



Scottish
House Condition
Survey
2002



SCOTTISH EXECUTIVE

Communities
Scotland

A close-up, high-angle photograph of a roof covered in terracotta tiles. The tiles are arranged in a regular, overlapping pattern, creating a strong sense of rhythm and texture. The lighting is warm, highlighting the reddish-brown color of the tiles and the shadows between them.

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Preface

In order to develop good quality public policy and invest resources wisely, we need good quality information about the nature of our housing and communities. This, the report of the third national Scottish House Condition Survey, represents a further strengthening of the national evidence base on house condition. It builds on the previous surveys to provide an up-to-date set of benchmarks on the physical condition of Scotland's homes and the views of the people who live in them.

Rather than being the end of the survey process, however, in many ways this publication is the beginning. The SHCS 2002 was designed to report at local authority level for the first time and a companion local report to this will soon be published, as will follow-up reports on housing and health and fuel poverty. We will also be working closely with colleagues to ensure that the survey adds real value to the work of Ministers, building on the contributions made by the SHCS 1996 to policies such as, for example, fuel poverty and housing quality.

As of this year, the SHCS will be carried out on a continuous basis, collecting data throughout the year. I hope that this report, and those which follow, will continue to be widely-used by policymakers, local authorities, planners and academics.

Most of all, I hope that the information collected in the survey will help everyone involved in social justice and regeneration to further our common goal of tackling disadvantage and improving the quality of life for people in Scotland.



Angiolina Foster
Acting Chief Executive
Communities Scotland

The SHCS is the largest single housing survey undertaken in Scotland and the only national study to look at the physical condition of dwellings as well as interviewing occupiers. This introduction puts the findings of the study in context before summarising the key points made throughout the remainder of the report.



Acknowledgements

At every stage of its development, the SHCS 2002 has benefited from the support and practical contributions of a wide range of individuals and organisations.

Firstly, and most importantly, Communities Scotland would like to thank the 20,000 or so householders who agreed to take part in the survey. All participants will receive a leaflet from us outlining the key findings of the survey, and a letter of thanks. We also appreciate the important work carried out by the 120 surveyors and over 250 interviewers who collected the data. Fieldwork management and parts of the data preparation were carried out by MORI (led by staff in the Scotland office, supported by systems and field teams based in London) in conjunction with Lickley Proctor, and thanks are due to staff of both organisations (particularly Mark Diffley, Kathryn Gallop, Ken Brewster, Simon Brauholtz and Murray Petrie).

The survey development was guided by a Steering Group comprising representatives from Communities Scotland, The Scottish Executive Development Department, the Confederation of Scottish Local Authorities, Chartered Institute of Housing and Scottish Federation of Housing Associations. The Steering Group was also supported by three technical subgroups, one for each survey component and another for the treatment of Below Tolerable Standard assessments, and the expertise of these members was invaluable. The Chief Statistician, Rob Wishart, was very helpful in guiding the project team through the procedures for statistical releases.

Important contributions to the surveyor training were made by Bill Sheldrick (Alembic Research), Colin Smith (Abodewell), and Judith Pickles. The analysis drew on material produced by National Energy Services Ltd and Thomas and Adamson, and specialist support to the analysis was provided by the National Centre for Social Research and Celia Macintyre of the Scottish Executive Development Department.

Project team at Communities Scotland





















Throughout its various stages, the SHCS 2002 was directed by Martyn Rendle, Dr Anthony O'Sullivan (now of Newhaven Research) and Colin Armstrong. The House Condition Surveys project team comprises:

- Dianne Millen (project manager)
- David Cormack (technical advisor)
- Andrew Robinson (senior researcher)
- Sara Grainger (assistant statistician)
- Karren Friel (assistant statistician)
- Pat Cairns (administrator).

The analysis team were also supported by three temporary members of staff: Colin Young, Aileen Stewart and Sadaf Ismail. Two former members of staff, Ruth Dundas and Malcolm Lytton, made significant contributions to the project during their time with the agency.

Typology of housing in Scotland

This grid illustrates the diversity of housing found in Scotland in terms of age and type. Where a square is left blank, no suitable example could be included.

	Detached	Semi-detached	Terraced	Tenement
Pre-1919				
1919-1944				
1945-1964				
1965-1982				
Post-1982				
	Detached	Semi-detached	Terraced	Tenement

4-in-a-block	Tower/slab	Conversion	
			Pre-1919
			1919-1944
			1945-1964
			1965-1982
			Post-1982
4-in-a-block	Tower/slab	Conversion	

About the SHCS 2002

The SHCS is the largest single housing survey undertaken in Scotland and the only national study to look at the physical condition of dwellings as well as interviewing occupiers. It covers all types of housing, whether owned or rented, flats and houses, in urban, rural and island locations across the whole country.

The aims of the survey are as follows:

- To monitor the physical quality of Scotland's housing stock at a national level over time.
- To contribute to the understanding of the factors which influence the physical condition of the housing stock.
- To provide a benchmark against which outputs from local surveys can be measured.
- To supplement the system of resource allocation within the Scottish Executive and Communities Scotland.
- To explore relationships between investment and stock condition both at a local and national level.
- To provide information for policy development in all areas of housing and community regeneration.

The survey consisted of two parts: a social interview (conducted with the Highest Income Householder or his/her spouse/partner), and a subsequent physical inspection carried out by a trained building professional. The social interview covered a range of topics including:

- Household composition.
- Tenure, previous moves and intention to move.
- Self-reported health status and respiratory health.
- Work done to the dwelling.
- Heating arrangements, their use and costs.
- Housing costs.
- Satisfaction with the home and the local environment.
- Existing adaptations and the need for others.
- Employment status and income.

The physical inspection focused on

- The basic description of the dwelling.
- The material used in construction.
- The state of repair of the internal, external and common parts (where relevant).
- The remaining life of external and common elements (where relevant).
- The amenities and services present.
- Heating systems and insulation.
- Whether or not the dwelling complied with the Barrier Freeⁱ standard.
- Whether or not the dwelling complied with the Tolerable Standardⁱⁱ.

This is the third SHCS, the two previous surveys having been undertaken in 1991 and 1996. It was carried out on behalf of Scottish Ministers by a specialist team at Communities Scotland, assisted by MORI Scotland as the primary contractor, managing around 120 surveyors and over 250 interviewers. The study fieldwork took place between January and November 2002 and involved over 20,000 households, 15,000 of which participated in both phases. Full details of the survey development, sampling design, analysis and quality control can be found in **Technical Annexe 12.2**.

About this report

Purpose

The SHCS 2002 involved over 20,000 dwellings, with paired social and physical data available for around 15,000 of these. Disseminating the results of such a large-scale and wide-ranging exercise is, as mentioned in the **Preface**, an ongoing process. In common with other national surveys, the SHCS is moving towards a user-driven dissemination model in which analysts work closely with policy 'customers' to inform the development of specific work programmes, and where increased use is made of web-based publishing.

This report is intended to be a working document: it provides the basic 'facts and figures' of interest to policymakers, academics, local authority officers, housing associations and the public, with a minimum of commentary. There is no companion volume of Annexe Tables as there was in the SHCS 1996. Much of the information included there has been incorporated into this report, and additional tables will be made available on the project website (www.shcs.gov.uk) as appropriate. The website also gives details of how requests can be made to Communities Scotland for the provision of analyses which do not appear here.

A series of follow-up working papers will also be published, which will enable a closer focus on specific aspects of housing than can be achieved in a general round-up report such as this. In particular, Communities Scotland will produce a report on fuel poverty by Spring 2004 and a report on health and housing, incorporating some of the new questions on respiratory health and mental well-being included for the first time in the 2002 survey, is also planned.

Using the estimates

Like all sample surveys, the SHCS produces **estimates** of the proportions within the population as a whole. These estimates may differ from the true rate of prevalence in the population and thus must be interpreted in the light of this potential divergence, or **sampling error**. The total sample is large and so sampling error overall is small, meaning that users can be confident about the majority of estimates reported here. However, in some cases the estimates for small subgroups (such as subcategories of variables) may be less accurate.

It is particularly important to consider sampling error when two estimates are to be compared. Users are asked to bear in mind that where two proportions in this report differ slightly – eg by one or two percentage points – it is not necessarily possible to conclude that the difference is genuine in the population. Any difference highlighted in the accompanying commentary has been tested and found to be statistically significant. The meaning of other differences can be established by the calculation of **confidence intervals**.

Rather than report confidence intervals for every estimate in this report, which would have made the presentation extremely complex, the background to and means of calculating confidence intervals are set out in **Technical Annexe 12.4**. Users are strongly advised to use the estimates in this report in conjunction with the Annexe.

Users may also wish to bear in mind that where **correlations** are presented (such as between dampness and condensation, and self-reported health status) the survey methodology does not enable **causation** to be proved. For example, the SHCS alone cannot determine whether or not the health outcome is a **direct** consequence of the presence or absence of dampness and condensation, but simply that the two situations occur together.

Conventions

To enable the complex material of this report to be presented as simply and readably as possible, a number of conventions have been used.

- 1 The tables do not, in general, specify the number of dwellings or households for which information is missing for the variables in question. This means that the number of cases in a category, and in the overall totals, may vary slightly from table to table. **Technical Annexe 12.5** sets out all the sample bases for all the tables to enable the extent of missing data to be evaluated by users. Where there is a substantial degree of missing data, this is noted in the accompanying text.
- 2 Unless stated otherwise, all differences and trends mentioned in the commentary are statistically significant at the 5% level. Information on sample design and sampling error can be found in **Technical Annexe 12.4**.
- 3 In all chapters except **Chapter 5, Tolerable Standard**, figures are rounded to the nearest thousand and percentages to the nearest integer. Percentages may not always sum to 100 due to this rounding.
- 4 Unless stated otherwise, '0' in a table denotes fewer than 500 cases or less than 0.5%. Where an asterisk appears, this means that the estimate in question would be based on information from fewer than 30 cases, and is hence omitted for reasons of statistical reliability. Where the symbol † appears, this represents an estimate derived from between 30 and 100 cases and which should therefore be treated with considerable caution.
- 5 Unless stated otherwise, all figures are produced directly from the data and are not rounded.

Executive Summary

This summary sets out the key findings from each area of the survey in the order they appear in the report. Note that where reference is made to 'Highest Income Householders' this reflects the fact that the interview survey was conducted with the HIH or his/her spouse/partner.

Chapter 2 – Profile of Stock

- The total number of dwellings in Scotland is 2,192,000.
- 38% of all dwellings are flats, 60% of which are tenements.
- The majority of dwellings have four or five rooms (which equates to a two- or three-bedroomed property).
- The majority of dwellings use render as an external wall finish, but there has been a shift towards the use of brick in most recently-constructed dwellings.
- The profile is similar to that found in the SHCS 1996, which is as would be expected since only 4% of the total stock has been built since then and around 27,000 dwellings have been demolished, with conversions stable at around 2%.
- There are approximately 87,000 vacant dwellings in Scotland. Their profile remains unchanged from the SHCS 1996.

Chapter 3 – Profile of Households

- Most of Scotland's 2.2 million households live in urban areas and are small – over 80% contain three people or fewer and just over 70% include no children.
- The majority (99%) of Highest Income Householders responding to the survey are white. It is not possible to break down the remainder into meaningful subcategories.
- 55% of Highest Income Householders are employed and just under 30% are retired.
- Single parent households are more likely to be headed by a woman than any other household type.
- The income profile of Scotland's households shows the same distribution as for the SHCS 1996, but is significantly higher. Only 6% of households have an income of less than £100 per week and the median weekly household income is £279.

Chapter 4 – Tenure and Mobility

- Owner occupation continues to be the predominant tenure in Scotland, accounting for 62% of households (1,400,000).
- Only 27% of single parent households own their own homes and about a quarter of private renters are single adults.
- 2% of households, a significant decrease from 1996, had moved in the year before the survey was carried out. Almost half of these movers were single adults or small adult households.
- Of households who changed tenure when moving (over the past five years), most moved into owner occupation.
- More households stated an intention to move in the next two years than in the SHCS 1996. Of those who indicated a tenure preference for this move, the primary reason for their choice was financial.
- 266,000 households had purchased their home under the Right to Buy initiative and a further 46,000 intended to exercise this right within the next two years.

Chapter 5 – Tolerable Standard

- 20,000 (1%) of occupied dwellings did not meet the Tolerable Standard. Of these, 84% failed on a single item.
- The main reason for dwellings being judged Below Tolerable Standard was the absence of adequate heating, lighting and/or ventilation (53%). No further analysis of subcategories is provided in this report due to the small numbers involved and the substantial standard error which results.
- There has been no net change in the total numbers of occupied BTS since the SHCS 1996. However, the profile of reasons for failure is different in this survey.
- Although no detailed analysis of the profile is possible, due to the small numbers involved, it may be noted that it would be possible for the types of BTS housing identified in the SHCS 1996 to have been addressed but other, previously non-BTS, dwellings to have fallen below the Standard in the intervening time.

Chapter 6 – Amenities

- The overwhelming majority (2,187,000) of dwellings are equipped with all the standard amenities.
- 40,000 dwellings (2%) have inadequate kitchen provision, around half of which are pre-1919 tenements.
- Approximately 1% (20,000) dwellings have lead in **both** the mains and distribution to the dwelling. Further work is being done to establish the reason for the decrease since 1996.
- Around half of the dwellings built since the SHCS 1996 have two or more WCs.
- Access to the public electricity grid is almost universal with a negligible amount of dwellings not connected. However, over a quarter of dwellings (612,000) are not connected to the mains gas supply. This rises to almost one-half of dwellings in the private rented sector.
- Over 100,000 dwellings (5%) are not connected to a public mains drainage supply, most of which are located in rural areas.
- Over 80% of dwellings (1,875,000) have at least one smoke detector on the premises, most of which are battery-operated.
- Just under half of the stock has a door viewer and/or restrictor (ie a peephole and/or security chain). Flats are more likely than houses to have this provision.

Chapter 7 – Disrepair and Repair Costs

- When all levels of severity of disrepair are considered, the greatest prevalence is found in the external and environmental elements. Disrepair to critical structural elements and amenities occurs relatively infrequently.
- Critical disrepair occurs according to a profile broadly similar to the basic profile of the stock itself with the exception of post-1982 dwellings (which form 16% of the stock but only 5% have critical disrepair) and pre-1919 dwellings (27% have critical disrepair although they form 21% of the stock as a whole).
- The overall prevalence of extensive disrepair is low. It is highest in external paintwork and environmental elements (eg paths, gates). Almost no dwellings have extensive disrepair to key services and amenities.
- In terms of urgency, the repairs most likely to be regarded as urgent were to the damp-proof course, principal and secondary roof coverings, and wall structure.
- The majority of dwellings had no elements in urgent disrepair. Newer dwellings require fewer urgent repairs. Houses are in slightly better repair than flats overall.

- Urgent disrepair is relatively concentrated in the private rented sector, with around half such dwellings having one item in urgent disrepair and 6% having five or more such elements.
- The majority of elements, other than decorative items, have a lifespan of six years or more. Around half of all primary roof coverings and wall finishes will last for another 30 years or more.
- The total cost of making good all visible disrepair identified in the survey is £1.75bn, nearly three-quarters of which is due to external and environmental disrepair.
- The distribution of patch repairs is skewed, since 19% of dwellings incur no repair costs at all. If dwellings with no disrepair are excluded, the total remains the same but the distribution shifts downwards and the median cost goes from £360 (all dwellings) to £560 (disrepair only).
- Pre-1919 dwellings account for 20% of all the stock but around 40% of the total patch repair bill, whilst stock built after 1982 contributes very little to the total.
- Tenements account for 96% of repair costs for the common parts but 60% of all flats in Scotland.
- The private rented stock accounts for a higher proportion of repair costs (20% of common parts costs but 8% in the stock overall).
- The total cost of making good all comprehensive disrepair identified in the survey (ie all patch repairs plus the replacement costs of external and common elements) is £6.50bn.
- As was the case for the patch repair costs, disrepair to pre-1919 dwellings is more expensive to address than the more recently-built stock, and the private rented stock contributes disproportionately to the overall total.
- The total cost of dealing with all patch repair identified in the survey plus bringing all stock above the Tolerable Standard is £1.76bn. 65% of the stock requires less than £750 per dwelling to be spent on it to satisfy patch repair and the Tolerable Standard (as would be expected given the low incidence of BTS housing).
- If the work required to meet an enhanced specification is added, the total patch, BTS and improvement cost is £3.45bn. This is an approximation for the maximum total investment in the stock if all repair and improvement issues were to be dealt with simultaneously.
- Taken by age, type, tenure and location, the profile of these costs is similar to the patch and comprehensive distributions.
- A number of hypotheses can be offered for the trends since the SHCS 1996, although no detailed statistical evaluation of them has been carried out for this report. The profile of critical and extensive disrepair varies across elements, with some being significantly more and others significantly less likely to be in disrepair. Urgent disrepair seems to have increased since the SHCS 1996 but this is likely to reflect the fact that more disrepair in total was recorded in this survey, affecting the denominator of the proportion.
- Residual life shows a complex shift, with some elements (such as external doors and windows) now showing a longer residual life than in 1996, suggesting a trend towards replacement, and others showing the expected downward shift.
- The patch repair cost total has increased by approximately £0.09bn over the two surveys. If the base cost index increase of 25% were simply applied to the 1996 total, it would be expected to increase by about £0.42bn (ie the 2002 total would be expected to be in the region of £2.08bn). Since this is not what has been obtained, it may be hypothesised that a counterbalancing factor (presumably the state of repair of the stock) is in operation against the influence of cost index increase. To explore this further, the 2002 survey data was analysed using the 1996 cost models (so as to control for the impact, if any, of cost inflation). The patch repair cost total obtained from this process was £1.37bn, or 78% of the actual 2002 total. The influence of the change in the repair scoring methodology was also examined. This was done by calculating the patch repair costs using the 2002 dataset modified as if it had been obtained using the 1996 scoring method (ie resetting scores of '55' to '0'). This resulted in a patch repair cost total of £1.42bn. Although these analyses would suggest that the state of repair of the stock overall has improved since the SHCS 1996, further work is required to quantify the particular contribution to this of changes in the state of repair of groups of elements as the change in disrepair is complex.

- The comprehensive repair bill has gone up by around £0.99bn. Although this is an order of magnitude greater than the increase in the patch repair bill, possibly because householders and landlords have been undertaking patch repairs rather than improvement works over the period 1996–2002, it is also a smaller increase over the SHCS 1996 total than base cost inflation alone would suggest. Although again further work is needed to clarify the exact nature of the change, it is likely to be due to the complex changes in residual life profiles referred to above (ie the preferential replacement of some items over others in the stock as a whole).
- The cost of rectifying BTS dwellings plus visible disrepair has increased since 1996, but by slightly less than the patch repair cost total itself. This suggests that the contribution made to this total by BTS action has decreased, which may be due to the change in the profile of reasons for failing the Standard. Almost half of all BTS dwellings in this survey failed due to inadequate heating, lighting or ventilation, which is often relatively inexpensive to rectify.
- The total cost of improvement works has decreased since 1996, which is likely to be due to the fact that a greater proportion of the stock now has double glazing and central heating, the two most expensive modernisation elements.

Chapter 8 – Access and Adaptations

- 35% of households (776,000) include at least one member who self-reports as having a long-term illness or disability. However, comparisons cannot be made with the SHCS 1996 figure due to a change in the methodology.
- Almost one-quarter of households include at least one member who can be classified as belonging to a Community Care grouping.
- Households including a member with long-term illness/disability are more likely to live in dwellings built between 1919-1964, in tower/slab dwellings and in publicly rented properties.
- The majority of households (82%) live in a dwelling which has no adaptations for the use of a person who has a disability. 94% of respondents did not require any adaptations to be made to the property.
- The most commonly-found adaptations are handrails, changes to the kitchen and bathroom, and door entry phones. Adaptations are most likely to be found in dwellings occupied by single pensioner and older smaller households.
- A low proportion of respondents said that theirs or a household member's activity was restricted by factors within the dwelling. Indoor stairs were the most commonly cited source of restriction.
- Very few dwellings in Scotland meet any of the levels of the Barrier Free standard. Of those which do, most are suitable for the lowest level of the hierarchy (use by the ambulant disabled).
- Most dwellings which fail to meet the standard do so due to the bathroom/WC facilities.
- Dwellings built after 1983 are more likely to be Barrier Free.

Chapter 9 – Dampness and Condensation

- Assessments of the presence of dampness and/or condensation were made by surveyors in the physical survey, whereas respondents were asked in the social survey about the effects of dampness and/or condensation (such as mould growth).
- According to surveyors, approximately 131,000 (6%) of dwellings in Scotland are affected by some form of dampness. Penetrating dampness is both more common and more severe in most cases than is rising dampness.
- Condensation affects around 229,000 (11%) of dwellings and mould growth is found in 233,000 (11%).
- The older a dwelling, the more likely it is to be affected by dampness and condensation. Private rented sector properties are most likely to have the problem but there is no difference between household types.
- Dwellings with single glazed metal windows are more likely to experience dampness than dwellings with any other type.
- Households with a member who suffers from long-term illness or disability are more likely to live in a dwelling with dampness and condensation than other households.
- Fewer than 6% of householders felt that their dwellings were affected by any problems relating to dampness or condensation. Of those who did, mould on hard surfaces was the most commonly reported problem.
- Problems caused by dampness and condensation have the same profile across dwelling and household types as do the presence (assessed by surveyors) of dampness and condensation themselves.
- There is a correlation between poor self-assessed health and the existence of problems caused by dampness and condensation in the dwelling.
- When the assessments of surveyors and householders are compared, surveyors are more likely to report that there is dampness and/or condensation in a dwelling than householders are to report the existence of associated problems. However, when householders do state there is a problem, their assessments tend to indicate that it is more serious than the surveyors' judgments do.

Chapter 10 – Work Done by Householders and Landlords

- Approximately one million households (48%) had carried out work to their dwellings in the twelve months prior to the SHCS fieldwork, a reduction of 10% on the equivalent figure from the SHCS 1996. Householders had paid for 1.5 million of the 2.2 million total jobs carried out.
- The job most frequently undertaken was the servicing of the central heating system, which was carried out by 17% of all households. Work to heating and insulation is the most common job category undertaken (28% of households).
- Owner occupiers are more likely than other tenure groups to do most types of work, with just over 20% having done general building works in the year prior to the survey. In contrast, only 9% of private renters had done so.
- 39% of the individual jobs carried out and paid for by households in the year prior to the survey were classified by the respondent as repairs, with the remainder being improvements. Households in all tenure groups except those renting from housing associations/co-ops tended to classify their works as improvement rather than repairs.
- Single parents and single pensioner households were least likely to carry out repairs.
- Respondents were asked to give the total amount they had spent on their home in the year before the survey (ie not just only the jobs described above). The total for all households was just over £3.3 billion, with the average (median) expenditure being about £220 per dwelling.

- In general, those with higher incomes spent more than lower income households, and a disproportionate amount of money was spent on dwellings built before 1919 and to detached houses.
- Most householders financed work through the use of savings, which taken together with day-to-day expenditure constituted almost 90% of payments.
- Around 20,000 households had been awarded grants to do work, accounting for a total of 16,000 jobs. In approximately 8,000 of these cases, the work would not have been completed without the grant.
- Servicing of central heating is also the most common job carried out by landlords (all types). The nature of the jobs carried out by landlords suggests that most are focusing on internal modernisation and patch repairs/maintenance rather than major external repairs.

Chapter 11 – Energy Efficiency and Fuel Poverty

- The mean NHER score of the stock is 4.5 with a standard deviation of 1.8.
- The mean SAP is 46.47 with a standard deviation of 16.24.
- If NHER scores are grouped together into bands, 14% of dwellings have a 'poor' energy rating and 12% have a 'good' rating, with the remaining 74% being 'moderate'. There are more dwellings with 'good' NHER scores than there were in the SHCS 1996.
- Older dwellings tend to have lower NHER scores, with pre-1919 dwellings lowest of all. Detached houses and flats in converted buildings have the lowest NHER, while flats in tenement buildings and 4-in-a-block types have the highest.
- Households with an income of less than £100 per week tend to live in dwellings with the lowest NHER scores. However, those with an income over £400 per week live in lower-rated dwellings than do households with a weekly income of between £100 and £400. This is likely to be because households on higher incomes tend to live in larger dwellings which are less efficient to heat and so may, other things being equal, have a lower NHER than smaller premises.
- The majority (68%) of dwellings have full gas central heating. Less than 10% of dwellings have only room heaters. In over three-quarters (78%) of dwellings the water heating is provided by the primary boiler.
- Full central heating is uncommon in pre-1919 dwellings but rises to over 80% in dwellings built after 1997.
- Rural dwellings are more likely to have partial central heating than urban dwellings but are equally likely to have no central heating at all.
- The most common thickness of loft insulation is 100mm. Approximately 165,000 dwellings have 200mm or more loft insulation. More than this (262,000) have none at all. Privately rented properties are more likely to have no loft insulation than any other tenure group.
- The chances of a dwelling having double glazing increase as the age decreases. Approximately 98% of all dwellings built after 1997 have double glazing, but the same is true for only 57% of those built before 1919.
- Most respondents (62%) were very satisfied with their heating, even those living in dwellings with poor NHER (32% of households living in NHER 0 dwellings are 'very satisfied').
- The number of rooms and type of heating system are the two best predictors of annual household energy expenditure. Dwelling age, type, and location are also important predictors, and glazing, loft insulation and added wall insulation each have small but statistically significant effects.

- The total number of fuel poor households in Scotland according to the SHCS 1996 definition is 262,000 (12% of all households); and according to the definition in the Fuel Poverty Statement of August 2002 the number is 369,000 (17%).
- This trend is consistent with externally verified trends in the major inputs (ie income, NHER and fuel costs).
- The trend across NHER categories is the same for both definitions of fuel poverty, and the proportion of fuel poor households within the "poor" NHER category is higher than for the other two bands.
- Fuel poor households are less likely to live in dwellings built since 1982.
- Occupiers of urban dwellings are less likely to be fuel poor than those living in rural areas.
- Households in dwellings with full gas central heating are least likely to be fuel poor and households without any form of central heating are most likely to be fuel poor.
- Households living in housing association/co-operative dwellings are less likely to be fuel poor.
- The prevalence of fuel poverty is significantly higher among private renters.
- Single pensioners are the most likely households to be fuel poor.
- Unsurprisingly, households with low and very low weekly incomes are much more likely to be fuel poor than others. Fuel poverty is virtually unknown amongst those with incomes in excess of £400 per week.

ⁱ See **Technical Annexe 12.1** for definitions of this and other Standards used.

ⁱⁱ See endnote i.

A number of the basic characteristics of a dwelling will have an impact on its overall condition, its state of repair and the cost of rectifying defects. The purpose of this chapter is therefore to set out the basic profile of the Scottish housing stock.

02

Introduction

This chapter gives an overview of the stock in terms of age, type, date of construction, size, type of construction and location and the interrelationships between them. It also gives estimates for the number and nature of vacant dwellings. This analysis forms a basis for considering the properties and condition of Scotland's dwellings in detail, as set out in the chapters which follow.

Dwellings in Scotland

- There are 2,279,000 dwellings in Scotland of which 2,192,000 (96%) are occupied and 87,000 are vacant.

A typology of Scotland's housing

The date of construction and the dwelling type are two of the most basic characteristics of any dwelling, and are fundamental to much of the analysis presented in this report. The **photographs on pages 4–5** give some typical examples (where available/applicable) of the different types of building which were built at different stages of the evolution of housing in Scotland. The precise definitions of these type categories are listed below.

House types

Detached – No other dwelling adjoins any part of the structure.

Semi-detached – A house that is only attached to one other dwelling.

The two dwellings taken together should be detached from any other dwellings.

Terraced – A house forming part of a block where at least one house is attached to two or more dwelling units.

Flat types

Tenements – Flats within a block with shared access, ie a common stair serves two or more flats. Generally not over four storeys in height.

4-in-a-block – Each flat in the block has its own independent access.

Flats on the upper level are reached by their own internal or external stair.

Tower/slab – Maisonettes and flats in a multi-storey or tower with five or more levels.

Typical examples would be 1960s high rise flats in the major cities.

Conversion – Flats resulting from the conversion of a house or former non-residential building (eg a warehouse). Note that the age of a building is taken from the date of original construction, not the date of conversion. This category does not include flats created from the conversion of other flats (eg the further subdivision of tenements) which are scored according to the type of flat the dwelling is at the time of survey.

The occupied stock

Table 2.1 summarises the profile of the occupied stock in terms of age, type, dwelling size and location.

Age and type

- 62% (1,366,000) of dwellings are houses and 38% (826,000) are flats.
- Of these flats, the majority (60%) are tenements, which form 23% of all the stock.
- 66% of Scotland's housing was built after World War II, with less than one-quarter of the stock dating from before 1919.
- The great majority of dwellings in Scotland are found in urban rather than rural locations.

Size

Dwelling size can be measured in two ways: a room count (excluding bathroom but including kitchen) and an estimate of floor area. **Table 2.2** describes the stock in terms of the number of rooms broken down by type, age and location.

- The majority (64%) of dwellings have four or five rooms (which equates to a two- or three-bedroomed property with kitchen and living-room). About 14% of dwellings have fewer rooms and the remaining 22% have more.
- Houses tend to be larger than flats: 70% of houses (955,000) have five rooms or more, compared to 20% of flats (169,000).
- Before 1919, dwellings tended to be either relatively large or relatively small. This trend gradually reduced in subsequent years.
- Dwellings in rural areas tend to be slightly larger than those in urban locations, as shown in **Figure 2.1**.

Age, type, size and location profile

TABLE
2.1

		000s	% of all dwellings
Dwelling type	Detached	412	19
	Semi-detached	459	21
	Terraced	495	23
	Tenement	497	23
	4-in-a-block	231	11
	Tower/slab	60	3
	Conversion	38	2
Age of dwelling	Pre-1919	446	20
	1919-1944	311	14
	1945-1964	531	24
	1965-1997	819	37
	Post-1997	86	4
Dwelling size	1-3 rooms	305	14
	4 rooms	764	35
	5 rooms	642	29
	6 rooms	263	12
	7+ rooms	218	10
Location	Urban	1,837	84
	Rural	355	16

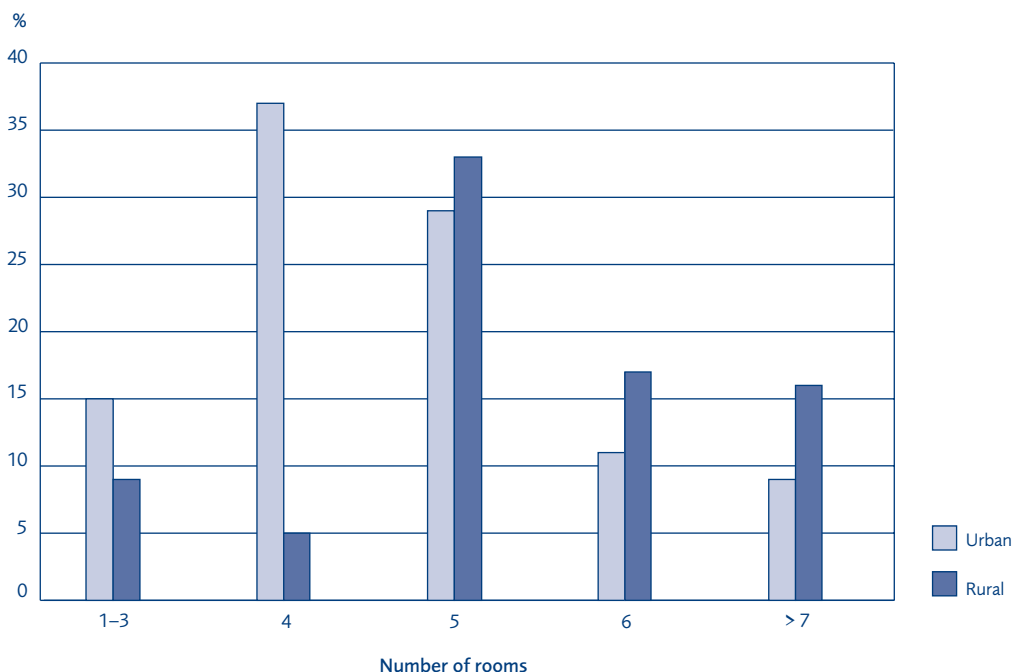
TABLE 2.2

Number of rooms by age, type and location

		Room count									
		1-3		4		5		6		>7	
		000s	%	000s	%	000s	%	000s	%	000s	%
Dwelling type	Detached	6	2	39	5	112	17	108	41	148	68
	Semi-detached	21	7	117	15	204	32	82	31	35	16
	Terraced	35	12	194	25	194	30	49	19	23	10
	Tenement	173	57	239	31	68	11	12	5	5	2
	4-in-a-block	41	14	131	17	49	8	7	3	4	2
	Tower/slab	17	6	35	5	7	1	*	0	*	0
	Conversion	11	4	10	1	8	1	5	2	4	2
Age of dwelling	Pre-1919	107	35	117	15	84	13	60	23	78	36
	1919-1944	24	8	142	19	88	14	34	13	22	10
	1945-1964	47	15	218	29	204	32	47	18	16	7
	1965-1997	118	39	264	35	244	38	108	41	84	39
	Post-1997	9	3	24	3	21	3	13	5	18	8
Location	Urban	272	89	677	89	526	82	203	77	160	73
	Rural	33	11	87	11	117	18	60	23	58	27

FIGURE 2.1

Number of rooms by location



Type of construction

Table 2.3 shows the profile of dwellings in terms of external wall construction, which indicates that the majority of dwellings are of traditional construction, ie mostly brick/blockwork.

External wall construction profile

TABLE
2.3

	External wall type	000s	%
Traditional	Sandstone	393	18
	Whin/granite	101	5
	Brick/block	1,477	67
Non-traditional	Timber	116	5
	Concrete	87	4
	Metal	15	1
	Other	3	0

Table 2.4 breaks this profile down further in terms of age of dwelling and also includes information about other significant aspects of dwelling construction such as roof and window type. The key points from this are as follows:

- There is a clear trend in terms of external wall construction after 1919, at which point dwellings began to be constructed using cavity rather than solid wall types, and the materials used changed from sandstone or whin/granite to the brick/block which predominates in the stock as a whole.
- Approximately 29% of dwellings built since 1997 have timber framed walls.
- The majority of dwellings use render as an external wall finish. This material, again, came into popularity after 1919 (prior to which stone was most commonly used) but the most recent age category indicates a shift towards the use of brick.
- Most dwellings in all age categories have a pitched roof with a tiled covering.
- There is a mixture of window types¹ in use. Sash and case windows predominate in pre-1919 dwellings but since then casement has been the favoured type, closely followed by pivot, then tilt-and-turn.
- Wood continues to be the most popular material for window construction, with uPVC popular in dwellings built between 1945–1964 but falling off again in more recently-built properties.

TABLE
2.4

Dwelling construction type by age of dwelling (continued overleaf)

Construction type		000s	% of all dwellings	Age of dwelling (%)				
				Pre-1919	1919-1944	1945-1964	1965-1997	Post-1997
External wall type	Solid	551	25	99	16	6	3	0
	Cavity	1,615	74	1	83	93	95	98
	Other	25	1	0	1	2	2	2
External wall material	Sandstone	393	18	79	10	1	1	1
	Whin/granite	101	5	17	5	1	0	1
	Brick/block	1,477	67	4	82	87	83	69
	Timber	116	5	0	1	2	10	29
	Concrete	87	4	0	2	6	6	1
	Metal	15	1	0	1	2	0	0
	Other	3	0	0	0	0	0	0
Principal external wall finish	Render	1,518	69	23	84	88	78	50
	Stone	394	18	76	11	2	1	3
	Brick	187	9	1	2	2	16	43
	Timber	24	1	0	0	2	1	1
	Concrete	57	3	0	3	4	3	2
	Metal	8	0	0	0	1	0	0
	Other	6	0	0	0	0	0	0
Principal roof type	Pitched	2,053	94	95	99	94	90	99
	Flat	93	4	2	1	5	6	1
	Mono	24	1	0	0	1	3	0
	Mansard	14	1	2	0	0	1	0
	Half mansard	8	0	1	0	0	0	0

continued overleaf

Dwelling construction type by age of dwelling (continued)

TABLE
2.4
continued

Construction type		Age of dwelling (%)						
		000s	% of all dwellings	Pre-1919	1919-1944	1945-1964	1965-1997	Post-1997
Principal roof cover	Slates	640	29	75	53	17	6	7
	Tiles	1,405	64	21	45	75	85	92
	Felt	64	3	2	1	2	5	0
	Asphalt	33	2	1	0	2	2	0
	Asbestos	9	0	0	1	0	0	0
	Metal	34	2	1	0	3	2	1
	Other	5	0	0	0	0	0	0
	Unobserved	3	0	0	0	0	0	0
Window type	Sash and case	230	11	40	9	2	1	1
	Casement	848	39	27	37	40	44	50
	Tilt and turn	508	23	14	26	27	25	23
	Pivot	535	24	15	25	28	27	26
	Other/mixed	71	3	4	3	3	3	0
Window frames	Wood	925	42	60	33	28	44	58
	Thermal break	92	4	4	5	5	4	1
	No thermal break	60	3	2	3	4	3	0
	uPVC	1,115	51	34	59	64	50	41

Characteristics of dwelling types

This section presents a brief overview in terms of the characteristics of each particular type of property found in Scotland, as summarised in **Table 2.5** (for houses) and **Table 2.6** (for flats).

Houses

- Almost one-fifth of all dwellings are detached houses.
- Most detached homes were built either before 1919 or after 1965. Semi-detached dwellings became more popular after World War II, and terraced houses after 1965.
- 40% of detached houses are bungalows, with almost all of the remainder having two storeys. Other house types are more likely to be on two floors.
- Approximately 62% of detached houses have six or more rooms. Terraced houses are more likely than other house types to have fewer than four rooms.
- In terms of floor area, detached houses are, again, larger, with almost seven out of 10 having a floor area of 100 m² or more. Semi-detached and terraced homes are more evenly spread in the range 70–110 m².

Flats

- Tenements, which as noted earlier are the most common type of flat in Scotland, tend to have been built before 1919 and between 1945–1967. Four-in-a-block dwellings were most popular in the inter-war period and towers were rarely constructed before 1945, nor are they being built in large numbers currently.
- Most conversions are of dwellings built before 1919 (the age is taken from the date of construction of the original building, not the date of conversion).
- The majority of flats are located in blocks of five or fewer storeys, with the obvious exception of towers.
- Very few flats have more than five rooms, of which most are conversions.
- Conversions are also larger in terms of floor area, with just over one-third having a floor area of 100m² or more.

Dwelling characteristics by type of house

TABLE
2.5

		Detached	Semi-detached	Terraced	All houses
		%	%	%	%
Age of dwelling	Pre-1919	22	12	11	15
	1919–1944	11	17	8	12
	1945–1964	9	30	33	25
	1965–1997	50	37	46	44
	Post-1997	9	4	2	5
Dwelling size	1–3 rooms	2	5	7	5
	4 rooms	9	26	39	26
	5 rooms	27	45	39	37
	6 rooms	26	18	10	18
	7+ rooms	36	8	5	15
Number of storeys	1.0	40	18	10	22
	1.5	23	12	6	13
	2.0	35	68	80	62
	2.5 or above	2	2	4	1
Floor size	<50m ²	0	2	4	2
	50–69m ²	3	10	13	9
	70–89m ²	10	28	36	25
	90–110m ²	19	35	31	29
	>110m ²	67	25	17	35
Houses (000s)		412	460	495	1,366
As a percentage of all houses		30	34	36	100

TABLE
2.6

Dwelling characteristics by type of flat

		Tenement	4-in-a-block	Tower/slab	Conversions	All flats
		%	%	%	%	%
Age of dwelling	Pre-1919	38	11	2	83	30
	1919–1944	9	46	0	4	18
	1945–1964	21	27	39	2	23
	1965–1997	31	13	59	11	27
	Post-1997	3	3	1	0	3
Dwelling size	1–3 rooms	35	18	29	29	29
	4 rooms	48	56	58	27	50
	5 rooms	14	21	13	22	16
	6 rooms	3	3	0	13	3
	7+ rooms	1	2	0	9	2
Storeys in common block	2–3	59	99	11	80	64
	4–5	40	1	16	18	30
	6–9	1	0	10	0	1
	10+	0	0	63	2	5
Floor size	<50m ²	21	10	16	15	17
	50–69m ²	35	32	38	17	34
	70–89m ²	28	41	33	15	31
	90–110m ²	9	12	9	16	10
	>110m ²	6	6	4	36	7
Flats (000s)		497	231	60	38	826
As a percentage of all flats		60	28	7	5	100

Change since 1996

There has been limited turnover since the SHCS 1996, with only 4% of the total stock having been built since that survey was undertaken, and around 27,000 dwellings (about 1%) having been demolishedⁱⁱ. The proportion of conversions has also remained stable at around 2%. We would not, therefore, expect the estimates reported in this chapter to have indicated any dramatic changes to the overall profile, and for the most part the basic characteristics of the stock have indeed remained the same as in the previous survey.

The profile of dwellings newly-built since the SHCS 1996 is in line with the overall stock proportions (eg the ratio of houses to flats) but does indicate the continuation of some trends identified in that survey, such as the growing popularity of timber frame construction and brick external wall finish.

Profile of vacant dwellings

At any given time, a proportion of the housing stock will be unoccupied. The SHCS therefore attempts to estimate the number of vacant dwellings in Scotland as well as profiling those which are occupied.

An assessment of occupation may be carried out at various points in the survey process, but for the purposes of estimating the total, a 'vacant' dwelling has been defined as one which was not occupied at the time of the **social** survey. The survey also defines sub-types of vacant (see **Box** overleaf).

Table 2.7 summarises the overall profile of vacant dwellings.

Although it is not possible to classify vacants in terms of tenure or any other characteristic which requires either an internal physical survey or information from the householder (since such dwellings received only an external inspection), an assessment of age and type was carried out. **Tables 2.8** and **2.9** summarise this information, broken down by type of vacant, for the 75% of estimated vacants where data was available.

Note that it is not possible to determine whether or not the vacant dwellings for which data was available are representative of all vacant dwellings. Caution should therefore be exercised when considering this profile. It indicates that:

- Most vacant dwellings (42%) were built before 1919. This in part reflects the fact that a large proportion of all dwellings are pre-1919, and also that they are slightly more likely to be vacant than dwellings built later.
- Most vacant dwellings (40%) are tenements. Of these tenements, vacant dwellings are as likely to be long-term as transitionally vacant. This pattern is in contrast to that found with all other dwelling types, where vacant dwellings are more likely to be transitionally than long-term vacant.
- There are fewer vacant dwellings in Scotland today than there were in the 1996 survey, which estimated there were 109,000 in total. Their profile, however, remains largely unchanged.

Vacant

A dwelling not occupied at the time of the social survey (used to estimate the total).

Transitional vacant

A dwelling defined as vacant during the social survey was on the market (for sale or rent) at the time of the physical survey.

Long-term vacant

A dwelling defined as vacant during the social survey was not being marketed, or was not fit for occupation, at the time of the physical survey.

TABLE
2.7

Breakdown of total vacant dwellings

Vacancy status	000s
Transitional	41
Long-term	23
Unknown ⁱⁱⁱ	23
Total	87

TABLE
2.8

Vacant dwellings by age of dwelling

Age of dwelling	Total vacant ^{iv}		Transitionally vacant		Long-term vacant	
	000s	%	000s	%	000s	%
Pre-1919	27	42	20	4	7	1
1919–1944	8	13	5	2	3	1
1945–1964	14	22	6	1	8	2
1965–1974	8	12	4	1	3	1
1975–1982	3	5	2	1	1	1
1983–1990	2	4	2	1	1	1
1991–1997	1	2	1	1	0	0
Post-1997	1	1	1	1	0	0

Vacant dwellings by type of dwelling

TABLE
2.9

Type of dwelling	Total vacant ^{iv}		Transitionally vacant		Long-term vacant	
	000s	%	000s	%	000s	%
Detached	15	23	12	3	3	0
Semi-detached	5	8	4	1	1	0
Terraced	8	12	6	2	2	0
Tenement	26	40	13	2	13	2
4-in-a-block	7	10	4	2	2	1
Flat in converted buildings	1	2	1	3	0	0
Tower/slab	3	5	2	3	1	2

ⁱ In dwellings with more than one window type, the surveyor was briefed to record the type which predominated.

ⁱⁱ Statistical Bulletin Housing Series HSG/2003/2 – Housing Trends in Scotland: Quarter Ending 31 December 2002.

ⁱⁱⁱ This category denotes vacants which had been identified at the social survey but for which no outcome was recorded at the physical survey. This situation is believed to have arisen because a proportion of vacants were issued to surveyors by the fieldwork contractor, but no physical inspection was carried out because fieldwork had come to an end before there was an opportunity to do so. This has an impact on the representativeness of the vacancy profile, as noted in the main text.

^{iv} The number of vacant dwellings adds up to 65,000 and not 87,000 because data were only available for 75% of vacant dwellings.

House condition is not influenced solely by physical factors such as the age, design and construction of the dwelling; its occupants and their decisions are also crucial. The purpose of this chapter is therefore to describe the basic profile of Scotland's households, in terms of their size, composition, type, location, employment status and income.

03

Introduction

Occupiers of dwellings have a crucial role to play in the preservation and repair of their homes. As such it is important to understand the nature of Scotland's households as this offers insights into the type of repair regimes undertaken and the differing levels of resource available across different household groups. Information on Scotland's households is obtained from the SHCS social survey, which is carried out with the Highest Income Householder (HIH) or their partner (see **Technical Annexe 1**, Glossary). Analysis of this data allows us to explore house condition within the context of the broader social and demographic factors that affect Scotland, such as the changing age and employment profiles of the population and shifting patterns of home ownership (covered in more detail in the next chapter on Tenure and Mobility).

Basic profile of households

There are approximately 2.2 million households in Scotland. **Table 3.1** summarises their profile in terms of key household and dwelling characteristics. It can be seen that:

- Small adult households make up 17% of all households. Single parent households constitute 6% while 'pensioner' households (older smaller, and single pensioner) comprise 30%.
- The majority of households (84%) live in urban areas;
- 63% of households live in houses rather than flats. Single adults are most likely to live in flats, representing 27% of the total. Houses are more commonly occupied by families, with 76% of small families and 83% of large families living in houses rather than flats.
- Almost a quarter (531,000) of all households live in dwellings built between 1945 and 1964. Although single adult households are most likely to live in dwellings that were constructed before 1919, post-1997 dwellings are most likely to be occupied by small families.

Household size

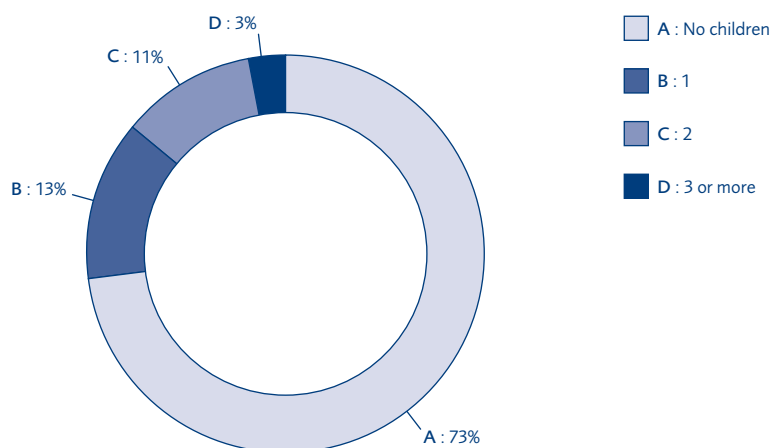
- Households in Scotland tend to be small. Almost one third (682,000) contain only one member whilst over 80% contain three people or fewer. Of those single person households just over half are pensioners. These figures indicate little change since the 1996 SHCS.
- The average (median) number of people per household is two.
- Just over 70% (1,594,000) of households contain no children and the majority of the remainder (96%) contain two children or fewer (see **Figure 3.1**).

TABLE
3.1

Profile of households by household type, location, dwelling type and age of dwelling

		000s	% of all dwellings
Household type	Single adult	342	16
	Small adult	376	17
	Single parent	131	6
	Small family	309	14
	Large family	158	7
	Large adult	224	10
	Older smaller	312	14
	Single pensioner	340	16
Location	Urban	1,837	84
	Rural	355	16
Dwelling type	Detached houses	412	19
	Semi-detached houses	459	21
	Terraced houses	495	23
	Tenement	497	23
	4-in-a-block	231	11
	Flat in converted building	38	2
	Tower/slab	60	3
Age of dwelling	Pre-1919	446	20
	1919-1944	311	14
	1945-1964	531	24
	1965-1974	363	17
	1975-1982	186	9
	1983-1990	133	6
	1991-1997	136	6
	Post-1997	86	4

Number of children in household – banded

FIGURE
3.1

Highest Income Householders

The SHCS social survey gathers a range of information on the HIH's age, status, occupation and income.

HIH and household types

Table 3.2 summarises the relationship between age and household type for HIH, showing that:

- The most common age for HIH is 40–59: 805,000 (37%) of households contain a HIH in this age category. The mean age of the HIH is 51 years old (standard deviation is 17.4). The majority (61%) are male.
- For HIH in the 16–24 age group the most common household types are single and small adult. For those aged 25–39 the prevalent household type is small family. Small adult households make up the single biggest group where the HIH is aged 40–59. 35% of HIH aged between 60–64 live in older smaller households.
- For the remaining age groups, unsurprisingly, there are very few single adult and small adult households; a half (50%) of HIH aged between 65–74 live in older smaller households whilst the proportion in this group aged 75–80 and over 81 is 96% and 99% respectively.

Age, marital status and ethnicity of HIH

As can be seen from **Table 3.3**, marital status changes according to the age of the HIH.

- HIH in the 16–24 age range are over six times more likely to be single than HIH in the 40–59 age group. Older HIH in the 65–74 age range tend to be married whilst HIH over 75 years of age are more likely to be widowed.
- In terms of ethnicity, the vast majority (99%) of HIH are white (see **Table 3.4**). It is not possible to break down the remaining 1% into meaningful sub-categories.

Employment status of HIH

Figure 3.2 summarises the employment profile of HIH.

- The majority (55%) of HIH are employed (full or part-time, or self-employed). Just under 30% of HIH are retired.
- HIH who are either long-term sick/disabled, suffering from a short-term illness or looking after the home and family constitute 11%. Almost 2% of HIH are in further or higher education whilst 4% are unemployed.
- For HIH of working age (65 or less) it is not surprising to find that the number of retired HIH falls to 8%.

TABLE
3.2

Household type by age of HIH

Household type	Age of HIH													
	16–24		25–39		40–59		60–64		65–74		75–80		81+	
	000s	% ^a	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Single adult	25	7	119	35	176	52	21	6	*	0	*	0	*	0
Small adult	27	7	108	29	212	56	29	8	*	0	*	0	*	0
Single parent	18	14	82	62	31	23	*	0	*	1	*	0	*	0
Small family	10+	3	182	59	112	36	*	1	*	1	*	0	*	0
Large family	*	1	56	35	97	62	*	1	*	1	*	0	*	*
Large adult	14+	6	11+	5	157	70	21	9	15	7	4+	2	*	1
Older smaller	*	0	*	1	19	6	57	18	153	49	53	17	28	9
Single pensioner	*	0	*	0	*	0	32	10	137	40	89	26	82	24
All types	96	4	561	26	805	37	163	7	309	14	148	7	111	5

^a Percentages refer to the proportion in the household type category.

Age and marital status of HIHs

TABLE
3.3

Marital status	Age of HIH													
	16-24		25-39		40-59		60-64		65-74		75-80		81+	
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Married	6†	6	236	42	482	60	100	62	152	49	51	35	24	21
Cohabiting	24	25	89	16	44	5	*	1	*	1	*	0	*	0
Single	65	68	165	29	83	10	12	7	28	9	13	9	9†	8
Widowed	*	0	*	1	33	4	26	16	100	32	78	53	77	69
Divorced	*	1	29	5	112	14	18	11	21	7	5†	3	*	1
Separated	*	1	39	7	51	6	6	3	5†	2	*	1	*	1

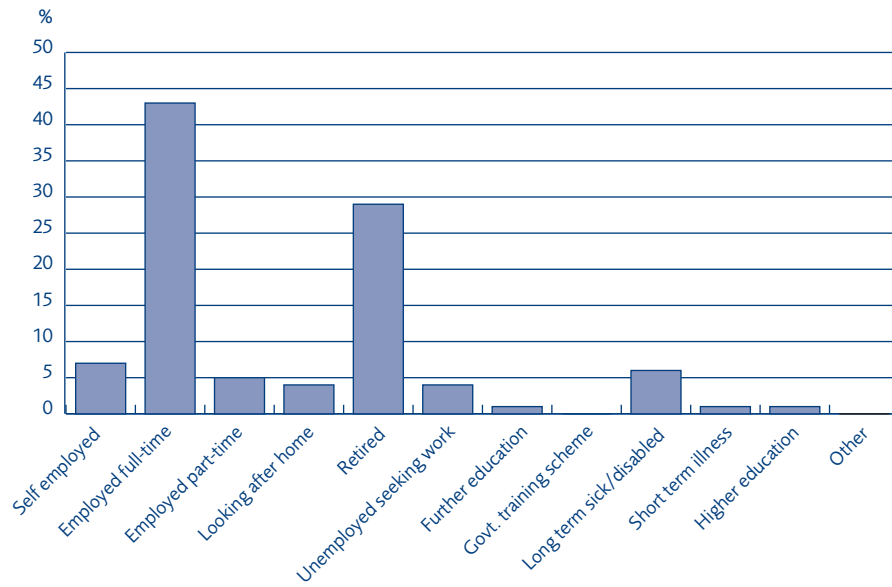
Ethnicity of HIH^aTABLE
3.4

Ethnic group	000s	%
White	1,630	99
Non-white	23	1

^a Numbers in this table do not sum to 2,192 because they refer only to cases where the Highest Income Householder was also the respondent. In cases where the HIH's partner was interviewed, no attempt was made to collect information on the ethnicity of the HIH him/herself.

FIGURE 3.2

Employment of HIH



Household income

The SHCS social interview also contains a section designed to establish the total income of the household from various sources (including employment, benefits and other sources). **Figure 3.3** illustrates the overall distribution of weekly household income in Scotland (see **Technical Annex 12.9** for more details of how these figures were obtained) and **Table 3.5** summarises the total in each income category. It can be seen that:

- Very few (6%) have an income of less than £100 per week.
- The median household income is £279 per week.
- Over two thirds (67%) of households have an income of more than £200 per week which equates to a gross annual income of £10,000 or above.
- Almost one in five households in Scotland have a weekly income of more than £500 per week.

Table 3.5 and **Figure 3.4** illustrate the breakdown of income by household type, showing clear differences. For example:

- 'Family'-type households tend to have higher incomes than others. For example only 7% of both small and large family households earn less than £200 per week compared to 75% of single pensioner households and just over 40% of both single parent and single adult households. Of course these differences may simply reflect the fact that such households are more likely to contain more than one member who is in employment.
- Around 40% of large family and small family households have an income of over £500 per week whilst around a third of small and large adult households fall into this income category. Conversely, fewer than 10% of single adult, single parent, older smaller and single pensioner households are in this category.
- The median household income for single pensioner households is £151 per week and £215 per week for single parent households. Small family households have a median household income of £457 per week.

FIGURE
3.3

Distribution of weekly household income

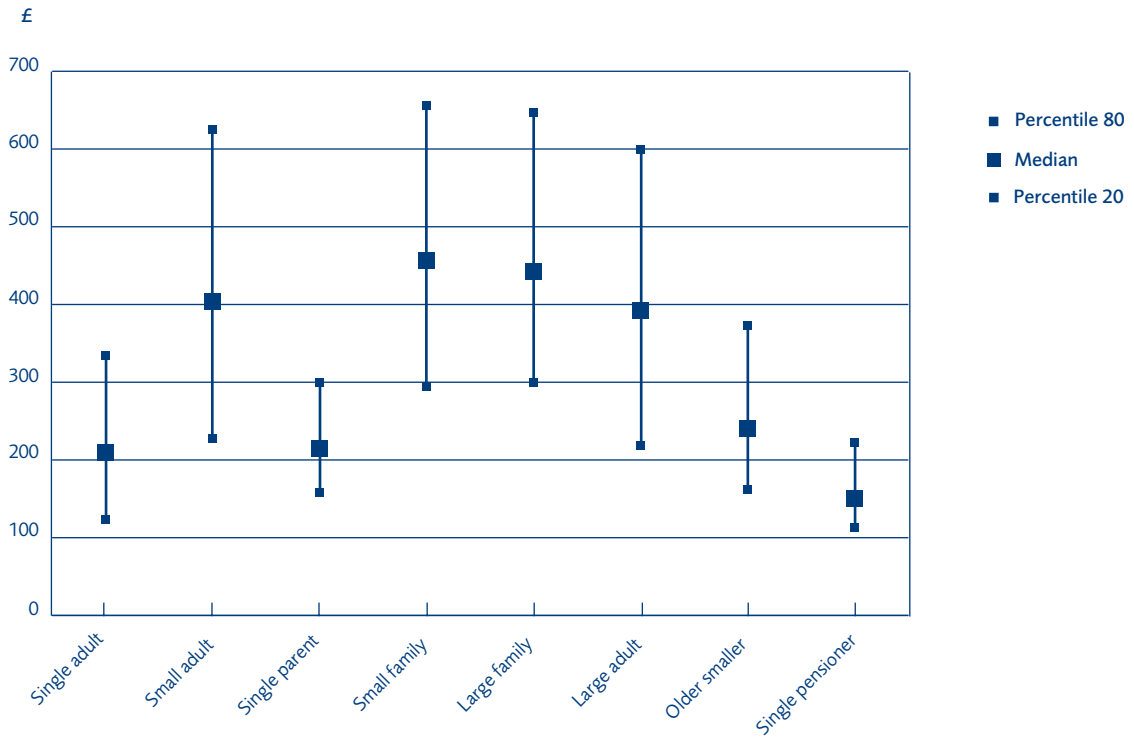
TABLE
3.5

Weekly household income by household type

Household type	< £100 p.w.		£100 -£199.99 p.w.		£200 -£299.99 p.w.		£300 -£399.99 p.w.		£400 -£499.99 p.w.		£500 -£699.99 p.w.		£700+ p.w.	
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Single adult	39	12	115	34	90	27	56	16	22	7	13†	4	4†	1
Small adult	13†	3	46	12	57	15	68	18	61	16	76	20	53	14
Single parent	*	2	53	40	49	37	18	14	6	5	*	1	*	1
Small family	*	1	18	6	43	14	56	18	59	19	80	26	49	16
Large family	*	1	9	6	22	14	34	22	29	19	38	24	25	16
Large adult	10	5	27	12	38	17	38	17	38	17	42	19	28	13
Older smaller	13	4	95	31	101	33	49	16	26	8	19	6	7†	2
Single pensioner	39	12	211	63	67	20	14	4	4†	1	*	1	*	0
Total (all types)	120	6	570	26	472	22	338	15	243	11	271	12	167	8

Weekly household income by household type

FIGURE
3.4



Highest Income Householders and households

This section explores the relationship between HIH and household types and the interaction between these two categories.

- As shown in **Table 3.6**, full-time employment is the most prevalent economic status for HIH across all household types, with only three exceptions (single parents, older smaller and single pensioners). Single parents are more likely to be looking after the home and, as would be expected, HIH in older households (older smaller and single pensioner) tend to be retired.
- There is a much greater incidence of part-time working amongst single parent households, where 20% of HIH work part-time compared to the national figure of 5%.
- Unemployment is also more likely to be higher for households headed by a single parent: 11% compared to a national figure of 4% for all HIH. Taken in isolation, however, this figure can be misleading. It is important to note that single parent households comprise only 18% of unemployed HIH, while 43% of unemployed HIH head single adult households.
- **Table 3.7** summarises the sex of HIH by type of household. It shows that single parent households are much more likely than any other household type to be headed by a woman. 92% of single parent households have a female HIH. The only other household type with a similar profile is single pensioner households where 74% have a female HIH. Large family households are most likely to have a male HIH (80%).

Table 3.8 shows the distribution of self-reported long-term illness (LTI) by household type.

- Around 35% of households contain someone with self-reported LTI or a disability. This rises to 53% for older smaller households and 50% for single pensioner households (**Table 3.8**).

Economic status of HIH by household type

TABLE
3.6

Economic status of HIH	Household type															
	Single adult		Small adult		Single parent		Small family		Large family		Large adult		Older smaller		Single pensioner	
	000s	% ^a	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Self-employed	22	7	37	10	*	2	31	10	20	13	23	10	11	4	*	1
Employed full-time	168	49	249	66	29	22	228	74	104	66	130	58	27	9	*	1
Employed part-time	16	5	16	4	27	20	17	6	7†	5	10†	5	9†	3	5†	1
Looking after home	6†	2	5†	1	44	33	10†	3	7†	4	*	2	*	1	6†	2
Retired	12	4	17	5	*	1	*	1	*	2	29	13	247	79	318	94
Unemployed seeking work	35	10	11†	3	15	11	9†	3	7†	5	4†	2	*	1	*	0
Further education	*	1	*	0	*	3	*	0	*	1	*	1	*	0	*	0
Govt. training scheme	*	0	*	0	*	0	*	0	*	0	*	0	*	0	*	0
Long-term sick/disabled	60	18	28	8	6†	5	7†	2	6†	4	10†	5	12	4	6†	2
Short-term illness	11†	3	4†	1	*	2	*	0	*	1	*	1	*	0	*	0
Higher education	7†	2	7†	2	*	2	*	0	*	0	12	5	*	0	*	0
Other	*	0	*	0	*	0	*	0	*	0	*	0	*	0	*	0

^a Percentages refer to the proportion in the household type category.

TABLE
3.7

Sex of HIH by household type

Household type	Sex of HIH			
	Male		Female	
	000s	%	000s	%
Single adult	197	58	144	42
Small adult	261	69	115	31
Single parent	11+	8	121	92
Small family	241	78	68	22
Large family	127	80	31	20
Large adult	168	75	56	25
Older smaller	245	79	67	21
Single pensioner	88	26	252	74

TABLE
3.8

Household type by member with long-term illness (LTI)/disability

Household type	No LTI/disabled		LTI/disabled	
	000s	%	000s	%
Single adult	238	70	104	30
Small adult	275	73	101	27
Single parent	92	70	39	30
Small family	238	77	71	23
Large family	110	70	48	31
Large adult	147	66	77	34
Older smaller	145	47	167	53
Single pensioner	171	50	139	50

Density of occupation

Not all householders use all the rooms in their home: conversely, some homes may not provide enough accommodation for all the people living there. A measure of density of occupation, known as the Bedroom Standard, has been developed to measure such under- or over-occupation. It is based on the approach taken in the General Household Survey (see **Box** overleaf for details).

Table 3.9 and **Figure 3.5** summarise the number of households meeting each level of the Bedroom Standard. This shows that:-

- Approximately 111,000 households (5%) do not have sufficient bedrooms available to meet their needs as defined by the Bedroom Standard.
- A further 737,000 households meet the standard exactly whilst the remainder exceed its requirements.

Table 3.10 indicates how density of occupation varies according to household type and key dwelling characteristics. The main points are as follows:

- Large adult and large family households comprise half of all households which are below the Bedroom Standard.
- Small adult households are most likely to live in dwellings with three or more bedrooms above the standard (39% of small adult households fall into this category). Conversely single parent households are least likely to be found in this category (1%).
- Households living in dwellings constructed before 1919 are most likely to have three bedrooms above the standard whilst those living in dwellings constructed between 1965 and 1997 are most likely to have insufficient bedrooms.
- Almost 40% of households with insufficient bedrooms live in tenement flats whilst the same is true for only 2% of those living in flats in converted buildings.
- Over two thirds of those with more than three bedrooms above the standard live in detached houses and 93% of those in this situation live in houses rather than flats.

The Bedroom Standard

This concept is used to estimate occupation density by allocating a standard number of bedrooms to each household in accordance with its age/sex/marital status composition and the relationship of the members to one another. A separate bedroom is allocated to each married/co-habiting couple, any other person aged 21 or over, each pair of adolescents aged 10–20 of the same sex, and each pair of children under 10. Any unpaired person aged 10–20 is paired if possible with a child under 10 of the same sex, or, if that is not possible, is given a separate bedroom, as is any unpaired child under 10. In a very few cases there was more than one household in the dwelling but the total number of households was not known. Households with one extra person were allocated an extra bedroom. For those few cases with more than one extra person a bedroom standard is not calculated.

This standard is then compared with the actual number of bedrooms available for the sole use of the household, and deficiencies or excesses are calculated.

Bedrooms were calculated as follows: bedrooms are all rooms described as such by the surveyor. Where dwellings have more than six rooms the extra are not defined but are assumed to be bedrooms for the purpose of calculating the SHCS bedroom standard.

The above process produces the five-category measure of density of occupation used in **Table 3.9**.

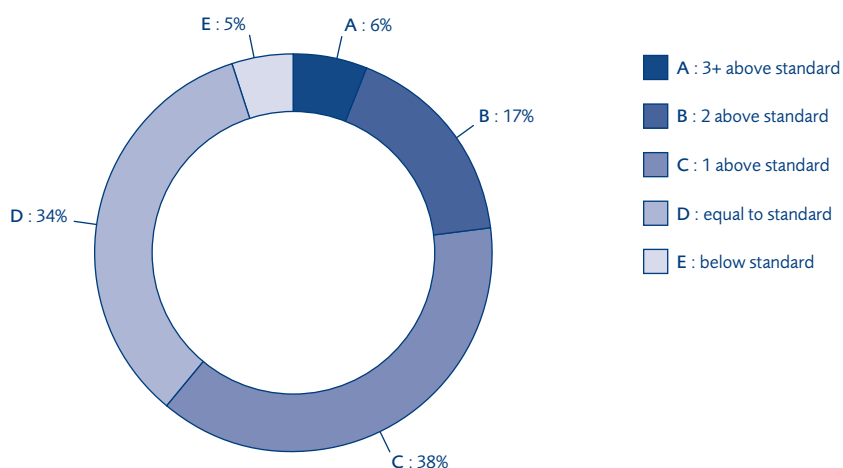
TABLE
3.9

Compliance with the Bedroom Standard

	000s	%
3+ rooms above Standard	133	6
2 rooms above Standard	368	17
1 room above Standard	843	38
Equal to Standard	737	34
Below Standard	111	5

Compliance with the Bedroom Standard

FIGURE 3.5



Compliance with Bedroom Standard by key household and dwelling characteristics

TABLE 3.10

		3+ above Standard		2 above Standard		1 above Standard		Equal to Standard		Below Standard	
		000s	%	000s	%	000s	%	000s	%	000s	%
Household type	Single adult	13†	10	46	13	143	17	126	17	8†	8
	Small adult	39	29	98	27	148	18	79	11	8†	7
	Single parent	*	1	2†	1	28	3	90	12	11†	10
	Small family	16	12	34	9	114	14	131	18	18	16
	Large family	9†	7	13	4	34	4	70	10	34	30
	Large adult	12†	9	20	5	81	10	86	12	22	20
	Older smaller	20	23	94	26	135	16	51	7	5†	5
	Single pensioner	14	10	61	17	159	19	104	14	5†	5
Age of dwelling	Pre-1919	52	39	62	17	142	17	160	22	30	27
	1919-1944	12†	9	46	13	137	16	99	13	16	15
	1945-1964	12†	9	95	26	215	26	180	24	29	26
	1965-1997	47	35	147	40	316	38	276	37	33	29
	Post-1997	10†	8	18	5	32	4	23	3	*	3
Type of dwelling	Detached	91	68	127	35	137	16	50	7	6†	6
	Semi-detached	18	14	107	29	195	23	123	17	16	15
	Terraced	15†	11	87	24	205	24	163	22	24	22
	Tenement	*	3	24	6	164	19	263	36	43	38
	4-in-a-block	*	2	15	4	103	12	96	13	14	12
	Flat in converted building	*	2	5†	1	14†	2	14†	2	*	2
	Tower/slab	*	0	*	1	24	3	28	4	5†	5

Change since 1996

Table 3.11 illustrates the profile of the key social and demographic indicators reported in this section against those reported in the SHCS 1996. It can be seen that any variation that does occur is minimal. It should be noted however that a methodological change to the SHCS renders this kind of comparison problematic. Although the 1996 SHCS took the Head of Household as the Household Reference Person (HRP), the 2002 SHCS uses the Highest Income Householder as the HRP. The figures in the tables therefore employ two different classifications of HRP.

TABLE
3.11

Comparison of key social, demographic and economic indicators 1996–2002

		1996 (%)	2002 (%)
All households (thousands)		2,123	2,192
Household type	Single adult	13	16
	Small adult	18	17
	Single parent	5	6
	Small family	17	14
	Large family	9	7
	Large adult	12	10
	Older smaller	12	14
	Single pensioner	14	16
Age of Highest Income Householder	16–24	4	4
	25–39	28	26
	40–59	35	37
	60–64	7	7
	65–74	14	14
	75–80	6	7
	81+	5	5
	Mean age (number of years)	50	51

continued overleaf

Comparison of key social, demographic and economic indicators 1996–2002 (continued)

TABLE
3.11
continued

		1996 (%)	2002 (%)
Ethnic group	White	99	99
	Non-white	1	2
Household size	Single person	27	31
	2 persons	33	35
	3 persons	18	16
	4 persons	16	13
	5+	7	4
	Mean number of people	2.4	2.3
Number of dependent children	None	68	71
	1	14	13
	2	13	12
	3	4	4
	4+	1	1
Sex of HH	Male	70	61
	Female	30	39
Marital status of householder	Married/cohabiting	59	55 ^a
	Single	16	17
	Widowed	15	15
	Divorced	7	8
	Separated	4	5
Economic status of householder	Employed full-time (includes self-employed)	48	50
	Employed part-time	4	5
	Looking after home	5	4
	Retired	26	29
	Unemployed seeking work	6	4
	Long term sick/disabled	7	6
	Other	3	2 ^b

^a The category 'married/cohabiting' was not disaggregated in 1996. In 2002, cohabittees formed 7% of all households.

^b 'Other' includes those in higher education, further education and Govt. training schemes.

Analysis of tenure is an important aspect of understanding house condition, given the potential differences between tenure groups in their repair/improvement activity, and their opinions about the quality of their homes and neighbourhoods. The purpose of this chapter is therefore to describe Scotland's tenure profile and to look at movement between tenures.

04

Introduction

The tenure composition of Scotland's housing has altered significantly in the past 30 years. The advent of the Right To Buy initiative resulted in thousands of local authority tenants buying their homes, with the consequence that owner occupation has become by far the dominant form of tenure in Scotland.

This trend has slowed in recent years but housing mobility remains an important feature of the housing system. People move house for many reasons, such as change in family circumstances or employment. As well as having an impact on house condition, an understanding of housing mobility and householder aspirations is also important to policy development and planning in areas such as housing and transport.

Overall tenure profile

- 1.4 million households (62%) are owner occupiers. This represents an increase of around 5% on the 1996 figure.
- Just over half a million households (24%) rent from a local authority, Scottish Homes or other public sector landlord, a fall of 9% on the corresponding figure from 1996.
- 6% of households (127,000) rent from a housing association or co-operative while 8% of households (173,000) rent privately.

Figure 4.1 illustrates the change in overall tenure profile since the 1996 SHCS.

Tenure change since 1996

FIGURE 4.1

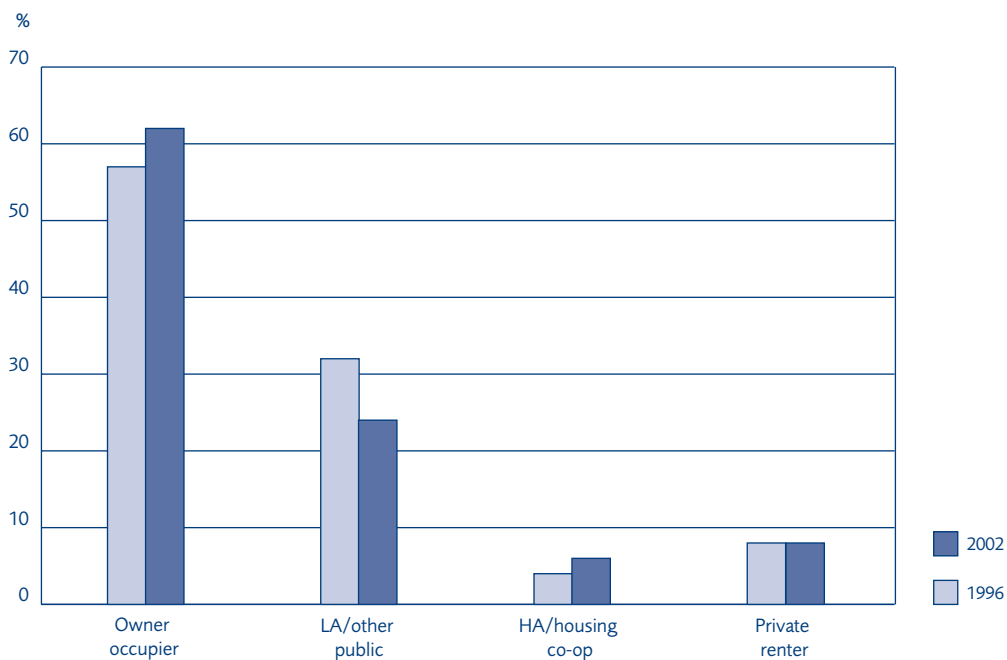


TABLE 4.1 Tenure profile by household type, location, dwelling type and age of dwelling

		Owner occupier		LA/other public		HA/co-op		Private renter	
		000s	%	000s	%	000s	%	000s	%
Household type	Single adult	169	49	102	30	27	8	44	13
	Small adult	276	73	53	14	13	3	35	9
	Single parent	36	27	66	50	16	12	14	11
	Small family	227	74	53	17	14	5	15	5
	Large family	107	68	31	20	9†	6	11†	7
	Large adult	165	74	32	15	6†	3	20	9
	Older smaller	223	71	63	20	13	4	14	4
	Single pensioner	165	49	124	37	29	8	22	6
Location	Urban	1,129	62	462	25	114	6	131	7
	Rural	238	67	62	18	13	4	42	12
Type of dwelling	Detached	376	91	4†	1	3†	1	30	7
	Semi-detached	341	74	78	17	15	3	25	6
	Terraced	295	60	153	31	25	5	22	4
	Tenement	215	43	149	30	64	13	69	14
	4-in-a-block	110	48	95	41	13	6	13	6
	Flat in converted building	27	72	*	5	*	4	7	19
	Tower/slab	5†	8	46	76	6†	11†	*	5
Age of dwelling	Pre-1919	318	71	13	3	19	4	95	21
	1919-1944	181	58	109	35	8†	3	13	4
	1945-1964	263	50	220	41	29	6	19	4
	1965-1974	208	57	124	34	17	5	15	4
	1975-1982	133	72	35	19	8†	4	9†	5
	1983-1990	99	75	12	9	13	10	9†	7
	1991-1997	102	76	8†	6	18	14	7†	5
	Post-1997	64	63	5†	6	15	18	*	3
Weekly household income (£)	<100	56	46	38	31	8†	7	19	16
	100-199.99	223	39	248	43	51	9	52	9
	200-299.99	241	52	143	31	39	8	43	9
	300-399.99	230	69	58	17	17	5	28	8
	400-499.99	202	83	22	9	7†	3	14	6
	500-699.99	248	91	10	4	4†	1	10†	4
	Over 700	159	94	4†	2	*	1	5†	3

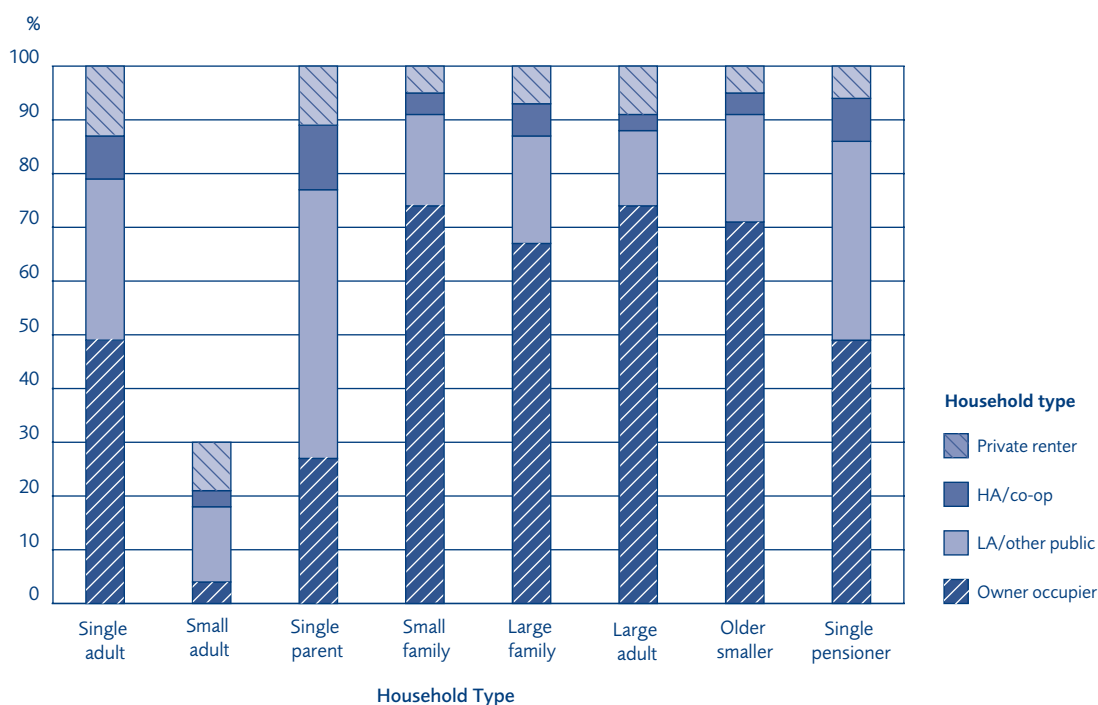
Table 4.1 sets out the tenure profile of Scotland's households in terms of household type, age, location and dwelling type. The key points are as follows:

- Owner occupation is the predominant tenure across all household types. The majority of people living in urban and rural areas own their own homes (62% and 67% respectively).
- However, this is not the case for single parent households, only 27% of which own their homes. The proportion of single parent owner occupiers has nonetheless almost doubled since the 1996 SHCS.
- Almost a quarter of households renting from a local authority (LA) or other public sector landlord are single pensioner households, and a further 19% are single adult households. 37% of single pensioner households rent from a local authority or other public sector landlord.
- Almost a quarter (23% or 29,000) of housing association/co-operative renters are single pensioners. However, this comprises only 8% of single pensioner households.
- 13% of single adult households rent privately. It should be noted however that just over a quarter (26%) of private renters are single adult households.
- Owner occupiers are four times more likely than renters to be in the top income band. Private renters are most likely to be in the lowest income band.
- With the exception of tenements and 4-in-a-block type flats, owner occupation is also the predominant tenure across dwelling types. Although not the majority tenure for tenements, owner occupation is still the single largest category.
- 40% of owner occupiers own their homes outright while the remainder are being bought under a mortgage.

Figure 4.2 summarises this information for household type.

Household type by tenure

FIGURE
4.2



Profile of length of occupancy

Households were asked to indicate the length of time they had been living in their current home. **Figure 4.3** summarises the responses.

- 2% of households had moved in the 12 months prior to the survey and 13% had been in their current home for less than two years. These figures show a marked decrease from the 1996 SHCS where 10% of households had moved in the year prior to survey and 18% had been in their home less than two years.
- At the other end of the scale the differences from 1996 are not so pronounced. 65% of households had lived in their homes for over five years compared to 63% in 1996, while 18% had lived in their homes for over 20 years, compared to 22% in 1996.
- The median length of occupancy is eight years¹.

Factors influencing length of occupancy

Length of occupancy can vary according to the influence of various factors. These could be socio-economic factors, such as the age and employment status of the highest income householder (HIH), or linked to aspects such as satisfaction with the dwelling or the neighbourhood.

Influence of socio-economic factors

Clear distinctions become apparent if we examine length of occupancy by household type, as summarised in **Figure 4.4**:

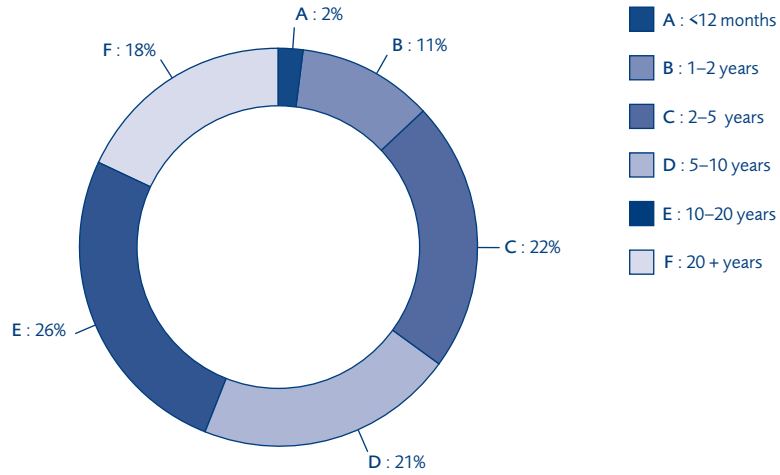
- Almost half (47%) of households who have lived in their current home for less than a year are either single or small adult households. By contrast almost two-thirds (62%) of households who have lived in their current home for over 20 years are either older smaller or single pensioner households.
- Families are likely to have lived in the current home for five years or more. 55% of small family households and 67% of large family households fall into this category.

Employment status also has an impact on length of occupancy:

- Households headed by someone who is retired are typically less mobile; 84% have not moved house in over five years.
- Conversely, households headed by someone in further/higher education have the greatest mobility levels, 83% having moved house in the past five years.
- Those in the lowest income bands tend to have lower mobility levels than those in higher bands. For example 22% and 25% of those on an income of less than £100 and those on an income of £100–£199 per week respectively have lived in their dwelling for more than twenty years.
- In general, as income increases households are more likely to have lower mobility levels.

Length of occupancy

FIGURE
4.3



Length of occupancy by household type

FIGURE
4.4

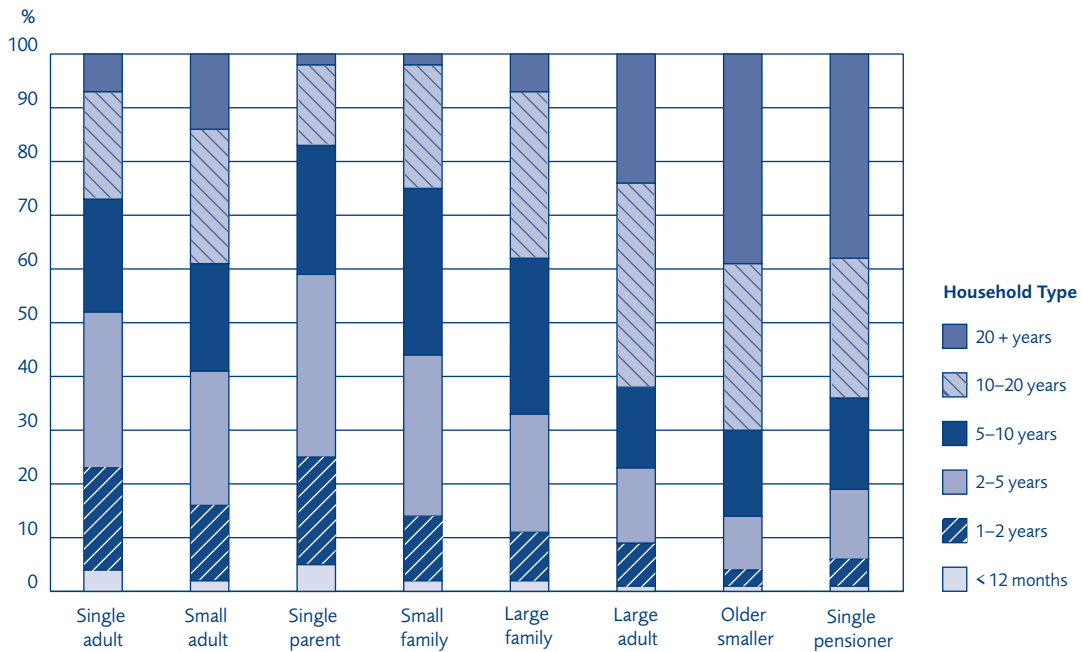


TABLE
4.2

Length of occupancy by employment status and income

		< 12 months		1-2 years		2-5 years		5-10 years		10-20 years		20+ years	
		000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Employment status of HH	Employed full-time	26	2	131	12	280	26	259	24	280	26	105	10
	Employed part-time	*	3	12	12	27	26	22	21	28	27	13†	13
	Looking after home	4†	5	15	18	25	30	16	20	16	20	7†	9
	Retired	6†	1	25	4	71	11	101	16	179	29	245	39
	Unemployed/Govt. training	5†	6	17	21	22	26	18	21	17	20	5†	6
	Further/higher education	*	5	21	49	12†	29	*	8	*	7	*	1
	Long-term illness	*	2	16	12	29	22	29	21	35	27	22	16
	Other	*	6	4†	19	4†	18	5†	24	5†	21	*	12
Weekly household income (£)	<100	5	4	22	18	20	17	18	15	28	24	27	22
	100-199.99	15	3	62	11	107	19	105	18	139	24	142	25
	200-299.99	11	2	50	11	104	22	90	20	117	25	92	20
	300-399.99	7	2	38	11	79	24	70	21	84	25	53	16
	400-499.99	4	2	26	11	56	23	59	24	66	27	33	14
	500-699.99	6	2	27	10	61	23	70	26	76	28	29	11
	Over 700	*	1	14	9	42	25	39	23	50	30	21	13

TABLE
4.3

Length of occupancy by household type

Length of occupancy	Household type															
	Single adult		Small adult		Single parent		Small family		Large family		Large adult		Older smaller		Single pensioner	
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
<12 months	15	4	9†	3	7†	5	7†	2	*	2	*	1	*	1	4†	1
1-2 years	66	20	52	14	27	20	37	12	15	9	19	9	10†	3	15	5
2-5 years	95	28	95	25	45	35	94	31	37	23	31	14	30	10	44	13
5-10 years	70	21	75	20	31	24	93	30	45	29	33	15	50	16	57	17
10-20 years	67	20	92	25	19	14	69	23	48	31	84	38	97	31	87	26
20+ years	25	8	52	14	*	2	6†	2	10†	7	53	24	122	39	130	39

Length of occupancy by tenure

TABLE
4.4

Length of occupancy	Tenure							
	Owner occupier		LA/other public		HA/co-op		Private renter	
	000s	%	000s	%	000s	%	000s	%
<12 months	21	2	14	3	4+	3	13+	8
1–2 years	108	8	54	11	19	15	60	35
2–5 years	277	20	108	21	38	30	47	27
5–10 years	302	22	101	20	30	24	21	12
10–20 years	406	30	117	23	22	18	17	10
20+ years	248	18	125	24	13	10	15	9

Influence of housing circumstances

As well as differences according to socio-economic factors, length of occupancy is influenced by tenure:

- 70% of owner occupiers have lived in their present home for over five years while 48% have lived there for over 10 years. Similar tenure "loyalty" can be found in the LA/public rented sector where 67% of households have lived in their current home for over five years and 47% for over 10 years.
- 51% of households renting from a housing association or co-operative have lived in their current home for over five years while 28% have lived there for over 10 years.
- The private rented sector, however, is notable for the smaller numbers of long-term residents. Only 31% of private renters have lived in their current home for more than five years while the proportion that have lived there for more than 10 years is lower still at 19%.

Table 4.5 highlights the median length of occupancy by tenure.

- It is no surprise to find that those who are satisfied with their home are more likely to have lived there for long periods; 69% of those who said they were very satisfied with their current home have been resident there for more than five years. However, a majority (52%) of those who claim to be very dissatisfied with their home have also been resident for more than five years, as **Table 4.6** demonstrates.

TABLE
4.5

Median length of occupancy by tenure

Tenure	Median length of occupancy (years)
Owner occupier	9
LA/public rented	9
HA/co-op	5
Private rented	2

TABLE
4.6

Length of occupancy by satisfaction with home

Length of occupancy	Satisfaction with home											
	Very satisfied		Fairly satisfied		Neither		Fairly dissatisfied		Very dissatisfied		No opinion	
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Less than 5 years	368	31	314	38	36	46	26	47	18	48	*	*
More than 5 years	821	69	503	62	43	54	30	53	19	52	*	*

TABLE
4.7

Tenure mobility (simplified)

	000s	%
Not applicable	70	3
Stayed within tenure	1,265	58
Moved tenures	857	39

Movement between tenures

When households move house they may also change tenure, a process known as tenure mobility. **Table 4.7** summarises.

Figure 4.5 gives a more detailed picture of tenure changes.

- Of those households who did change tenures the majority (73%) moved into owner occupation.
- Of the 627,000 households who moved into owner occupation just over 40% moved from the LA/other public sector whilst 29% moved from 'other' tenuresⁱⁱ.
- 11% (94,000) of households moved from owner occupation to renting, of which 47% moved to renting from a LA or other public sector landlord.
- A large proportion of those who moved into renting did so from 'other' situations. 66% (84,000 households) who moved into the LA/other public sector, 57% (20,000) who moved into the HA/co-op sector and 48% (32,000) who moved into private renting fall into this category.

Tables 4.8 and **4.9** set out the tenure mobility patterns by household type, both in terms of percentage of movers in that household type category (**4.8**) and percentage of household types in that mover category (**4.9**). It can be seen that:

- Small adult households are most likely to move into owner occupation.
- Moves within the owner-occupied sector are most likely to be carried out by small family households, who account for just over a fifth (21%) of such moves.
- Moves within the rented sector are most likely to be carried out by single pensioner households. Just under a quarter of such moves (23%) were undertaken by this household type.
- There are clear differences in mobility in terms of income; low income households are more likely to move within the rented sector while higher income households are likely to move within the owner-occupied sector. For example, 70% of households earning over £700 per week who moved dwellings stayed within the owner-occupied category. Conversely, only 20% of those in the lowest income band moved, while just over one third of this group moved within the rented sector.
- Only 5% of households in the lowest income band and 7% of those in the highest moved into owner occupation from other tenures. Over half of moves into the rented sector were by households earning less than £200 per week.

FIGURE 4.5 Mobility between tenures

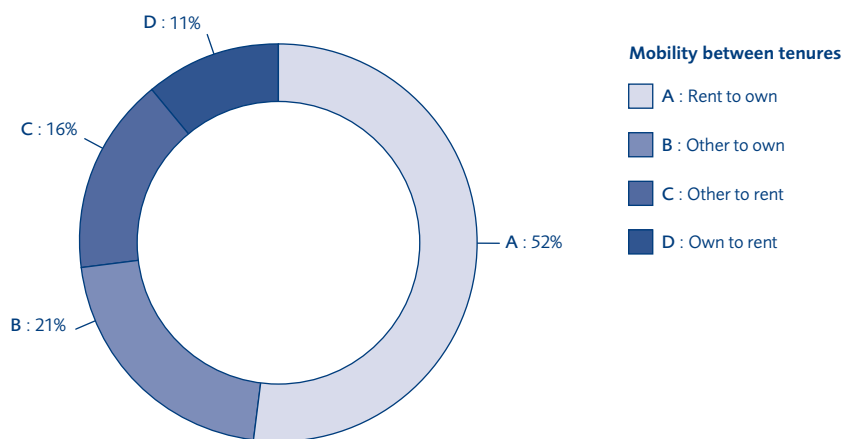


TABLE 4.8 Tenure mobility (simplified) by household type and income (% by rows)

	Household type	Moved to own		Moved to rent		Rent to rent		Own to own	
		000s	%	000s	%	000s	%	000s	%
Household type	Single adult	93	28	60	18	109	33	70	21
	Small adult	142	39	31	8	66	18	128	35
	Single parent	14	11	33	26	61	47	20	16
	Small family	80	26	27	9	53	17	143	47
	Large family	39	26	11	7	39	25	65	42
	Large adult	73	34	16	8	41	19	87	40
	Older smaller	103	35	15	5	69	23	110	37
	Single pensioner	83	26	37	11	132	41	72	22
Weekly household income (£)	<100	29	26	24	21	39	34	21	19
	100-199.99	120	22	93	17	246	45	91	17
	200-299.99	132	29	55	12	164	36	99	22
	300-399.99	116	36	28	9	72	22	109	34
	400-499.99	96	40	16	7	26	11	102	43
	500-699.99	90	34	8	3	15	6	153	58
	Over 700	41	25	4	2	5	3	116	70

Tenure mobility (simplified) by household type and income (% by columns)

TABLE
4.9

		Moved to own		Moved to rent		Rent to rent		Own to own	
		000s	%	000s	%	000s	%	000s	%
Household type	Single adult	93	15	60	26	109	19	70	10
	Small adult	142	23	31	13	66	12	128	18
	Single parent	14	2	33	15	61	11	20	21
	Small family	80	13	27	12	53	9	143	21
	Large family	39	6	11	5	39	7	65	9
	Large adult	73	12	16	7	41	7	87	13
	Older smaller	103	16	15	7	69	12	110	16
	Single pensioner	83	13	37	16	132	23	72	10
Weekly household income (£)	<100	29	5	24	10	39	7	21	3
	100–199.99	120	19	93	41	246	43	91	13
	200–299.99	132	21	55	24	164	29	99	14
	300–399.99	116	19	28	12	72	13	109	16
	400–499.99	96	15	16	7	26	5	102	15
	500–699.99	90	14	8†	4	15	3	153	22
	Over 700	41	7	4†	2	5†	1	116	17

Definition of categories used in analysing propensity to move

Migrant movers

Those who have moved in the past two years and intend to move in the next two years.

Non-migrant movers

Those who have not moved in the past two years but intend to move in the next two years.

Migrant stayers

Those who have moved in the past two years but do not intend to move in the next two years.

Non-migrant stayers

Those who have not moved in the past two years and do not intend to move in the next two years.

Non-migrants

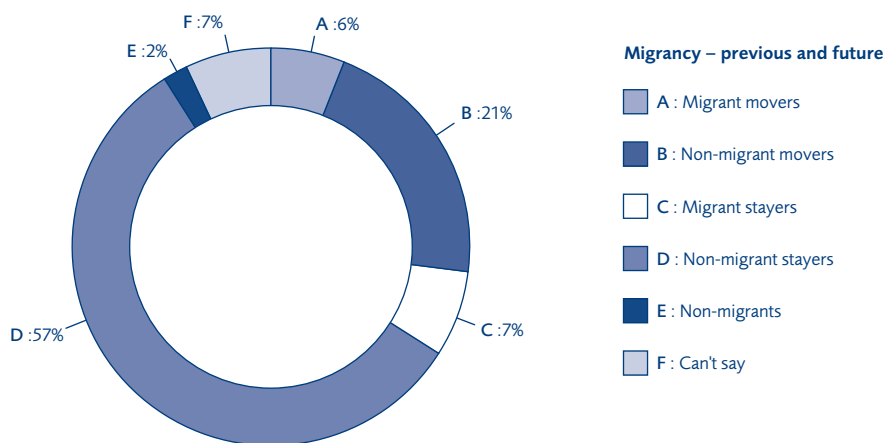
Those who have never moved and do not intend to move in the next two years.

Can't say

Those who are unsure whether they intend to move in the next two years.

FIGURE
4.6

Propensity to move



Propensity to move

Propensity to move home is determined by examining households' previous and future mobility. Future mobility is established by asking households if they intend to move house in the next five years. This approach allows us to classify households into one of six types (see **Box**). **Figure 4.6** summarises these responses:

Overall profile

Comparison of these figures to the SHCS 1996 indicates that:

- Changes are relatively minor but the trend appears to be towards an increased propensity to move. In 1996 the proportion of households classified as movers was 13%; in 2002 this increases to 27%.
- Likewise, the number of households classified as stayers in 1996 was 73% while in 2002 this falls to 64%.
- Overall, more households indicated an intention to move in the next two years than did so in 1996.

Factors influencing propensity to move

Further examination of these groups according to their socio-economic characteristics and housing circumstances (as summarised in **Table 4.10**) reveals the following:

- Single adult households have the greatest propensity to move, with 12% classified as migrant movers. These results echo those of the 1996 SHCS, except for the fact that only 8% of single adult households then were migrant movers.
- Non-migrant stayers are the majority in all tenure groups with the exception of the private rented sector, where movers form the majority.
- Non-migrant stayers also form the majority across all income bands.

TABLE
4.10

Propensity to move by tenure, household type, satisfaction with home and income

		Propensity to move – categorised											
		Migrant movers		Non-migrant movers		Migrant stayers		Non-migrant stayers		Non-migrants		Can't say	
		000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Tenure	Owner occupier	45	3	307	22	80	6	824	60	34	3	77	6
	LA/other public	22	4	86	16	45	9	316	60	13	2	43	8
	HA/co-op	9†	7	26	21	13	10	69	55	*	1	8†	7
	Private renter	51	30	41	24	16	9	46	27	*	2	17	10
Household type	Single adult	40	12	89	26	36	11	140	41	6†	2	32	9
	Small adult	33	9	105	28	26	7	184	50	7†	2	21	6
	Single parent	12†	9	36	27	17	13	51	39	*	2	14	11
	Small family	20	6	100	33	23	8	143	47	3†	1	19	6
	Large family	6†	4	38	24	11†	7	90	57	3†	2	10†	6
	Large adult	13†	6	46	20	9†	4	138	62	5†	2	13	6
	Older smaller	*	1	28	9	10†	3	242	78	13	4	17	5
	Single pensioner	*	0	19	6	21	6	266	78	13	4	20	6
Satisfaction with home	Very satisfied	48	4	192	16	89	7	778	65	29	2	59	5
	Fairly satisfied	57	7	207	25	55	7	417	31	19	2	66	8
	Neither satisfied/dissatisfied	11†	14	25	32	5†	6	29	37	*	2	8†	10
	Fairly dissatisfied	7†	12	20	35	*	5	20	35	*	1	6†	11
	Very dissatisfied	4†	12	15	41	*	4	9†	26	*	1	6†	17
	No opinion	0	0	*	29	*	9	*	34	*	10	*	19
Weekly household income (£)	<100	14	11	18	15	11†	9	62	51	6†	5	10†	8
	100–199	29	5	73	13	47	8	366	64	19	3	40	7
	200–299	26	6	89	19	32	7	274	59	11†	2	35	8
	300–399	21	6	86	26	20	6	176	53	6†	2	23	7
	400–499	15	6	65	27	15	6	132	54	4	2	14	6
	500–699	15	5	78	29	18	7	142	52	4†	2	14	5
	Over 700	7†	4	48	29	9†	6	95	57	*	2	8†	5

Housing aspirations

A total of 588,000 households said they expected to move sometime in the futureⁱⁱⁱ. Householders who state they are expecting to move are then asked a series of exploratory questions to determine why they wish to do so, and the type and tenure of home they would prefer. The responses to these items are summarised in **Table 4.11** and **Table 4.12**, which set out tenure and house type preferences and the reasons for each.

The results indicate that:

- Reasons for tenure preference were typically financial. The majority of those who expressed a preference to own and those who wished to rent from a local authority cited financial reasons for their preference.
- Similarly, financial reasons were the most significant factor for those wishing to rent privately. The only group where this was not the case was those expressing a preference to rent from a HA/co-op, where 'good services' was the most important consideration.
- The main reason households wish to move is factors concerning the dwelling itself.
- Owner occupation remains the tenure of preference for the majority of households. 73% of those households who expected to move gave this as their preferred tenure, which is down slightly from the 1996 figure of 77%^{iv}.
- Detached houses and bungalows are the property of choice for the majority of those who expect to move. 40% would like to move to a detached house while 32% would like to move to a bungalow. These were also the most preferred properties in 1996 but the proportion stating detached houses as a preference has risen from 34%.

Householders were also asked how **likely** they felt it was that they would be able to move to their preferred dwelling type:

- Just under a quarter of those who expressed a preference indicated that they felt it was 'likely' or 'certain' that they would be able to move into their preferred type of dwelling.
- 39% considered it 'unlikely' or were 'certain' that they would **not** be able to move to their preferred dwelling type whilst the remainder (29%) stated that they already lived there. The majority (61%) cited finances as their main reasons for taking this view.

TABLE
4.11

Tenure preference

Preferred tenure	000s	%	% of all households
Own/buy own home	327	73	15
Rent from local authority	62	14	3
Rent from a housing association	19	4	1
Rent from housing co-op	*	0	0
Rent from private landlord	22	5	1
Other	*	1	0
Don't care/can't say/none	16	4	1
Total	448	100	20

TABLE
4.12

Preferred accommodation

Preferred accommodation	000s	%
Detached house	879	40
Semi-detached house	200	9
Terraced bungalow	94	4
Bungalow	693	32
Flat or maisonnette	156	7
Bedsit	*	0
Other	5†	0
Don't know	162	7
Total	219	100

Reasons for tenure preference

TABLE
4.13

		000s	% of responses
Why prefer to own home	Property reasons	119	26
	Area/people reasons	69	15
	Financial reasons	263	57
	Other reasons	12†	3
	Total	464	100
Why prefer to rent from LA	Good service	10†	15
	Financial reasons	46	64
	Better houses	6†	8
	Other reasons	10†	14
	Total	72	100
Why prefer to rent from HA/co-op	Good service	8	34
	Financial reasons	7	29
	Better houses	7	28
	Other reasons	*	9
	Total	25	100
Why prefer to rent privately	Good service	2†	8
	Financial reasons	8†	39
	Better housing	5†	26
	Other reasons	6†	28
	Total	20†	100

TABLE
4.14

Reasons households wish to move

	000s	% of responses
Dwelling	228	51
Neighbourhood	130	29
Personal	69	15
Condition of home	32	7
Other reason (housing related)	119	27

TABLE
4.15

Likelihood of moving to desired property and reasons unlikely to move

		000s	%
Likelihood of moving to desired property	Certain	80	4
	Very likely	136	6
	Fairly likely	299	14
	Not very likely	356	16
	Not at all likely	273	12
	Certain not to move	248	11
Reason unlikely to move to property	Already live in it	639	29
	Cost/financial	536	61
	Age	77	9
	Other	263	30

The Right to Buy

As noted at the beginning of this chapter, the Right to Buy (RTB) brought about a fundamental alteration to the tenure composition of Scotland's housing. The SHCS explores both the extent to which the RTB has been taken up so far, and the likelihood of further RTB purchases being made.

- 12% (266,000) of households had already purchased their home under the RTB. This represents 19% of the total owner-occupied stock.
- 349,000 households stated that they qualified to purchase their home under the RTB. 46,000 (3%) were intending to exercise this right within the next two years.
- Finances appear to be the main reason people were not considering the purchase of their property under the RTB. 50% of those who stated that they would not be purchasing their property in the next two years indicated that a change in their financial circumstances would lead them to reconsider.

Change in circumstances likely to lead to the exercise of RTB

TABLE
4.16

Type of change cited	000s	%
Buy if financial situation changed	132	50
Buy if household circumstances changed	60	23
Buy if improvements to area	72	27

ⁱ Given the skewed distribution of length of occupancy, the median is a more suitable measure of the 'average' length of occupation.

ⁱⁱ Other tenures include: staying with parents, family and friends; squatting and residence in institutions such as prisons and hospitals.

ⁱⁱⁱ A methodological change from the 1996 survey makes it difficult to compare the two results directly. In 1996 households were asked how **likely** they were to move and those who answered positively were asked the subsequent questions. In the 2002 survey all households were asked if they **expected** to move. Although this may seem a minor change its impact on the occupants' response cannot be quantified nor discounted.

^{iv} Direct comparisons are difficult as in 1996 households were asked to state their first, second, and third preferences whereas in 2002 they were asked for one preference only. The figure of 77% refers to those households giving owner occupation as a **first** preference.

The Tolerable Standard is the minimum standard of condition required by Scottish law. The purpose of this chapter is to report on the number and characteristics of dwellings failing the Standard.

05

Introduction

The Tolerable Standard (TS) was introduced in the 1969 Housing (Scotland) Act and updated by the 1987 and 2001 Acts. The current TS contains 10 items. A dwelling meets the TS if it:

- Is structurally stable.
- Is substantially free from rising or penetrating damp.
- Has satisfactory provision for natural and artificial light, for ventilation and for heating.
- Has an adequate piped supply of wholesome water within the house.
- Has a sink provided with a satisfactory supply of both hot and cold water within the house.
- Has a WC available for the exclusive use of the occupants of the house suitably located within the house.
- **Has a fixed bath/shower and a wash-hand basin all with a satisfactory supply of hot and cold water 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.

The seventh item in the above list was first introduced in the Housing (Scotland) Act 2001 and was therefore measured by the SHCS for the first time in this survey.

A failure to meet one or more of these criteria results in the dwelling being Below Tolerable Standard (BTS). Local authorities have an obligation to act (eg by closure, improvement or demolition) when a dwelling is declared BTS.

The low prevalence of BTS housing in the stock as a whole means that small numbers are found in the SHCS sample. Elsewhere in this report, statistics based on very small numbers of cases have been replaced by an asterisk in the relevant tables. This approach has not been taken in this chapter, because it would have meant no detail on BTS below the national total would have been available. However, the small numbers mean that the BTS estimates are more affected by error than those reported in other chapters. This means that statistically significant subgroup comparisons cannot be made and we strongly recommend that all estimates below the total figure should be interpreted with extreme caution. Where the errors are so large that statistically significant differences could not be identified, no commentary has been provided. **Technical Annexes 12.3** and **12.7** discuss these issues in more detail.

Except where otherwise specified, the estimates in this chapter refer to the occupied stock only.

BTS dwellings in Scotland

- **Table 5.1** indicates that the overall rate of prevalence of BTS stock is less than 1%. This is not significantly different from the SHCS 1996 in which 1% of the stock was judged BTS.
- The standard error on the measurement of the total is 0.08% which means the true value of BTS probably lies somewhere between 0.82% and 0.98%.
- The change in definition of the TS between the two surveys does not significantly affect the outcome.

Table 5.2 shows that the majority of dwellings failed for one reason only, which is a similar profile to that found in 1996.

Table 5.3 summarises the profile of reasons for failure, quoting the standard error on the measurement. Due to the very small numbers involved, these statistics should be interpreted with caution. They do, however, indicate with some degree of robustness that the main reason for dwellings being judged BTS was the absence of adequate heating, lighting and/or ventilation (53%). The other estimates are, as the table indicates, subject to considerable error and will not be interpreted further here.

This profile is different from that found in the SHCS 1996 in which failures due to dampness were the most common. However, given the level of error involved in the subgroup estimates, it is questionable to what extent the detailed profile is meaningful and so no discussion of the changes will be presented here.

TABLE
5.1

Number of occupied dwellings failing the Tolerable Standard

	000s	%
Under current version of Standard	20	0.9
Under previous version of Standard (in use in 1996)	19	0.9
Dwellings failing the Standard in SHCS 1996	21	1.0

Failure by number of items

TABLE
5.2

Number of failure items	000s	% of BTS dwellings
1	17	85
2	2	12
3 or more	1	3

Reasons for failing the Tolerable Standard

TABLE
5.3

	000s	% of BTS dwellings	% of total stock	Standard error ^a (% of total stock)
Structurally unstable	3	15.7	0.14	0.03
Rising or penetrating damp	2	10.7	0.10	0.03
Inadequate heating, lighting and/or ventilation	11	52.5	0.48	0.06
Inadequate supply of wholesome water	0	1.2	0.01	0.01
No sink with satisfactory supply of hot/cold water	1	5.6	0.05	0.02
No WC available for the exclusive use of the occupants	1	4.1	0.04	0.02
No fixed bath/shower and a wash hand basin	3	14.2	0.13	0.03
No effective system for drainage and disposal	1	2.5	0.02	0.01
Unsatisfactory facilities for the cooking of food	1	7.0	0.06	0.02
Unsatisfactory access to all external doors and outbuildings	1	6.1	0.06	0.02

^a The standard error is a measure of the accuracy of an estimate. Estimation errors are discussed in more detail in **Technical Annexe 12.4** but it can be seen here that the larger the proportion of dwellings in each category, the smaller the standard error. For example, the error on the estimate for 'no WC' indicates that the true value probably lies between 0.02% and 0.06% of the stock, or between 482 and 1,174 dwellings, which is a relatively inaccurate estimate.

Types of dwelling failing the Standard

Tables 5.4 and 5.5, which break down the BTS stock by dwelling and household characteristics respectively, are provided for completeness only. The level of error associated with each variable is also shown to highlight the substantial degree of variance in each estimate. Users are reminded that the level of inference which can be drawn from the estimates is minimal.

TABLE
5.4

BTS by dwelling characteristics

		000s	% of BTS dwellings	% of all in category	Standard error ^a (% of all in category)
Dwelling type	Detached	4	21.1	1.0	0.2
	Semi-detached	3	13.9	0.6	0.2
	Terraced	3	13.0	0.5	0.1
	Tenement	8	38.7	1.6	0.2
	Flat in converted building	2	7.6	4.0	1.3
	Other flat	1	5.6	0.7	0.2
Age of dwelling	Pre-1919	14	68.2	3.1	0.3
	1919–1944	2	9.5	0.6	0.2
	1945–1964	2	9.3	0.4	0.1
	Post-1964	3	13.1	1.3	0.1
Dwelling size	1–3 rooms	5	23.6	1.6	0.3
	4 rooms	7	36.7	1.0	0.1
	5 rooms	4	21.3	0.7	0.1
	6 rooms	2	8.9	0.7	0.2
	7+ rooms	2	9.5	0.9	0.2
Location	Urban	15	76.7	0.8	0.1
	Rural	5	23.3	1.3	0.2

^a The standard error is a measure of the accuracy of an estimate. Estimation errors are discussed in more detail in **Technical Annexe 12.4** but it can be seen here that the larger the proportion of dwellings in each category, the smaller the standard error. For example, the error on the estimate for 'other flat' indicates that the true value probably lies between - 0.2% and 0.6% of "other flats", or between 0 and 5,510 dwellings.

BTS by household characteristics

TABLE
5.5

		000s	% of BTS dwellings	% of all in category	Standard error ^a (% of all in category)
Tenure	Owner occupier	13	66.9	1.0	0.1
	LA/other public	2	10.0	0.4	0.1
	HA/co-op	1	2.5	0.4	0.2
	Private rented	4	20.7	2.5	0.5
Household type	Single adult	5	22.7	1.4	0.3
	Small adult	3	15.3	0.8	0.2
	Single parent	1	6.4	1.0	0.3
	Small family	1	5.3	0.3	0.1
	Large family	1	4.3	0.5	0.2
	Large adult	2	10.6	1.0	0.2
	Older smaller	3	16.3	1.0	0.2
	Single pensioner	4	19.2	1.1	0.2
Economic Status of HIH	Employed full-time	9	42.5	0.8	0.1
	Employed part-time	1	3.6	0.7	0.3
	Looking after home	1	3.8	0.9	0.4
	Retired	7	34.9	1.1	0.2
	Unemployed/Govt. training	1	5.8	1.4	0.5
	Further/higher education	1	2.8	1.4	0.8
	Long-term illness	1	4.7	0.7	0.3
	Other	0	1.8	1.5	1.0
Weekly household income	< £100	2	10.7	1.8	0.5
	£100–£199.99	7	36.2	1.3	0.2
	£200–£299.99	4	21.5	0.9	0.2
	£300–£399.99	3	13.4	0.8	0.2
	£400–£499.99	1	5.7	0.5	0.2
	£500–£699.99	2	7.7	0.6	0.2
	£700+ p.w.	1	4.8	0.6	0.2

^a The standard error is a measure of the accuracy of an estimate. Estimation errors are discussed in more detail in **Technical Annexe 12.4** but it can be seen here that the larger the proportion of dwellings in each category, the smaller the standard error. For example, the error on the estimate for 'small family' indicates that the true value probably lies between 0.2% and 0.4% of total 'smaller families', or between 674 and 1,446 households.

Vacant BTS stock

The previous analysis refers to the occupied stock only. No estimate for BTS rates in the vacant stock is provided here since it is not possible to produce such an estimate to an appropriate standard of reliability and accuracy.

There are three main difficulties aside from the basic difficulty of the very small numbers involved. Firstly, such an analysis would have relied heavily on information from the small number of vacant dwellings which received a full physical survey. These dwellings were not selected using any systematic sampling technique and it cannot therefore be said that they are representative of the vacant stock. Secondly, it was not possible to consider the profile of vacant BTS stock across local authority areas, and thus to weight the cases so as to correct for unequal probabilities of selection, etc. Finally, the calculation also relied on the estimate for the total number of vacant dwellings which, as reported in **Chapter 2**, should be regarded with considerable caution.

A more detailed explanation of the analytical methods which were used to arrive at this decision can be found in **Technical Annexe 12.7**.

Change since 1996

The occupied BTS estimate from the SHCS 1996 was, as noted in **Table 5.1**, 21,000 dwellings or 1% of the stock. In terms of overall prevalence, there does not appear to have been any change between the two surveys. On the face of it this is a surprising finding in view of the fact that between 1997 and 2002 approximately 28,000 dwellings were demolished or closedⁱ (although some of these dwellings are likely to have been vacant and so not relevant to the estimate of occupied BTS, nor will all have necessarily failed the TS). BTS rates have generally been expected to decline over time as a result of this and other forms of corrective action by local authorities.

It is difficult to make any substantial inferences as to the reasons for the current BTS profile given the limitations of the subgroup estimates, as discussed in the introduction to this chapter. However, it should be noted that even if the types of BTS housing identified in the SHCS 1996 have been dealt with since then, it is equally possible for other, previously non-BTS dwellings to have fallen below the Standard in the intervening period due to deterioration in the building fabric and/or decisions made by occupants (eg the installation of new glazing which does not meet ventilation requirements).

ⁱ HSG/2003/2

All dwellings are expected to contain basic facilities such as washing, cooking and power supplies. The purpose of this chapter is to profile the occupied stock in terms of the presence or absence of these amenities.



Introduction

As well as prescribing the minimum standard for dwellings (see **Chapter 5, Tolerable Standard**) the Housing (Scotland) Act 1997 sets out a series of standard amenities which all habitable dwellings must contain:

- A fixed bath or shower.
- A hot and cold water supply at a fixed bath or shower.
- A wash hand basin.
- A hot and cold water supply at a wash hand basin.
- A sink.
- A hot and cold water supply at a sink.
- A water closet.

Dwellings which do not include these amenities are Below the Tolerable Standard (BTS) and more information on their prevalence can be found in **Chapter 5**. Although the provision of these basic facilities is a legal requirement, it is increasingly appropriate to take a broader view of the services and amenities which a dwelling would be expected to contain. Successive revisions to the Building Regulations in light of changing social expectations have resulted in a trend of improvement, with more facilities being incorporated. The same trend is expected as the profile of stock changes as a result of conversion, refurbishment and new build, since new amenities tend to be added rather than removed when such changes are made.

In order to capture this broader view of amenities, therefore, surveyors in the SHCS 2002 examined the presence and condition of services over and above the basic legal requirement:

- Mains services (such as electricity and gas).
- Water supplies.
- Drainage.
- Lighting systems.
- Safety systems (such as smoke detectors).
- Security arrangements (such as locks).

The majority of the analyses in this chapter refer to these amenities rather than solely to the standard provisions.

No attempt was made to gain access to vacant dwellings and so all estimates in this chapter relate only to the occupied stock.

Standard amenities

An overview (**Table 6.1**) of the presence of the standard amenities in the stock as a whole indicates that:

- The overwhelming majority of the occupied stock (2,187,000) is equipped with all the standard amenities.
- Dwellings lacking one or more of the standard amenities are concentrated in the pre-1919 stock, of which around 1% lacks the required facilities. This is the same pattern as found in the SHCS 1996.

TABLE
6.1

Presence of all amenities in the occupied stock

Number of amenities missing	000s	% of all dwellings
0	2,187	99
1	*	0
2	*	0
3+	*	0
Unobserved [†]	3†	0

[†] The surveyor was unable to determine the presence of at least one of the specified amenities (eg because access to a particular room in the dwelling was refused).

The following commentary refers primarily to **Tables 6.2 to 6.5**, which set out the provision of amenities and services broken down by age (**6.2**), type (**6.3**), tenure (**6.4**) and location (**6.5**).

Kitchens

The provision of a sink with hot and cold water, and cooking facilities, is reviewed in **Chapter 5**, Tolerable Standard (TS). As well as assessing the TS items, surveyors looked at the adequacy of the kitchen size and layoutⁱ and of the fixed storage provided in terms of the number of occupiers of the dwellingⁱⁱ.

- 40,000 dwellings (2%) have inadequate kitchen provision, around half of which are pre-1919 tenements.
- 472,000 dwellings (22%) require additional kitchen storage. **Figure 6.1** summarises the additional requirements of the stock as a whole, indicating that most such dwellings require only 25% more capacity to be added to meet the standard.
- Tenements and terraced houses are most likely to have inadequate storage, as are local authority dwellings.
- Around 2% of dwellings have no kitchen storage provision at all.

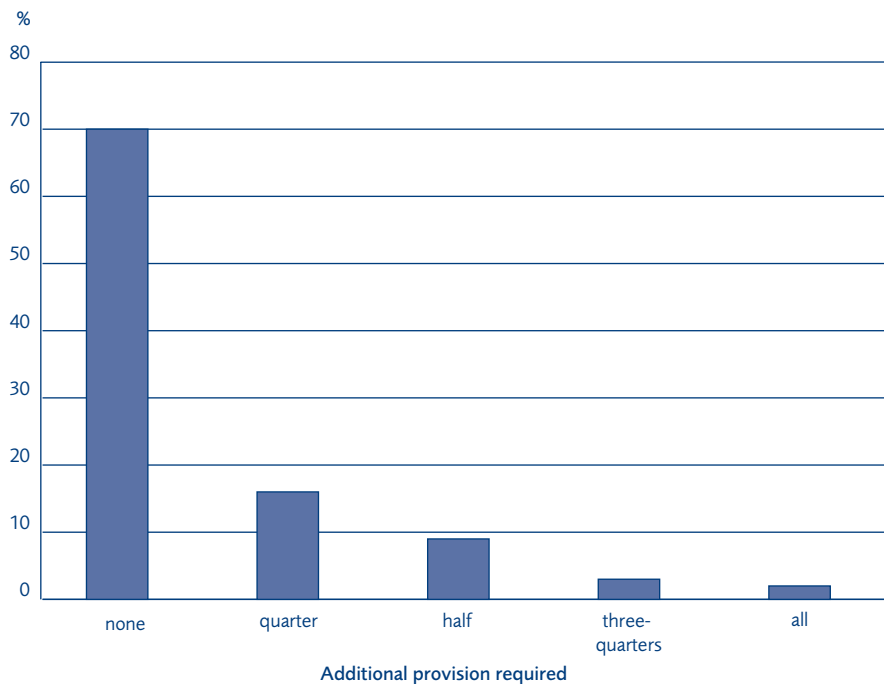
Surveyors also assessed the presence or absence of visible lead piping at two stages in the supply: the underground water main (or communal rising main in flats) and the distribution and storage system within the surveyed dwelling. As this was a visual assessment, the figures quoted in this chapter should be regarded as a minimum estimateⁱⁱⁱ.

- Approximately 1% of dwellings (20,000) have lead piping in both the mains and distribution system.
- Lead is found more frequently in the mains than in the distribution system.

The low numbers involved mean that any comparison of subcategories (eg types of dwelling) is not possible.

FIGURE
6.1

Requirement for additional kitchen storage (all dwellings)



Bathrooms and WCs

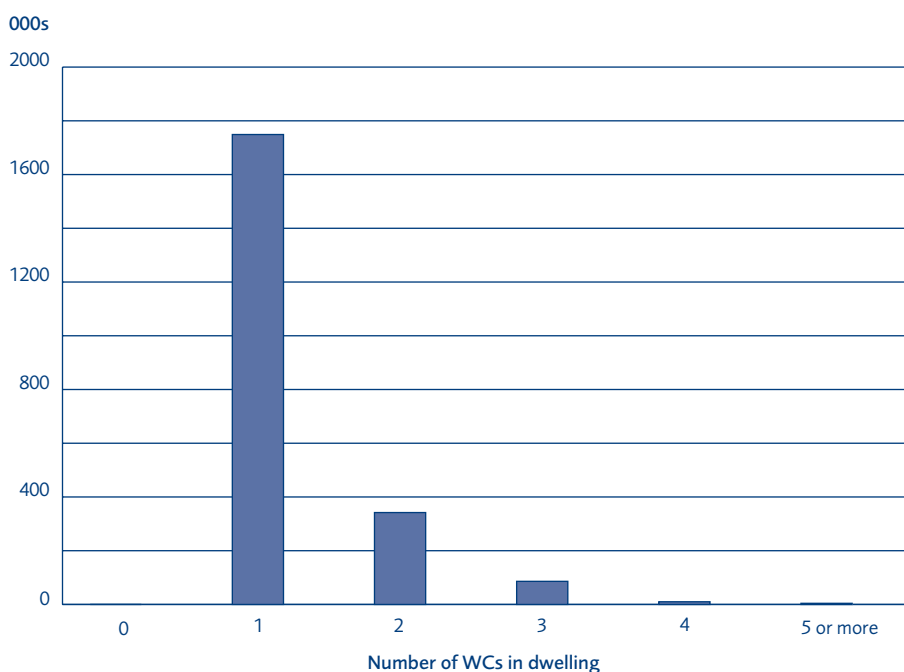
Again, the provision of the standard amenities in the bathroom, such as a fixed bath/shower, is discussed in **Chapter 5, Tolerable Standard**. Surveyors were asked to assess the adequacy of the bathroom layout^{iv} and the number and location of WCs:

- The majority of dwellings have a suitable bathroom size and layout, with around 7,000 dwellings lacking this provision.
- In approximately 5,000 dwellings, again constituting less than 1% of the stock as a whole, the WC is located directly off the kitchen. This arrangement is no longer regarded as BTS provided there is a wash-hand basin within the WC compartment.
- 442,000 dwellings have more than one WC. **Figure 6.2** summarises the provision of WCs in the stock as a whole.
- Detached houses are the most likely to have an additional WC (perhaps reflecting the likelihood that they will contain more rooms, as reported in **Chapter 2**).
- Around half of the dwellings built since the SHCS 1996 have two or more WCs.

Provision of WCs

FIGURE

6.2



Energy supplies

- Access to the public electricity grid^v is almost universal, with a negligible number of dwellings not connected.
- Of these supplies, almost all are 13-amp, with a negligible number of 5/15 amp or mixed systems.
- A very small number of electrical power systems (12,000, around 1% of all dwellings) were assessed by the surveyor as dangerous. These are not concentrated in any particular type or tenure.
- A similar number (13,000) of electrical lighting systems were assessed as unsatisfactory^{vi}. Most of these were located in pre-1919 dwellings. Virtually no electrical lighting systems were considered dangerous.
- A small number of dwellings (around 9,000), almost all of which are in urban areas, have a privately generated power supply^{vii}.
- Over one-quarter of dwellings (612,000) are not connected to the mains gas supply^{viii}. This rises to almost half of dwellings in the private rented sector.

Drainage

- Over 100,000 dwellings (5%) are not connected to a public mains drainage supply.
- Over 80% of these dwellings are detached houses (20% of which do not have a public drainage connection).
- Most dwellings without a connection are located in rural areas (25% of which are not connected as compared to 1% of urban dwellings), as summarised in **Figure 6.3**.
- Almost one in five privately rented dwellings are not connected to public drainage, compared to 5% for owner-occupied homes.
- Most dwellings with no public connection are served instead by a cesspool or septic tank. Virtually no dwellings lack any form of drainage facility (which would result in failure of the Tolerable Standard – see also **Chapter 5**).

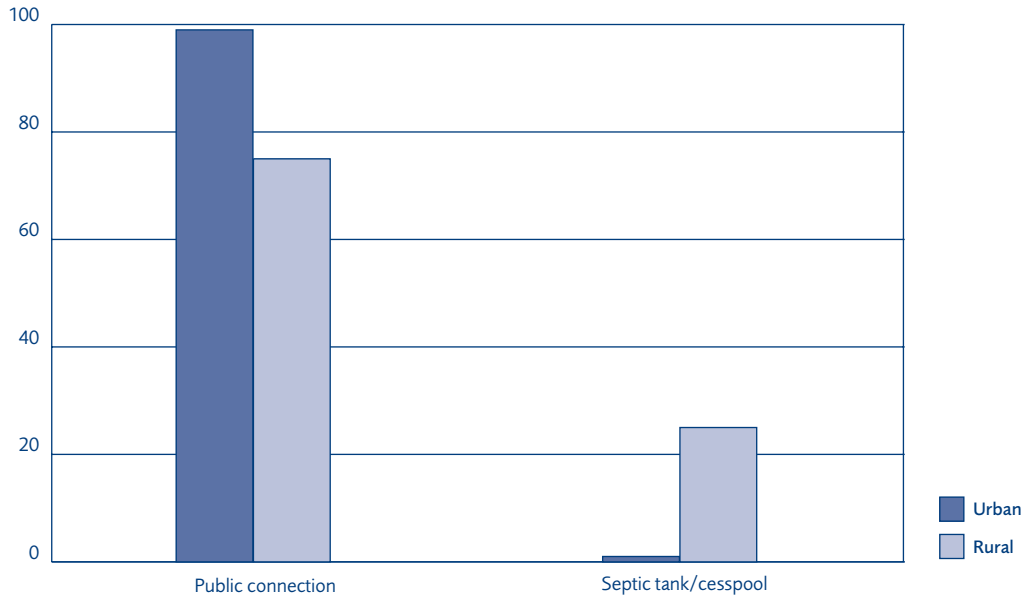
Safety and security

Surveyors also assessed a number of arrangements intended to promote the safety and security of buildings and their occupiers:

- Over 80% of dwellings (1,875,000) have at least one smoke detector on the premises although flats in converted buildings (most of which are pre-1919) are slightly less likely to have such provision.
- Most smoke detectors are battery-operated (see **Figure 6.4**).
- Almost all dwellings have adequate locks on the doors to the common block (where applicable) and to the private door to the dwelling. This is found evenly across all ages, types and tenures.
- Some form of security system on the entrance to the common block (such as a door entry system or concierge) is found in almost three-quarters of all dwellings with common parts. Such arrangements are less common in rural areas (60%) and in the older stock.
- Just under half of the stock has a door viewer and/or restrictor (ie a peephole and/or security chain). Flats are more likely than houses to have this provision.

Drainage facilities by location

FIGURE
6.3



Smoke detector provision

FIGURE
6.4

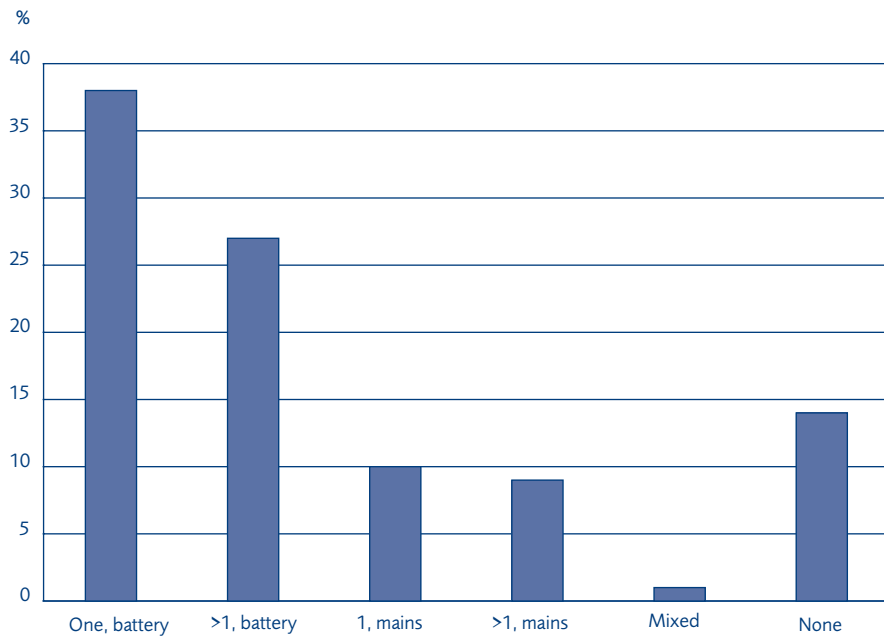


TABLE
6.2

Amenities by age of dwelling

	Pre-1919		1919–1944		1945–1964		1965–1997		Post-1997		Total	
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
One or more standard amenities missing	*	1	*	0	*	0	*	0	*	0	*	0
Inadequate kitchen arrangement	21	5	7†	2	7†	1	5†	1	*	0	40	2
Inadequate kitchen storage	104	23	84	27	145	27	132	16	8†	9	472	22
Unsatisfactory bathroom arrangement	4†	1	*	0	*	0	*	0	*	0	7†	0
Additional WC	107	24	32	10	37	7	222	27	44	51	442	20
Main WC directly off kitchen	5†	1	*	0	*	0	*	0	*	0		
No mains electricity	*	0	*	0	*	0	*	0	*	0	*	0
No mains gas	147	33	51	16	132	25	265	32	16	19	612	28
No connection to public drainage	62	14	9†	3	10†	2	23	3	3†	3	108	5
Visible lead in water supply system	12	3	4†	1	2†	1	*	0	*	0	20	1
Water main	27	6	9†	3	12†	2	3†	0	*	0	51	2
Distribution system	5†	1	*	1	*	0	*	0	*	0	9	0
Private electricity supply	3†	1	*	1	*	0	*	0	*	0	9†	0
Non-13 amp electrical power system	*	0	*	0	*	0	*	0	*	0	*	0
Electrical power system dangerous	*	1	*	1	*	1	*	0	*	1	12†	1
Electrical lighting system dangerous	*	0	*	0	*	0	*	0	*	0	*	0
Electrical lighting system unsatisfactory	5†	1	*	1	*	1	*	1	*	0	13†	1
Smoke detector present	328	74	263	85	463	87	737	90	84	98	1,875	86
Entry system to common block [‡]	144	67	26	61	83	67	150	80	13†	96	416	71
Adequate locks on external door(s) to common block [‡]	195	98	42	98	122	97	183	97	14	100	556	97
Door viewer/restrictor on main entrance door	222	50	139	45	247	47	381	47	55	64	1,044	48

[‡] Basis for this estimate is all dwellings with common access.

Amenities by type of dwelling

TABLE
6.3

	Dwelling type										Total							
	Detached		Semi-detached		Terraced		Tenement		4-in-a-block				Flat in converted building		Tower/slab			
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%				
One or more standard amenities missing	*	0	*	0	*	0	*	0	*	0	*	0	*	1	*	0	*	0
Inadequate kitchen arrangement	*	0	*	1	5†	1	23	5	*	2	*	2	*	2	*	4	40	2
Inadequate kitchen storage	45	11	86	19	107	22	138	28	70	30	6†	17	20	33	472	22		
Unsatisfactory bathroom arrangement	*	0	*	0	*	0	*	1	*	1	*	2	*	0	7†	0		
Additional WC	249	60	89	19	74	15	15†	3	6†	2	8†	20	*	3	442	20		
Main WC directly off kitchen	*	1	*	0	*	0	*	0	*	0	*	1	*	0	5†	0		
No mains electricity	*	0	*	0	*	0	*	0	*	0	*	0	*	0	*	0		
No mains gas	146	36	96	21	106	21	164	33	39	17	10†	27	50	84	612	28		
No connection to public mains drainage	82	20	18	4	5†	1	*	0	*	0	*	3	*	0	108	5		
Visible lead in water supply system	5†	1	*	1	*	0	*	1	*	1	*	2	*	0	20	1		
Water main	9†	2	12†	2	6†	1	15†	3	8†	3	*	4	*	0	51	2		
Distribution system	*	0	*	1	*	0	*	1	*	1	*	2	*	0	9†	0		
Private electricity supply	*	1	*	0	*	0	*	0	*	0	*	1	*	0	9†	0		
Non-13 amp electrical power system	*	0	*	0	*	0	*	0	*	0	*	0	*	0	*	0		
Electrical power system dangerous	*	1	*	0	*	1	*	1	*	1	*	1	*	0	12†	1		
Electrical lighting system dangerous	*	0	*	0	*	0	*	0	*	0	*	1	*	0	*	0		
Electrical lighting system unsatisfactory	*	1	*	1	*	1	*	1	*	1	*	0	*	1	13†	1		
Smoke detector present	347	84	401	87	442	89	404	81	199	86	28	73	55	91	1,875	86		
Entry system to common block†	n/a		n/a		n/a		354	71	*	0	11†	30	50	84	416	74		
Adequate locks on external door(s) to common block†	n/a		n/a		n/a		482	97	*	100	14	98	59	98	556	97		
Door viewer/restrictor on main entrance door	160	39	169	37	193	39	355	72	104	45	19	50	44	73	1,044	48		

† Basis for this estimate is all dwellings with common access.

TABLE
6.4

Amenities by tenure

	Tenure								Total	
	Owner-occupier		LA/ other public		HA/ housing co-op		Private renter			
	000s	%	000s	%	000s	%	000s	%	000s	%
One or more standard amenities missing	*	0	*	0	*	0	*	0	*	0
Inadequate kitchen arrangement	23	2	9†	2	*	2	*	4	40	2
Inadequate kitchen storage	214	16	181	34	34	26	43	26	472	22
Unsatisfactory bathroom arrangement	4†	0	*	0	*	0	*	1	7†	0
Additional WC	384	28	17	3	16	12	25	15	442	20
Main WC directly off kitchen	*	0	*	0	*	0	*	1	5†	0
No mains electricity	*	0	*	0	*	0	*	0	*	0
No mains gas	321	23	167	32	40	31	83	49	612	28
No connection to public mains drainage	74	5	*	0	*	0	32	19	108	5
Visible lead in water supply system	15†	1	*	0	*	0	*	2	20	1
Water main	37	3	7†	1	*	1	6†	4	51	2
Distribution system	7†	1	*	0	*	0	*	1	9†	0
Private electricity supply	6†	0	*	0	*	0	*	0	9†	0
Non-13 amp electrical power system	*	0	*	0	*	0	*	0	*	0
Electrical power system dangerous	6†	0	6†	1	*	0	*	1	12†	1
Electrical lighting system dangerous	*	0	*	0	*	0	*	0	*	0
Electrical lighting system unsatisfactory	8†	1	*	1	*	0	*	1	13†	1
Smoke detector present	1,138	83	485	92	121	95	131	77	1,875	86
Entry system to common block†	158	70	141	73	61	86	56	77	416	74
Adequate locks on external door(s) to common block†	226	98	189	97	69	96	73	97	556	97
Door viewer/restrictor on main entrance door	569	42	309	59	86	67	80	47	1,044	48

† Basis for this estimate is all dwellings with common access.

Amenities by location

TABLE
6.5

	Location				Total	
	Rural		Urban			
	000s	%	000s	%	000s	%
One or more standard amenities missing	*	0	*	0	*	0
Inadequate kitchen arrangement	3†	1	37	2	40	2
Inadequate kitchen storage	64	18	408	22	472	22
Unsatisfactory bathroom arrangement	*	0	6†	0	7†	0
Additional WC	118	33	324	18	442	20
Main WC directly off kitchen	*	1	3†	0	5†	0
No mains electricity	*	0	*	0	*	0
No mains gas	230	65	382	21	612	28
No mains drainage	88	25	20	1	108	5
Visible lead in water supply system	*	1	16†	1	20	1
Water main	9†	3	42	2	51	2
Distribution system	*	0	7†	0	9†	0
Private electricity supply	*	1	7†	0	9†	0
Non-13 amp electrical power system	*	0	*	0	*	0
Electrical power system dangerous	*	1	10†	1	12†	1
Electrical lighting system dangerous	*	0	*	0	*	0
Electrical lighting system unsatisfactory	3†	1	9†	1	13†	1
Smoke detector present	298	84	1,578	86	1,875	86
Entry system to common block	13†	60	403	74	416	74
Adequate locks on external door(s) to common block†	21	95	535	98	556	97
Door viewer/restrictor on main entrance door†	120	34	923	50	1,044	48

† Basis for this estimate is all dwellings with common access.

Change since 1996

There are very few statistically significant differences between the estimates set out in this chapter and the equivalent assessments performed in the SHCS 1996. There are two main points which can be made about this.

Firstly, the situation illustrates a similar difficulty to that found in reporting non-compliance with the Tolerable Standard: such a low proportion of the stock now lacks the amenities in question that the survey is starting from a very small basis when probing differences in detail. Very few dwellings lacked facilities such as the standard amenities, a safe electrical power and lighting system and a satisfactory arrangement of kitchens in 1996, and the same is true today. Secondly, although there has been no significant change in the other types of service which were found to be absent from a relatively higher proportion of dwellings – such as mains drainage and mains gas – the lack of change in these estimates may be because the absence of the facility is not related to the quality of individual dwellings, but is about their relationship to the public infrastructure (such as the gas grid and public sewerage system).

Location is also a factor here (eg remote rural dwellings are less likely to have mains drainage) and this is unlikely to have changed since the last survey was undertaken.

There are three areas where there **have** been significant changes since the SHCS 1996:

- The number of dwellings which have smoke detectors has increased according to the 2002 survey. This may be due to growing public awareness of the role of these in fire safety. It should also be noted that the Building Regulations have, since 1993, required all building warrant applications to include provision for a mains-wired smoke detector. This means that as refurbishments and changes are carried out to the stock over time, the proportion of smoke detectors will also increase.
- The number of dwellings with a common access which have an entry system has gone up since 1996. In the majority of cases, the system in use is the entry phone. Again, this may reflect growing public demand for improved building security.
- The presence of visible lead in pipework to and within the dwelling has decreased since 1996. Further work will be required to establish the reason for the change in this estimate. Communities Scotland is liaising with colleagues in the Scottish Executive Water Services Unit (Environment and Rural Affairs Department) and has obtained data on lead concentrations from Scottish Water. This data will be examined in an attempt to augment the lead pipework estimates reported here. It is our current intention to publish the results of this process in our forthcoming companion report on Health and Housing.

-
- ⁱ A kitchen was defined as unsatisfactory if the total floor area was less than 4m² and/or the distance between opposite walls was less than 2m. This was derived from the Parker-Morris standard.
 - ⁱⁱ The standard provision is 2.3m³ for three person or larger dwellings and 1.7m³ for one or two person dwellings.
 - ⁱⁱⁱ Surveyors did not lift manhole covers or perform any sort of chemical test for lead piping/solder. Pipework could also be obscured (eg if it had been painted over by the occupier) or inaccessible on the day of survey. There is therefore potential for this figure to be an undercount of the actual prevalence.
 - ^{iv} A satisfactory bathroom arrangement was defined as reasonable access to all amenities in the bathroom. For example, the WC should not be positioned between the door and the bath, so that the occupier has to climb over it.
 - ^v For the purposes of this assessment, small generators providing electricity to more than one dwelling were considered as a public supply.
 - ^{vi} Surveyors were instructed that 'unsatisfactory' in this context meant the number or the position of electrical light outlets within the dwelling was not suitable for normal domestic purposes.
 - ^{vii} This could include a privately owned, independent generator, a water wheel, windmill etc. but did not include solar panelling.
 - ^{viii} For the purposes of this assessment, bulk LPG storage tanks serving more than one dwelling were considered as a public supply.

Understanding the nature and extent of disrepair is a crucial aspect of housing quality. The purpose of this chapter is to describe the state of repair of the housing stock and the costs of putting it right.



Introduction

An important goal of house condition research, set in the context of the overall aim of improving the quality of life of people in Scotland, is to assess the extent and nature of the works required to be carried out so as to ensure the housing stock reaches and remains at a particular standard. For this to be translated into action, it is also important to assess the resource implications.

This chapter, therefore, takes a detailed look both at the levels and types of disrepair in the stock and at the costs of rectifying disrepair and making certain improvements. Firstly, however, it is important to set out the methodology and techniques used to gather the primary data and generate the estimates reported here.

Assessing disrepair

When an element of a dwelling, such as a roof, falls into disrepair, corrective action must be taken. However, establishing the exact nature and more importantly the cost of this action can be challenging, even at the level of an individual property. A number of questions are likely to arise:

- Is the repair intended to return the roof to its original standard, or will the opportunity be taken to make an improvement to the specification?
- Does the work need to be undertaken urgently, and if so, on what basis is that judgment being made?
- What level of maintenance or repair will be required to make the dwelling 'fit for purpose' and how is that to be defined?

There are likely to be significant differences of opinion over these questions at the level of individual dwellings and their owners. For the SHCS 2002, in which over 15,000 dwellings across the whole of Scotland were assessed by a team of more than 120 surveyors, it is clear that judgments about disrepair need to be made within a standardised framework so as to minimise individual variation.

Surveyors are therefore instructed to take a very clearly defined approach to assessing disrepair and corrective action. Rather than making an assessment of the response to disrepair they are required simply to judge and describe its presence and extent on the day of survey. This is achieved through a two-stage process.

Firstly, for the purposes of the survey the dwelling is divided into a series of separate 'elements' (see **Box** on page 93 for a list of the elements covered). For example, the roof is divided into 'principal roof structure', 'principal roof covering', 'secondary roof structure' and 'secondary roof covering'. Each of these elements is to be assessed in isolation by the surveyor.

Secondly, the surveyor records the extent of disrepair using two specified measurement scales (five-item and 10-item, depending on the type of element). Surveyors are briefed in detail as to the interpretation of these scales and so although they use their individual professional judgment to identify disrepair, they judge and record it in as standardised a way as possible. The aggregation of repair scores into estimates for groups of elements, and the application of costs, is done at the analysis stage of the survey.

Urgency and residual life

For external and common elements only, a further assessment is performed by the surveyor. This covers the degree of urgency of the repair, and the residual life of the element.

An urgent repair is defined as one which, if not carried out, would cause the fabric of the building to deteriorate further and/or place the health and safety of the occupier at risk. Residual life refers to the remaining life of the element, assuming any necessary repairs are carried out.

Changes to and limitations of the methodology

A minor change was made to the methodology for the current survey. In 1996, any disrepair of 5% or less was recorded as zero. Subsequent research¹ suggested that the process would benefit from giving surveyors the opportunity to record very low, but non-zero, levels of disrepair. The ten-point disrepair scale was therefore adjusted to enable surveyors to score disrepair of 5% or less to the element. This means that a score of '0' on the scale now genuinely means zero disrepair, as opposed to 1996 when it could refer to disrepair of up to 5% of the length or area of the element in question.

One other small change was made to the instructions given to surveyors as a result of the above. In 1996, if minor disrepair to an element was judged to be likely to affect the future safety of the occupants, or the wind and watertightness of the building, surveyors were told to score it as a 01 (for minor disrepair) but to indicate it as urgent. In 2002, the same situation would lead to the element being scored 55 (again for minor disrepair) and urgent.

The estimates reported here are necessarily minimum figures. As a walk-through, non-intrusive survey the SHCS cannot report fully on non-visible disrepair. For example, surveyors do not take detailed physical measurements (eg they would not lift floorboards or carry out intrusive testing with a dampness meter).

Elements assessed for disrepair in SHCS 2002 physical survey

Element	Urgency	Residual life	Element	Urgency	Residual life
External			Common parts (flats only)		
Principal roof structure	Y		Stairs, landings and balustrades	Y	Y
Principal roof cover	Y	Y	Access balcony/gallery	Y	Y
Secondary roof structure	Y		Halls and passages	Y	Y
Secondary roof cover	Y	Y	Wall finishes	Y	Y
Chimney stacks	Y	Y	Ceiling and soffit finishes	Y	Y
Flashings	Y	Y	Doors, screens and rooflights	Y	Y
Roof gutters and downpipes	Y	Y	Lifts	Y	Y
Soil waste and vent pipes	Y	Y	Decorations	Y	Y
Wall structure	Y		Service mains	Y	Y
Wall finish	Y	Y	Public lighting	Y	Y
Foundations	Y		Communal security systems	Y	Y
Damp proof course	Y	Y	Refuse chutes/chambers	Y	Y
Underground drainage	Y		Bin stores	Y	Y
Private balcony	Y	Y			
External doors	Y	Y			
External windows	Y	Y			
External painterwork	Y	Y			
External stairs to own door	Y	Y			
Internal			Services and amenities		
Floor structure*	Y**		Wash-hand basin		
Floor finish	Y**		Hot and cold water to wash-hand basin		
Skirtings	Y**		Fixed bath or shower in bathroom		
Wall finish			Hot and cold water to bath or shower		
Ceiling finish			Sink		
Cornices			Hot and cold water to sink		
Doors and frames			Kitchen storage and worktops		
Fireplaces and flues			Cold water system		
Internal walls (structural)			Hot water system		
Party walls (structural)	Y**		Electrical power system		
Staircase			Electrical lighting system		
Dry/wet rot*	Y**		Central heating source		
			Central heating distribution		
Environment					
Fences/walls/gates			* Critical element		
Paths/paved areas/ramps			** Assumed to be urgent for the purposes of calculating critical disrepair		
Steps/platforms					
Surface drainage					

Disrepair

The first set of tables in this chapter describe the different levels of disrepair in the stock, the urgency of repair and the remaining life of elements. This information is presented in terms of key characteristics such as age, type and tenure.

Overview of the stock

Table 7.1 lists the dwellings which show evidence of any disrepair, by element. It indicates that:

- The types of disrepair of the greatest prevalence are in the external and environmental elements, where problems such as disrepair to external wall finishes, external painterwork, and paths, paved areas and ramps are found in around one-quarter to one-third of the stock.
- The prevalence of disrepair to critical structural elements such as foundations, party walls, external walls and roof structure is relatively low.
- Disrepair to key amenities such as WCs and bathrooms also occurs relatively infrequently.

Critical disrepair

For the purposes of the analysis, those elements which are central to the wind- and weather-proofing of a dwelling, and/or to its structural integrity, are defined as 'critical'.

Table 7.2 describes disrepair to critical elements in terms of key dwelling and household characteristics such as age, type and tenure. It indicates that such disrepair occurs according to a profile that is broadly similar to the basic profile of the stock characteristics with two exceptions: critical disrepair in post-1982 dwellings is estimated at 5%, whereas the prevalence of this age band in the stock is 16%, and 27% of pre-1919 dwellings have critical disrepair compared with 21% in the stock as a whole.

Extensive disrepairⁱⁱ

Extensive disrepair is calculated in an attempt to identify those dwellings where any disrepair present is of relatively greater severity – in other words it is a subset of the total number having any disrepair. The prevalence of extensive disrepair is summarised in **Table 7.3**. This indicates that:

- The overall prevalence of extensive disrepair is relatively low.
- Around 194,000 dwellings have extensive disrepair to the external painterwork, 134,000 to the paths, paved areas and ramps, 129,000 to fences, walls and gates and 114,000 to the internal doors or frames.
- Almost no dwellings have extensive disrepair to key services and amenities.

Total number of dwellings with any disrepair by element

TABLE
7.1

	Type of element	000s	% of all dwellings
Internal	Floor structure	25	1
	Floor finish	246	11
	Skirtings	95	4
	Wall finish	246	11
	Ceiling finish	285	13
	Cornices	68	3
	Doors and frames	280	13
	Fireplaces and flues	159	7
	Dry/wet rot	8†	0
	Internal walls/partition(s)	50	2
	Party walls	10†	1
	Staircase(s)	82	4
External	Principal roof structure	25	1
	Principal roof covering	446	20
	Secondary roof structure	5†	0
	Secondary roof covering	34	2
	Chimney stacks	339	15
	Flashings and edges	404	18
	Roof gutters and downpipes	374	17
	Soil waste and vent pipes	593	27
	Wall structure	72	3
	Wall finish	545	25
	Foundations	14†	1
	DPC	9†	0
	Underground drainage	16	1
	Private balcony to dwelling	19	1
	External doors to dwelling	151	7
	Windows to dwelling	183	8
	External painterwork to dwelling	709	32
External stairs to own door	19	1	

continued overleaf

TABLE
7.1
continued

Total number of dwellings with any disrepair by element (continued)

	Type of element (continued)	000s	% of all dwellings
Services and amenities	Main WC	75	3
	Wash-hand basin	130	6
	Hot and cold water to wash-hand basin	21	1
	Fixed bath/shower in bathroom	157	7
	Hot and cold water to bath/shower	21	1
	Sink	151	7
	Hot and cold water to sink	25	1
	Kitchen storage and worktops	17	1
	Cold water system	12†	1
	Hot water system	14†	1
	Electrical power system	32	2
	Electrical lighting system	27	1
	Central heating source	37	2
	Central heating distribution	50	2
Environment	Fences, walls and gates	630	29
	Paths, paved areas, ramps	723	33
	Steps and plats	405	19
	Surface drainage	126	6
		000s	% of all dwellings with common parts ^a
Common elements	Stairs, landings and balustrades	106	19
	Access balcony/gallery/decks and balustrades	12†	2
	Halls and passages	29	5
	Wall finishes	169	30
	Ceilings and soffit finishes	123	22
	Doors, screens, windows and rooflights	146	25
	Lifts	*	1
	Decorations	261	46
	Service mains	17†	3
	Public lighting to common areas	28	5
	Communal security systems	32	6
	Refuse chutes/chambers	14†	2
	Bin stores	63	11

^a These proportions are based on the 570,826 (weighted) dwellings which have common parts.

Disrepair to critical elements^a by dwelling and household characteristicsTABLE
7.2

		000s	% of dwellings with critical disrepair	% of all dwellings in category
Age of dwelling	Pre-1919	334	27	75
	1919–1944	217	18	70
	1945–1964	337	27	64
	1965–1982	283	23	52
	Post-1982	68	6	19
Dwelling type	Detached	188	15	46
	Semi-detached	253	20	55
	Terraced	267	22	54
	Tenement	319	26	64
	4-in-a-block	152	12	66
	Flat in converted building	27	2	70
	Tower/slab	32	3	54
Tenure	Owner occupier	730	59	53
	LA/other public	341	28	65
	HA/co-op	50	4	39
	Private renter	118	10	70
Location	Rural	209	17	59
	Urban	1,030	83	56

^a Critical elements are defined as: roof covering; roof structure; chimney stacks; flashings; roof gutters and downpipes; external wall structure; external wall finish; access decks and balustrades; foundations; DPC; external doors and windows; door screens, windows and rooflights; party walls; floor structure; dry/wet rot.

TABLE
7.3

Total number of dwellings with extensive disrepair by element

		000s	% of all dwellings
Internal	Floor structure	4†	0
	Floor finish	20	1
	Skirtings	33	2
	Wall finish	32	1
	Ceiling finish	32	1
	Cornices	16	1
	Doors and frames	114	5
	Fireplaces and flues	23	1
	Dry/wet rot	8†	0
	Internal walls/partition(s)	5†	0
	Party walls	*	0
	Staircase(s)	23	1
External	Principal roof structure	5†	0
	Principal roof covering	25	1
	Secondary roof structure	*	0
	Secondary roof covering	5†	0
	Chimney stacks	33	2
	Flashings and edges	33	2
	Roof gutters and downpipes	39	2
	Soil waste and vent pipes	11†	1
	Wall structure	6†	0
	Wall finish	42	2
	Foundations	*	0
	DPC	4†	0
	Underground drainage	5†	0
	Private balcony to dwelling	*	0
	External doors to dwelling	24	1
	Windows to dwelling	36	2
	External painterwork to dwelling	194	9
External stairs to own door	*	0	

continued on next page

Total number of dwellings with extensive disrepair by element (continued)

TABLE
7.3
continued

		000s	% of all dwellings
Services and amenities	Main WC	4+	0
	Wash-hand basin	5+	0
	Hot and cold to wash-hand basin	*	0
	Fixed bath/shower in bathroom	*	0
	Hot and cold to bath/shower	*	0
	Sink	*	0
	Hot and cold to sink	*	0
	Kitchen storage and worktops	20	1
	Cold water system	*	0
	Hot water system	*	0
	Electrical power system	4+	0
	Electrical lighting system	*	0
	Central heating source	10+	1
	Central heating distribution	8+	0
Environment	Fences, walls and gates	129	6
	Paths, paved areas, ramps	134	6
	Steps and plats	22	1
	Surface drainage	7+	0
		000s	% of all dwellings with common parts ^a
Common elements	Stairs, landings and balustrades	11+	2
	Access balcony/gallery/decks and balustrades	*	0
	Halls and passages	*	0
	Wall finishes	18+	3
	Ceilings and soffit finishes	16+	3
	Doors, screens, windows and rooflights	25	4
	Lifts	*	0
	Decorations	65	11
	Service mains	*	0
	Public lighting to common areas	*	1
	Communal security systems	10+	2
	Refuse chutes/chambers	*	0
Bin stores	15+	3	

^a These proportions are based on the 570,826 (weighted) dwellings which have common areas.

Urgency

Table 7.4 describes the urgency of repair for external and common elements, and **Table 7.5** breaks this down by key dwelling characteristics for houses and flats respectively. Note that all disrepair to floor structure, floor finish and skirtings, structural party walls and rectifying dry/wet rot has been assumed to be urgent in all cases and so is not included here. The estimates in these two tables suggest that:

- The repairs most likely to be regarded by the surveyor as urgent were to the DPC, principal and secondary roof coverings, and wall structure (all of which have a potentially significant impact on rising and penetrating damp).
- Repairs to communal security systems were also regarded as urgent in around half of all cases.
- Disrepair to decorations, bin stores and soil, waste and vent pipes and wall finish were less likely to be required urgently, reflecting the minimal contribution of these dwelling elements to the structural integrity and weatherproofing performance of the building.
- The majority of dwellings have no items requiring urgent disrepair. Of those that do, there is a trend related to age, with newer dwellings requiring fewer urgent repairs. This trend is less marked for flats than for houses.
- Dwellings with four or more items in urgent disrepair are most likely to have been built before 1919. Urgent disrepair to more than three items is virtually unknown in dwellings built since 1982.
- Houses are in slightly better repair than flats overall, with slightly fewer flats having no items at all in urgent disrepair. Within categories, however, there is no significant difference between houses and flats.
- There are no meaningful differences between dwelling types in terms of urgent disrepair.
- In terms of tenure, however, disrepair is relatively concentrated in the private rented sector, with around half of privately rented dwellings having one or more items requiring urgent disrepair and around 5% having five or more such elements.

Residual life

Table 7.6 and **Figures 7.1** and **7.2** summarise the estimates of residual life for external and common elements, showing that:

- The majority of elements other than decorative items are considered to have a lifespan of six years or more.
- Over the next **six to 10 years**, around one in four dwellings will need replacement of the communal security systems.
- 16% of dwellings will require new doors/screens/windows and rooflights over this period.
- Around 70% of flashings and roof gutters and 41% of principal roof coverings will need replacement in **11–30 years**.
- Around half of all primary roof coverings and wall finishes will last for another **30 years or more**, as will 19% of stairs, landings and balustrades in common blocks.

Urgency of disrepair by elements

TABLE
7.4

		Dwellings with any disrepair	Dwellings with urgent disrepair	
		000s	000s	% of dwellings with disrepair to this element
Common elements	Stairs, landings and balustrades	106	16†	15
	Access balcony/gallery/ decks and balustrades	12†	*	29
	Halls and passages	29	*	18
	Wall finishes	169	20†	12
	Ceilings and soffit finishes	123	18†	15
	Doors, screens, windows and rooflights	146	41	28
	Lifts	*	*	23
	Decorations	261	19†	7
	Service mains	17†	*	31
	Public lighting to common areas	28	12†	42
	Communal security systems	32	16†	49
	Refuse chutes/chambers	14†	*	16
	Bin stores	63	7†	12
External	Principal roof structure	25	8†	34
	Principal roof covering	446	250	56
	Secondary roof structure	5†	*	27
	Secondary roof covering	34	18	54
	Chimney stacks	339	112	33
	Flashings and edges	404	188	47
	Roof gutters and downpipes	374	171	46
	Soil waste and vent pipes	593	69	12
	Wall structure	72	36	49
	Wall finish	545	183	34
	Foundations	14†	7†	47
	DPC	9†	6†	69
	Underground drainage	16	7†	41
	Private balcony to dwelling	19	*	19
	External doors to dwelling	151	35	23
	Windows to dwelling	183	62	34
External painterwork to dwelling	709	199	28	
External stairs to own door	19	4†	22	

TABLE
7.5

Urgency of disrepair by age, type, tenure and location (houses and flats)

		No. of elements requiring urgent repairs					
		0	1	2	3	4	5+
Houses		% of dwellings with urgent disrepair					
Age of house	Pre-1919	55	17	12	7	5	5
	1919–1944	66	15	9	5	3	2
	1945–1964	65	19	9	4	2	2
	1965–1982	75	15	6	2	1	1
	Post-1982	90	7	2	1	0	0
House type	Detached	75	12	6	3	2	2
	Semi-detached	70	16	8	3	2	1
	Terraced	69	16	8	4	2	1
Tenure	Owner occupier	73	14	7	3	2	1
	LA/other public	66	18	8	4	2	2
	HA/co-op	84	11	4	1	0	0
	Private renter	58	16	10	7	5	5
Location	Rural	69	15	7	4	2	3
	Urban	72	15	7	3	2	1
Total (houses)		71	15	7	3	2	2
Flats							
Age of flat	Pre-1919	50	18	11	8	4	9
	1919–1944	55	20	12	7	4	3
	1945–1964	62	19	9	4	3	3
	1965–1982	66	16	8	6	3	2
	Post-1982	89	7	2	1	0	1
Flat type	Tenement	60	16	9	6	4	5
	4-in-a-block	62	17	10	5	3	3
	Flat in converted building	56	18	10	7	4	6
	Tower/slab	69	18	6	4	1	3
Tenure	Owner occupier	60	17	10	6	3	4
	LA/other public	61	18	10	5	3	3
	HA/co-op	77	13	6	2	2	1
	Private renter	50	16	9	9	5	11
Location	Rural	66	14	8	4	4	4
	Urban	61	17	9	6	3	4
Total (flats)		61	17	9	6	3	4

Residual life for external and common elements

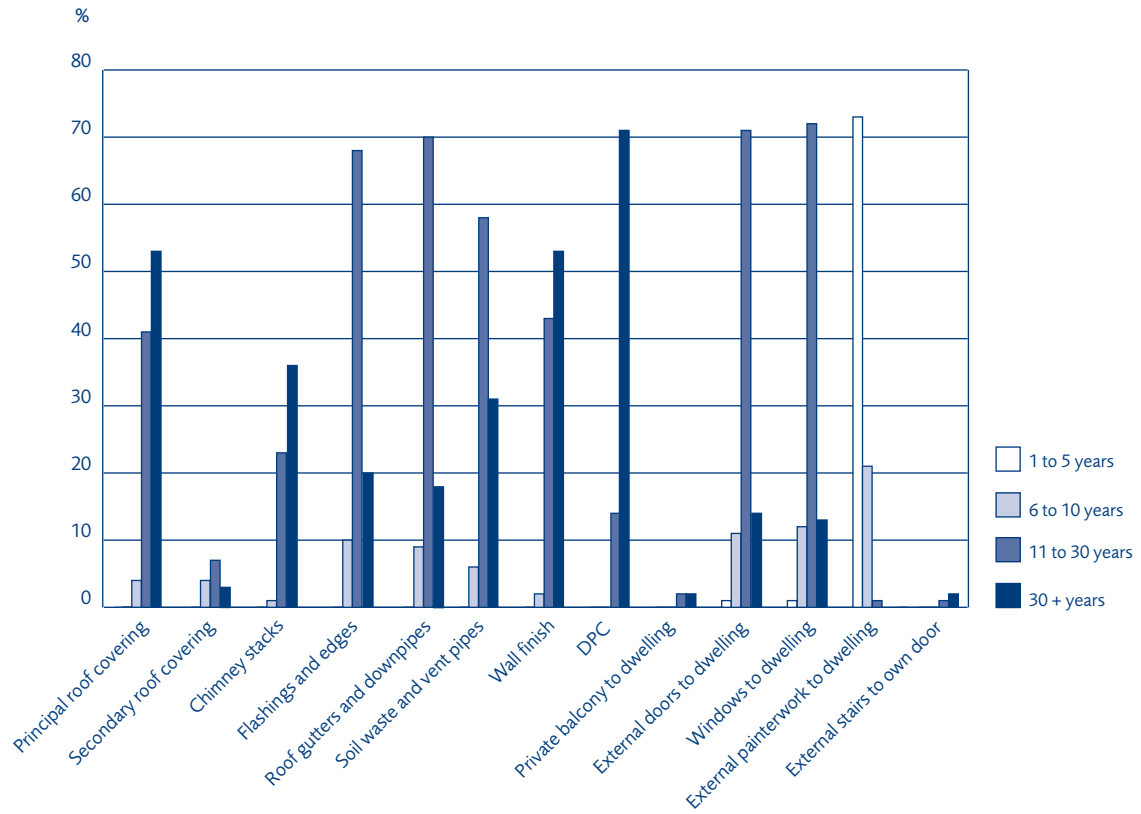
TABLE
7.6

		Residual life of element (years)							
		1-5		6-10		11-30		30+	
		000s	% of dwellings ^a	000s	% of dwellings	000s	% of dwellings	000s	% of dwellings
External elements	Principal roof covering	4	0	81	4	903	41	1,153	53
	Secondary roof covering	6	0	98	4	147	7	54	3
	Chimney stacks	*	0	28	1	511	23	779	36
	Flashings and edges	8	0	217	10	1,485	68	437	20
	Roof gutters and downpipes	7†	0	200	9	1,522	70	404	18
	Soil waste and vent pipes	*	0	120	6	1,265	58	672	31
	Wall finish	*	0	52	2	943	43	1,159	53
	DPC	*	0	*	0	310	14	1,560	71
	Private balcony to dwelling	*	0	*	0	34	2	51	2
	External doors to dwelling	11†	1	237	11	1,560	71	307	14
	Windows to dwelling	22	1	262	12	1,582	72	284	13
	External painterwork to dwelling	1,591	73	470	21	30	1	*	0
	External stairs to own door	*	0	*	0	18	1	45	2
Common elements	Stairs, landings and balustrades	*	0	*	0	125	22	418	73
	Access balcony/gallery/decks and balustrades	*	0	*	2	19	1	56	65
	Halls and passages	*	0	*	1	71	31	137	61
	Wall finishes	*	0	37	7	231	41	281	50
	Ceilings and soffit finishes	*	0	40	7	238	42	270	48
	Doors, screens, windows and rooflights	6†	1	87	16	338	61	110	20
	Lifts	*	1	10	13	29	39	25	33
	Decorations	250	44	245	43	53	9	*	0
	Service mains	*	0	43	8	329	62	139	26
	Public lighting to common areas	*	1	91	16	401	72	43	8
	Communal security systems	7†	2	86	23	247	67	16	4
	Refuse chutes/chambers	*	1	*	3	39	42	38	41
	Bin stores	*	1	19	5	135	39	174	50

^a For the external elements, all percentages are calculated on the basis of all dwellings. For the common elements, the proportion is based on the 570,826 (weighted) dwellings which have common areas.

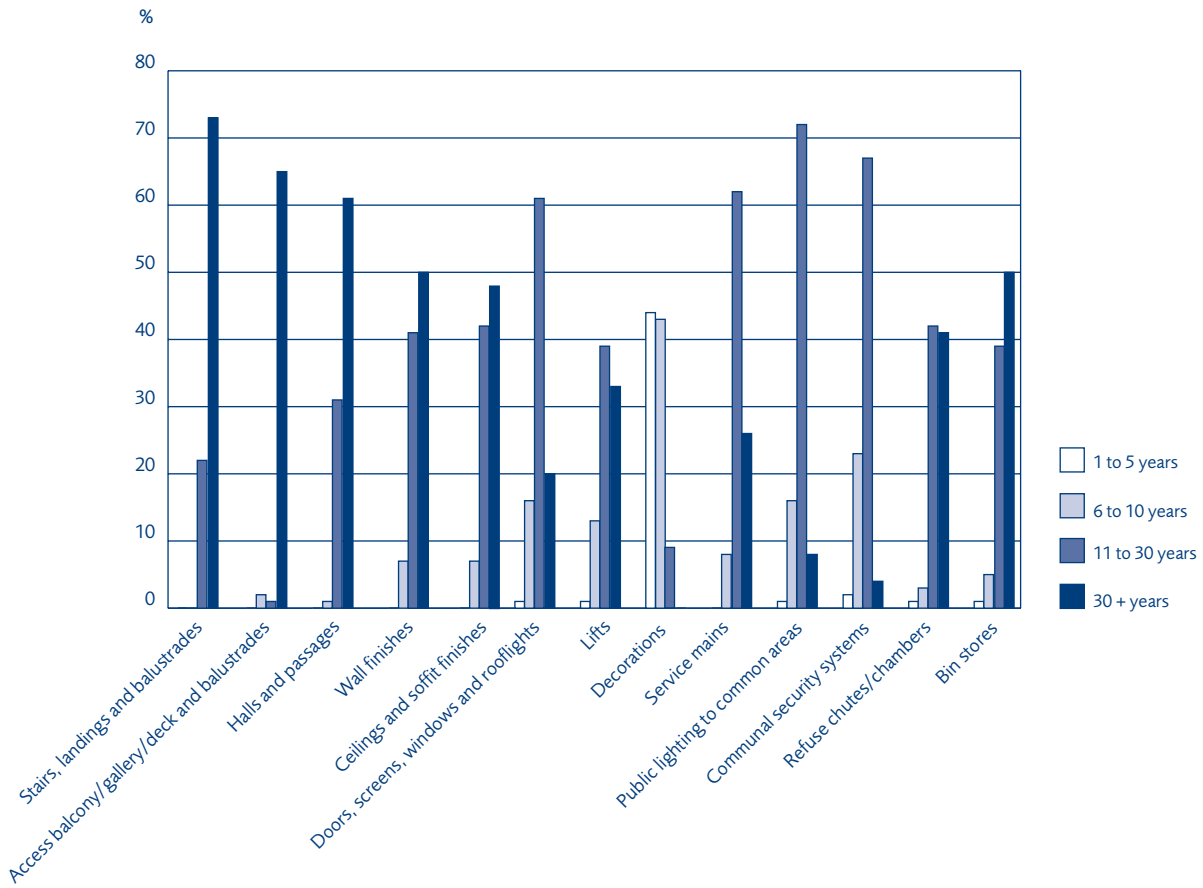
FIGURE 7.1

Residual life of external elements



Residual life of common elements

FIGURE
7.2



The cost of making good disrepair

Having identified visible disrepair in the stock, the next consideration is the cost of rectifying the various types of defect which have been identified.

In the SHCS, surveyors do not themselves estimate the costs of making good any disrepair which they record on the form while on site. Instead, the assessment of cost involves a sophisticated mathematical modelling exercise conducted as part of the survey analysis. In brief, each dwelling surveyed is assigned to one of over 170 stereotypes held in Communities Scotland's cost database (rates are adjusted for local variation) and the repair scores collected by surveyors at that dwelling are applied to the calculation, which produces a series of costs for making good this disrepair. **Technical Annexe 12.6** describes this process in more detail.

For the purposes of the analysis, four key repair standards are used in the cost calculation process and are referred to throughout this chapter:

- **Patch repairs** – the cost of rectifying visible disrepair. This can be regarded as an estimate of the minimum expenditure required on the stock.
- **Comprehensive repairs** – patch repairs plus the cost of replacing all external and common elements assessed by surveyors as having a residual life of 10 years or fewer.
- **BTS costs** – the cost of rectifying defects which cause a property to fail the Tolerable Standard and which are not covered elsewhere in the costs, such as the installation of missing amenities.
- **Improvement costs** – the cost of installing certain specified improvement items such as central heating and sound and thermal insulation (see **Box** below).

Because residual life is only assessed for external and common elements, the costs of internal repairs, repairs to services and amenities, and environmental repairs will remain the same in both the patch and comprehensive repair costs. The replacement costs rather than the patch repair costs of external and common elements are used in the comprehensive repair costs.

Modernisation standards used to calculate improvement costs

- Alterations to overcome inadequate space in kitchens, bathrooms, apartments or circulation areas.
- Alterations to overcome other deficiencies in the layout of kitchens, bathrooms, apartments or circulation areas (generally unsatisfactory circulation arrangements).
- Full installation of central heating.
- Supplementing inadequate kitchen storage provision.
- Thermal insulation to roof spaces and/or cavity external walls.
- Sound insulation to party walls and/or party floors.
- Provision of garden fencing and paving where none exist.

Patch repair costs

Table 7.7 shows the distribution of patch repair costs for the whole stock broken down by key groups of elements. The costs information is reported by percentiles for each group of elements and indicates the following:

- The estimated minimum total cost of making good all visible disrepair identified in the survey is £1.75bn.
- Around 40% of the above total is due to repairs to the external elements of the building and 19% to internal repairs. Taken together, repairs to the exterior and the external environment (eg steps and paths) account for 72% of the total repair bill.
- The medianⁱⁱⁱ cost of rectifying visible disrepair is £359 per dwelling.

As **Table 7.8** and **Figure 7.3** illustrate, the overall distribution of patch repair costs is skewed towards the lower end (as would be expected given the disrepair profile of the stock itself). 19% of all dwellings incur no patch repair costs at all and 45% require £300 or less to be spent on them.

Tables 7.9 and **7.10** present the same information for dwellings which have some disrepair only, to account for this skewness. These tables indicate that:

- When dwellings with no disrepair are excluded, the lower end of the distribution is relatively unchanged for all types of cost except external and environmental. This is to be expected given the greater contribution of these two types of cost to the patch repair total.
- The median cost goes up to £556.

Table 7.11 sets out the patch repair costs profile (for all dwellings) broken down by key dwelling characteristics. This indicates that:

- Dwellings built before 1919 account for 20% of all the stock but around 40% of the total patch repair bill.
- Stock built since 1982 contributes a very low proportion of the total patch repair bill.
- The distribution for other age bands is roughly in line with their proportion in the stock as a whole, with the exception of common parts repairs in the 1919–1944 stock which are relatively low. However, this is more likely to be because only 18% of all flats in Scotland fall into this age category than because of the disrepair profile in itself.
- The distribution for dwelling type is, again, broadly in line with overall stock proportions. However, tenements account for 96% of repair costs associated with the common parts, but 60% of all flats in Scotland.
- Detached houses form 19% of all stock but account for around 29% of external disrepair costs.
- In terms of tenure, the private rented stock accounts for 8% of all households but 17% of external disrepair, 20% of common parts disrepair, and 14% of internal disrepair costs.
- Rural stock is likely to be in slightly poorer repair than urban, relative to the prevalence in the stock as a whole.

TABLE
7.7

Distribution of patch repair costs for all dwellings

Percentile	Patch repair costs (£)					
	External	Internal	Common parts	Services and amenities	External environment	Total
20	0	0	0	0	0	10
30	0	0	0	0	0	92
40	30	0	0	0	0	212
50 (median)	75	0	0	0	0	359
60	139	0	0	0	94	557
70	237	66	0	0	213	832
80	407	180	0	19	429	1,263
90	828	429	96	74	791	2,141
95	1,459	784	273	173	1,306	3,207
99	3,687	2,240	835	508	2,473	6,403
Gross patch repair cost (£m)	691	334	89	75	557	1,745

TABLE
7.8

Grouped patch repair costs for all dwellings

£	Dwellings with patch repair cost in each range		Dwellings with patch repair cost less than	
	000s	%	000s	%
0	419	19	419	19
>0 to <150	324	15	743	34
150 to <300	244	11	987	45
300 to <450	176	8	1,163	53
450 to <600	149	7	1,312	60
600 to <900	212	10	1,524	70
900 to <1,200	147	7	1,671	77
1,200 to <1,800	174	8	1,845	85
1,800 to <2,400	102	5	1,947	90
2,400 to <4,800	130	6	2,077	96
4,800 and over	44	2	2,121	98
Unobtainable ^a	71	3	n/a	

^a This refers to dwellings where a full set of patch repair costs could not be generated, for example because a score for a key element was missing or ambiguous.

Frequency distribution of total visible repair costs for all dwellings

FIGURE
7.3

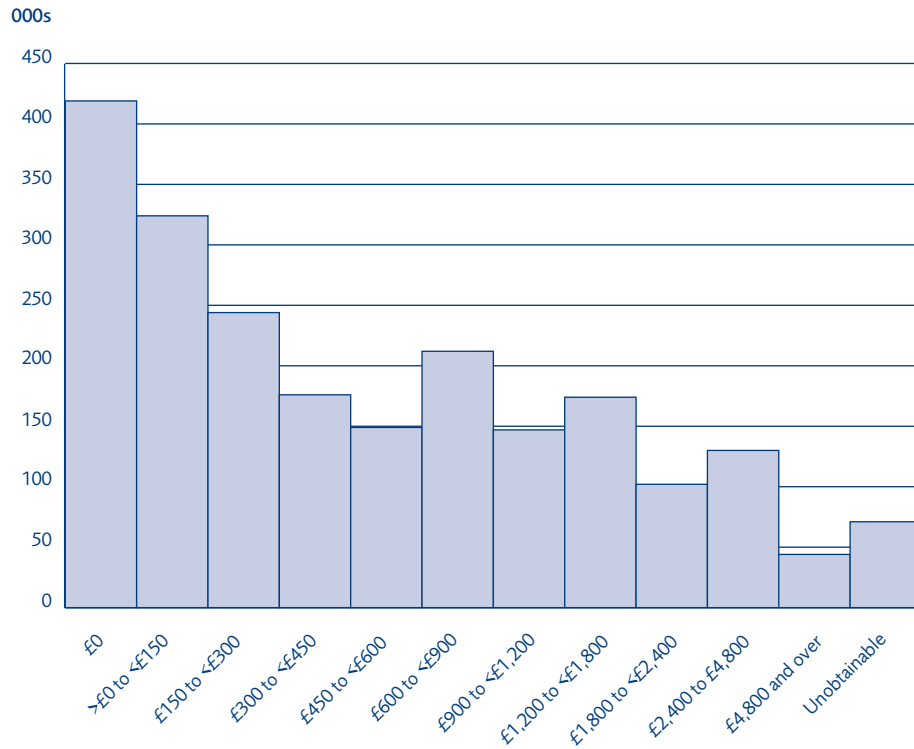


TABLE
7.9

Distribution of patch repair costs for dwellings with disrepair only

Percentiles	Patch repair costs (£)					
	External	Internal	Common parts	Services and amenities	External environment	Total
20	14	0	0	0	0	161
30	47	0	0	0	0	264
40	85	0	0	0	0	392
50 (median)	139	0	0	0	94	556
60	212	45	0	0	195	764
70	328	124	0	0	323	1,062
80	517	251	0	30	542	1,528
90	977	535	146	100	944	2,433
95	1,704	917	338	207	1,493	3,550
99	4,138	2,594	920	679	2,634	6,805
Gross £m	691	334	89	75	557	1,745

TABLE
7.10Grouped patch repair costs for dwellings with disrepair only^a

£	Dwellings with patch repair cost in each range		Dwellings with patch repair cost less than	
	000s	%	000s	%
>0 to <150	321	18	321	18
150 to <300	244	14	565	32
300 to <450	176	10	741	42
450 to <600	149	9	890	51
600 to <900	212	12	1,102	63
900 to <1,200	147	8	1,249	71
1,200 to <1,800	174	10	1,423	81
1,800 to <2,400	102	6	1,525	87
2,400 to <4,800	130	7	1,655	94
4,800 and over	44	3	1,699	97
Unobtainable	63	4	n/a	

^a Dwellings were selected if they had at least one element in disrepair (at any level).

Patch repair costs by key dwelling characteristics for all dwellings

TABLE
7.11

		% of all dwellings		External		Internal		Services and amenities		External environment		Common parts		All elements	
		%	£m	%	£m	%	£m	%	£m	%	£m	%	£m	%	£m
Age of dwelling	Pre-1919	20	47 326	40	135	26	20	25	141	51	45	38	667		
	1919–1944	14	16 110	17	57	18	13	15	83	6	5	15	269		
	1945–1964	24	19 132	22	75	24	18	28	155	24	22	23	400		
	1965–1982	25	15 102	14	48	26	20	25	141	17	15	19	325		
	Post-1982	16	3 21	6	19	6	5	7	37	2	2	5	83		
Type of dwelling	Detached	19	29 203	18	61	16	12	23	128	0	0	23	403		
	Semi-detached	21	22 150	20	65	22	17	30	165	0	0	23	397		
	Terraced	22	19 134	23	75	21	16	28	154	0	0	22	380		
	Tenement	23	19 128	27	91	26	20	10	53	96	85	22	377		
	4-in-a-block	11	8 58	10	33	13	10	9	48	0	0	9	149		
	Flat in converted building	2	2 14	2	6	1	1	1	8	1	1	2	30		
	Tower/slab	3	0 3	1	2	1	1	0	1	3	3	1	9		
Tenure	Owner occupier	62	65 451	57	190	52	39	63	352	44	39	61	1,071		
	LA/other public	24	16 112	25	84	32	24	25	137	31	27	22	384		
	HA/co-op	6	2 13	4	14	5	4	3	14	6	5	3	50		
	Private renter	8	17 115	14	47	12	9	10	53	20	17	14	240		
Location	Rural	16	29 198	19	63	19	14	25	141	2	2	24	418		
	Urban	84	71 493	81	271	82	61	75	415	98	87	76	1,327		

Comprehensive repair costs

Tables 7.12 and 7.13 show the distribution of comprehensive repair costs for the whole stock. As noted in the Introduction, comprehensive repair costs are a superset of patch repairs, with replacement costs entered for external and common elements. The distribution shows that:

- The total cost of rectifying all comprehensive disrepair found in the survey is £6.50bn and the median cost per dwelling is £1,739.
- The distribution of costs across types of expenditure differs from that found in the patch repair costs, as would be expected given that an assessment of residual life is only performed for external and common parts.
- The distribution as a whole is not skewed towards the lower end as is found for patch repairs. This is likely to be accounted for by the fact that a dwelling need not have **visible** disrepair to have a **comprehensive** repair cost, since external or common elements may be coming to the end of their life regardless of their current state of repair. **Figure 7.4** illustrates this point.

Table 7.14 shows the comprehensive repairs broken down by characteristics of the stock, for all dwellings. The profile indicates:

- As was the case for the patch repair costs, pre-1919 stock is in worse condition than the most recent stock. The cost of rectifying all the comprehensive disrepair in the pre-1919 stock is £2.3bn, around 35% of the total repair bill.
- Again, the private rented stock contributes disproportionately to the total cost of making good comprehensive disrepair.

Distribution of comprehensive repair costs for all dwellings

TABLE
7.12

Percentiles	Comprehensive repair costs (£)			
	External	Common parts	All other	Total
1	0	0	0	0
5	320	0	0	594
10	522	0	0	760
20	702	0	0	997
30	859	0	0	1,209
40	1,013	0	34	1,447
50 (median)	1,201	0	142	1,739
60	1,477	0	259	2,186
70	1,965	0	443	2,969
80	3,249	432	713	4,394
90	6,134	872	1,279	7,208
95	9,269	1,520	1,952	10,429
99	16,209	4,175	3,910	16,707
Gross (£m)	5,161	598	966	6,501

TABLE
7.13

Grouped comprehensive repair costs for all dwellings

£	Dwellings with comprehensive repair cost in each range		Dwellings with comprehensive repair cost less than	
	000s	%	000s	%
0	30	1	30	1
> 0 to <500	45	2	75	3
500 to <750	129	6	204	9
750 to <1,000	224	10	428	19
1,000 to <1,250	250	11	678	30
1,250 to <1,500	210	10	888	40
1,500 to <2,000	305	14	1,193	54
2,000 to <3,000	298	14	1,491	68
3,000 to <4,000	156	7	1,647	75
4,000 to <5,000	115	5	1,762	80
5,000 to <7,500	159	7	1,921	87
7,500 to <10,000	84	4	2,005	91
10,000 and over	115	5	2,120	96
Unobtainable	71	3	n/a	

Frequency distribution of total comprehensive repair costs for all dwellings

FIGURE
7.4

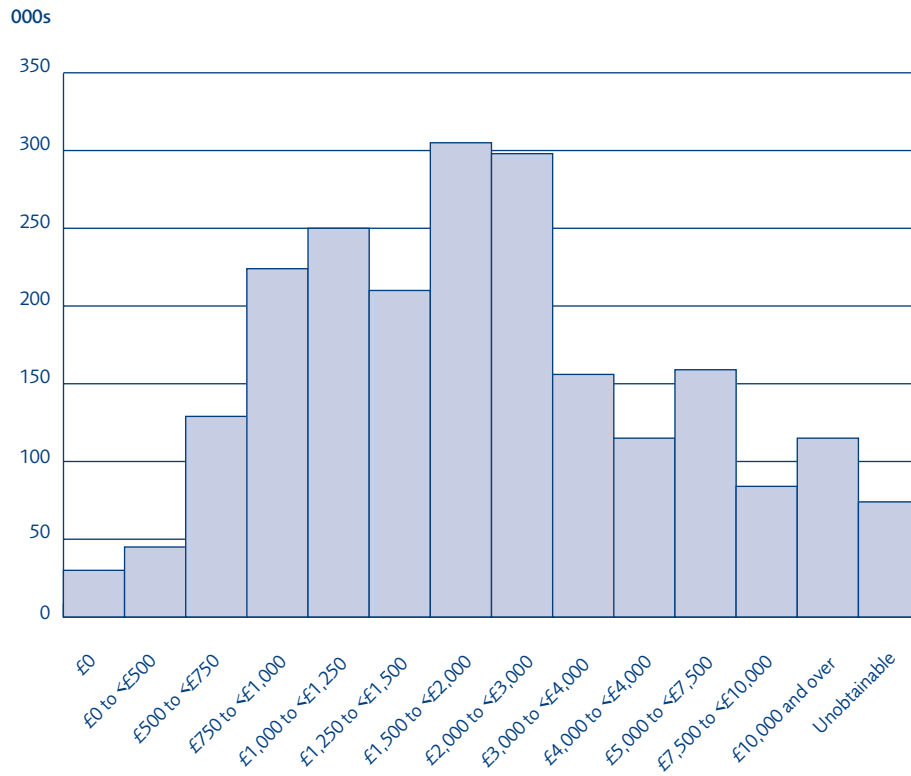


TABLE
7.14

Comprehensive repair costs by key dwelling characteristics for all dwellings

		All dwellings	External		Common parts		All other		All elements	
			%	£m	%	£m	%	£m	%	£m
Age of dwelling	Pre-1919	20	36	1,873	40	238	31	296	35	2,283
	1919–1944	14	16	831	7	43	16	154	15	994
	1945–1964	24	21	1,079	22	133	26	247	22	1,427
	1965–1982	25	19	974	20	121	22	208	20	1,278
	Post-1982	16	8	404	11	63	6	60	8	520
Type of dwelling	Detached	19	26	1,329	0	0	21	200	23	1,465
	Semi-detached	21	22	1,157	0	0	26	247	21	1,364
	Terraced	23	22	1,122	0	0	25	245	20	1,327
	Tenement	23	20	1,040	95	567	17	164	26	1,705
	4-in-a-block	11	8	411	0	0	9	91	8	492
	Flat in converted building	2	2	81	1	7	2	15	2	99
	Tower/slab	3	0	22	4	24	0	3	1	48
Tenure	Owner occupier	62	67	3,455	43	257	60	581	64	4,147
	LA/other public	24	17	884	30	181	25	245	20	1,280
	HA/housing co-op	6	4	183	11	63	3	32	4	270
	Private renter	8	12	639	16	98	11	108	12	804
Location	Rural	16	22	1,147	3	19	23	218	21	1,330
	Urban	84	78	4,013	97	579	77	747	79	5,172

BTS and improvement costs

Table 7.15 summarises the costs of bringing dwellings above the Tolerable Standard (TS) and making improvements, as well as making good any visible disrepair in terms of the impact on the whole stock. It is separated into two panels: one shows the cost of patch repairs + BTS costs, and the other the cost of patch + BTS + improvement. **Table 7.16** sets out the costs in terms of percentiles.

Looking first of all at the figures for BTS + patch repairs (**Panel 1 of Table 7.15** and the **left-hand column of Table 7.16**):

- The total cost of dealing with BTS and patch repairs is approximately £1.76bn.
- The distribution is skewed towards the lower end, as would be expected given the low incidence of BTS housing in Scotland (see **Chapter 5**).
- 65% of the stock requires less than £750 per dwelling to be spent on it to satisfy the Tolerable Standard as well as meeting patch repair standards.

Panel 2 of Table 7.16 shows the costs when works conducted in order to meet an enhanced specification to the dwelling are added. As noted earlier, surveyors were asked to identify specific areas where a dwelling could be subject to certain specified improvements – this does not refer to general building or amenity improvement (for example, no such cost would be allocated to an old kitchen or bathroom which is not in disrepair and otherwise satisfies the requirements of the TS).

The information is presented in this manner because the cost modelling process cannot easily separate out the works required to rectify patch disrepair from the action taken to deal with BTS and modernisation. This is to be expected given the often complex interaction between elements involved in the TS and modernisation standards, and the fact that if an element (such as the central heating system) is completely upgraded, the cost of making good any disrepair to the existing element is disregarded.

Looking at **Panel 2 of Table 7.15** and the **right-hand column of Table 7.16**:

- The total patch, BTS and improvement cost is £3.45bn. This is an approximation for the maximum total investment in the stock if all repair and improvement issues were to be dealt with simultaneously.
- The distribution of this total aggregated cost differs from that of the previous three types of cost, being shifted upwards slightly: the 30th percentile for BTS + patch is £92 compared to £514 for the 30th percentile of the costs inclusive of improvement.

Table 7.17 breaks down these costs by age, type, tenure and location, indicating a similar profile (in terms of greater costs due to pre-1919 stock and private rented dwellings) as for previous types of cost.

TABLE
7.15

Distribution of BTS + patch repair (+ improvement) costs for all dwellings

Panel 1 (£)	Dwellings with BTS + patch repair cost in each range		Dwellings with BTS + patch repair cost less than	
	000s	%	000s	%
0	419	19	419	19
>0 to <500	792	36	1,211	55
500 to <750	219	10	1,430	65
750 to <1,000	146	7	1,576	72
1,000 to <1,250	114	5	1,690	77
1,250 to <1,500	81	4	1,771	81
1,500 to <2,000	112	5	1,883	86
2,000 to <3,000	117	5	2,000	91
3,000 to <4,000	54	3	2,054	94
4,000 to <5,000	25	1	2,079	95
5,000 to <7,500	28	1	2,107	96
7,500 to <10,000	7	0	2,114	96
10,000 and above	6	0	2,123	96
Unobtainable	71	3	n/a	
Panel 2 (£)	Dwellings with BTS + patch + improvement cost in each range		Dwellings with BTS + patch + improvement cost less than	
	000s	%	000s	%
0	72	3	72	3
>0 to <500	549	25	621	28
500 to <750	279	13	900	41
750 to <1,000	214	10	1,114	51
1,000 to <1,250	166	8	1,280	59
1,250 to <1,500	127	6	1,407	65
1,500 to <2,000	181	8	1,588	73
2,000 to <3,000	223	10	1,811	83
3,000 to <4,000	116	5	1,927	88
4,000 to <5,000	65	3	1,992	91
5,000 to <7,500	80	4	2,072	95
7,500 to <10,000	26	1	2,098	96
10,000 and above	24	1	2,122 ^a	97
Unobtainable	71	3	n/a	

^a These totals do not agree exactly between the two panels due to rounding.

Grouped BTS + patch repair (+ improvement) costs for all dwellings

TABLE
7.16

Percentiles	Repair/improvement costs (£)	
	BTS + patch	BTS + patch + improvement
1	0	0
5	0	69
10	0	166
20	10	339
30	92	514
40	212	698
50 (median)	360	922
60	558	1,235
70	836	1,691
80	1,267	2,410
90	2,149	3,833
95	3,222	5,488
99	6,529	10,287
Gross £m	1,758	3,451

TABLE 7.17 BTS + patch repair (+ improvement) costs by key dwelling characteristics for all dwellings

		All dwellings	BTS + patch costs		BTS + patch + improvement costs	
		%	%	£m	%	£m
Age of dwelling	Pre-1919	20	39	678	35	1,212
	1919–1944	14	15	270	16	539
	1945–1964	24	23	401	22	743
	1965–1982	25	19	326	18	628
	Post-1982	16	5	84	10	328
Type of dwelling	Detached	19	23	408	21	731
	Semi-detached	21	23	397	19	641
	Terraced	23	22	381	18	617
	Tenement	23	22	381	29	1,016
	4-in-a-block	11	9	149	10	350
	Flat in converted building	2	2	33	2	68
	Tower/slab	3	1	9	1	29
Tenure	Owner occupier	62	61	1,079	61	2,100
	LA/other public	24	22	385	21	735
	HA/co-op	6	3	50	4	149
	Private renter	8	14	243	14	466
Location	Rural	16	24	422	20	672
	Urban	84	76	1,336	81	2,779

Change since SHCS 1996

A number of broad inferences may be drawn from a comparison of the SHCS 1996 results and the estimates presented in this chapter, although no detailed examination of the hypotheses which follow has been carried out.

In interpreting the following comments users should take into account the fact that no errors are quoted for the repair costs, although the error on the disrepair frequencies should be treated in the same way as the other estimates in this report (see **Introduction** and **Technical Annexe 12.3** for details). In other words, there is no 95% confidence interval quoted in this report for the repair cost totals. This does not mean that the repair costs are more accurate than other estimates, but simply that we cannot be as specific about the approach to error given that the cost calculations are derived from multiple inputs, not all of which are obtained from this or any other sample survey (see **Technical Annexe 12.6** for a description of the modelling process). Although it has not been possible to establish an exact error range for the repair cost totals, the most likely source of any such error is likely to be the repair score inputs and the information required to establish stereotype (ie age, type etc) and so for operational purposes we recommend that the costs be treated as having a similar level of precision as these sets of estimates. Communities Scotland intends to publish a follow-up report which will address disrepair in more detail than is possible here and will also include additional analyses of error, surveyor variability and the sensitivity of estimates.

Disrepair

The profile of critical and extensive disrepair is similar over the two surveys. There are some changes in extensive disrepair, but the pattern is complex, with significantly less disrepair in 2002 for some elements (eg floor structure and electrical lighting) and significantly more for others, almost all of which are external.

The proportion of elements in urgent disrepair was higher across all elements in the SHCS 1996 than in this survey. However, on closer inspection this is likely to reflect the fact that more total disrepair was recorded in this survey (in other words, the denominator of the proportion is larger). The absolute numbers of urgent repairs are either similar or lower than in 1996 for the majority of elements and slightly more dwellings have none or one element in urgent disrepair than in 1996.

In terms of residual life, given that six years have elapsed, we might expect the overall distribution of residual life to shift downwards (ie elements assessed as having six to 10 years of life in 1996 would, all other things being equal, have a residual life of one to five years in this survey). However, the changes in the distribution are not as straightforward as this. Some elements, such as external doors and windows, now have a predominant residual life of 30 or more years, suggesting that they have been replaced in the interim period. Other elements, such as access galleries, decks and balustrades, do show the predicted downward shift.

While no firm conclusions can be drawn from the information available here, a common-sense interpretation would be that elements which are relatively easy and cheap to replace are being renewed, whereas elements which are harder or more expensive to deal with are subject to patch repair instead. However, a detailed comparison of the longitudinal data – ie data gathered at the same dwelling in 1996 and 2002 – would be required to make any definitive statements about these trends. Communities Scotland hopes to include such an analysis in the follow-up report noted above.

Repair costs

Table 7.18 summarises the totals for the various types of repair cost between the SHCS 1996 and the current survey^{iv}. Again, some tentative hypotheses may be advanced.

The patch repair total has increased by approximately £0.09bn between the two surveys. The two major influences on this total are likely to be the base cost indices (which have increased by about 25% since 1996) and the disrepair inputs themselves (bearing in mind the potential impact of error in these inputs to error on the cost totals, as discussed above).

If the cost index increase of 25% were simply applied to the 1996 patch repair total, it would be expected to increase by about £0.42bn (ie the 2002 total would be expected to be in the region of £2.08bn). Since this is not what has been obtained, it may be hypothesised that a counterbalancing factor (presumably the state of repair of the stock) is in operation against the influence of the cost index increase. To explore this further, the 2002 survey data was analysed using the 1996 cost models (so as to control for the impact, if any, of cost inflation). The patch repair cost total obtained from this process was £1.37bn, or 78% of the actual 2002 total.

The influence of the change in the repair scoring methodology was also examined. This was done by calculating the patch repair costs using the 2002 dataset modified as if it had been obtained using the 1996 scoring method (ie resetting scores of '55' to '0'). This resulted in a patch repair cost total of £1.42bn, or 81% of the total reported in **Table 7.7**. This is close to the figure reported above and suggests that a proportion of the change since 1996 is due to this methodological adjustment.

Although the smaller than predicted change in the patch repair cost total would suggest that the overall state of repair of the stock is better than it was in 1996, this change is not necessarily distributed equally across all types of element (as the notes above on the change in disrepair profile indicate). Further work is required to quantify more precisely the contribution of changes in state of repair for groups of elements to the overall patch repair cost total. At present, however, it is possible to say that (a) the increase in patch repair total costs is smaller than the cost index inflation factor alone would suggest and (b) a proportion of the change which has occurred is likely to be due to the shift in repair scoring methodology.

The comprehensive repair cost total has increased by approximately £0.99bn. Although this increase is almost an order of magnitude greater than that seen for the patch repairs, it is, again, less than might have been predicted on the basis of the 25% increase in base cost indices alone. Since the comprehensive repair costs are a superset of the patch repair costs, they are likely to reflect trends in the basic costs of making good visible disrepair. However, the somewhat larger increase here than in the patch totals alone may be due to householders and landlords tending to undertake patch repairs rather than to renew older elements, so that these are assessed as requiring replacement (see also **Chapter 10**). As the above discussion of residual life shows, the pattern of replacement across the stock is complex, and again further work is required to specify more precisely the contribution of patch vs renewal works to the overall comprehensive repair cost total.

The cost of rectifying BTS dwellings has increased slightly over the whole stock. Again, this total is closely linked to the patch repair cost total, and due to the way these costs are calculated it is not straightforward to isolate the BTS element. However, the BTS-inclusive total has increased by slightly less than the patch repair cost alone. This suggests that the costs of bringing dwellings above the Standard – ie the BTS contribution to this total – have decreased slightly. Although, as noted in **Chapter 5**, caution must be exercised when considering BTS estimates for subcategories, this change in costs is likely to reflect the change in profile of reasons for failing the Standard. Almost half of all BTS dwellings in this survey fail due to inadequacies in heating, lighting and/or ventilation, which is often relatively inexpensive to rectify compared with, for example, the installation of missing amenities.

Finally, the total cost of improvements to dwellings has decreased: this is likely to be due to the fact that a greater proportion of the stock now has double glazing and central heating, the two modernisation elements which contribute the greatest amount to the cost total (see also **Chapter 11**).

Comparison of total repair costs 1996–2002

TABLE
7.18

	Total £bn	
	1996	2002
Patch	1.66	1.75
Comprehensive	5.51	6.50
BTS + patch	1.69	1.76
BTS + patch + improvement	3.71	3.45
(Improvement only)	2.02	1.69

ⁱ O'Dell and Nicol (1999), 'Repair Costs for the SHCS 2002'. Commissioned report for Scottish Homes.

ⁱⁱ Extensive disrepair is defined as a score of 2 or more on the 10-point repair scale, and/or a score of 'major' or 'renew' on the five-point repair scale, and/or dry or wet rot in two or more rooms in the dwellings. More information on the repair scales and their use can be found in **Technical Annexe 12.6**.

ⁱⁱⁱ Because the patch repair costs distribution is non-normal, the median is used as an average rather than a mean.

^{iv} The improvement cost total for 2002 has been obtained by simply subtracting the BTS + patch cost from the 'grand total' of BTS + patch + improvement. However, this is a crude estimate and should be treated with caution, given the linkages between elements in the cost model process described in the main text.

Householders with long-term illness and/or a disability may require changes to their homes so that they may continue to live in the community. The purpose of this chapter is to set out the profile of the housing stock in terms of the existing and potential adaptations required to meet these needs.



Introduction

The direction of current policy, such as 'Supporting People'⁴, is to provide housing support services which will help vulnerable people to carry on living in the community rather than entering residential care. For those who become vulnerable due to long-term illness and/or disability, this policy emphasis has implications for the physical fabric of their home and, by extension, of the stock in general. While many people with health problems will not require any changes to their accommodation, others (particularly those whose mobility is affected) may require adaptations such as access ramps and stairlifts so that they can remain in their own homes. However, since the majority of dwellings were not originally designed with such needs in mind, addressing the adaptability of the stock as a whole, and the implications and cost of such changes, is a significant issue in policy development. It can also, as the summer 2003 consultation on the Scottish Housing Quality Standard showed, be a key consideration for many stakeholder groups in terms of housing quality.

The SHCS 2002 asked householders about their health status and any adaptations they had or felt they required. The physical inspections also involved an assessment of the accessibility of the home in terms of the Barrier Free standard.

Health of households

Overall profile

Respondents were asked if any member of their household suffered from long-term illness (LTI), had a disability, and/or used a mobility aid. These responses were also used to classify households into Community Care groupings based on the nature of the illness/disability from which one or more members suffered. **Table 8.1** summarises the overall profile. It can be seen that:

- Just over one-third of households have at least one member with a LTI or disability.
- About one in 10 households includes a person who uses a mobility aid.
- Almost a quarter of households include at least one individual who can be classified as belonging to a Community Care grouping.

Although this last figure appears to be a substantial increase from the SHCS 1996, in fact the figures are not comparable due to a change in survey method. In 1996 respondents were asked to describe the disabled inhabitant's disability without any prompting or categories being suggested. In 2002 respondents were given a list of nine types of disability (including 'other' and 'don't know') from which the respondent had to choose to categorise the affected resident's disability.

Table 8.2 illustrates the types of LTI/disability which respondents said they suffered from. It can be seen that:

- Most respondents reporting some form of LTI/disability suffered from a mobility or some other physical impairment (363,000 responses covering 17% of all households).
- The next most common difficulty was respiratory/circulatory problems, each of which affected just over one in 10 respondents.
- The least common type of LTI/disability reported was learning difficulty.

TABLE
8.1Overall illness/mobility profile of householdsⁱⁱ

	000s	% of all households
At least one member has LTI or disability	776	35
At least one member uses a mobility aid	248	11
At least one member is in a Community Care group	506	23

TABLE
8.2

Type of long-term illness/disability reported by respondents

	000s	% of all households
Vision	64	3
Hearing	67	3
Learning difficulty	22	1
Mobility/other physical impairment	363	17
Mental health problem	62	3
Respiratory problem	240	11
Circulatory problem	255	12
Other	150	7
Unknown	*	0

Profile by dwelling and household type

Tables 8.3 to 8.7 set out the detailed profile of dwellings and households where at least one member of the household has a LTI/disability or is in a Community Care grouping.

Households where at least one occupant has long-term illness and/or disability by key dwelling characteristics

**TABLE
8.3**

		000s	% of dwellings in category	% of all dwellings
Age of dwelling	Pre-1919	118	26	5
	1919–1944	132	43	6
	1945–1964	230	43	10
	1965–1974	140	39	6
	1975–1982	64	34	3
	1983–1990	45	34	2
	1991–1997	34	25	2
	Post-1997	22	26	1
Type of dwelling	Detached houses	107	26	5
	Semi-detached	161	35	7
	Terraced	193	39	9
	Tenement	180	36	8
	4-in-a-block	103	44	5
	Flat in converted building	11†	30	1
	Tower/slab	31	51	1
Location	Urban	663	36	30
	Rural	122	34	6

TABLE 8.4 Households where at least one occupant has long-term illness and/or disability by key dwelling characteristics

		000s	% of households in category	% of all households
Tenure	Owner occupier	386	28	18
	LA/other public	278	53	13
	HA/housing co-op	63	50	3
	Private renter	48	28	2
Household type	Single adult	104	30	5
	Small adult	101	27	5
	Single parent	39	30	2
	Small family	71	23	3
	Large family	48	31	2
	Large adult	77	34	4
	Older smaller	167	53	8
	Single pensioner	169	50	8
Economic status of HH	Employed full-time	212	20	10
	Employed part-time	30	28	1
	Looking after home	35	42	2
	Retired	326	52	15
	Unemployed/Govt. training	26	30	1
	Further/higher education	6†	14	0
	Long-term illness	126	93	6
	Other	16	69	1
Weekly household income (£)	<100	44	37	2
	100–199.99	273	48	13
	200–299.99	203	44	9
	300–399.99	105	32	5
	400–499.99	63	26	3
	500–699.99	53	20	2
	700 +	29	18	1

Households where at least one occupant belongs to a Community Care group
by key dwelling characteristicsTABLE
8.5

		Total dwellings (000s)	% of dwellings in category	% of all dwellings
Age of dwelling	Pre-1919	70	16	3
	1919–1944	92	30	4
	1945–1964	149	28	7
	1965–1974	90	25	4
	1975–1982	41	22	2
	1983–1990	30	22	1
	1991–1997	21	16	1
	Post-1997	13†	15	1
Type of dwelling	Detached houses	63	15	3
	Semi-detached	98	21	4
	Terraced	125	25	6
	Tenement	121	24	6
	4-in-a-block	72	31	3
	Flat converted building	6†	16	0
	Tower/slab	22	37	1
Location	Urban	430	23	20
	Rural	78	22	4

TABLE 8.6 Households where at least one member belongs to a Community Care group by key dwelling characteristics

		000s	% of households in category	% of all households
Tenure	Owner occupier	234	17	11
	LA/other public	196	37	9
	HA/housing co-op	47	37	2
	Private renter	29	17	1
Household type	Single adult	70	21	3
	Small adult	59	16	3
	Single parent	17	13	1
	Small family	31	10	1
	Large family	23	15	1
	Large adult	45	20	2
	Older smaller	120	39	5
	Single pensioner	140	41	6
Economic status of HH	Employed full-time	89	8	4
	Employed part-time	15	14	1
	Looking after home	21	25	1
	Retired	252	40	11
	Unemployed/Govt. training	13	15	1
	Further/higher education	*	6	0
	Long-term illness	103	76	5
	Other	11	46	0
Weekly household income (£)	<100	31	26	1
	100–199.99	196	34	9
	200–299.99	144	25	7
	300–399.99	64	19	3
	400–499.99	32	13	1
	500–699.99	24	9	1
	700 +	12	7	1

Type of long-term illness/disability by key household characteristics

TABLE
8.7

		Learning difficulty		Mental health		Physical disability	
		000s	% in category	000s	% in category	000s	% in category
Tenure	Owner occupier	8†	1	18	1	17	13
	LA/other public	9†	1	29	6	142	27
	HA/housing co-op	*	2	9†	7	31	25
	Private renter	*	1	6†	4	18	10
Household type	Single adult	*	1	19	6	49	14
	Small adult	*	0	11†	3	47	13
	Single parent	*	3	6†	5	9†	7
	Small family	5†	2	5†	2	21	7
	Large family	4†	2	4†	3	17	11
	Large adult	5†	2	7†	3	36	16
	Older smaller	*	0	7†	2	85	27
	Single pensioner	*	0	4†	1	99	29
Economic status of HH	Employed full-time	8†	1	11†	1	66	6
	Employed part-time	*	2	*	1	11†	10
	Looking after home	5†	6	7†	8	12	15
	Retired	*	0	11	2	176	28
	Unemployed/Govt. training	*	2	*	4	8	10
	Further/higher education	*	1	*	1	*	3
	Long-term illness	4†	3	25	19	82	61
	Other	*	1	4†	17	6†	26
Household income	<100	*	0	*	3	20	16
	100–199.99	6†	1	23	4	135	23
	200–299.99	5†	1	19	4	106	23
	300–399.99	4†	1	10†	3	49	15
	400–499.99	4†	2	5†	2	24	10
	500–699.99	*	1	*	1	19	7
	700+	*	0	*	1	8†	5

The tables indicate that:

- Households containing a member with LTI/disability are most likely to live in dwellings built after 1919 but before 1964.
- 51% of tower or slab dwellings contain a LTI/disabled resident. In contrast, the same is true for only 26% of detached houses.
- Households with a LTI/disabled member are more likely to rent from a local authority or housing association than to rent privately or to own their home. In contrast, households with at least one member who is in a Community Care group are most likely to be found in dwellings that are privately owned.
- Rural and urban dwellings are equally likely to have a LTI/disabled resident.
- Most households with a LTI/disabled member and/or a member in a Community Care group are older smaller or single pensioner households.
- Households with at least one occupant who has a long-term illness or disability are most likely to have a weekly income of between £100 and £300.
- The same is true for households with an occupant in a Community Care group.

Adaptations to dwellings

Not all of the illnesses or disabilities considered in the previous section will have implications for the physical accommodation provided by the home. The remainder of this chapter focuses on the relationship between householders' needs and the possible or actual adaptations to the dwelling which would meet them.

Adaptations can range from the relatively straightforward (eg a rail to hold on to in the bath, an access ramp) to the more complex and expensive (eg the creation of an additional WC on the ground floor of a house).

(a) Adaptations present and required

Table 8.8 summarises the status of the stock in terms of the number of adaptations **currently** present. This information was obtained from the social survey (ie was reported by the householder rather than the surveyor).

- The majority of households do not live in a dwelling which has adaptations.
- Of those which do have some degree of adaptation (398,000), the majority have only one.

Table 8.9 summarises the number of adaptations which householders said they required.

- The majority of householders did not want any adaptations.
- Of those who did (accounting for some 132,000 households) most required only one change to be made.

Householders who indicated that some form of adaptation had been made to their home were asked for more details. The type of adaptations present, and the number of dwellings incorporating each, is summarised in **Table 8.10**. The profile of adaptations (existing and required) is also summarised in **Figure 8.1**.

- The most common types of adaptation are handrails (204,000), changes to the kitchen and bathroom (147,000 dwellings), and door entry phones (111,000).
- Lifts (through floors rather than on stairs), and extensions, were the least common forms of adaptation, presumably because these alterations would be inappropriate to more dwellings than would other forms of change (eg extensions to tenement flats and tower blocks would not be possible).

TABLE
8.8

Number of adaptations currently present in households

	000s	%
0	1,795	82
1	250	11
2	77	4
3	36	2
4	18	1
5 or more	17	1

TABLE
8.9

Number of adaptations required by householders

	000s	%
0	2,060	94
1	86	4
2	31	1
3	9+	0
4	4+	0
5 or more	2+	0

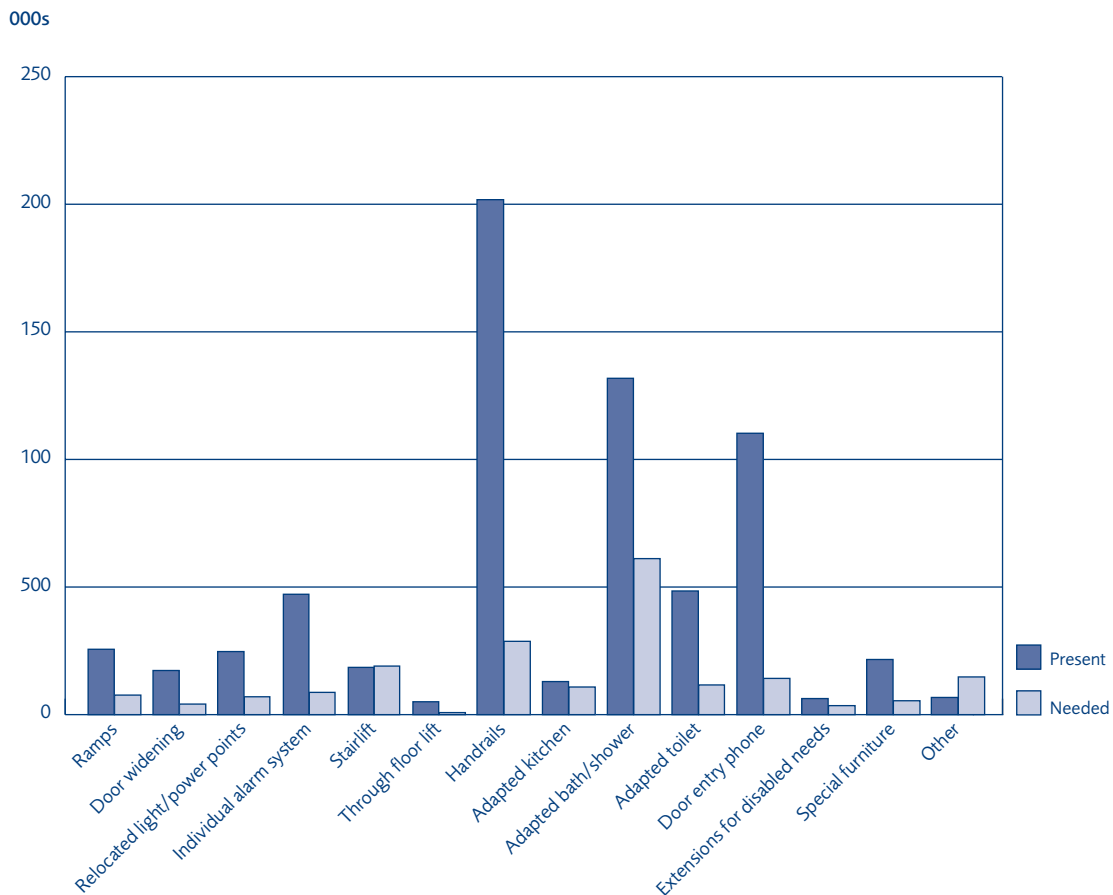
Profile of existing adaptations

TABLE
8.10

	000s	%
Ramps	26	1
Door widened	17+	1
Relocated lights/sockets	25	1
Alarm system	48	2
Stair lift	19	1
Lift	5+	0
Handrails	204	9
Adapted kitchen	13	1
Adapted bath/shower	134	6
Adapted toilet	49	2
Door entry phone	111	5
Extension	6+	0
Special furniture	22	1
Other	7+	0

FIGURE 8.1

Profile of existing and required adaptations to dwellings



Tables 8.11 to 8.15 summarise the adaptations present in terms of age of dwelling, type of dwelling, tenure, household type and location.

- Adaptations are most likely to be found in dwellings occupied by single pensioner and older smaller households.
- There is little difference between urban and rural dwellings in terms of adaptation.
- Post-1997 dwellings have the fewest adaptations while those built between 1945 and 1964 have the most.
- Flats in converted buildings have the fewest adaptations, while those in tenement buildings have the most.
- Single pensioners are most likely to live in dwellings with adaptations.

Adaptations to dwellings by age of dwelling

TABLE
8.11

	Pre -1919		1919 -1944		1945 -1964		1965 -1974		1975 -1982		1983 -1990		1991 -1997		Post -1997	
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Ramps	*	8	6†	22	6†	22	*	12	3†	13	*	9	*	10	*	5
Door widened	*	10	*	8	*	17	*	12	*	8	*	16	*	13	*	17
Relocated lights/sockets	*	11	*	7	*	13	5†	19	*	9	4†	17	*	12	*	12
Alarm system	*	9	8†	16	9†	19	8†	16	5†	10	7†	15	5†	10	*	5
Stair lift	*	11	*	16	7†	36	*	21	*	8	*	5	*	4	*	1
Lift	*	20	*	0	*	12	*	22	*	20	*	14	*	4	*	9
Handrails	22	10	40	19	65	31	36	17	19	9	14†	7	8†	4	5†	2
Adapted kitchen	*	13	*	15	*	18	*	11	*	7	*	14	*	12	*	11
Adapted bath/shower	15	11	26	19	37	28	24	18	12†	9	11†	8	5†	4	*	3
Adapted toilet	5†	10	10†	20	13†	27	8†	16	5†	11	5†	9	*	5	*	3
Door entry phone	34	31	11†	10	19	17	19	17	6†	6	10†	10	7†	7	*	3
Extension	*	13	*	21	*	20	*	16	*	8	*	9	*	6	*	8
Special furniture	*	16	4†	19	6†	27	*	16	*	8	*	7	*	4	*	2
Other	*	20	*	20	*	11	*	23	*	9	*	3	*	8	*	8

TABLE
8.12

Adaptations to dwellings by type of dwelling

	Detached		Semi-detached		Terraced		Tenement		4-in-a-block		Flat converted building		Tower/slab	
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Ramps	6†	23	8†	29	4†	15	*	16	5†	18	*	0	*	0
Door widened	4†	22	*	20	3†	19	*	24	*	12	*	3	*	0
Relocated lights/sockets	3†	13	5†	21	4†	15	10†	38	*	10	*	2	*	2
Alarm system	6†	13	7†	15	8†	16	19	39	6†	13	*	2	*	3
Stairlift	*	7	6†	29	8†	42	*	8	*	8	*	3	*	2
Lift	*	8	*	4	*	5	*	49	*	0	*	3	*	31
Handrails	23	11	47	23	62	30	36	17	32	15	*	1	6†	3
Adapted kitchen	*	11	*	13	*	17	6†	43	*	14	*	0	*	2
Adapted bath/shower	17	13	24	18	32	24	32	24	21	16	*	1	6†	4
Adapted toilet	7†	14	8†	17	11†	23	12†	24	8†	18	*	0	*	4
Door entry phone	*	1	*	2	*	2	82	75	7†	7	*	3	12†	11
Extension	*	26	*	23	*	12	*	27	*	6	*	1	*	4
Special furniture	5†	24	4†	18	5†	24	*	19	*	15	*	0	*	1
Other	*	12	*	15	*	16	*	47	*	9	*	0	*	2

Adaptations to dwellings by tenure

TABLE
8.13

	Owner occupier		LA/other public		HA/housing co-op		Private renter	
	000s	% of dwellings with adaptation	000s	% of dwellings with adaptation	000s	% of dwellings with adaptation	000s	% of dwellings with adaptation
Ramps	12	46	11†	41	*	10	*	3
Door widened	7†	37	6†	33	4†	25	*	4
Relocated lights/sockets	8†	32	9†	37	7†	27	*	5
Alarm system	16	34	20	41	9†	18	*	7
Stairlift	10†	53	7	35	*	7	*	5
Lift	*	23	*	40	*	32	*	5
Handrails	90	44	88	43	17	8	10†	5
Adapted kitchen	4†	29	5†	34	4†	28	*	8
Adapted bath/shower	52	39	60	45	15	11	7†	5
Adapted toilet	20	40	21	42	6†	12	*	6
Door entry phone	40	36	38	34	19	17	14†	13
Extension	*	47	*	38	*	12	*	4
Special furniture	11†	49	8†	35	*	8	*	8
Other	*	33	*	46	*	15	*	6

TABLE
8.14

Adaptations to dwellings by household type

	Single adult		Small adult		Single parent		Small family		Large family		Large adult		Older smaller		Single pensioner	
	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Ramps	*	14	4†	16	*	3	*	6	*	9	*	8	4†	17	7†	27
Door widened	*	17	*	17	*	6	*	5	*	8	*	9	*	13	4†	25
Relocated lights/sockets	5†	21	*	14	*	2	*	6	*	5	*	5	*	14	8†	34
Alarm system	5†	11	*	6	*	1	*	4	*	2	*	3	8†	17	27	55
Stairlift	*	3	*	9	*	1	*	2	*	2	*	11	7†	35	7†	37
Lift	*	9	*	13	*	0	*	3	*	7	*	3	*	13	*	51
Handrails	20	10	21	10	6†	3	11†	6	9†	4	16	8	52	25	70	34
Adapted kitchen	*	21	*	23	*	4	*	1	*	5	*	8	*	13	*	26
Adapted bath/shower	14	10	11†	8	*	3	4†	3	6†	4	12	9	36	27	47	36
Adapted toilet	5†	10	5†	10	*	2	*	3	*	5	5†	11	14	30	15	31
Door entry phone	30	27	16†	14	6†	5	7†	6	*	2	10†	9	13†	12	28	25
Extension	*	9	*	15	*	2	*	6	*	14	*	11	*	26	*	18
Special furniture	*	9	*	12	*	3	*	4	*	6	*	13	6†	26	6†	26
Other	*	16	*	11	*	2	*	5	*	3	*	13	*	17	*	32

Adaptations to dwellings by rurality

TABLE
8.15

	Rural			Urban		
	000s	% of all dwellings with adaptation	% of rural dwellings	000s	% of all dwellings with adaptation	% of urban dwellings
Ramps	6†	23	2	21	77	1
Door widened	4†	21	1	14	79	1
Relocated lights/sockets	5†	18	1	21	82	1
Alarm system	9†	18	2	40	82	2
Stairlift	*	15	1	16	85	1
Lift	*	13	0	5†	87	0
Handrails	33	16	9	175	84	10
Adapted kitchen	*	17	1	12†	83	1
Adapted bath/shower	21	16	6	114	85	6
Adapted toilet	8†	16	2	40	84	2
Door entry phone	4†	3	1	106	97	6
Extension	*	26	1	4†	74	0
Special furniture	5†	23	1	17	77	1
Other	*	16	0	6†	84	0

Respondents were also asked which, if any, aspects of their dwellings restricted the activity of ill or disabled members of the household. **Table 8.16** summarises the overall profile.

- A relatively low proportion of respondents indicated that theirs or a household member's activity was impaired by factors within the dwellingⁱⁱⁱ. Due to the small numbers involved, no further breakdown (by age, type etc) will be provided.
- Indoor stairs are the most common aspect of dwellings which are held to restrict activity, followed by the bath and/or shower.

TABLE 8.16 Profile of dwellings with aspects that restrict activity of LTI/disabled household member

	000s	% of all dwellings with restriction
Can't use indoor stairs	84	11
Need more room	7†	1
Can't use outdoor stairs	15	2
Design restricts movement	9†	1
Doors too narrow	*	1
Rooms too small	5†	1
Bath needs adapting	58	7
Toilet needs adapting	15	2
Can't use sockets	8†	1
Can't use heat controls	4†	1
Can't open windows	12	2
Can't answer door	11†	2
Can't use cupboards	16	2
Can't use garden	12	2
Other	14	2

ATTENTION

Revisions to Chapter 8, pages 143 – 151: Barrier Free standard

A post-publication error has been found in the estimation of Barrier Free dwellings. **Please do not use any of the figures originally published on pages 143-151 of this report.** This section is currently being revised in full. Replacement figures will be released in the near future. In the meantime the revised headline figures for Barrier Free dwellings (confirmed by independent external validation) are as shown below:

	Barrier Free for ambulant disabled		Barrier Free for temporary wheelchair		Barrier Free for full wheelchair		Barrier Free for visiting wheelchair	
	000s	%	000s	%	000s	%	000s	%
Published	89	4	29	1	3	0	22	1
Revised	26	1	21	1	7†	0	11†	1
1996	24	1.1	10	0.9	5	0.2	20	0.9

† denotes estimate based on less than 100 cases within sample - treat with caution.

If you have a query about these headline estimates please contact the HCS Team.

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March 2004

Dampness and Condensation

The strong association between dampness and respiratory health means it is particularly important for any review of condition to address this specific aspect of housing quality. This chapter explores the prevalence and distribution of dampness and condensation, and related problems, in the Scottish housing stock.



Introduction

The seriousness with which dampness is viewed in Scottish housing is reflected in its inclusion in the Tolerable Standard (see **Chapter 5**), which stipulates that a dwelling must be "substantially free" from both rising and penetrating dampness in order to be considered habitable. Indeed, this was the leading reason for failure of the Standard in the SHCS 1996.

Nevertheless, a level of dampness which does not render the dwelling Below Tolerable Standard (BTS) would still be regarded as having an impact on the occupants. 29% of the stock in the SHCS 1991, and 25% in 1996, was recorded as suffering from some degree of dampness and/or condensation. The potential impact of these problems on people's health has been characterised in a range of research studies¹. Their presence and severity is affected by a range of issues, which can interact in a complex way:

- Effectiveness of the heating system.
- Effectiveness of ventilation in the affected rooms.
- Type of construction.
- Type of insulation.
- Lifestyle of occupants (eg use of heating, use of appliances such as tumble driers).

As in the SHCS 1996, the assessment of dampness and condensation uses data from the social and physical surveys. In the interview, householders were asked to state whether or not they experienced problems with dampness or condensation in each room of their home, and the impact of any such difficulties on them. In the subsequent physical inspection, the surveyor assessed the presence and extent of dampness (split into rising and penetrating), condensation and mould growth in each of the rooms covered in the internal survey. A 'whole house' summary assessment was also made. **Technical Annexe 12.8** describes the guidance given to surveyors.

Clearly, the two assessments take place on a different basis, which is likely to have an impact on the estimates. The focus on the social survey is on the impact of problems, whereas the surveyor is gauging their extent. Each is assessing slightly different things, and so the two should not be compared directly. However, they will give a different overview of the extent of the problem in general.

The physical survey approach is standardised and isolates the different aspects of the problem. However, it takes place at a single point in time, potentially biasing the estimate downwards, given the intermittent nature of dampness and condensation (ie it may not be present at the time of survey) and does not give any indication of the impact on the occupants. While the social survey looks at the impact of these conditions and also enables the long-term situation to be taken into account, it is a more subjective evaluation. Understanding of the concepts and terms involved in making an assessment cannot be standardised across all householders in the same way as for trained surveyors.

While these measurement issues should be borne in mind when considering the estimates reported here, the opportunity to take into account the views of both building professionals and occupants is one of the most important aspects of the SHCS methodology. This can give the assessment of dampness and condensation greater power. With this in mind, both types of evaluation are discussed in this chapter, with the source of each estimate clearly specified.

Dampness and condensation – surveyors' assessment

Overall profile

Table 9.1 details the overall prevalence of rising and penetrating dampness, condensation and mould. This profile indicates that:

- Approximately 131,000 (6%) dwellings in Scotland are affected by some form of dampness. Penetrating dampness is both more common and more severe in most cases than rising dampness.
- Condensation and mould affect around 229,000 (11%) and 233,000 (11%) dwellings respectively.
- Dampness is more likely to affect public rooms than kitchens and bathrooms.

Dwelling and household characteristics

Tables 9.2 and **9.3** show the number of dwellings affected by dampness and condensation broken down by key dwelling and household characteristics, suggesting that:

- Generally speaking, the older a dwelling, the more likely it is to be affected by dampness and condensation.
- Households living in private rented properties are most likely to experience dampness and condensation in their dwellings (see also **Figure 9.1**).
- There is very little difference between household types in terms of the likelihood of living in dwellings that have dampness or condensation.
- There is no relationship between weekly household income and dampness, but households on very low incomes are more likely to live in dwellings with condensation than are households on higher incomes.

Presence and severity of surveyor-assessed dampness, condensation and mould

TABLE
9.1

		Rising dampness		Penetrating dampness		Any dampness ^a		Condensation		Mould	
		000s	% of all dwellings	000s	% of all dwellings	000s	% of all dwellings	000s	% of all dwellings	000s	% of all dwellings
Present		53	2	112	5	131	6	229	11	233	11
Severity	< 2%	34	2	72	3	77	4	149	7	152	7
	2% to 5%	9†	0	25	1	31	1	48	2	50	2
	5% to 10%	5†	0	9†	0	12†	1	21	1	20	1
	10% to 20%	*	0	*	0	*	0	6†	0	7†	0
	20% to 30%	*	0	*	0	*	0	*	0	*	0
	30% to 40%	*	0	*	0	*	0	*	0	*	0
	> 40%	*	0	*	0	*	0	*	0	*	*
Rooms affected	Public rooms	32	1	74	3	87	4	90	4	103	5
	Bathroom/kitchen/hall only	10†	0	20	1	25	1	46	2	40	2
	Bathroom only	11†	1	17	1	19	1	93	4	90	4

^a This category refers to the presence of **either** rising or penetrating dampness, not necessarily both.

TABLE
9.2

Surveyor-assessed dampness and condensation by key dwelling characteristics

		Dampness		Condensation	
		000s	% of all dwellings with dampness	000s	% of all dwellings with condensation
Dwelling type	Detached	26	6	36	9
	Semi-detached	24	5	44	10
	Terraced	28	6	51	10
	Tenement	30	6	59	12
	4-in-a-block	13	6	27	12
	Flat in converted building	*	12	*	9
	Tower/slab	*	9	9†	16
Age of dwelling	Pre-1919	46	10	54	12
	1919–1944	25	8	39	13
	1945–1964	32	6	69	13
	1965–1974	15	4	42	12
	1975–1982	5†	3	12†	7
	1983–1990	*	2	6†	5
	1991–1997	*	2	5†	3
	Post-1997	*	2	*	2
Location	Rural	30	8	47	13
	Urban	102	6	182	10

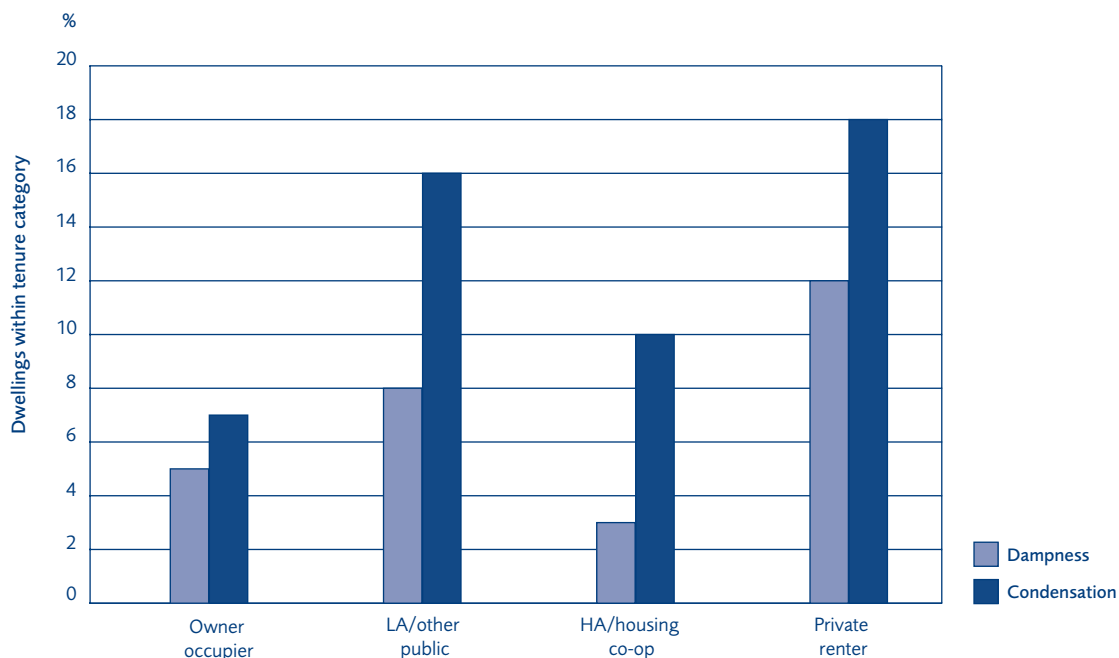
Surveyor-assessed dampness and condensation by key household characteristics

TABLE
9.3

		Dampness		Condensation	
		% of all dwellings with dampness		% of all dwellings with condensation	
		000s		000s	
Tenure	Owner occupier	64	5	103	8
	LA/other public	43	8	84	16
	HA/co-op	4†	3	13	10
	Private renter	20	12	30	18
Household type	Single adult	23	7	39	12
	Small adult	22	6	33	9
	Single parent	8†	6	19	15
	Small family	16	5	29	9
	Large family	9†	5	21	13
	Large adult	16	7	28	13
	Older smaller	17	6	27	9
	Single pensioner	21	6	33	10
Weekly household income (£)	<100	10†	8	19	16
	100–199.99	41	7	76	13
	200–299.99	30	6	55	12
	300–399.99	18	5	32	10
	400–499.99	13†	5	20	8
	500–699.99	10†	4	17	6
	Over 700	8†	5	10†	6

FIGURE
9.1

Surveyor-assessed dampness and condensation by tenure



Building construction and heating systems

Table 9.4 describes the number of dwellings affected by dampness and condensation broken down by key characteristics of the building construction and heating facilities:

- Dwellings are more likely to be affected by dampness and condensation if they have full electric central heating than if they have full gas central heating.
- Dwellings with no central heating are more likely to have dampness and condensation than those which do have either full or partial central heating.
- However, dwellings with full gas central heating are less likely to experience dampness and condensation than those with part gas or other central heating.
- Dwellings with single-glazed metal-framed windows are more likely to experience dampness than dwellings with any other type of window.

Relationship to health

As noted in the Introduction, the relationship between dampness and condensation, and respiratory health, is an important policy focus. The following section sums up the relationships between dampness, condensation and health, but it should be noted that this analysis cannot be taken to demonstrate causality. In other words, the health outcome cannot be assumed to be a direct consequence of the presence or absence of dampness and condensation. Neither the survey methodology nor the statistical analyses used here would enable such conclusions to be drawn.

Tables 9.5 and 9.6 illustrate the relationships between dampness and condensation in the home and the self-reported health status of occupiers. The main issues arising here are as follows:

- There is no relationship between household size or number of children and the presence of dampness within the household's dwelling.
- When all household members are included, there is a greater chance of at least one member having a respiratory problem if damp is present in the dwelling. However, this relationship does not hold when children only are considered.
- In contrast, when children are considered separately, there is an association between respiratory problems and there being condensation in the dwelling. This relationship does not hold when all householders are considered.
- Households where the respondent assessed his or her health as "very good" are less likely to live in dwellings with dampness and condensation than households where a less positive assessment was made.
- Households with a member in a Community Care group are more likely to live in dwellings with dampness, but not one which has condensation, than other households.
- Households with a member who suffers from long-term illness or is disabled are more likely to live in a dwelling with dampness and condensation than households in which no-one is ill or disabled.

TABLE
9.4Surveyor-assessed dampness and condensation by heating system,
window type and wall construction material

		Dampness		Condensation	
		000s	% of all dwellings with dampness	000s	% of all dwellings with dampness
Central heating and fuel type	Full gas	73	5	127	9
	Full electric	17	7	30	12
	Full other fuel	13	8	20	13
	Partial gas or other	5†	11	8†	18
	Partial electric	8†	6	20	16
	Gas fires	*	10	6†	16
	Electric heaters	7†	11	13†	20
	Other heaters	5†	27	6†	34
Window type	Full uPVC, double-glazed	64	6	109	10
	Full metal, double-glazed	5†	4	12†	10
	Full wood, double-glazed	24	4	42	8
	Full metal, single-glazed	*	13	7†	29
	Full wood, single-glazed	29	9	48	15
	Other	6†	9	12†	17
Wall type	Sandstone	38	10	45	11
	Whin/granite	10†	10	10†	10
	Brick/blockwork	72	5	150	10
	Other	5†	11	16	15

Surveyor-assessed dampness and condensation by household size

TABLE
9.5

		Dampness		Condensation	
		000s	% of all households within category	000s	% of all households within category
Number of people in household	1	44	6	72	11
	2	45	6	69	9
	3	18	5	39	11
	4	17	6	33	12
	5+	7†	6	16	13
Number of children in household	0	98	6	160	10
	1	15	5	34	12
	2	13†	5	24	10
	3+	5†	5	12†	14

Surveyor-assessed dampness and condensation by health status

TABLE
9.6

		Dampness		Condensation	
		000s	% of all dwellings with dampness	000s	% of all dwellings with condensation
Household members with respiratory problems	None	112	6	198	10
	At least one	19	8	31	13
Children with respiratory problems in household	None	127	6	221	10
	At least one	*	7	9†	16
Self-assessed health of respondent	Very good	39	5	72	9
	Good	43	6	70	11
	Fair	34	7	60	13
	Bad	12†	7	21	13
	Very bad	*	7	5†	10
Household members with a long-term illness or disability	None	77	6	137	10
	At least one	54	7	93	12
Household members in a Community Care group	None	99	6	173	10
	At least one	32	7	56	11

Dampness and condensation – householders' assessment

As noted in the Introduction, householders were also asked for their views on any problems due to dampness or condensation. The focus here is on the impact of the difficulties (such as mould growth) which may result from dampness or condensation, rather than on making an assessment of the presence of the original problem. The assessment is therefore of a subtly different issue, but a correlation between presence (as assessed by surveyors) and impact (as assessed by householders) may be expected. This is dealt with in the subsequent section, which compares the two.

Overall profile

Table 9.7 summarises the overall prevalence of dampness and condensation problems reported by householders, for any room in the dwelling:

- Overall, fewer than 6% of householders felt that their dwellings were affected by any problems relating to dampness or condensation (excluding 'steamed up windows').
- Mould on hard surfaces is the most common problem associated with dampness and condensation, affecting approximately 6% of all dwellings.
- Approximately the same number of dwellings across Scotland have wet walls as have stained walls (60,000), although only 33,000 dwellings are affected by both.

Respondents were asked to identify problems present in each room of their dwelling in turn. **Table 9.8** summarises the profile by room in which the problem was reported, showing that there is little meaningful difference between public and private rooms.

Dwelling and household characteristics

Tables 9.9 and **9.10** set out the number of dwellings with dampness and condensation problems (excluding 'steamed up windows') in any room, as reported by the respondent, in terms of key dwelling and household characteristics. These estimates suggest that:

- In general, problems such as wet or stained walls, mould, and damaged paint, have the same profile across dwelling and household types as do the presence of dampness and condensation.
- Flats in tower blocks and slabs are more likely to be affected by dampness and condensation problems, particularly staining to walls, mould on hard surfaces and damage to paint on windows, than other dwelling types.
- On the whole, older dwellings are more likely to be affected by dampness and condensation problems than those built more recently.
- Households living in local authority/other publicly rented dwellings are more likely to experience wet walls and mould on hard surfaces than households in other tenures.
- Single parents are more likely to live in dwellings with condensation and dampness problems than other household types.
- The distribution of problems according to income is similar to the distribution of income itself, ie no particular income group suffers disproportionately from problems due to dampness or condensation.

Overall prevalence of householder-assessed dampness and condensation problems

TABLE
9.7

	000s	% of all dwellings
Wet walls	91	4
Staining to walls	92	4
Mould on hard surfaces	129	6
Mould on soft furnishings	24	1
Damage to paint on windows	49	2
Other	16	1

Householder-assessed dampness and condensation problems by room

TABLE
9.8

	Wet walls		Staining to walls		Mould on hard surfaces		Mould on soft furnishings		Damage to paint on windows		Other	
	000s	% of dwellings with room	000s	% of dwellings with room	000s	% of dwellings with room	000s	% of dwellings with room	000s	% of dwellings with room	000s	% of dwellings with room
Kitchen	32	1	24	1	27	1	3†	0	15	1	*	0
Bathroom	48	2	32	1	53	2	9†	0	22	1	*	0
Main living room	12	1	20	1	18	1	5†	0	12	1	*	0
Hall	7†	0	11	1	16	1	*	0	7†	0	*	0
Any bedroom	33	2	48	2	75	3	15	1	24	1	*	0

TABLE
9.9

Householder-assessed dampness and condensation problems by key dwelling characteristics

		Wet walls		Staining to walls		Mould on hard surfaces		Mould on soft furnishings		Damage to paint on windows		Other	
		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem	
Dwelling type	Detached	9†	2	11	3	21	5	3†	1	5†	1	*	0
	Semi-detached	15	3	16	4	24	5	*	1	8†	2	*	1
	Terraced	18	4	15	3	22	4	*	1	9†	2	*	1
	Tenement	28	6	28	6	36	7	10†	2	17†	3	5	1
	4-in-a-block	16	7	15	7	21	9	5†	2	8†	3	2	1
	Flat in converted building	*	3	*	4	*	4	*	0	*	1	*	1
	Tower/slab	*	9	6†	10	7†	12	*	3	*	5	*	1
Date of construction	Pre-1919	20	5	22	5	26	6	6†	1	11†	3	4†	1
	1919–1944	19	6	19	6	27	9	4†	1	8†	3	*	1
	1945–1964	27	5	27	5	38	7	9†	2	16	3	*	1
	1965–1974	16	4	16	4	25	7	5†	1	9†	3	*	1
	1975–1982	5†	3	*	2	8†	4	*	0	*	1	*	1
	1983–1990	*	3	*	3	5†	4	*	1	*	2	*	1
	1991–1997	*	2	*	1	*	3	*	0	*	0	*	0
	Post-1997	*	1	*	1	*	1	*	0	*	1	*	0
Location	Rural	17	5	17	5	30	8	5†	2	9†	3	3†	1
	Urban	76	4	76	4	103	6	21	1	41	2	13†	1

Householder-assessed dampness and condensation problems by key household characteristics

TABLE
9.10

		Wet walls		Staining to walls		Mould on hard surfaces		Mould on soft furnishings		Damage to paint on windows		Other	
		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem	
Tenure	Owner occupier	30	2	30	2	49	4	6†	0	16	1	5†	0
	LA/other public	44	8	45	9	56	11	13	3	22	4	7†	1
	HA/co-op	6†	5	6†	5	8†	6	*	2	4†	3	*	1
	Private renter	11†	6	12†	7	16	9	*	2	7†	4	*	2
Household type	Single adult	17	5	20	6	23	7	5†	1	11†	3	4†	1
	Small adult	12	3	15	4	23	6	*	1	8†	2	*	1
	Single parent	12†	9	10†	8	13	10	4†	3	7†	6	*	1
	Small family	16	5	15	5	23	8	4†	1	8†	3	*	1
	Large family	9†	6	9†	6	15	10	*	2	5†	3	*	1
	Large adult	9†	4	9†	4	14	6	*	1	5†	2	*	1
	Older smaller	7†	2	7†	2	11†	3	*	1	*	1	*	0
	Single pensioner	9†	3	8†	2	7†	2	*	0	*	1	*	0
Weekly household income (£)	<100	5†	4	5†	4	7†	6	*	1	*	2	*	1
	100–199.99	27	5	29	5	34	6	8†	1	14	2	5†	1
	200–299.99	24	5	23	5	33	7	7†	2	15	3	*	1
	300–399.99	16	5	15	5	22	7	3†	1	8†	3	*	1
	400–499.99	9†	4	7†	3	14	6	*	1	4†	2	*	1
	500–699.99	6†	2	7†	3	11	4	*	0	4†	2	*	0
	Over 700	4†	2	5†	3	8†	5	*	1	*	1	*	1

Building construction and heating systems

Table 9.11 shows the number of dwellings affected by dampness and condensation problems according to heating system, window type and wall construction material:

- Dwellings with double glazing are less likely to have problems associated with dampness and condensation than those with single glazing.
- Wall construction type has no impact on dampness and condensation problems.

Relationship to health

Tables 9.12 and **9.13** show the relationships between dampness and condensation problems and household size and health respectively. **Figure 9.2** further illustrates the relationship between the self-assessed health status of the survey respondent and dampness and condensation problems. Again, it must be emphasised that these relationships do not prove a causative link exists.

- Mould on hard surfaces, and wet walls, are both more likely to be found in larger households.
- Households with at least one person who suffers from respiratory problems are more likely to live in dwellings with mould on hard surfaces and wet walls than other households.
- Children with respiratory problems are more likely to live in dwellings with all specified problems associated with dampness and condensation than children who do not.
- Overall, there is a clear correlation between poor self-assessed health and the existence of dampness and condensation problems within a dwelling.

Householder-assessed dampness and condensation problems by heating system,
window type and wall construction materialTABLE
9.11

		Wet walls		Staining to walls		Mould on hard surfaces		Mould on soft furnishings		Damage to paint on windows		Other	
		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem	
Central heating and fuel type	Full gas	49	3	49	3	68	5	10†	1	26	2	8†	1
	Full electric	16	6	17	7	24	10	6†	2	9†	4	4†	1
	Full other fuel	7†	5	7†	4	12	7	*	1	3	2	*	1
	Part gas or other	*	5	*	6	*	7	*	2	*	5	*	1
	Part electric	9†	7	9†	7	14	11	*	3	4†	3	*	1
	Gas fires	*	7	*	5	*	7	*	2	*	3	*	1
	Electric heaters	*	8	*	6	7†	11	*	5	*	5	*	2
	Other heaters	*	12	*	11	*	16	*	4	*	6	*	1
Window type	Full uPVC, double-glazed	44	4	48	4	70	7	15	1	23	2	8†	1
	Full metal, double-glazed	*	4	*	3	6†	5	*	1	*	2	*	0
	Full wood, double-glazed	18	3	16	3	29	5	4†	1	8†	1	*	1
	Full metal, single-glazed	*	11	*	9	*	6	*	2	*	7	*	2
	Full wood, single-glazed	18	6	20	6	20	6	5†	2	13†	4	*	1
	Other	5†	7	*	5	6†	9	*	1	*	3	*	2
Wall material	Sandstone	18	5	20	5	23	6	5†	1	9†	2	*	1
	Whin/granite	5†	5	5†	5	8†	8	*	1	*	3	*	1
	Brick/blockwork	62	4	60	4	90	6	17	1	34	2	11†	1
	Other	8	1	8†	1	11†	1	*	0	5†	1	*	0

FIGURE 9.2 Dampness and condensation problems by self-assessed health of respondent

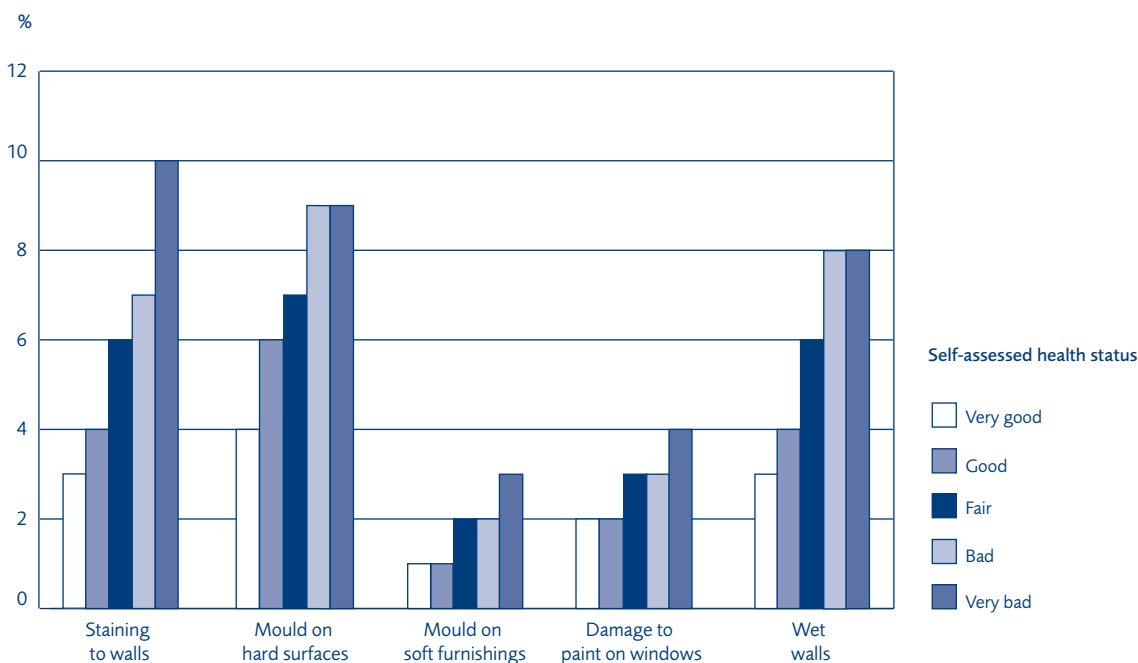


TABLE 9.12 Householder-assessed dampness and condensation problems by household size

		Wet walls		Staining to walls		Mould on hard surfaces		Mould on soft furnishings		Damage to paint on windows		Other	
		% of dwellings with 000s problem	% of dwellings with 000s problem	% of dwellings with 000s problem	% of dwellings with 000s problem	% of dwellings with 000s problem	% of dwellings with 000s problem	% of dwellings with 000s problem	% of dwellings with 000s problem				
Number of people in household	1	25	4	28	4	31	5	6+	1	14	2	5+	1
	2	26	4	27	4	40	5	8+	1	13	2	4+	1
	3	17	5	16	5	24	7	5+	2	10+	3	*	1
	4	15	5	15	5	22	8	*	1	8+	3	*	1
	5+	8+	5	7+	5	13	11	*	2	5+	4	*	0
Number of children in household	0	53	3	58	4	78	5	14	1	28	2	11+	1
	1	19	7	15	6	23	8	5+	2	8+	3	*	1
	2	12	5	13	5	19	8	*	1	8+	4	*	1
	3+	7+	8	6+	7	10+	11	*	3	*	4	*	0

Householder-assessed dampness and condensation problems by health status

TABLE
9.13

		Wet walls		Staining to walls		Mould on hard surfaces		Mould on soft furnishings		Damage to paint on windows		Other	
		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem		% of dwellings with 000s problem	
Household members with respiratory problems	None	69	4	70	4	102	5	18	1	37	2	12	1
	At least one	22	9	22	9	27	11	7†	3	12	5	4	2
Children with respiratory problems in household	None	85	4	85	4	121	6	22	1	44	2	15	1
	At least one	7†	14	7†	14	9†	16	*	5	5†	10	*	1
Self-assessed health of respondent	Very good	24	3	24	3	37	4	5†	1	14	2	5†	1
	Good	25	4	25	4	39	6	6†	1	14	2	5†	1
	Fair	26	6	26	6	34	7	8†	2	14	3	4†	1
	Bad	12	8	12	7	14	9	*	2	5†	3	*	1
	Very bad	5†	8	5†	10	4†	9	*	3	*	4	*	1
Household members with a long-term illness or disability	None	48	3	48	3	71	5	12	1	27	2	10†	1
	At least one	44	6	44	6	59	8	12	2	22	3	6†	1
Household members in a Community Care group	None	70	4	70	4	96	6	18	1	39	2	13	1
	At least one	23	5	23	5	33	7	7†	1	10†	2	*	1

Comparison of surveyor and householder assessments

Surveyors were required to assess the severity of dampness and condensation using a seven-point scale based on the percentage of each room which was affected. However, the severity of problems caused by dampness and condensation, according to the householder, was assessed simply by asking them whether or not they had each problem, taking each room of the home in turn. **Table 9.14** summarises the results of the two types of assessment, which should be interpreted in recognition of the fact that surveyors and householders were judging the extent and the effect respectively of any dampness and condensation present.

- Surveyors are more likely to report that there is damp and/or condensation in a dwelling than householders are to report the existence of associated problems in the dwelling.
- Where householders do state there is a problem within their dwelling, their assessments tend to indicate that the problems are more serious than do the surveyors' judgments. This is perhaps expected in the light of the focus in this part of the survey on the impact of the problem, and given that the householder's assessment is assumed to take account of a longer period than simply the day the survey takes place.

Figure 9.4 illustrates the relationship between surveyors' and householders' assessments for cases where both identified some sort of dampness/condensation problem. This indicates a general positive correlation between surveyors' assessments of the existence of dampness and condensation, and the seriousness of problems reported by the householders. Reports of 'damage to paint' and 'wet walls' stand out as exceptions to this trend however, as they are associated with an assessment by surveyors of relatively low prevalence of dampness and condensation.

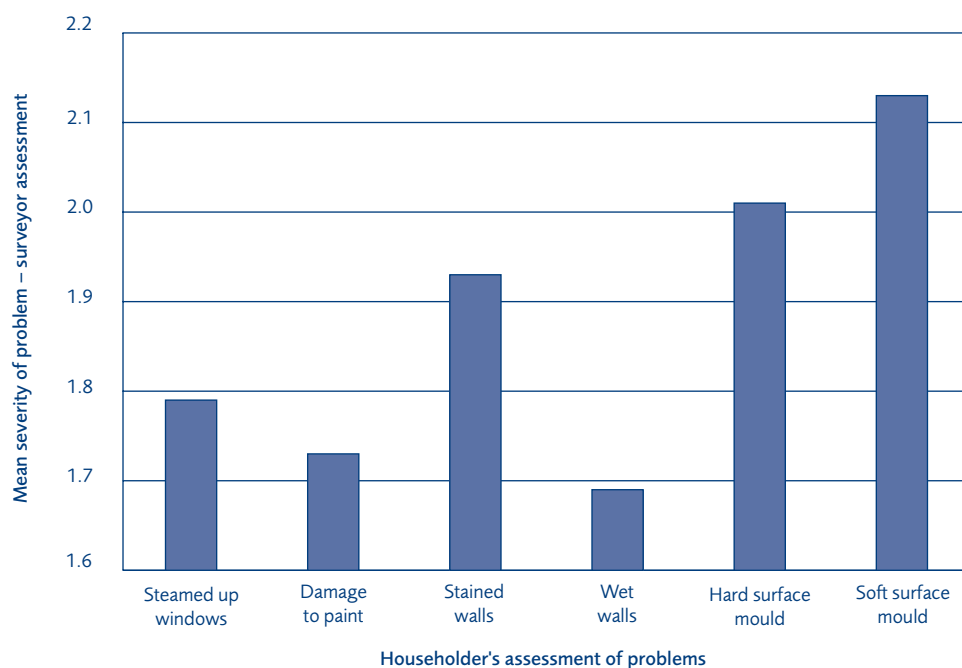
Comparison of surveyors' and householders' assessments

TABLE
9.14

		Surveyors' assessments		Total 000s
		No problems 000s	Problems 000s	
Householders' assessments	No problems (000s)	135	76	210
	Problems (000s)	40	42	83
Total		175	118	293

Relationship between surveyors' and householders' assessments

FIGURE
9.4



ⁱ For a summary of such studies, see Wilkinson, D (1999), 'Poor housing and ill health: a summary of research evidence', Scottish Office Central Research Unit.

The work done to dwellings by householders and landlords is crucial to the maintenance and improvement of the housing stock. This chapter explores the work carried out on Scotland's homes, what it costs and how it is funded.

10

Introduction

Householders and/or landlords may choose to carry out a range of repair, maintenance and improvement works on their homes.

Respondents were asked a number of questions about work they had done to their home. In order to standardise the information gathered, detailed questions were only asked about the work conducted during the twelve months prior to fieldwork. The interview covered the following areas:

- The number of jobs completed in the previous five years.
- The number of jobs completed in the year prior to survey.
- The number of those which were paid for by the household.
- Methods of payment.
- Cost of work.
- Nature of work (necessary or discretionary).
- Whether or not the household received a grant to assist with payment.
- Total amount spent on dwelling in year prior to survey (work and any decorative outlays).

This approach means that full data on all the above questions is only available for those households who themselves paid for any work done to their dwelling. If they did not pay for the work they could not be asked the subsequent questions on payment methods, nature of the work, grants and costs.

Additionally, respondents who had completed multiple jobs to their home were asked whether or not these jobs were done as one package. If so, only a total cost for all the work combined was obtained, which means it was not possible to determine the individual costs of all jobs.

The choice of work done was constrained to enable comparisons to be made. Respondents were asked to select from a list of 35 pre-defined jobs and indicate which, if any, they had done to their dwelling in the year prior to survey. Individual jobs were grouped into six discrete categories (see **Box** for details).

General building work includes: building conservatory, porch, or extension; converting loft, attic or garage; completely refitting kitchen; completely refurbishing existing bathroom; providing additional bathroom or WC; work to foundations or structural work to walls or roof; any work to damp-proof course and the replacement of drives or paths.

Work inside the house includes: completely rewiring the dwelling; any work to stairs or staircase; re-plastering at least one wall or ceiling; replacing/repairing floor boards or joists and timber treatment (for dry/wet rot, woodworm).

Heating/insulation includes: installing complete central heating system (including electrical central heating system) or storage heaters; installing/replacing gas fire(s) or heater(s) or solid fuel fire(s); replacing central heating systems; servicing heating; installing or improving loft insulation and installing wall insulation.

Work outside the house includes: replacing a large area of roof covering (at least 6ft x 6ft or 2m x 2m); replacing flat roof with pitched roof; re-building or re-pointing chimney stack; replacing gutters or down pipes; repairing or replacing rendering or harling on walls; replacing external timber with uPVC and replacing mains water connection.

Other work to flats includes: installing entry phone system; basic repairs to corridors, stairway or main entrance; installing or replacing fire alarm and removing one or more storeys or demolishing part of block.

Work done to dwellings

Overview

Tables 10.1 and **10.2** summarise the total work carried out by households and the nature of that work, showing that:

- Approximately one million households (48%) carried out work to their dwellings in the 12 months prior to the survey. This is a reduction of 10% from the SHCS 1996 figure.
- Around 2.2 million jobs were done over the same time period.
- The most frequent work done by households was the servicing of the central heating system. This was completed by 17% of all households.
- Although almost 2.2 million jobs were carried out, households themselves paid for only 1.5 million of those. The majority of the remainder are likely to have been carried out by landlords.

Types of work undertaken

Table 10.3 summarises the breakdown of work done to dwellings in terms of the six categories of job defined by the survey. This indicates that:

- Heating and insulation work is the most commonly undertaken, with 28% of households having carried out this type of work.
- The next most common type of work undertaken was general building works, done by 23% of households.

The number of jobs undertaken by households is summarised in **Table 10.4**.

- Just over half the households which undertake work did only one job (55%).
- Of the remainder, three quarters did just two or three jobs.

TABLE
10.1

Households doing work to dwellings

	000s	%
Did work to dwelling	1,058	48
Did not do work to dwelling	1,134	52

Types of job done by households

TABLE
10.2

	Jobs done in preceding five years (000s)	Jobs done in preceding 12 months (000s)	% of all jobs ^a	% of all households ^a	Jobs paid for in preceding 12 months (000s)	% of all households paying for work
Conservatory/porch/extension	123	33	2	2	30	1
Convert loft, attic or garage	72	17	1	1	16	1
Completely refit kitchen	491	141	6	6	111	5
Refurbish existing bathroom	412	131	6	6	107	5
Additional bathroom/WC	104	27	1	1	21	1
Foundations/structural work to walls/roof	194	57	3	3	36	2
Damp-proof course	92	25	1	1	14	1
Replace drives/paths	257	77	4	4	66	3
Rewire dwelling	140	28	1	1	16	1
Work to stairs	130	39	2	2	29	1
Re-plaster wall/ceiling	361	146	7	7	115	5
Replace/repair floor joists/boards	170	64	3	3	48	2
Timber treatment	95	23	1	1	17	1
Paint outside windows	443	162	7	7	128	6
Replace single-glazed windows	57	11	1	1	6†	0
Replace double-glazed windows	517	120	6	6	75	3
Replace door with uPVC or hardwood door	332	85	4	4	58	3
Replace door with similar type	205	61	3	3	41	2
Install central heating	214	47	2	2	29	1
Install gas fire	210	56	3	3	42	2
Replace central heating	232	59	3	3	36	2
Service heating	584	373	17	17	243	11
Install loft insulation	199	46	2	2	26	1
Install wall insulation	96	23	1	1	9†	0
Replace area of roof	126	40	2	2	29	1
Replace flat with pitched roof	31	7†	0	0	5†	0
Re-build/point chimney	116	35	2	2	28	1
Replace gutters/down pipes	240	86	4	4	62	3

^a The percentages in these columns are based on the total of jobs done in the preceding 12 months.

continued overleaf

WORK DONE

TABLE
10.2
continued

Types of job done by households (continued)

	Jobs done in preceding five years (000s)	Jobs done in preceding 12 months (000s)	% of all jobs	% of all households	Jobs paid for in preceding year (000s)	% of all households paying for work
Repair rendering on walls	108	36	2	2	24	1
Replace external timber with uPVC	56	14	1	1	12	1
Replace mains water connection	47	13	1	1	6†	0
Install entry phone	45	15	1	1	*	0
Repairs to entrance	64	30	1	1	16	1
Install fire alarm	103	32	1	1	13	1
Demolish part of block	4†	*	0	0	*	0
Total		2,200			1,500	

TABLE
10.3

Work done by grouped category of job

Category	000s	% of all households
General building work	508	23
Work inside the house	299	14
External windows and doors	439	20
Heating and insulation	603	28
Work outside the house	231	11
Other work to flats	76	3

Number of jobs done by households

TABLE
10.4

	000s	% of all households
1 job	587	55
2-3 jobs	346	33
4-5 jobs	75	7
More than 5 jobs	51	5

Characteristics of households undertaking work

Tables 10.5 and 10.6 summarise the work done by households in terms of household and dwelling characteristics respectively. They indicate that:

- Just over 50% of owner-occupied households carried out work or had work done to their dwelling; this compares to only 32% of those households who are renting privately.
- Single pensioner households are least likely to carry out work to their dwellings while small families are most likely to do so.
- With the exception of dwellings constructed after 1997, around 50% of dwellings in all age categories had work done to them in the year prior to survey.
- With the exceptions of tenements and tower/slabs around 50% of dwellings in all categories had work done to them. This falls to 40% for tenements and 35% for tower/slabs.

The six categories of work type can also be looked at by tenure and household type, as shown in Table 10.7, which indicates that:

- Owner occupiers are more likely than other tenure types to do most types of work. Just over 20% of owner-occupied households had done general building work in the year prior to the survey while a quarter did heating and insulation work in the same period.
- By contrast only 9% of privately renting households undertook general building work whilst 15% did work on their heating and insulation.

TABLE
10.5

Work done by household characteristics

		000s	% in category
Tenure	Owner occupier	712	52
	LA/other public	241	46
	HA/co-op	50	39
	Private renter	56	32
Household type	Single adult	146	43
	Small adult	199	53
	Single parent	63	48
	Small family	180	58
	Large family	89	56
	Large adult	116	52
	Older smaller	143	46
	Single pensioner	121	36

TABLE
10.6

Work done by dwelling characteristics

		000s	% in category
Age of dwelling	Pre-1919	224	50
	1919-1944	160	51
	1945-1964	252	48
	1965-1974	176	48
	1975-1982	95	51
	1983-1990	70	53
	1991-1997	65	48
	Post-1997	29	34
Dwelling type	Detached	231	56
	Semi-detached	243	53
	Terraced	247	50
	Tenement	198	40
	4-in-a-block	113	49
	Flat in converted building	18	47
	Tower/slab	21	35

Types of work done by household characteristics

TABLE
10.7

		General building work		Work inside the house		External windows and doors		Heating and insulation		Work outside the dwelling		Other work to flats	
		000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Tenure	Owner occupier	284	21	156	11	255	19	347	25	134	10	31	2
	LA/other public	57	11	42	8	75	14	123	24	28	5	24	5
	HA/co-op	14	11	8†	6	13	11	29	23	4†	3	6†	4
	Private renter	16	9	11†	6	18	11	26	15	10†	6	7†	4
Household type	Single adult	48	13	31	9	48	14	73	22	24	7	18	5
	Small adult	78	21	47	13	67	18	99	26	36	10	14	4
	Single parent	18	14	15	12	19	14	35	27	8†	6	6†	4
	Small family	75	24	52	17	63	20	91	30	29	9	10†	3
	Large family	37	23	22	14	32	20	46	29	16	10	*	2
	Large adult	45	20	25	11	40	18	53	24	20	9	5†	2
	Older smaller	41	13	13	4	50	16	71	23	28	9	4†	1
	Single pensioner	30	9	13	4	42	12	56	17	17	5	8†	2

Necessary and discretionary work

Work done to any dwelling can fall into two broad categories: that which is necessary to maintain the dwelling and that which is undertaken to improve it. In order to further explore the nature of work carried out by households or landlords, survey respondents were asked to classify jobs as either a repair or an improvement. This information was only gathered for the 1.5 million jobs for which households paid for the work, as noted in the Introduction.

Table 10.8 summarises the division of work into necessary and discretionary:

- Around 1.2 million individual jobs were carried out and paid for by households in the year prior to survey. Of these 471,000 (39%) were classified as repairs by respondents while 736,000 (61%) were classified as improvements.
- The remaining 317,000 jobs had been paid for as part of broader work and so no individual assessment of whether or not they were repairs or improvements could be carried out.

Tables 10.9 and **10.10** summarise this information on repairs and improvements by tenure and household type respectively. They show that:

- Homeholders in all tenure groups, apart from those renting from a housing association/co-op, tended to classify their works as improvements rather than repairs.
- 325,000 owner occupiers classified a job as a repair whilst 440,000 conducted improvements. In total, 96% of all repairs and 94% of all improvements were carried out by owner occupiers.
- Small family households were most likely to have carried out both repairs and improvements to their dwelling, although there is little difference between this group and small and large adult households in terms of the number of repairs and improvements carried out.
- Single parent and single pensioner households were least likely to carry out repairs. Just over a fifth of repairs and improvements were carried out by small adult households whilst only 3% of both were conducted by single parent households.

Total necessary and discretionary work

TABLE
10.8

	000s	%
Repairs	471	39
Improvements	736	61

Repairs and improvements by tenure

TABLE
10.9

		Owner occupier		LA/other public		HA/co-op		Private renter	
		000s	%	000s	%	000s	%	000s	%
Column %	Repair	325	24	4†	1	*	1	7†	4
	Improvement	440	32	18	4	*	1	8†	5
Row %	Repair	96		1		0		2	
	Improvement	94		4		0		2	

Repairs and improvements by household type

TABLE
10.10

		Single adult		Small adult		Single parent		Small family		Large family		Large adult		Older smaller		Single pensioner	
		000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Column %	Repair	42	12	72	19	11†	8	66	21	28	18	40	18	51	16	27	8
	Improvement	49	14	104	28	14	10	94	31	43	27	64	29	66	21	34	10
Row %	Repair	12		21		3		20		8		12		15		8	
	Improvement	11		22		3		20		9		14		14		7	

Expenditure on work

Overview

As noted at the beginning of this chapter, households paid for just over 1.5 million jobs in the year prior to survey. Just over 300,000 of these jobs were conducted and paid for as part of broader works, meaning that payment details are only available for the total group rather than each individual job.

Given that households also tend to spend money on items such as decoration, respondents were asked to outline the total amount they had spent on their dwelling in the year prior to survey (ie also including work not covered in the repair and improvement categories). **Table 10.11** illustrates the amount spent on repairs and the total amount spent by households in terms of type of work:

- Households spent just over £3.3 billion on work to their dwellings, with the average (median) expenditure being approximately £220 per dwelling. £1.9 billion of this was spent on repairs and improvements. We can surmise therefore that the remaining £1.4 billion had been spent on decoration and other work.
- Despite heating and insulation work being most prevalent the biggest expenditure came on general building work. Given the nature of these jobs (such as building conservatories, re-fitting kitchens, and work to foundations) it is to be expected that they will have both a higher total and a higher average cost.

Characteristics of households paying for work

Tables 10.12 and **10.13** summarise spending patterns by key household and dwelling characteristics. The main points to emerge are:

- Owner occupiers are more likely than renters to have work done, and tend to have more expensive work done.
- There are clear differences in total spending in terms of household income. In general those with higher incomes spent both more in total and on average than lower income households.
- A disproportionate amount was spent on dwellings constructed before 1919. Despite comprising 20% of the stock, almost 30% of spending on dwellings is to the oldest buildings. Since there is no difference in the amount of work conducted in terms of age of dwelling, it may be inferred that repairs to the older stock tend to be more expensive.
- Similarly, a disproportionate amount of spending was done to detached dwellings. These constitute less than 20% of the overall stock yet a third of spending was on work done to this type.

Amount spent by type of work done

TABLE
10.11

Type of work	Dwellings that had work done (000s)	Total cost (£m)	Average (median) ⁱ cost (£)
General building work	234	796	2000
Work inside the house	105	71	250
External windows and doors	197	211	300
Heating and insulation	263	172	120
Work outside the house	84	81	350
Other work to flats	22	6	60
Job group costs	76	611	3,500
Total spend on work done		1,944	960
Total spend on dwellings		3,300	220 ⁱⁱ

Amount spent by household characteristics

TABLE
10.12

		Households that did work (000s)	Total spend (£m)	% of total spend	Average (median) spend (£) ⁱⁱⁱ
Tenure	Owner occupier	1,367	2,983	90	500
	LA/other public	525	237	7	100
	HA/co-op	127	58	2	80
	Private renter	173	48	1	0
Household type	Single adult	342	369	11	150
	Small adult	376	701	21	500
	Single parent	131	135	4	250
	Small family	309	752	23	600
	Large family	158	420	13	520
	Large adult	224	392	12	450
	Older smaller	312	364	11	200
	Single pensioner	340	192	6	0
Weekly household income (£)	< 100	121	88	3	0
	100–199.99	574	365	11	50
	200–299.99	467	473	14	200
	300–399.99	332	468	14	300
	400–499.99	245	508	15	500
	500–699.99	271	722	22	1,000
	Over 700	168	691	21	1,000

TABLE
10.13

Amount spent by dwelling characteristics

		000s ^a	Total spend (£m)	% of total spend	(Median) ^{iv} spend (£)
Age of dwelling	Pre-1919	446	958	29	300
	1919–1944	311	504	15	250
	1945–1964	531	597	18	200
	1965–1997	819	1,175	35	300
	Post-1997	86	109	3	200
Type of dwelling	Detached	412	1,098	33	500
	Semi-detached	459	833	25	400
	Terraced	495	668	20	300
	Tenement	497	403	12	100
	4-in-a-block	231	222	7	200
	Flat in converted building	38	93	3	250
	Tower/slab	60	26	1	20

^a As this question is asked of every respondent regardless of whether or not they stated they had done work, the base totals for these estimates are the total number of dwellings in each category.

Sources of finance for work

Overview

Respondents were also asked about how the household had paid for any work done to the dwelling. The responses are summarised in **Tables 10.14** and **10.15**, which show that:

- The most popular method of financing work to dwellings was through the use of savings – taken together with day-to-day expenditure these accounted for almost 90% of payments.
- There are differences between different tenure groups and household types in how works are financed. Owner occupiers and public renters are more likely to use savings to fund work, while those renting from a housing association/co-op or private landlord are more likely to rely on day-to-day expenditure.
- Using savings is the most popular form of funding work across all household types with single pensioner households being the most reliant on this method and the least likely to use day-to-day expenditure.

Grants for work done

It is possible for households to receive grants from local authorities to assist with repairs and improvements to their dwelling. These grants may often enable households to do work which they would otherwise not have been able to finance. With this in mind respondents were specifically asked if they received a grant towards the total costs. **Tables 10.16** and **10.17** summarise the responses:

- Approximately 20,000 jobs were covered by a grant.
- In total respondents indicated that just over £34 million had been given to assist payments for repairs and improvements to dwellings. Of those households that received grants, most received £200. The average (median) amount of grant per household given was £1500⁰.
- Of the 20,000 grant-funded jobs, approximately 8,000 would not have been completed without a grant.

TABLE 10.14 Methods of paying for work

Method	000s	% of households doing work
Day-to-day expenditure	513	40
Insurance	24	2
Loan	55	4
Increased mortgage	29	2
New mortgage	7†	1
Savings	623	48
Other	43	3

TABLE 10.15 Payment methods by household characteristics

		Day-to-day expenditure		Insurance		Loan		Increased mortgage		New mortgage		Savings		Other	
		000s	%	000s	%	000s	%	000s	%	000s	%	000s	%	000s	%
Tenure	Owner occupier	490	72	23	3	52	8	29	4	7†	1	597	88	38	6
	LA/other public	10†	45	*	0	*	9	n/a	n/a	17	74	*	11		
	HA/co-op	*	85	*	0	*	21	n/a	n/a	*	44	*	14		
	Private renter	10†	77	*	6	*	0	n/a	n/a	8†	62	*	12		
Household type	Single adult	62	76	*	4	6†	7	*	3	*	1	72	88	8†	10
	Small adult	127	82	4†	3	11†	7	6†	4	*	0	138	88	7†	5
	Single parent	13†	59	*	7	*	11	*	6	*	1	16†	70	*	12
	Small family	110	79	7†	5	17	12	8†	6	*	2	126	91	8†	6
	Large family	47	74	*	2	8†	13	7†	12	*	2	54	85	4†	6
	Large adult	66	71	*	3	8†	8	*	2	*	2	76	83	*	4
	Older smaller	63	59	*	2	*	1	*	1	*	0	91	85	4†	4
	Single pensioner	24	41	*	4	*	3	*	1	*	0	50	86	4†	6

Grants received for work done

TABLE
10.16

	000s ^a	%
Grant funded	20	2
Not grant funded	1,273	99

^aThis refers to the number of jobs, not the number of households.

Households which would have done work without grant

TABLE
10.17

	000s	%
Yes	12	61
No	8	40

Work done by landlords

It is not only households who carry out work to dwellings: landlords (be they private individuals, housing associations, local authorities or other bodies) also undertake work in order to repair, maintain and modernise their properties. The data gathered from the SHCS allows us to estimate the number and nature of work carried out by landlords in the year prior to survey^{vi}. **Table 10.18** outlines the five most prevalent jobs carried out by different landlord types:

- Servicing the central heating is the most prevalent job across all landlords. The only other job which all types of landlord had carried out in the year prior to survey was the replacement of double-glazed windows.
- The nature of jobs carried out by landlords does suggest that most are not carrying out major repairs to the exterior of dwellings, but are instead carrying out internal modernisation and patch repairs/maintenance.

TABLE
10.18

Work carried out by landlords (most prevalent across landlords)

Landlords	Type of work done	000s	% of total in category
LA/other public	Service heating	73	14
	Replace double-glazed windows	31	6
	Replace door with uPVC or hardwood	21	4
	Re-plaster wall/ceiling	16	3
	Replace central heating	16	3
HA/co-op	Service heating	20	16
	Completely refit kitchen	7†	6
	Paint outside windows	7†	6
	Replace double-glazed windows	4†	3
Private	Service heating	17	10
	Paint outside windows	5†	3
	Foundations/structural work to walls/roof	5†	3
	Refurbish existing bathroom	3†	3
	Replace double-glazed windows	5†	3

-
- ⁱ This is the median of costs for dwellings that had work done. Median for all dwellings = 0.
 - ⁱⁱ The median is larger for repairs because it is based on a smaller sample. Total expenditure on dwelling is asked of all households regardless of whether or not they had work done to their dwelling. The median for expenditure on repairs only is based on those households who carried out work and also knew the cost of doing so. It is further limited by the fact that some households did work but indicated the cost to be zero, perhaps because they had done the work themselves and did not include the cost of materials in the total they stated.
 - ⁱⁱⁱ See endnote i.
 - ^{iv} See endnote i.
 - ^v Some respondents did not know the total amount of their grant. These figures are based on the 13,657 respondents (weighted) who could report the total amount of their grant.
 - ^{vi} This information has been derived by estimating the number of renters who had had work done to their dwelling but did not pay for any of the jobs. Consequently it is likely to underestimate the total numbers of landlord works as some tenants will carry out and pay for work to their dwellings themselves.

ATTENTION

Revisions to Chapter 11: Energy Efficiency and Fuel Poverty

A post-publication error has been found in the calculation of the National Home Energy Rating (NHER). **Please do not use any of the figures originally published on pages 190-219 of this report.** This section is currently being revised in full. Replacement figures will be released in the near future. In the meantime, the revised headline figures (confirmed by independent external validation) are as shown below:

Median NHER of whole stock – 6*

Number of households in fuel poverty (2002 definition) – 286,000

Number of households in fuel poverty (1996 definition) – 201,000

* Note that as the NHER distribution is now non-normal, the mean cannot be used. A full explanation of this change will be published with the detailed breakdown of estimates.

If you have a query about these headline estimates please contact the HCS Team.

Email: shcs@communities.scot.nhs.uk

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March 2004

These Technical Annexes are intended to help readers interpret the information collected in the preceding pages. They summarise key aspects of the methodology and explain the statistical techniques which were used to generate the survey estimates.

Contents

- 1 Glossary
- 2 Development, fieldwork and quality control
- 3 Sampling, response and weighting
- 4 Sampling error
- 5 Sample bases
- 6 Repair costs
- 7 Tolerable Standard
- 8 Measuring energy efficiency and calculating NHER
- 9 Financial data



Glossary

Adult

Any adult aged 18 or over, and any individual aged 16–18 who is not in full-time education.

Age of dwelling

The date of construction of the oldest part of the dwelling.

Barrier Free

Barrier Free housing is defined as 'dwellings and their environments that are designed to allow for the needs of people who have mobility, agility or sensory impairment'.

Common access

A structure with common access is a building where two or more flats or maisonettes share either a common entrance with or without stair access, or an external staircase, whether or not there is a flat (or flats) with its own entrance door elsewhere in the same block. The sharing of footpaths and external steps at ground level is excluded from this assessment.

Common block

A group of dwellings with a shared access to two or more dwellings under the same roof and where the cost of repairs to common parts may be apportioned on a dwelling basis. This should include mixed uses under the same roof, such as shops or offices, where a similar proportion of costs applies. For the purposes of this survey, surveyors determined the common block (which must include the selected dwelling) on the basis of the smallest repeating unit served by one common stair or close.

CAPI

Stands for Computer Assisted Personal Interviewing. This means that the interviewer entered the respondent's answers directly into a program running on a portable computer terminal, rather than referring to a paper script.

Community Care groups

For the purpose of the SHCS 2002 Community Care groups were identified. The figures refer to the number of households containing someone in each group.

- **Frail elderly**
Households containing someone over the age of 75 who has a long-term illness or disability.
- **Mental health problems**
Households containing someone with a mental health problem.
- **Physical disability**
Households containing someone with a mobility problem or other physical impairment.
- **Learning difficulties**
Households containing someone with a learning difficulty.

Dependent child

Any child under 16 and/or any son or daughter under 18 in full-time education.

Dwelling

A dwelling is a self-contained unit of accommodation. This generally means it will be structurally separate behind its own front door, with the occupant(s) able to get in and out without passing through anyone else's living quarters. Flats in purpose-built pre-1919 tenement blocks with shared facilities in the close are regarded as single dwellings for the purposes of this survey.

Employment status

Respondents were asked to select which of the following categories best described the current position of each member of the household.

- 1 Self-employed
- 2 Employed full-time (30 hours or more)
- 3 Employed part time
- 4 Looking after the home or family
- 5 Permanently retired from work
- 6 Unemployed and seeking work
- 7 At school
- 8 In further education/college
- 9 In higher education/university
- 10 Government work or training scheme
- 11 Permanently sick or disabled
- 12 Unable to work because of short-term illness or injury
- 13 Pre-school

Ethnic origin

The classification used was the one employed by the 2001 Census of Population and identified respondents as:

- A Scottish
- B Other British
- C Irish
- D Any other white background
- E Any mixed background
- F Indian
- G Pakistani
- H Bangladeshi
- I Chinese
- J Any other Asian background
- K Caribbean
- L African
- M Any other black background
- N Any other background

Due to the small sizes of the subsamples the detailed classification has been aggregated into two broad categories, namely 'white' and 'non-white'.

Household

One person living alone or a group of people who have the address as their only or main residence and who either share one meal a day, share a living room or share substantial amount of domestic arrangements (eg food, shopping).

Householder

A householder is anyone who:

- a owns the property (has his/her name on the deeds); or
- b rents the property (has his/her name on the rent book); or
- c is resident in the accommodation by virtue of their relationship to the owner (in cases where the owner or lessee was not a resident member of the household).

The Highest Income Householder (HIH) or his or her partner was the interviewee for the SHCS social survey. If householders had exactly the same income, the older was selected.

Household type

Households were allocated to one of the eight types as follows:

Single pensioner	1 adult of pensionable age and no children
Single parent	1 adult of any age and 1 or more children
Single adult	1 adult of non-pensionable age and no children
Older smaller	2 adults of pensionable age and no children
Large adult	3 or more adults and no children
Small adult	2 adults of non-pensionable age and no children
Large family	2 adults and 3 or more children, or 3 or more adults and 1 or more children
Small family	2 adults and 1 or 2 children

Income

The weekly net income received by the HIH and spouse/partner (where relevant) received from wages and salaries, from benefit payments and from other sources such as non-state pensions, alimony or maintenance payments.

Location

The following classification was used in the analysis:

Urban	A dwelling located in a parish with a population density of one or more persons per hectare.
Rural	A dwelling located in a parish with a population density of less than one person per hectare.

This was also the definition used in the SHCS 1996.

Long-term illness

Respondents were asked the same question as used in the 2001 Census: 'Does anyone in your household have any long-standing health problem or disability that affects how you live your life over an extended period of time, or that is likely to affect you over an extended period of time?'

Mobility problems

If any household member suffered from a long-term illness, a further question was asked as to whether his or her mobility was affected by the illness. The interview then determined which member of the household faced the greatest difficulty in mobility.

Public rented sector

All dwellings owned by local authorities, Scottish Homes or another public body.

Room

A room is the basic survey unit for the interior of the dwelling. The physical inspection was confined to habitable rooms. Habitable rooms provide the living accommodation of the dwelling. They include living rooms, dining rooms, bedrooms, playrooms or studies, kitchens (whether or not in current use) and/or a scullery, if it is used for cooking. Dual purpose rooms such as a living room with an open plan stairwell are also included.

Rooms divided by curtains or portable screens count as a single room, but rooms divided by double doors or a fixed/sliding partition count as two. Similarly, if an extension has been built onto an existing room then the space created is a single room.

The following are not defined as habitable rooms within the SHCS 2002:

- Bathrooms, toilets and closets.
- Stairs, halls, landings or other circulation spaces.
- Utility rooms and store rooms.
- Attic or basement spaces which are basically storerooms but may have been used occasionally as habitable accommodation.
- Conservatories (whether heated or not).
- 'Rooms' in outbuildings which are attached to the dwelling but are only accessed from the outside of the building.

Social rented sector

All dwellings in the public rented sector and all dwellings owned by housing associations or co-operatives.

National Statistics Socio-Economic Classification (NS-SEC)

The NS-SEC is an occupationally based classification covering details of employment status (whether an employer, self-employed or employee; whether a supervisor; and number of employees at the workplace). It uses the following Analytical Classes:

- 1 Higher managerial and professional occupations
 - large employers and higher managerial occupations
 - higher professional occupations
- 2 Lower managerial and professional occupations
- 3 Intermediate occupations
- 4 Small employers and own account workers
- 5 Lower supervisory and technical occupations
- 6 Semi-routine occupations
- 7 Routine occupations
- 8 Never worked and long-term unemployed

Tenure

The nature of a person's occupation of the dwelling. Four categories are used for most reporting purposes:

- Owner-occupied
- Public rented
- Housing association/co-operative
- Private rented

Owners are subdivided, for some purposes, into the following categories: outright owners and owners paying a mortgage; first time buyers and non-first time buyers; Right to Buy owners and non-Right to Buy owners. This last classification is made on the basis of the present dwelling only.

Private renters are subdivided, for some purposes, into furnished, unfurnished and tied to a person's employment.

Type of dwelling

Dwellings are classified by surveyors into the following categories:

Detached houses	No other dwelling adjoins any part of the structure
Semi-detached houses	A house that is only attached to one other dwelling. The two dwellings taken together should be detached from any other dwellings.
Terraced houses	A house forming part of a block where at least one house is attached to two or more dwelling units.
Tenements	Flats within a block with shared access (ie a common stair serving two or more flats.) Generally not over four storeys in height.
4-in-a-block	Each flat in the block has its own independent access. Flats on the upper level are on external stair.
Tower/slab	Maisonettes and flats in a multi storey or tower with five or more levels. Typical examples would be 1960s high-rise flats in the major cities.
Conversion	Flats resulting from the conversion of a house or former non-residential building (eg a warehouse). NB this does not refer to flatted accommodation which has been converted into a different number or layout of flats: these are classified according to the flat type.

Repair cost

The cost allocated by the SHCS 2002 bespoke analysis program to the repair and improvement works required to be carried out on dwellings. The methodology is outlined in **Technical Annexe 12.6**.

Vacant dwellings

For the purposes of estimating the vacancy rate in the stock as a whole, a vacant dwelling was defined as one which was not occupied at the time of the social survey interviewer's visit. Further details of how the estimates for vacant dwellings were calculated can be found in **Technical Annexe 12.4**.

Development, fieldwork and quality control

Management structures

The SHCS 2002 was managed and analysed by a specialist team working within the Planning Department of Communities Scotland, the executive agency formed in November 2001 from the non-departmental public body Scottish Homes.

Strategic leadership for the SHCS 2002 was provided by a Steering Group including representatives from the Scottish Executive, Scottish Homes (later Communities Scotland), Convention of Scottish Local Authorities (COSLA), the Scottish Federation of Housing Associations (SFHA) and the Chartered Institute of Housing (CIH).

The Group was initially chaired by the Scottish Executive but when Communities Scotland was formally created, responsibility transferred across. Secretariat was provided by the House Condition Surveys team.

The Steering Group was supported by three technical subgroups which addressed the content and coverage of the social and physical surveys, and the treatment of BTS dwellings. Membership of these groups, which looked at the content and use of the survey instruments, included academics, local authority officials and representatives of relevant professional institutions.

The survey fieldwork was conducted by MORI Scotland and NFO System Three. Management of the everyday survey operations was supported by a Joint Survey Management Group comprising the core project teams from MORI and Communities Scotland.

Survey instruments

The survey instruments used in the SHCS 1996 were subject to a detailed review by Communities Scotland and the technical working groups in late 2000. In spring 2001, a public consultation exercise on the social survey questionnaire was also carried out to generate suggestions for new items. This involved local authorities, academics and the voluntary sector.

All proposed changes were referred to the social survey technical working group and then the Steering Group. This resulted in a number of relatively minor changes to both instruments, which focused on the removal of items which were felt not to have worked well in 1996 and the inclusion of topics in which a particular policy interest had developed (eg factoring).

The survey instruments were piloted in three local authority areas in September 2001. Some fine-tuning to the survey content and management systems was carried out as a result.

Fieldwork

The social survey fieldwork began in January 2002 when interviewers from MORI and NFO System Three received a one-day training course at various venues around Scotland. Additional interviewers with experience on the English House Condition Survey were used in the later stages of the survey to ensure response rate targets were met. Some addresses where an interview was not achieved after repeated visits were reissued to a supervisor or another interviewer. The social survey fieldwork was completed by the end of September 2002.

Approximately 120 surveyors and 10 senior surveyors (monitors) were involved in the physical survey fieldwork. Each surveyor attended a week-long residential training course in May 2002, involving lectures and on-site instruction, delivered by a team comprising Communities Scotland staff, monitors and consultants with expertise in energy efficiency, Barrier Free housing and the Tolerable Standard. An administrative briefing from MORI Scotland was also included. The physical survey fieldwork was completed by November 2002.

Quality control

A number of measures were taken prior to and during fieldwork to promote consistent and good quality data collection:

- All interviewers were required to attend a one-day briefing from the contractor, including a full practice session on the SHCS 2002 questionnaire.
- Back checks were conducted by MORI/NFO System Three supervisors at 14% of addresses, either by telephone or postal questionnaire.
- All surveyors were required to attend a residential five-day briefing led by Communities Scotland staff as a condition of contract.
- All surveyors were required to complete two full assessments under 'examination' conditions before being permitted to start work.
- All surveyors were supervised throughout fieldwork by a monitor who guided technical interpretation and monitored progress.
- At least the first ten survey forms completed by each surveyor were manually checked by a monitor.
- 5% of all physical surveys, including all those classified as Below Tolerable Standard (BTS), were back-checked by a monitor.

Quality control processes were also undertaken throughout the data management, data processing and analysis phases of the project:

- All survey forms received a clerical check on arrival at MORI's Central Administration Unit (CAU) to ensure consistency of key data and full and correct completion of the form. Failed surveys were returned to the surveyor for amendment and resubmission.
- All accepted surveys were subject to full validation at CAU to confirm internal consistency, with reference to the photograph of the dwelling and/or check of anomalies with the surveyor/monitor.
- All completed CAPI interviews were analysed using an edit specification (in SPSS) developed by the contractor in conjunction with Communities Scotland statisticians. The edit specification was progressively updated and re-run as new types of error emerged.
- All social data was acceptance tested by SHCS staff. Extensive post-acceptance data editing was also performed by Communities Scotland analytical staff after all cases and variables had been received.
- All analysis code, results and chapter material was cross-checked by colleagues at each stage of development to ensure accuracy and consistency.
- A full audit trail can be reconstructed for every edit and analysis procedure performed on the data.

Sampling, response and weighting

Sampling strategy

The primary aim of the sample design was to achieve accurate estimates of house condition at both national and local authority (LA) levels in response to the increasing demand for subnational data. Previous SHCS have addressed the demand for local information through the conduct of boost samples, which are expensive and difficult to manage, and also dependent on LA uptake. The construction of a single SHCS sample that would achieve both aims was held to be a more efficient way of fulfilling information needs.

In order to achieve these aims, the sample had to be designed so as to obtain complete information (ie a social survey and a full physical survey) for approximately 15,000 dwellings. A minimum of 400 cases with full information was to be achieved in each LA area, with the remainder being allocated in proportion to the size of the LA. This strategy allows for accurate subnational reporting while having a limited impact on the accuracy of the national estimates, which are the main purpose of the SHCS 2002.

Sampling frame

The main sampling frame was the small users file of the Postcode Address File (PAF). The PAF is a database containing all known addresses and postcodes in the United Kingdom. The small users file contains only those addresses which receive a small amount of mail each day, thus excluding large organisations. The PAF has been used for a number of years in large surveys like the SHCS. It has advantages over other sampling frames such as the Electoral Roll in that it is updated every three months and is considered to be more complete, covering 98% of the population.

Despite this, the PAF is known to contain some addresses which are not occupied dwellings. These addresses are referred to as deadwood. Two types of deadwood are relevant to the SHCS 2002 – invalid addresses (small offices, business premises, community halls etc), and vacant dwellings. The overall Scottish deadwood rate is approximately 11% but there is variation across areas. The rates by local authority were estimated from the latest Scottish Household Survey (SHS) data, from which the invalid/vacant rates were drawn for the purposes of sample design.

Sample size and composition

The total issued sample size was calculated with reference to predicted response rates (adjusted). The target adjusted response rate was set at 70% nationally and no less than 60% in any LA, based on a review of response rates from the SHCS 1996 and the SHS. The assumed conversion rate from social to physical survey was 83%. The issued sample size was also increased to counter the effect of deadwood as noted above, to ensure that target response rates were achieved at valid addresses.

The issued SHCS sample consisted of two discrete subsamples:

- A fresh sample of around 18,000 addresses drawn from the February 2001 version of the PAF.
- A longitudinal sample of 10,549 addresses which had also been issued (but had not necessarily resulted in a survey) in the SHCS 1996.

Given the need to produce estimates at LA level, the sample had to be stratified. Addresses which had been used for the SHS also had to be removed to reduce the burden on respondents. A systematic random sample for each LA in Scotland was drawn according to the following process:

- 1 Sampled addresses were drawn from the PAF.
- 2 The PAF was expanded using the latest Multi Occupancy Indicator (MOI). Each multi-occupancy was represented by the relevant number of multiple entries on the file prior to sampling.
- 3 Each address was allocated to a ward within one of the 32 LAs using a point-in-polygon technique. This technique used Ordnance Survey CodePoint grid references (at the unit postcode level) and Ordnance Survey Boundary Line local authority digital boundaries.
- 4 Within each LA, addresses were sorted by Scottish Mosaic within each ward.
- 5 The previously determined number of addresses was then sampled from each authority, using a random-start-and-fixed-interval technique.
- 6 Each sampled address was then matched against:
 - Longitudinal addresses from the 1996 survey (113 cases – these were retained in the longitudinal sample and replaced in the PAF sample).
 - Addresses sampled for the SHS in the 1999-2002 sweep (replaced by the nearest non-duplicated address).
 - Addresses issued in the SHCS 2002 pilot study (replaced by the nearest non-duplicated address).

Table T3.1 lists the eventual issued sample.

Issued addresses by local authority

 TABLE
T3.1

Local authority	Issued sample	Local authority	Issued sample
Aberdeen City	904	Highland	810
Aberdeenshire	790	Inverclyde	760
Angus	719	Midlothian	725
Argyll and Bute	771	Moray	691
Borders	741	North Ayrshire	711
Clackmannanshire	753	North Lanarkshire	1,212
Dumfries and Galloway	704	Orkney	773
Dundee	852	Perth and Kinross	724
East Ayrshire	727	Renfrewshire	786
East Dunbartonshire	676	Shetland	714
East Lothian	761	South Ayrshire	705
East Renfrewshire	845	South Lanarkshire	1,292
City of Edinburgh	1,822	Stirling	699
Falkirk	732	West Dunbartonshire	752
Fife	1,088	West Lothian	741
Glasgow City	2,784	Western Isles	608
TOTAL			28,372

Additional sample

Difficulties were experienced in achieving target response rates in some LAs. There were two main reasons for this. Firstly, in the Western Isles, there proved to be a higher than predicted proportion of second/holiday homes, which are ineligible for the SHCS. Secondly, no-contact rates were higher than anticipated in some areas, particularly those with a large proportion of tenemental properties with door-entry access systems.

In order to combat this problem a further 1,158 addresses were issued in 12 LAs where it was not possible to achieve the required response rates with the original sample. **Table T3.2** summarises the issue of the additional sample.

TABLE
T3.2**Further issue of sample by local authority**

Local authority	Additional sample
Argyll and Bute	23
East Dunbartonshire	27
City of Edinburgh	413
Glasgow City	147
Highland	98
Moray	21
North Ayrshire	86
North Lanarkshire	59
Shetland	32
South Ayrshire	87
Stirling	45
Western Isles	120
Total	1,158

Response rates

A total of 29,530 addresses were issued to interviewers. **Tables T3.3** and **T3.4** summarise the outcomes in both phases of the survey.

Note that response on the physical survey is slightly different from the interview survey because data will be collected on all addresses: the question is the extent of that data. There are three possible outcomes:

- **Full survey** – the surveyor inspects the inside and outside of the property. (He or she may be refused access to individual rooms, such as the bathroom when it is in use, but completes all relevant sections of the form.)
- **External survey** – the surveyor is not allowed inside the property and therefore only completes those sections pertaining to its exterior.
- **Dwelling description** – the surveyor is not allowed inside the property and is unable to complete the full external inspection, but notes some basic facts such as age and type.

Invalid or ineligible outcomes

 TABLE
T3.3

	Number	% of addresses issued
Addresses issued for social survey	29,530	100
Vacant	569	2
Ineligible for survey	2,552	9
No contact	2,008	7
Refusal	4,332	15
Other	1,652	6
Full interview	18,417	62
Adjusted response rate ^a		70

^aBased on eligible addresses only.

Outcomes for physical survey

 TABLE
T3.4

	Number	% of issued addresses ^a
Property invalid/untraceable	560	3
Refusals	672	3
Full survey	16,223	75
External survey only	3,529	16
Dwelling description	566	3
Full surveys paired with interviews	15,168	70
Full surveys response rate ^b		82

^aSome no contacts and refusals were issued to surveyors.

^bAs a proportion of the number of full social interviews.

For the vast majority of analyses, only cases with a full physical and full social survey ('paired cases') have been used (n=15,168). This is 51% of the original sample, or 57% of all eligible addresses in the original sample.

Weighting and grossing

Weighting is the term given to the process of applying factors to sample estimates to ensure that the sample is representative of the population. It is used to compensate for unequal selection probabilities and/or differential patterns of non-response and non-contact.

Grossing refers to the process of applying factors to sample estimates so that they apply to the overall population. It is used to adjust weighted sample distributions for certain variables (eg tenure or dwelling type) to make them conform to known population distributions.

The weighting and grossing for the 2002 SHCS was carried out by the National Centre for Social Research to a specification drawn up by Communities Scotland. The process involved several stages. The final weights were the product of the weights produced at each stage.

- 1 Different selection probabilities were used within each LA. Weights were calculated to compensate for these.
- 2 Adjustments were made for cases where the multiple occupancy indicator (MOI) recorded by the interviewer was different to that logged on the sampling frame, which resulted in the household's chances of selection being non-standard. In practice this had a very small impact on the weights due to the small numbers involved.
- 3 The response to both surveys was then modelled using a logistic regression of a range of variables, including local authority, MOSAIC code and tenure. Non-response and non-contact were looked at separately. The weights from each stage were used to create a final weight for the social survey and a final weight for the physical survey.
- 4 Post-stratification of the sample was carried out by tenure, housing type (ie whether the dwelling is a house or flat) and age of dwelling (ie the proportion of housing stock built pre- and post-1996). This was done within each LA, using figures from the 2001 Census. This process incorporated an adjustment for the fact that the longitudinal element of the sample meant that recently-built stock (1996–2002) was under-represented.
- 5 The figures were grossed up to the total number of occupied dwellings in Scotland as reported in the 2001 Census.

After the original weights had been calculated, a revision was required due to the correction of an error identified in the 2001 Census tenure estimates (see Census 2001 Update No 17, published on www.gro-scotland.gov.uk). All estimates in this report have been produced using the corrected Census tenure split.

A detailed paper on the weighting process is available on request from Communities Scotland.

Vacant stock

A proportion of the stock will be vacant at any given time and, given that time elapses between the social and physical surveys, a dwelling's status may change over the period of the survey. For the purposes of the analysis, the basic count of 'vacants' was derived from all those dwellings which were classified as unoccupied at the time of the social survey.

Vacant dwellings were weighted according to sampling probability within each local authority and were grossed up to the total number of vacant dwellings in each local authority as reported in the 2001 Census.

A separate category of 'transitional vacants' was created for analysis purposes, using the surveyor's assessment of whether or not the property appeared to be on the market and/or was suitable for immediate occupation (ie not undergoing extensive renovation). No social survey information was collected at these dwellings although a limited amount of physical data was collected by external inspection.

Sampling error

Introduction

All sample surveys produce estimates of the proportions within the population as a whole. These estimates may differ from the true rate of prevalence in the population. It is important to know the extent of this possible divergence – known as **sampling error** – when interpreting the estimates.

The large size of the total sample for the SHCS results in minimal sampling error overall, such that a fair degree of confidence may be expressed in the majority of estimates reported here. However, for subgroups, particularly small categories such as the private rented sector, or subcategories of variables, it may have a greater impact, affecting the conclusions which may be drawn from the figures in this report.

One approach to assessing sampling error is to calculate a **confidence interval**. This is a range around the estimate within which there is a specified probability that the true value lies. For example, there is a 95% chance that the true figure lies within the boundaries of the 95% confidence interval.

Using confidence intervals

It is important to take sampling error into account when comparing two estimates. In particular it should be noted that where one reported figure or percentage is only slightly higher or lower than another, it is not possible to conclude from that that the difference is real. For example, in **Chapter 7**, it is reported that approximately 6% of households that have no children and 5% of households with three or more children live in dwellings where some dampness is present. It would not be valid to state that households with no children are more likely to live in dwellings with damp than those households with three or more children, however, because of the confidence interval around the difference between the two estimates.

Calculating whether or not two confidence intervals from two estimates overlap is not a valid way to test if the difference between two estimates is real. Instead, the confidence interval surrounding the **difference** should be calculated.

The report does not state confidence intervals for every result. Instead, the sections below explain how users can roughly estimate the relevant confidence interval for any of the statistics listed in the main report (except where an alternative approach is specified in the text). It is important to note that as all reported figures have been rounded to the nearest 1,000, confidence intervals surrounding the figures will inevitably be compromised. Furthermore, the confidence intervals given assume a normal distribution, which may not always be the case: for example, financial estimates are not normally distributed (these estimates are therefore reported in terms of median, mean and percentile distributions).

Percentages

The confidence interval for a percentage can be calculated by adding and subtracting a number from the estimated percentage quoted in the text. The number is obtained from the look-up table provided on the facing page. It depends on the value of the estimated percentage and the unweighted number of dwellings on which the percentage is based (all sample bases are listed in the next section).

Table T4.1 is a look-up table for calculating confidence intervals. The figure given is one side of an estimated 95% confidence interval surrounding that percentage and should be both subtracted from and added to each reported percentage to give a confidence interval.

Look-up table for calculating confidence intervals

TABLE
T4.1

Unweighted number of dwellings	Percentages												
	1	5	10	20	30	40	50	60	70	80	90	95	99
15,168	0.16	0.35	0.48	0.64	0.73	0.78	0.80	0.78	0.73	0.64	0.48	0.35	0.16
15,000	0.16	0.35	0.48	0.64	0.73	0.78	0.80	0.78	0.73	0.64	0.48	0.35	0.16
12,500	0.17	0.38	0.53	0.70	0.80	0.86	0.88	0.86	0.80	0.70	0.53	0.38	0.17
10,000	0.20	0.43	0.59	0.78	0.90	0.96	0.98	0.96	0.90	0.78	0.59	0.43	0.20
9,000	0.21	0.45	0.62	0.83	0.95	1.01	1.03	1.01	0.95	0.83	0.62	0.45	0.21
8,000	0.22	0.48	0.66	0.88	1.00	1.07	1.10	1.07	1.00	0.88	0.66	0.48	0.22
7,000	0.23	0.51	0.70	0.94	1.07	1.15	1.17	1.15	1.07	0.94	0.70	0.51	0.23
6,000	0.25	0.55	0.76	1.01	1.16	1.24	1.27	1.24	1.16	1.01	0.76	0.55	0.25
5,000	0.28	0.60	0.83	1.11	1.27	1.36	1.39	1.36	1.27	1.11	0.83	0.60	0.28
4,000	0.31	0.68	0.93	1.24	1.42	1.52	1.55	1.52	1.42	1.24	0.93	0.68	0.31
3,000	0.36	0.78	1.07	1.43	1.64	1.75	1.79	1.75	1.64	1.43	1.07	0.78	0.36
2,000	0.44	0.96	1.31	1.75	2.01	2.15	2.19	2.15	2.01	1.75	1.31	0.96	0.44
1,000	0.62	1.35	1.86	2.48	2.84	3.04	3.10	3.04	2.84	2.48	1.86	1.35	0.62
900	0.65	1.42	1.96	2.61	2.99	3.20	3.27	3.20	2.99	2.61	1.96	1.42	0.65
800	0.69	1.51	2.08	2.77	3.18	3.39	3.46	3.39	3.18	2.77	2.08	1.51	0.69
700	0.74	1.61	2.22	2.96	3.39	3.63	3.70	3.63	3.39	2.96	2.22	1.61	0.74
600	0.80	1.74	2.40	3.20	3.67	3.92	4.00	3.92	3.67	3.20	2.40	1.74	0.80
500	0.87	1.91	2.63	3.51	4.02	4.29	4.38	4.29	4.02	3.51	2.63	1.91	0.87
400	0.98	2.14	2.94	3.92	4.49	4.80	4.90	4.80	4.49	3.92	2.94	2.14	0.98
300	1.13	2.47	3.39	4.53	5.19	5.54	5.66	5.54	5.19	4.53	3.39	2.47	1.13
200	1.38	3.02	4.16	5.54	6.35	6.79	6.93	6.79	6.35	5.54	4.16	3.02	1.38
100	1.95	4.27	5.88	7.84	8.98	9.60	9.80	9.60	8.98	7.84	5.88	4.27	1.95

Sample bases

Tenure

Owner occupier	11,366
LA/other public	4,610
HA/co-op	1,210
Private renter	1,231

Household type

Single adult	2,693
Small adult	3,079
Single parent	1,075
Small family	2,602
Large family	1,393
Large adult	1,911
Older smaller	2,721
Single pensioner	2,943

Weekly income (£)

< 100	982
100–199.99	4,916
200–299.99	3,914
300–399.99	2,825
400–499.99	2,056
500–699.99	2,262
700+	1,355
Missing	107

Total households **18,417**

Location with a social variable

Urban	14,490
Rural	3,927

Total dwellings **18,417**

Location with a physical variable

Urban	11,908
Rural	3,260

Total dwellings **15,168**

Date of construction

Pre-1919	2,777
1919–1944	2,206
1945–1964	3,878
1965–1974	2,562
1975–1982	1,420
1983–1990	954
1991–1997	888
Post-1997	483

Dwelling type

Detached houses	3,303
Semi-detached houses	3,473
Terraced houses	3,629
Tenements	2,714
4-in-a-block	1,504
Flat in a converted building	228
Tower/slab	317

Total dwellings **15,168**

Profile of stock

Number of rooms

1–3 rooms	1,926
4 rooms	5,012
5 rooms	4,726
6 rooms	1,928
7+ rooms	1,576

External wall material

Sandstone	2,461
Whin/granite	678
Brick	8,327
Blockwork	2,091
Timber	868
Concrete	602
Metal	121
Other	20

External wall construction

Solid	3,611
Cavity	11,394
Other	163

Principal external wall finish

Render	11,171
Stone	2,275
Brick	1,096
Timber	216
Concrete block	216
Concrete panel	118
Metal	44
Other	32

Principal roof type

Pitched	14,367
Flat	526
Mono	161
Mansard	73
Half mansard	39
Unobtainable	2

Principal roof cover

Slates	4,300
Tiles	9,774
Felt	391
Asphalt	174
Asbestos	210
Metal	262
Other	40
Unobtainable	17

Principal window type

Sash and case	1,379
Casement	6,217
Tilt/turn	3,356
Pivot	3,730
Other/mixed	486

Window frames

Wood	6,373
Metal (therm break)	605
Metal (no therm break)	397
UPVC	7,793

Number of storeys

2–3	3,293
4–5	1,195
6–9	56
10+	206
Unobserved	15
Not applicable	10,403

Total floor space (m²)

<50	29
50–69	1,034
70–89	2,539
90–110	4,070
110+	3,454
Unobtainable	4,042

Total **15,168**

Vacant dwellings

Transitional	268
Long-term	161
Unknown	140

Total **569**

Profile of households**Age of Highest Income Householder**

16–24	672
25–39	4,461
40–59	6,923
60–64	1,424
65–74	2,667
75–80	1,303
81+	967

Number of dependent children

0	12,941
1	2,382
2	2,190
3	713

Marital status of HIH

Married	9,083
Cohabiting	1,262
Single	2,918
Widowed	2,749
Divorced	1,568
Separated	837

Employment status of HIH

Self-employed	1,327
Employed full-time	7,689
Employed part-time	935
Looking after home	691
Retired	5,470
Unemployed seeking work	674
Further education	92
Govt. training scheme	19
Long-term sick/disabled	1,142
Short-term illness	181
Higher education	185
Other	12

Ethnicity of HIH

White	18,193
Non-white	219
Refused	5

Sex of HIH

Male	11,296
Female	7,121

Total	18,417
--------------	---------------

Tenure and mobility**Length of occupancy**

Less than 5 years	6,009
More than 5 years	12,297
Missing	111

Satisfaction with home

Very satisfied	10,023
Fairly satisfied	6,895
Neither satisfied nor dissatisfied	693
Fairly dissatisfied	484
Very dissatisfied	297
No opinion	25

Tenure mobility

Not applicable	768
Moved to own	5,191
Moved to rent	1,921
Rent to rent	4,887
Own to own	5,650

Migrancy – previous and future

Migrant movers	910
Non-migrant movers	3,604
Migrant stayer	1,265
Non-migrant stayer	10,877
Non-migrant never moved	582
Can't say	1,179

Total	18,417
--------------	---------------

Why wishes to move

Dwelling	1,715
Neighbourhood	997
Personal	562
Condition of dwelling	252
Other housing	915

Total	4,441
--------------	--------------

How likely to move to ideal property?

Certain to be able to	600
Very likely to be able to	1,029
Fairly likely to be able to	2,338
Not very likely to be able to	2,961
Not at all likely to be able to	2,294
Certain not to be able to	2,045
Already live in it	5,801
Unknown	1,349
Total	18,417

Reasons unlikely to move

Cost/financial reasons	4,416
Age/too old	634
Other	2,250
Total dwellings	7,300

Qualify for Right to Buy

Know would qualify	3,124
Know would not qualify	379
Don't know whether would qualify	1,105
Total dwellings	4,608

Intention to exercise RTB

Yes	405
No	3,448
Don't know	376
Not applicable/missing	14,188

Changed circumstances leading to RTB

Buy if financial situation improved	1,219
Buy if household circumstances changed	532
Buy if improvements to area occurred	624
Total dwellings	2,375

Why prefer to own

Property	893
Area/people reasons	529
Financial reasons	1,986
Other reasons	91
Total	3,499

Why prefer to rent privately

Good service	13
Financial reasons	51
Better houses	40
Other	41
Total	145

Why prefer to rent from HA/co-op

Good service	66
Financial reasons	59
Better houses	57
Other	21
Total	203

Why prefer to rent from LA

Good service	83
Financial reasons	381
Better houses	47
Other	89
Total	600

The Tolerable Standard

Any elements in/aspects of dwelling

Not Below Tolerable Standard (BTS)	15,018
BTS	138
Unobtainable	12

Structurally stable

Not BTS	15,146
BTS	22

Rising and penetrating damp

Not BTS	15,147
BTS	21

Provision for natural and artificial light, ventilation and heating

Not BTS	15,104
BTS	64

Piped supply of wholesome water within house

Not BTS	15,166
BTS	2

Sink for exclusive use with hot and cold water

Not BTS	15,158
BTS	10

WC for exclusive use

Not BTS	15,158
BTS	10

Fixed bath/shower with hot and cold water

Not BTS	15,146
BTS	22

Drainage system for disposal of foul and surface water

Not BTS	15,155
BTS	13

Facilities for cooking food

Not BTS	15,160
BTS	8

Access to external doors and outbuildings

Not BTS	15,158
BTS	10

Total dwellings	15,168
------------------------	---------------

Amenities

Age of dwelling

Pre-1919	2,777
1919–1944	2,206
1945–1964	3,878
1965–1997	5,824
Post-1997	483

Total **15,168**

No. of standard amenities missing

0	15,125
1	7
2	8
3	2
5	2
6	3
7	1
Unobserved	20

Presence of lead in water supply system

Lead in mains and distribution	119
Lead in distribution system only	53
Lead in mains only	310
Lead not present	14,513
No water system	19
Unobserved	154

Main WC located off kitchen

No	15,115
Yes	45
No WC	3
Unobtainable	5

Extra kitchen storage required

0%	11,835
25%	2,026
50%	801
75%	249
100%	248
Unobtainable	9

Number of WCs

0	6
1	11,964
2+	3,195
Unobtainable	3

Main services

Electricity only	4,868
Electricity and gas	10,296
Gas only	2
No services	1
Unobtainable	1

Electrical power system

Inadequate number of sockets	6,775
Adequate number of sockets	8,374
Mixed system	14
5/15 amp system	3
Unobtainable	2

Water – mains lead free

Yes	14,577
No	429
No water main	19
Unobtainable	143

Water – distribution system lead free

Yes	14,942
No	172
No water system	2
Unobtainable	52

Privately generated electricity?

No	15,089
Yes	67
No power supply	12

Electrical power system dangerous?

No	15,046
Yes	91
Unobtainable	31

Electrical lighting satisfactory?

Yes	15,048
No	91
No, dangerous	27
Unobtainable	2

Smoke detectors present?

1, battery powered	5,573
1+, battery powered	4,251
1, mains powered	1,600
1+, mains powered	1,442
1+, mixed	215
No	2,080
Unobtainable	7

Viewer and restrictor on main door?

No	8,299
Viewer only	2,944
Restrictor only	1,567
Both viewer & restrictor	2,357
Unobtainable	1

Total **15,168**

Disrepair**Dwelling type – house only**

Detached houses	3,303
Semi-detached houses	3,473
Terraced houses	3,629
Total dwellings	10,405

Dwelling type – flat only

Tenement	2,714
4-in-a-block	1,504
Flat in converted building	228
Tower/slab	317
Total dwellings	4,763

Location – house only

Rural	2,910
Urban	7,495
Total dwellings	10,405

Location – flat only

Rural	350
Urban	4,413
Total dwellings	4,763

Grouped visible repair costs

Unobtainable	399
0	2,864
1–149	2,280
150–299	1,699
300–449	1,221
450–599	1,027
600–899	1,473
900–1,199	1,014
1,200–1,799	1,209
1,800–2,399	703
2,400–4,799	919
4,800+	360

Grouped comprehensive repair costs

Unobtainable	399
0	212
1–499	332
500–749	888
750–999	1,501
1,000–1,249	1,751
1,250–1,499	1,466
1,500–1,999	2,157
2,000–2,999	2,105
3,000–3,999	1,138
4,000–4,999	785
5,000–7,499	1,071
7,500–9,999	560
10,000+	803

Grouped visible repair costs (Disrepair)

Unobtainable	346
0	7
1–149	2,262
150–299	1,697
300–449	1,221
450–599	1,027
600–899	1,473
900–1199	1,014
1,200–1,799	1,209
1,800–2,399	703
2,400–4,799	919
4,800+	360

Grouped visible + BTS repair costs

Unobtainable	399
0	2,863
1–499	5,528
500–749	1,513
750–999	1,025
1,000–1,249	782
1,250–1,499	557
1,500–1,999	790
2,000–2,999	820
3,000–3,999	376
4,000–4,999	177
5,000–7,499	214
7,500–9,999	61
10,000+	63
Total dwellings	15,168

Grouped visible + BTS + improvements repair costs

Unobtainable	399
0	513
1–499	3,784
500–749	1,957
750–999	1,520
1,000–1,249	1,176
1,250–1,499	901
1,500–1,999	1,290
2,000–2,999	1,545
3,000–3,999	769
4,000–4,999	441
5,000–7,499	532
7,500–9,999	169
10,000+	172
Total dwellings	15,618

Access and Adaptations

Long-term illness/disability

No sick/disabled	11,723
Yes sick/disabled	6,694

Long-term illness/disability

Vision	573
Hearing	594
Learning difficulty	194
Mobility/other physical impairment	3,161
Mental health problem	531
Respiratory problem	2,033
Circulatory problem	2,221
Other	1,297
Unknown	19

Household with someone in Community Care group

No	14,030
Yes	4,387

Any adaptation needed

No	17,274
Yes	1,143

Number of adaptations needed

0	17,274
1	743
2	265
3	85
4	28
5 or more	22

Aspects of dwelling that restrict movement

Indoor stairs	730
Need more room	58
Outdoor stairs	131
Restrictive design	85
Doors too narrow	33
Rooms too small	47
Bath	489
Toilet	125
Can't use sockets	68
Can't use heat controls	32
Can't open windows	104
Can't answer door	94
Can't use cupboards	132
Can't use garden	112
Other	131

Adaptations present

Ramps	244
Door widened	158
Relocated lights/sockets	224
Alarm system	414
Stairlift	163
Lift	40
Handrails	1,790
Adapted kitchen	119
Adapted bath/shower	1,173
Adapted toilet	435
Door entry phone	758
Extension	57
Special furniture	195
Other	56

Total **18,417**

Dwelling barrier free for ambulant disabled people?

No	14,317
Yes	821
Unobtainable	30

Entry barrier free for ambulant disabled people?

No	1,984
Yes	13,178
Unobtainable	6

Access barrier free for ambulant disabled people?

No	3,739
Yes	11,426
Unobtainable	3

Kitchen barrier free for ambulant disabled people?

No	4,310
Yes	10,853
Unobtainable	5

Bathroom barrier free for ambulant disabled people?

No	14,006
Yes	1,146
Unobtainable	16

Dwelling barrier free for people temporarily in a wheelchair?

No	14,814
Yes	286
Unobtainable	68

Entry barrier free for people temporarily in a wheelchair?

No	3,058
Yes	12,066
Unobtainable	44

Access barrier free for people temporarily in a wheelchair?

No	5,756
Yes	9,409
Unobtainable	3

Kitchen barrier free for people temporarily in a wheelchair?

No	4,310
Yes	10,853
Unobtainable	5

WC/bathroom barrier free for people temporarily in a wheelchair?

No	14,743
Yes	409
Unobtainable	16

Dwelling barrier free for people permanently in a wheelchair?

No	15,076
Yes	32
Unobtainable	60

Access barrier free for people permanently in a wheelchair?

No	14,067
Yes	1,097
Unobtainable	4

Entry barrier free for people permanently in a wheelchair?

No	3,353
Yes	11,780
Unobtainable	35

Kitchen barrier free for people permanently in a wheelchair?

No	7,220
Yes	7,943
Unobtainable	5

Bathroom barrier free for people permanently in a wheelchair?

No	14,743
Yes	409
Unobtainable	16

Dwelling barrier free for people in wheelchairs to visit?

No	14,934
Yes	215
Unobtainable	19

Entry barrier free for people in wheelchairs to visit?

No	3,102
Yes	12,066

Access barrier free for people in wheelchairs to visit?

No	13,346
Yes	1,822

WC barrier free for people in wheelchairs to visit?

No	13,798
Yes	1,351
Unobtainable	19

Total dwellings	15,168
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Dampness and condensation

Severity of problems – surveyor assessment

No problems	12,953
< 2%	1,214
2 <5%	470
5 <10%	208
10 <20%	75
20 <30%	40
30 <40%	17
Over 40%	15
Unobtainable	176

Dampness severity scale – surveyor assessment

No damp	14,076
< 2%	539
2 <5%	216
5 <10%	83
10 <20%	36
20 <30%	23
30 <40%	11
Over 40%	10
Unobtainable	174

Mould severity scale – surveyor assessment

No mould	13,384
< 2%	1,060
2 <5%	349
5 <10%	143
10 <20%	44
20 <30%	16
30 <40%	15
Unobtainable	157

Rising damp severity scale – surveyor assessment

No rising damp	14,624
< 2%	236
2 <5%	64
5 <10%	35
10 <20%	13
20 <30%	12
30 <40%	5
Over 40%	8
Unobtainable	171

Penetrating damp severity scale – surveyor assessment

No penetrating damp	14,220
< 2%	501
2 <5%	175
5 <10%	59
10 <20%	26
20 <30%	12
30 <40%	6
Over 40%	3
Unobtainable	166

Rooms affected by condensation – surveyor assessment

Public rooms	622
Bath/kitchen/hall only	301
Bathroom only	659
None	13,430
Unobtainable	156

Rooms affected by damp – surveyor assessment

Public rooms (and others)	622
Bath/kitchen/hall only	177
Bathroom only	127
No damp	14,076
Unobtainable	166

Rooms affected by penetrating damp – surveyor assessment

Public rooms	525
Bath/kitchen/hall only	144
Bathroom only	113
None	14,220
Unobtainable	166

Rooms affected by mould – surveyor assessment

Public rooms	726
Bath/kitchen/hall only	267
Bathroom only	634
None	13,384
Unobtainable	157

Rooms affected by rising damp – surveyor assessment

Public rooms	229
Bath/kitchen/hall only	67
Bathroom only	77
None	14,624
Unobtainable	171

**Rooms affected by condensation/damp –
surveyor assessment**

Public rooms (and others)	1,033
Bathroom/kitchen/hall only	392
Bathroom only	640
No problems	12,953
Missing	150

Window type

Full uPVC double glazing	7,596
Full metal double glazing	816
Full wood double glazing	4,108
Single metal	156
Single wood	2,017
Other	475

Central heating and fuel type

Full gas central heating	9,765
Full electric central heating	1,859
Full other fuel central heating	1,530
Part gas or other central heating	332
Partial electric central heating	939
Gas fires	204
Electric heaters	338
Other heaters	171
Unobserved	30

Total	15,168
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**Staining to walls –
householder assessment**

No	17,587
Yes	830

**Mould on hard surfaces –
householder assessment**

No	17,270
Yes	1,147

**Mould on soft furnishings –
householder assessment**

No	18,206
Yes	211

**Damage to paint on windows –
householder assessment**

No	18,011
Yes	406

**Wet walls –
householder assessment**

No	17,636
Yes	781

**Other condensation problem –
householder assessment**

No	18,289
Yes	128

**Severity of condensation/damp problems –
householder assessment**

No problems	14,828
Steamed-up windows	1,508
Damage to paint	179
Stained walls	314
Wet walls	366
Mould on hard surfaces	1,011
Mould on soft surfaces	211

Self-assessed health

Very good	7,061
Good	5,616
Fair	3,939
Bad	1,385
Very bad	416

Children with respiratory problems

No	17,960
Yes	457

Any householder with respiratory problems

No	16,384
Yes	2,033

Total	18,417
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Work done

Households that did work

Yes	8,920
No	9,497
Total	18,417

Households that did work in last 5 years

Yes	13,589
No	4,828
Total	18,417

Households that did work in last year

Yes	8,920
No	4,669
Total	13,589

Number of jobs done by household

0	15,519
1 job	2,127
2-3 jobs	678
4-5 jobs	72
>5 jobs	21
Total	18,417

Tenure

Owner occupier	5,914
LA/other public	2,129
HA/co-op	473
Private renter	404
Total	8,920

Household type

Single adult	1,160
Small adult	1,658
Single parent	528
Small family	1,498
Large family	759
Large adult	1,007
Older smaller	1,241
Single pensioner	1,069
Total	8,920

Banded work done

Work inside the house	1,774
External windows and doors	3,143
Heating/insulation	4,424
Work outside the house	1,511
Other work to flats	515
Total	8,920

Type of dwelling (physical)

Detached	1,768
Semi-detached	1,821
Terraced	1,802
Tenement	1,090
4-in-a-block	744
Flat convt.	110
Tower/slab	111
Total	7,446

Age of dwelling

Pre-1919	1,423
1919–1944	1,125
1945–1964	1,854
1965–1997	2,873
Post-1997	171
Total	7,446

Work classed as repair?

Yes	2,785
No	15,632
Total	18,417

Work classed as improvement?

Yes	3,877
No	14,540
Total	18,417

Tenure by 'repairs'

Owner occupier	2,686
LA/other	39
HA/housing	11
Private renter	49
Total	2,785

Household type by repairs

Single adult	306
Small adult	600
Single parent	80
Small family	538
Large family	247
Large adult	348
Older smaller	428
Single pensioner	238
Total	2,785

Tenure by improvements

Owner occupier	3,633
LA/other public	159
HA/co-op	21
Private renter	64
Total	3,877

Household type by improvements

Single adult	391
Small adult	843
Single parent	106
Small family	774
Large family	362
Large adult	544
Older smaller	573
Single pensioner	284
Total	3,877

Expenditure on work done

Amount given	12,667
Refused	94
Don't know	983
Nothing	4,673
Total	18,417

Paid for work done

Yes	5,993
No	2,927
Total	8,920

Payment methods

Day-to-day expenditure	4,293
Insurance company	192
Loan	425
Increased mortgage	239
New mortgage	65
Savings	5,200
Other	340
Total	5,993

Household type

Single adult	631
Small adult	1,291
Single parent	173
Small family	1,142
Large family	541
Large adult	795
Older smaller	918
Single pensioner	502
Total	5,993

Households receiving grants

Total	182
Would have done work without grant?	182*
Total	182

Work carried out by landlords

LA/other public	1,933
HA/co-op	443
Private renter	296
Total	2,672

*Due to opportunity for multiple responses (for each job) actual responses =>household figure. (218 actual responses, 123 answered Yes, 95 stated they would not have done the work had they not received a grant).

Energy efficiency and fuel poverty

National Home Energy Rating (NHER) categories

0	179
1	914
2	1,334
3	2,140
4	3,276
5	3,110
6	2,321
7	966
8	426
9	254
10	45
Missing	203

Type of water heating

Primary boiler	11,722
Off-peak immersion	2,036
Peak immersion	996
Separate boiler	127
Other	267
Unobserved	20

Loft insulation

None	941
25mm	443
50mm	1,257
75mm	1,121
100mm	4,327
150mm	2,635
200mm	968
>200mm	383
Not applicable	2,969
Unobtainable	124

Wall insulation

None	12,446
Filled 50mm cavity	1,891
Filled 75mm cavity	250
25mm internal/external	124
50mm internal/external	308
75mm internal/external	87
100mm internal/external	61
Unobtainable	1

Window glazing

Single	2,626
Double or triple	12,542

Satisfaction with heating

Very satisfied	9,430
Fairly satisfied	3,805
Neither satisfied nor dissatisfied	498
Fairly dissatisfied	829
Very dissatisfied	576
Don't know	30

Reason for dissatisfaction with heating system

No central heating	537
Not enough heaters	513
Poor system	937
Radiators too small	290
Heating not working	115
Dislike storage heaters	474
Inadequate heating	520
Difficult to regulate	769
Heating in part of house	469
Too hard to set controls	201
Draughty windows	1,316
No/poor insulation	912
Rooms too big	237
Expensive	898
Cannot afford new system	343
None of these	10,509
Other	316
Total	15,168

Standard Assessment

Protocol (SAP)	14,965
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Households in fuel poverty (2003 definition)

Fuel poor	2,785
Not fuel poor	12,004
Unobtainable	379

Households in fuel poverty (1996 definition)

Fuel poor	1,978
Not fuel poor	12,823
Unobtainable	367

Repair costs

This annexe outlines the methodology for calculating the repair costs.

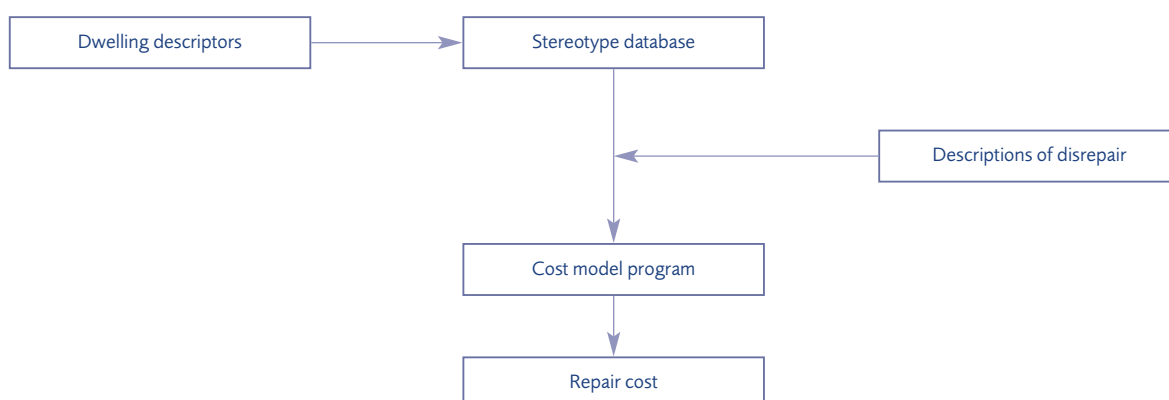
Overview of the method

As noted in the introduction to **Chapter 7**, Disrepair and Repair Costs, surveyors in the SHCS are not asked to assess the response to any disrepair present in a dwelling, but to record its presence. The costs associated with making good disrepair are added at the analysis stage.

Figure T6.1 is a simplified representation of the cost generating process. As can be seen, the process relies upon two types of input from the survey fieldwork – the dwelling descriptors (such as age and type) and the repair scores profile. The descriptor information is used to assign each dwelling to one of a database of stereotypes and the repair scores are used to generate a series of costs, which are then aggregated to produce the cost profiles reported in **Chapter 7**.

FIGURE
T6.1

Cost modelling process



Patch repair costs

There are seven steps in the process of generating the patch, or visible, repair costs.

Step 1 – Assign dwelling to stereotype

Nine of the items collected during the course of the survey are used to assign each dwelling to one of 172 'stereotypes' on which the costs are based. Five of these generate the 'core stereotype':

- Type of dwelling (eg semi-detached house, tenement flat).
- Date of construction.
- Number of storeys in the dwelling.
- Quality of dwelling (ie basic/better than basic/of superior quality¹).

The remaining four items relate to variations which further refine the choice of a particular stereotype within the 'core' group to which the dwelling has been assigned. These are:

- Type of common block (eg corner, mid terrace).
- Number of storeys within the common block.
- Type of common access (eg deck access, balcony).
- Amount of exposure of flank walls.

The first three of these relate to flats with common access and define the particular flat type. The information about the amount of exposure of the flank walls determines whether an adjustment to the basic shape of any of the types is required.

Step 2 – Incorporate the repair score and generate a cost

At this stage, the raw information collected by the surveyors for each element assessed – using the standardised method described in **Chapter 7** – is incorporated into the program. Most of the elements (40) are measured on a 10 point scale with most of the remainder (18) measured on a four-point scale. One question (concerning dry or wet rot) is measured on a two-point scale which simply records the presence or absence of that particular defect. **Table T6.1** below shows how the score links to the proportion of the element which is assessed as being in disrepair.

Percentage of element in disrepair by repair scale

**TABLE
T6.1**

10-point scale	% of element in disrepair	Four-point scale	% of element in disrepair
0	0	0	0
55	<5	1	< 5
1	5 to <15	2	5 to <25
2	15 to <25	3	25 to <60
3	25 to <35	4	>60
4	35 to <45		
5	45 to <55		
6	55 to <65		
7	65 to <75		
8	75 to <85		
9	85 to <95		
10	>95		

Once the information about which stereotype is to be applied and how much disrepair there is to a particular element is known, a repair cost can be read off the pricing database. The 10 most expensive elements are listed below in **Table T6.2**, which gives the cost of replacement (ie the maximum repair costs) of the item using both the most expensive and the least expensive stereotypes.

The base costs used to construct the cost models used in this analysis were re-priced by Thomas and Adamson in spring 2003, using costs as at Q1 2002. This defines the base index date. The cost date is taken as Q3 2002 when the median number of surveys took place.

Note that the most expensive and least expensive stereotypes vary from element to element. For wall structure, for example, the most expensive stereotype relates to a pre-1919 three-storey detached house, whilst the least expensive relates to a post-1982 single storey mid-terrace tenement.

TABLE T6.2 Replacement costs for most expensive elements

Item	Replacement cost (£)	
	Least expensive stereotype	Most expensive stereotype
Wall structure	1,542	85,667
Internal structure/partitions	3,034	16,586
Foundations	1,064	11,978
Internal floor structure	3,434	16,263
Internal floor finish	2,146	10,922
Windows	647	21,200
Internal wall finish	1,640	16,682
Roof structure (pitched)	730	15,013
Common staircase	486	9,545
Underground drainage	1,627	9,863

Step 3 – Regional variation factor, tenure adjustments and scaling for rooms to base costs

An intermediate 'adjusted base cost' table is produced for every dwelling and the relevant cost adjustments are applied at this stage.

- **Regional variation and indexing**
The regional variation factor takes account of the differences in levels of pricing between local authority areas. Costs are also adjusted to the HTPI Q3 2002 at this stage. Building Cost Bulletins are produced by the Construction and Building Control Group at the Scottish Executive.
- **Tenure adjustment**
A tenure factor is applied in recognition of the fact that works carried out in the public sector or by housing associations are generally part of larger contracts which benefit from economies of scale. The reduction in costs for public sector and housing association works is taken to be 90% of the single dwelling cost, based on an assumption of a 30-dwelling contract.
- **Scaling for rooms**
Each stereotype is associated with a particular number of rooms. If the actual number of rooms in the dwelling differs, any replacement costs which relate to the number of rooms in the dwelling are rescaled on a pro rata basis. This enables the cost to match more closely the actual replacement costs for that dwelling.

For example, the stereotype for a pre-1919 basic quality mid-terrace tenement flat has four rooms, and the cost of replacing the principal roof cover is £1,464. If the dwelling was located in Glasgow this would increase the cost to £1,508. If the actual dwelling had five rooms, then this replacement cost would be increased to £1,885. If the dwelling was owned by a housing association then the final adjusted base cost for the element cost would be £1,696.

Step 4 – Calculate a proportional repair cost for each element

Repairs are subject to economies of scale: smaller jobs incur higher costs due to diseconomies of scale. **Table T6.3** sets out, for the 10-point and four-point scales, the small repair enhancement factors which are applied to account for this.

Note that in the case of internal room by room repair scores, the sliding scale is applied to each individual room and then averaged out over the total number of rooms in that dwelling. In large dwellings surveyors only inspect the kitchen, bathroom, hall/landing, and a representative sample of five other rooms. The room scores in these circumstances are deemed to be representative of all the rooms in that dwelling and the averaging still applies.

Having applied the small repair enhancement factor, it is now possible to generate a proportional repair cost for the element. For example, if 20% of the principal roof cover in a four-room pre-1919 basic quality mid-terrace tenement flat is in disrepair then the cost assigned would be $£1,464 \times 0.35 = £512.40$.

TABLE
T6.3

Replacement costs for most expensive elements

10-point scale		Four-point scale	
Raw score	Adjusted score	Raw score	Adjusted score
0	0.00	0	0.000
55	0.08	1	0.080
1	0.20	2	0.165
2	0.35	3	0.420
3	0.45	4	1.000
4	0.50		
5	0.55		
6	0.63		
7	0.70		
8	0.80		
9	0.90		
10	1.00		

Step 5 – Aggregating individual costs to a summary cost

In the next stage, the individual costs for each item are aggregated to form five summary costs for each of the main groups of elements:

- Internal.
- Amenities and services.
- Common parts (where applicable).
- External.
- External environment.

The five summary costs are then added together to produce a gross total cost.

Step 6 – Apply the scaling factor to produce visible repair cost

A scaling factor is then applied to the gross cost generated using Steps 1-7 above, in recognition of the fact that there will be some savings if a 'package' of works is carried out at the same time. This is essentially a factor reflecting the economies of scale to be expected on larger jobs.

If the gross cost of the works is less than £1,000 then no adjustment is made. If the gross cost is more than £1,000 then a factor (which is a linear function of the cost) is applied. **Table T6.4** illustrates the magnitude of these scaling factors.

Scaling factor applied to gross costs >£1,000

TABLE
T6.4

Gross cost of works	Scaling factor
< £1,000	1.000
£2,000	0.994
£5,000	0.976
£10,000	0.947
£20,000	0.888
£30,000	0.829
> £35,000	0.800

Step 7 – Apply the scaling factor to summary components

Finally, the same scaling factor as applied to the gross cost is then applied to the five summary components which comprise the total. This ensures that the sum of the five individual summary costs equals the total immediate repair cost.

Comprehensive repair costs

To obtain the comprehensive repair costs, the same procedure as described above to generate the visible repair cost is applied to two of the element groups, namely the Internal and the Services and Amenities groups.

For the other three groups, namely External, External Environment and Common Parts, information from the 10-point and four-point repair scores is included only if the residual life of the component is greater than 10 years. If it is less than 10 years, then the replacement cost for that item is invoked. Otherwise, the methodology proceeds as above.

Repairs + BTS

The costs for BTS are calculated and added to the repair costs. Where an element is being installed for the first time this is a straightforward additional cost. For example if a dwelling fails the Tolerable Standard due to rising damp and has no damp-proof course (DPC) then the cost of installing the DPC for the first time is added. However, if the DPC exists and is in disrepair then there is no additional BTS cost included as this will have been accounted for in the repair costs. This avoids double counting for the element concerned and is the reason why the two cost items are always reported together.

Repairs + BTS + Improvement

Similarly the costs for repairs + BTS + improvement costs are interlinked. For example, if a bedroom has an unsatisfactory circulation space then costs for improving this item are added. As the costs allow for an installation of all elements, any repair costs for that room are discounted, again to avoid double counting of elements.

¹ This is a judgment made on the basis of the dwelling's specification, not its condition, assessed relative to other dwellings of the same type (eg for tenements, a 'superior' assessment would denote a dwelling which has high-cost architectural features such as oriel/bay windows).

The Tolerable Standard

A number of items in the Tolerable Standard (TS) assessment depend on surveyors' interpretation of terms such as 'effective' and 'substantial' rather than requiring them to record the presence or absence of an element or defect. This means that the assessment involves a greater degree of individual judgment than do other parts of the survey process. All surveyors received a detailed briefing so as to standardise, as far as possible, their interpretation of evidence relevant to the TS. This was based on the guidance provided to local authorities by the Scottish Executive in the Scottish Housing Handbook (1988 edition) and subsequent circulars. The survey data generated was also checked for consistency, and any dwellings adjudged BTS were revisited by a senior surveyor.

This section describes the guidance given, outlines the quality control applied to the data, and finally considers the measurement issues pertaining to the SHCS 2002 BTS estimates.

Guidance and interpretation

(a) Is the dwelling structurally stable?

Evidence of instability is likely to be significant insofar as it indicates the likelihood of further movement which could be a danger to the occupants of the house.

In reaching a decision surveyors considered:

- The stability, distortion or spreading of roof structures.
- The stability of chimneys, dormers, parapets or other roof features.
- The stability, eccentricity and fracturing of walls and the effectiveness of cavity ties.
- The structural adequacy of horizontal elements such as floors, stairs, ceiling and balconies.
- The structural effectiveness of foundations, footings and slabs.
- The structural effectiveness of framed structures and non-load bearing panels.

(b) Is the dwelling substantially free from rising or penetrating damp?

Not all dampness need be significant, eg a small patch caused by defective pointing would probably not give grounds for action under this item. What does matter is likely to arise from the lack of a proper DPC or major disrepair to the roof.

In reaching a decision surveyors considered:

- The extent of rising dampness on the day of survey. Extent is to be assessed primarily in terms of length. The height of rising damp is not to be considered here except for 'borderline' decisions.
 - If less than 20% of the total wall length (include external walls, load bearing and non-load bearing partitions) of the ground floor of the dwelling is affected by rising damp, then the dwelling is definitely above the Tolerable Standard.
 - If more than 40% of the total wall length of the ground floor of the dwelling is affected by rising damp, then the dwelling is definitely below the Tolerable Standard.
 - Dwellings where between 20% and 40% of the total wall length of the ground floor is affected by rising damp must be assessed by the surveyor in terms of the use of the affected areas. Where the rising damp is concentrated in the main living areas the dwelling should be recorded as failing the Tolerable Standard. However, if the majority of dampness is concentrated outwith the main living areas (within utility rooms, sculleries, box rooms etc) then the dwelling should not be recorded as failing the Tolerable Standard.

Condensation (surface or interstitial) is not dampness in terms of the Tolerable Standard. Surveyors were instructed to differentiate between condensation and dampness.

(c) Has the dwelling satisfactory provision for natural and artificial light, for ventilation and for heating?

There should normally be sufficient natural lighting for ordinary domestic purposes in each room in good weather conditions. The reference to artificial lighting should be interpreted in relation to all the circumstances in each house. It does not mean that it would be reasonable to insist on the provision of mains electricity in a remote cottage.

Ventilation of a living apartment from a tenement stair is unacceptable.

No preference need, in general, be shown for any particular form of heating; but a serious view should be taken of lack of either a working flue for a coal or gas fire or a 13/15 Amp power point from which electric heating could be worked.

In reaching a decision surveyors considered the following:

Lighting

- The size and location of windows and glazed door.
- The relationship between floor area and window size (minimum of 1/20th required).
- The provision of permanent artificial lighting fixed to the wall or ceiling.
- The number of rooms deficient in lighting (natural and/or artificial) in relation to the total number of rooms in the dwelling.

Ventilation

- The size and location of the openable parts of windows and doors.
- The position of windows and doors in relation to external obstructions.
- The relationship between the floor size and the opening area of windows (minimum 1/40th), where cross ventilation exists within a room this opening area can be reduced.
- The size and location of other (permanent or mechanical) ventilation.

Heating

- The presence, type and provision for heating in all rooms.
- The capacity of an electrical installation to provide an adequate heating source. This should not be 5 amp.

(d) Has the dwelling an adequate piped supply of wholesome water within the house?

The supply must be available to at least one tap at the sink. The supply must not be intermittent and must not be polluted. It must be within the house.

In reaching a decision surveyors considered:

- The adequacy of private supplies.
- The siting of this supply (ie it must be within the dwelling and should be at the kitchen sink).
- The route from the mains to the drinking tap should not be from a storage tank of an unsuitable type/condition. Stored supplies to the sink (as used in multi-storeys) must be both covered and vented.
- Water did not have to be crystal clear to be satisfactory – some discolouration can occur in satisfactory drinking water.

The absence or presence of lead pipe was not a consideration in terms of the Tolerable Standard but was recorded separately on the form.

(e) Has the dwelling a sink provided with a satisfactory supply of both hot and cold water within the house?

This item was defined as objectively as possible. The emphasis was placed not on the means of heating the water but on the availability of a supply that is adequate to the needs of the household. It must be within the house.

In reaching a decision surveyors considered:

- The presence of drinking water to the sink.
- The presence of an independent hot water heater. An appliance with storage capacity of fewer than seven litres was to be regarded as BTS, although instantaneous type heaters with a continuous supply were acceptable.

(f) Has the dwelling a water closet available for the exclusive use of the occupants of the house suitably located within the house?

The interpretation of this item changed with the issue of the Scottish Office Circular No 22 in 1995. Prior to this, a dwelling was regarded as BTS if the main WC was located directly off the kitchen. The new guidance altered the interpretation as follows:

'The water closet must be internal and accessible without going outside. It must also be suitably placed. If it opens off a kitchen, or other area used regularly for the preparation of food, it must be separated by a door from the kitchen or other area. In such circumstances the water closet must be so located as to permit within it, or in adjacent space which provides the sole means of access to the compartment, a wash-hand basin provided with a satisfactory supply of hot and cold water.'

The guidance further stipulated:

'It is important to note that while a water closet which opens directly onto a kitchen may meet the criteria in paragraph 10 that does not necessarily mean it will be tolerable in all circumstances. It must still be tested against other appropriate items in the Tolerable Standard. Thus, for example the water closet must have satisfactory provision for natural or artificial lighting and for ventilation and there must be an effective system for the disposal of foul water. Local authorities will also wish to satisfy themselves that the configuration of the rooms concerned does not prevent the kitchen from having satisfactory facilities for the cooking of food. If any one of these criteria is not met then the house will continue to fail the Tolerable Standard, as it will do also if some other location is unsuitable. There are of course, now many houses with more than one water closet; if at least one water closet in a house meets the requirements of item (f) of the Tolerable Standard the house meets the standard in respect of the criteria relating to water closets.'

In reaching a decision surveyors considered:

- The location of the WC in the dwelling. It must not open directly off winders on a staircase.
- The size of the dwelling. In two apartment dwellings it is acceptable for the only WC within the dwelling to be en suite. However, in three apartment dwellings there must be a WC accessible from a public area unless each bedroom has its own en suite WC.

(fa) Has the dwelling a fixed bath/shower and a wash-hand basin all with a satisfactory supply of hot and cold water suitably located within the house?

The Housing (Scotland) Act 2001 amended the definition of the Tolerable Standard in Section 86 (1) by introducing paragraph (fa): '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'.

At the time the fieldwork was undertaken, guidance had not yet been issued to enact this section of the Act. However, the decision was taken to assess the item as part of the SHCS 2002 BTS section.

In reaching a decision surveyors considered:

- The presence of a permanent drainage connection.
- The presence of a satisfactory supply of both hot and cold water.
- The location of the amenity. It must be internal and accessible without going outside; nor must it open directly off winders on a staircase.
- In a two-apartment dwelling it was acceptable for the only bath/shower to be en suite, however in three or more apartment dwellings there was required to be a bath/shower accessible from a public area unless each bedroom had its own en suite bath/shower.

(g) Has the dwelling an effective system for the drainage and disposal of foul and surface water?

This will normally be a public sewage system but in rural areas other arrangements will often be acceptable for limited numbers of houses.

In reaching a decision surveyors considered:

- The capacity of the system.
- The siting and design of private outfalls.
- The outfall or soakaway for rainwater downpipes.
- The adequacy of the connections to drainage/septic tank.
- Signs of damage to the drainage system.

Surface water which discharges into the surrounding area without provision for its removal is not BTS as long as the water drains away effectively and there is no signs of damage or ponding.

(h) Has the dwelling satisfactory facilities for the cooking of food within the house?

This does not mean that a cooker must be provided. The item is concerned with the availability of a suitably located space, ie well-ventilated and well-related to the pattern of movement within the house, at which normally a power supply is provided. In remote areas Calor gas might suffice.

In reaching a decision surveyors considered:

- The capacity of the cooker point, either a 30/45 amp power outlet, a mains or LPG gas point or any AGA-type range permanently connected to a flue. A 5/15 amp point for a worktop cooker was not suitable.
- The siting of the cooker point (or cooker). This was not to be in a cupboard or under the stairs off a room and must allow reasonable access around the cooker, though the cooker itself need not be present.

(i) Is there satisfactory access to all external doors and outbuildings?

This requirement is likely to be relevant in relation to houses in the attics of tenement houses and certain dwellings produced by conversion.

In reaching a decision surveyors considered:

- The layout, approach and climb to attic conversions. Surveyors should watch for sharp winders and access in poor repair.
- The layout of passages and corridors in conversions with long travel distances to the final exit.
- The pavings or surface treatment to all external doors of a building and in the case of flats inside the building to the entrance door of the sampled address.
- The access to bin stores located away from the dwelling or block.

The surveyor was not to consider the type of material that is used. The assessment was to be based within the context of the area. Urban standards should not be applied to a rural situation. The assessment was to be confined to the area surrounding the dwelling and was not to include an assessment of the access to remote outbuildings or long driveways.

Statutory action

Surveyors were also required to indicate whether, in their opinion, the dwelling would be subject to one of the statutory actions indicated in the Housing (Scotland) Act 1987. This did not mean that the local authority was notified as the purpose was to provide estimates of the number of dwellings likely to require action rather than to prescribe action to individual properties surveyed.

Repairs notice

The power to serve a repair notice is defined in Section 108 of the last Act. A dwelling need not be BTS to be subject to a repairs notice. It would normally be considered where the living conditions of the occupants are affected and/or the fabric of the house or an adjoining house is threatened.

Improvement order

The service of an improvement order would generally be considered where facilities are being provided for the first time to bring houses up to the Tolerable Standard, such as the installation of drainage facilities or a damp-proof course. It is defined in Section 88 of the Act.

Closure or demolition order

Closing orders, prohibiting the use of the house for human habitation, are issued by local authorities against houses that do not meet the Tolerable Standard. The provisions are defined under Sections 114 and 115 of the Act. Dwellings are normally subject to a demolition order when the building is dangerous to persons inhabiting or frequenting it or adjacent buildings. It would also be used when the premises are a danger to public safety. A closure order would be appropriate where there are other dwellings within the building which do meet the Tolerable Standard (eg tenement flats).

Quality control

During fieldwork, all physical survey forms were validated – checked for consistency and accuracy – by a trained team of surveyors using a specially written computerised system, managed by Communities Scotland staff. Although BTS assessments were checked as part of this process, it was survey policy not to change the status of any BTS judgment (ie to non-BTS). This is a standard methodological response to the problem of only being able to identify false positives, not false negatives (removing false positives only would incorrectly depress the estimates, potentially leading to bias).

As a matter of good practice, and as part of the development of improved validation specifications for the next SHCS, it was decided to repeat and extend the validation process as part of the post hoc data preparation phase of the study. Specifically, both the false positives (ie all dwellings assessed as BTS) but also those dwellings which had not been assessed as BTS but where the scores entered on other parts of the form would indicate that the dwelling could be BTS (ie possible false negatives) were re-examined by an experienced analyst. This review was undertaken within strict rules. A change could only be made if one or more of the following were true:

- There were at least two pieces of corroborative evidence elsewhere on the form (otherwise it could not be determined whether the BTS information, or the other piece of information, was wrong).
- The surveyor had given a written explanation (on the form) which unambiguously indicated incorrect reasoning or misinterpretation of the BTS briefing guidance.
- There had been a data-punching error (ie the score entered on the system was not what was written on the form). The survey data was double-punched and checked, but it is impossible to completely eliminate errors in the transfer of information.

Table T7.1 summarises the results of this review.

Overview of post hoc quality check of BTS counts

 TABLE
T7.1

TS item	Types of false positive	Types of false negative
Structural stability	None found	Unstable room indicated and confirmed by repair scores so is BTS
Rising/penetrating dampness	RPD present, but not enough to be BTS	Room by room evidence indicated RPD at BTS level, so is BTS
Heating, lighting and/or ventilation	Single room (excluding WC) with no vent Single room (including WC) with no heating Multi-storey flats vent to common close, but this is itself vented so apartment is not BTS Facility existed but was in disrepair Data entry errors	Room by room scores indicate inadequate HLW, confirmed by repair scores to items, so dwelling is BTS Bathroom inadequately ventilated – is BTS Data entry errors
Water supply	Incorrectly judged as BTS due to lead piping Data entry error	None found
H/C to sink	Amenity existed but was in disrepair	Data entry errors
WC location	Evidence that amenity existed and was suitably located (in 1 case dwelling was being renovated)	None (suspect some incorrect cases but insufficient evidence)
Fixed bath/shower	Amenity existed but was in disrepair	None (suspect some incorrect cases but insufficient evidence)
Drainage/disposal	Facility existed but was in disrepair	Repair scoring indicated absence of facility
Cooking facilities	Amenity existed but was in disrepair or dwelling was being renovated	None found
Access	Wrong aspect of access was assessed (eg internal rather than access to dwelling)	Data entry errors

The strictness of the approach taken means that some cases were identified where we suspect the surveyor entered the wrong codes on the form, but there was not enough evidence to justify changing the data. There would have been no way to assess these cases without revisiting the dwelling which was impractical on cost and time grounds as well as the potential disruption to the occupier.

The estimate reported in **Chapter 5** is based on the data set as reviewed and cleaned according to the above process. It is the most robust possible estimate of BTS available from the SHCS 2002 data set.

Measurement issues

The following observations are made in the light of the very small numbers of BTS dwellings in the SHCS sample, which means the estimates are considerably more susceptible to sampling error than those which have been derived from a larger proportion of the sample. This is particularly true for the subgroup estimates (ie reasons for failure) and we would caution against over-interpretation of the profile.

We would regard the estimates as being potentially susceptible to systematic errors in measurement on items 6 and 7, relating to the provision of a WC and a fixed/bath shower, which we would regard as potentially underestimated. In a number of cases, the survey form indicated that the room in which one or both these amenities were located was off a winder on the staircase, which is BTS, but the surveyor had not judged the property BTS. However, as more than one piece of evidence was required for any data change, these cases could not be adjusted and are **not** included in the BTS count reported in **Chapter 5**.

The non-intrusive nature of the SHCS physical inspection also makes it particularly difficult to assess some aspects of the Tolerable Standard. In particular, no testing of the drinking water is performed, nor do surveyors carry out detailed structural engineering tests, and so estimates of failure due to water supply and structural stability are best regarded as a minimum count.

Overall, Communities Scotland regards the BTS estimates reported herein as robust and usable estimates, given the caveats listed here and the inherent statistical limitations of low prevalence sample survey estimates.

Estimating BTS in vacant dwellings

No estimate for BTS in the vacant stock is included in **Chapter 5**. However, work was conducted to assess the possibility of producing such an estimate, according to the methodologies set out below.

The process had to take into account two issues. Firstly, vacant dwellings have different weights and grossing factors than occupied dwellings. The occupied stock weights and grossing factors were calculated according to local authority. Secondly, vacant dwellings did not undergo full physical surveysⁱ.

The first approach tried was an imputation process in which a series of logistic regression analyses were conducted within subgroups (houses/flats with dwelling description/external survey) to identify predictors for BTS. The results of the regression analyses were used to organise cases into groups of stereotypes and the proportions of each group that should be BTS calculated from the occupied stock. Random numbers were allocated to all vacant cases. The imputation was then done by allocating a score of 2 (BTS) to all cases with a random number below or equal to the percentage of occupied stock that were BTS. However, the level of variability in this model was too high and the results were discarded.

The second approach involved a three-step calculation of the rate of BTS overall rather than within-group imputation, based on the assumption that the percentage of BTS dwellings that had a dwelling description would be the same as amongst vacant dwellings that had a full survey. Firstly, the vacant dwellings which did receive a full survey were assessed in the same way as occupied dwellings. Secondly, the ratio of the likelihood of internal and external elements being BTS was calculated using step 1 data and applied to those dwellings that had an external survey only.

However, since no individual cases were imputed, no weights could be applied and the effect of sampling fractions across local authority areas could not be considered. The method also relied too heavily on other estimates of vacancy which were not considered robust. The decision was therefore taken not to use the results of either methodology. Further details of the approaches taken may be obtained from Communities Scotland on request.

ⁱ The small proportion which did were the result of (randomly distributed) errors in surveyor practice (eg gaining access to the dwelling via a letting agent, despite having been given instructions not to do so).

Dampness and condensation

The following summarises the guidance given to surveyors in their assessment of dampness, condensation and mould growth.

Rising damp

Rising damp generally exhibits some or all of the following characteristics:

- Wallpaper peeling away or bubbling/flaking paintwork at low levels.
- Lifting floor tiles.
- Discoloured patch on wall with a tide mark (can be as high as one metre above ground floor level) occurring at a sharp change from wet to dry.
- Deterioration of plaster and leeching of salts above skirtings.

It is caused by lack of a DPC, failure in a DPC or the bridging of a DPC.

Surveyors were directed to assess rising damp on a linear basis on walls. They were cautioned to make every effort to distinguish it from condensation or penetrating damp.

Penetrating damp

Penetrating damp can occur:

- Around windows (poor seal, damaged putty).
- Around doors (poor seal).
- On ceilings (missing or cracked roof tile/slate, fault in flat roof, poor flashings, defective gutters or down pipes).
- On walls (bridged wall ties, poor brickwork, poor rendering).
- On chimney breasts (slipped brick in unused (uncapped) flues or cracked haunching).

The assessment of penetrating damp included traumatic damp or damp from a source within the dwelling or an adjacent dwelling. This will normally occur due to leaking pipes, drains, tanks or radiators.

Surveyors were directed to assess penetrating damp on an area basis on walls and ceilings. They were cautioned to make every effort to distinguish it from condensation or penetrating damp.

Where evidence remained of rising and/or penetrating damp from a defect that had since been corrected, surveyors were told not to record its presence.

Condensation

Surveyors were directed to assess condensation on an area basis on walls and ceilings. It was acceptable to ask the occupant if condensation was found in the dwelling given that the defect can occur intermittently. Condensation on glazing was to be disregarded.

Mould

Surveyors were directed to assess mould on an area basis on walls and ceilings. It was expected that mould would only be recorded if dampness or condensation had been found to be present. It was acceptable to ask the occupant if mould growth had damaged clothing, bedding, carpets or furniture, given that the defect can occur intermittently.

Whole dwelling dampness

A new question was introduced in the SHCS 2002 to enable overall dampness to be checked. At questions H10-H13, which cover the evaluation of dampness, condensation and mould described above, surveyors were told to assess the extent of these defects over the dwelling as a whole as well as on a room-by-room basis. The categories and basis for this assessment were the same as for each individual room.

Calculating NHER

This Annexe outlines the process by which the profiles of the energy efficiency of the stock reported in **Chapter 11** were produced.

Overview of the methodologies

There are two methodologies in common use to determine the energy efficiency profile of dwellings.

Standard Assessment Procedure (SAP)

This has been in use since 1993 and is the UK Government's preferred system for home energy rating. It is based on the space and water heating running costs per square metre in the home, and uses a scale of 1 (poor) to 100 (excellent). It does not take into account other energy factors like lighting, the use of domestic appliances or standing charges, how many people live in the house and how they prefer to heat it. Nor does it incorporate a locality factor taking into account the potential differences in climate between different parts of the UK (eg the south coast of England and the Orkney Islands).

National Home Energy Rating (NHER)

NHER assesses energy efficiency inside a dwelling on a scale of 0 (poor) to 10 (excellent). The rating produced reflects the total fuel costs per square metre of the floor area of the dwelling required to achieve an adequate overall temperature. It also includes a locality factor. A high NHER score denotes a dwelling which needs less energy to achieve a given temperature standard, rather than one in which occupants shut off power to keep costs down. The NHER is the preferred methodology in Scotland.

The NHER assessment can be carried out at four different levels, the choice of which depends on time and resources as well as desired outputs. At the simplest level, Level 0, up to 19 items are measured in a procedure which takes approximately five minutes per dwelling. This gives a score to the nearest integer with a standard error of 1.0. At the most complex level, Level 3, approximately an hour is required to assess both full dimensional data including room measurements, and occupancy data. Levels 1 to 3 can produce outputs for individual dwellings. The outputs at higher levels are more accurate (the ratings are calculated to one decimal place) but are also more resource-intensive and may not be required for purpose.

The SHCS uses an **enhanced** Level 0 assessment to produce the NHER profile reported in **Chapter 11** (see **Box**). At this level, the scale does not deliver scores for individual dwellings but instead produces the distribution of the NHER rating and other indicators across the stock as a whole. The enhancement includes many of the items gathered at Level 1: otherwise, the default values are used (see **next section**). This approach enables the survey to improve upon the Level 0 assessment conducted in the SHCS 1996.

Calculating the NHER profile

The NHER calculation is produced using AutoEvaluator version 3.48, a bespoke computer program produced by the National Energy Foundation which is based on an approved version of the Building Research Establishment's BREDEM methodology. The program also produces SAP 1998 to provide comparability with SHCS 1996 output.

The calculation can be summarised as follows:

- 1 The model calculates the total fuel use for the dwelling under the standard occupancy assumption for the NHER. This is a BREDEM calculation coupled with the necessary algorithms for estimating auxiliary (lighting, domestic appliances) energy use.
- 2 The total energy running cost for the dwelling is then determined using the fuel consumption calculated in (1) above, the NHER standard fuel costs and standing charges. The standard fuel costs and charges are based on the three-year historical average costs.
- 3 The total energy costs are then divided by the total floor area of the dwelling.
- 4 This indexed cost per square metre is then translated into an NHER rating.

Components of enhanced Level 0 NHER assessment

Location data based on postcode.

All Level 0 data gathered.

Level 1 data gathered:

- Construction data (roof type, wall type, floor area and storey height)
- Scottish Wall Construction data
- Primary heating controls
- Cylinder insulation type
- Primary pipework insulation

Level 2 data gathered:

- Actual occupancy rather than the default occupancy (based on floor area).

Defaults are used for all other Level 1 and 2 items

Financial data

Defining household income

The household income used in this report is the net income of the Highest Income Householder and their spouse/partner. The income of any other member of the household is not included. Household income comprises all earned income (from employment, self-employment, part-time and casual work), all income from state benefits (including Council Tax and Housing Benefit), student income, non-state pensions, investment income and any other regular non-work income.

The data for individual components of the income were collected in the social survey under the following main headings:

- Earnings from main job (employed or self-employed) and other jobs.
- State benefits including state pensions.
- Other regular income (non-state pensions, investment income, rent from property, maintenance payments, student income etc).

All income data were thoroughly checked for inconsistencies and corrected where the source of error could be readily identified. Mostly, errors were due to incorrect recording of the period for the income amount (eg per annum amounts were incorrectly recorded as per month).

Where amounts given covered a period of less than a year, it was assumed that they were typical incomes for the purpose of calculating the annual income. Earnings data were requested net (after tax and national insurance), but gross amounts were collected if the respondent was unable to provide a net amount. Tax and national insurance were calculated for the amounts given gross and deducted to give the net annual income. Many benefits are not taxable. The amount received was requested for benefits and other regular income sources. The amounts for these income sources were therefore assumed to have had tax already deducted, where applicable.

Information was also collected on the receipt of the Winter Fuel Payment. This was added to the income of all households containing a person of state pension age and to those households with a person aged 60 or over who had stated that they had received this payment.

Imputation

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

Strategy

In order for the survey to be able to produce income and housing costs, a statistical process known as imputation was 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.

The imputation of missing income and housing costs data was carried out by the National Centre for Social Research according to a set of requirements specified by Communities Scotland. Hot Deck imputation was used for all missing income and housing costs 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.

Earned income

Earned income was imputed for the Highest Income Householder and his or her spouse separately. The numbers of missing items of earned income were as shown below.

	Missing	Total	% missing
Highest Income Householder, main earnings	2,313	9,941	23.3%
Highest Income Householder, other earnings	94	292	32.2%
Spouse, main earnings	1,258	5,489	22.9%
Spouse, other earnings	55	203	27.1%

Benefits and other regular income

Amounts for these sources of income were collected as totals received for each benefit or income source, by both the Highest Income Householder and their spouse. Totals received by both HIH and spouse were imputed for each benefit or other income item, where individual items were missing. In addition, there were households where a total for all benefits or for all other regular income was missing and this was imputed for these households.

	Cases with missing items	Total	% with any missing items
Benefits	5,233	13,530	38.7%
Other regular income	2,766	6,592	42.0%

There were also households where no information had been given on any income sources. For some of those households, a question on income band had been answered and the mid-point of income band was imputed for their total income. Income was imputed in this way for 91 cases (0.5% of social survey cases). Where there is no information on income band either, household income is unavailable. Household income is unavailable for 107 cases (0.6% of social survey cases).

Mortgages

Mortgage payments were imputed for households with endowment mortgages and for those with non-endowment mortgages separately. Mortgage items were missing in 17.7% of households with a mortgage.

Rent

The amount of rent paid before deduction of housing benefit was imputed for households where this item was missing. This rent item was missing for 20.7% of households paying rent.

A detailed paper on the imputation process is available on request from Communities Scotland.

Comparison of income data with other surveys

The overall distribution of income was compared with the Scottish Household Survey results for 2001 and showed close agreement. The median income increase since 1996 is compared with that observed in the Family Resources Survey and was found to be consistent. This comparison was also made for pensioner households in particular, for the purpose of verifying fuel poverty results, and this was also found to be consistent.

The HBAI definition of income before housing costs

This is the definition of income used in the Scottish Fuel Poverty Statement published in August 2002.

Under this definition, income includes total income from all members of the household, including dependants, and includes the following components:

- Usual net earnings from employment.
- Profit or loss from self-employment.
- All Social Security benefits (including Housing Benefit, Social Fund, maternity, funeral and community care grants, but excluding Social Fund loans) and Tax Credits.
- Income from occupational and private pensions.
- Investment income.
- Maintenance payments, if a person received them directly.
- Income from education grants and scholarships (including for students, top-up loans and parental contributions).
- The cash value of certain forms of income in kind (free school meals, free welfare milk, and free school milk),

Under this definition, income is net of the following items:

- Income tax payments.
- National Insurance contributions.
- Council Tax.
- Contributions to occupational pension schemes (including additional voluntary contributions) and any contribution to person pensions.
- All maintenance and child support payments, which are deducted from the income of the person making the payment.
- Parental contributions to students living away from home.

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