare Hillside	2,319	181 (8%)	54 (2%)
Weston-super-Mare Kewstoke	472	35 (7%)	8 (2%)
Weston-super-Mare Mid Worle	339	15 (4%)	2 (1%)
Weston-super-Mare Milton	773	83 (11%)	24 (3%)
Weston-super-Mare North Worle	493	32 (6%)	6 (1%)
Weston-super-Mare South Ward	829	115 (14%)	22 (3%)
Weston-super-Mare South Worle	875	45 (5%)	10 (1%)
Weston-super-Mare Uphill	719	87 (12%)	29 (4%)
Weston-super-Mare Winterstoke	1,298	50 (4%)	15 (1%)
Wick St Lawrence and St Georges	212	6 (3%)	0 (0%)
Winford	247	20 (8%)	5 (2%)
Wrington	291	23 (8%)	9 (3%)
Yatton	530	33 (6%)	5 (1%)

Map 22 shows the geographic distribution of HMOs and **Map 23** shows the distribution of mandatory licensable HMOs. The maps show that the majority of HMOs are concentrated towards central and western parts of Weston-super-Mare, with notable concentrations to the east of Yatton and in east Portishead. The picture is similar for Licensable HMOs, which are mainly found in and around Weston-super-Mare and east Portishead, as well pockets in the east of Long Ashton, centre of Gordano Valley and Blagdon & Churchill, and south of Banwell and Winscombe and Hutton & Locking. Generally, there is a clear tendency for HMOs to be located around the Weston-super-Mare area where there is a very high proportion of PRS homes. **Maps D.19** to **Map D. 22** zoom in on the urban area of North Somerset for HMOs and licensable HMOs, respectively. As previously mentioned, ward level data on HMOs is available in the accompanying Housing Stock Condition Database (HSCD) and **Appendix C** provides guidance on how to use the database.

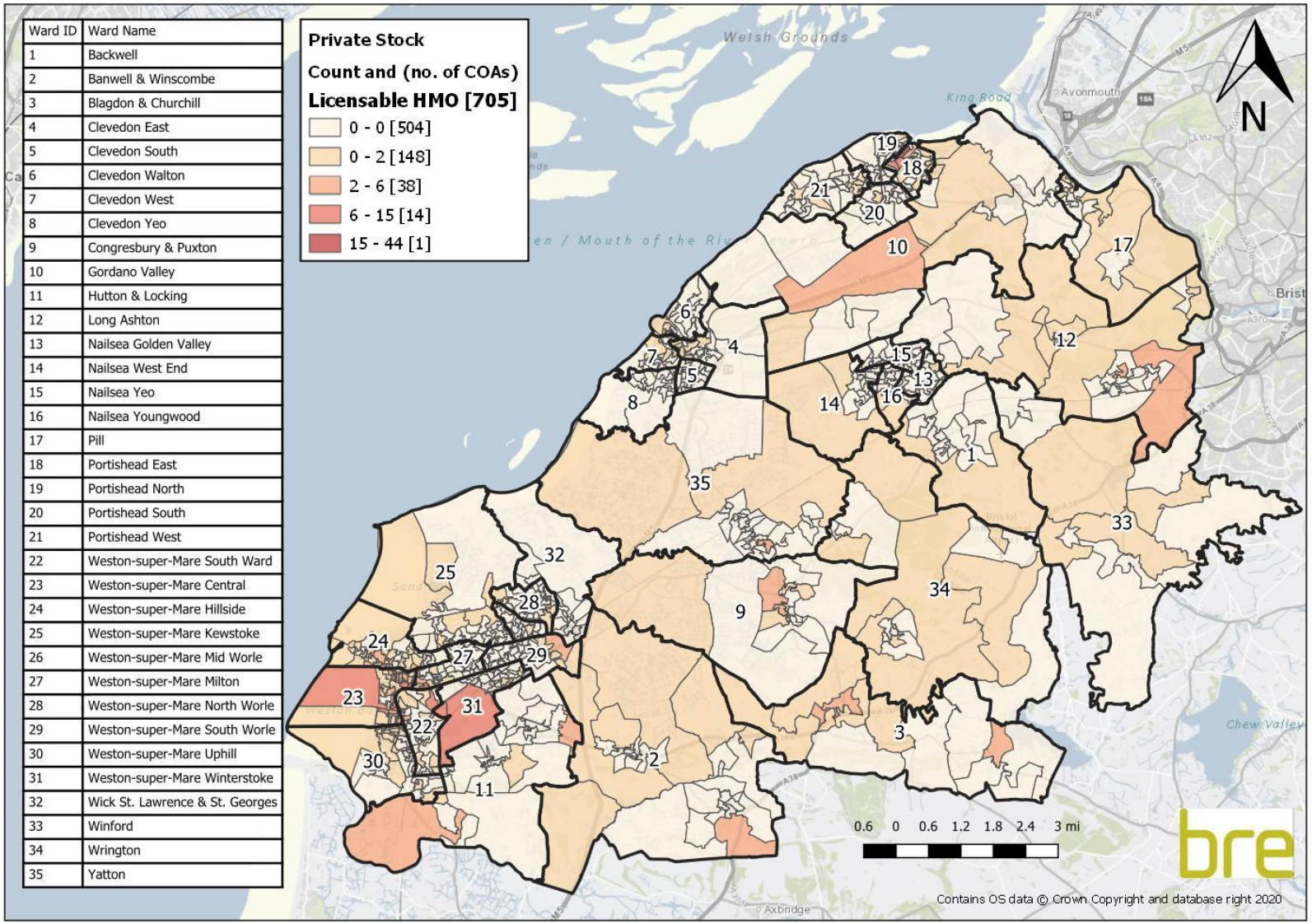
Map 22: Count of HMOs. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton



Map 23: Count of mandatory licensable HMOs. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton



5.1.1 Housing standards variables for HMOs

HMOs compared to non-HMOs

Table 17 and **Figure 15** show the results for each of the housing standards variables in North Somerset for the private rented sector split into non-HMOs and HMOs. **Figure 16** compares the average SimpleSAP ratings for HMOs compared to non-HMOs.

HMOs have slightly higher levels of falls hazards, disrepair and fuel poverty (LIHC definition), but lower levels of all hazards, excess cold, fuel poverty (10% definition) and low income households. Average SimpleSAP ratings are similar across both groups with HMOs being 61 and non-HMOs 63.

Table 17: Estimates of the percentage of private rented dwellings meeting the housing standards variables assessed using HMO data provided by North Somerset Council and the Housing Stock Models – HMOs compared to non-HMOs

Housing Standards Variable		Private rented sector stock			
		Non HMOs		HMOs	
		No.	%	No.	%
No. of dwellings		17,650	-	1,832	-
HHSRS category 1 hazards	All hazards	1,998	11%	177	10%
	Excess cold	657	4%	44	2%
	Fall hazards	506	3%	76	4%
Disrepair		595	3%	98	5%
Fuel poverty (10%)		949	5%	49	3%
Fuel poverty (Low Income High Costs)		2,682	15%	351	19%
Low income households		5,889	33%	424	23%

Figure 15: Estimates of the percentage of private rented dwellings meeting the housing standards variables assessed using HMO data provided by North Somerset Council and by the Housing Stock Models – HMOs compared to non-HMOs

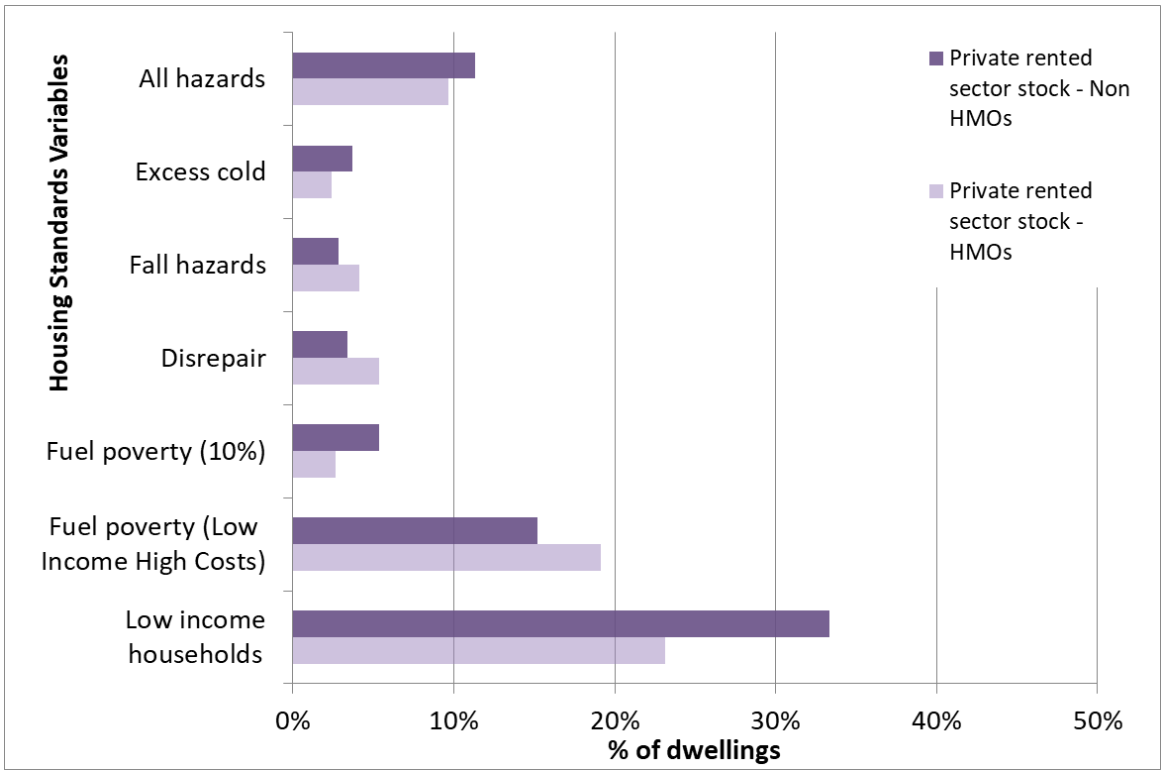
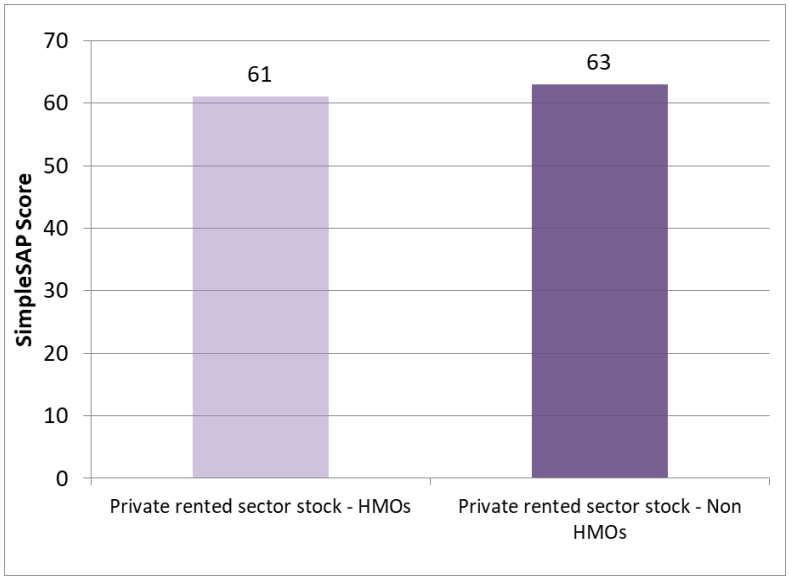


Figure 16: Average SimpleSAP ratings for HMOs compared to non-HMOs in North Somerset (assessed using HMO data provided by North Somerset Council and the Housing Stock Models)



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Non-licensable HMOs compared to licensable HMOs

Table 18 and **Figure 17** show the results for each of the housing standards variables in North Somerset for HMOs split into non-licensable HMOs and mandatory HMOs. Licensable HMOs have slightly lower levels of low income households, but higher levels of all hazards, excess cold, fall hazards, disrepair and fuel poverty (both definitions).

Figure 18 compares the average SimpleSAP ratings for non-licensable HMOs and licensable HMOs. It is estimated that licensable HMOs have the same SAP ratings than non-licensable HMOs.

Table 18: Estimates of the percentage of dwellings meeting the housing standards variables (assessed using HMO data provided by North Somerset Council and the Housing Stock Models) - non-licensable HMOs compared to licensable HMOs

Housing Standards Variable		HMOs			
		Non-mandatory		Mandatory	
		No.	%	No.	%
No. of dwellings		1,306	-	526	-
HHSRS category 1 hazards	All hazards	119	9%	58	11%
	Excess cold	31	2%	13	2%
	Fall hazards	47	4%	29	6%
Disrepair		64	5%	34	6%
Fuel poverty (10%)		31	2%	18	3%
Fuel poverty (Low Income High Costs)		195	15%	156	30%
Low income households		304	23%	120	23%

Figure 17: Estimates of the percentage of dwellings meeting the housing standards variables (assessed using HMO data provided by North Somerset Council and the Housing Stock Models) - non-licensable HMOs compared to licensable HMOs

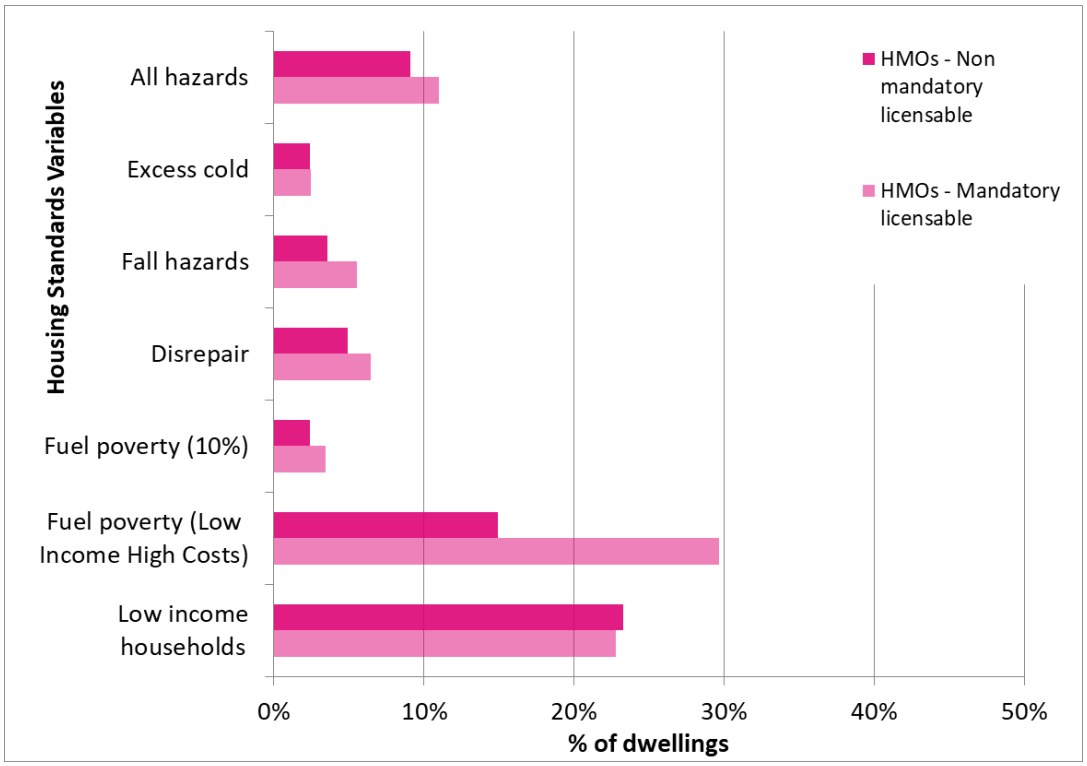
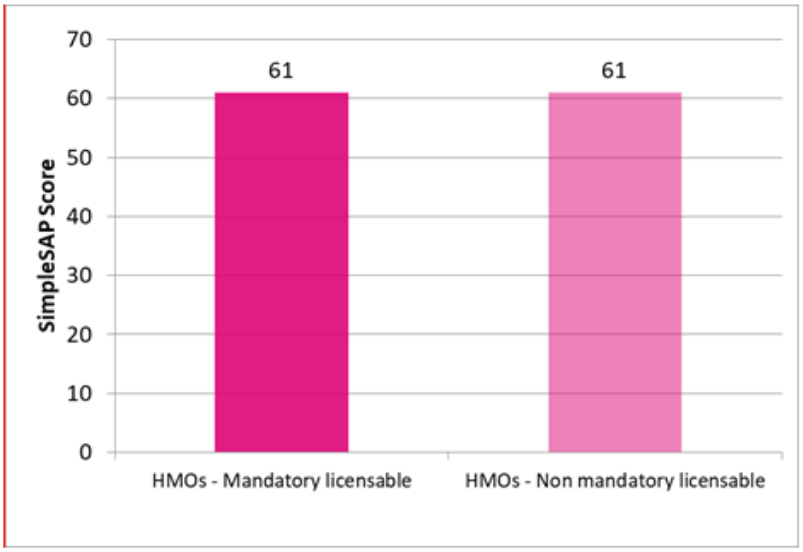


Figure 18: Average SimpleSAP ratings for non-licensable HMOs compared to licensable HMOs in North Somerset (assessed using HMO data provided by North Somerset Council and the Housing Stock Models)



5.1.2 Potential areas for investigation within North Somerset's HMOs

Table 19 shows the number of HMOs in each ward as well as the proportion of those HMOs containing a category 1 hazard or being in disrepair. Wards with high levels of HMOs and with high proportions of hazards or in disrepair may be a starting point when considering which areas to be targeted for improvement. For example, Weston-super-Mare Central ward has the greatest number of HMOs (561), and of these 11% are estimated to have a category 1 hazard, 2% to have a falls hazard and 9% to be in disrepair. Weston-super-Mare Hillside ward also stands out as having the second greatest number of HMOs (181), and 14% of these are estimated to contain a hazard, 1% to suffer from excess cold, 8% to contain a fall hazard and 8% to be in disrepair.

Table 19: Number of HMOs (based on data from North Somerset Council, and percentage of those HMOs containing a category 1 hazard or being in disrepair, by ward)

Ward	HMOs	HHSRS category 1 hazards			Disrepair
		All hazards	Excess cold	Fall hazards	
Backwell	5	1 (20%)	1 (20%)	0 (0%)	0 (0%)
Banwell and Winscombe	24	1 (4%)	1 (4%)	0 (0%)	1 (4%)
Blagdon and Churchill	28	5 (18%)	3 (11%)	2 (7%)	0 (0%)
Clevedon East	44	5 (11%)	2 (5%)	1 (2%)	4 (9%)
Clevedon South	17	3 (18%)	0 (0%)	2 (12%)	0 (0%)
Clevedon Walton	31	2 (6%)	1 (3%)	0 (0%)	0 (0%)
Clevedon West	18	3 (17%)	1 (6%)	2 (11%)	3 (17%)
Clevedon Yeo	8	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Congresbury and Puxton	21	5 (24%)	3 (14%)	2 (10%)	1 (5%)
Gordano Valley	14	2 (14%)	1 (7%)	0 (0%)	0 (0%)
Hutton and Locking	40	1 (3%)	0 (0%)	1 (3%)	2 (5%)
Long Ashton	31	3 (10%)	3 (10%)	0 (0%)	0 (0%)
Nailsea Golden Valley	10	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Nailsea West End	9	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Nailsea Yeo	15	2 (13%)	1 (7%)	1 (7%)	1 (7%)
Nailsea Youngwood	18	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Pill	20	4 (20%)	2 (10%)	2 (10%)	1 (5%)
Portishead East	144	4 (3%)	0 (0%)	4 (3%)	1 (1%)

Table 19 cont: Number of HMOs (based on data from North Somerset Council), and percentage of those HMOs containing a category 1 hazard or being in disrepair, by ward)

Ward	HMOs	HHSRS category 1 hazards			Disrepair
		All hazards	Excess cold	Fall hazards	
Portishead North	31	3 (10%)	1 (3%)	1 (3%)	1 (3%)
Portishead South	7	1 (14%)	1 (14%)	0 (0%)	0 (0%)
Portishead West	15	1 (7%)	0 (0%)	1 (7%)	0 (0%)
Weston-super-Mare Central	561	62 (11%)	11 (2%)	19 (3%)	51 (9%)
Weston-super-Mare Hillside	181	23 (13%)	1 (1%)	15 (8%)	15 (8%)
Weston-super-Mare Kewstoke	35	5 (14%)	0 (0%)	5 (14%)	1 (3%)
Weston-super-Mare Mid Worle	15	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Weston-super-Mare Milton	83	4 (5%)	1 (1%)	2 (2%)	6 (7%)
Weston-super-Mare North Worle	32	4 (13%)	1 (3%)	3 (9%)	1 (3%)
Weston-super-Mare South Ward	114	7 (6%)	0 (0%)	2 (2%)	5 (4%)
Weston-super-Mare South Worle	45	3 (7%)	0 (0%)	2 (4%)	0 (0%)
Weston-super-Mare Uphill	87	10 (11%)	4 (5%)	2 (2%)	4 (5%)
Weston-super-Mare Winterstoke	50	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Wick St Lawrence and St Georges	6	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Winford	20	4 (20%)	2 (10%)	0 (0%)	0 (0%)
Wrington	21	4 (19%)	2 (10%)	2 (10%)	0 (0%)
Yatton	32	3 (9%)	1 (3%)	2 (6%)	0 (0%)

5.2 Selective licensing

Selective licensing is different to additional licensing as it covers all private rented sector properties (excluding any HMOs already licensed under HMO schemes). Selective licensing must be part of the overall strategic approach taken by an authority. The main aim of selective licensing is to address the problems caused by poor quality private rented accommodation[65].

Section 80 of the 2004 Housing Act[66] gives powers to Local Housing Authorities (LHAs) to designate geographical areas to be licensed, provided certain conditions are met. The power does not permit LHAs to require licensing of houses that have been exempted under the Selective Licensing of Houses (Specified exemptions) (England) Order 2006, or a property that is subject to a tenancy or licence granted by a body which is registered as a social landlord under Part 1 of the Housing Act 1996. Furthermore, a local housing authority will need to apply to the Secretary of State for confirmation of any scheme which covers more than 20% of their geographical area, or that would affect more than 20% of privately rented homes in the local authority area. Prior to the introduction of a licensing scheme, there must be a consultation with residents, landlords and tenants and any others likely to be affected. If the selective licensing scheme is adopted, then landlords who rent out properties in that area will be required to obtain a licence from the local authority for each of their properties. Failure to do so, or if they fail to achieve minimum standards the authority can take enforcement action. More details can be found in the DCLG document "Selective licensing in the private rented sector: A guide for local authorities"[67].

The conditions which apply to Selective licensing areas are split into 3 "sets", each of which has several conditions. Any of the three sets needs to be met in order for a local authority to designate a selective licensing area. The requirements of each of the sets are summarised as follows:

Set one:

- The area has low housing demand (or is likely to become such an area)
- Selective licensing will contribute to the improvement of the social or economic conditions in the area, when combined with other measures taken in the area

Set two:

- The area has a significant and persistent problem cause by anti-social behaviour
- Some or all of the private landlords letting dwellings in the area are failing to take appropriate action to combat the problem
- Selective licensing will lead to a reduction/elimination of the problem, when combined with other measures taken in the area

[65] http://researchbriefings.files.parliament.uk/documents/SN04634/SN04634.pdf

[66] http://www.legislation.gov.uk/ukpga/2004/34/pdfs/ukpga_20040034_en.pdf

[67] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/418551/150327_Guidance_on_selective_licensing_applications_FINAL_updated_isbn.pdf

Set three:

- The area has a high proportion of properties in the private rented sector, compared to the total number of properties in the area – this is suggested as being the national average as reported in the latest available English Housing Survey (currently 19%)[68]
- These properties are occupied under either assured tenancies or licences to occupy
- One or more of the following conditions is satisfied:

    - **Housing conditions** – the authority has reviewed housing conditions in the area and that it considers it would be appropriate for a significant number of properties in the area to be inspected to determine presence of category 1 or 2 hazards, or the authority intends to carry out inspections with a view to carrying out enforcement action; selective licensing, combined with other measures, will contribute to an improvement in general housing conditions in the area.

    - **Migration** – the area has recently or is experiencing high levels of migration, a significant number of properties in the area are occupied by migrants; selective licensing will contribute to an improvement in the social or economic conditions in the area and ensuring that properties are properly managed, and overcrowding is prevented.

    - **Deprivation** – the area has high levels of deprivation which affects a significant number of the occupiers; selective licensing, combined with other measures, will contribute to a reduction in deprivation levels in the area. To determine if an area has high levels of deprivation the authority can look at: employment status, average income, health, access to education, training and services, housing conditions, physical environment, crime levels.

    - **Crime** – the area has high levels of crime which affects those living in the area; selective licensing, combined with other measures, will contribute to a reduction in crime levels in the area for the benefit of those living in the area.

5.2.1 Indicators for investigation

As detailed, there are various criteria which can be used to designate areas for selective licensing. The criteria which were investigated in more detail are:

- The proportion of dwellings that are privately rented

- Information on property condition - proportion of dwellings:

    - With a category 1 Housing Health and Safety Rating System (HHSRS) hazard – this is the presence of one or more of the 29 hazards covered by the HHSRS[69]

[68] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/860076/2018-19_EHS_Headline_Report.pdf

[69] For a full list of hazards see - Housing Health and Safety Rating System Operating Guidance, ODPM, 2006 - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/15810/142631.pdf

- With a category 1 HHSRS hazard for excess cold
- With a category 1 HHSRS fall hazard – these include those fall hazards where the vulnerable person is 60 or over i.e. the presence of falls associated with baths, falling on the level and falling on stairs
- In disrepair – this is based on the former Decent Homes Standard criteria for disrepair which states that a dwelling fails this criterion if it is not found to be in a reasonable state of repair. This is assessed by looking at the age of the dwellings and the condition of a range of building components including walls, roofs, windows, doors, electrics and heating systems)

- Information on deprivation based on the 2019 Indices of Multiple Deprivation (IMD)[70]
- Information on crime - Anti-Social Behaviour (ASB)
- Information on migration

5.2.2 Proportions of dwellings that are privately rented overall and by ward

The percentage of stock in North Somerset which is privately rented is estimated to be 19.6%. This is slightly higher than the figure for England – 19%[71].

There are 8 (of a total of 35) wards with private rented proportions in excess of the national average (19%) – these are depicted in **Table 20** by the thick dashed line. Those wards with over 19% private rented stock have been further divided into 3 groups for analysis (depicted by the thin dashed lines in the table). These groups are as follows:

Wards with PRS over 36%

- Weston-super-Mare Central
- Weston-super-Mare Hillside

Wards with PRS between 25 - 36%

- Weston-super-Mare Winterstoke
- Portishead East

Wards with PRS between 19 - 24% (above national average of 19%)

- Weston-super-Mare South Worle

[70] https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019

[71] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/860076/2018-19_EHS_Headline_Report.pdf

- Clevedon East
- Weston-super-Mare South Ward
- Clevedon Yeo

Map 24 shows the location of these three analysis groups within North Somerset.

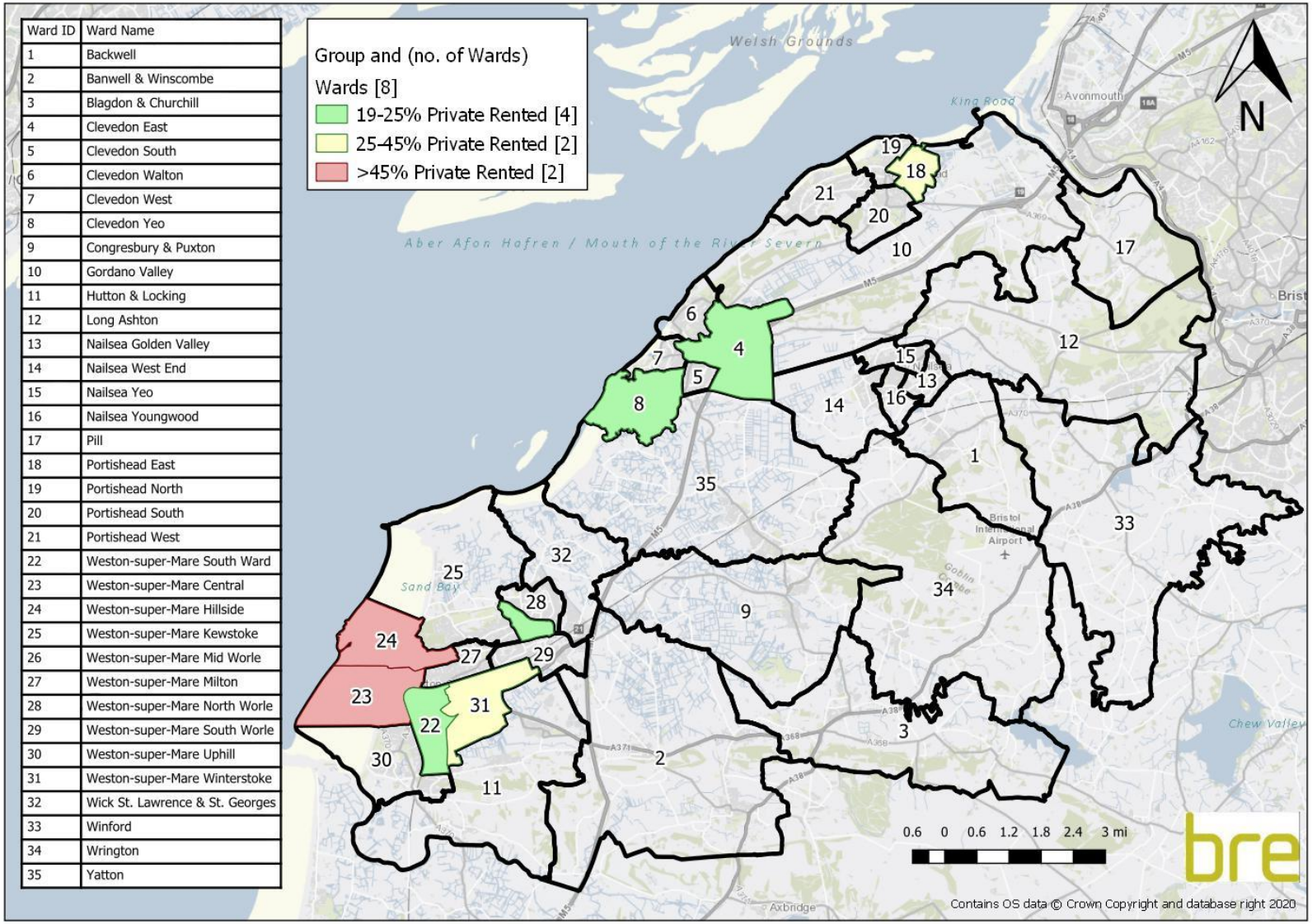
Table 20: Count and percentage of estimated privately rented dwellings by ward in North Somerset (sorted by descending private rented proportion)

Ward	Dwellings - all stock	Dwellings - private rented	
		Count	%
Weston-super-Mare Central	5,388	3,146	58.4%
Weston-super-Mare Hillside	5,114	2,319	45.3%
Weston-super-Mare Winterstoke	3,644	1,298	35.6%
Portishead East	3,748	1,029	27.5%
Weston-super-Mare South Worle	3,812	875	23.0%
Clevedon East	2,159	447	20.7%
Weston-super-Mare South Ward	4,250	829	19.5%
Clevedon Yeo	1,907	368	19.3%
Clevedon South	1,982	358	18.1%
Weston-super-Mare Uphill	3,999	719	18.0%
Weston-super-Mare Milton	4,289	773	18.0%
Clevedon Walton	2,144	385	18.0%
Clevedon West	2,081	354	17.0%
Portishead North	2,400	399	16.6%
Nailsea Yeo	2,140	352	16.4%
Weston-super-Mare Mid Worle	2,083	339	16.3%
Hutton and Locking	3,532	574	16.3%
Blagdon and Churchill	1,774	282	15.9%
Wrington	1,895	291	15.4%
Yatton	3,751	530	14.1%
Weston-super-Mare North Worle	3,502	493	14.1%
Winford	1,853	247	13.3%
Congresbury and Puxton	1,730	217	12.5%
Weston-super-Mare Kewstoke	3,990	217	11.8%
Nailsea Youngwood	1,579	180	11.4%
Banwell and Winscombe	3,508	392	11.2%
Wick St Lawrence and St Georges	2,045	212	10.4%

Table 20 cont: Count and percentage of estimated privately rented dwellings by ward in North Somerset (sorted by descending private rented proportion)

Ward	Dwellings - all stock	Dwellings - private rented	
		Count	%
Pill	1,998	206	10.3%
Long Ashton	3,844	387	10.1%
Nailsea West End	1,772	174	9.8%
Portishead South	2,025	173	8.5%
Portishead West	4,012	313	7.8%
Gordano Valley	1,791	117	6.5%
Backwell	1,940	124	6.4%
Nailsea Golden Valley	1,725	108	6.3%

Map 24: Location of the three analysis groups with proportions of private rented stock which are greater than the national average (19%)



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

5.2.3 Information on property condition

Information on property condition is based on the presence of a category 1 HHSRS hazard (one or more of the 29 covered by the HHSRS[72]), a category 1 hazard for excess cold and a category 1 hazard for falls (these are fall hazards where the vulnerable person is over 60 and includes falls associated with baths, falling on the level and falling on stairs). Property condition also includes proportions of dwellings in disrepair. This is based on the former Decent Homes Standard and assesses the age of the dwelling and the condition of a range of building components – e.g., walls, roofs, electrics and heating systems.

Maps at COA level are provided for the private rented sector for the following housing standards variables in **Map 25** to **Map 28** below:

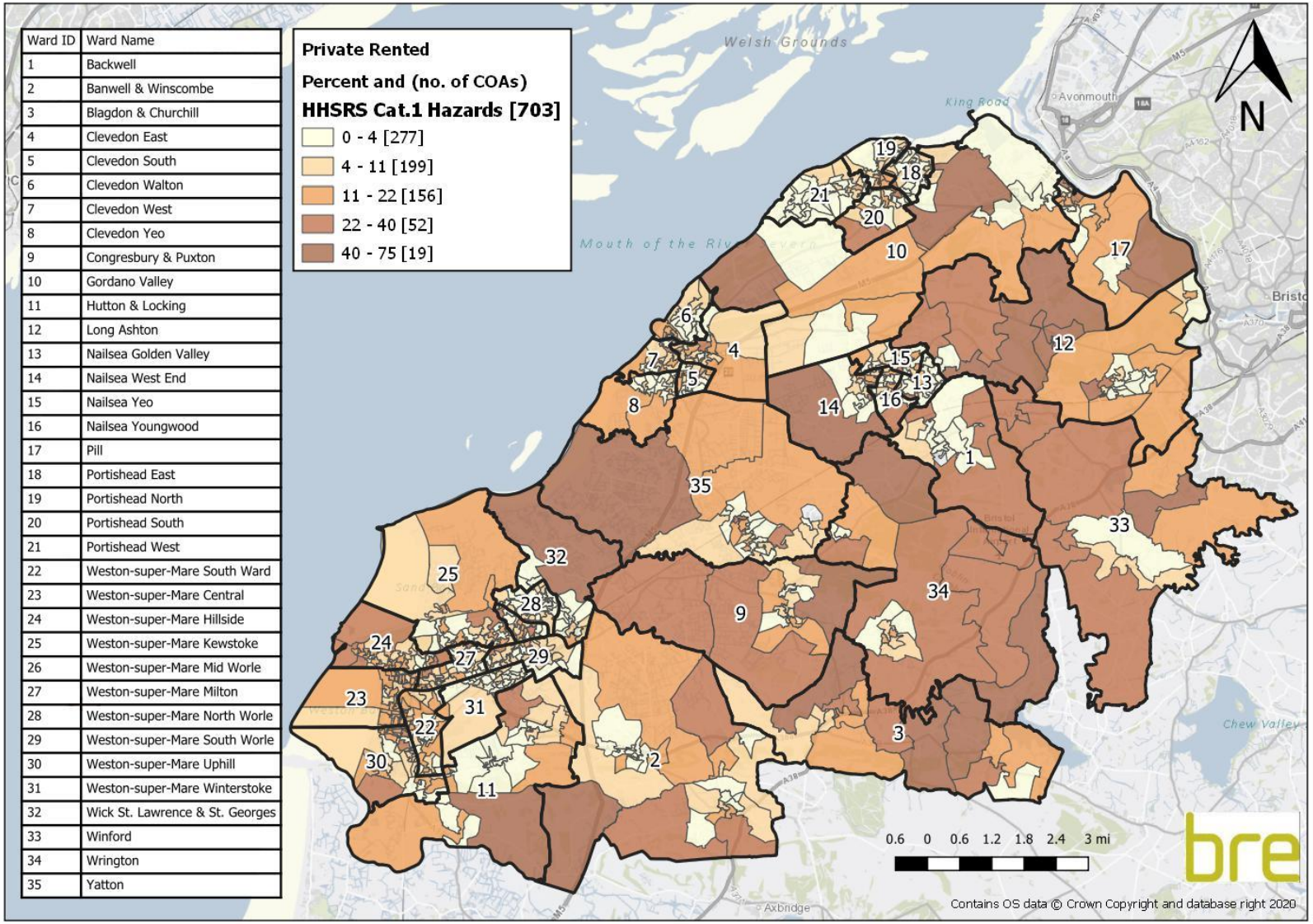
- **HHSRS**
  - The presence of a category 1 HHSRS hazard
  - The presence of a category 1 hazard for excess cold
  - The presence of a category 1 hazard for falls

- **Levels of disrepair**

Table 21 provides a summary of property condition at ward level and is split into the groups described above based on the proportion of private rented stock in each ward. This table shows that the highest levels of all hazards (24%) is in Congresbury and Puxton, the highest levels of excess cold (20%) is in Backwell, the highest levels of fall hazards (14%) is in Weston-super-Mare Kewstoke and the highest levels of disrepair (17%) is in Clevedon West ward.

[72] For a full list of hazards see - Housing Health and Safety Rating System Operating Guidance, ODPM, 2006 - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/15810/142631.pdf

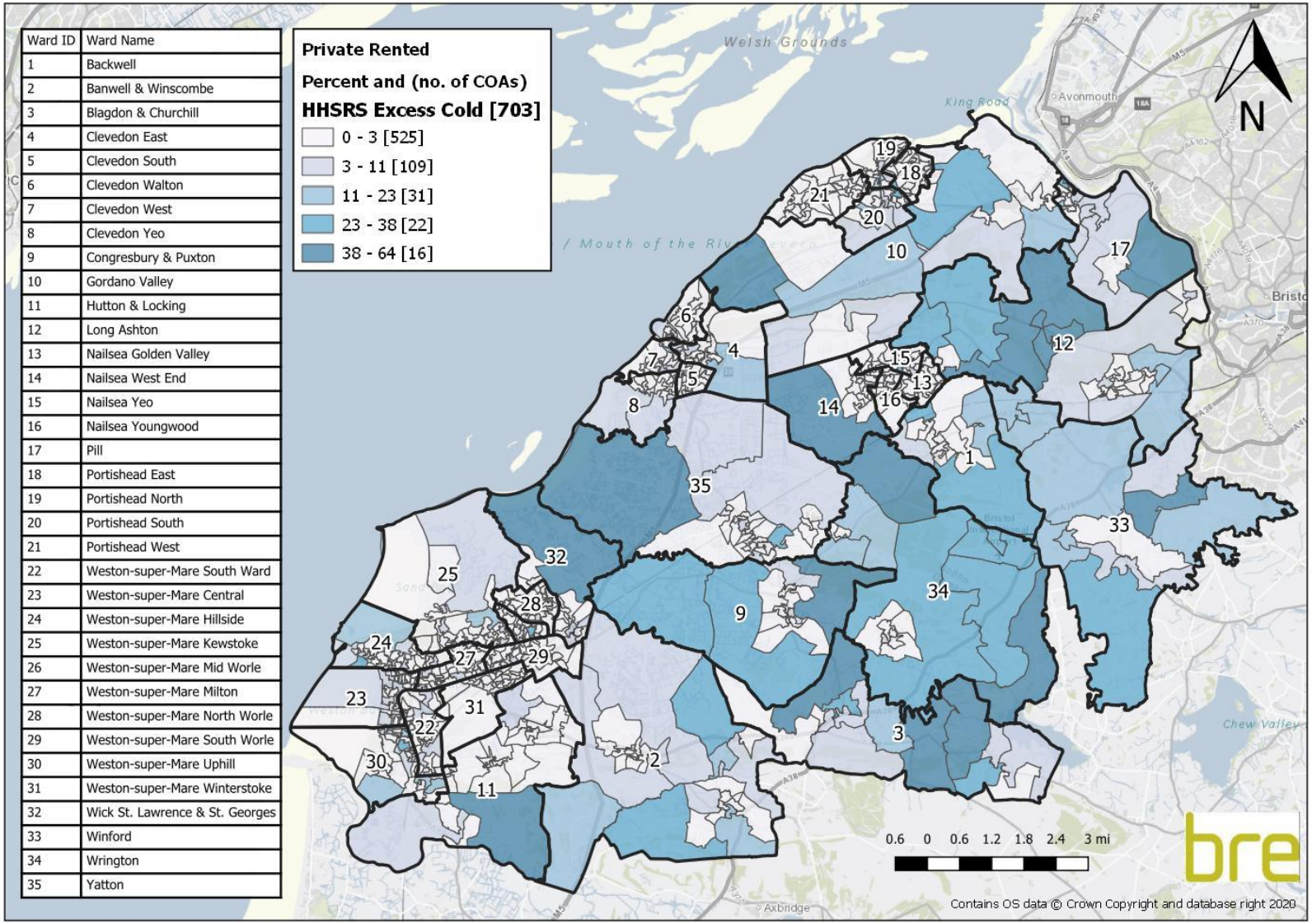
Map 25: Percentage of private rented sector dwellings in North Somerset with the presence of a HHSRS category 1 hazard



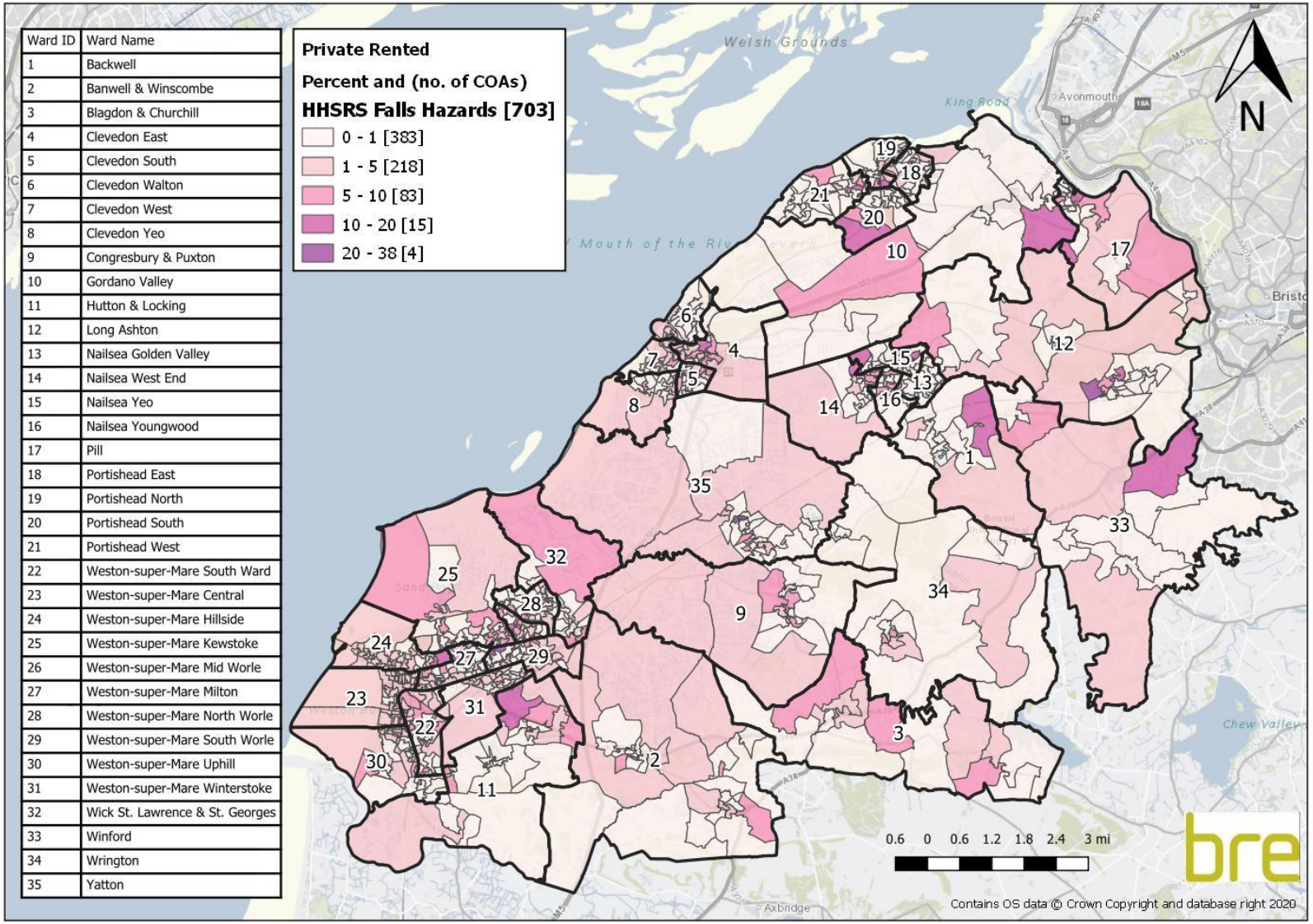
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 26: Percentage of private rented sector dwellings in North Somerset with the presence of a HHSRS category 1 hazard for excess cold

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton



Map 27: Percentage of private rented sector dwellings in North Somerset with the presence of a HHSRS category 1 hazard for falls



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 28: Percentage of private rented sector dwellings in North Somerset in disrepair

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

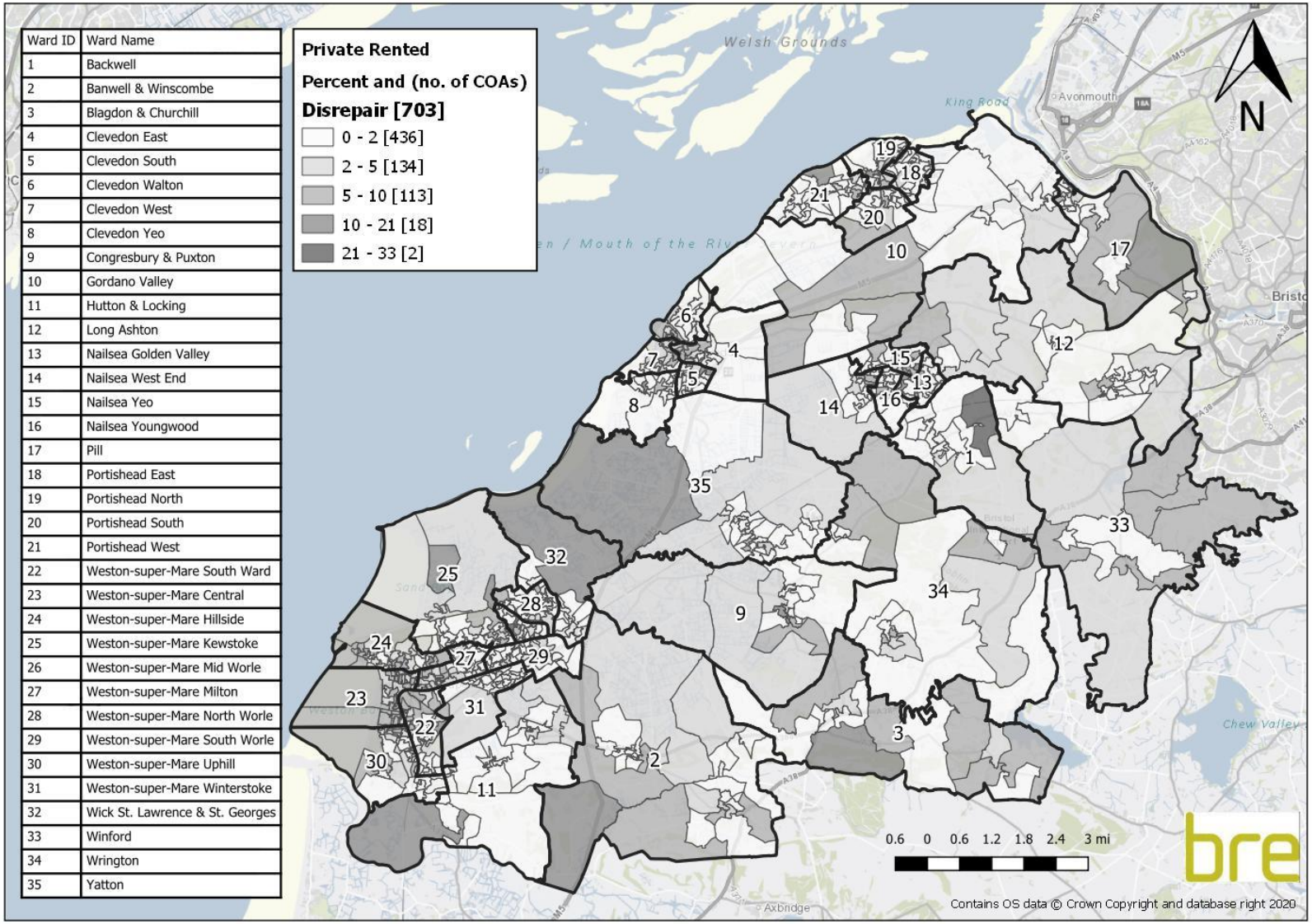


Table 21: Count and percentage of dwellings failing each of the HHSRS indicators and disrepair by ward, split into the 3 analysis groups, *private rented stock*

Ward	No. of dwellings - private rented stock	HHSRS category 1 hazards			Disrepair
		All hazards	Excess cold	Fall hazards	
Weston-super-Mare Central	3,146 (58.4%)	448 (14%)	94 (3%)	106 (3%)	184 (6%)
Weston-super-Mare Hillside	2,319 (45.3%)	342 (15%)	93 (4%)	69 (3%)	130 (6%)
Weston-super-Mare Winterstoke	1,298 (35.6%)	73 (6%)	2 (0%)	36 (3%)	20 (2%)
Portishead East	1,029 (27.5%)	56 (5%)	7 (1%)	24 (2%)	16 (2%)
Weston-super-Mare South Worle	875 (23.0%)	49 (6%)	6 (1%)	23 (3%)	12 (1%)
Clevedon East	447 (20.7%)	53 (12%)	14 (3%)	16 (4%)	17 (4%)
Weston-super-Mare South Ward	829 (19.5%)	73 (9%)	14 (2%)	25 (3%)	29 (3%)
Clevedon Yeo	368 (19.3%)	20 (5%)	4 (1%)	9 (2%)	3 (1%)
Weston-super-Mare Uphill	719 (18.0%)	90 (13%)	23 (3%)	24 (3%)	33 (5%)
Clevedon South	358 (18.1%)	18 (5%)	2 (1%)	7 (2%)	4 (1%)
Weston-super-Mare Milton	773 (18.0%)	86 (11%)	14 (2%)	25 (3%)	34 (4%)
Clevedon Walton	385 (18.0%)	45 (12%)	9 (2%)	12 (3%)	19 (5%)
Clevedon West	354 (17.0%)	44 (12%)	15 (4%)	11 (3%)	16 (5%)
Portishead North	399 (16.6%)	31 (8%)	11 (3%)	9 (2%)	8 (2%)
Nailsea Yeo	352 (16.4%)	43 (12%)	24 (7%)	9 (3%)	9 (3%)
Weston-super-Mare Mid Worle	339 (16.3%)	37 (11%)	18 (5%)	8 (2%)	7 (2%)
Hutton and Locking	576 (16.3%)	50 (9%)	10 (2%)	23 (4%)	18 (3%)
Blagdon and Churchill	282 (15.9%)	71 (25%)	56 (20%)	9 (3%)	11 (4%)
Wrington	291 (15.4%)	52 (18%)	37 (13%)	9 (3%)	9 (3%)
Yatton	530 (14.1%)	62 (12%)	26 (5%)	18 (3%)	15 (3%)
Weston-super-Mare North Worle	493 (14.1%)	24 (5%)	2 (0%)	12 (2%)	5 (1%)
Winford	247 (13.3%)	60 (24%)	44 (18%)	7 (3%)	9 (4%)
Weston-super-Mare Kewstoke	472 (11.8%)	45 (10%)	10 (2%)	17 (4%)	15 (3%)
Congresbury and Puxton	217 (12.5%)	31 (14%)	19 (9%)	7 (3%)	7 (3%)
Nailsea Youngwood	180 (11.4%)	14 (8%)	1 (1%)	7 (4%)	4 (2%)

Table 21 cont: Count and percentage of dwellings failing each of the HHSRS indicators and disrepair by ward, split into the 3 analysis groups, *private rented stock*

Ward	No. of dwellings - private rented stock	HHSRS category 1 hazards			Disrepair
		All hazards	Excess cold	Fall hazards	
Banwell and Winscombe	392 (11.2%)	53 (14%)	28 (7%)	11 (3%)	14 (4%)
Wick St Lawrence and St Georges	212 (10.4%)	13 (6%)	8 (4%)	4 (2%)	2 (1%)
Pill	206 (10.3%)	32 (16%)	18 (9%)	7 (3%)	7 (3%)
Long Ashton	387 (10.1%)	63 (16%)	41 (11%)	12 (3%)	12 (3%)
Nailsea West End	174 (9.8%)	20 (11%)	11 (6%)	5 (3%)	4 (2%)
Portishead South	173 (8.5%)	13 (8%)	5 (3%)	5 (3%)	4 (2%)
Portishead West	313 (7.8%)	13 (4%)	0 (0%)	7 (2%)	7 (2%)
Gordano Valley	117 (6.5%)	22 (19%)	16 (14%)	3 (3%)	4 (3%)
Backwell	124 (6.4%)	24 (19%)	19 (15%)	4 (3%)	4 (3%)
Nailsea Golden Valley	108 (6.3%)	5 (5%)	0 (0%)	2 (2%)	1 (1%)

5.2.4 Analysis of property conditions in the private rented sector for the analysis groups

This section analyses the proportion of private rented dwellings:

- With a category 1 Housing Health and Safety Rating System (HHSRS) hazard – this is the presence of one or more of the 29 hazards covered by the HHSRS (see **Appendix A** for more information)
- With a category 1 hazard for excess cold
- With a category 1 HHSRS fall hazard – these include those fall hazards where the vulnerable person is 60 or over, i.e. the presence of falls associated with baths, falling on the level and falling on stairs
- In disrepair – this is based on the former Decent Homes Standard criteria for disrepair which states that a dwelling fails this criterion if it is not found to be in a reasonable state of repair. This is assessed by looking at the age of the dwellings and the condition of a range of building components (including walls, roofs, windows, doors, electrics and heating system)

Figure 19 to **Figure 21** compare these property condition indicators across the three analysis groups. For wards with over 36% of the stock being private rented, Weston-super-Mare Hillside has the highest level of category 1 hazards (14.8%) and excess cold (4%), whereas Weston-super-Mare Central has the highest levels of falls hazard (3.4%) and disrepair (5.9%). Compared to the figures for North Somerset's overall private rented stock, these wards generally tend to have similar or higher levels of each of the property condition indicators.

Of the wards where 25-36% of the stock is estimated to be private rented, Portishead East has the highest levels of excess cold (0.6%), whereas Weston-super-Mare Winterstoke has the highest levels of hazards

(5.6%), falls hazard (2.8%) and disrepair (1.5%). Compared to North Somerset's overall private rented stock, both wards have much lower levels of category 1 hazards, excess cold, falls hazards and disrepair.

For the wards with 19-24% private rented stock, Clevedon east has the highest levels of category 1 hazards (12.3%), falls hazards (3.3%) and disrepair (4.5%), whereas Clevedon Yeo has the highest levels of excess cold (3.8%). With the exception of Clevedon East all wards in this analysis group have much lower levels of category 1 hazards than the North Somerset average, and slightly lower levels of falls hazards and disrepair. Clevedon Yeo has higher levels of excess cold than the North Somerset average, unlike the other three wards in this analysis group which are all lower than average.

Figure 19: Comparison of percentage of private rented dwellings failing the Housing Standards Variables for wards with PRS over 36%

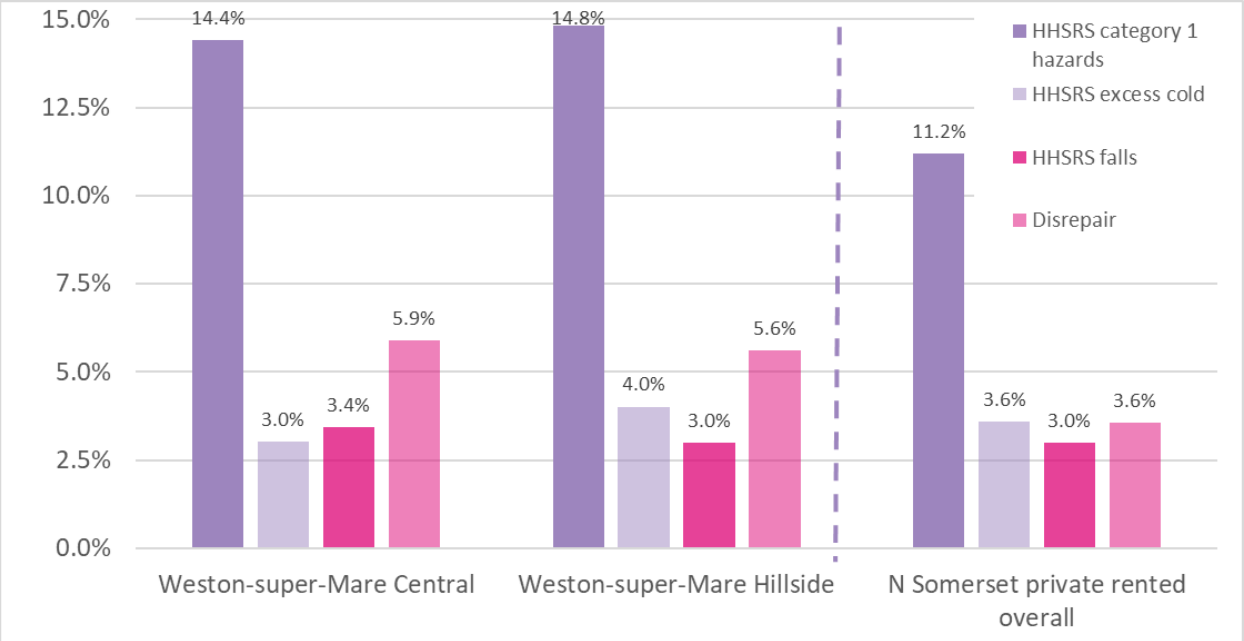


Figure 20: Comparison of percentage of private rented dwellings failing the Housing Standards Variables for wards with PRS 25-36%

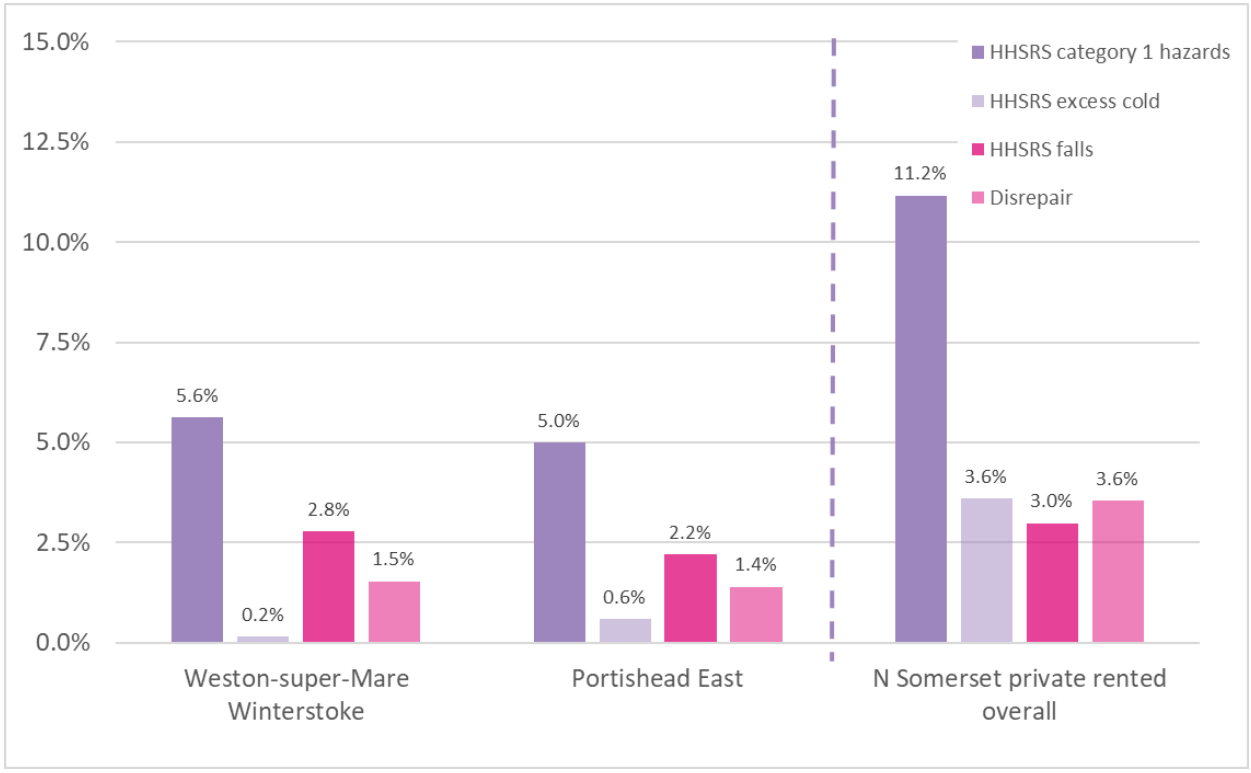
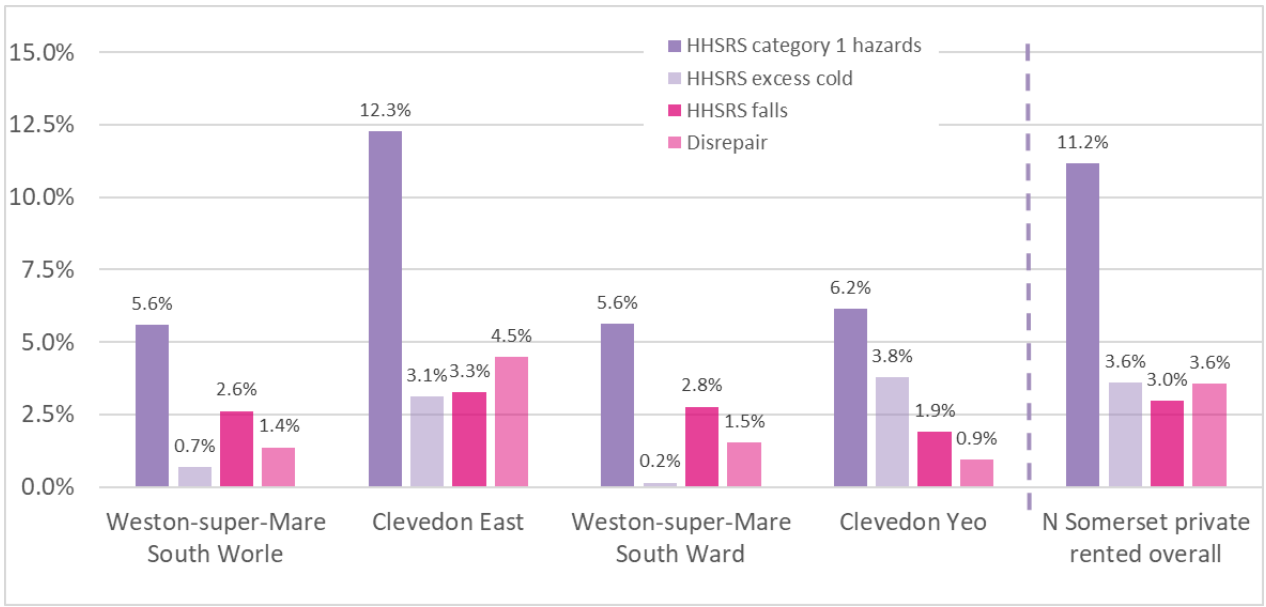


Figure 21: Comparison of percentage of private rented dwellings failing the Housing Standards Variables for wards with PRS 19-24%



5.2.5 Information on crime - Anti-Social Behaviour (ASB)

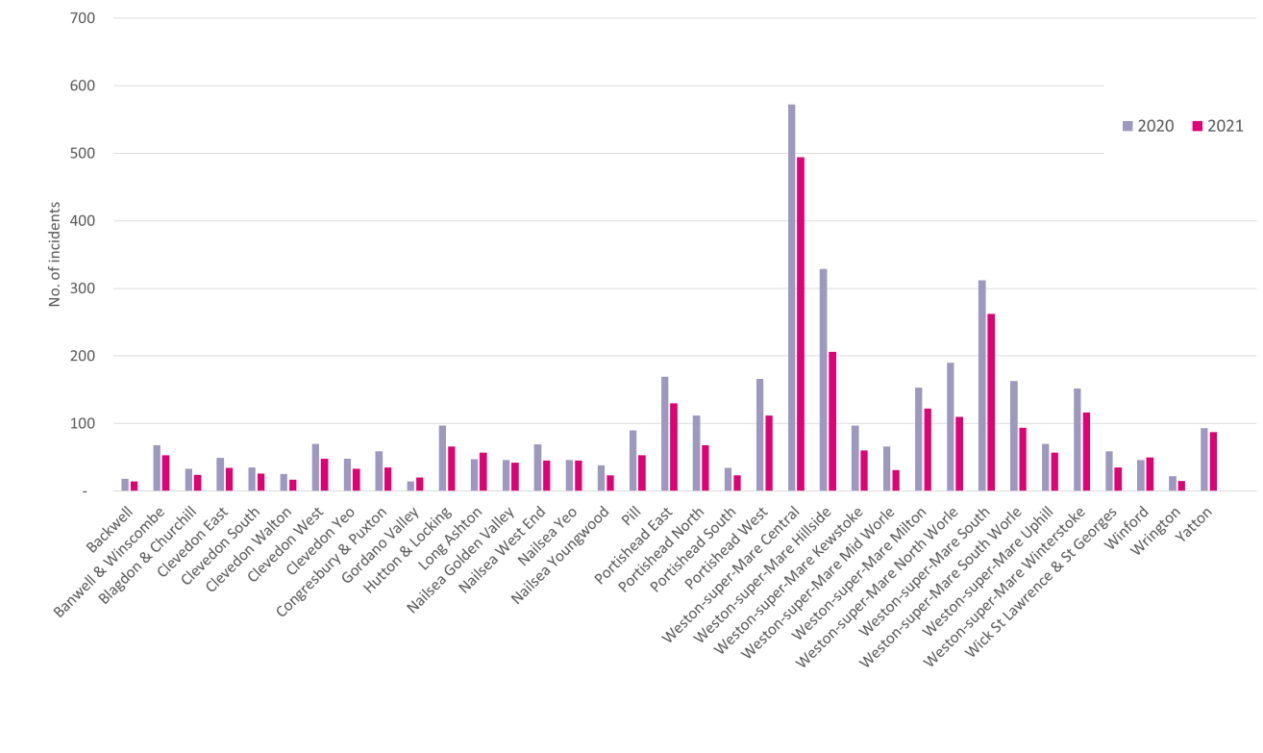
The term anti-social behaviour (ASB) covers a range of activities which negatively affect people on a daily basis[73]. ASB is defined as "behaviours by a person which causes or is likely to cause harassment, alarm or distress to one or more persons not of the same household as the person" and is classified under 3 headings:

- Personal – ASB is perceived to be targeted at an individual or group rather than the community at large
- Nuisance – ASB is causing trouble, annoyance or suffering to the community at large rather than an individual or group
- Environmental – the incident is not aimed at an individual or group but targets the wider environment e.g. public spaces/buildings

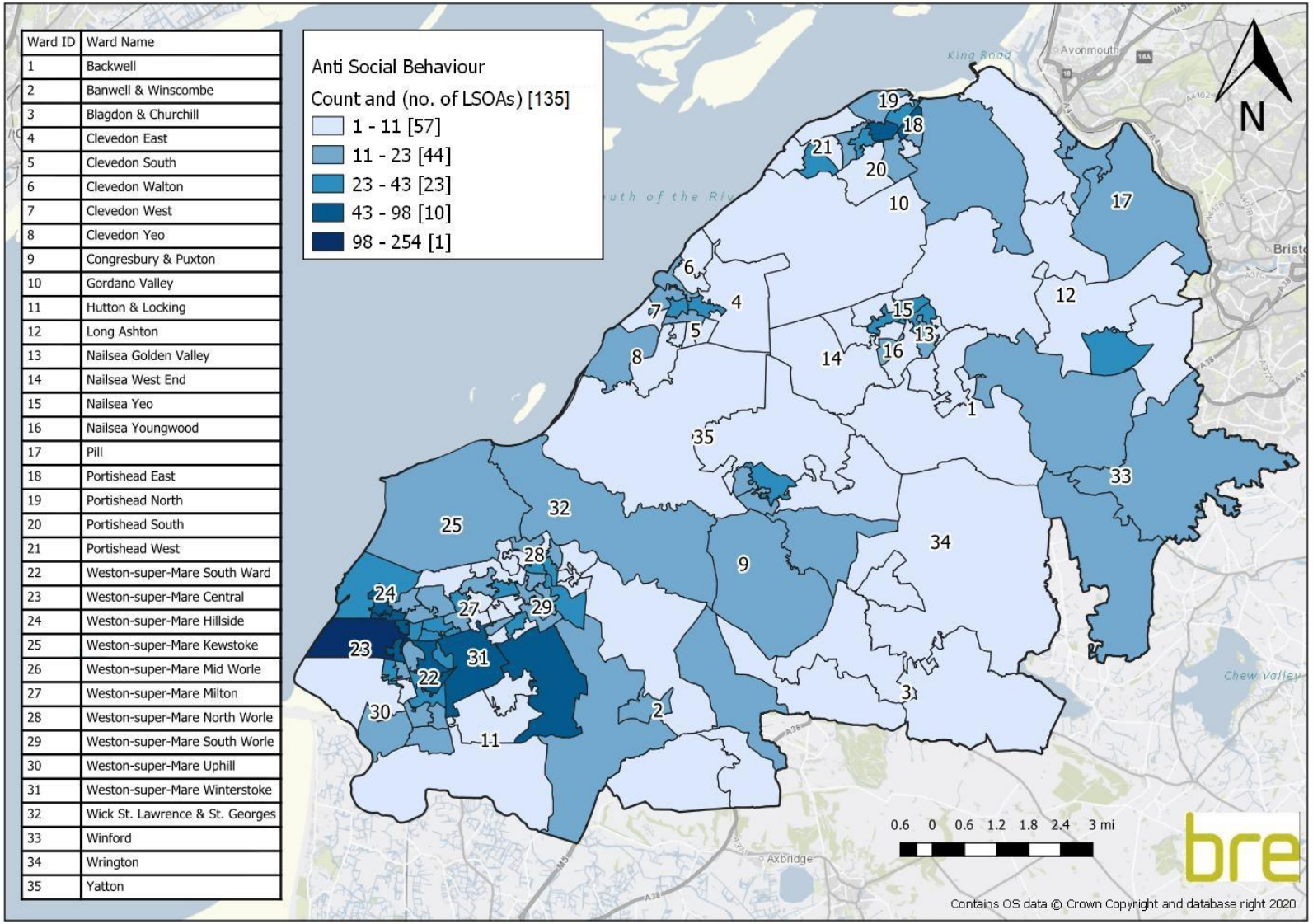
Information was sourced from *data.police.uk* for 2020 and 2021, and this is summarised in **Figure 22** which shows incidents of ASB by ward for both years. For both years there are clearly three wards with much higher numbers of reported ASB incidents than other parts of North Somerset. These are Weston-super-Mare Central (572 incidents in 2020 and 494 in 2021), Weston-super-Mare Hillside (329 incidents in 2020 and 206 in 2021) and Weston-super-Mare South (312 incidents in 2020 and 262 in 2021). Generally, in 2021 incidents of ASB in all wards appear to have reduced. **Map 29** shows the figures at LSOA level for 2020, indicating higher levels of ASB incidents to the south and south west of the borough.

[73] Antisocial Behaviour Act 2003 & Police Reform and Social Responsibility Act 2011

Figure 22: Incidences of ASB by ward, 2020 and 2021 *(Source: data.police.uk)*



Map 29: Distribution of ASB by LSOA - 2021 figures *(Source: data.police.uk)*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

5.2.6 Information on deprivation

The 2019 Indices of Multiple Deprivation (IMD)[74] take account of seven "domains" to produce an overall relative measure of deprivation. The domains and their weighting are as follows:

- Income deprivation (22.5%)
- Employment deprivation (22.5%)
- Education, skills and training deprivation (13.5%)
- Health deprivation and disability (13.5%)
- Crime (9.3%)
- Barriers to housing and services (9.3%)
- Living environment deprivation (9.3%)

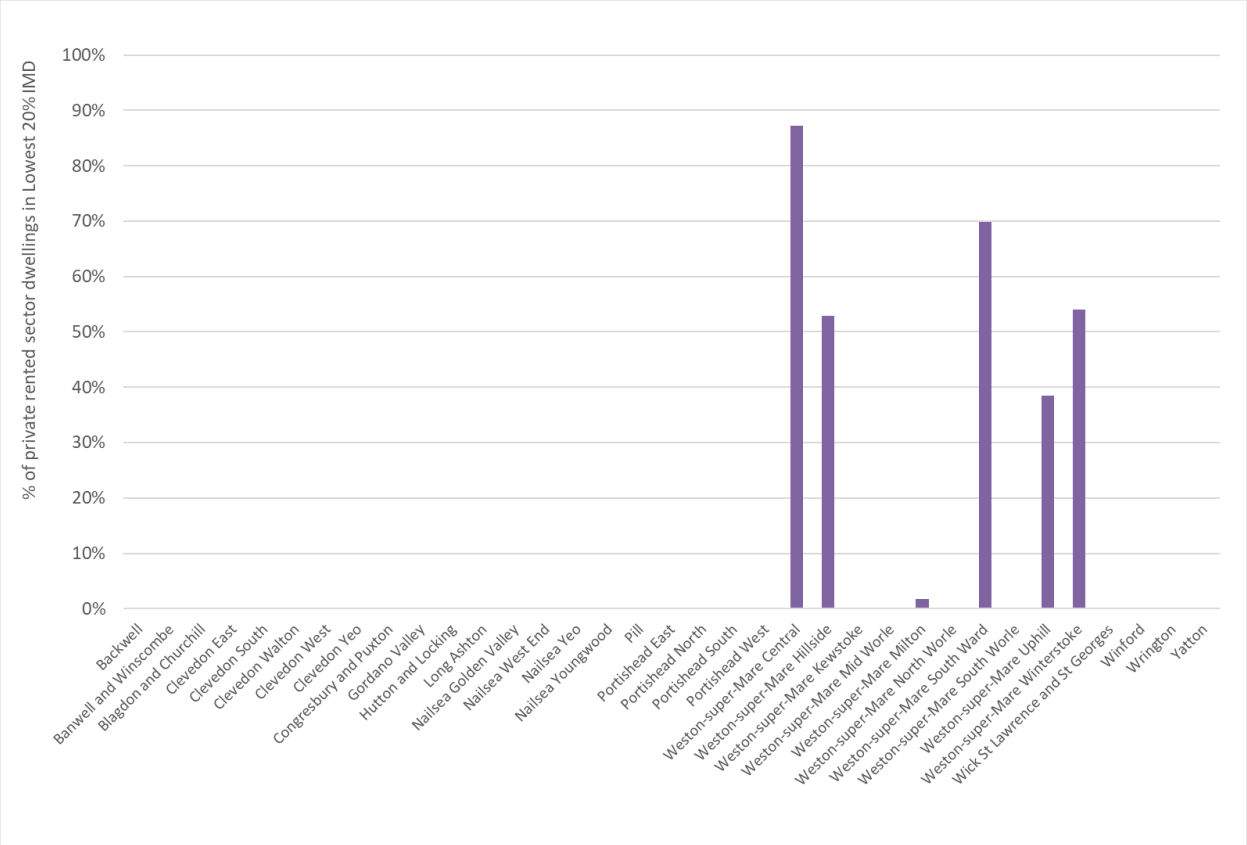
The indices are produced at Lower Super Output Area (LSOA) and provide statistics on relative deprivation in England by ranking every LSOA from 1 (most deprived) to 32,844 (least deprived). To determine whether an area is deprived or not for the purposes of this study, the 20% most deprived LSOAs have been used.

Map 30 shows the distribution of deprivation across North Somerset at LSOA level with the wards shown over the top. The darker colours indicate the most deprived areas, for example, looking at the key there are 14 LSOAs which fall into the 20% most deprived areas in England. Overall, in North Somerset 28% of privately rented properties are in the 20% most deprived areas.

Figure 23 shows the results of this analysis of IMD data at ward level. In Weston-super-Mare Central 87% of private sector dwellings are in the 20% of the most deprived LSOAs in England. For Weston-super-Mare South Ward, it is 70%, in Weston-super-Mare Winterstoke it is 54%, in Weston-super-Mare Hillside the figure is 53%, in Weston-super-Mare Uphill it is 38%, and in Weston-super-Mare Milton it is 2%. At the other end of the scale, 29 of the 35 wards in North Somerset have no dwellings in the 20% most deprived LSOAs. Looking at the two wards with the highest levels of deprivation, Weston-super-Mare Central has 57.9% private rented stock and for Weston-super-Mare South Ward this figure is 19.5%.

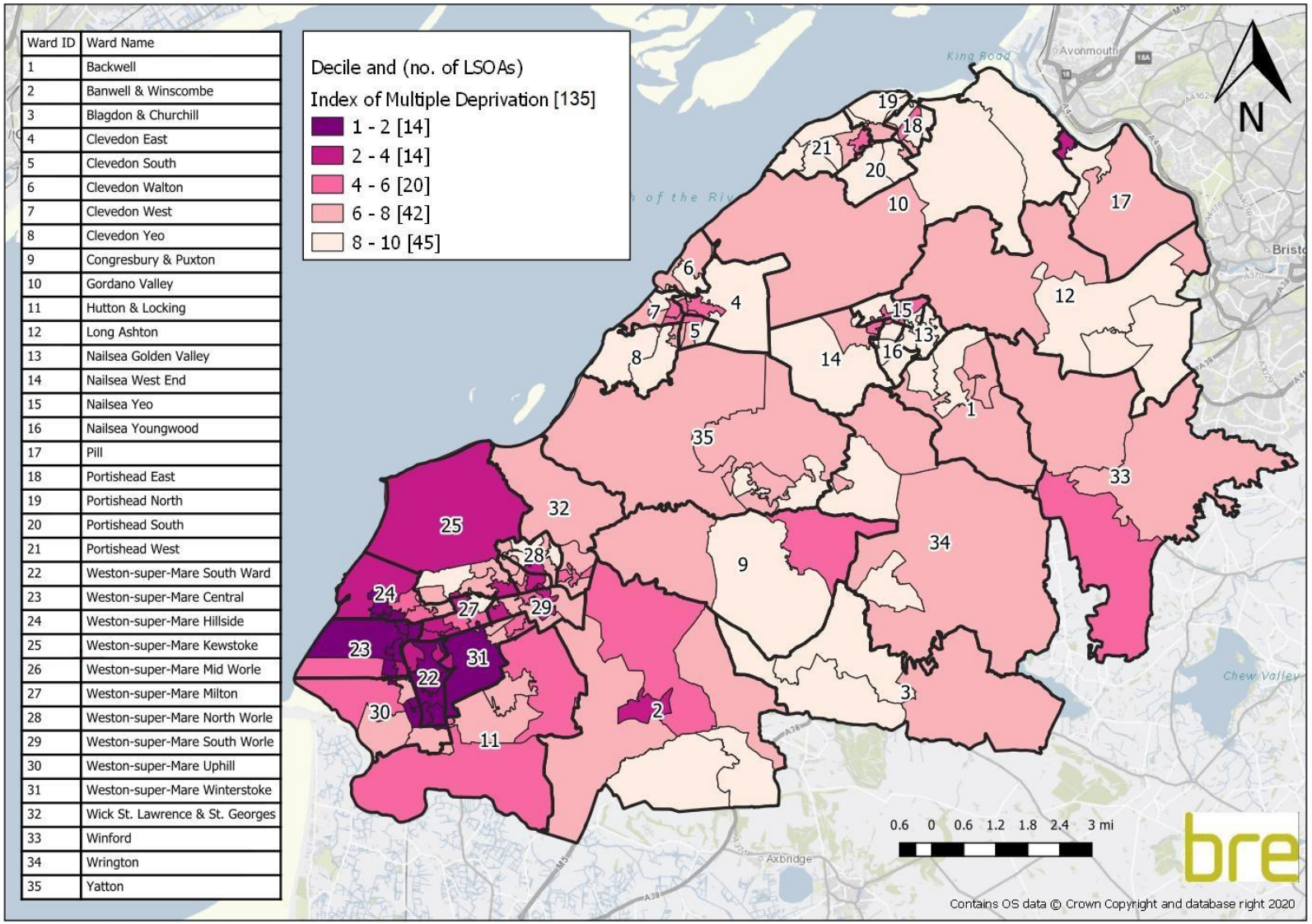
[74] https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019

Figure 23: Percentage of privately rented dwellings in each ward in North Somerset which are in the 20% most deprived areas in England (IMD 2019)



N.B. where no IMD exists on the graph for an area, this is due to there being no properties within the 20% most deprived LSOAs for England

Map 30: Distribution of deprivation in North Somerset (1 - 2 = the 10% and 20% deciles (i.e. the most deprived), 3 = the 30% decile, etc.) (source: DLUHC, Indices of Deprivation 2019)

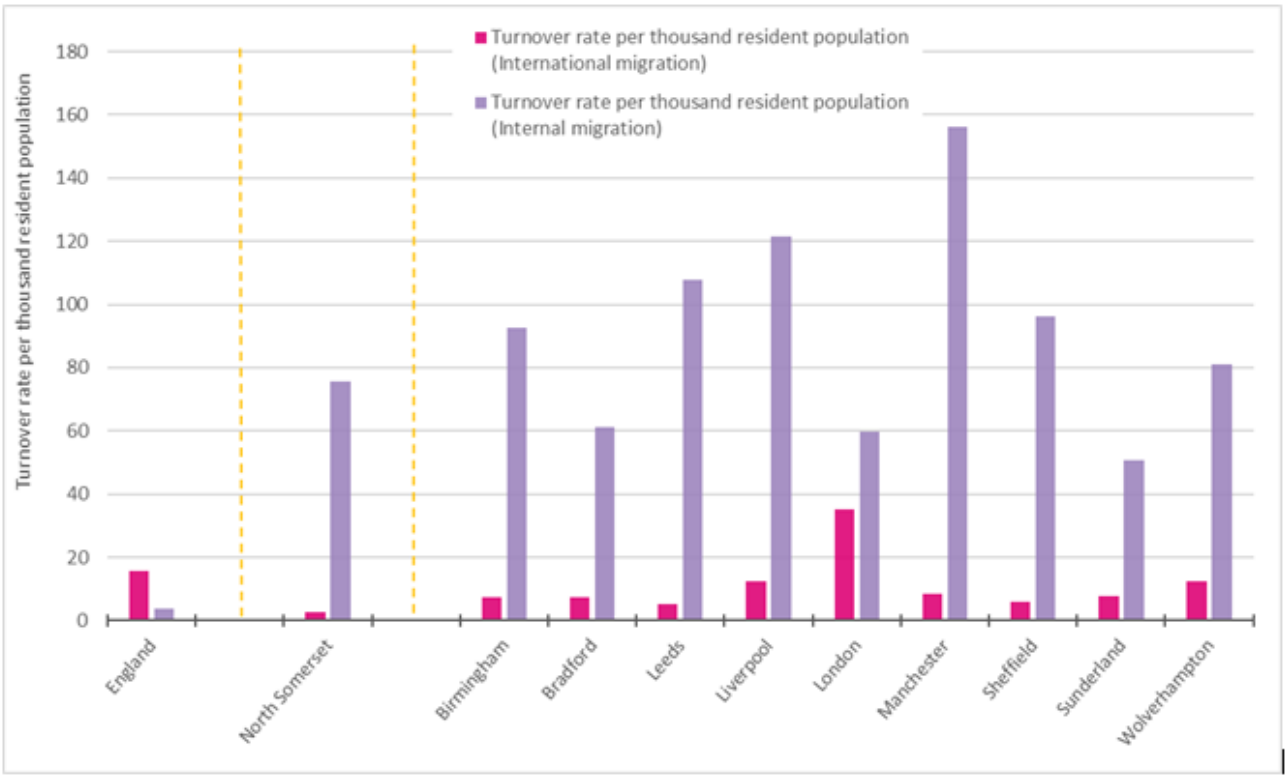


Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

5.2.7 Information on migration

Data on migration is only available at the local authority level[75], therefore migration figures for North Somerset have been compared to the remaining 10 largest cities in England and England overall for the latest year available (mid-2019 to mid-2020) – see **Figure 24**. The data uses the long-term[76] international and internal (within UK) migration component of population change data to calculate the rates for turnover and is therefore split into international migration and internal migration. The data shows that for international migration the greatest turnover rate is in London, with North Somerset having the lowest turnover of the analysed cities. Looking at internal migration, North Somerset has the third highest levels, with only Sunderland and Leeds having a greater level of internal migration.

Figure 24: Comparison of migration figures (international and internal) for North Somerset, the 10 largest cities in England, and England overall - mid-2019 to mid-2020 (Source: ONS75)



75 https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/migrationwithintheuk/datasets/localareamigrationindicatorsunitedkingdom

76 A person who moves from their country of usual residence for a period of at least 12 months - https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/methodologies/migrationstatisticsfirsttimeuserguideglossaryandlistofproducts

5.2.8 In-depth analysis on specific areas

Areas with proportions of private rented stock above the national average (19%) were examined more closely. **Table 22** shows the numbers and percentages of dwellings for each of the HHSRS indicators, dwellings in disrepair and the most deprived 20% of LSOAs in England (IMD 2019) by ward. The table is divided into the previously identified three analysis groups (all above the national average of 19% private rented stock), and also provides the figures for the remaining wards for completion of information.

Looking at the analysis group with over 36% private rented sector stock, Weston-super-Mare Central ward stands out as having a high proportion of private rented sector dwellings (57.9%). Both Weston-super-Mare Central and Weston-super-Mare Hillside have relatively high proportions of all hazards (at 14% and 15% respectively). They both have similar levels of excess cold, with Weston-super-Mare Central at 3% and Weston-super-Mare Hillside at 4%, and both have identical proportions of falls hazards (3%) and disrepair (6%). Weston-super-Mare Central has very high proportions of properties in the 20% most deprived areas (87%), and whilst Weston-super-Mare Hillside's figure for this is not as high it is still very high at 53%.

For the analysis group with 24 – 36% private rented stock, Weston-super-Mare Winterstoke and Portishead have quite similar levels of most variables including all hazards (6% compared to 5%), excess cold (0% compared to 1%), falls hazards (3% compared to 2%) and disrepair (2% compared to 1%). However, they differ greatly in relation to the proportions of properties in the 20% most deprived areas, where 54% of Weston-super-Mare Hillside's homes are within this category, but none of the homes within Portishead East are in this category.

Looking at the analysis group with 19 – 24% private rented stock, all four wards perform reasonably similarly for the category 1 hazards variables and disrepair. There is, however, a difference in the proportions of properties in the 20% most deprived areas, Weston-super-Mare South Worle, Clevedon East and Clevedon Yeo all have 0% in this category, whereas Weston-super-Mare South Ward has 70% of properties in this category.

To provide a more detailed picture the following maps provide information at LSOA level where only LSOAs where the proportion of private rented dwellings is greater than the national average (19%) are shown. **Map 31** shows the levels of HHSRS category 1 hazards in these specific areas. The rest of the map is blank, showing it is not an LSOA with >19% private rented stock. This provides more focus on smaller geographical areas where private rented stock is high, and the proportion of hazards is also high. For example, the map shows that Weston-super-Mare Central ward has private rented stock over 19% as well as 11% – 15% of these properties also having a category 1 hazard. This LSOA, is also highlighted in green and therefore is also in the 20% most deprived LSOAs.

Map 31 to **Map 34** show the distributions for excess cold, fall hazards and disrepair across North Somerset in LSOAs where the proportion of private rented dwellings is greater than the national average. For excess cold most of the areas which stand out are similar to those for category 1 hazards. The maps show Weston-super-Mare Central, Weston-super-Mare Hillside and Weston-super-Mare Kewstoke to consistently be the worst performing across these maps and therefore areas to target for improvements.

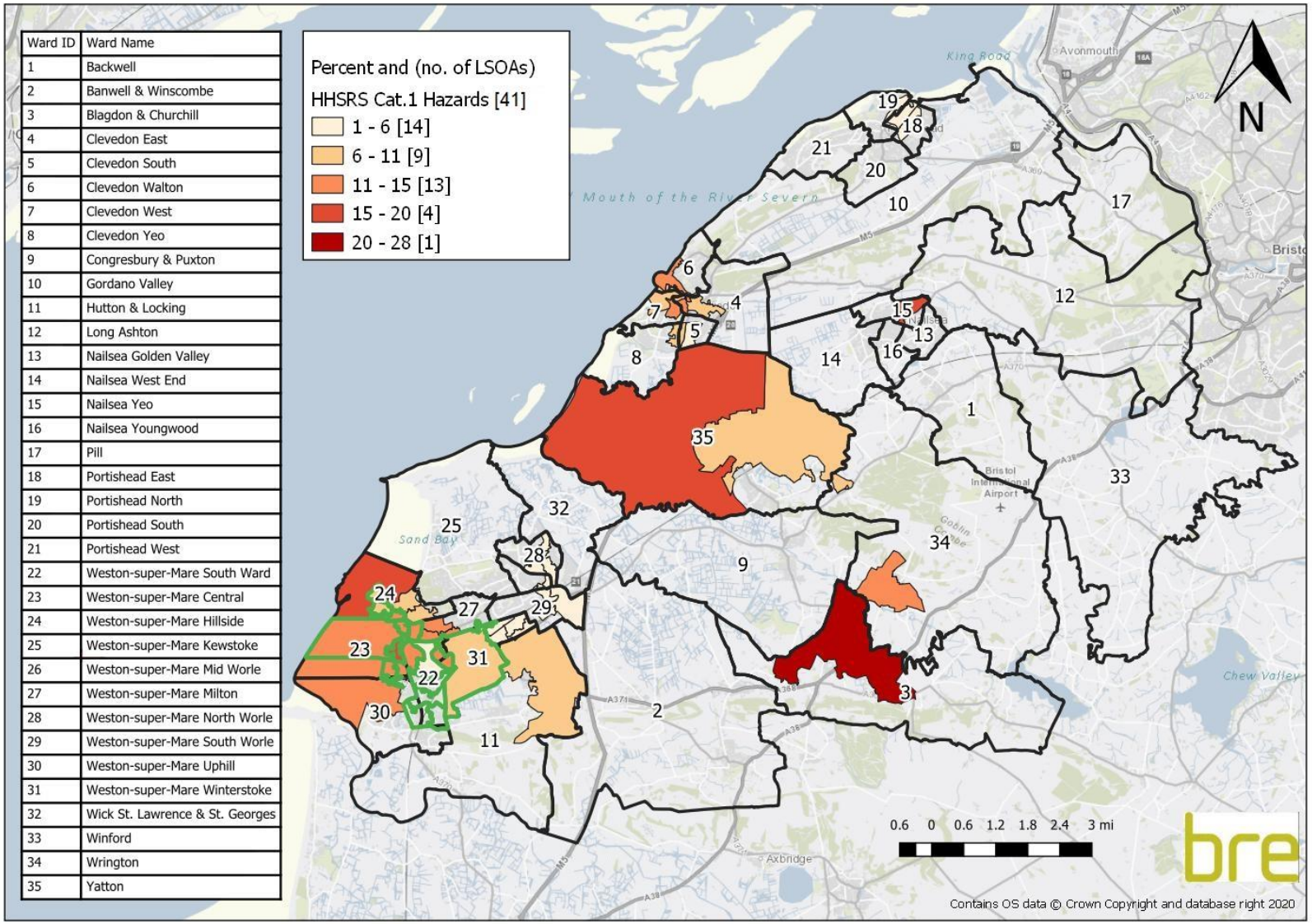
Table 22: Number and percentage of dwellings for each of the HHSRS indicators, disrepair and the most deprived 20% of LSOAs in England (IMD 2019) by ward – private rented stock split into the three analysis groups with over 19% private rented stock (remaining wards included for completeness)

Ward	No. of dwellings - private rented stock	HHSRS category 1 hazards			Disrepair	Index of Multiple Deprivation (20%)
		All hazards	Excess cold	Fall hazards		
Weston-super-Mare Central	3,146 (58.4%)	448 (14%)	94 (3%)	106 (3%)	184 (6%)	2,721 (86%)
Weston-super-Mare Hillside	2,319 (45.3%)	342 (15%)	93 (4%)	69 (3%)	130 (6%)	1,226 (53%)
Weston-super-Mare Winterstoke	1,298 (35.6%)	73 (6%)	2 (0%)	36 (3%)	20 (2%)	701 (54%)
Portishead East	1,029 (27.5%)	56 (5%)	7 (1%)	24 (2%)	16 (2%)	0 (0%)
Weston-super-Mare South Worle	875 (23.0%)	49 (6%)	6 (1%)	23 (3%)	12 (1%)	0 (0%)
Clevedon East	447 (20.7%)	53 (12%)	14 (3%)	16 (4%)	17 (4%)	0 (0%)
Weston-super-Mare South Ward	829 (19.5%)	73 (9%)	14 (2%)	25 (3%)	29 (3%)	579 (70%)
Clevedon Yeo	368 (19.3%)	20 (5%)	4 (1%)	9 (2%)	3 (1%)	0 (0%)
Weston-super-Mare Uphill	719 (18.0%)	90 (13%)	23 (3%)	24 (3%)	33 (5%)	282 (39%)
Clevedon South	358 (18.1%)	18 (5%)	2 (1%)	7 (2%)	4 (1%)	0 (0%)
Weston-super-Mare Milton	773 (18.0%)	86 (11%)	14 (2%)	25 (3%)	34 (4%)	13 (2%)
Clevedon Walton	385 (18.0%)	45 (12%)	9 (2%)	12 (3%)	19 (5%)	0 (0%)
Clevedon West	354 (17.0%)	44 (12%)	15 (4%)	11 (3%)	16 (5%)	0 (0%)
Portishead North	399 (16.6%)	31 (8%)	11 (3%)	9 (2%)	8 (2%)	0 (0%)
Nailsea Yeo	352 (16.4%)	43 (12%)	24 (7%)	9 (3%)	9 (3%)	0 (0%)
Weston-super-Mare Mid Worle	339 (16.3%)	37 (11%)	18 (5%)	8 (2%)	7 (2%)	0 (0%)
Hutton and Locking	576 (16.3%)	50 (9%)	10 (2%)	23 (4%)	18 (3%)	0 (0%)
Blagdon and Churchill	282 (15.9%)	71 (25%)	56 (20%)	9 (3%)	11 (4%)	0 (0%)
Wrington	291 (15.4%)	52 (18%)	37 (13%)	9 (3%)	9 (3%)	0 (0%)
Yatton	530 (14.1%)	62 (12%)	26 (5%)	18 (3%)	15 (3%)	0 (0%)
Weston-super-Mare North Worle	493 (14.1%)	24 (5%)	2 (0%)	12 (2%)	5 (1%)	0 (0%)
Winford	247 (13.3%)	60 (24%)	44 (18%)	7 (3%)	9 (4%)	0 (0%)
Weston-super-Mare Kewstoke	472 (11.8%)	45 (10%)	10 (2%)	17 (4%)	15 (3%)	0 (0%)
Congresbury and Puxton	217 (12.5%)	31 (14%)	19 (9%)	7 (3%)	7 (3%)	0 (0%)
Nailsea Youngwood	180 (11.4%)	14 (8%)	1 (1%)	7 (4%)	4 (2%)	0 (0%)

Table 22 cont: Number and percentage of dwellings for each of the HHSRS indicators, disrepair and the most deprived 20% of LSOAs in England (IMD 2019) by ward – private rented stock split into the three analysis groups with over 19% private rented stock (remaining wards included for completeness)

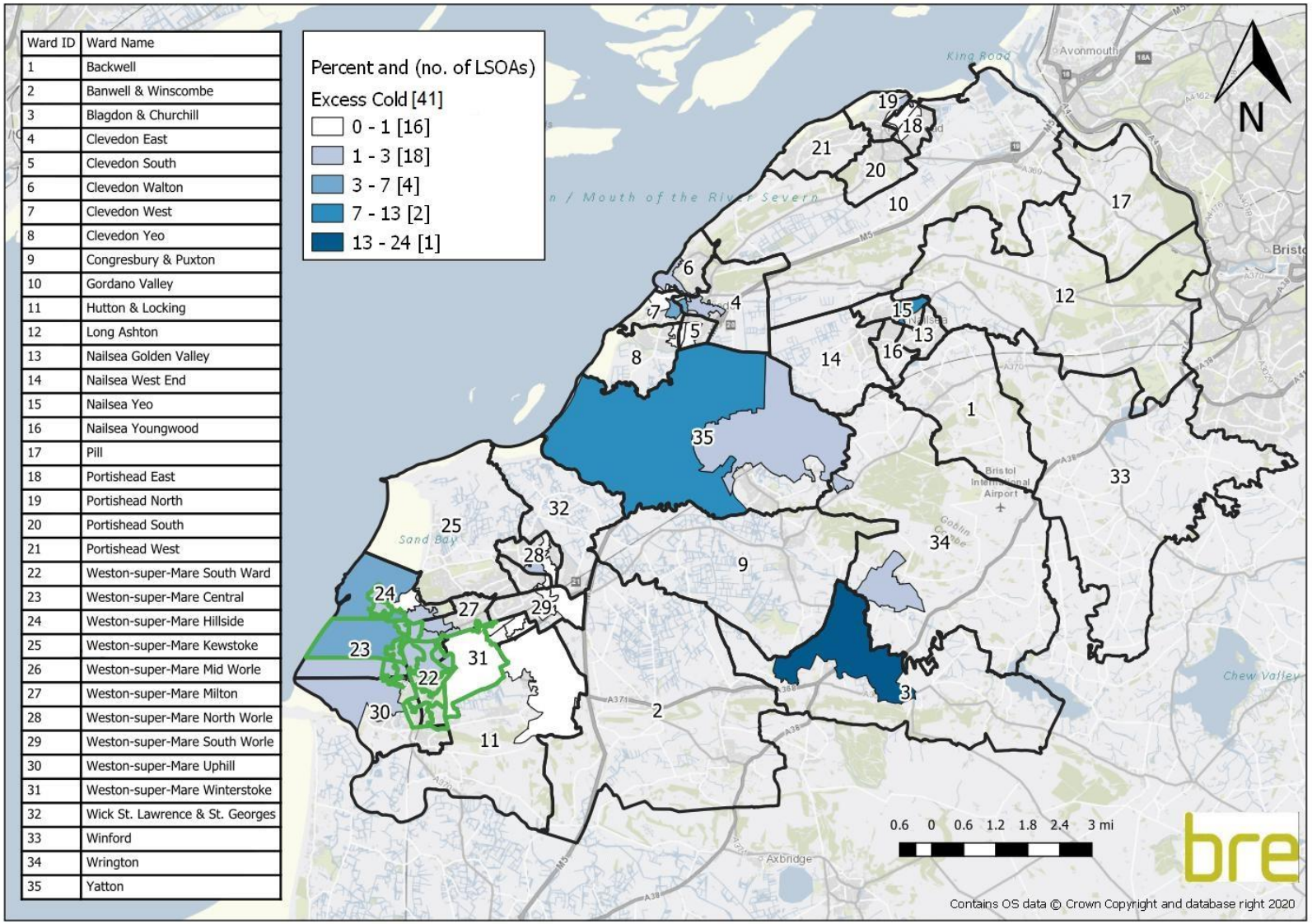
Ward	No. of dwellings - private rented stock	HHSRS category 1 hazards			Disrepair	Index of Multiple Deprivation (20%)
		All hazards	Excess cold	Fall hazards		
Banwell and Winscombe	392 (11.2%)	53 (14%)	28 (7%)	11 (3%)	14 (4%)	0 (0%)
Wick St Lawrence and St Georges	212 (10.4%)	13 (6%)	8 (4%)	4 (2%)	2 (1%)	0 (0%)
Pill	206 (10.3%)	32 (16%)	18 (9%)	7 (3%)	7 (3%)	0 (0%)
Long Ashton	387 (10.1%)	63 (16%)	41 (11%)	12 (3%)	12 (3%)	0 (0%)
Nailsea West End	174 (9.8%)	20 (11%)	11 (6%)	5 (3%)	4 (2%)	0 (0%)
Portishead South	173 (8.5%)	13 (8%)	5 (3%)	5 (3%)	4 (2%)	0 (0%)
Portishead West	313 (7.8%)	13 (4%)	0 (0%)	7 (2%)	7 (2%)	0 (0%)
Gordano Valley	117 (6.5%)	22 (19%)	16 (14%)	3 (3%)	4 (3%)	0 (0%)
Backwell	124 (6.4%)	24 (19%)	19 (15%)	4 (3%)	4 (3%)	0 (0%)
Nailsea Golden Valley	108 (6.3%)	5 (5%)	0 (0%)	2 (2%)	1 (1%)	0 (0%)

Map 31: Distribution of category 1 HHSRS hazards where the proportion of private rented stock is above the national average *(N.B. the green highlighted LSOAs show the most deprived 20% - Source DLUHC Indices of Deprivation 2019)*



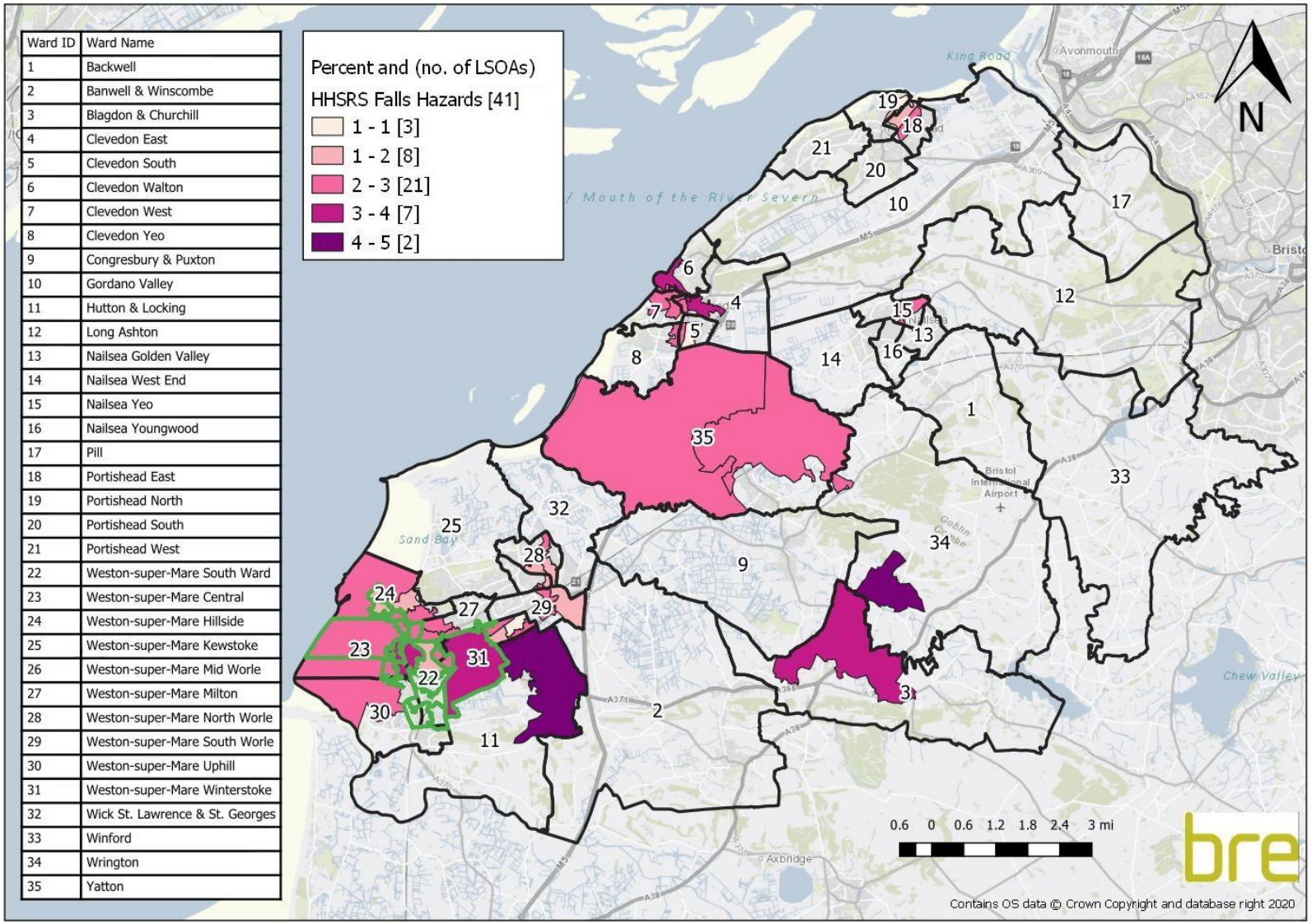
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 32: Distribution of excess cold hazards where the proportion of private rented stock is above the national average *(N.B. the green highlighted LSOAs show the most deprived 20% - Source DLUHC Indices of Deprivation 2019)*



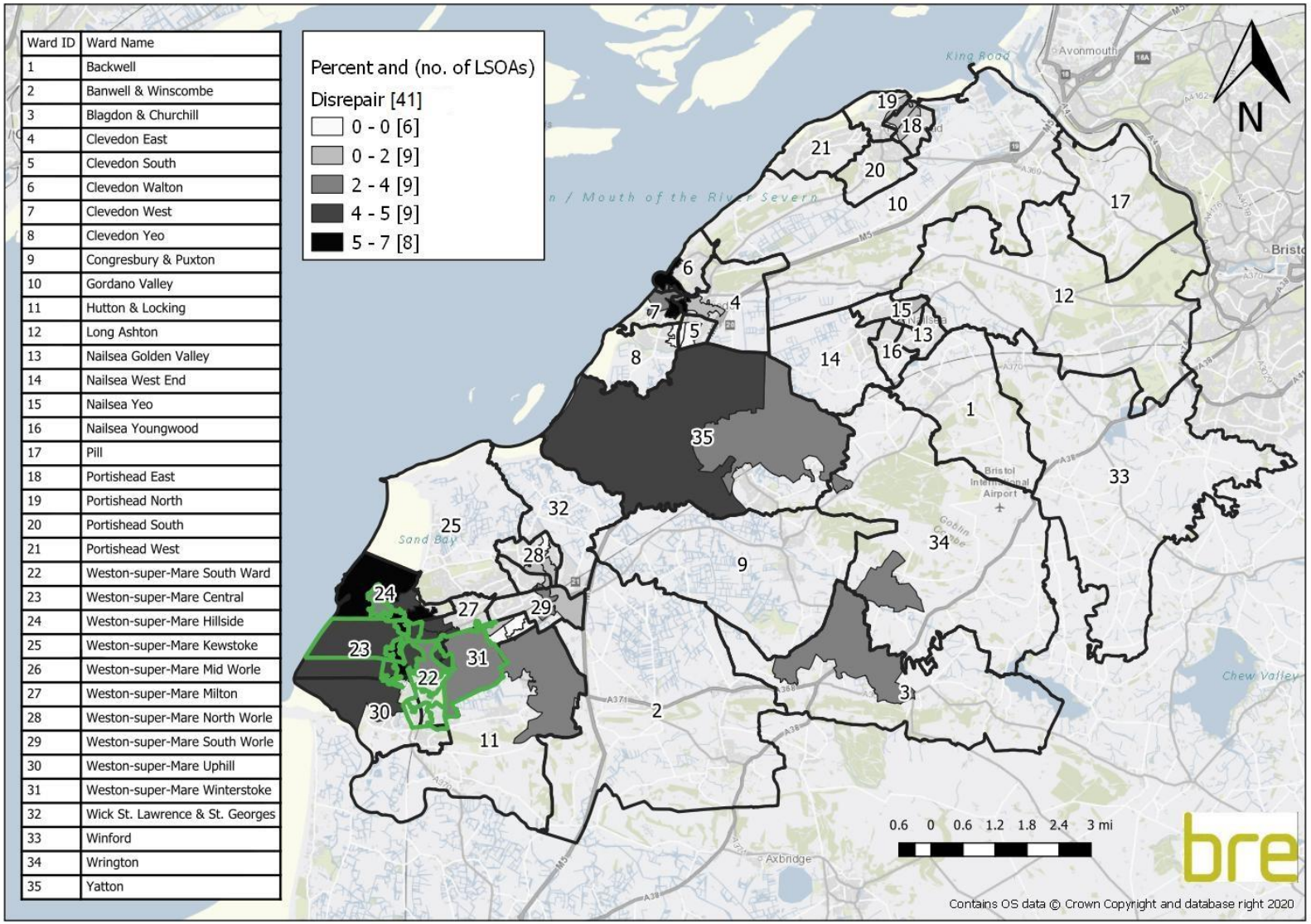
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 33: Distribution of fall hazards where the proportion of private rented stock is above the national average *(N.B. the green highlighted LSOAs show the most deprived 20% - Source DLUHC Indices of Deprivation 2019)*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map 34: Distribution of dwellings in disrepair where the proportion of private rented stock is above the national average *(N.B. the green highlighted LSOAs show the most deprived 20% - Source DLUHC Indices of Deprivation 2019)*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

6 Conclusion and recommendations

6.1 Conclusion

North Somerset commissioned BRE to undertake a series of modelling exercises on their housing stock to provide an integrated housing stock condition database, making use of available local data sources (Local Land and Property Gazetteer (LLPG), tenure, benefits, Houses in Multiple Occupation (HMO), enforcement and energy efficiency scheme data) plus the EPC data which have been integrated into BRE's standard housing stock condition database. The integration of this data source serves to further increase the accuracy of the models by removing the need to rely on imputed data for the 49,245 cases where EPC data is available, and instead using observed data from the surveys. This leads to more accurate SimpleSAP ratings, more accurate excess cold data (and therefore HHSRS data), and more accurate fuel poverty data for around 49.5% of the stock in North Somerset.

This report describes the modelling work and provides details of the results obtained from the dwelling level model and database. The housing stock condition database is also provided to the council to enable them to obtain specific information whenever required. This database is now in an online format.

The integrated stock models and database provide the council with dwelling level information, focussing on private sector housing, for the following:

- The percentage of dwellings with the presence of each of the Housing Standards Variables for North Somerset overall and broken down by tenure and then mapped by COA (private sector stock only)
- Information relating to LAHS reporting for the private sector stock - category 1 hazards and HMOs as well as information on estimated EPC ratings (based on SimpleSAP)
- Energy efficiency for the private sector stock (wall and loft insulation)
- Energy planning variables
- Improvement scenarios
- Additional modelling analysis to determine the estimated potential costs required to improve SimpleSAP ratings to a Band C

Some of the key findings of this report are as follows:

- The performance of the housing stock in North Somerset compared to the EHS England average is mixed with North Somerset performing slightly better for all hazards, disrepair, fuel poverty (both definitions), but worse for excess cold and low income households
- The private rented sector is generally worse than the social sector, but similar to the owner occupied sector
- 5.2% of dwellings in the private rented sector are estimated to have an EPC below band E. Under the legislation these properties would not be eligible to be rented out to new, renewal or existing tenancies.

Such information will facilitate the decision-making process for targeting resources to improve the condition of housing and to prevent ill health resulting from poor housing conditions. Furthermore, the results of this project provide North Somerset with information which will assist in housing policy and strategy development whether these are inspired locally, arise from obligations under the Housing Act 2004 or as responses to government initiatives such as DLUHC's Housing Strategy Policy and ECO.

6.2 Recommendations

Programmes designed to tackle disrepair for example group repair schemes, regeneration or enforcement interventions could be considered with a focus on areas of greatest disrepair such as Weston-super-Mare Central ward with 5% disrepair and 13% containing category 1 hazards, or Weston-super-Mare Hillside ward with an estimated 4% of private sector homes in disrepair and 13% with category 1 hazards. These findings could be combined with local intelligence to help identify additional areas for targeting assistance for physical improvements to private sector stock and the environment. Furthermore, programmes aimed at increasing household income through job creation, benefit entitlement checks and other initiatives should also be considered, with a particular focus on areas containing high proportions of low income households like Weston-super-Mare Central (76%), Weston-super-Mare South Ward (82%) and Weston-super-Mare Winterstoke (60%).

The use of additional local data in this project has enhanced the housing stock models and Housing Stock Condition Database (HSCD). The addition of any further local data, were it to become available, would potentially further enhance the models and database.

Examples of such data are:

- **Local repair schemes**

Data from any local repair schemes, including the use of repair grants, could be used to enhance the Disrepair Model.

- **Local energy improvement schemes**

Any local schemes to improve the energy efficiency of dwellings, including national schemes for which local data has been made available to North Somerset, could be used to further enhance the energy models (SimpleSAP, excess cold, fuel poverty).

bre

Appendix A Definitions of the Housing Standards Variables

1. **Housing Standards Variables:**
   a. **The presence of a category 1 hazard under the Housing Health and Safety Rating System (HHSRS) – reflecting both condition and thermal efficiency**
   Homes posing a category 1 hazard under the HHSRS – the system includes 29 hazards in the home categorised into category 1 – band A to C (serious) or category 2 – band D onwards (other) based on a weighted evaluation tool. Note that this includes the hazard of excess cold which is also included as one of the energy efficiency variables.

   The 29 hazards are:

1 Damp and mould growth	16 Food safety
2 Excess cold	17 Personal hygiene, Sanitation and Drainage
3 Excess heat	18 Water supply
4 Asbestos	19 Falls associated with baths etc.
5 Biocides	20 Falling on level surfaces etc.
6 Carbon Monoxide and fuel combustion products	21 Falling on stairs etc.
7 Lead	22 Falling between levels
8 Radiation	23 Electrical hazards
9 Uncombusted fuel gas	24 Fire
10 Volatile Organic Compounds	25 Flames, hot surfaces etc.
11 Crowding and space	26 Collision and entrapment
12 Entry by intruders	27 Explosions
13 Lighting	28 Position and operability of amenities etc.
14 Noise	29 Structural collapse and falling elements
15 Domestic hygiene, Pests and Refuse	

   b. **The presence of a category 1 hazard for falls (includes "falls associated with baths", "falling on the level" and "falling on stairs")**
   The HHSRS Falls Model includes the 3 different falls hazards where the vulnerable person is over 60 as listed above.

   c. **Dwellings in disrepair (based on the former Decent Homes Standard criteria for Disrepair)**
   The previous Decent Homes Standard states that a dwelling fails this criterion if it is not found to be in a reasonable state of repair. This is assessed by looking at the age of the dwelling and the condition of a range of building components including walls, roofs, windows, doors, electrics, and heating systems).

2. **Energy efficiency variables:**
   a. **The presence of a category 1 hazard for excess cold (using SAP ratings as a proxy measure in the same manner as the English House Condition Survey)**
   This hazard looks at households where there is a threat to health arising from sub-optimal indoor temperatures. The HHSRS assessment is based on the lowest income group for this hazard – persons aged 65 years or over (note that the assessment requires the hazard to be

present and potentially affect a person in the low income age group should they occupy that dwelling. The assessment does not take account of the age of the person actually occupying that dwelling at that particular point in time).

The English Housing Survey (EHS) does not measure the actual temperatures achieved in each dwelling and therefore the presence of this hazard is measured by using the SAP rating as a proxy. Dwellings with a SAP rating of less than 33.52 (SAP 2012 methodology) are considered to be suffering from a category 1 excess cold hazard.

b. An estimate of the SAP rating which, to emphasise its origin from a reduced set of input variables, is referred to as "SimpleSAP"

The Standard Assessment Procedure (SAP) is the UK Government's standard methodology for home energy cost ratings. SAP ratings allow comparisons of energy efficiency to be made and can show the likely improvements to a dwelling in terms of energy use. The Building Regulations require a SAP assessment to be carried out for all new dwellings and conversions. Local authorities, housing associations, and other landlords also use SAP ratings to estimate the energy efficiency of existing housing. The version on which the Average SAP rating model is based is SAP 2012.

The SAP ratings give a measure of the annual unit energy cost of space and water heating for the dwelling under a standard regime, assuming specific heating patterns and room temperatures. The fuel prices used are the same as those specified in SAP 2012. The SAP takes into account a range of factors that contribute to energy efficiency, which include:

- Thermal insulation of the building fabric
- The shape and exposed surfaces of the dwelling
- Efficiency and control of the heating system
- The fuel used for space and water heating
- Ventilation and solar gain characteristics of the dwelling

3. Household vulnerability variables:

a. Fuel poverty - 10% definition

This definition states that a household is said to be in fuel poverty if it spends more than 10% of its income on fuel to maintain an adequate level of warmth (usually defined as 21°C for the main living area, and 18°C for other occupied rooms). This broad definition of fuel costs also includes modelled spending on water heating, lights, appliances, and cooking.

The fuel poverty ratio is defined as:

$$\textit{Fuel poverty ratio} = \frac{\textit{Fuel costs (usage * price)}}{\textit{Full income}}$$

If this ratio is greater than 0.1 then the household is in fuel poverty.

The definition of full income is the official headline figure and in addition to the basic income measure, it includes income related directly to housing (i.e. Housing Benefit, Income Support for Mortgage Interest (ISMI), Mortgage Payment Protection Insurance (MPPI), Council Tax reduction).

Fuel costs are modelled, rather than based on actual spending. They are calculated by combining the fuel requirements of the household with the corresponding fuel prices. The key goal in the modelling is to ensure that the household achieves the adequate level of warmth set out in the definition of fuel poverty whilst also meeting their other domestic fuel requirements.

b. Fuel poverty - Low Income High Costs definition

The government has recently set out a more recent definition of fuel poverty - the Low Income High Costs (LIHC) definition[77]. Under this definition, a household is said to be in fuel poverty if:

- They have required fuel costs that are above average (the national median level)
- Were they to spend that amount they would be left with a residual income below the official poverty line

c. Dwellings occupied by a low income household

A household in receipt of:

- Income support
- Housing benefit
- Attendance allowance
- Disability living allowance
- Industrial injuries disablement benefit
- War disablement pension
- Pension credit
- Child tax credit
- Working credit

For child tax credit and working tax credit, the household is only considered a low income household if it has a relevant income of less than £16,105.

The definition also includes households in receipt of Council Tax reduction and income based Job Seekers Allowance.

[77] https://www.gov.uk/government/collections/fuel-poverty-statistics

Appendix B Methodology for the BRE Integrated Dwelling Level Housing Stock Modelling approach

This Appendix provides a more detailed description of the models which make up the overall housing stock modelling approach and feed into the housing stock condition database. The process is made up of a series of data sources and Models which, combined with various imputation and regression techniques and the application of other formulae, make up the final Housing Stock Condition Database (HSCD). The database is essentially the main output of the modelling and provides information on the Housing Standards Variables and other data requirements (e.g. energy efficiency variables). An overview of the approach and a simplified flow diagram are provided in **Section 3** of this report.

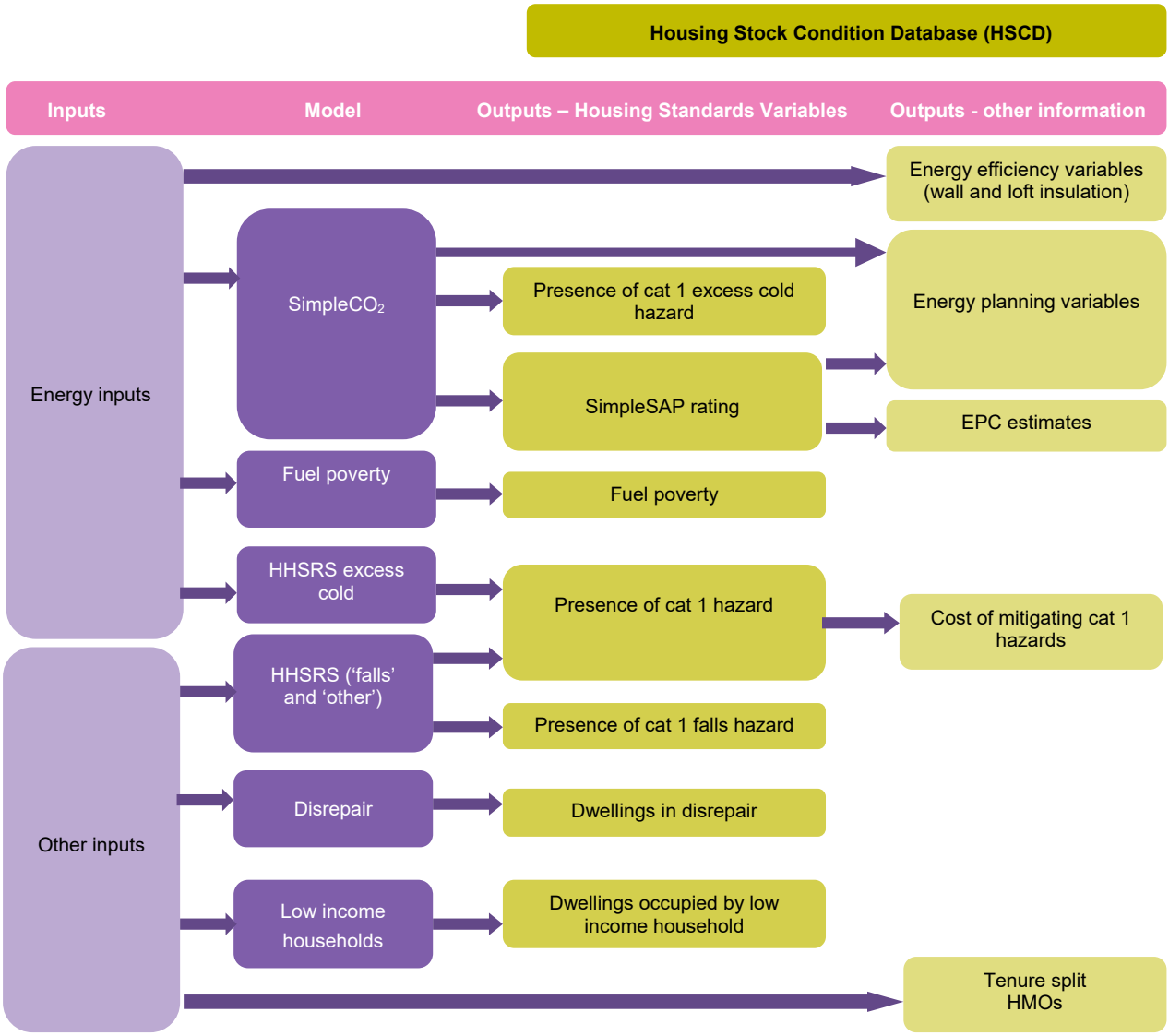
The models making up the overall housing stock modelling approach are:

- SimpleCO_2 Model
- Fuel Poverty Model
- HHSRS (all hazards, falls hazards and excess cold) Models
- Disrepair Model
- Low Income Households Model

Figure B.1 shows the data flows for the stock modelling approach, showing which models each of the outputs in the database (split into the Housing Standards Variables and other information) come from. The exception is the energy efficiency variables (if used) which come directly from the energy inputs, and the tenure and HMO data (if used) which come directly from the other inputs.

Section B.1 describes the SimpleCO_2 Model in more detail, **Section B.2** provides more information on the other four models and **Section B.3** gives details of the OS MasterMap/geomodelling approach.

Figure B.1: Simplified data flow for the housing stock modelling approach



B.1 BRE SimpleCO_2 Model

BRE have developed a variant of the BREDEM[78] software, named "SimpleCO_2", that can calculate outputs from a reduced set of input variables. These outputs are indicative of the full BREDEM outputs and the minimum set of variables the software accepts is information on:

- Tenure
- Dwelling type
- Location of flat (if a flat)
- Dwelling age
- Number of storeys
- Number of rooms
- Loft insulation
- Level of double glazing
- Main heating type
- Boiler type (if a boiler driven system)
- Heating fuel
- Heating system
- Heating controls
- Water heating
- Hot water cylinder insulation
- Solar hot water
- PV panels
- Internal floor area

The Experian UK Consumer Dynamics Database is used as a source for some of these variables (tenure, dwelling age) and they are converted into a suitable format for the SimpleCO_2 software. The dwelling type is derived using information from OS Mastermap and the number of storeys from OS experimental height data. The remaining pieces of data are inferred from the EHS using other tenure, dwelling age and type, other Experian data (number of bedrooms), other OS data (i.e. dwelling footprint) and data from Xoserve[79] which indicates whether the dwelling is in a postcode which is on the gas network. As the characteristics of a dwelling cannot be determined through access to observed data, a technique known as cold deck imputation is undertaken. This is a process of assigning values in accordance with their known proportions in the stock. For example, this technique is used for predicting heating fuels because the Xoserve data only confirms whether a dwelling is on the gas network or not. Fuel used by dwellings not on the gas network is unknown, so in most cases this information will be assigned using probabilistic methods. The process is far more complex e.g. dwellings with particular characteristics such as larger dwellings are more likely to be assigned with oil as a fuel than smaller dwellings.

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[78] Building Research Establishment Domestic Energy Model, BRE are the original developers of this model which calculates the energy costs of a dwelling based on measures of building characteristics (assuming a standard heating and living regime). The model has a number of outputs including an estimate of the SAP rating and carbon emissions.

[79] Xoserve is jointly owned by the five major gas distribution Network companies and National Grid's gas transmission business. It provides transportation transactional services on behalf of all the major gas Network transportation companies.

The reason for taking this approach is to ensure that the national proportions in the data source are the same as those found in the stock nationally (as predicted by the EHS or other national survey). Whilst there is the possibility that some values assigned will be incorrect for a particular dwelling (as part of the assignment process must be random) they ensure that examples of some of the more unusual types of dwelling that will be present in the stock are included.

Whilst this approach is an entirely sensible and commonly adopted approach to North Somerset with missing data in databases intended for strategic use, it raises issues where one of the intended uses is planning implementation measures. It must therefore be always kept in mind that the data provided represents the most likely status of the dwelling, but that the actual status may be quite different. That said, where EPC data has been used, the energy models (which use EPC data) are likely to be more accurate.

It is important to note that some variables have been entirely assigned using cold decking imputation techniques. These include presence of cavity wall insulation and thickness of loft insulation as there is no reliable database with national coverage for these variables.

The "SimpleCO_2" software takes the combination of Experian and imputed data and calculates the "SimpleSAP" rating for each dwelling in the national database. The calculated "SimpleSAP" ratings are the basis of the estimates of SAP and excess cold. How the other key variables are derived is discussed later in this Appendix.

Because the estimates of "SimpleSAP" etc. are calculated from modelled data it is not possible to guarantee the figures. They do, however, provide the best estimates that we are aware can be achieved from a data source with national coverage and ready availability. The input data could, however, be improved in its:

- accuracy for example through correcting erroneous values,
- depth of coverage, for example by providing more detailed information on age of dwellings,
- breadth by providing additional input variables such as insulation.

Improving any of these would enhance the accuracy of the output variables and for this reason it is always worth considering utilising additional information sources where they are available. Using EPC data will go some way towards meeting these improvements by providing more accurate data.

B.2 Housing Condition and Low Income Household Models

This section provides further information on the remaining four models – fuel poverty, HHSRS, disrepair and low income households. These models are discussed together since the approach used for each one is broadly the same.

These models are not based solely on the thermal characteristics of the dwelling, and in some cases are not based on these characteristics at all. A top down methodology has been employed for these models, using data from the EHS and statistical techniques, such as logistic regression, to determine the combination of variables which are most strongly associated with failure of each standard. Formulae have been developed by BRE to predict the likelihood of failure based on certain inputs. The formulae are then applied to the variables in the national Experian dataset to provide a likelihood of failure for each dwelling. Each individual case is then assigned a failure/compliance variable based on its likelihood of failure and on the expected number of dwellings that will fail the standard within a given geographic area. Thus if the aggregate values for a census output area are that 60% of the dwellings in the area fail a particular standard then 60% of the dwellings with the highest failure probabilities will be assigned as failures and the remaining 40% as passes.

The presence of a category 1 hazard failure is the only exception to this as it is found by combining excess cold, falls hazards and other hazards such that failure of any one of these hazards leads to failure of the standard.

B.3 Integrating local data sources

As mentioned in the main body of the report, North Somerset identified a number sources of data which were used to update the BRE dwelling level models to provide an integrated housing stock condition database. Their data sources are shown in **Table B.1**.

To allow these data sources to be linked to the BRE Dwelling Level Stock Models, an address matching exercise was required to link each address to the Experian address key. Address matching is rarely 100% successful due to several factors including:

- Incomplete address or postcodes
- Variations in how the address is written e.g. Flat 1 or Ground floor flat
- Additions to the main dwelling e.g. annexes or out-buildings

Experience indicates that, for address files in good order, match rates are around 75% - 95%. **Table B.1** provides the address matching results for the data sources provided by North Somerset and the resulting impact on the modelling process.

Table B.1: Address matching results and impact on the modelling process

Data source	Total no. of records	No. (and %) of addresses matched	Notes / impact on the modelling process
EPC data	83,699 – total records available	49,245 (72.2% of de-duplicated)	Data de-duplicated for multiple EPCs – 68,190 remaining Final number matched to modelled data and useable – 50,237
LLPG data	104,887 – total received	102,012 (97.26% of records provided)	BLPU classes checked and duplicate UPRNs removed – 102,060 remaining Remaining cases once address fields checked – 102,012
Tenure data	9,349 – total received	4,886 (52.3% of records provided)	8,983 – remaining records after de-duplication
Benefits data	965 – total received	742 (76.9% of records provided)	Remaining cases once duplicate UPRNs removed – 742
HMO data	151 – total received	151 (100% of records provided)	Remaining cases once duplicate UPRNs removed – 151
Enforcement data	1,850 – total received	1,407 (76.1% of records provided)	Remaining cases once duplicate UPRNs removed – 1,552

The Housing Stock Condition Database (HSCD) was also updated using the Ordnance Survey (OS) MasterMap data which enables the measurement of the footprint of the building and provides information on the number of residential addresses within the building, and to see which other buildings each address is attached to or geographically close to.

The stage at which the local data sources are included in the modelling process depends on whether the data includes information which can be used as an input into the SimpleCO_2 model. The simplified flow diagram in **Figure 1** in the main report shows how these data sources are integrated into the standard modelling approach.

The following sections consider each of the data sources and how they are used to update the SimpleCO_2 inputs and/or stock model outputs.

EPC data

If there are discrepancies in the energy data for the same dwelling case, arising from different energy data sources, then, if available, the EPC data will be used. If no EPC data source is available for that case, then the data with the most recent date will be taken.

Some of the energy data provided includes tenure data, in which case the housing stock condition database has been updated accordingly. However, EPC cases do not include tenure data, they only include the reason for the EPC.

Therefore:

- If the reason given was a sale, then the dwelling was assumed to be owner occupied.
- If the reason given was re-letting and the tenure of the let was specified (i.e. private or social) then the tenure was changed to that indicated.
- If the reason for the sale did not indicate tenure, then the tenure was left unchanged.

It is important to note that the modified tenure created from the EPC data should only ever be used for work relating to energy efficiency and carbon reduction. This is a legal requirement stemming from the collection of the data and is a licence condition of the data suppliers. For this reason, the tenure variable supplied in the database is NOT based on EPC data; however, the calculations used to determine the SimpleSAP rating and other energy characteristics of the dwelling do make use of the EPC tenure.

Where the energy data provides information on loft insulation, wall insulation, the location of a flat within a block and floor area this information will be used in favour of any imputed information, as long as the OS data is in agreement with the dwelling type.

Where energy data on wall type is present for a dwelling in a block of flats, terrace or semi-detached, that data is extrapolated to the rest of the block or terrace. If multiple dwellings with energy data are present then the most common wall type is used. Note that where the energy data indicates a wall type that is not the predominant one, this data will not be overwritten with the predominant type – the data reported in the energy database will always be used even if this results in two different wall types being present in a terrace or a block of flats.

For flats it is assumed that all flats in the block will have the same level of double glazing and as the case for which we have energy data for. If there are multiple flats in the block with energy data showing different levels of double glazing, an average will be used.

It is assumed that all flats in a block share the same heating type, boiler type if present, fuel type and heating controls. Where there are multiple types present, the predominant type is used. Flats are assumed to have the same hot water source, and if one flat benefits from solar hot water it is assumed that all flats in the block do.

B.4 OS MasterMap information

OS AddressBase was then linked to the OS MasterMap Topography Layer. OS MasterMap provides a detailed geographical representation of the landscape in Great Britain, including buildings. Once the OS AddressBase is linked to OS MasterMap it is possible to extract the relevant geographical information for the residential buildings– this involves looking at information about individual dwellings or blocks of flats such as footprint area and attachment to other dwellings.

Figure B. 2 shows that visual identification of dwelling type can be quite simple. The OS MasterMap of the cul-de-sac 'Prince of Wales Gardens' comprises 10 sets of semi-detached properties. BRE use this type of knowledge to create a model to infer dwelling type, which is described in more detail below.

Figure B. 2: OS MasterMap example (source OS website[80])

By looking at the number of residential address points (from OS AddressBase) it is possible to determine whether a building is a house or a block of flats[81]. The dwelling type is then determined based on the spatial relationship of the individual dwelling/block of flats with other dwellings. These spatial relationships are outlined for each resulting dwelling type below:

[80] https://www.ordnancesurvey.co.uk/business-and-government/products/mastermap-products.html

[81] Houses have one residential address point and blocks of flats have two or more

Houses - where the dwelling is a house, the number of other buildings it is attached to can be observed and the dwelling types allocated as follows:

Detached – where a single address is within a dwelling footprint and that footprint is not attached to any other building footprint[82].

Semi-detached - where a single address is within a dwelling footprint and is joined to one other building footprint.

Terrace - where three or more building footprints are joined to one another.

Mid terrace – where a single address is part of a terrace block and attached to more than one other building footprint.

End terrace – where a single address is part of terrace block and attached to only one other building footprint.

Flats - if the building is a block of flats, its exact nature is determined by its age and the number of flats in the block. The following assumptions are made:

Converted flat –if there are between two and four flats in the block (inclusive) and the dwelling was built before 1980 then it is assumed to be a conversion.

Purpose built flat – all other flats are assumed to be purpose built.

[82] The area of land over which a building is constructed (i.e. the area of the ground floor only, this does not consider the number of floors in a building)

Appendix C Using the BRE Integrated Dwelling Level Housing Stock Database

The BRE Housing Stock Condition Database (HSCD) is the final output of the overall stock modelling approach described in **Section 3** and **Appendix B**. The HSDC has been designed to allow local authorities to access their local area data. There are several different options for summarising or investigating the data and generating lists of properties of interest.

C.1 Overview

The Housing Stock Condition Database (HSCD) is now online. You can access it in https://hscd.bregroup.com/login.jsp with the credentials sent to you by email.

To ensure data security the interface will automatically open on the login page shown in **Figure C. 1**. Should you forget your password details, these can be reset and emailed to you using the function provided on the login page.

Upon login, the home page will open with a dashboard showing the Housing Standards Variables for your housing stock, similar to that shown in

Figure C. 2.The navigation pane is along the top and is visible on all pages; the options shown on the navigation pane will depend upon the options purchased.

Figure C. 1: Login screen

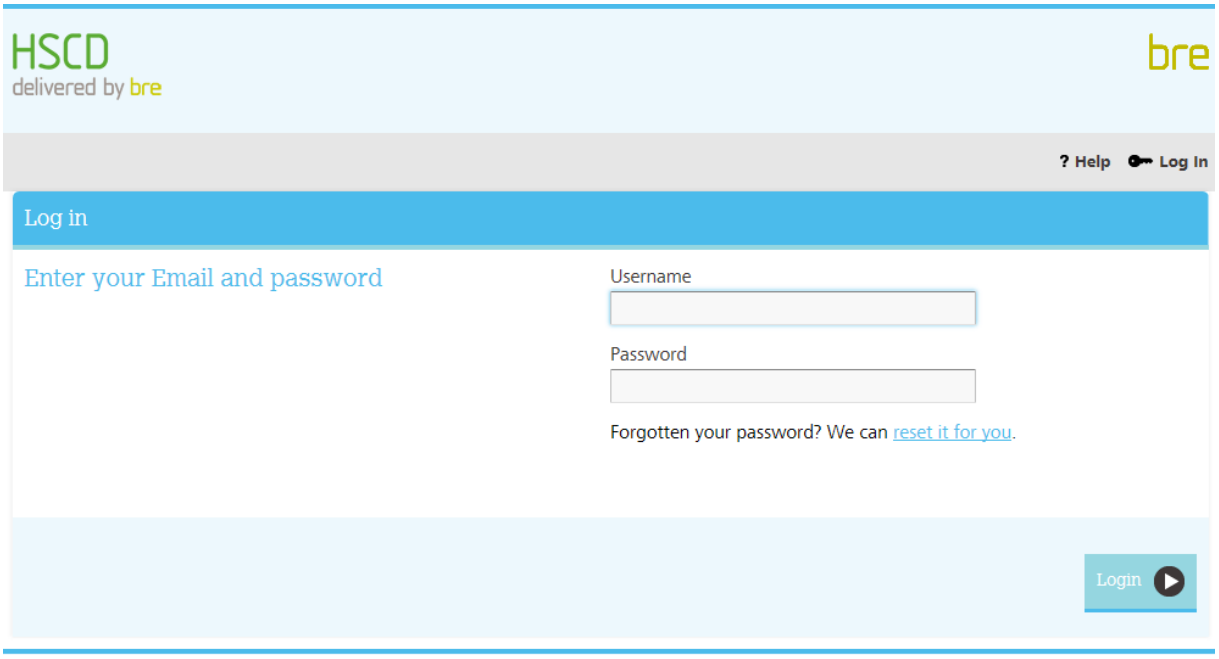
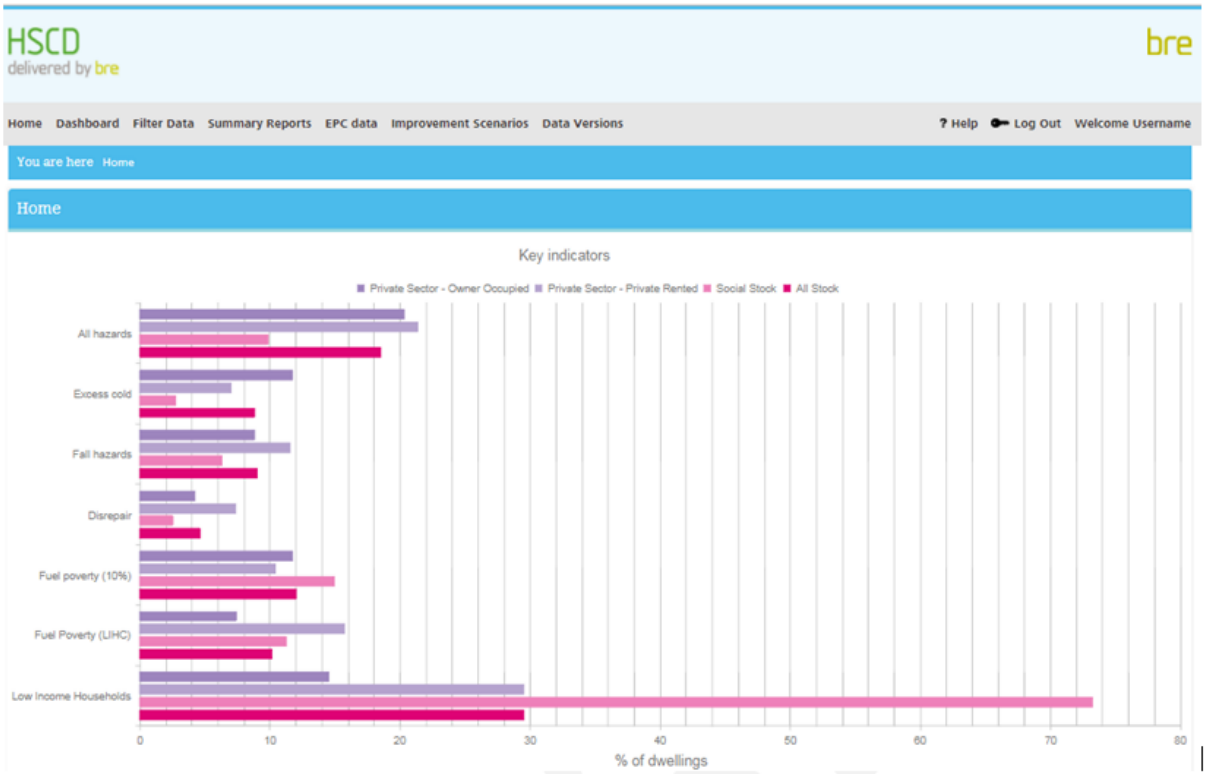


Figure C. 2 Home page (note screenshot below is sample data)

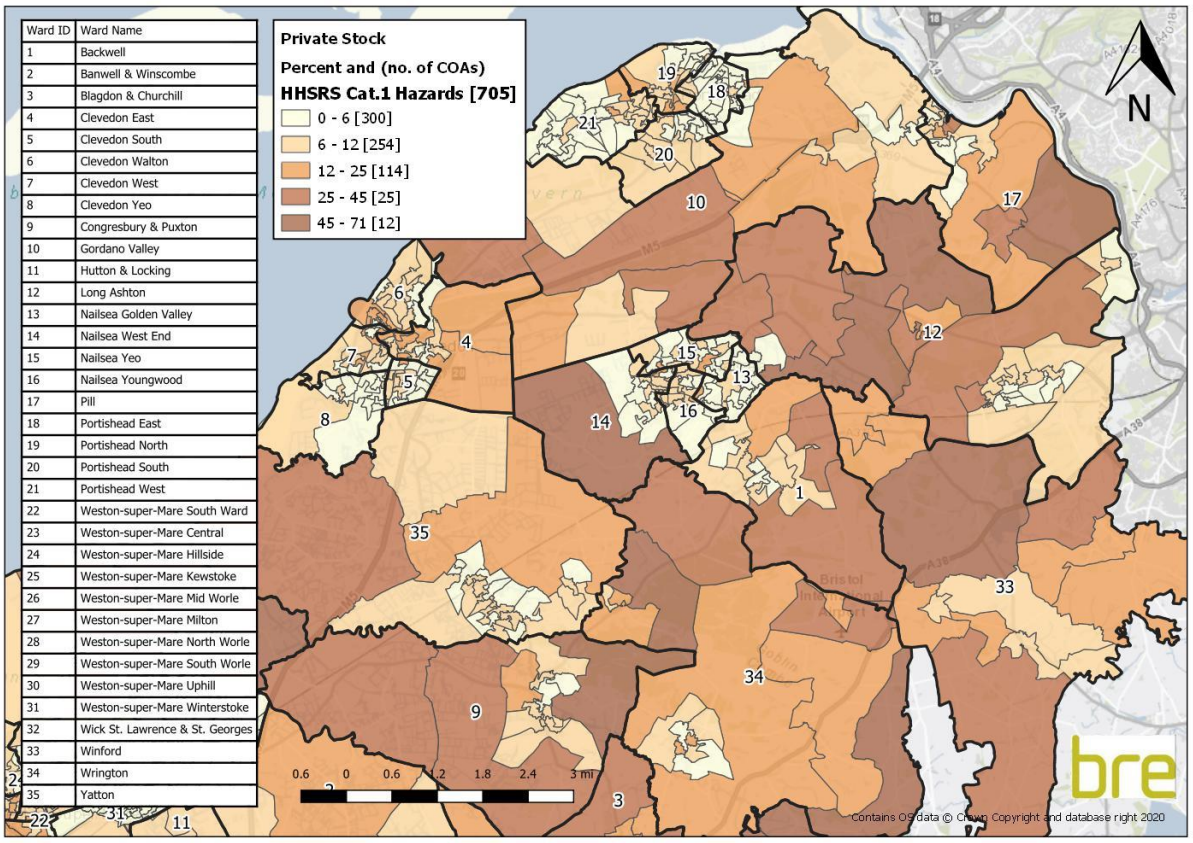


Please refer to the user guide accessible via the log in page under the help button.

Appendix D Additional Maps

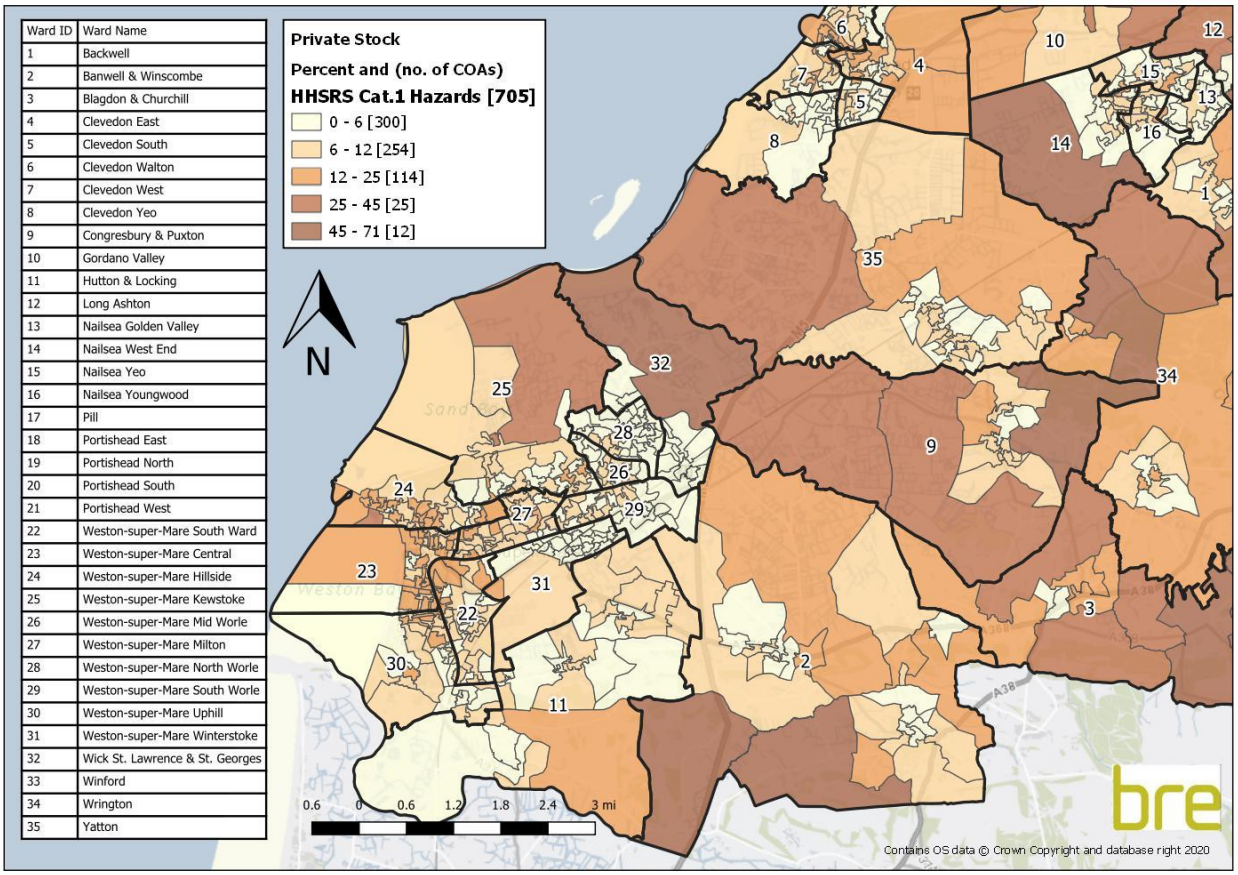
This Appendix provides close up maps for each variable, focussing in on the north and south of North Somerset. These maps show the clear urban – rural divide in many of the Housing Standards Variables. The larger maps included above in the report do not always allow for the appreciation that smaller and denser COAs in urban areas are very different in their hazards to the surrounding rural COAs which are larger and are immediately more eye-catching.

Map D. 1: North Somerset category 1 hazards – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



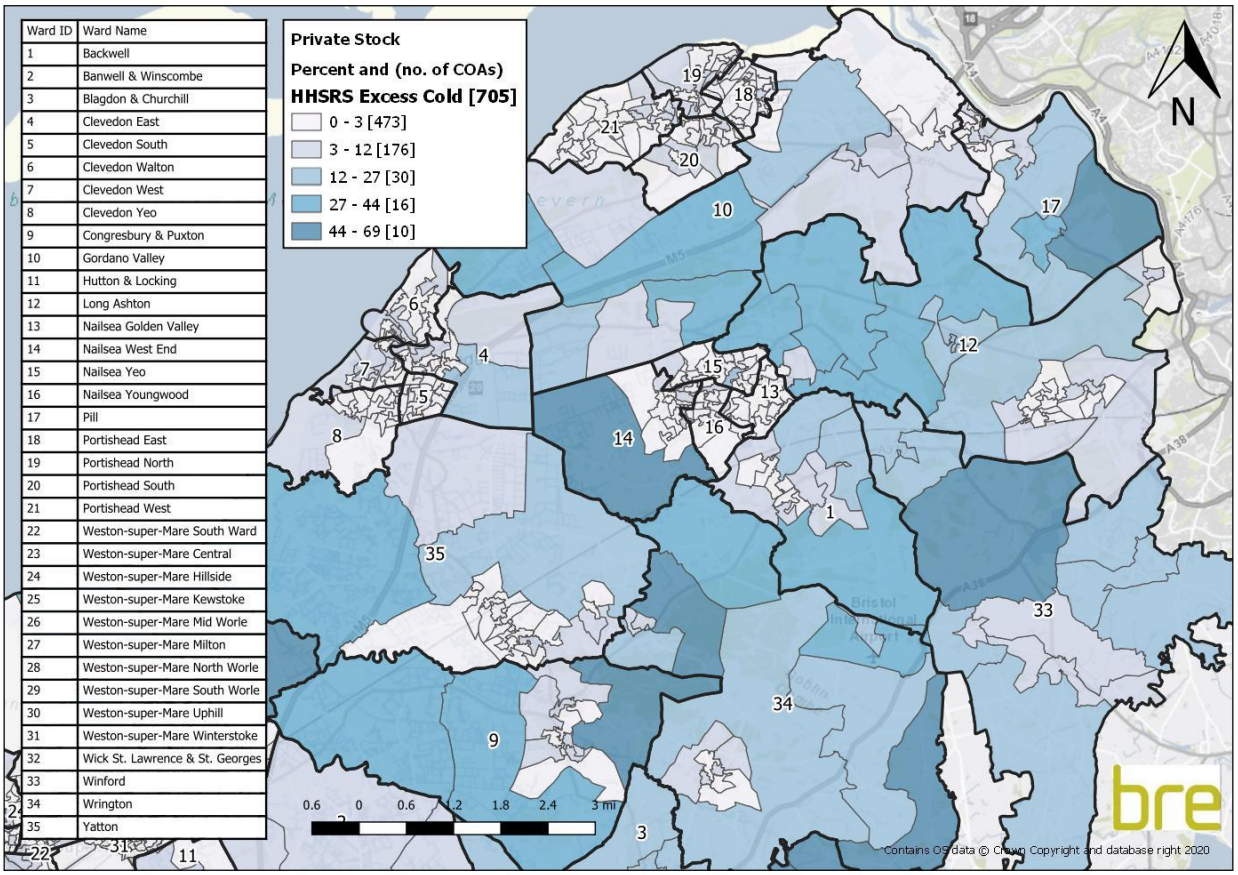
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 2: North Somerset category 1 hazards – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



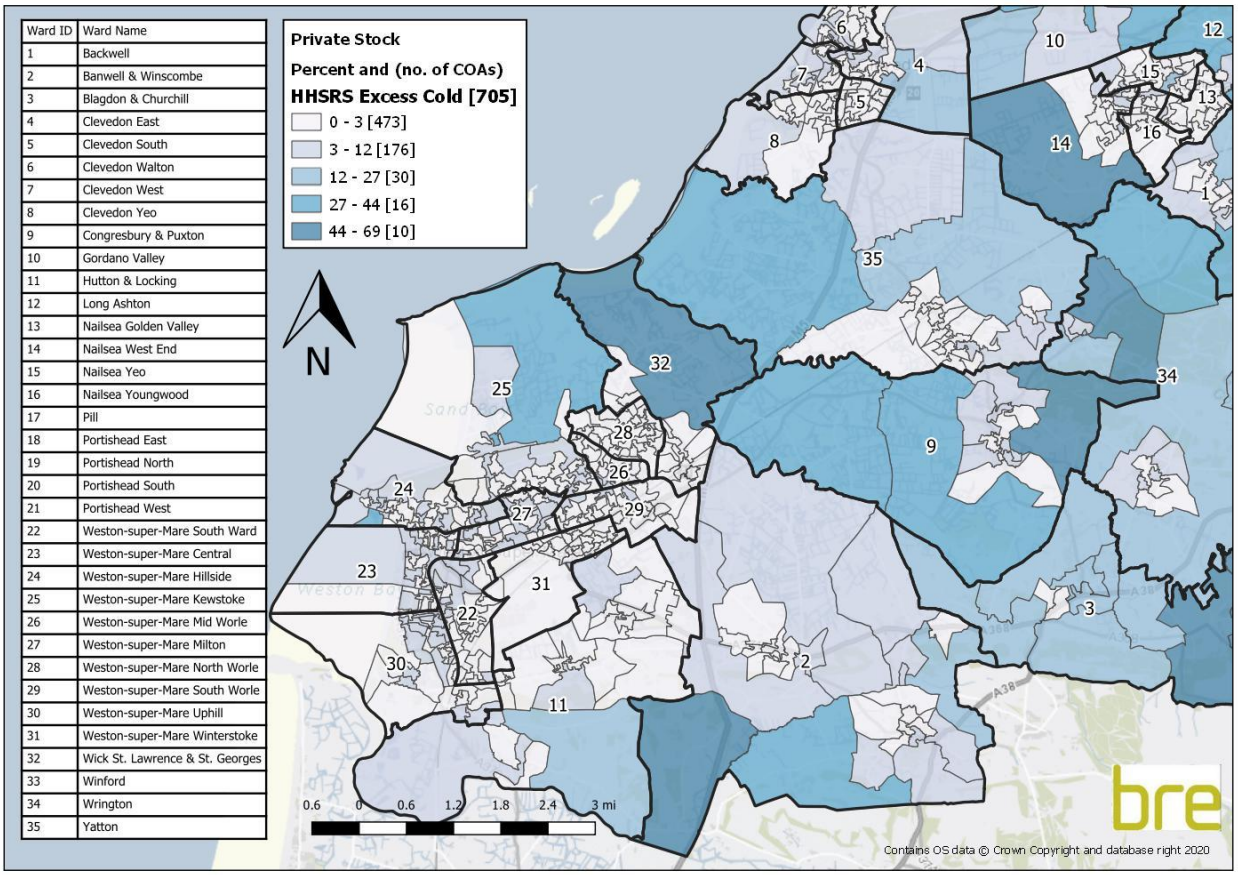
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 3: North Somerset households with excess cold – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



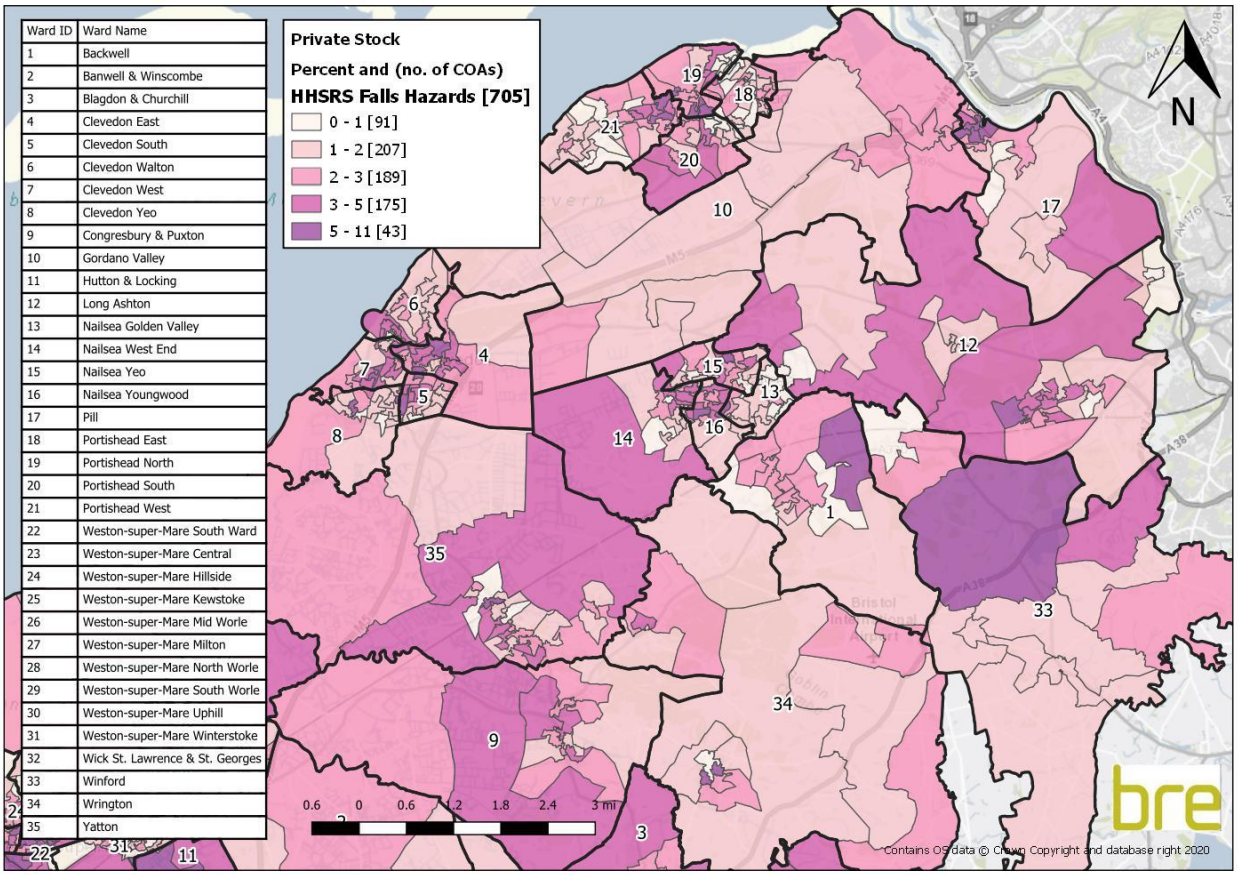
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 4: North Somerset households with excess cold – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



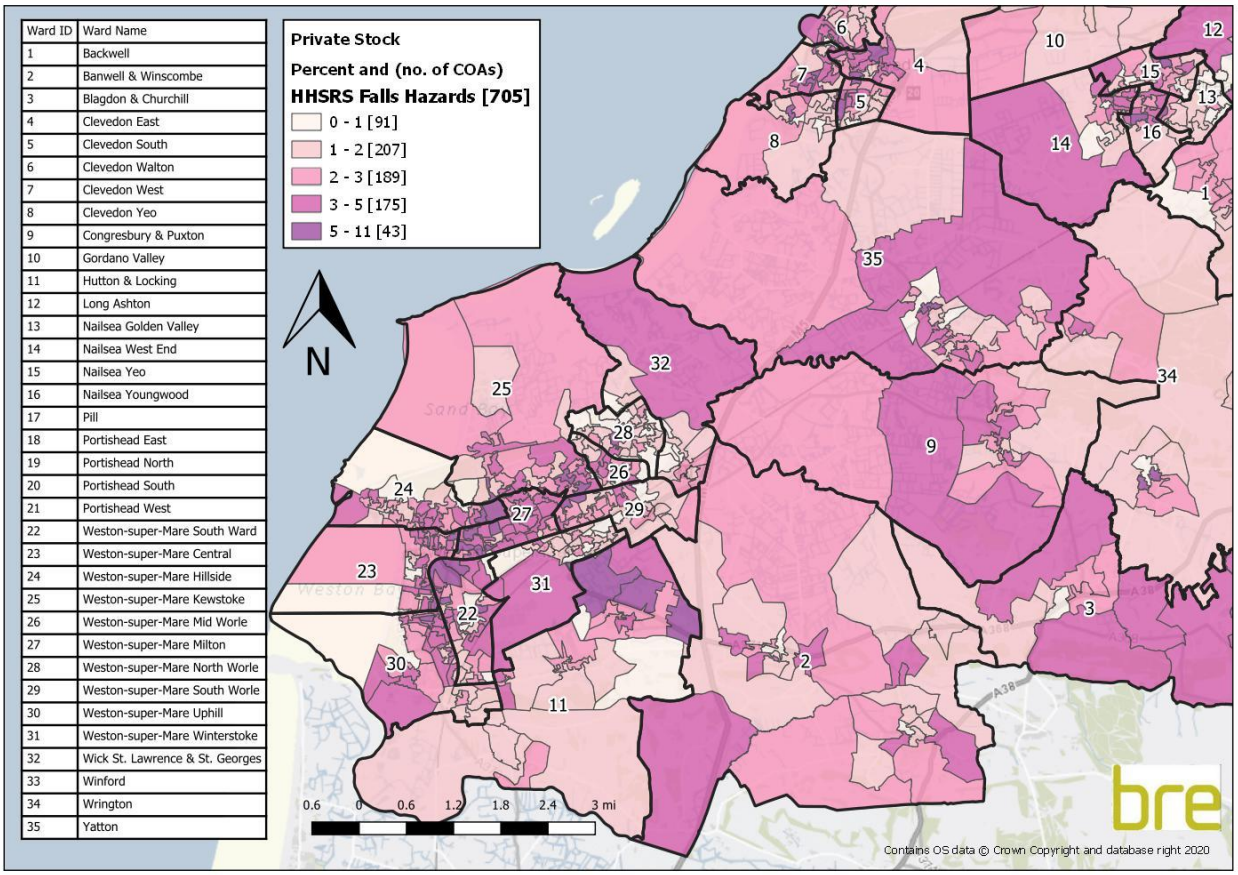
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 5: North Somerset households with falls hazards – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 6: North Somerset households with falls hazards – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
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12	Long Ashton
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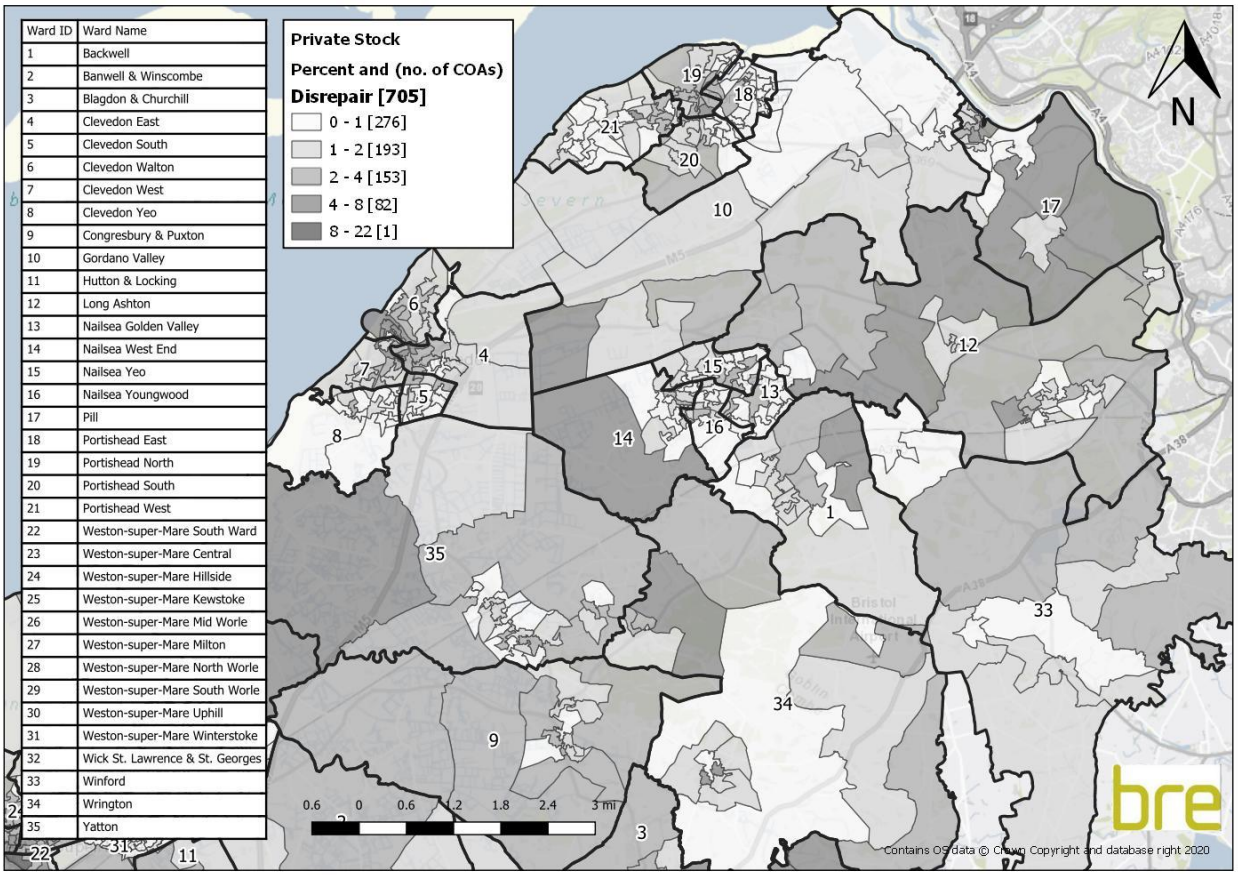
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 7: North Somerset households in disrepair – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
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11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
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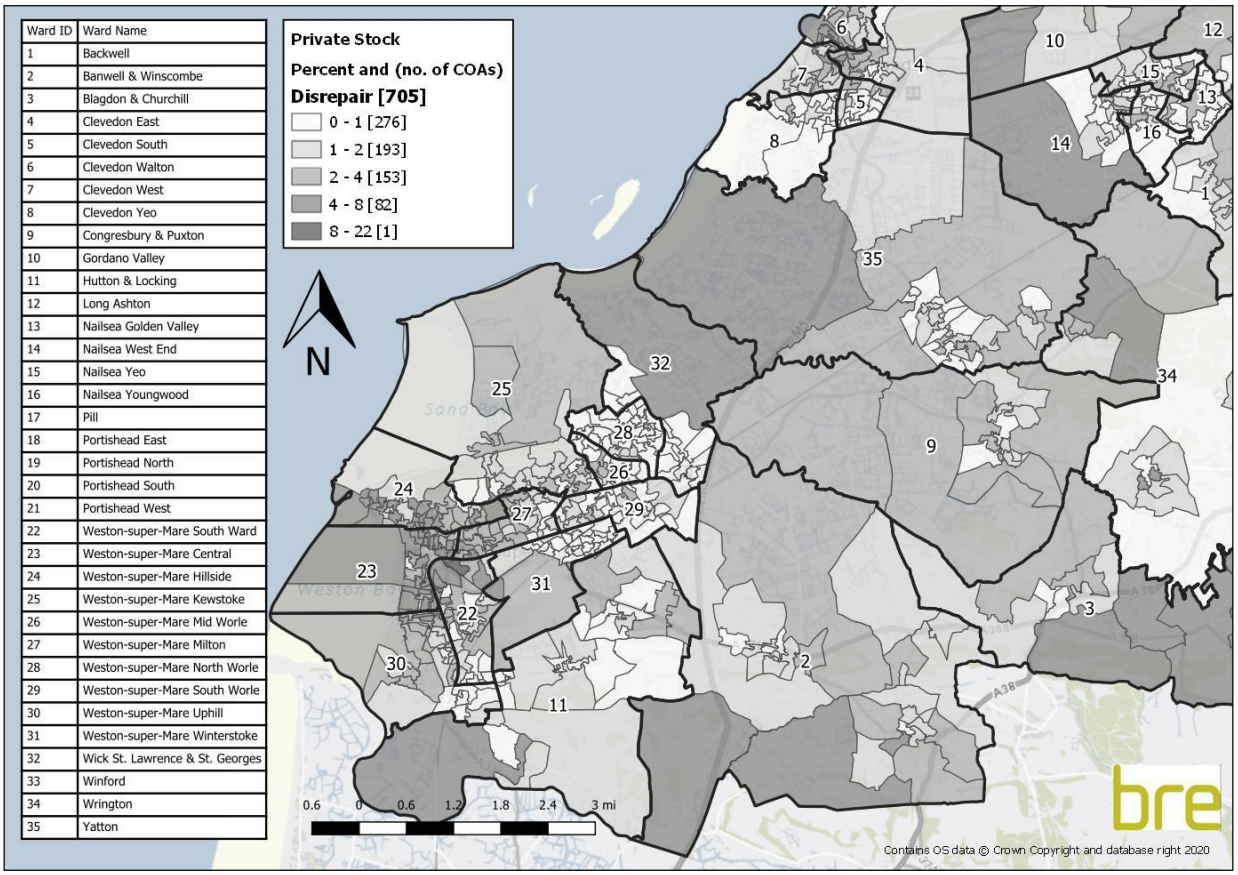
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 8: North Somerset households in disrepair – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
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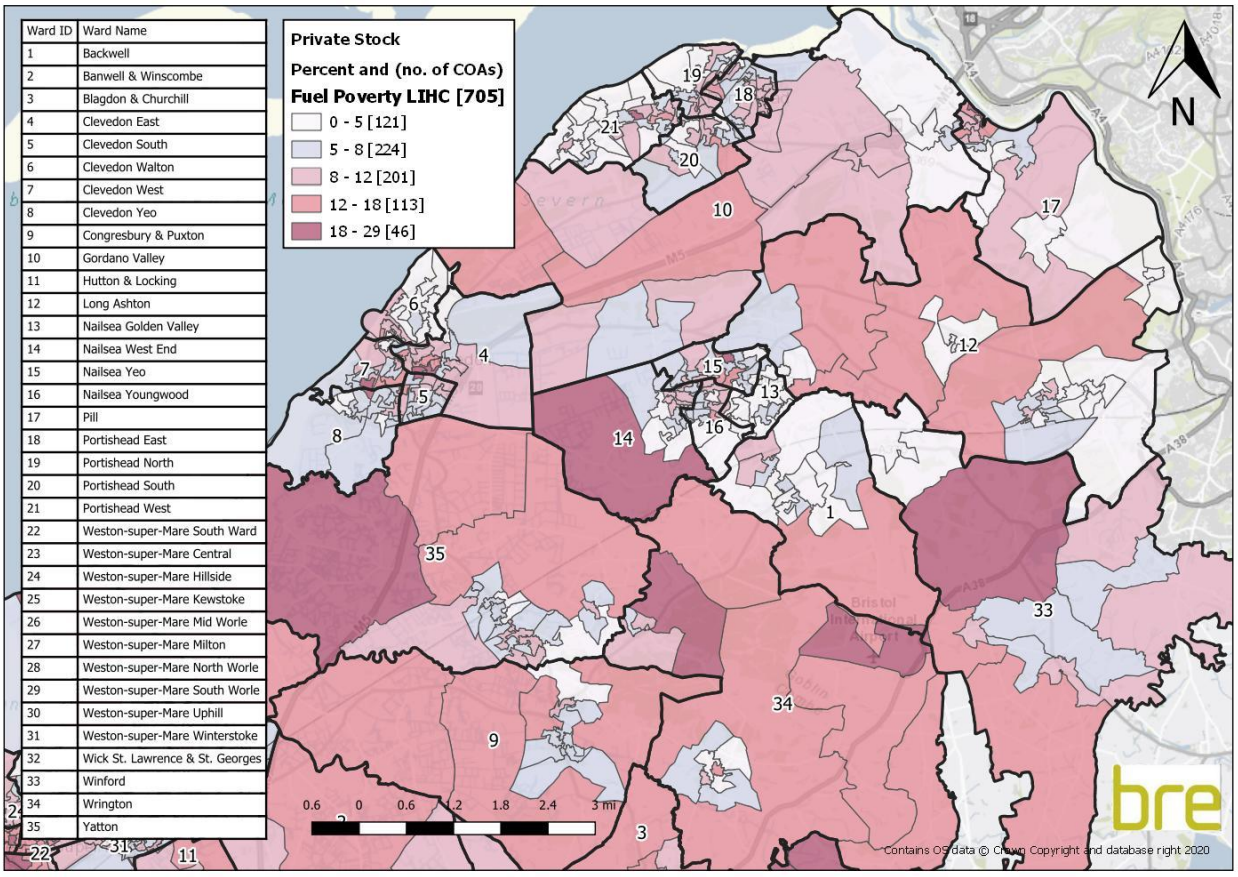
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 9: North Somerset households in fuel poverty (LIHC definition) – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
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13	Nailsea Golden Valley
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16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
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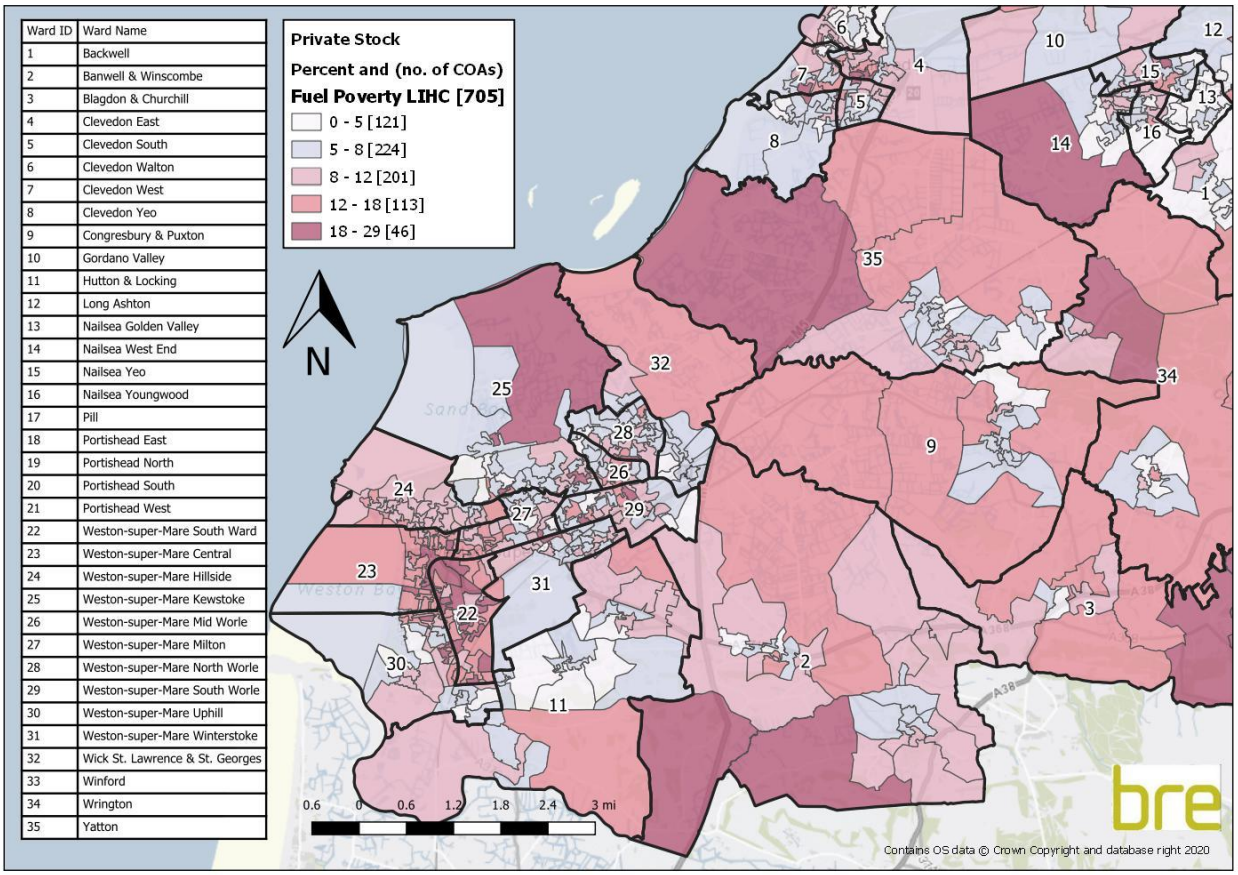
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 10: North Somerset households in fuel poverty (LIHC definition) – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
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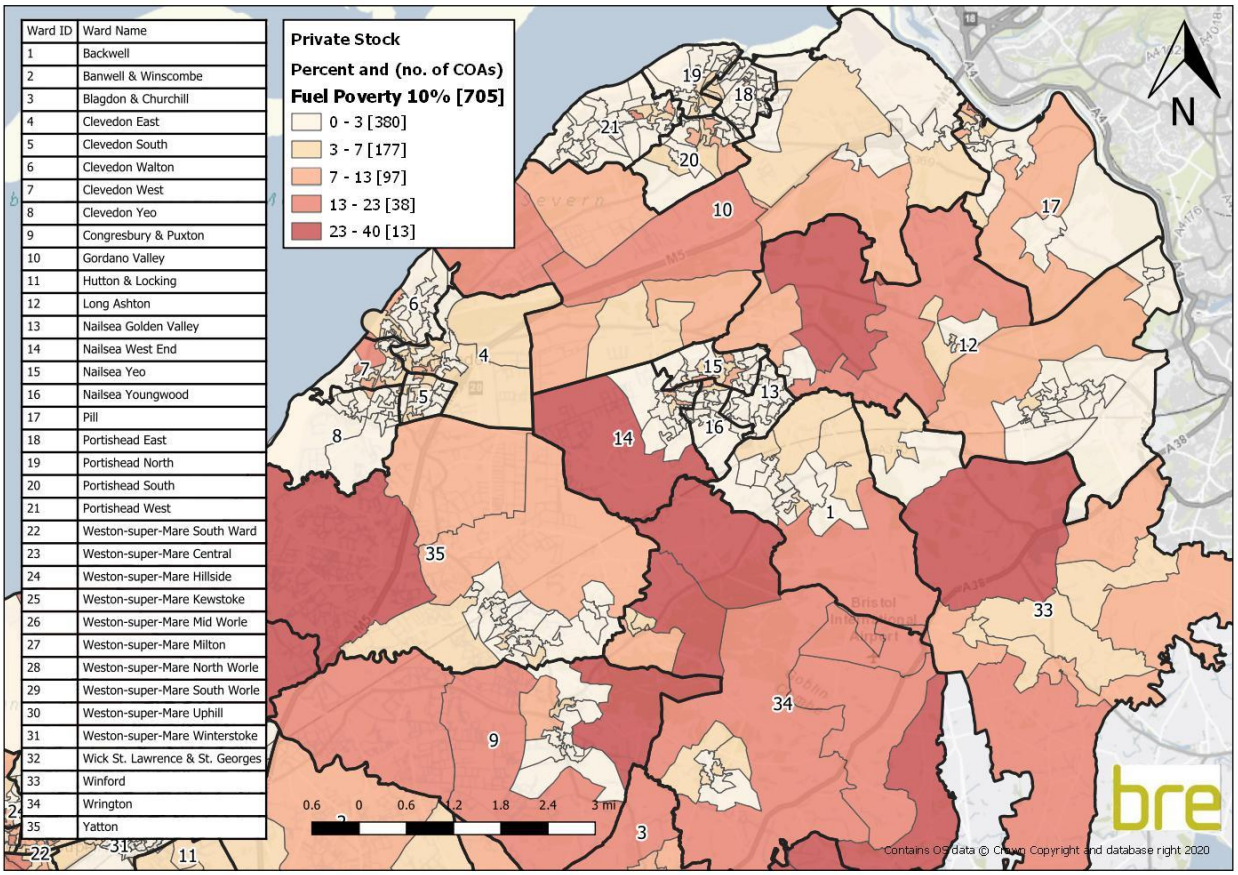
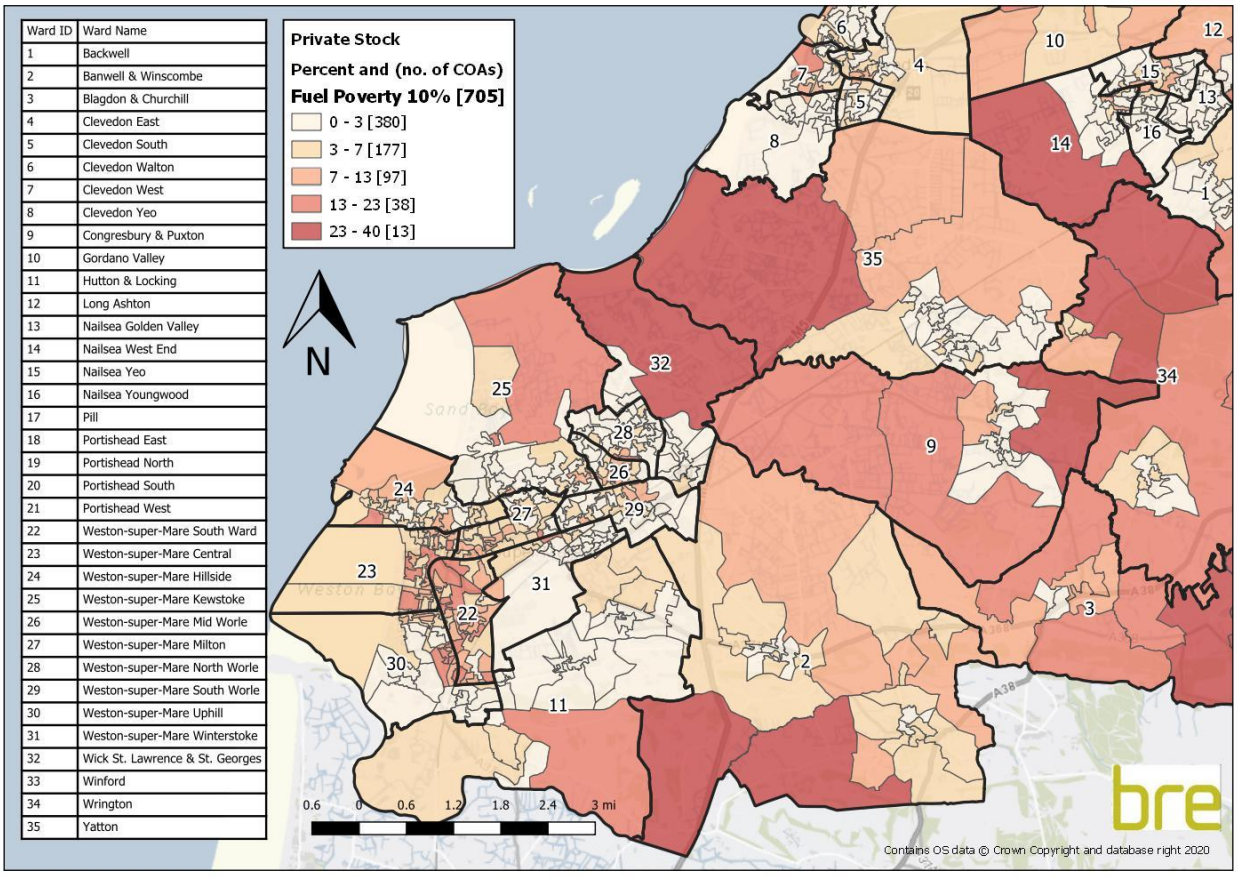
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 11: North Somerset households in fuel poverty (10% definition) – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



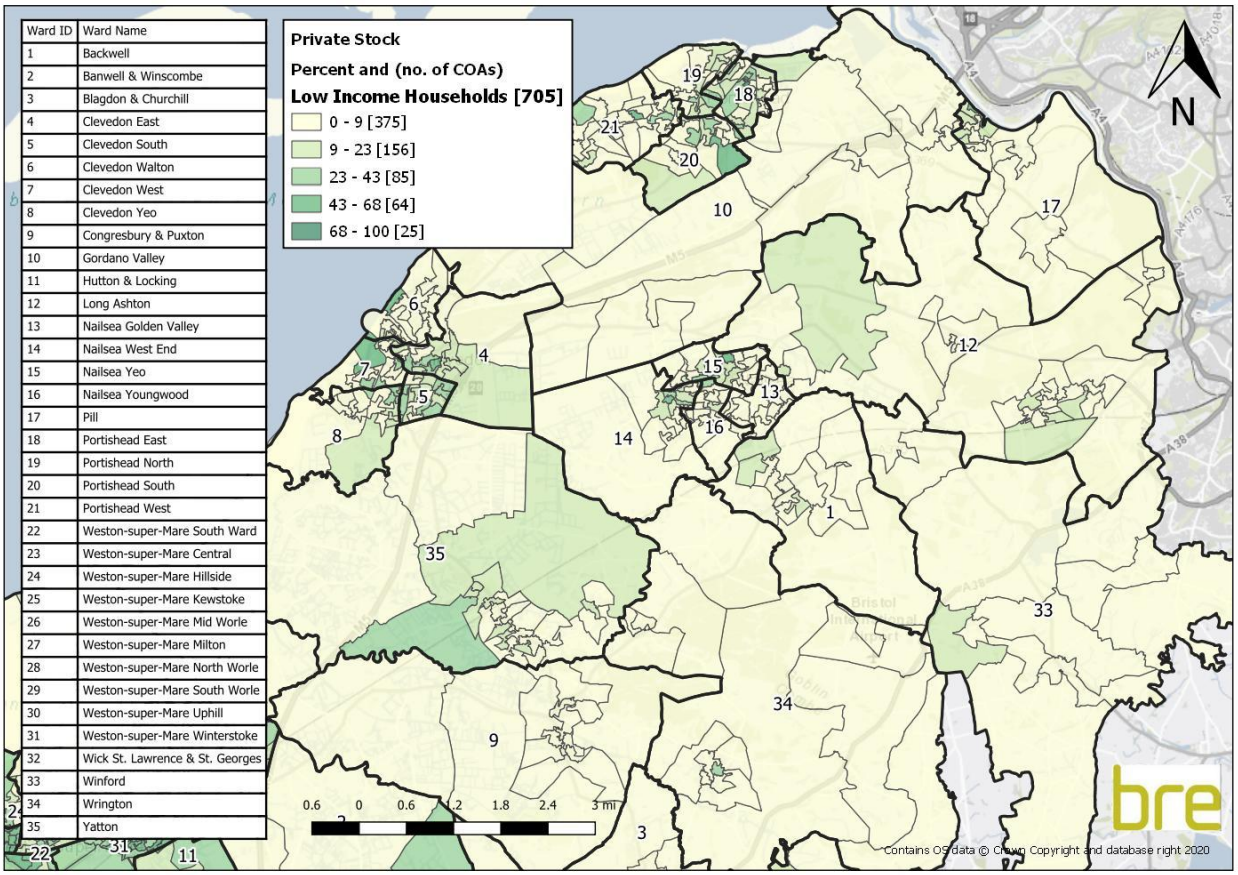
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 12: North Somerset households in fuel poverty (10% definition) – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



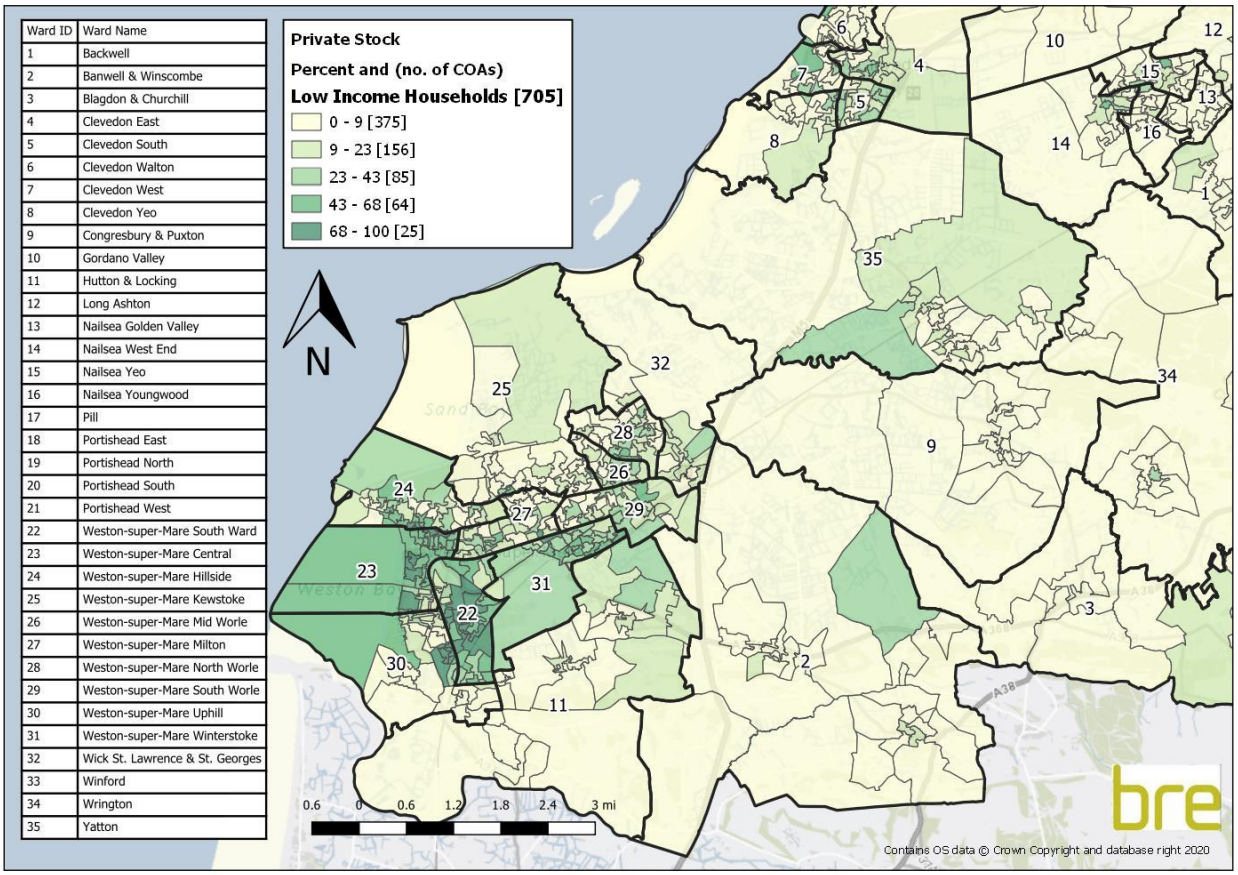
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 13: North Somerset households in low income – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



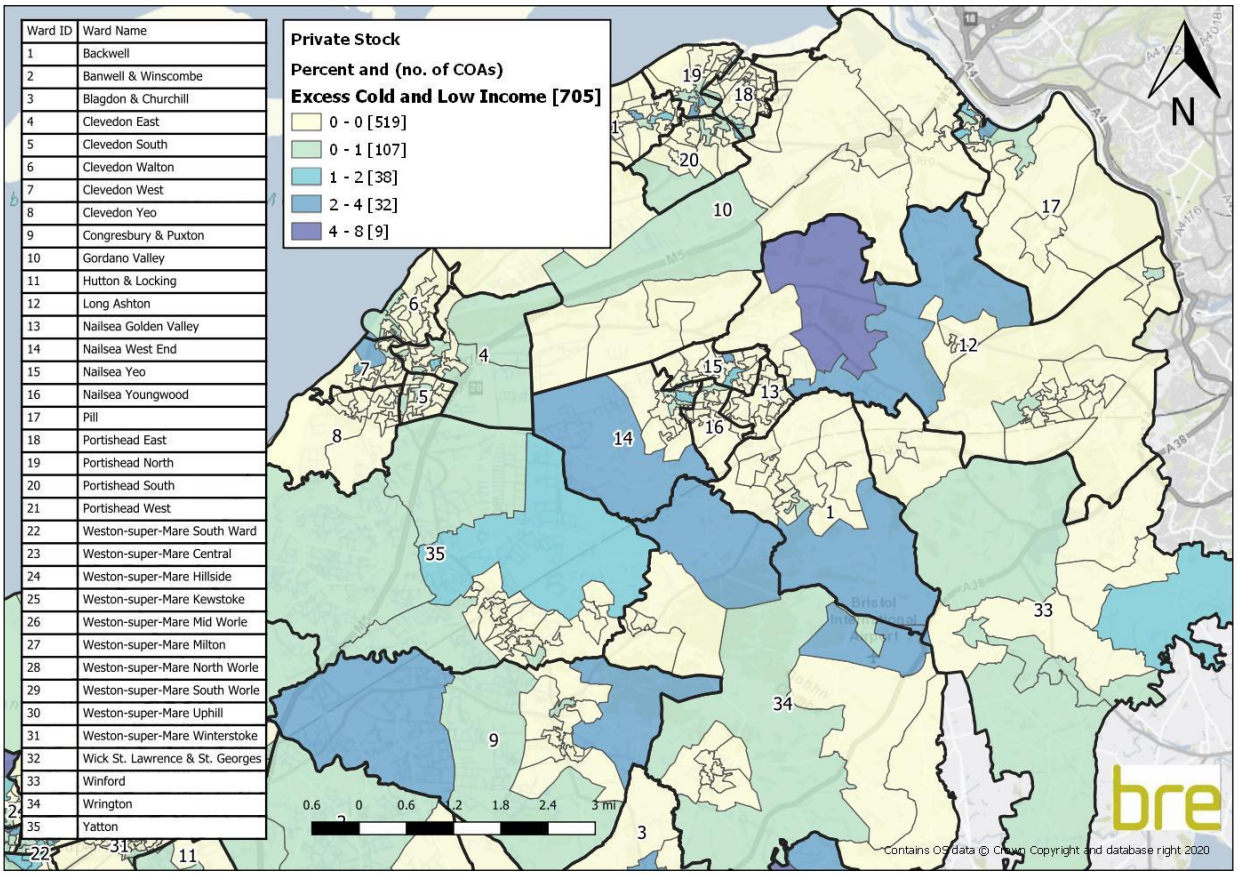
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 14: North Somerset households in low income – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



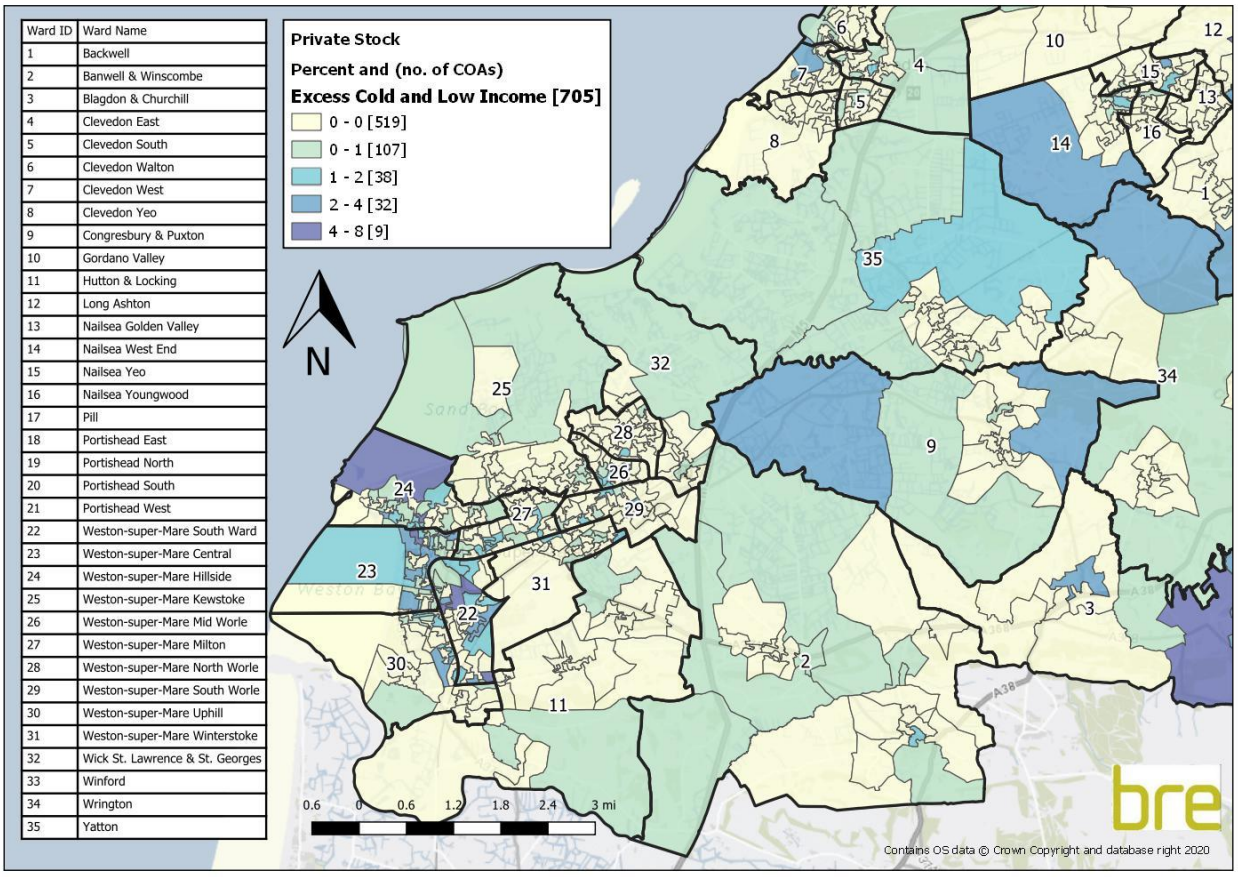
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 15: North Somerset households with excess cold and in low income – private stock in the north.
N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.
Return to main report



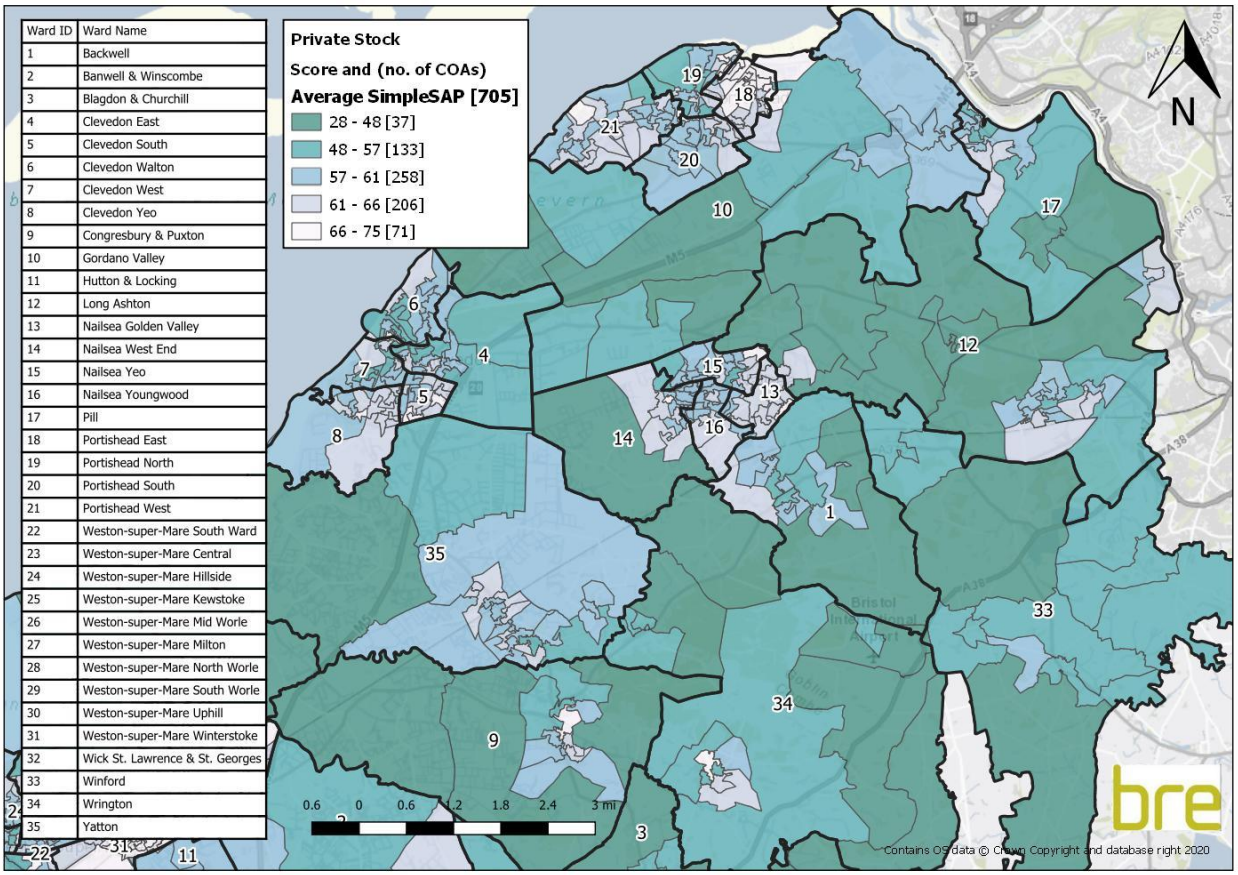
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 16: North Somerset households with excess cold and in low income – private stock in the south.
N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.
Return to main report



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

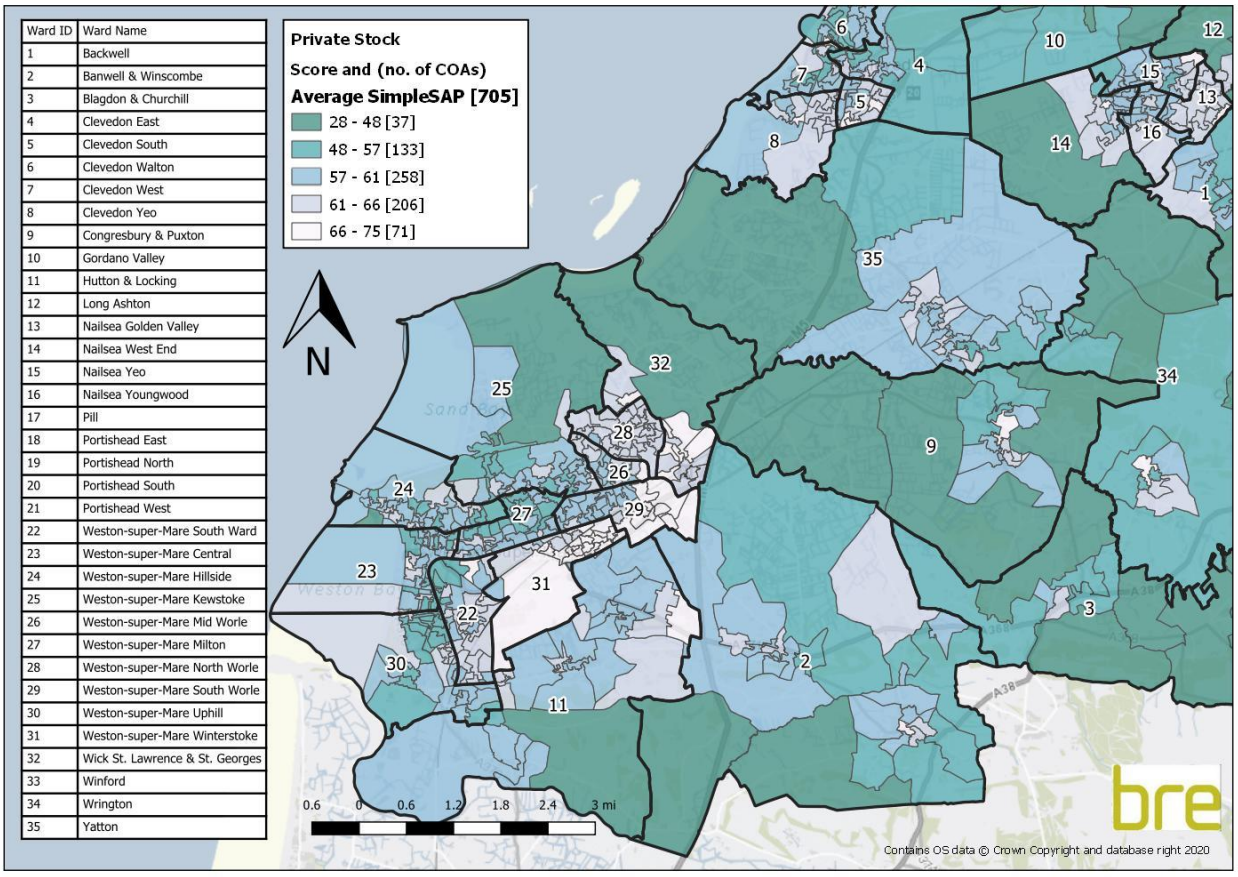
Map D. 17: North Somerset average SimpleSAP households – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



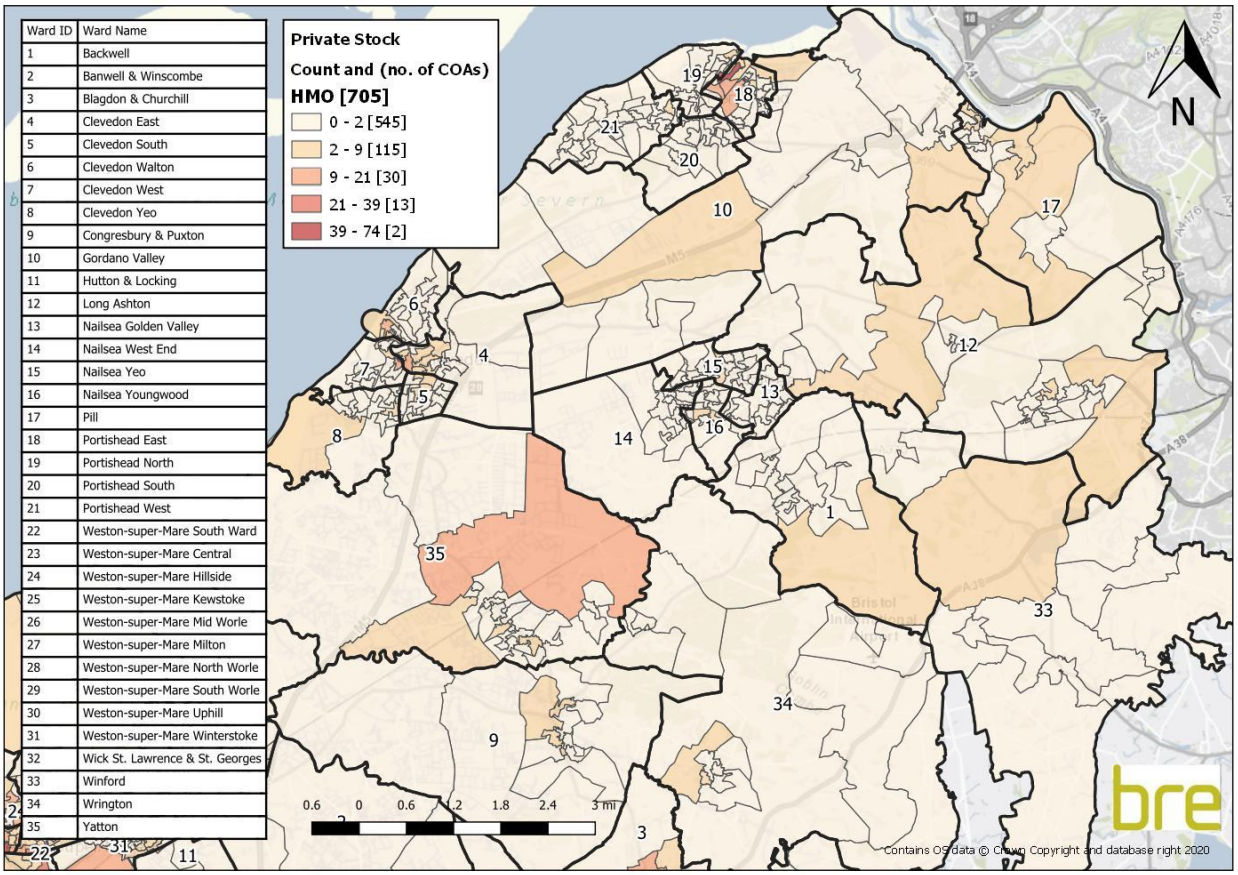
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 18: North Somerset average SimpleSAP households – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

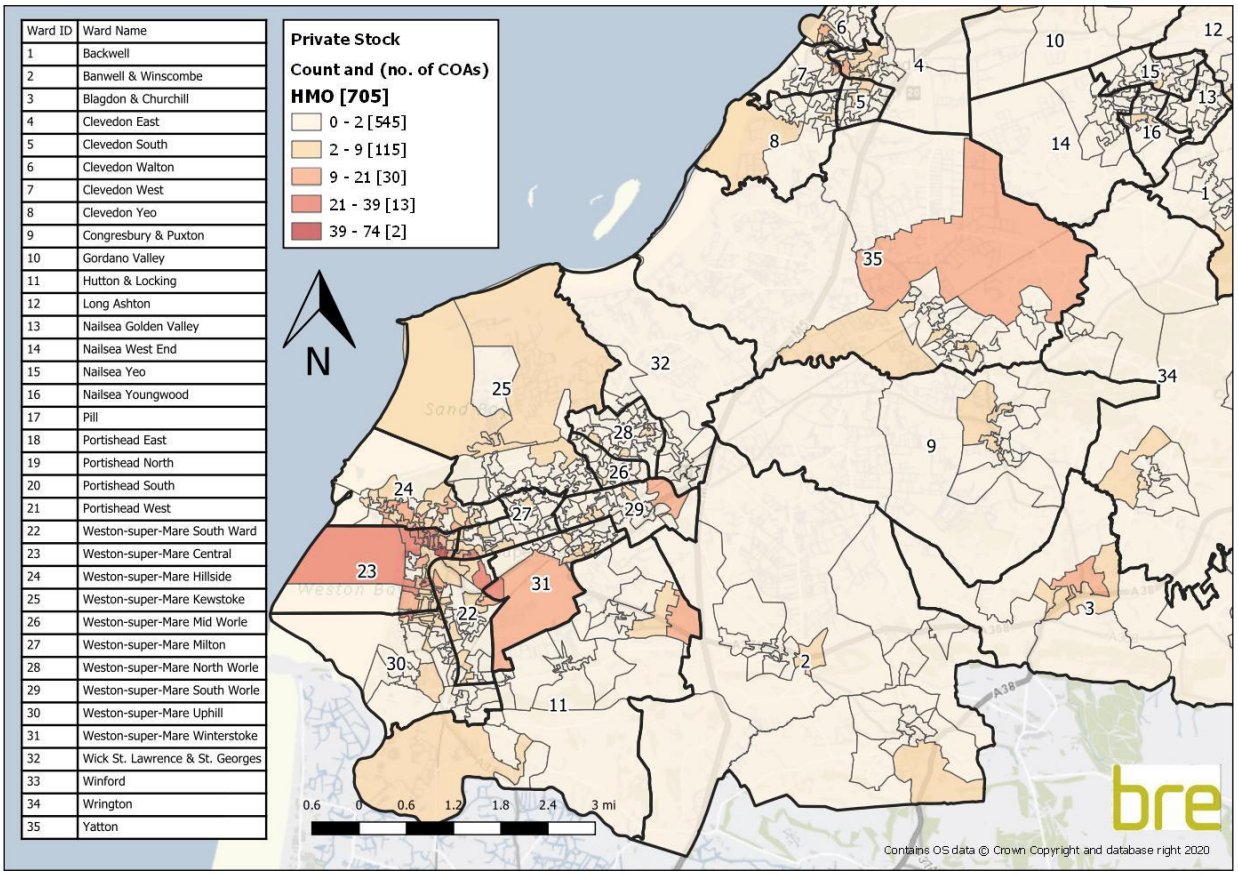


Map D. 19: North Somerset HMOs in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



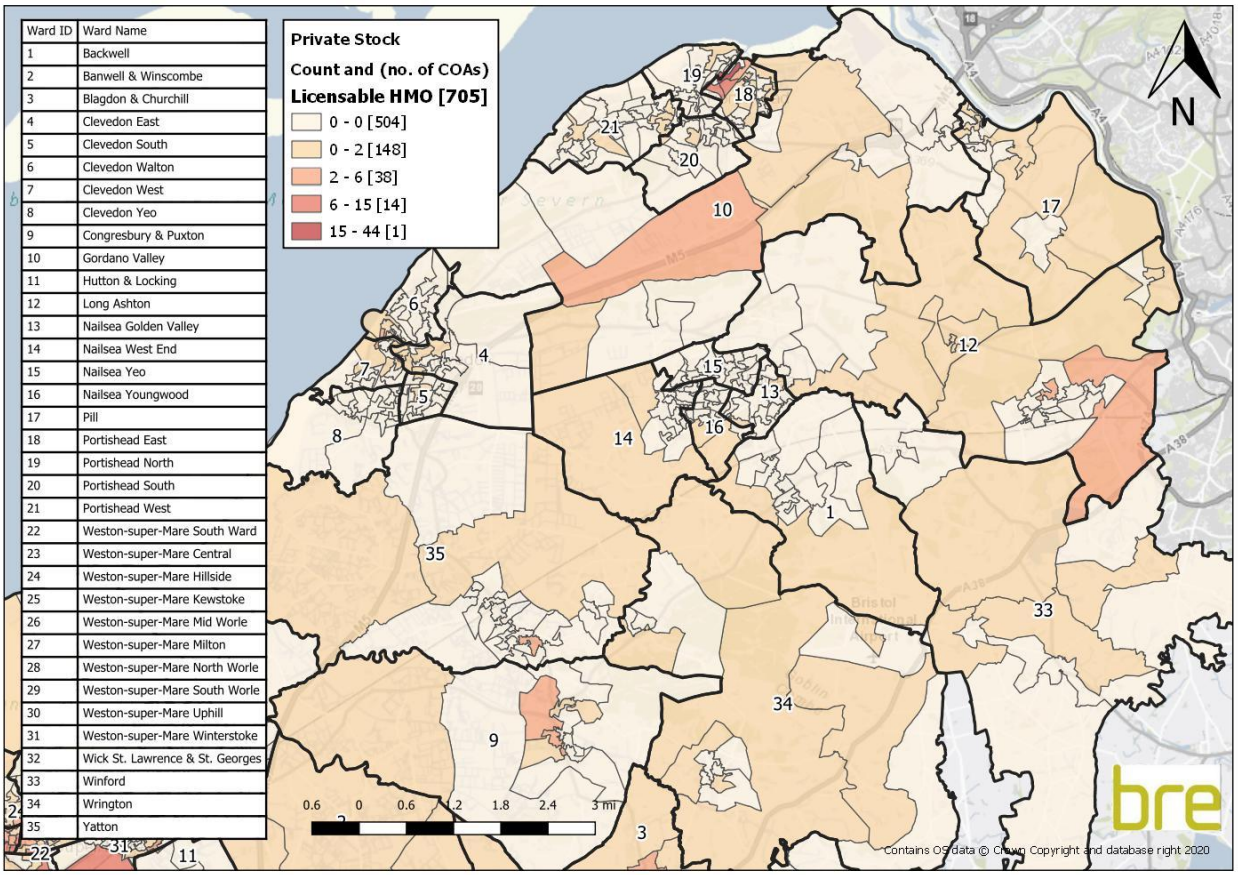
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 20: North Somerset HMOs in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

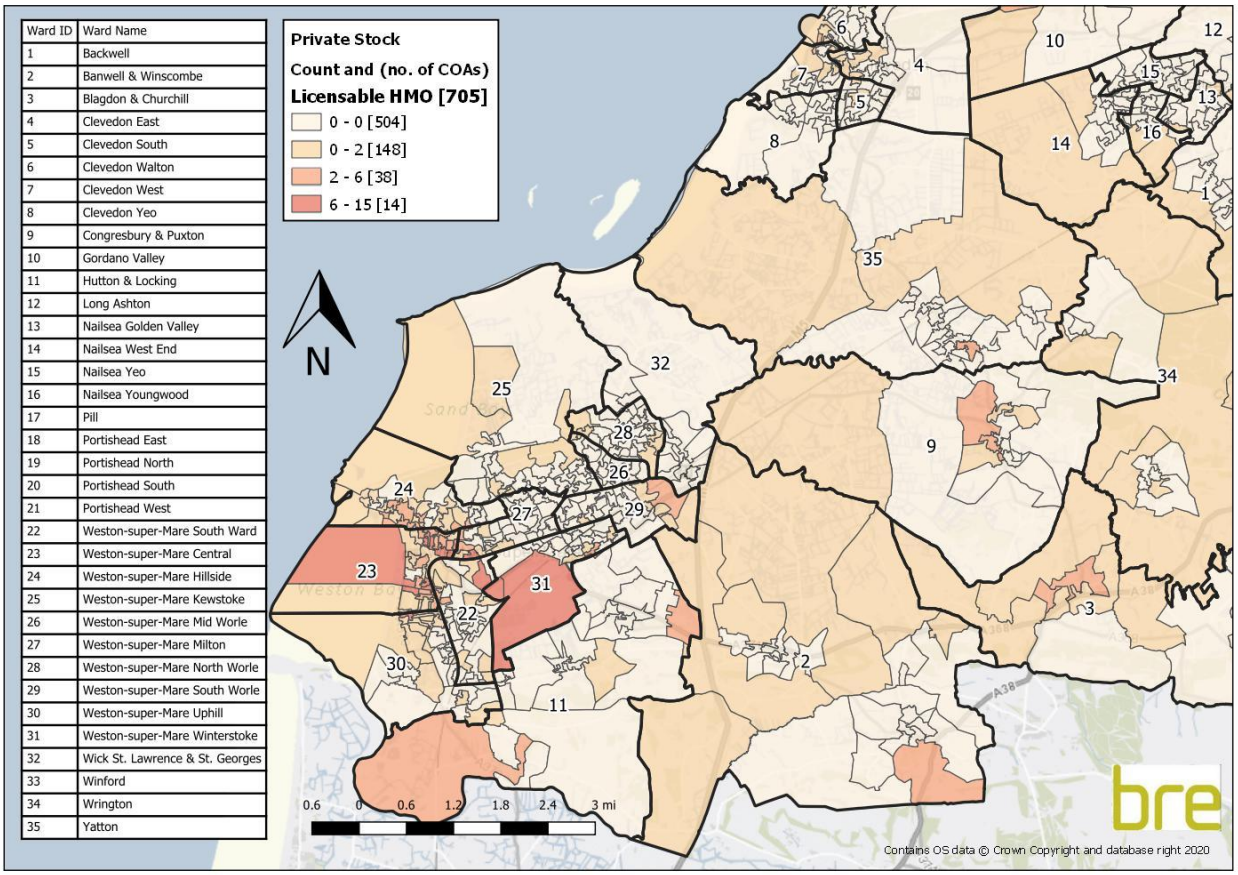
Map D. 21: North Somerset mandatory licensable HMOs in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



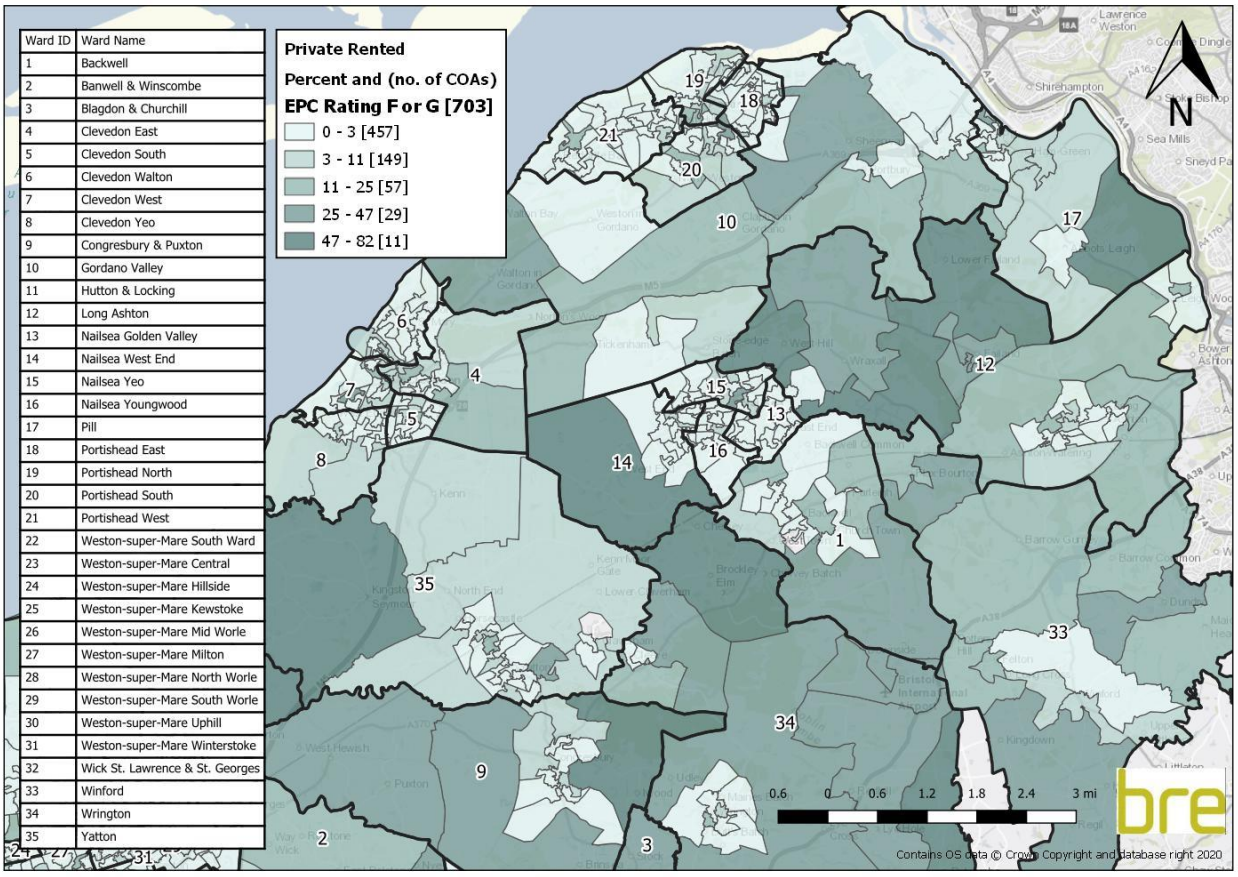
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 22: North Somerset mandatory licensable HMOs in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

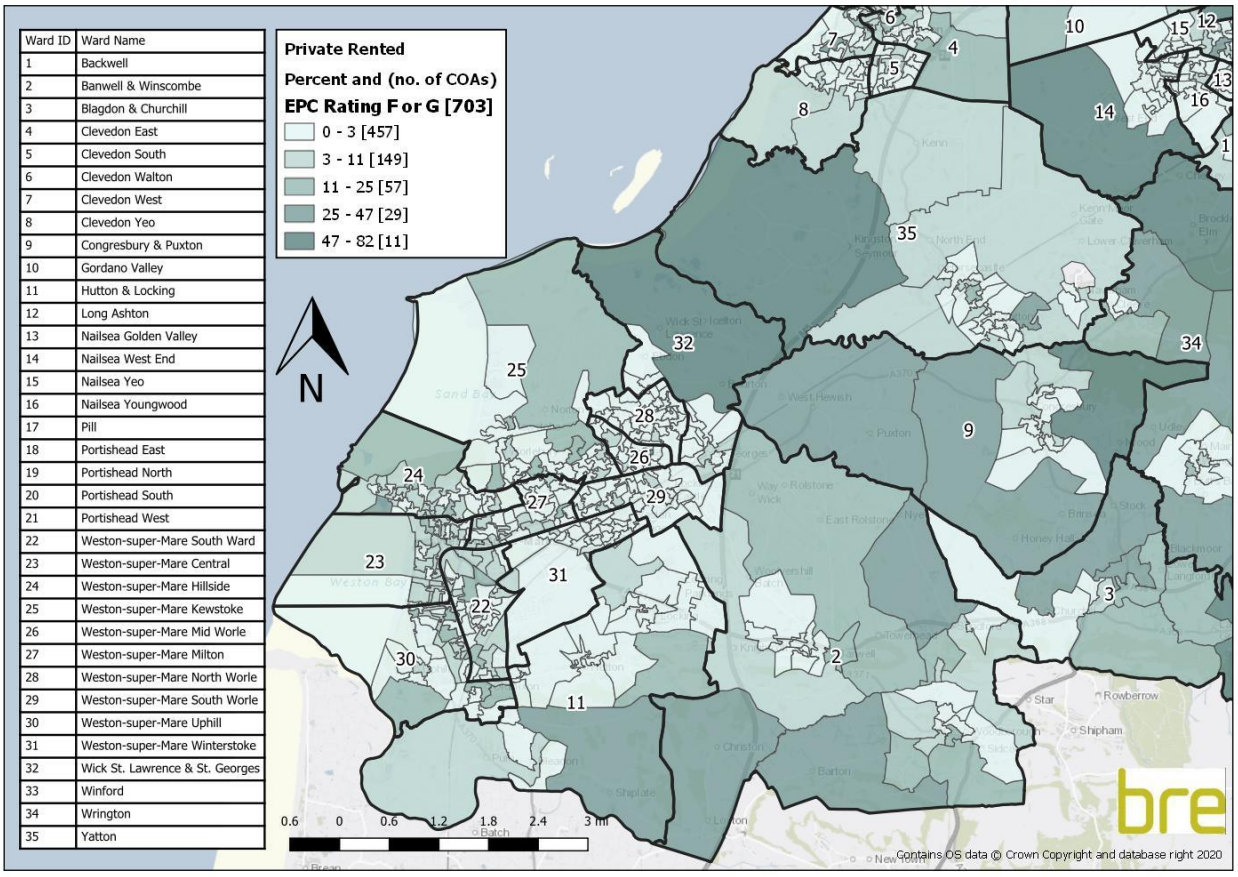


Map D. 23: North Somerset households with EPC ratings F or G – private rented in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



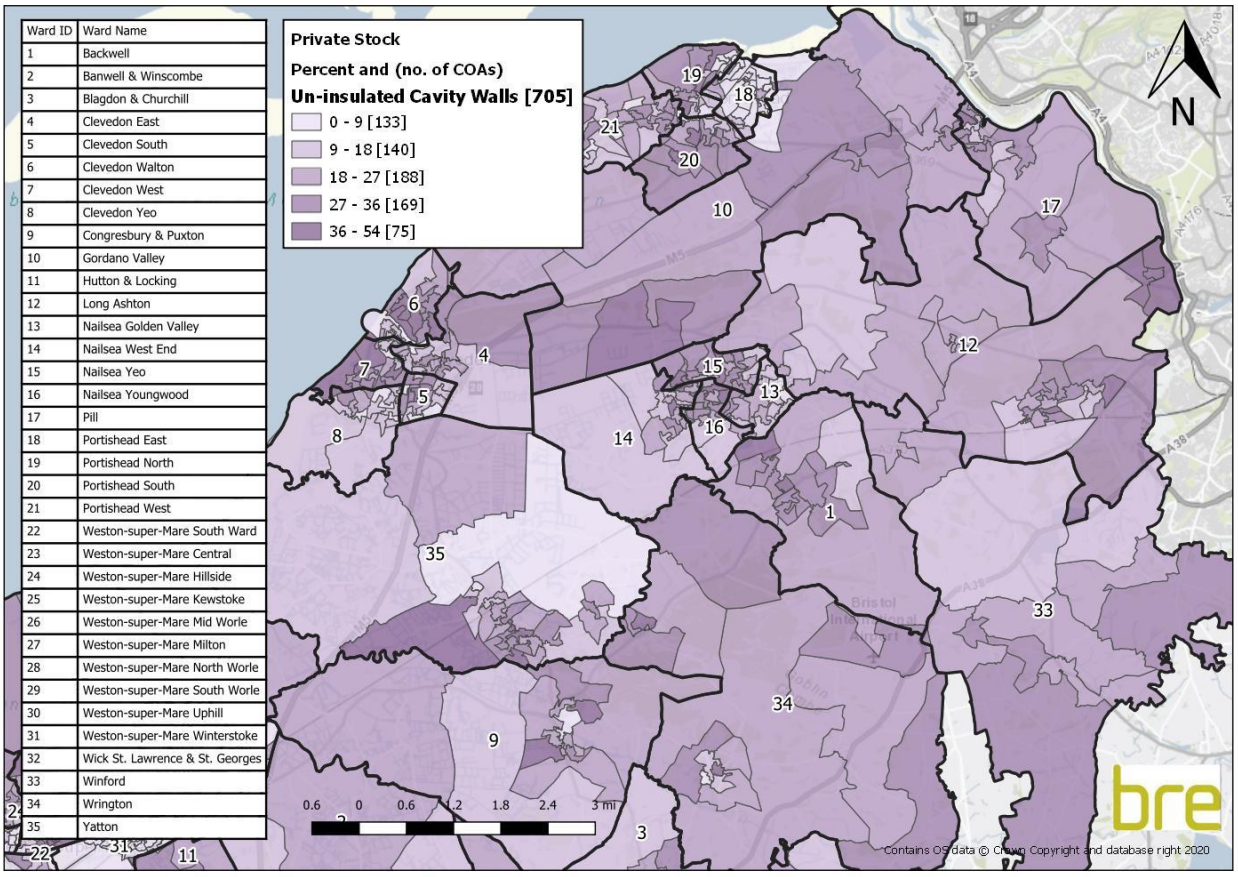
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 24: North Somerset households with EPC ratings F or G – private rented in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



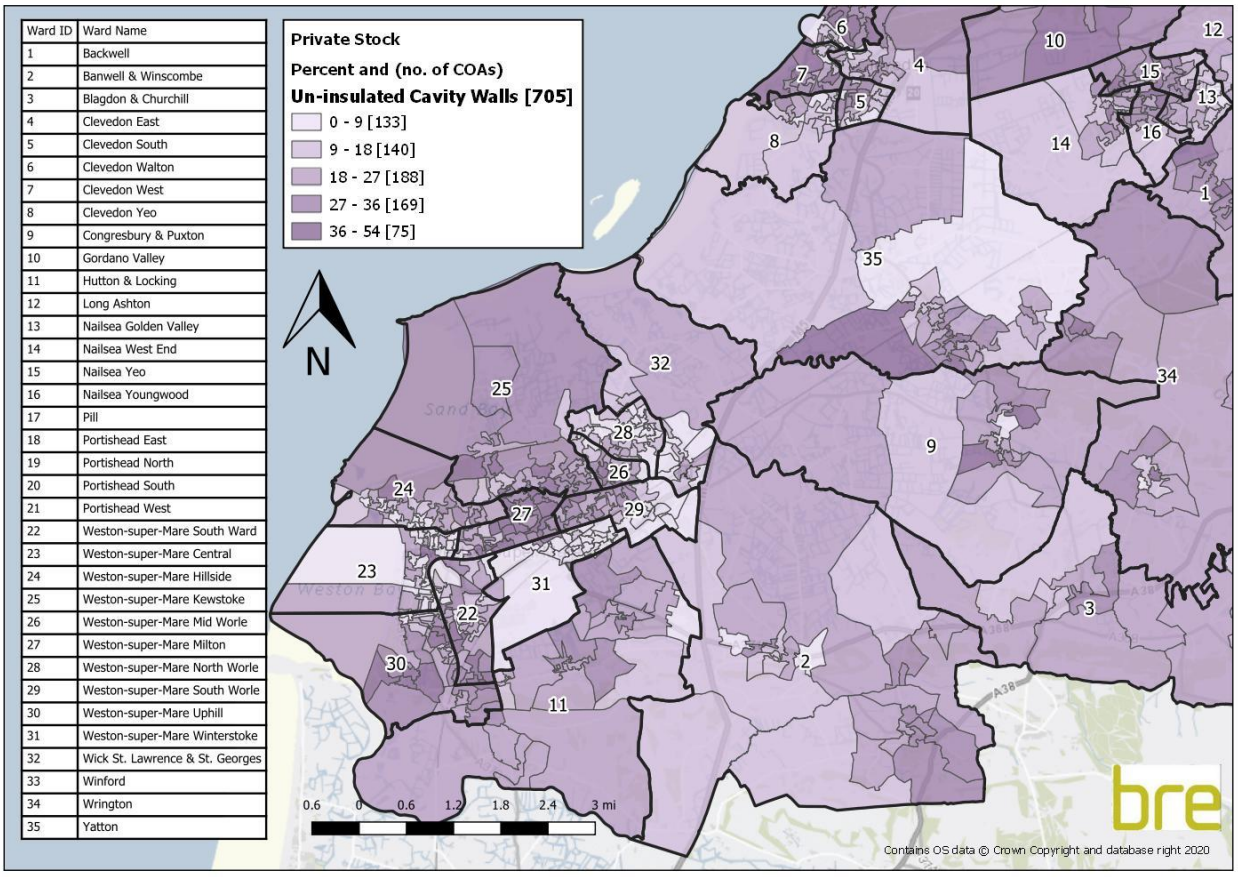
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 25: North Somerset un-insulated cavity wall households – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound*. *Return to main report*



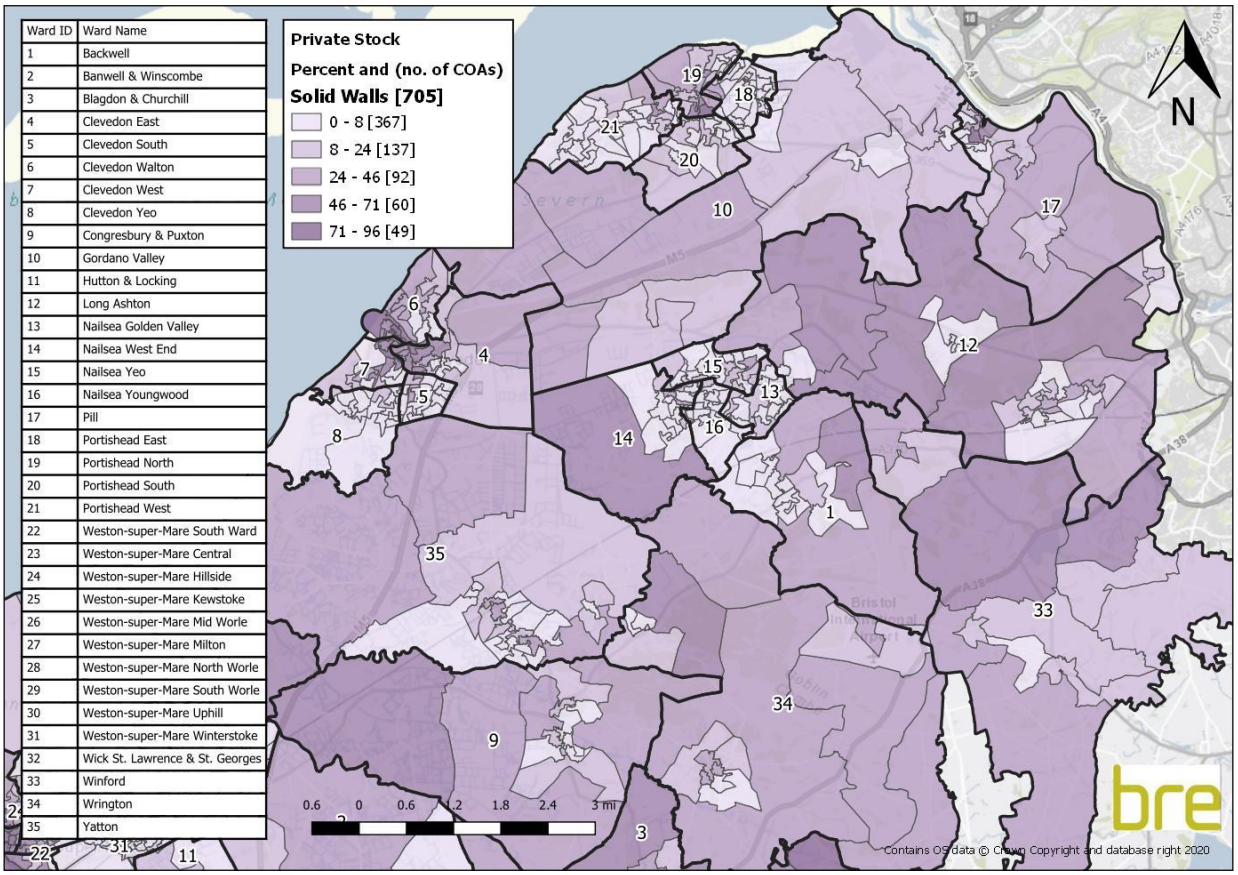
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 26: North Somerset un-insulated cavity wall households – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



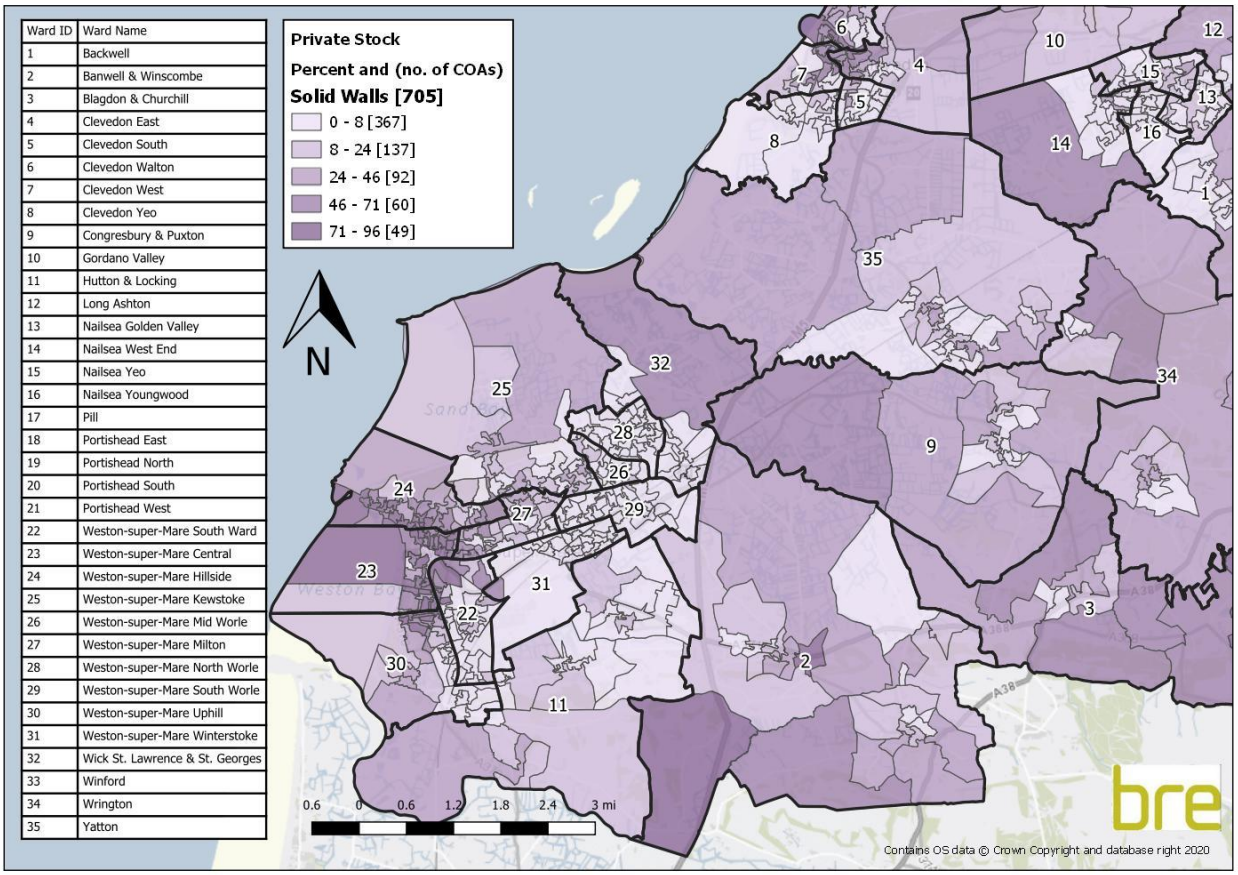
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 27: North Somerset solid wall households– private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



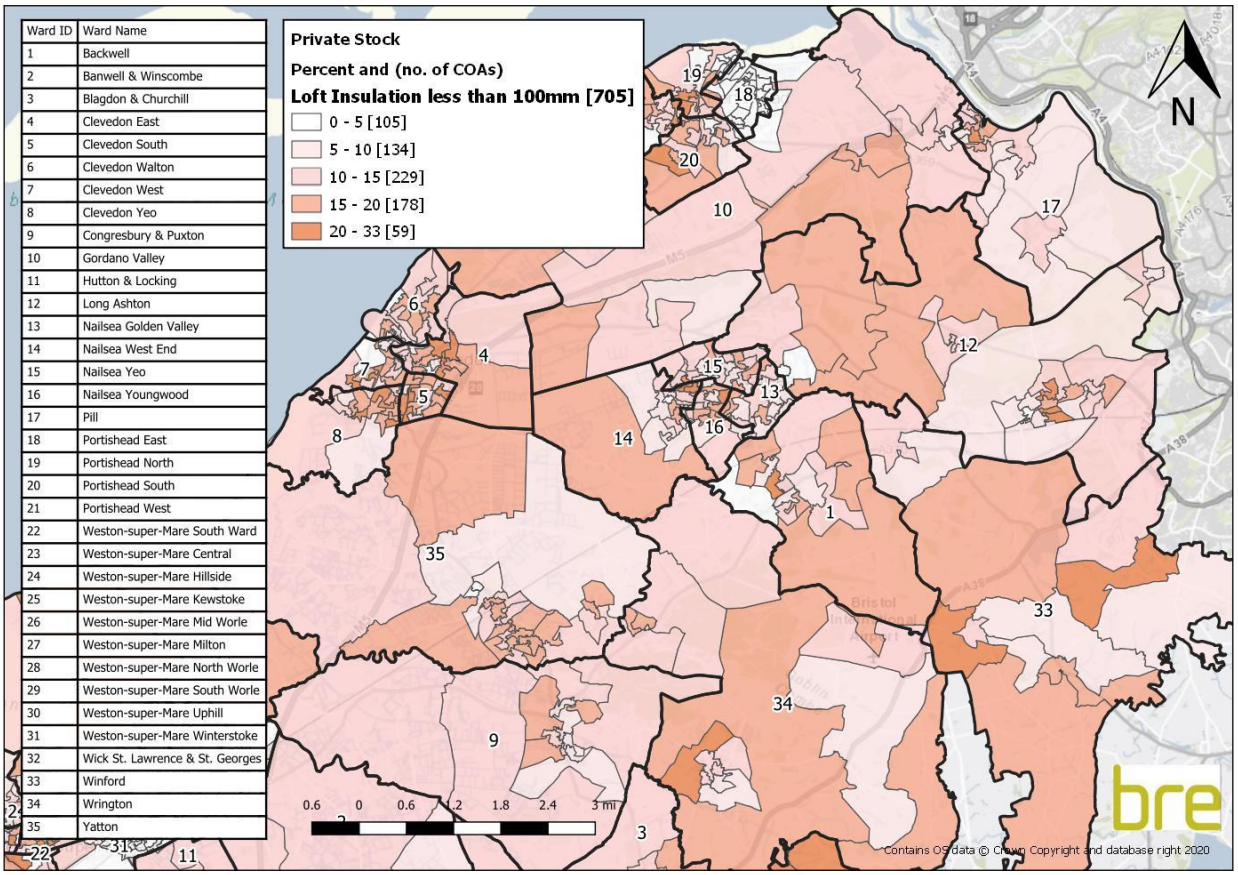
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 28: North Somerset solid wall households– private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

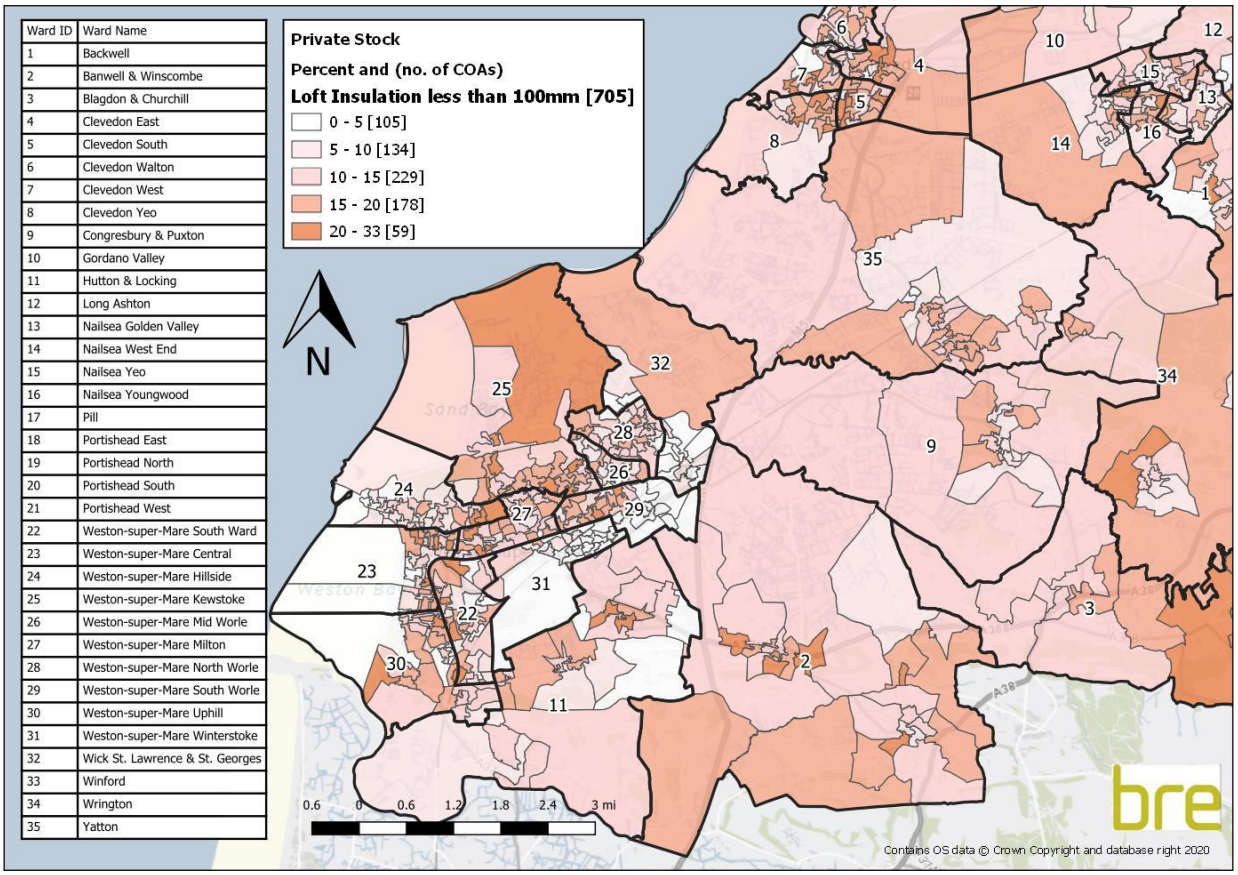
Map D. 29: North Somerset households with less than 100mm loft insulation – private stock in the north.
N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.
Return to main report



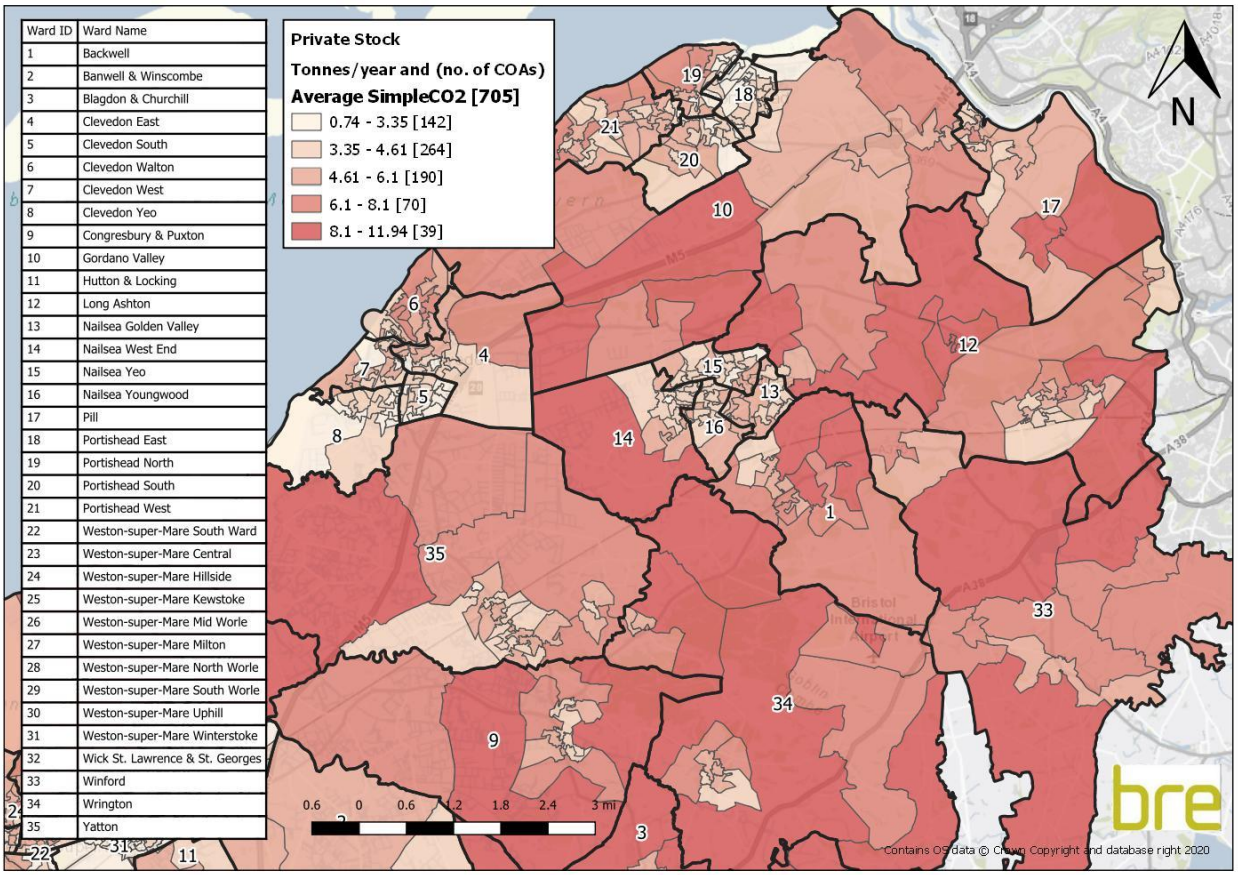
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 30: North Somerset households with less than 100mm loft insulation – private stock in the south.
N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.
Return to main report

Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

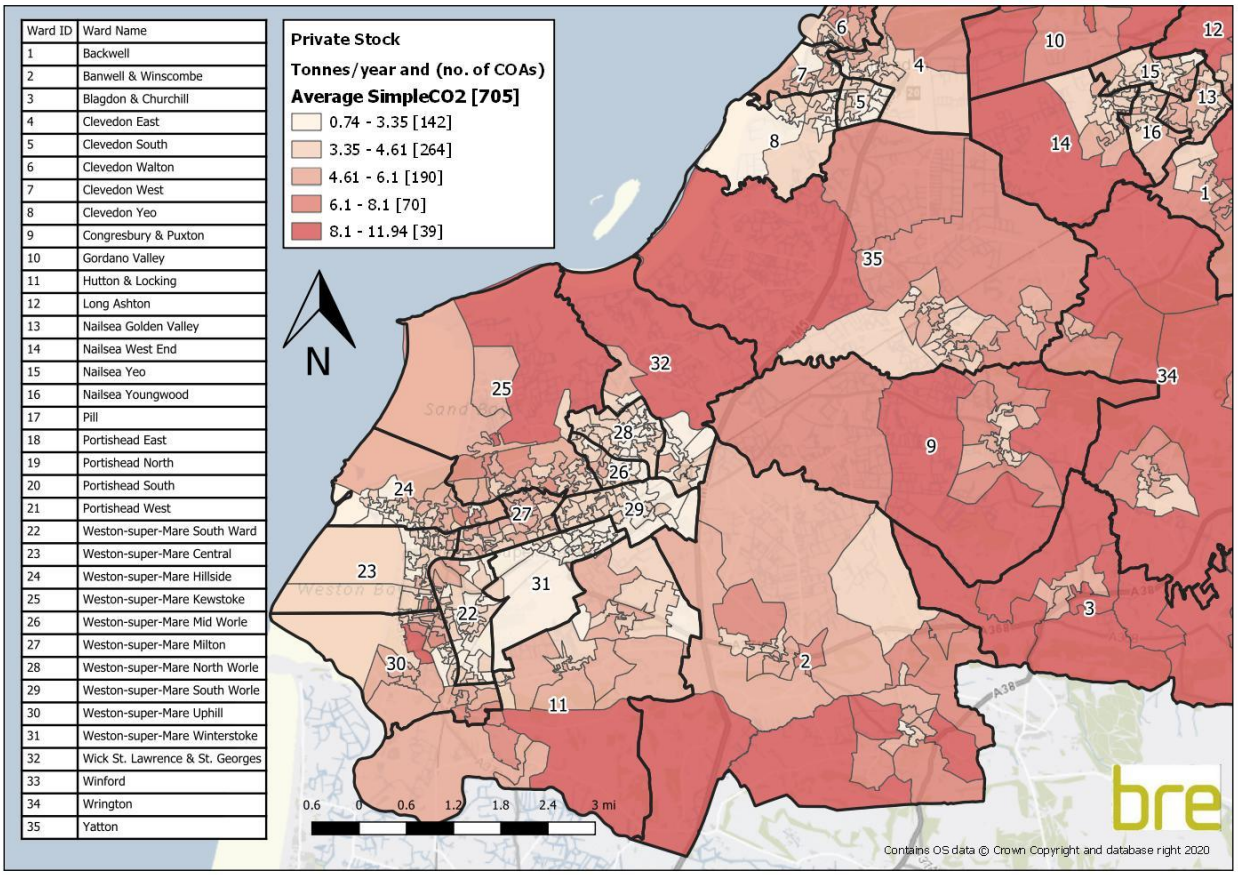


Map D. 31: North Somerset household SimpleCO2 – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



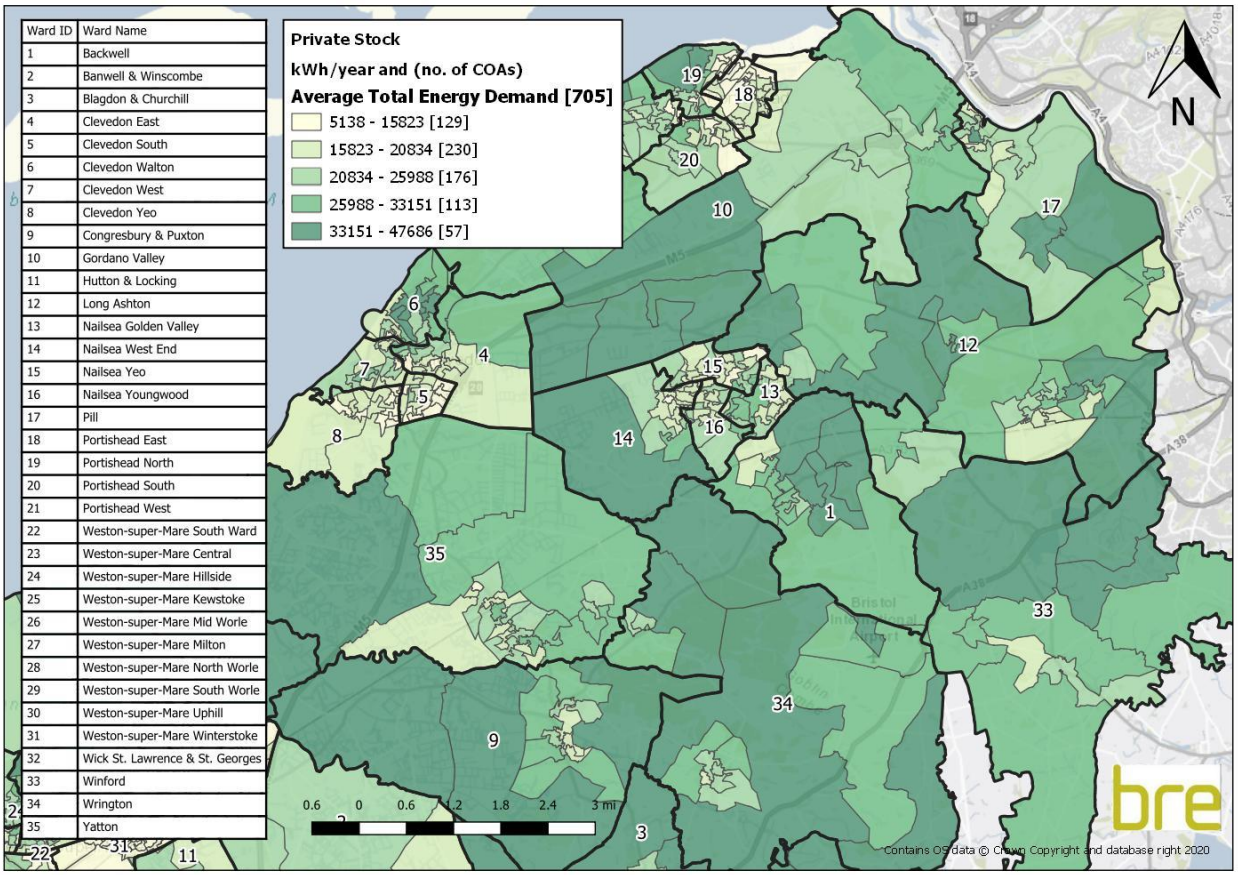
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 32: North Somerset household SimpleCO2 – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



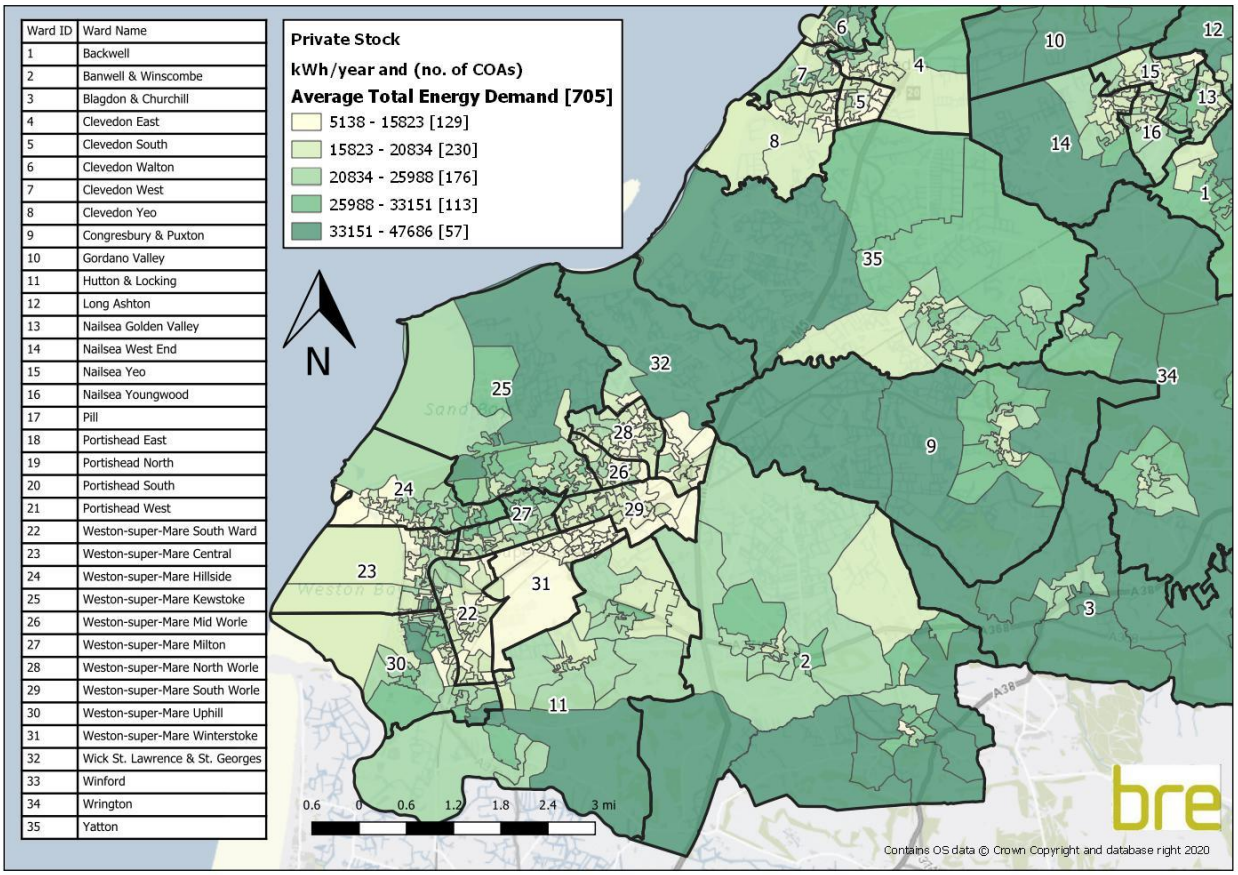
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 33: North Somerset total energy demand – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



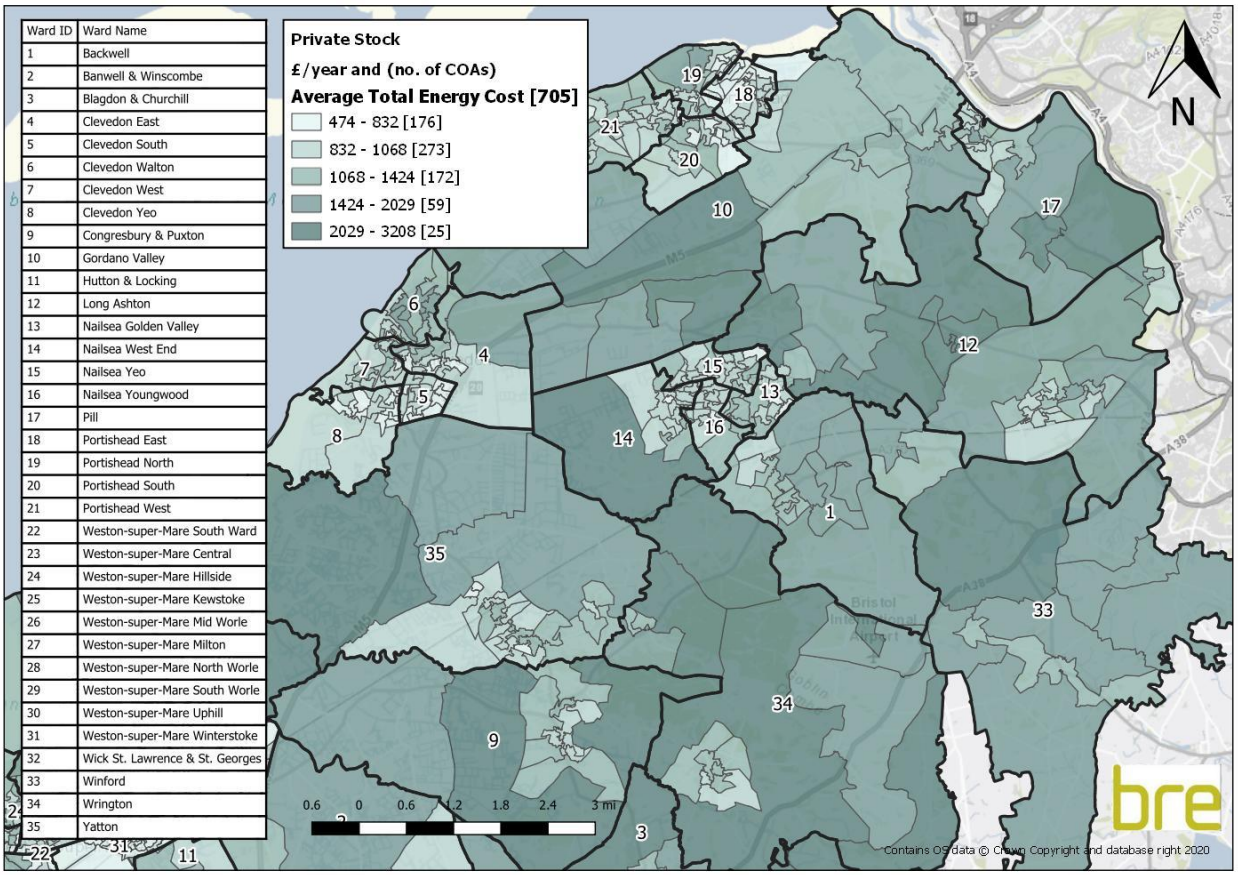
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 34: North Somerset total energy demand – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



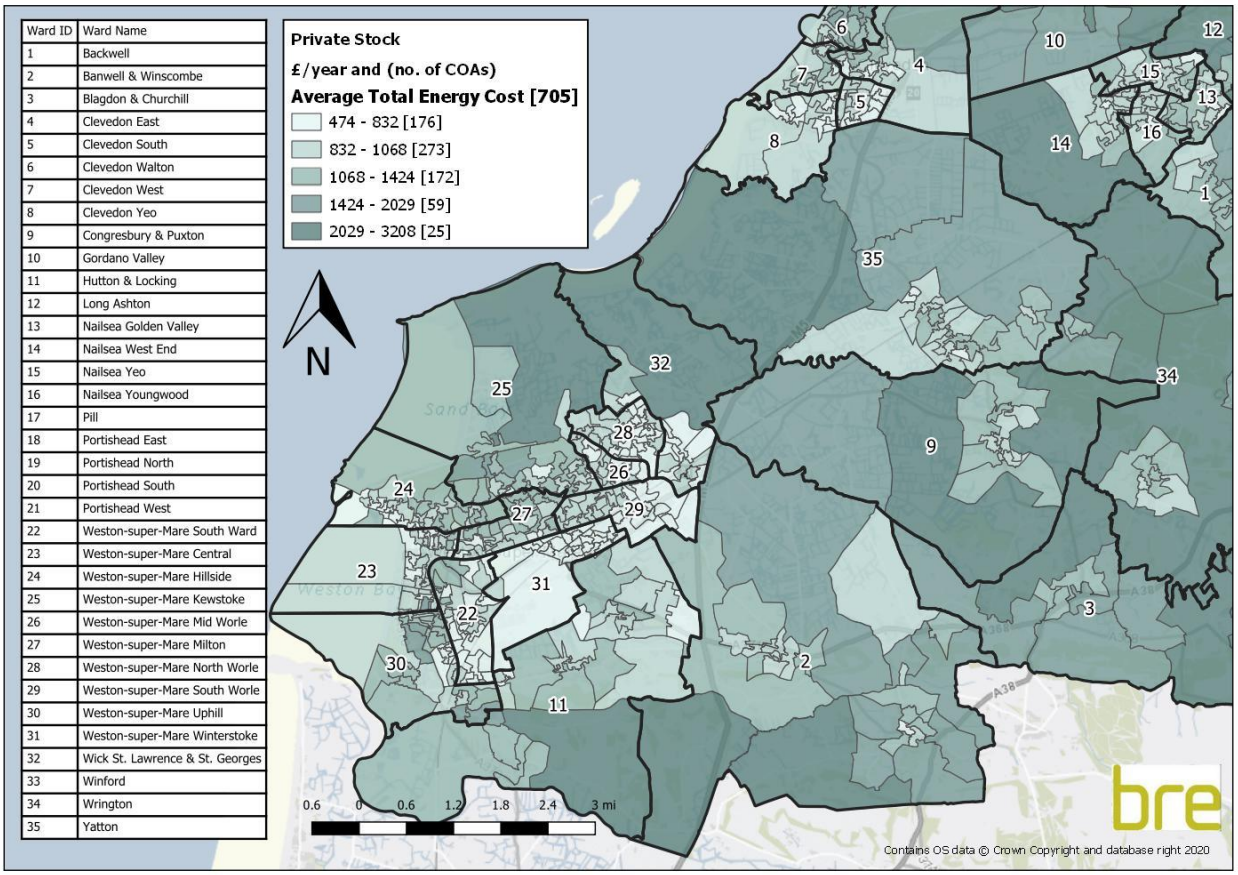
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 35: North Somerset total energy cost – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



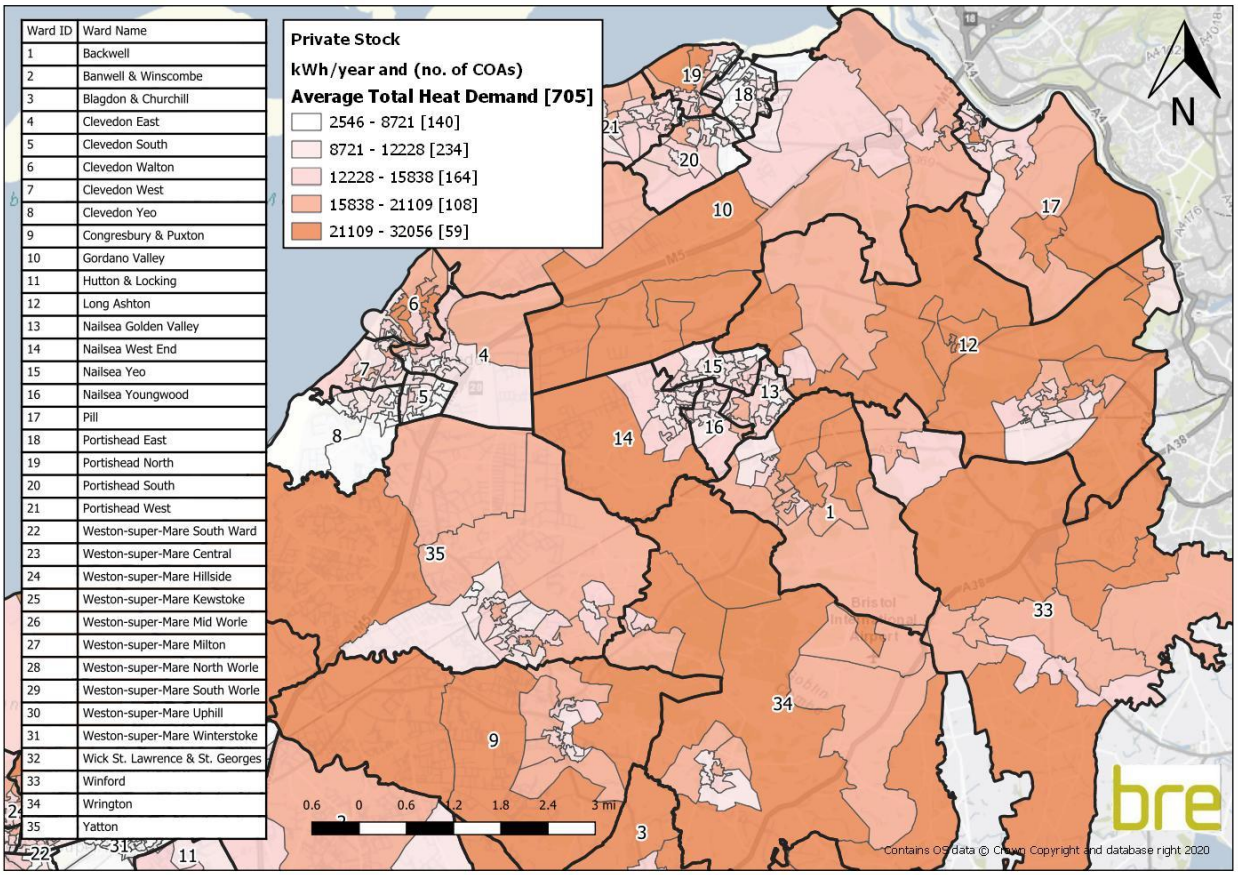
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 36: North Somerset total energy cost – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



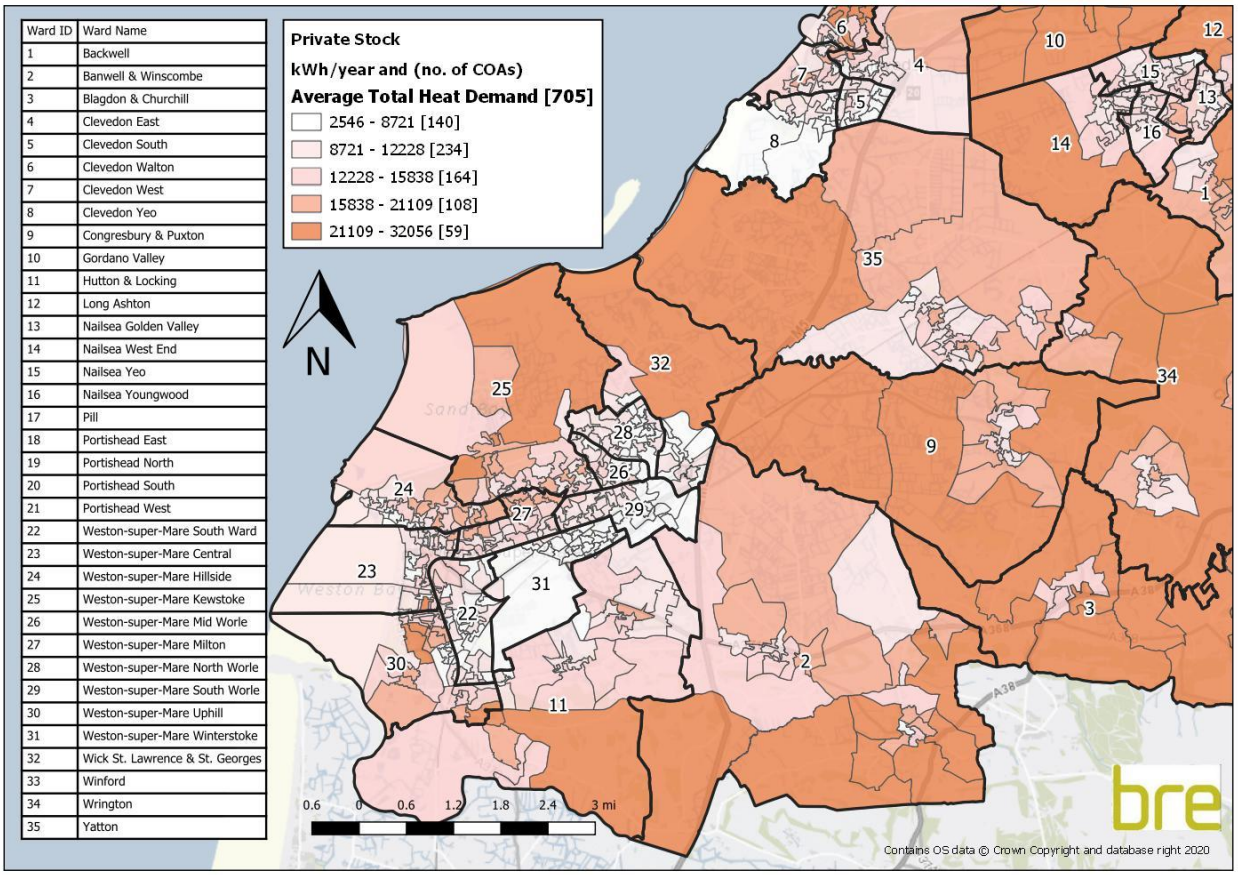
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 37: North Somerset total heat demand – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



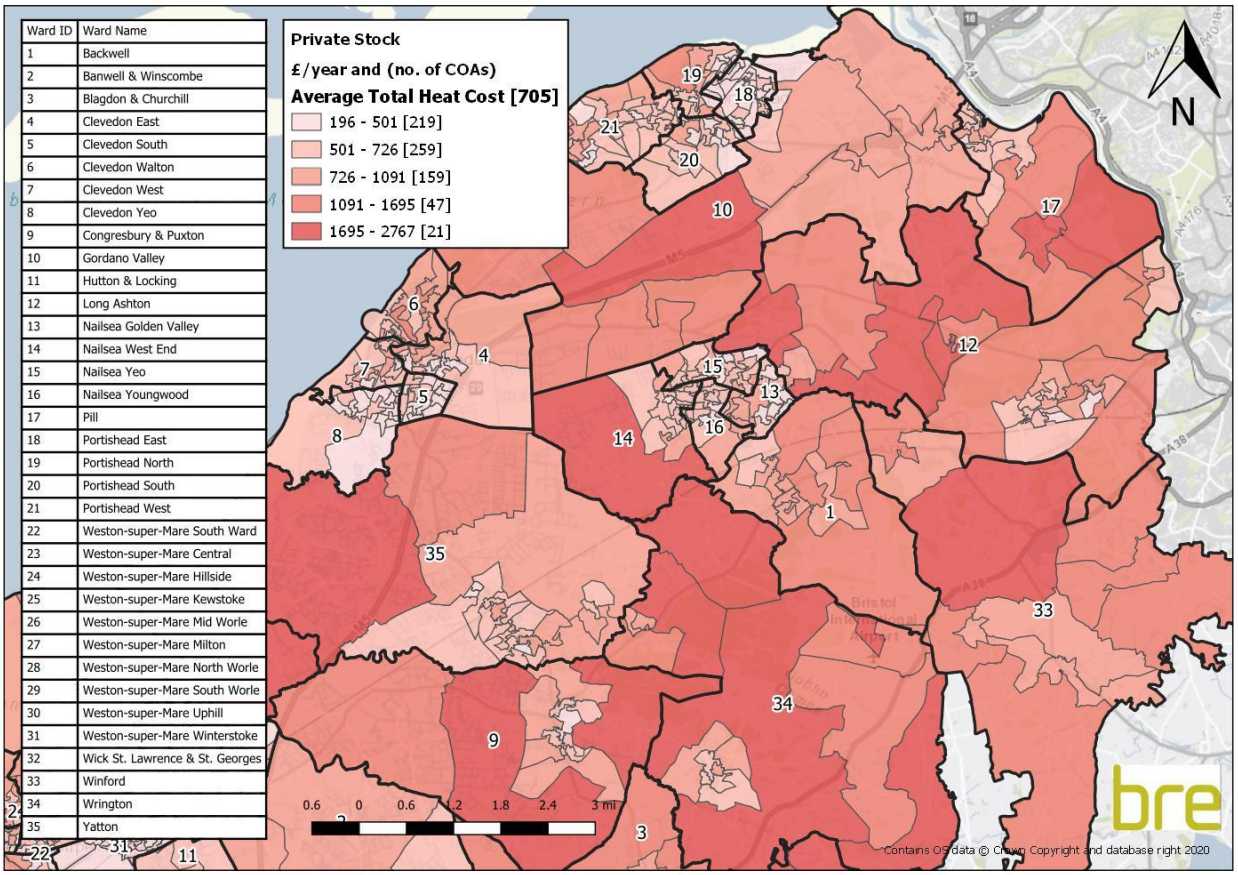
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 38: North Somerset total heat demand – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* *Return to main report*



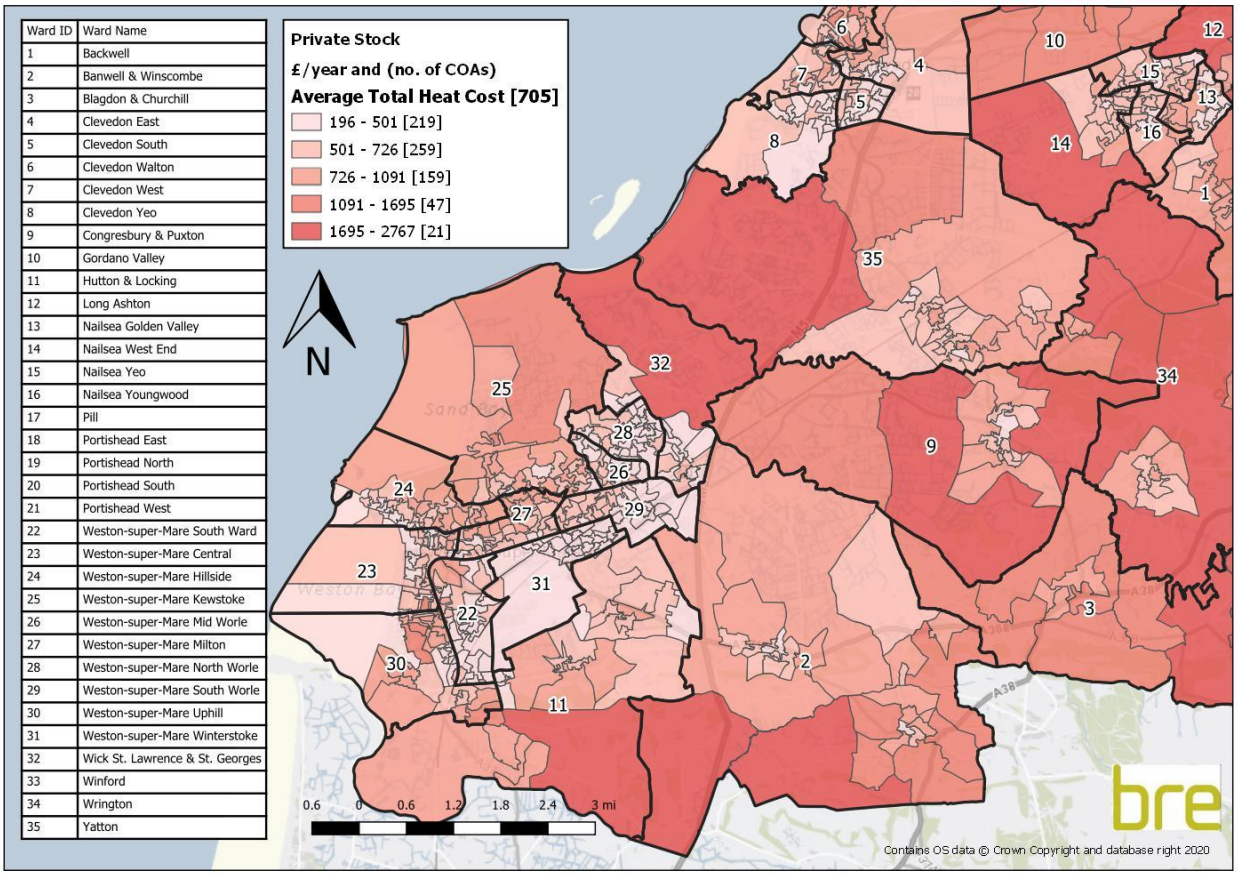
Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 39: North Somerset total heating cost – private stock in the north. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

Map D. 40: North Somerset total heating cost – private stock in the south. *N.B. in the legend, values are greater than the lower bound and less than or equal to the upper bound.* Return to main report



Ward ID	Ward Name
1	Backwell
2	Banwell & Winscombe
3	Blagdon & Churchill
4	Clevedon East
5	Clevedon South
6	Clevedon Walton
7	Clevedon West
8	Clevedon Yeo
9	Congresbury & Puxton
10	Gordano Valley
11	Hutton & Locking
12	Long Ashton
13	Nailsea Golden Valley
14	Nailsea West End
15	Nailsea Yeo
16	Nailsea Youngwood
17	Pill
18	Portishead East
19	Portishead North
20	Portishead South
21	Portishead West
22	Weston-super-Mare South Ward
23	Weston-super-Mare Central
24	Weston-super-Mare Hillside
25	Weston-super-Mare Kewstoke
26	Weston-super-Mare Mid Worle
27	Weston-super-Mare Milton
28	Weston-super-Mare North Worle
29	Weston-super-Mare South Worle
30	Weston-super-Mare Uphill
31	Weston-super-Mare Winterstoke
32	Wick St. Lawrence & St. Georges
33	Winford
34	Wrington
35	Yatton

bre

Glossary of terms

BREDEM	BRE Domestic Energy Model
Category 1 hazard	Hazards with a HHSRS score of > 1,000. A dwelling with a category 1 hazard is considered to fail the minimum statutory standard for housing
CLG	Department for Communities and Local Government
COA	Census Output Area
	Designed for statistical purposes, built from postcode units, approximately 125 households
Disrepair	Based on former Decent Homes Standard criteria which states that a dwelling fails this if it is not in a reasonable state of repair – this is based on the dwelling age and condition of a range of building components including walls, roofs, windows, doors, electrics, and heating systems
DLUHC	Department for Levelling Up, Housing and Communities (previously MHCLG)
ECO	Energy Companies Obligation
	Places legal obligations on the larger energy suppliers to deliver energy efficiency measures to domestic energy users
EHS	English Housing Survey
	A continuous national survey commissioned by the Department for Levelling Up, Housing and Communities (DLUHC). It collects information about people's housing circumstances and the condition and energy efficiency of housing in England
EPC	Energy Performance Certificate
	Present the energy efficiency of domestic properties on a scale of A (most efficient) to G (least efficient)
Fuel poverty	The original definition of fuel poverty states that a household is in fuel poverty if it needs to spend more than 10% of their income on fuel to maintain an adequate level of warmth (10% definition). The new definition now adopted by government is that a household is said to be in fuel poverty if they have fuel costs that are above average and were they to spend that amount they would be left with a residual income below the official poverty line (Low Income High Costs definition)
GIS	Geographic Information System
	A system designed to capture, store, manipulate, analyse, manage, and present spatial or geographical data
HHSRS	Housing Health and Safety Rating System

	A risk assessment tool to help local authorities identify and protect against potential risks and hazards to health and safety related deficiencies in dwellings, covering 29 categories of hazards
HIA	Health Impact Assessment
	A formal method of assessing the impact of a project, procedure, or strategy on the health of a population
HMO	Houses in Multiple Occupation
	An entire house or flat which is let to 3 or more tenants who form 2 or more households and who share a kitchen, bathroom, or toilet
	A house which has been converted entirely into bedsits or other non-self-contained accommodation and which is let to 3 or more tenants who form two or more households and who share kitchen, bathroom, or toilet facilities
	A converted house which contains one or more flats which are not wholly self-contained (i.e. the flat does not contain within it a kitchen, bathroom, and toilet) and which is occupied by 3 or more tenants who form two or more households
	A building which is converted entirely into self-contained flats if the conversion did not meet the standards of the 1991 Building Regulations and more than one-third of the flats are let on short-term tenancies
	In order to be an HMO the property must be used as the tenants' only or main residence and it should be used solely or mainly to house tenants. Properties let to students and migrant workers will be treated as their only or main residence and the same will apply to properties which are used as domestic refuges
HSM	Housing Stock Model
	Desktop based modelling used to determine the condition of the housing stock
Jenks' Natural Breaks	The natural breaks classification method is a data clustering method determining the best arrangement of values into different classes. It is achieved through minimising each class's average deviation from the class mean while maximising each class's deviation from the means of the other groups. The method seeks to reduce the variance within classes and maximise variance between classes thus ensuring groups are distinctive
JSNA	Joint Strategic Needs Assessment
	An assessment of the current and future health and social care needs of the local community
LACORs	Local Authority Coordinators of Regulatory Services – now renamed Local Government Regulation

LAHS	Local Authority Housing Statistics National statistics on housing owned and managed by local authorities
LIHC	Low Income High Cost Measure of fuel poverty, considers a household to be in fuel poverty if required fuel costs are above average, or if they were to spend that amount, they would be left with a residual income below the official poverty line
LLPG	Local Land and Property Gazetteer An address database maintained by local authorities
LSOA	Lower Super Output Area Designed for statistical purposes, built from census output areas, approximately 400 households
MHCLG	Ministry of Housing, Communities and Local Government
MSOA	Medium Super Output Area Designed for statistical purposes, built from lower super output areas, approximately 2,000 households
NHS	National Health Service
Older people	People over 65 for the excess cold hazard, people over 60 for the fire and falls hazards (excl. falling between levels)
OS	Ordnance Survey
Poor housing	Dwellings where a category 1 hazard is present
Private sector housing	Housing not owned by the local authority or a housing association
SAP	Standard Assessment Procedure Method system for measurement of energy rating of residential buildings.
SimpleSAP	An estimate of a residential dwelling's likely SAP score, it is not based on the full required range of data for a SAP calculation or a reduced data SAP calculation (RDSAP), it should only ever be considered an estimate of the SAP score, and used as a guide
UPRN	Unique Property Reference Number A unique 12 digit number assigned to every unit of land and property recorded by local authorities as part of their LLPG
Vulnerable persons	Persons who are more likely to be affected by the particular hazard as defined by the HHSRS Operating Guidance