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Scottish House Condition Survey: 2022 Key Findings Methodological and Technical Notes

An Accredited Official Statistics Publication for Scotland

PEOPLE, COMMUNITIES AND PLACES

Contents

Introduction

- The purpose of this document is to provide information on the definition and methods of derivation of key indicators measured through the Scottish House Condition Survey (SHCS) which apply to the reporting of 2022 data. It also provides an summary of the 2022 SHCS sample[1].

- This document is periodically updated to reflect changes in definitions and methods used in SHCS reports. The last time substantial methodological changes were made was with the reporting of 2019 data, when there was an update to energy modelling and new presentation on disrepair data.

- In the reporting of 2021 data, there was an update to fuel poverty analysis to fully meet the definition of fuel poverty as laid out in the Fuel Poverty (Targets, Definition and Strategy)(Scotland) Act 2019, the Fuel Poverty (Enhanced Heating) (Scotland) Regulations 2020 and Fuel Poverty (Additional Amount in respect of Remote Rural Area, Remote Small Town and Island Area) (Scotland) Regulations 2020. As the 2021 SHCS was published as experimental statistics the 2022 publication represents the first official statistics using the full definition of fuel poverty. This is outlined in the Fuel Poverty Section of this paper.

- The 2022 fuel poverty rates also reflect changes to Broad group eligibility for the Warm Home Discout, and include any income received through Cost of Living Payements for eligible households, and energy bill reductions through the Energy Bill Support Scheme.

- The 2022 Key Findings also includes an update to the tolerable standard including the criteria on fire and carbon monoxide alarms were added by the Housing (Scotland) Act 1987 (Tolerable Standard) (Extension of Criterion) Order 2019. This is laid out in the Tolerable Standard methodology notes and the disrepair chapter of the main publication.

[1] For a full overview of the SHS survey and corresponding SHCS physical survey see SHS 2022 Methodology & Fieldwork Outcomes

1 Methodological and Technical Notes

1.1 Survey Estimation

From 2012 the Scottish House Condition Survey (SHCS) has been a module of the Scottish Household Survey (SHS). In 2012, around a third (36%) of respondents to the SHS were invited to participate in a follow-up inspection by SHCS surveyors. This proportion has had to increase over time as the conversion rate from the social interview to the physical survey has decreased. Over half of respondents (52%) to the 2022 SHS were invited to participate in the 2022 SHCS to ensure that the required number of physical surveys were achieved.

1.1.1 Sample Sizes and Gross Dwelling Numbers

In Table 1.1 we provide the achieved sample sizes in the social interview and physical dwelling inspection follow-up for all years of the annual SHCS to 2022.

Table 1.1: Achieved sample for the social interview and physical survey and the number of occupied dwellings by survey year, 2003/04 to 2022

Survey year	Social interview (achieved sample)	Physical survey (achieved sample)	Number of occupied dwellings (thousands)
2003/4	3,870	3,090	2,269
2004/5	3,783	3,093	2,301
2005/6	3,679	3,147	2,315
2007	3,867	3,033	2,314
2008	3,763	3,015	2,331
2009	4,153	3,346	2,344
2010	3,853	3,115	2,357
2011	3,949	3,219	2,368
2012	3,813	2,787	2,386
2013	3,780	2,725	2,402
2014	3,787	2,682	2,420
2015	4,083	2,754	2,434
2016	4,220	2,850	2,452
2017	5,049	3,002	2,464
2018	4,843	2,964	2,477
2019	4,843	2,997	2,496
2020	[z]	[z]	[z]
2021	3,980	3,174	2,529
2022	5,501	2,983	2,550

Table 1.1 also shows the total number of households (occupied dwellings) in Scotland for each survey year which provides the basis for grossing up the estimates of households and dwellings in this report. These figures are produced annually by the National Records of Scotland as part of their inter-censal household estimates publication.

The SHCS is a sample survey. All survey results are estimates of the true prevalence within the population and will contain some error associated with sampling variability. The likely size of such variability can be identified, by taking account of the size and design of the sample, as described in the subsections on confidence intervals, design effects and statistical significance.

In addition to sampling variability, there are other sources of uncertainty, such as those arising from incomplete responses or failure to secure participation in the survey from each sampled household. Where non-response is not random, i.e., some types of households are less likely to participate than others, bias is introduced into the survey data. Such errors have not been quantified in this report.

In general, the smaller the sample size, the greater the likelihood the estimate may not be reflective of the true value in the population or housing stock, so more care must be taken when using smaller subsets of the survey sample for analysis. In this report estimates representing 2 or fewer cases, or where the base sample is below 30 have been suppressed.

Different types of estimates are subject to different levels of uncertainty associated with sampling and design. For example, estimates of change (i.e., figures relating to comparisons across survey years) are generally subject to greater sampling error than point-in-time estimates (i.e., figures relating to one survey year only) and such errors would be understated by the confidence intervals in Table 1.2. There is more uncertainty associated with complex measures, such as the fuel poverty rate and this is not quantified in this report or reflected by the confidence intervals in Table 1.2.

1.1.2 Confidence Intervals

By convention, a 95% confidence interval is used to quantify the variability of a sample estimate, under which there is a 1 in 20 chance that the true value will fall outside the given confidence interval.

Table 1.2 shows the 95% confidence limits for estimates of proportions based on sub-samples of various sizes before design effects are considered.

Table 1.2: 95% confidence limits for estimates of proportions based on sub-samples of various sizes (excluding design effects)

Sub-sample size	Estimate of 10% or 90%	Estimate of 20% or 80%	Estimate of 30% or 70%	Estimate of 40% or 60%	Estimate of 50%
100	5.9%	7.8%	9.0%	9.6%	9.8%
250	3.7%	5.0%	5.7%	6.1%	6.2%
500	2.6%	3.5%	4.0%	4.3%	4.4%
1,000	1.9%	2.5%	2.8%	3.0%	3.1%
1,500	1.5%	2.0%	2.3%	2.5%	2.5%
2,000	1.3%	1.8%	2.0%	2.1%	2.2%
3,000	1.1%	1.4%	1.6%	1.8%	1.8%

1.1.3 Design Effects

The design effect is the ratio between the variance (average squared deviation of a set of data points from their mean value) of a variable under the actual sampling method used and the variance computed under the assumption of simple random sampling. In short, a design effect of 2 would mean doubling the size of the sample used to obtain the same level of precision as with a simple random sample; a design effect of 0.5 implies the reverse. Design effect adjustments are necessary where standard errors (and confidence intervals) are affected by the design and complexity of the survey.

Disproportionate stratification and sampling with non-equal probabilities tends to increase standard errors, giving a design effect greater than 1. However, this can be controlled by deliberately over-sampling in stratum where the item of interest is either very rare or variable. The impact of non-response weighting on standard errors tends to be, although with exceptions, comparatively limited. The sampling design of the SHCS meets the criteria above in that disproportionate stratification is applied across the 32 local authority areas with over-sampling of remote rural areas - for example in Orkney Islands and Shetland Islands. As a result, one would expect the design effect to be above 1 although only modestly so.

Table 1.3 shows the design factors (the design factor is the square root of the design effect) for all the SHCS waves since 2003/04. When using a mixture of the physical and social survey data, the physical survey design factor must be used. The physical survey design factor for the 2022 SHCS is 1.13. Since 2021 it is not possible to produce social weights as summary surveys have not been undertaken for all households in the SHCS subsample of the SHS. Therefore, it is not possible to produce a social survey design factor.

Table 1.3: Design factors for the SHCS by survey year, 2003/04 to 2022

Survey year	Physical survey design factor	Social survey design factor
2003/04	1.14	1.13
2004/05	1.18	1.17
2005/06	1.14	1.14
2007	1.13	1.11
2008	1.11	1.11
2009	1.09	1.08
2010	1.11	1.10
2011	1.12	1.11
2012	1.09	1.08
2013	1.09	1.08
2014	1.09	1.08
2015	1.10	1.08
2016	1.10	1.08
2017	1.10	1.08
2018	1.11	1.08
2019	1.12	1.08
2020	[z]	[z]
2021	1.12	[z]
2022	1.13	[z]

In general, when producing estimates at a local authority level from the SHCS, no design effect adjustment of standard errors is necessary because simple (equal interval) random sampling is carried out within each local authority.

1.1.4 Weighting

In 2022 both the SHS and SHCS resumed their historic weighting method. The full SHCS weighting methodology, including a description of physical fieldwork, data

processing, and survey response can be found in the SHS 2022 Methodology & Fieldwork Outcomes.

However, it should be noted that although the SHCS is a subset of the SHS both surveys take a slightly different approach to calibration weighting. Calibration weighting corrects for non-response bias in surveys by weighting the achieved sample so that it is consistent with known external totals.

The SHCS is primarily focused on the physical characteristics of dwellings, therefore weights are calibrated so that the weighted total of responding households match:

- The number of households in each local authority
- Dwelling age at Scotland level
- Dwelling type at Scotland level
- Urban-rural classification at Scotland level

Conversely, the SHS is focused primarily on the characteristics of the general population of Scotland. As such Households weights[2] for the SHS are calibrated that the weighted total of responding households match NRS population totals for age bands and sex within each local authority.

As the SHCS and SHS use different calibration methods weighted household counts are likely to differ between tenures. Typically, the SHCS estimates a slightly higher number of Socially rented properties than the SHS, but a lower number of private rented dwellings.

This is likely due to the different relationships between tenure and calibration methods. For example, the SHCS weighting is focused on the physical characteristics of dwelling age/type, including urban rural split, which will have a bearing on tenure results due to the association of those characteristics with certain tenure types. For instance, socially rented properties are more likely to be flats than owner occupied dwellings, while Private rented properties tend to be older. Conversely the SHS focusses on the population distribution by age/sex (adjusted to Local Authority NRS household estimates), which will have a different relationship to tenure. For example, Older households are more likely to own outright than Families, and Other households.

[2] The SHS produces three weights: Household, Random Adult, and Random School Child however the household weight is the most direct comparator to the SHCS. See SHS 2022 Methodology & Fieldwork Outcomes for a full description of SHS weights.

It should also be noted that the SHCS (nor SHS) are not designed to capture tenure as comprehensively as other formal surveys of tenure, e.g. the census. Therefore, figures in this publication may not align with National Statistics on household tenure.

For estimates of the total number of dwellings by tenure, readers are referred to the Scottish Government Housing Statistics for Scotland publication which uses information from social landlords' returns which comprehensively cover the social housing sector and therefore provides more accurate estimates of the total stock by tenure

1.1.5 Comparison to Previous SHCS Waves

The results of the 2021 SHCS External+ survey were published as experimental statistics. They are not directly comparable to SHCS face-to-face surveys and internal physical dwelling inspection results for other years and are not presented in time series data.

The results of the 2022 survey have been published as Accredited Official Statistics and are broadly comparable to 2019 and earlier years[3]. Unlike 2021, interviewers were able to resume visiting people's homes to encourage participation in the 2022 survey, as they had done in 2019 and earlier. The majority (70%) of social survey (SHS) interviews were conducted face to face, and physical inspections resumed their pre pandemic approach with internal and external surveys conducted in person by trained surveyors.

While most key measures that we would expect to remain broadly stable are in line with 2019, (see Table T6 in Methodological and Technical notes tables and figures) weighted results for tenure are slightly different to what we might expect.

The 2022 SHCS results for tenure show an increase in the proportion of owner-occupied households (+2.5 percentage points) compared to 2019, and a decrease in the proportion of social rented (-1.5 percentage points) and privately rented (-1 percentage points) households. In contrast, social housing dwelling stock administrative data (published by the Scottish Government and the Scottish Housing Regulator) indicate that the percentage of dwellings in the social sector was stable from 2017 to 2022, with the growth in the number of social dwellings over this period matching the growth in total dwelling stock over these years.

[3] This was confirmed through a review by OSR, see Ed Humpherson to Alastair McAlpine: Scottish House Condition Survey statistics – Office for Statistics Regulation (statisticsauthority.gov.uk)

Separate administrative data on the size of the private rental sector from properties registered as part of the Scottish Landlord Register suggests that the percentage of dwellings in the private rented sector decreased very slightly (by 0.4 percentage points) between 2019 and 2022. The Scottish Landlord Register provides a measure of the overall supply of privately rented properties based on the number of properties registered, although there are some limitations of this data source, such as the fact that registrations last for a period of three years and there could be a time lag in landlords de-registering properties which are no longer available for rent.

It is not currently possible to get a complete picture of the tenure of Scottish households from published sources other than the SHS. The 2022 census results, when they are published, will provide a very valuable comparison for these figures. (See tables T4a and T4b and Tables T5a and T5b in Methodological and Technical notes tables and figures for a full breakdown of these figures)

The results highlighted above could be reflective of genuine changes in the population rather than any methodological issues with the survey. They are unlikely to be due to the change in mode of interview, and the mode of approach has returned to face to face. However, response rates were lower in 2022 (44%) than they had been pre-pandemic (63% in 2019). This may have been accompanied by a small change in the pattern of non-response to the survey (with renters slightly less likely to respond to the survey than before, compared to other groups).

In general, these differences are unlikely to have a significant impact on the reported results. For those results where an impact is more likely, this is highlighted in the relevant chapter and as notes to the data tables.

1.1.6 Statistical Significance

Because the survey's estimates may be affected by sampling errors, apparent differences may not reflect real differences in the population. A difference is significant if it is so large that a difference of that size is unlikely to have occurred purely by chance.

Comparisons in this publication are tested at the 5 per cent level as described in the subsection on confidence intervals. Testing significance involves comparing the difference between two statistics (for example, the percentage of households rated as EPC band C or better for the social sector compared to the private sector) with the 95 per cent confidence limits for each of the two estimates considered.

Our approach to testing statistical significance follows that described in the Scottish Household Survey 2022 methodology and fieldwork outcomes.

In the example above (see Table EE9 in the supporting energy efficiency tables), the percentage of social sector households rated as EPC band C or better is 66% with a 95 per cent confidence interval of +/- 4 percentage points, having accounted for the design factor of 1.13 in Table 1.3. The percentage of private sector households rated as EPC band C or better is 48% with a 95 per cent confidence interval of +/- 2 percentage points. As the absolute difference between the estimates (18 percentage points) is greater than the square root of the sum of the squared confidence intervals (5 percentage points), we conclude that the difference between the estimates is statistically significant at the 5 per cent level.

1.1.7 Table Conventions

The following conventions are used in tables:

- [low] indicates a value is less than 0.5% or 500 households
- [w] indicates there are no sample cases
- [c] indicates that the base sample is too small to report (below 30 cases) or the estimate represents 2 or fewer sampled households
- [x] for not available, i.e. the data was not collected in the survey
- [z] indicates that a value is unavailable as it is not applicable

These conventions are consistent with the guidance on using symbols and shorthand when publishing data tables on public sector websites.

All numbers are rounded to the nearest 1,000 and percentages are generally rounded to the nearest whole number. Because of rounding, figures in tables and charts may not always add exactly

1.1.8 Households missing income

Although some level of item non-response is inevitable across all aspects of the social and physical surveys (e.g. where a householder refused to answer a particular question, or a surveyor could not get into a loft), in most situations this does not affect the power of the survey to produce valid and useful estimates. The exception to this is the assessment of income, where there is generally a higher proportion of item refusals.

In order for the survey to be able to produce income, a statistical process known as imputation is carried out. Imputation involves replacing missing values with the values associated with other households which have the same characteristics, defined according to the nature of the missing item.

Hot Deck imputation was used for all missing income items. In Hot Deck imputation, the sample is divided into imputation classes based on the relevant characteristics of cases and these classes contain potential donor cases. A donor case is selected at random from the imputation class and the item value for that case is assigned to the case with the missing item value. The relevant characteristics were chosen using regression analysis.

The imputation of missing income data has been carried out by the survey contractor, Ipsos.

Nevertheless, some households do not provide a complete enough response to income questions, and as such have no income data recorded. These households therefore are excluded from any analysis which reports on income.

1.2 Missing Tenure Information

Because of a routing error tenure information is not available for a small number of cases in the 2012 and 2013 surveys (46 in 2012, 42 in 2013). Unlike previous years, respondents who reported living in their property rent free were not asked from whom they rent their property. Answers to that question are required to assign respondents to one of four tenure groups and then into social or private sector categories.

This was rectified for the 2014 fieldwork and the full sample has been used when reporting on tenure for subsequent years. This introduces some discontinuities in comparing statistics for the social (or the private) sector for 2014 onwards, on the one hand, and previous years, on the other. However, these are expected to be small as the proportion of households who reported living “rent free”, and were thus excluded, in the years leading up to 2012 and 2013 ranged from 1.3% to 2.6%. For further details please refer to the respective earlier key findings reports. Tables in key findings reports from the SHCS are clear whether data for 2011 and earlier are presented including or excluding rent free cases.

1.3 Energy Models

Two domestic energy models, summarised in Table 1.4, are used to produce the energy outputs in this report. They are based on the same core methodology but have some different assumptions and calculations affecting the output values.

Table 1.4: Summary of domestic energy models used on SHCS data

Model	SAP	BREDEM 2012
Version	• SAP 2009 • SAP 2012 (RdSAP 9.92) for 2014 to 2019 • SAP 2012 (RdSAP 9.93) from 2018 onwards	• Version 1.0 for data up to 2013 • Version 1.1 for data from 2014 onwards
Outputs	• Energy efficiency ratings • Environmental impact ratings	• Fuel poverty energy use and running costs • Carbon emissions
Fuel prices	SAP standard	Based on a range of sources. For more details see Table 1 in the section on Measuring Fuel Poverty in SHCS methodology notes 2019
Occupancy	Number of occupants derived based on total floor area of the dwelling	Actual number of occupants in the dwelling
Heating regime	21°C in the main living area and 18°C elsewhere; 9 hours per weekday and 16 hours at the weekend	• For carbon emissions, as SAP • For fuel poverty energy use/running costs for 2021 onwards, as described in paragraph 50 of the SHCS methodology notes 2019

		• For fuel poverty energy use/running costs for 2012 to 2019, as described in paragraph 48 of the SHCS methodology notes 2019
Climate	East Pennines	Based on geographical location. For fuel poverty energy use/running costs postcode district-level weather data is being used for 2021 onwards
Energy end-use included	• space heating • water heating • fixed lighting • gains from renewable energy technologies	As SAP but also energy used for: • cooking • running appliances

All energy efficiency and environmental impact rating related statistics for 2022 presented in this report are based on SAP 2012 (RdSAP 9.93).

Carbon emissions are calculated based on the standard heating regime, applying carbon intensity values to each fuel type used. Emissions factors for the BREDEM 2012 model come from SAP 2012 and are provided in Table 1.5.

Table 1.5: Carbon intensity of common heating fuels, SAP 2012

Fuel	Kilograms (kg) of carbon dioxide (CO2) per kilowatt hour (kWh)
Mains gas	0.216
LPG	0.241
Oil	0.298
Coal	0.394
Anthracite	0.394
Smokeless fuel	0.433
Wood - logs	0.019
Wood - pellets	0.039
Wood - chips	0.016
Electricity	0.519

From 2018 to 2019 SAP based energy variables under SAP 2012 RdSAP v9.92 and v9.93 were reported. For 2021 onwards energy variables under SAP 2012 RdSAP v9.92 are not available. Compared to v9.92, U-values for solid, insulated stone and uninsulated cavity walls improved, whereas they declined for insulated cavity walls. As a result, the mean SAP rating under v9.93 was 0.16 SAP points less than under v9.92 in 2019 and 0.17 points less in 2018.

Over the years improvements have been made to how the BREDEM 2012 model is used to produce energy outputs from the SHCS.

From 2016 the SHCS has collected information about the presence of pre-payment meters in dwellings which allows more accurate fuel prices to be assigned to these dwellings.

From 2019 more detailed information on combi boilers has been included to improve the accuracy of calculations surrounding hot water losses. As a result, the mean BREDEM 2012 modelled energy consumption is expected to increase by around 33 kWh per year.

Furthermore, from 2019 a household’s lights and appliances are assigned as using an off-peak tariff if an off-peak electricity meter is present, even if there is no form of electric heating in the dwelling. Previously, where a household did not have a form of electric heating, the lights and appliances were assumed to use standard electricity. This change does not affect the energy consumption of a dwelling, only the fuel prices applied to the energy associated with lighting and appliance use.

From 2022 a minor bug fix, which had already been fixed retrospectively for the 2021 data, was applied to improve the modelling of non-mains gas fuelled cookers. This bug fix had no impact on SAP ratings, as cooking energy use is not a component of the SAP methodology. It is however included in the BREDEM energy consumption which is used for fuel poverty calculations. As data is not collected on the type of non-mains gas fuel used by the cooker, it is now assumed that if bulk LPG is used for space heating then it is also being used for cooking, otherwise it is assumed bottled gas is being used. The error affected 146 cases in the 2021 data and resulted in a decrease in total fuel costs of between £22 and £75 for households with normal size cookers. Households with range cookers on the other hand, had an increase in total fuel costs of approximately £32 for oil fuel ranges, £272 for solid fuel ranges and £1,383 for gas ranges.

Climate factors such as external temperature, wind speed, latitude, mean global solar irradiance and height above sea level are determined by the area in which the dwelling is located. Prior to 2021, weather data for the nine Scottish regions in Table U6 in SAP 2012 was used. From 2021 more detailed postcode district weather data is being used from Table 172 of the Product Characteristic Database (PCDB).

The impact of using postcode district weather data has been measured using data from the 2015, 2016, 2017 and 2021 Scottish House Condition Surveys. It was found that many dwellings in the achieved sample were clustered in postcode districts where the average external temperature was higher and wind speed was lower than the regional averages previously used. As expected, a decrease in wind speed (which is most likely to be affected by local geography) combined with an increase in external temperature resulted in a decrease in mean energy consumption and mean annual running costs.

1.4 Boilers

Testing compliance of boilers with current Scottish Building Standards for domestic properties is carried out by comparing the boiler efficiency to minimum requirements. Data on the efficiency of household heating systems was first produced for the 2012 SHCS. However, there was a change to the methodology for the 2014 and 2015 SHCS which made an adjustment to the modelling to allow for the assumption that a poorly controlled system is, in effect, less efficient.

In the 2016 SHCS report, the full boiler efficiency dataset was revised to ensure it was on a consistent basis across years and represented the efficiency of the heating system before any adjustments for lack of controls. Efficiencies are taken directly from the Product Characteristics Database whenever possible and from the SAP default efficiencies for that system otherwise. This is therefore more representative of the actual boiler efficiency.

The thresholds used to test compliance for oil condensing boilers were also updated in 2016 to reflect current minimum standards. The full time series presented from 2017 onwards continues to reflect these changes.

Furthermore, from 2022 an improvement has been made to the boiler model which results in a higher proportion of boilers being matched to the Product Characteristics Database (PCDB), thereby providing greater accuracy in boiler efficiencies. The default efficiencies which are used for unmatched cases are based on tables published in SAP 2012, but boilers in general have become more efficient since then. The impact of using the improved boiler model on SAP was tested on a national survey dataset (English Housing Survey 2021). There was no significant difference in the mean overall SAP rating between models which gives confidence that the change in methodology has not impacted the historic timeseries.

1.5 Fuel Poverty

1.5.1 Changes to modelling from 2021

The 2021 key findings report was the first to include fuel poverty estimates which fully met the definition of fuel poverty as laid out in the Fuel Poverty (Targets, Definition and Strategy)(Scotland) Act 2019, the Fuel Poverty (Enhanced Heating) (Scotland) Regulations 2020 and Fuel Poverty (Additional Amount in respect of Remote Rural Area, Remote Small Town and Island Area) (Scotland) Regulations 2020.

However, due to the change in the mode of approach and data collection, as well as bias in the sample in 2021 (for further details see Chapter 6 of the 2021 SHCS key findings report), the rates of fuel poverty in 2021 are not comparable to previous or current waves of the survey.

As such this report makes year on year comparisons with 2019 fuel poverty rates as they represent the most recent fuel poverty statistics accredited as Official Statistics. Due to the differences in methodology[4] between the years we have outlined the methodological improvements implemented from 2021 below and in Table 1.6.

Table 1.6 differences in methodology between previous fuel poverty calculations and updated methodology.

Component of definition	2012-2019	2021 - present
Income	HIH and Spouse	HIH, Spouse, and up to three other adults
housing costs	Only those reported	Imputed if missing
heating regime	2 regimes	4 regimes
childcare costs	No	Included
MIS	11 publicly available	full 107

Income: Since 2018 the SHS has collected information on the income of up to three other adults in addition to the highest income householder and/or their spouse. For 2021, the income after housing costs used in the fuel poverty calculations includes the income of these other adults, whereas previously only the income the highest income householder and/or their spouse was included.

Housing Costs: The housing costs used in the fuel poverty calculations from 2021 include imputed housing costs (when housing costs are missing) whereas previously these were assumed to be nil. Imputation is already carried out on the income data in the SHS when it is missing and from 2019[5] this has been extended to housing costs. Mortgage and rent payments were primarily imputed by hierarchical hot deck imputation, the method used for imputing many of the components of household income. For further details see the Supporting Document accompanying the 2019 SHS methodology and fieldwork outcomes report.

[4] Analysis had shown that some methodological improvements such as adding imputed housing costs have worked to increase the fuel poverty rate, while others such as including the incomes of all members in the household have worked to decrease the fuel poverty rate. This has had a broadly neutral effect on the overall national fuel poverty rate. As such while the 2022 rate was calculated using an updated methodology comparisons can be drawn with previous rates, although caution is urged when drawing any conclusions in relation to the overall national fuel poverty rate, due to slight tenure bias in the achieved 2022 sample.

[5] Though housing costs were imputed when missing for the 2019 SHS, these were not available in time to include in fuel poverty calculations for 2019

Heating Regimes: Estimates of the household's necessary energy consumption and running costs are now based on the four heating regimes set out in the Fuel Poverty (Enhanced Heating) (Scotland) Regulations 2020. Previously households were placed on either the enhanced heating temperatures and hours regime or the standard regime, as described in section 4.1 of the 2019 SHCS key findings report.

Childcare: Childcare costs have been recorded in the survey since 2018. From 2021 childcare costs have been imputed when missing and are now included in the fuel poverty calculations.

MIS: The UK Minimum Income Standard (MIS) household budgets used are now based on the full 107 MIS household budgets produced by Loughborough University. Estimates from 2012-2019 used the 11 publicly available MIS budgets. Using the full 107 MIS budgets means that households are now given a MIS value more specific to their household characteristics.

Specifically, this means that budgets now reflect the costs associated with children of different ages (babies aged 0-1; preschool children aged 2-4; primary school aged 5-11; and secondary school children aged 12-15) as well as differentiating between two adults living together in a relationship and two adults living together but not in a relationship.

For example, under the previous methodology a household with two adults and two children would have an annual household budget of £23,500 whereas under the new methodology they would be given a budget ranging from £23,000 to £29,100 depending on the ages of children in the household.

The uplifts applied to MIS budgets for remote rural, remote small town and island (RRRSTI) areas now use the values provided by the Centre for Research in Social Policy, Loughborough University. These range from 14% to 33% with differences between household types, mainland and island locations. Previous estimates used uplifts, based on the approach taken by the 2017 Scottish Fuel Poverty Definition Review Panel which used average data from the MIS for remote rural Scotland published by Highlands and Island Enterprise in 2013. In the 2019 SHCS the uplift for working age single or couple households was 15%, for pensioner single or couple households it was 19% and for family households it was 27.5% with no difference between island and mainland locations.

1.5.2 Income after housing costs council tax

For the 2017 Scottish Household Survey (SHS), an updated set of questions collecting council tax information were incorporated and accounted for in fuel poverty analysis. Previously respondents were only asked to provide what they paid in council tax whether or not they received any deductions or reductions. The survey now distinguishes between reported council tax after any deductions or reductions, and full council tax. This reduces the risk of double counting Council Tax Reduction in household income in the former case.

For the 2022 SHS, Council Tax Reduction (CTR) was removed from the list of benefits households could report receiving. Therefore, when a household does not provide council tax costs and they have to be imputed it is not possible in all cases to deduct any CTR received and these costs may be overestimated.

1.5.3 Income including Cost of Living Payments

For 2022 household income used in the calculation of fuel poverty also includes an adjustment to account for the cost of living payments in 2022. This includes the £650 Cost of Living Payment for households on means tested benefits, the £150 Disability Cost of Living Payment for households in receipt of select disability benefits, the £300 Pensioner Cost of Living Payment for households in receipt of Winter Fuel Payment.

Unlike other forms of income such as earnings or benefits, income received by households for any cost of living payments was imputed based on household eligibility[6]. This was done through cross referencing household benefit data gathered through the SHS. Any household that met the eligibility criteria of a cost of living payment had that amount added to their income.

Conversely, eligibility for, and receipt of, the £150 Scottish Government for Cost Of Living Award for households in Council tax bands A – D or in receipt of council tax benefit is accounted for through the SHS survey methodology which asks households to provide the amount of council tax paid including any discounts.

These adjusted incomes where then used for all calculations in the fuel poverty chapter including: the overall fuel poverty rate, the fuel poverty gap, and household income statistics.

[6] Eligibility criteria for the £650 COL payment, £150 Disability COL payment and £300, pensioner COL payment is available at Cost of Living Payment 2022.

1.6 Energy Bill Support Scheme (EBSS)

Between October 2022 and March 2023 the Energy Bill Support Scheme provided a £400 discount to each house with a domestic energy connection. In order to account for this while modelling fuel poverty all households had their modelled energy bill reduced by £199, (the amount received for the EBSS in the 2022 calendar year).

These adjusted energy bills where then used for all calculations in the fuel poverty chapter including: the overall fuel poverty rate, the fuel poverty gap. Importantly however, while this methodology reduced fuel bills it did **not** reduce energy consumption. Therefore any reference to energy consumption reflects the typical approach to modelling fuel bills as set out in section 1.3.

1.7 Warm Home discount (WHD)

The Warm Homes Discount (WHD) scheme was launched in April 2011. Energy suppliers are mandated to provide support in the form of discounts and rebates, as well as advice and assistance, to fuel poor customers.

The SHCS does not collect information on whether respondents receive direct financial support under this scheme. In fact, it would be difficult to collect such information as many people are not aware that they are benefiting from a rebate. However, unless this is accounted for in the survey, the modelled fuel bill and therefore fuel poverty would be overestimated.

The publication of the 2014 SHCS Key Findings report introduced an allowance for the WHD rebate in the estimation of the number of fuel poor households in Scotland and the 2014 Methodology Notes contain a detailed description of the methodology. This was based on modelling households' eligibility for the scheme. This method has been used in all subsequent Key Findings reports.

The approach consists of the following stages:

- Details of the number of households in receipt of each component of the WHD are provided by Ofgem for GB as a whole. It is assumed that the number of recipients in Scotland is proportional to Scotland's share of households in GB (9.2%).
- Details of eligibility for each element of the WHD provided by Ofgem, are used to flag all households in the SHCS dataset who meet these criteria. Because of limitations in the available survey information, some approximations are necessary.

- A series of runs are made, where a sample of likely recipients is drawn at random from the pool of all eligible households. For each sample the WHD rebate amount (e.g. £150 for 2022 data, previously £140) is subtracted from the modelled household fuel bill. The estimated number of households in receipt of the Core and Broader Group element of the WHD in Scotland is used to constrain the size of the sample which is selected.
- A representative iteration based on the number of fuel poor households among modelled recipients is selected from all runs as the best estimate of the set of household in the survey who benefit from the Core or Broader Group element of the WHD scheme.

Elements of the WHD scheme and eligibility criteria

For the 2022 SHCS we have updated the WHD eligibility criteria used to match Warm Home Discount Scotland: Guidance for Suppliers 2022 – 2026. The eligibility criteria for the WHD Scotland scheme is divided into two groups: Core and Broad.

Each uses different criteria for eligibility and the corresponding information is not always collected in the SHS interview and in some cases, it has been necessary to simplify the criteria or make certain assumptions in order to determine if a household would be eligible for support under the scheme.

Under the Core Group (CG) element households receive an electricity bill rebate, currently worth £150. Eligibility criteria have changed in the period the scheme has been in operation. This is summarized below:

- Year 1 (2011-2012): Recipients of Pension Credit Guaranteed Credit only
- Year 2 (2012 – 2013): Recipients of Pension Credit Guaranteed Credit only and households where someone receives both Guaranteed and Savings Credit and is over 80 years old
- Year 3 (2013- 2014): Recipients of Pension Credit Guaranteed Credit only and households where someone receives both Guaranteed and Savings Credit and is over 75 years old
- Year 4 (2014- Current): Recipients of the Guaranteed Credit element of Pension Credit irrespective of whether they receive the savings elements of pension credit.

The SHCS collects information on whether the household reference person (HRP) or their partner receives Pension Credit, however no detailed information on the particular elements of Pension Credit is collected. For this reason, all Pension Credit recipients in the survey have been assumed to be eligible for the Core Group of WHD. This is a larger and slightly better-off group of households than the households who would in reality be eligible for the Core Group element. This means that WHD recipients in the survey are selected from a broader pool and there is a risk that the effectiveness of WHD in targeting fuel poor households is understated in the modelling. This also means that the impact WHD has in helping reduce the level of fuel poverty may be understated.

Broader Group

The Broader Group forms part of a compulsory supplier's non-core obligation. It obligates suppliers to identify Scotland domestic customers to provide a rebate to. The guidance states that customers should be in fuel poverty or a fuel poverty risk group and not captured under the Core Group. Generally, the criteria for the broad group is one of:

- A range of benefits covering disability, low incomes and job-seeking; and

- A range of vulnerability characteristics such as having young children, elderly and infirm household members or low incomes.

From 2022 there are 7 Broad group criteria as set out below in Table 1.7

Table 1.7: Warm Home Discount Compulsory Broader Group qualifying benefits

Mandatory Criteria	**Plus**	**Additional Criteria**
A Person who receives **Income Support**	And	(a) has parental responsibility for a child under the age of 5 who ordinarily resides with that person. Or (b) receives any one of the following in addition to Income Support: - Child tax credit which includes a disability element;

		- A disabled child premium; - A disability premium, enhanced disability premium or severe disability premium; - A pensioner premium or higher pensioner premium
A person who receives **Income related Employment and Support Allowance** (IR ESA) which includes a support component	And	(a) has parental responsibility for a child under the age of 5 who ordinarily resides with that person. Or (b) receives any one of the following in addition to Income related Employment and Support Allowance: - Child tax credit which includes a disability element; - A disabled child premium; - A disability premium, enhanced disability premium or severe disability premium; - A pensioner premium or higher pensioner premium
A person who receives **IR ESA** and is a member of the work-related activity group	And	(a) has parental responsibility for a child under the age of 5 who ordinarily resides with that person. Or (b) receives any one of the following in addition to Income based Jobseeker's Allowance:

		- Child tax credit which includes a disability element; - A disabled child premium; - A disability premium, enhanced disability premium or severe disability premium; - A pensioner premium or higher pensioner premium
A person who is in receipt of **Income based Jobseeker's Allowance**	And	(a) has parental responsibility for a child under the age of 5 who ordinarily resides with that person. Or (b) receives any one of the following in addition to Income based Jobseeker's Allowance: - Child tax credit which includes a disability element; - A disabled child premium; - A disability premium, enhanced disability premium or severe disability premium; - A pensioner premium or higher pensioner premium
A person who is in receipt of **Housing Benefit**	And	(a) has parental responsibility for a child under the age of 5 who ordinarily resides with that person. Or (b) receives any one of the following in addition to Housing Benefit: - Child tax credit which includes a disability element;

		- A disabled child premium; - A disability premium, enhanced disability premium or severe disability premium; - A pensioner premium or higher pensioner premium
A person who is in receipt of **Universal Credit**, has an earned income not exceeding the relevant periodic amount in at least one relevant assessment period	And	(a) has limited capability for work or limited capability for work and work-related activity; Or (b) is in receipt of the disability child element Or (c) has parental responsibilities for a child under the age of 5 who ordinarily resides with that person.
A person who is in receipt of **Child Tax Credit** by virtue of an award which is based on an annual income not exceeding the relevant annual amount	And	(a) has parental responsibilities for a child under the age of 5 who ordinarily resides with that person; Or (b) is in receipt of child tax credit which includes a disability element, Or (c) is in receipt of a disabled child premium

Not all eligibility criteria used in the Broad Group element are available in the SHCS.

For example, the following have not been included in the modelling: Child Tax Credit which includes a disability or severe disability element, disability premium, disabled child premium, pensioner premium, or if a person has limited capability for work or limited capability for work and work-related activity.

For Child Tax Credit which includes a disability or severe disability element, disability premium, and disabled child premium we have used if a household has reported a long-term health condition (in addition to receipt of child tax credit) as proxy in these cases. Similarly, in the case of limited capability for work we have used if a respondent has reported a long-term health condition and is not in work as a proxy.

2 Definitions of Categories in the Key Findings Report

2.1 Dwelling Types

The SHCS uses the following definitions of dwelling types:

- Detached house: a house that is free standing with no party walls
- Semi-detached house: a house that is only attached to one other dwelling, commercial premises etc. The two properties taken together should be detached from any other properties.
- Terraced house: a house forming part of a row of three or more dwellings, commercial premises etc.
- Tenement flat: a dwelling within a common block of two or more floors (commonly up to five storeys but may be higher in certain circumstances) where some or all the flats have a shared or common vertical access. The selected dwelling need not share the access, but may be situated within the block with shared/common access (own door flat).
- 4-in-a-block: each flat in a block has its own independent access. Flats on the upper level have an internal or external stair.

Tower/slab: flats in a high rise (ten or more storeys) or flats where the common circulation is predominantly horizontal (maisonette, balcony, or gallery access)
Flat from a conversion: flats resulting from the conversion of a house only. A flat converted from a non-residential building (e.g., a warehouse) is classified according to the above flat types.

2.2 Household Types

The SHCS uses the following classification of household types:

- Families: households which contain at least one child aged under 16. Resident adults may be of any age
- Older households: small households made up of one or two residents, at least one of which is aged 65 or older
- Other households: these are all other households with adult residents (of any age) and no children

The pensionable age threshold used for SHCS key findings reports from 2015 onwards is 65 years for both men and women. Previous publications used 65 for men and 60 for women. Therefore, the categories ‘Older households’ and ‘Other households’ used from 2015 are not fully comparable with previous years.

2.3 Urban Rural Classifications

The urban/rural classification in SHCS key findings reports is the Scottish Government’s 2-fold and 6-fold urban rural classification. Dwellings in settlements with over 3,000 people are considered urban by this definition. For 2021 onwards, the 2020 urban rural classification is used for reporting, calibration weighting and in fuel poverty calculations to identify households in remote rural, remote small town and island (RRRSTI) areas for which uplifts to the UK Minimum Income Standard are applicable.

The Scottish Government published the 2016 urban rural classification in 2017. However, to remain consistent with the classification underpinning survey weight derivations, the 2013/14 urban rural classification (2011 data zone edition) is used for reporting 2016 to 2019 data. Prior to 2016, 2001 data zones are used.

2.4 Gas Grid Coverage Derivation

Determining whether a dwelling is within the coverage of the gas grid is primarily based on its proximity to gas distribution pipes. A dwelling is “on the gas grid” if it is within 63 metres of a low, medium, or intermediate pressure pipe, the usual maximum distance for a standard domestic connection. This methodology was used for deriving gas grid coverage for the 2013 to 2019 SHCS key findings reports.

Figure 2.1: Gas grid derivation using GIS mapping

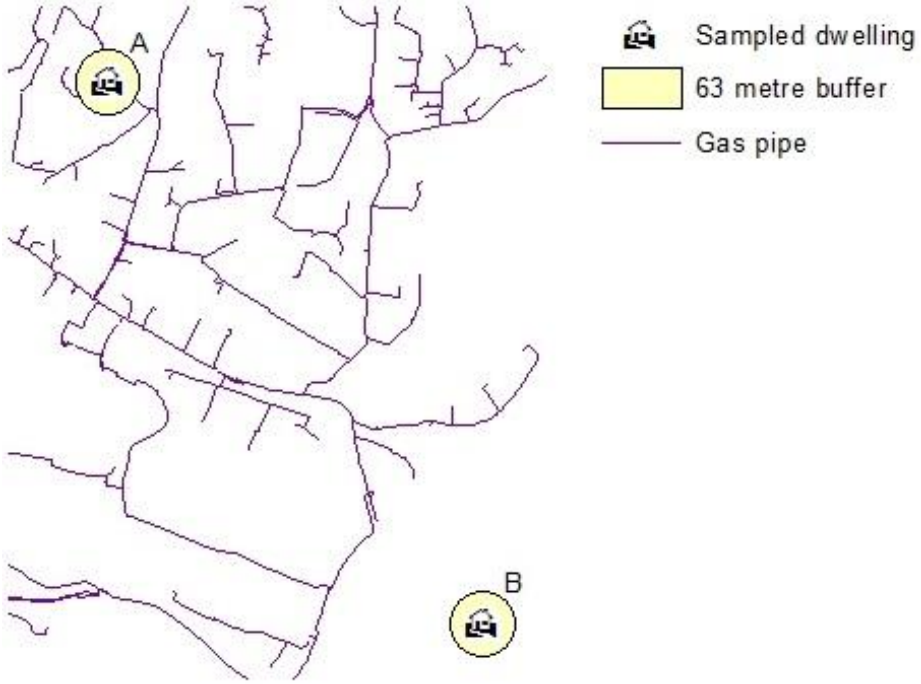

Figure 2.1 shows how this is derived using GIS mapping. From the dwelling location information of surveyed properties, a 63-metre buffer is drawn. Where this buffer intersects a gas distribution pipe, the dwelling is said to be on the gas grid. In the example in Figure 2.1, dwelling A is on the gas grid, while dwelling B is not.

The gas grid information used for this mapping is provided by SGN. It includes both the national gas network and the Scottish Independent Undertakings (SIUs), where gas is provided in areas remote from the national gas grid. It does not however include information on pipes owned and operated by Independent Gas Transporters (IGTs). Therefore, dwellings classified as off the gas grid by this method may be within 63 metres of an IGT operated gas distribution pipe and potentially have a connection to the gas grid. This methodology may therefore slightly undercount dwellings within the range of the gas grid.

The SHCS collects information on whether a dwelling has a mains gas connection. So, to account for the potential undercount of dwellings on the gas grid, from 2021 we have introduced an improvement to the gas grid coverage derivation whereby a dwelling categorised as being off the gas grid by the method described above but recorded as having a mains gas connection in the SHCS is re-categorised as being on the gas grid.

2.5 Reasons Why Home Heating is Difficult

Question HT14 in the Scottish Household Survey asks: “Which of these things, if any, make it difficult to heat your home”. There are 19 response categories and respondents can choose any combination of reasons why heating their home is difficult. Response categories are grouped for reporting in the energy perceptions section of the key findings reports from the SHCS.

“Poor or inadequate heating” corresponds to the response categories:

- No central heating
- Not enough heaters/radiators
- Position of heaters/radiators
- Poor system/need new system
- Radiators not big enough
- Heating not working
- Dislike storage heaters
- Inadequate heating
- Heating in part of house
- Can’t afford to replace system

“Hard to control heating” corresponds to the response categories:

- Difficult to control/regulate
- Hard to control heat

2.6 Hard to Treat Cavity Walls

Key findings reports from the SHCS use the Energy Company Obligation (ECO) definition of hard-to-treat cavity walls (HTTCs) to provide a breakdown of the remaining insulation potential of cavity wall dwellings in the Scottish housing stock.

Under this definition a cavity wall is considered hard-to-treat if:

- The building has three or more storeys. Dwelling spaces in lofts are not counted as storeys
- The building is severely exposed to wind-driven rain. The SHCS is not able to collect this information, which will lead to an underestimation of HTTCs
- Walls at risk of water penetration, i.e., walls requiring urgent repair to the wall finish and walls with penetrating damp
- Non-traditional building types, e.g., timber frame, metal-frame, and prefabricated concrete
- Partially filled, narrow or uneven cavities as well as cavities with failed cavity wall insulation**.** The SHCS is not able to capture this information. As a result, HTTCs may be underestimated

Note that the presence of a conservatory alone does not cause a dwelling to be considered hard-to-treat under the ECO definition of HTTCs.

2.7 Disrepair

Key findings reports from the SHCS use different categories of disrepair to describe the state of disrepair of a dwelling.

A range of elements - both internal and external - are assessed for the extent of disrepair, the urgency of disrepair (relating to external and common elements only), and in some cases the residual life of the element.

In a small number of instances, surveyors may not be able to assess the state of repair of certain elements of a property. This results in a disrepair status of ‘unobtainable’ for the full property since we are unable to say for certain whether disrepair exists. This usually affects a small number of the properties surveyed. Tables and figures relating to disrepair describe where these properties have been counted for clarity in reporting.

2.7.1 Critical Elements

The critical elements are those whose condition is central to a dwelling being wind and weatherproof, structurally stable and safeguarded against further rapid deterioration. They are as follows:

- Roof covering
- Roof structure
- Chimney stacks
- Flashings

- Roof gutters and downpipes
- External walls - finish
- External walls - structure
- Access decks and balustrades (common areas - flats only)
- Foundations
- Damp-proof course
- External doors and windows (dwelling only)
- Doors, screens, windows, and roof lights (common areas - flats only)
- Internal walls/partitions[7]
- Floor structure
- Floor finish
- Dry/wet rot

Disrepair to critical elements is recorded where there is any disrepair, no matter how small, to the critical elements of the dwelling.

2.7.2. Urgent Disrepair

Urgent disrepair is recorded where the SHCS surveyor deems that a dwelling has any disrepair which, if not rectified, would cause the fabric of the building to deteriorate further and/or place the health and safety of the occupier at risk.

Urgency of disrepair is only assessed for external and common elements. Internal room floor structures and finishes as well as internal walls/partitions and the presence of dry/wet rot are the only critical elements for which urgency is not applicable.

The presence of urgent disrepair to critical elements was first reported in the 2019 SHCS key findings report, for 2018 onwards.

2.7.3. Extensive Disrepair

Extent of disrepair is usually measured on a 5 or 10-point scale.

The 5-point scale is as follows: 0 (no disrepair); 1 (small repairs up to 5%); 2 (minor repairs 5% to less than 25%); 3 (medium repairs 25% to less than 60%); and 4 (renew 60% to 100%).

[7] This element has been incorrectly described in key findings reports from the SHCS prior to 2019 as ‘party walls’.

The 10-point scale is as follows: 0 (no disrepair); 55 (less than 5%); 1 (5 to 15%); 2 (15 to 25%); 3 (25 to 35%); 4 (35 to 45%); 5 (45 to 55%); 6 (55 to 65%); 7 (65 to 75%); 8 (75 to 85%); 9 (85 to 95%); and 10 (95% or more).

Extensive disrepair is calculated to identify those dwellings where any disrepair present is of a relatively greater severity. It is recorded where:

- any building element has an overall disrepair score exceeding 20% by area; or
- any building element assessed has a score of 'medium' or 'renew' on the 5-point repair scale (equivalent to an area of around 25% or more of the element); or
- dry/wet rot is recorded in two or more rooms.

The average extent of disrepair is calculated from the 5 and 10-point scales by taking the mid-point of the relevant band for the element. So, for example, a chimney stack assessed as band 4 on the 10-point scale would contribute 40% toward the average value. Similarly, a bathroom wash hand basin assessed as medium on the 5-point scale would contribute 42.5% to the average value. The presence of dry/wet rot contributes 50% to the average value. Thus, measures of average extent should be considered approximate.

2.8 Damp, Mould, and Condensation

Penetrating damp is usually the result of a defect in the building fabric, such as damage to the walls or roof, water ingress due to damaged seals on doors or windows or damp because of leaking plumbing.

Rising damp is the result of defective or missing damp proof coursing, leading to water leaching into the building fabric.

Condensation is the build-up of moisture inside a dwelling, which may be the result of insufficient or ineffective ventilation.

Mould is generally caused by cold bridging causing condensation as mould needs clean water to grow. Mould growth can occur intermittently and may have been removed (cleaned) at the time of surveyors visit.

2.9 Bedroom Standard

The bedroom standard is defined in the Housing (Overcrowding) Bill 2003 based on the number of bedrooms in a dwelling and the people in a household who can share a bedroom.

Each of the following groups or individuals requires a separate bedroom:

- any couple;
- a person aged 21 years or more;
- two people of the same sex[8] aged between 10 and 20;
- two children (whether of the same sex or not) under 10 years;
- two people of the same sex where one person is aged between 10 years and 20 years and the other is aged less than 10 years; and
- any further person who cannot be paired appropriately.

This definition is distinct from the rules introduced by the UK Government in April 2013 for the size of accommodation that Housing Benefit will cover for working age tenants renting in the social sector, known as the 'spare room subsidy'[9]. Applying the rules of the spare room subsidy requires information not collected in the SHCS. Statistics in this report relate to the bedroom standard only.

2.10 Tolerable Standard

The Tolerable Standard is a minimum standard for habitability introduced in the 1969 Housing (Scotland) Act, and updated by the 1987, 2001 and 2006 Acts and 2019 Order.

A dwelling meets the tolerable standard if it:

- is structurally stable
- is substantially free from rising or penetrating damp
- has satisfactory provision for lighting, ventilation and heating
- has an adequate piped supply of wholesome water available within the house

[8] Between 2018 and 2021 the SHS collected data on gender and not sex therefore the number of bedrooms required were allocated based on self-reported gender.

[9] Department for Work and Pensions, Housing Benefit Spare Room Subsidy Changes Factsheet, Retrieved: 19/11/15.

- has a sink provided with a satisfactory supply of both hot and cold water within the house
- has a water closet or waterless closet available for the exclusive use of the occupants of the house and suitably located within the house
- has a fixed bath or shower and a wash-hand basin, each provided with a satisfactory supply of both hot and cold water and suitably located within the house
- has an effective system for the drainage and disposal of foul and surface water
- has satisfactory facilities for the cooking of food within the house
- has satisfactory access to all external doors and outbuildings
- has electrical installations[10] that are adequate and safe to use
- has satisfactory thermal insulation
- has satisfactory equipment for detecting fire and giving warning in the event of fire or suspected fire and
- has satisfactory equipment for giving warning if carbon monoxide is present in a concentration that is hazardous to health.

The criteria on electrical installations and thermal insulation were added by the Housing (Scotland) Act 2006. These requirements came into force in April 2009 and were first reported in the 2010 SHCS key findings report. The change in definition caused the fail rate for the tolerable standard to increase from 0.7% in 2009 to 3.9% in 2010.

The criteria on fire and carbon monoxide alarms were added by the Housing (Scotland) Act 1987 (Tolerable Standard) (Extension of Criterion) Order 2019. The Scottish Government has published guidance on these changes. These new standards came into to come into force on 1 February 2022 and are reported for the first time in the 2022 SHCS key findings report (this edition). These changes to the tolerable standard caused the failure rate to increase from 2% in 2019 to 29% in 2022. Without these changes the failure rate in 2022 would have been 2%.

[10] The "electrical installation" is the electrical wiring and associated components and fittings but excludes equipment and appliances.

In general, fewer dwellings fail the tolerable standard based on the presence of rising or penetrating damp than experience this issue overall. This reflects the fact that low levels of penetrating damp would not give grounds for action under the tolerable standard. A dwelling will normally be below tolerable standard if a surveyor finds persistent visible penetrating damp that covers an area greater than approximately:

- 10% of the overall wall space in one habitable room; or
- 10% of the ceiling in one habitable room; or
- 20% of the overall wall space or ceiling in one or more other spaces in the dwelling.

2.11 Scottish Housing Quality Standard (SHQS)

The SHQS was announced by the Minister for Communities in February 2004. A target was agreed that all social landlords must ensure that all their dwellings pass the SHQS by 2015. Private owners and private landlords are currently under no obligation to bring their properties up to a standard which meets the SHQS. However, the SHCS collects the same data for all dwellings to allow comparison across the housing stock.

The SHQS is an aggregation of the results from 55 different elements grouped into 5 higher-level criteria, which in turn provide a single pass/fail classification for all dwellings. The 5 higher-level criteria specify that the dwelling must be:

- above the statutory tolerable standard;
- free from serious disrepair;
- energy efficient;
- with modern facilities and services; and
- healthy, safe, and secure.

A full list of assessed elements is available on the Scottish Government website. Only one element of the SHQS is not assessed using SHCS data: no information is collected on external noise insulation (element 43).

The data is assessed against the SHQS as it stood in the year the data relates to. So, for example, in 2019 dwellings were assessed against elements 31 to 35 (covering cavity wall insulation, loft insulation, water tank and pipe insulation, central heating and energy efficiency ratings based on NHER or SAP) in the energy efficiency criterion.

However, from 1 January 2021 these were superseded by the Energy Efficiency Standard for Social Housing (EESSH). Similarly, from 1 February 2022, elements 11 and 44 were replaced by elements 11A and 11B to cover changes to the tolerable standard relating to smoke, heat and carbon monoxide alarms. These changes to the SHQS are reflected, for the first time, in the failure rates presented the 2022 SHCS key findings report (this edition). Therefore, estimates of SHQS failure rates for 2022 onwards are not directly comparable to previous years.

Figures on SHQS failure rates for 2014 onwards are not entirely comparable to previous years published in key findings reports from the SHCS. Because of missing tenure information, a small number of dwellings (see the subsection on missing tenure information for more detail) are excluded from tenure breakdowns in figures relating to years prior to 2014. In addition, small changes to data processing relating to failure thresholds for the energy efficiency criterion[11], as well as other minor data processing corrections were introduced in 2014. Although the effect of these corrections on the overall failure rates in the social sector was neutral, some discontinuities with previous years cannot be ruled out, especially when considering more detailed breakdowns.

[11] This relates to the SAP and NHER thresholds for element 35 and the thickness of hot water tank insulation for element 33.

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How to access background or source data

The data collected for this publication:

☒ will be made available via the UK Data Service

☒ may be made available on request, subject to consideration of legal and ethical factors. Please contact shcs@gov.scot for further information.

Complaints and suggestions

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