
**ASHFORD BOROUGH
COUNCIL**

**PRIVATE SECTOR HOUSE
CONDITION SURVEY**

Final Report

Managed Services and Consultancy Ltd

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1. Introduction

Background

1.1. The Housing Grants, Construction and Regeneration Act 1996 and the accompanying DOE Circular 17/96 Private Sector Renewal: A Strategic Approach set out the framework in which private sector housing strategies were to be developed. There are also other important pieces of legislation and guidance among them The Home Energy Conservation Act 1995, which required local authorities to develop a strategy for energy conservation for the following 10 years. More recently with the introduction of "best value" the local authority is obliged to collect information on specific aspects of private sector housing. There is also a new requirement to take action on fuel poverty as part of the local authority energy strategy. For the future, there is a need to consider the likely impact of the introduction of the Housing Health and Safety Rating which is due to replace the existing housing fitness standard within the next few years, and the new "Decent Homes" standard.

Housing Grants, Construction and Regeneration Act 1996

1.2. The Circular advises local authorities to develop effective housing strategies. Amongst many other provisions, this Circular severed the link between the fitness standard for housing and mandatory grant eligibility. This approach has been replaced by a discretionary approach to grant allocation, which means authorities must be clear about their aims when determining objectives and targets for dealing with identified private sector housing need and conditions.

1.3. The Circular emphasises that information on the condition of the stock is essential for the development of effective private sector renewal strategies. It can be a basis for determining:

- The nature and extent of problems in the private sector stock
- The levels of investment required to tackle them
- Priorities for action, and
- The effectiveness of decisions already taken and the expenditure already committed

DETR Guidance on house condition surveys

- 1.4. Methods of gathering information on the condition and energy efficiency of the stock have been greatly assisted by the publication of comprehensive guidance on local authority house condition surveys. The guidance which dates from 1993 includes a methodology which comprises a detailed form in a modular format and what is close to a step by step guide to implementing a survey (Local House Condition Survey Guidance Manual 1993 DOE).
- 1.5. This guidance has been backed up by a software package, BRELASS, which is produced by the Building Research Establishment and this has been used to analyse the data collected in the current survey.
- 1.6. The year 2000 saw the publication of further DETR guidance, Collecting, Managing and Using Housing Information which updates the 1993 guidance and emphasises the need to make full use of information gathered in stock surveys. It also includes guidance on the Housing Health and Safety Rating System.
- 1.7. The Home Energy Conservation Act 1995 for the first time, required local authorities to develop a strategy for energy conservation. An important prerequisite to developing a strategy is the existence of suitable methods of measuring energy efficiency.
- 1.8. In the early 1990s the Government introduced its own method of rating the energy efficiency of a domestic dwelling, the Standard Assessment Procedure. This is a rating on a scale from 1-100: the higher the number, the better. A SAP rating has been calculated for every dwelling in the survey where access was achieved.
- 1.9. More recently the local authority has been issued with guidance asking them to report to the DETR on their policies, strategies and achievements in tackling fuel poverty as part of their annual progress report. The survey includes a specific measure of fuel poverty to allow this reporting to take place.
- 1.10. The survey used a stratified random sample of 1,668 dwellings from the Ashford Borough Council Tax list. The sample was stratified by area. This was done in order to maximise the potential for making effective comparisons between areas. Table 1.1 below gives a breakdown of the sample.

Home
Energy
Conservation
Act 1995

The survey
method

Table 1.1 Sample stratification groups

Areas	Sample
Tenterden	417

Rural	417
Ashford	834
Total	1668

- 1.11. Each dwelling selected for survey was visited a minimum of three times and, where access failed, basic dwelling information was gathered including a simple assessment of condition. To ensure the sample was not subject to a non-response bias, the condition of the dwellings where access was not achieved was systematically compared to those where the surveyors were successful. Where access was achieved, a full internal inspection was carried out including a detailed energy efficiency survey. In addition to this, where occupied, an interview survey was undertaken. More detailed information on the sampling methods and the methodology for dealing with non-response is given in Appendix A.
- 1.12. The basic unit of survey was the 'single self contained dwelling'. This could comprise a single self-contained house, a self contained flat or a House in Multiple Occupation such as a shared house or house divided into bed-sits. Where more than one flat was present the external part of the building encompassing the flat, and any access-ways serving the flat, were also inspected.
- 1.13. The data was collected using handheld computers although this is an adaptation of a paper form. This house condition survey form is based on the survey schedule published by the then DOE in their 1993 guidelines (Local House Condition Surveys 1993 HMSO ISBN 0 11 752830 7). A copy of the form is included in Appendix D.

Survey response

1.14. The original target was for a minimum of 1,000 completed surveys out of 1,668 addresses that were issued. Of these access was achieved in 995. Further analysis of access achieved is given in Appendix A.

Weighting the data

1.15. The data was weighted using the MSC Reports software. Two approaches to weighting the data have been used.

1.16. The first method is used for data such as building age, which has been gathered for all dwellings visited. In this case the weight applied to the individual dwellings is very simple to calculate, as it is the reciprocal of the sample fraction. Thus if 1 in 10 dwellings were selected the sample fraction is 1/10 and the weight applied to each is 10/1.

1.17. Where information on individual data items is not always present, i.e. when access fails, then a second approach to weighting the data is taken. This approach is described in detail in Appendix A, but a short description is offered here.

1.18. The simplest approach to weighting the data to take account of access failures is to increase the weight given to the dwellings where access is achieved by a proportion corresponding to the access failures. Thus if the sample fraction were 1/10 and 10 dwellings were in a sample the weight applied to any dwelling would be 10/1 which would give a stock total of 100. However, if access were only achieved in 5 dwellings the weight applied is the original 10/1 multiplied by the compensating factor, 10/5. Therefore $10/1 \times 10/5 = 20$. As there are only 5 dwellings with information the weight, when applied to five dwellings, still yields the same stock total of 100. The five dwellings with no data are ignored.

1.19. An access rate of 60% is one of the best achieved in recent years. Whilst only a 100% access rate can guarantee an unbiased sample there is no evidence to suggest that the access rate achieved has introduced any bias. When externally gathered information (which is present for nearly all dwellings) is examined the stock that was inspected internally is present in similar proportions to those where access was not achieved suggesting no serious bias has been introduced.

Survey results

1.20. The use of a sample survey to draw conclusions about the stock of the Borough as a whole introduces some uncertainty. Each figure produced is subject to sampling error, which means the true result will lie between two values, e.g. 5% and 6%. For ease of reading, the data are presented as single figures rather than as ranges. A full explanation of these confidence limits is included in Appendix A.

Rounding of results

1.21. Throughout the report all percentages are reported to the nearest 1%, all dwelling numbers less than 1,000 are rounded to the nearest 10 and all dwelling numbers greater than 1,000 are rounded to nearest 100. The percentages are calculated on the basis of the unrounded numbers and then rounded to the nearest per cent. This will often mean that columns do not sum to the total for both percentages.

1.22. This report includes the main results for the survey. Abstracts of the data are presented in figures and tables throughout the text. A main table from "MSC Reports" (the reporting software used for the survey analysis) usually supports each figure in the text and these are referenced at the end of each paragraph. (These can be viewed on or printed from the software but hard copies are also supplied in a separate volume called "MSC Reports: Outputs").

National comparisons and regional comparisons

1.23. The main source for comparison of figures to the national position, used in this report, is the 1996 English House Condition Survey (EHCS) and this includes some data on regions and local authority groupings. The groupings do not readily lend themselves to cover Ashford Borough but it was probably included in the "Shire District" grouping. We have quoted this as a comparison where appropriate.

1.24. The 1996 EHCS has many substantial changes to typologies and wherever possible this report has tried to match these. If this has not been possible because data was collected in a different manner or different data was collected this report will refer to the 1991 EHCS.

1.25. This report refers to Urgent Costs, Repair and Replacement Costs, and Comprehensive Costs. These are "Plain English" definitions taken from the EHCS and are used to allow comparisons with this important national survey. In the BRELASS database which, is the basis of the reports, the naming conventions are different for two of the categories. Repair and Replacement Costs correspond to Non-urgent Costs and Comprehensive Costs to 10yr Replacement Costs.

2. Profile of the housing stock

Size of the dwelling stock

2.1. In the year 2001 there are an estimated 36,900 private sector dwellings (including housing association dwellings) in Ashford Borough (Table G1). The total of the private sector stock is derived from weighting the results for all dwellings surveyed. The total is lower than the original Council tax list total as it takes into account properties which are ineligible as they are non-residential, or where dwellings have been demolished or converted to other uses. Details of this estimate are contained in Appendix A.

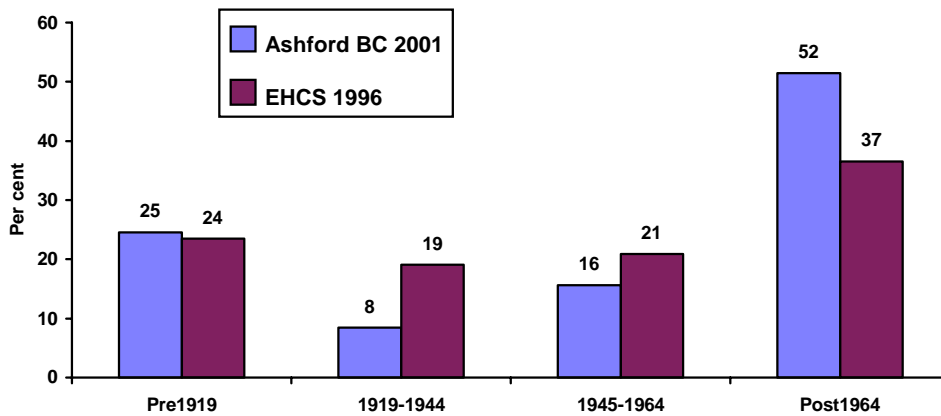
Age of the dwelling stock

2.2. The age profile of the stock in Ashford Borough is considerably more modern than the national profile but there is a similar proportion of the oldest stock i.e. that built before 1919. The stock profiles are illustrated in Figure 2.1. The shortfall is made up in the post-1964 stock.

Figure 2.1 Date of construction of the dwelling stock (England:

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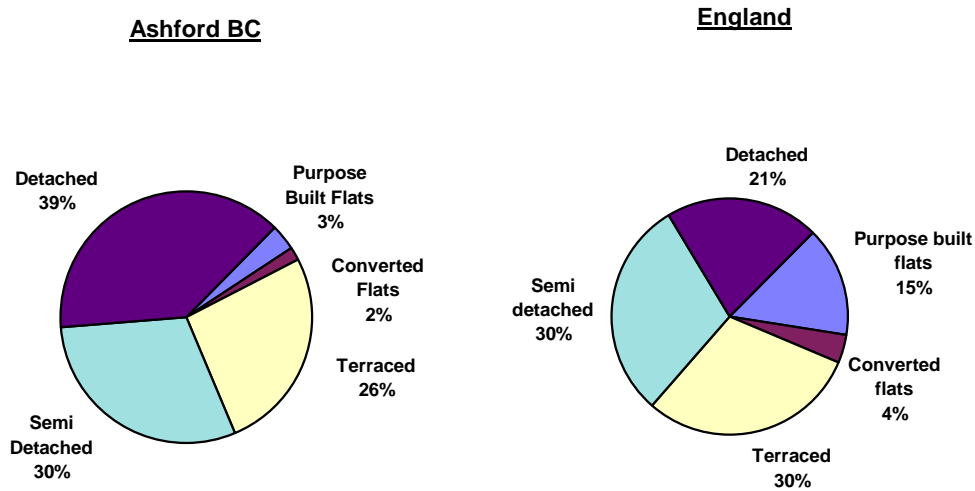


1996 EHCS)

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- 2.3. There are some marked differences between the profile of building types in Ashford Borough and the national profile. The proportion of detached houses (39%) is nearly double that found at the national level (21%). The proportion of semi-detached houses is the same as the national average at 30%. There are however fewer terraced houses, (26% compared to 30% nationally) purpose built flats, (3% compared to 15% nationally) and converted flats (2% compared to 4% nationally). (N.B. Under this typology flats associated with non-residential properties are grouped in with converted flats) (Table G7).

Figure 2.2 Building types: Ashford Borough and England (1996)



EHCS)

2.4. The 36,900 total of private sector dwellings includes a small proportion of dwellings whose tenure does not strictly fit into the three categories: owner occupied, housing association and privately rented. These include such properties as caretaker's accommodation and other job related tenures. These various other tenure types represent approximately 1% of the stock. (Table G4).

2.5. Table 2.1 gives comparative percentages of private stock within each tenure, first for Ashford Borough and then England as a whole.

Table 2.1 National (1996 EHCS) and local tenure proportions (private sector)

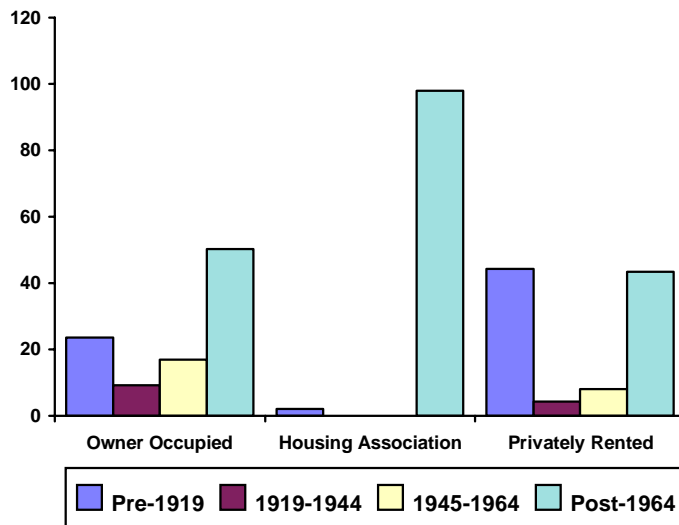
	Ashford Borough 2001	Ashford Borough 2001	England 1996
Owner occupied	32,400	88%	83%
Housing association	1,300	4%	5%
Privately rented	2,900	8%	11%
Other	250	1%	N/A

2.6. Figure 2.3 illustrates the differing dwelling age profile between the main tenures (Table G6).

Tenure

Tenure and age comparisons

Figure 2.3 Tenure by date of construction (Ashford Borough)



- 2.7. The age profile of the owner occupied stock is broadly similar to the overall profile but this is largely due to the dominance of the owner occupied sector.
- 2.8. The profile for housing association dwellings revealed the most modern of all tenures. Nearly all housing association dwellings were built post-1964. There are some similarities here with the national profile where this sector is also more modern, but this is far more pronounced in Ashford Borough. It should however be noted that the sample is very small and results for this sector should be treated with some caution (Table G6).
- 2.9. Nationally, 53% of private rented dwellings originate from the pre 1919 period making it the tenure with the oldest dwelling age profile. The position in Ashford Borough is less pronounced with 44% of dwellings dating from before 1919. Most of remainder was post-1964 (43%).

Conclusions

- 2.10. There are some marked differences between the national age and building type profiles and those found in Ashford Borough. In general the stock in Ashford Borough is more modern, which normally leads to expectations of fewer problems of disrepair and unfitness. The proportion of pre-1919 stock, which usually accounts for the worst conditions however is at the same level as the national average. The influence of building type on unfitness and disrepair leads to expectations of a lower than average unfitness rate. This is due to a greater proportion of detached properties in Ashford Borough compared to nationally. These dwellings are usually found to be in better condition than other property types both by the national and local surveys. The influence of tenure would also be expected to result in lower rates of unfitness and disrepair as the tenure usually associated with poor conditions, the private rented sector, is present in a smaller proportion than is found nationally.
- 2.11. The age, building type and tenure profile usually give an indication of the likely conditions to be found in an area. While the main indicator of condition is usually the age of the stock it is the proportion of pre-1919 stock, which is usually associated with the worst conditions. In Ashford Borough this is the same as the national average. The presence of large numbers of detached dwellings and the small proportion of private rented properties however lead to an overall expectation of repair and unfitness levels slightly lower than the national average.

3. Use of the housing stock

Vacant dwellings

- 3.1. In Ashford Borough 890 (2%) dwellings are estimated to be vacant compared to 4% nationally (Table V1).
- 3.2. The reasons for vacancy are given in Table 3.1 below with the corresponding national figures (Table V2). The national figures are drawn from the 1991 EHCS as the 1996 survey does not collect this information. The 1996 EHCS does however state that 56% of vacant dwellings nationally are “problematic”, i.e. in need of work before they can be reused.

Table 3.1 Vacant dwellings by reason for vacancy

Vacant status	Ashford Borough(2001)	Ashford Borough(2001)	England (1991)
Vacant awaiting sale	220	24%	39%
Vacant being modernised	120	14%	14%
Newly vacant	180	21%	18%
Mid-term vacant (1 - 6 months)	270	31%	14%
Long term vacant (more than 6 months)	90	11%	15%
Total	890	100%	100%

- 3.3. Vacant dwellings in the first three categories are of less concern as they are associated with periodic changes in occupancy, which are part of normal turnover in the housing stock. Of greater importance are dwellings thought to have been vacant for more than 6 months. The results for the long-term vacants are slightly lower than the national position, however, the sample is so small that this cannot be regarded as a significant finding (Table V2).

Density of occupation

- 3.4. The average number of persons per dwelling is 2.47, which is just below the national average of 2.56 (Table R13).
- 3.5. The occupation density figures in table 3.2 overleaf are compared to the 1991 EHCS figures as the 1996 EHCS does not collect this type of information, but relies solely on the bedroom standard.

Table 3.2 Occupation and floor space by tenure (excluding HMOs)

		Owner occupied	Housing assoc.	Private rented	All ⁽¹⁾ dwellings
Ashford Borough	No. persons	78300	3400	5900	88000
	No. dwellings	31400	1300	2500	35500
	No. persons per dwelling	2.49	2.52	2.34	2.47
	Mean floor area of dwelling (sq. metres)	121	68	98	117
	Floor space per person (sq. metres)	49	27	42	47
England	No. persons per dwelling	2.61	2.14	2.29	2.56
	Mean floor area of dwelling (sq. metres)	87	58	74	84
	Floor space per person (sq. metres)	33	27	32	33

(1) Excludes HMOs and vacant dwellings. Includes all tenures, not just the 3 main ones. Also excludes dwellings where no social data was collected.

- 3.6. Table 3.2 allows comparison of the different tenures to the national data. The dwelling total is slightly lower than the overall stock total as vacant dwellings cannot, by definition, be included (there are no occupants to count) and HMOs are also excluded. Dwellings where residents refused to answer social questions are also excluded.
- 3.7. Housing association dwellings are the smallest and average the smallest mean floor area at 27m² per person. Private rented dwellings are considerably larger and have a large mean floor area per person (42m²) while owner occupied dwellings are the largest and have the greatest amount of floor space per person (49 m²) (Table R13).

- 3.8. Floor space varies considerably with building type. Unsurprisingly the largest dwellings are detached houses (167m²). Semi-detached and terraced houses average 91m² and 85m² respectively. The dwellings with the smallest average floor space are converted flats averaging 27m² (Table R17). The building types described are those used in the 1996 EHCS.
- 3.9. There is some variation in occupancy between dwelling types. In general the larger dwelling types (terraced, semi-detached and detached) have the highest density of occupation all at 2.5 persons. Purpose built flats have the lowest density, 1.7 persons per dwelling with converted flats slightly higher at 1.9 persons per dwelling. The largest mean floor space per person is found in detached houses with an average of 66m² compared to 37m² in semi-detached and 34m² in terraced houses. Due to their considerably smaller size, purpose built flats are considerably smaller with regard to mean floor space per person with 29m² (Table R17).
- 3.10. The very oldest dwellings (pre-1919) were found to be the largest with an average floor space of 138m². Dwellings then drop in size to 119m² for 1919-1944, 102m² for 1945-1964 and 112m² for the most modern, post 1964 dwellings (Table R15).

Overcrowding

- 3.11. The approach taken to overcrowding has been to calculate a simple room rate by dividing the number of persons in a dwelling by the number of habitable rooms. This measure is used firstly for its simplicity but secondly because it is the same measure used by the census, which will allow comparisons to be made. The census definition of overcrowding adopts a two-tier approach with a room rate of greater than 1 considered as being overcrowded and greater than 1.5 as seriously overcrowded. Using these definitions 2% of dwellings are overcrowded and less than 1% are seriously overcrowded (Table R09).
- 3.12. Overcrowding was discovered in 7% of privately rented dwellings and serious overcrowding in less than 1% (Table R07). No overcrowding was discovered in housing association dwellings but over a quarter were on the threshold (Table R06). In owner occupied dwellings the rate is at 2%, the same as the overall position (Table R04).

Under occupation

3.13. At the opposite end of the scale some properties can be regarded as under occupied. In some cases occupiers may welcome assistance to convert large houses into flats. Dwellings with 6 rooms or more were considered as having potential for conversion into flats. There are an estimated 9,700 owner-occupied dwellings of this type in Ashford Borough. Of these an estimated 380 were dwellings where an elderly person lives alone. Single adults account for an estimated 540 such dwellings (Table R100b).

Houses in multiple occupation

3.14. The legal definition of an HMO is a house which is occupied by persons who do not form a single household. This definition includes bed-sit accommodation but also covers shared houses and self-contained converted flats. The basic unit of the survey was the Council Tax dwelling. A house sub-divided into bed-sits or a shared house appears in the sample as a single dwelling. However converted flats also appear as single dwellings. The results in Table 3.3 below are based on dwellings so to obtain a total of houses in multiple occupation containing converted flats the total must be divided by the average number of converted flats in each house. There were a total of 660 converted flats and these are estimated to be found in 240 houses. The estimated total of HMOs is therefore 490, which is 1% of the stock.

Table 3.3 Location and type of HMOs (dwelling totals)

	Converted flat	Converted flat (>=3 storeys)	Shared house	HMO (linked to employment)	Registered home	
Tenterden	20	30	0	0	10	60
Rural	240	0	0	70	0	310
Ashford	160	210	170	0	0	540
	420	240	170	70	10	910

N.B The 660 converted flats were contained in an estimated 240 houses

3.15. The main concentration of HMOs is in Ashford Town itself. Most importantly nearly all the flats of 3 storeys or more are located in Ashford. There is a mandatory duty on the Council to inspect these houses to ensure they comply with Fire Safety legislation.

Conclusions

3.16. There is evidence of a very small number of medium to long-term vacant dwellings that could be brought into use. This result should however only be considered in the context of other evidence, as surveys of this type are not particularly effective in gathering data on vacant dwellings.

- 3.17. Overall dwellings are larger in terms of floor space compared to the national average but are occupied at a slightly higher rate. This results in Ashford Borough occupiers enjoying considerably more space per person than the national average. There was however evidence of over-crowding and while the greatest numbers were in the owner occupied sector the largest percentage was found in privately rented dwellings. At the opposite end of the scale there was evidence of under occupancy of dwellings and some of this was by elderly occupiers who may welcome assistance to sub-divide their dwellings.
- 3.18. While HMO numbers are small they include 240 self contained flats in Ashford and Tenterden where because of their size there is a mandatory duty to inspect to ensure compliance with Fire Safety legislation.

4. Facilities and services

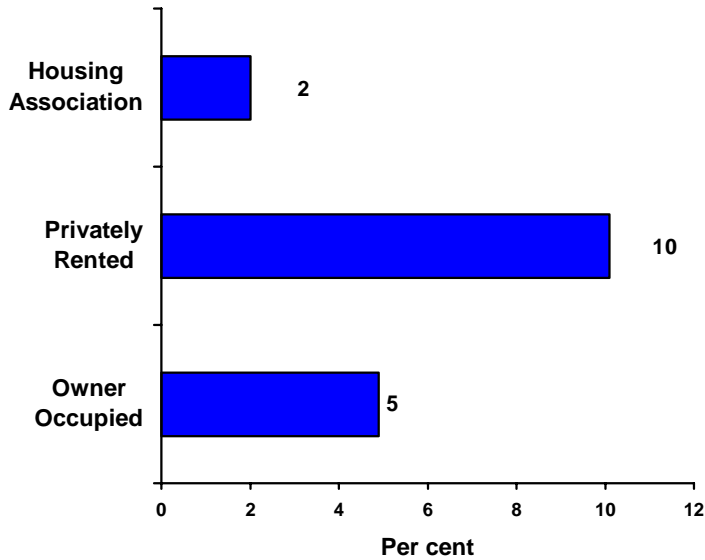
4.1. The survey found that 99% of singly occupied dwellings now have the five basic amenities i.e. a kitchen sink; a bath or shower in a bathroom; a wash-hand-basin; hot and cold water supply to each of these; and an internal WC (Table A3).

Kitchens

4.2. The high level of amenity provision means that an analysis of facilities and services should shift to a focus on the condition of services. In common with the findings of most local house condition surveys there is little evidence of amenities in disrepair. This is recognised at the national level where the emphasis has shifted to an analysis of the age of amenities, as an indicator of their adequacy. To compare with the national position the age of four key facilities is examined; kitchens, bathrooms, electricity supply and heating.

4.3. The national survey collects much more detailed information than is possible for the Ashford Borough HCS in respect of kitchen facilities. However, as only a major kitchen refurbishment is likely to involve replacement of the kitchen sink, the age of this element can act as an indicator of likely condition. The 1996 EHCS regards amenities installed before 1964 as un-modernised.

Figure 4.1 Un-modernised kitchens by tenure



- 4.4. Using this measure, 1,900 (5%) kitchens are un-modernised, a little more than the proportion of 4% that is found nationally (Table A1).
- 4.5. Examining un-modernised kitchens with reference to tenure shows that lack of modernisation occurs at a similar rate in owner occupied dwellings where 5% of dwellings have kitchen sinks installed before 1964. The private rented sector has older kitchen facilities with 10% of dwellings having un-modernised kitchens, but in housing association dwellings the figure is much lower at 2% (Figure 4.1)(Table A1).

Bathrooms

4.6. A similar analysis can be applied to bathrooms, again utilising pre 1964 as the defining period, which in Ashford Borough reveals that an estimated 10% of bathrooms are un-modernised, which is just under the national average of 12% (Table A1).

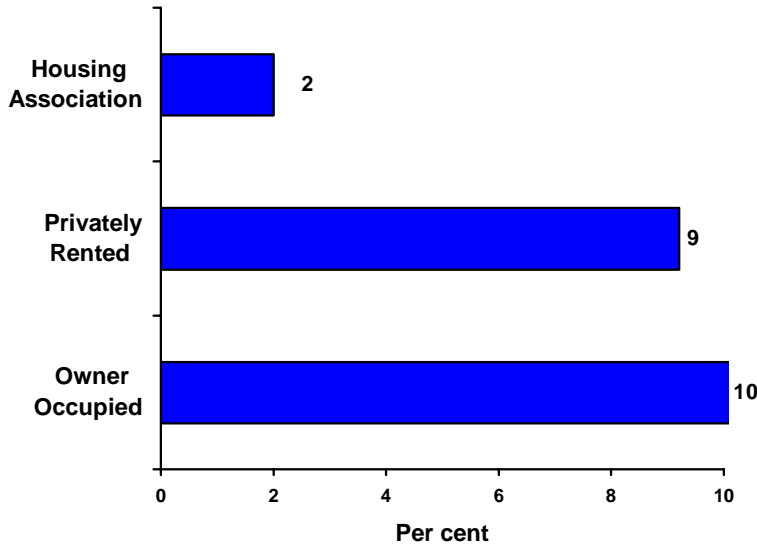


Figure 4.2 Dwellings with un-modernised bathrooms by tenure

4.7. Figure 4.2 shows the profile of un-modernised bathrooms by tenure. The least modern bathroom facilities were found in owner-occupied and privately rented dwellings at 10% and 9% respectively. In housing association dwellings there were only 2%. (Table A1).

Electricity supply

4.8. The quality of electrical installations is difficult to judge in housing stock surveys, and therefore the age of an installation becomes even more important as a means of establishing the need for action. There is, of course, scope for significant surveyor error in making such judgements and the results below are therefore indicative of trends but must be interpreted with care.

4.9. Comparisons with the national position are also problematic as the 1996 EHCS utilises a different typology where dwellings that lack PVC wiring, modern 13amp sockets and modern light fittings are regarded as un-modernised. Comparisons with national figures cannot therefore be made.

- 4.10. Un-modernised electrical installations (i.e. those installed before 1964) were present in 12% of Ashford Borough private sector stock (Table A2).
- 4.11. When disaggregated by tenure the owner-occupied dwellings had the highest proportion at 13%, whilst for the private rented sector the figure was 9% and 0% for housing association dwellings. (Table A2).
- Gas supply**
- 4.12. 81% (29,900) of dwellings had a permanent mains gas supply which is below the national average of 86%, but this is typical of a borough with a significant proportion of rural properties (Table A3).
- Heating**
- 4.13. 95% (34,900) of dwellings have central heating, which is higher than the national average of 88% (1996 EHCS). This definition includes storage heaters and warm air systems (Table E31).
- 4.14. Gas fired boiler and radiator systems account for 69% of all heating systems, making them by far the most frequently occurring type.
- 4.15. In the owner occupied stock gas fired boiler and radiator systems are also found in 69% of stock (Table E32), compared with 63% in private rented stock (Table E34) and 83% in housing association stock (Table E33).
- 4.16. A 10-year defining period was utilised to assess heating, in terms of both central heating boilers and “old style” gas room heaters. The definition of “modern” is stricter here due to the fact that boilers over 10 years old are generally less efficient than modern boilers and older style room heaters present a health and safety risk.
- 4.17. 52% of dwellings have gas boilers that are over ten years old (Table A4).
- 4.18. There are 1,250 dwellings that have older style gas room heaters, representing 3% of the stock. The room heaters in 93% of these dwellings are more than 10 years old (Table A7).
- Conclusions**
- 4.19. At the most basic level Ashford Borough is well provided for in that nearly all dwellings have all standard amenities. Looking beyond this, the level of provision in Ashford Borough is similar to the national average (which itself is based on 5 year old data).

- 4.20. These amenity measures are important in the definition of a "Decent Home" and as this becomes acknowledged as a major housing indicator Ashford Borough is likely to be shown to be somewhat poorer than the national average which will result from the 2001 EHCS.

5. Fabric of the dwelling

**Measurement
of repair costs**

- 5.1. The simplest measure of the condition of the fabric is the estimated cost of putting the building into good repair. This allows the condition of the dwelling as a whole to be assessed and the contribution of individual elements to be identified. The estimate of cost used in this survey is obtained by applying a common set of building prices to the surveyors' description of the type and scale of work required.
- 5.2. In undertaking repairs to the fabric of the dwelling different amounts of work are required, depending on the objectives of those responsible for the dwelling. To accommodate these different objectives several alternative measures of repair have been calculated and they are described in Box 5.1.

Box 5.1
repair and replacement takes in all the works needed in the next five years, taking no account of the relative seriousness of the defect to be remedied or the possibility of short term repairs;

urgent repair includes only those items needing urgent action (within the next year) to remove threats to health, safety, security and comfort of the occupants, and to forestall further rapid deterioration in the building;

comprehensive repair includes all repairs together with replacement of elements of the building having less than 10 years remaining life;

standardised repair is the repair and replacement cost per square metre of floor area, calculated to remove the effect of the size of buildings and give a better measure of relative deterioration.

**Overall
condition of
the stock**

- 5.3. The costs described in Box 5.1 are those made use of by the 1996 English House Condition Survey.
- 5.4. The average costs of repair in Ashford Borough are, (see box 5.1 for repair cost definitions):
- repair & replacement; £2,060 (England £1,830)
 - urgent repair; £770 (England £1,280)
 - comprehensive repair; £7,440 (England £3,420)
 - standardised repair; £17.00 per m² (England £17.20)

(Tables C1 and C21)

- 5.5. Comparisons can also be made with the EHCS results for "Shire Districts" in which Ashford Borough almost certainly would be grouped. The difference between this and the overall national result are quite small e.g. repair and replacement £1,690 compared to the national figure of £1,830 and the Ashford Borough result of £2,060.
- 5.6. These averages are useful for simple purposes of comparison but they can hide wide ranges that exist around the mean figures. The overall figures have therefore been broken down by a selection of variables.

Variation with dwelling age

5.7. Pre-1919 dwellings have the highest levels of disrepair – roughly 1.7 times the average for the whole stock at £29.20 per m². However, the 1919-1944 stock is also a real concern with costs greater than those found in dwellings dating from the earlier period. This does not however come as a major surprise as research based on EHCS data shows that mean repair costs reach their peak in houses around 80 years of age and many of these houses are now approaching this. Beyond 80 years of age mean costs gradually reduce as a result of major elements being replaced as their useful lives come to an end. It would, however, seem that much of the pre-1919 stock has yet to see this improvement and it still has the highest costs (Table C21). Caution on placing too much emphasis on the inter-war stock is urged as it only represents 8% of the stock overall. Figure 5.1 shows the variation of repair and replacement costs with age of dwelling.

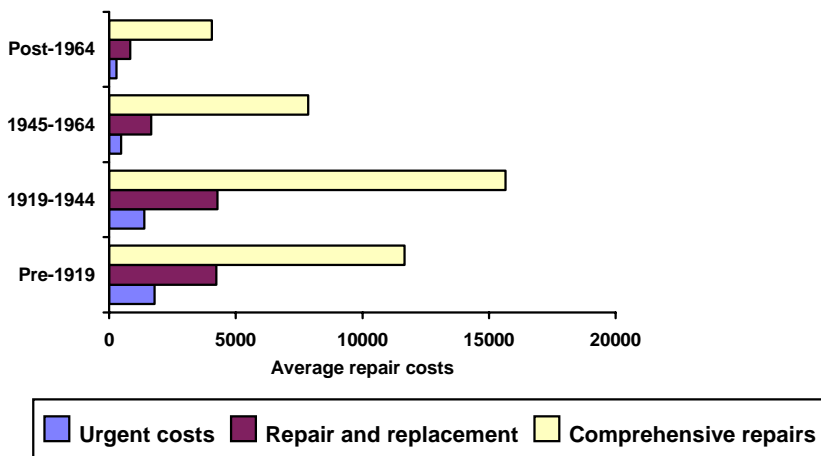
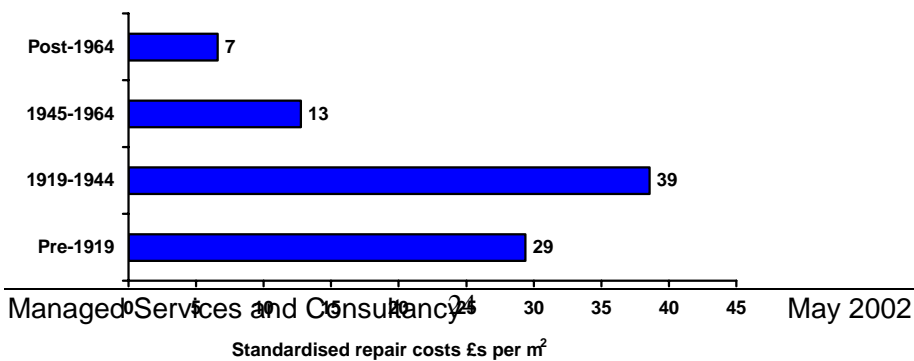


Figure 5.1 Repair cost by age of dwelling

Figure 5.2 Standardised repair cost by dwelling age



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Repair costs and tenure

5.8. When costs are standardised the trend is similar to that for the basic cost types.

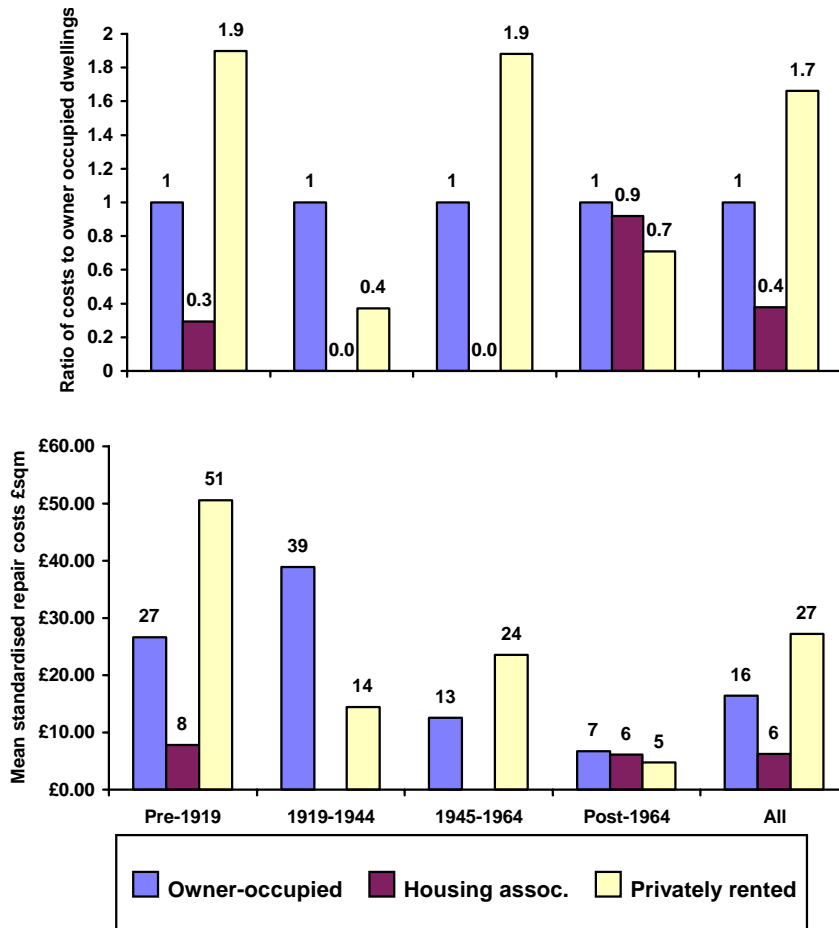
5.9. The average cost of repair per dwelling is:

- private rented £2,240 (repair & replacement)
£27.90 (standardised)
- owner occupied £2,110 (repair & replacement)
£16.40 (standardised)
- housing assoc. £560 (repair & replacement) £6.20 (standardised)

(Tables C1 and C21)

5.10. Figure 5.3 below shows mean standardised repair costs (bottom) and the same costs, expressed as a ratio, in comparison to owner occupied stock (top).

Figure 5.3 Variation of standardised repair costs by tenure and



construction date

5.11. When costs are broken down in the manner displayed in figure 5.3 privately rented dwellings clearly return the highest costs overall, reflecting the national position.

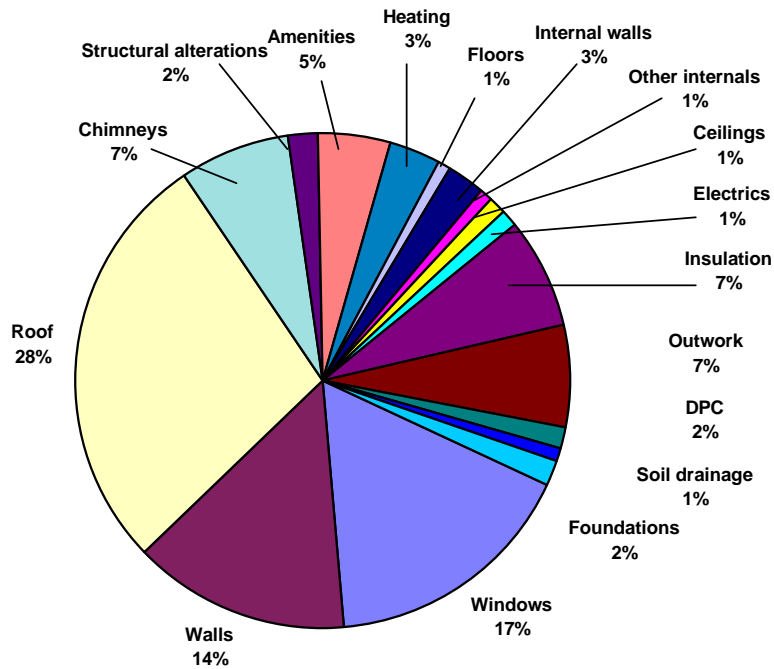
Repair costs and building types

5.12. Highest mean repair & replacement costs are found in detached houses at £2,600. Purpose built flats return the lowest costs at £250, and converted flats return a figure of £800 (Table C19). Terraced and semi-detached houses have costs of £2,000 and £1,700 respectively. Unfortunately these figures are difficult to compare to national statistics which use a different typology for disrepair.

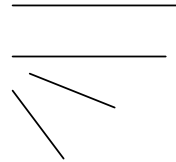
Repair costs and building elements

5.13. A similar proportion of repair as nationally (68% compared to 70%) relates to the exterior fabric of the dwelling. A detailed breakdown is given in the figure below (Table C18).

Figure 5.4 Repair costs by building element



5.14. Repairs to windows account for 17% of all costs while walls and roofs both account for 14% and 28% respectively (Figure 5.4). These three costs represent the largest proportions for costs at the national level and are elements that typically require repair. The proportion of costs for repair to windows is higher than the national average of 13%. The only national comparison that is available is from the 1991 EHCS as the most recent survey did not report on the cost of repairs in this way.



Repair costs by area

5.15. Rural stands out as the area with the highest costs. This is not solely due to the larger sizes of the dwellings in this area as the standardised costs, which remove the influence of dwelling dimensions, also return the highest figure.

Table 5.1 Costs by area

Area	Repair and replacement costs	Standardised repair costs
Tenterden	£1,040	£12.50
Rural	£2,580	£17.10
Ashford	£1,680	£16.90
All Areas	£2,060	£17.00

Conclusions

5.16. Comparisons of general repair costs suggest that the repair and replacement costs are similar to the national average, but the comprehensive costs are more than twice the national averages. However this simple average may not be a particularly good comparison and it is for purposes of internal comparison that these costs are most useful. In this respect it is notable that the 1919-1944 stock has costs greater than those of the pre-1919 stock suggesting the stock from this period is in particularly poor repair.

5.17. Private rented sector costs are generally higher than those of owner occupied dwellings and the pattern of variation in cost between age bands is similar to the national position.

5.18. Detached houses were the building type with highest repair costs reflecting their large size and dominance of the poorer condition rural stock.

5.19. The majority of costs are attributable to external elements. The distribution of internal and external costs is similar to that found nationally.

5.20. The Rural sub-area had the highest repair costs per dwelling, which were significantly higher than those for Ashford and Tenterden.

6. Unfit dwellings

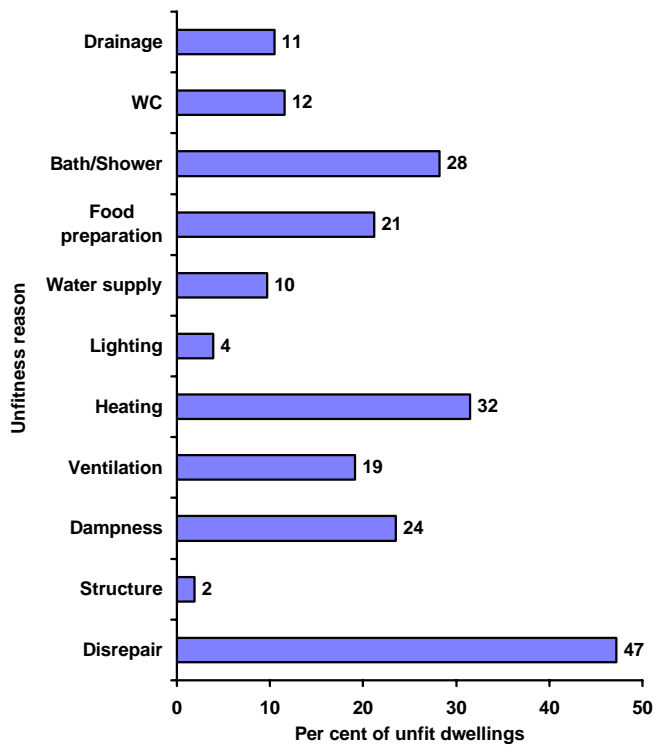
Incidence of unfit dwellings

6.1. An estimated 1,800 dwellings are unfit, accounting for 5% of the housing stock of which 100 (5%) are flats and 1,700 (95%) are houses (Table U3). This compares to an unfitness rate of 7% nationally and of 4% in the "Shire Districts" (1996 EHCS).

Reasons for unfitness

6.2. The most common reasons for unfitness are failures associated with the following fitness categories: disrepair 860 (47%), heating 570 (32%), bath/shower 510 (28%), dampness 430 (24%) and food preparation 390 (21%) (Table U7).

Figure 6.1 Unfit dwellings by reason for unfitness



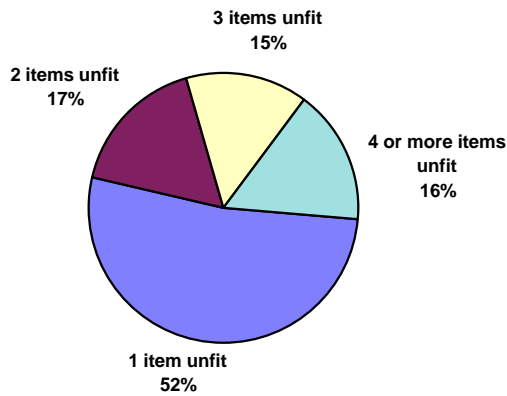
6.3. The 47% figure for disrepair is higher than the national average of 32%. The failure rate for food preparation at 21% is considerably lower than the national figure of 38%. At the national level these are the most frequent causes of unfitness, evidence of a somewhat different pattern of unfitness from the national picture (Table U7).

- 6.4. Nationally the least frequent causes of failure of the fitness standard are lighting, drainage and water supply, reflecting the very basic requirements for these items. This pattern is also shown in Ashford Borough (Table U7).

Severity of
unfitness

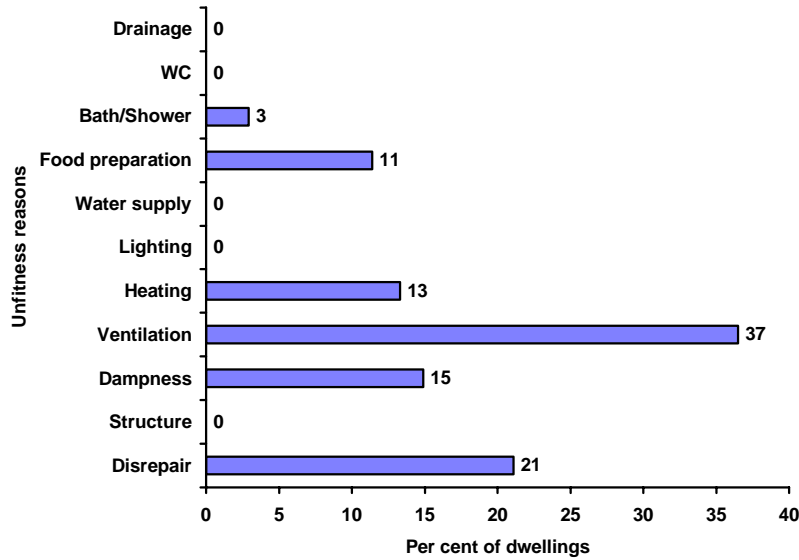
- 6.5. One indication of the severity of unfitness is the number of items on which a dwelling fails the fitness standard.

Figure 6.2 Unfit dwellings by number of items unfit as a percentage of all unfit dwellings



- 6.6. A total of 950 dwellings in Ashford Borough fail the fitness standard on one item, 52% of all unfit dwellings. At the national level dwellings unfit on a single item are found at a somewhat higher rate (64%) (Table C14).
- 6.7. In those dwellings that failed on a single item, the most frequent causes of unfitness are ventilation 37%, disrepair 21%, dampness 15%, heating 13% and food preparation 11% (Table U8).

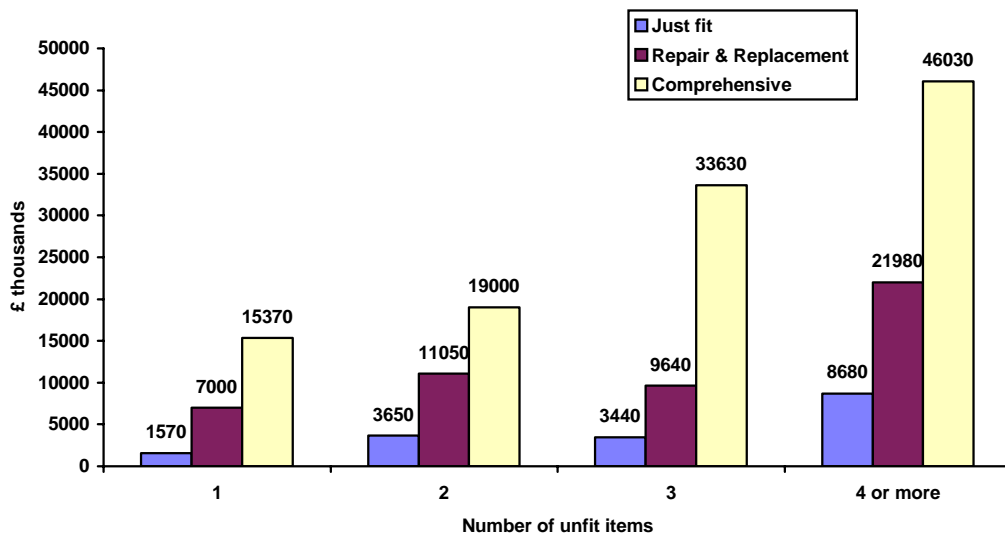
Figure 6.3 Dwellings failing on a single unfitness item as a percentage of all such failures



Costs of unfitness

6.8. The average repair and replacement cost in unfit dwellings is £4,970. The cost to make unfit dwellings just fit is £3,510 per dwelling. There is an increase in the mean cost to make fit as the number of items on which a dwelling fails the test increases (Table C2 and C14).

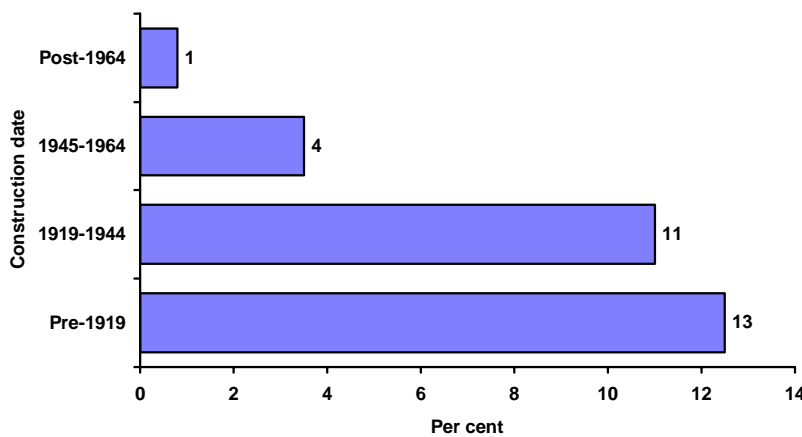
Figure 6.4 Unfitness costs by number of items unfit



Dwellings by age and type

6.9. Unfitness is usually strongly associated with age. In Ashford Borough, the relationship between unfitness and construction date is similar to that found nationally although not so severe. The pre-1919 figure (13%) is lower for Ashford Borough than is found nationally (20%), whilst for 1919-1944 it is slightly higher (11% against 10%). The percentage for the 1945-1964 stock is slightly lower at 4% (5% nationally) and for the post-1964 stock also lower at 1% compared to 2%. (Tables U2). The profile tends to suggest that unfitness affects the oldest dwellings most, but that is a more worrying problem in the 1919-1944 stock where it is higher than the national average.

Figure 6.5 Percent of age bands unfit



6.10. Flats associated with a non-residential use, return the highest rate of unfitness at 44% (200) while no unfitness was discovered in purpose built flats. These results must be interpreted with extreme caution due to the very small sample size. The EHCS groups flats associated with a non-residential use together with converted flats. This has been the general approach throughout this report and when taken together under this definition converted flats return a 15% rate of unfitness (Tables U3 and U9).

6.11. Terraced houses are unfit at a rate of 6% (570), detached houses have a rate of 5% (710) and semi-detached houses have a rate of 4% (440) (Table U9).

- 6.12. Figure 6.6 illustrates unfit totals for each building type rather than unfit rate. It illustrates very clearly how detached houses account for the biggest single total of unfit dwellings. This is due to the large number of such dwellings rather than a high rate of unfit. (N.B. Figure 6.6 is based on the 1991 EHCS typology, which does not distinguish flats associated with commercial premises, nor does it separate mid and end terraced dwellings. It does however correspond to generally understood building type definitions, which unfortunately the 1996 EHCS does not).

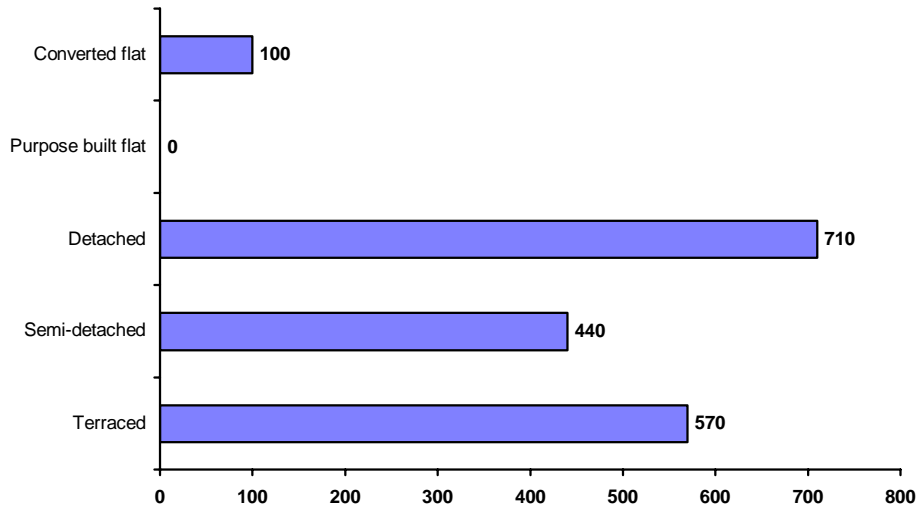


Figure 6.6 Unfitness by building type

Tenure

6.13. Figure 6.7 gives a comparison of levels of unfit across the three main tenures, between Ashford Borough and England as a whole.

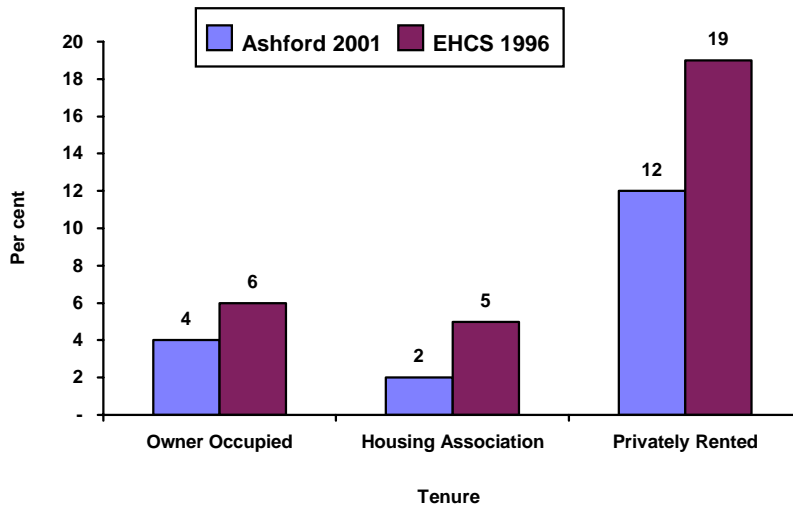


Figure 6.7 Unfitness and tenure comparisons, national and local

6.14. Unfitness is lower than national average figures across all tenures. Unfitness is closest to the national average for owner-occupied dwellings. Housing association dwellings returned an unfitness rate of 2%, which is less than half the national average of 5%. The proportion of unfit dwellings in the private rented sector, while lower than the national average at 12% (compared to 19%), still implies that 1 in 8 private rented dwellings is unfit (Table U6).

Costs to make dwellings fit

6.15. The different categories of costs calculated have already been explained in the previous section. Any one of these can be used to estimate the cost of making dwellings fit. The likely cost of improving unfit dwellings to a standard the Council would require for a renovation grant would be an average of £25,300. This figure is the comprehensive repair cost, defined in Box 5.1, in owner occupied, unfit dwellings. It includes all costs of repair likely to be incurred over the next 10 years (Table C2).

Unfitness by sub-area

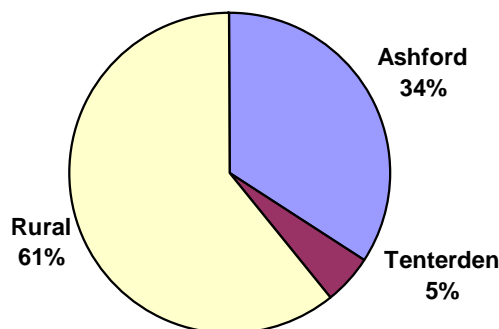
6.16. Table 6.1 shows sub areas by unfitness within Ashford Borough.

Table 6.1 Unfit dwellings by sub-area

Sub area	Unfit dwellings	Per cent unfit
Ashford	620	3
Tenterden	90	3
Rural	1,100	7
Total	1,800	5

6.17. Table 6.1 demonstrates that Rural has the highest rate of unfitness at 7%, with Ashford and Tenterden both returning unfitness rates of 3%.

Figure 6.8 Unfit dwellings by sub-area as a percentage of all unfit



dwellings

6.18. The "Rural" sub area has both the highest rate of unfitness and the highest absolute total of unfit dwellings. Ashford with the largest number of dwellings accounts for a third of all unfit dwellings despite the relatively low rate of unfitness.

Conclusions

6.19. The overall rate of unfitness of 5% in Ashford Borough is slightly lower than the national average of 7%.

6.20. Disrepair is the main cause of failure of the fitness standard. The causes of unfitness are somewhat different to the national position with food preparation taking a less prominent role than nationally. Other frequent causes of unfitness include heating, dampness and ventilation.

6.21. Multiple fitness failures i.e. failures on more than one grounds of unfitness category, occur at a higher rate than the national average.

6.22. It was notable that the costs of making dwellings fit increased with the number of items on which a dwelling failed and was considerably higher than is often found by local house condition surveys in southern England.

6.23. These higher costs are almost certainly associated with detached houses being the most frequently occurring unfit building type and the relatively small number of unfit dwellings of smaller types such as converted and purpose built flats. Other obvious reasons for the higher costs are the larger number of items of unfitness on which dwellings fail, the presence of disrepair as a failure item in almost half of them and their age: over 60% are pre-1919 and 81% pre-1945.

6.24. While the overall level of unfitness is close to the 1996 national average, there are clear indications of a hard core of dwellings with severe problems of unfitness which will be very costly to make fit.

6.25. With the Rural area returning both the highest unfitness rate and the largest total of unfit dwellings (more than the rest of the Borough) there is a real concern that the unfit dwellings will be relatively scattered and difficult to target as well as expensive to remedy once found.

7. Housing Health and Safety Rating

Introduction

7.1. The previous chapter summarised the data obtained from this survey with respect to unfitness as currently defined within the Housing Act 1985 (as amended). As well as providing an intervention standard that triggers local authority action, it is the principal measure of housing conditions in the private sector both at local and national level. There are however well documented weaknesses of the fitness standard and the DETR has now come forward with a new measure which is intended to replace it.

7.2. The proposed Housing Health and Safety Rating System (HHSRS), which will replace the fitness standard, has now been published. It was decided to require information to be gathered by the survey, which would help inform the Council on the implications of this new approach.

The proposed Housing Health and Safety Rating System

7.3. The new rating is based upon the calculation of risk of harm to persons using the dwelling. A total of 23 different categories, with a further 5 sub-categories, which constitute a threat to health and safety are included. In practice some of these have proved difficult to collect reliable information on and subsequent guidance has recommended that specific hazards which require measurement should be omitted from a stock survey. The methodology for this survey was however agreed prior to this guidance and surveyors have attempted to gather information on all of the hazards.

7.4. A detailed inspection of the dwelling is required in order to identify and register any faults under these categories. For example, a damaged floorboard (a fault) could contribute to the hazard of "falls on the level". A hazard score of the perceived risk is based on the probability of an occurrence within the next 12 months and the likely range of harm outcomes should it occur. The probabilities are based on national statistics on the probability of an incident occurring, which could result in moderate or serious harm to a member of the potentially vulnerable group over the following twelve months. A vulnerable group is defined as an age range of people for whom the risk arising from a hazard is greater than for the population as a whole and who might typically be expected to occupy the dwelling (but excluding those who could be registered as chronically sick or disabled).

- 7.5. Most of these hazards are either rare, or very unlikely to cause a serious health or safety outcome. A hazard score of 1,000 implies that there is a risk of death equivalent to 1 in 1,000. Research undertaken by the Health and Safety Executive indicates this is generally held to be an unacceptable risk. By contrast, a hazard score of 100 represents an equivalent risk of death of 1 in 10,000 and is considered acceptable.
- 7.6. Nationally, it is estimated that the three most frequent hazards (excessive cold, falls on the level, and falls on stairs) account for more than 67% of all the serious cases.
- 7.7. Based on the national figures, it is likely that a typical sample stock condition survey would contain a small number of dwellings with the most frequently occurring hazards. Other serious hazards are unlikely to be identified in sufficient numbers to analyse in a sample survey and there are others, which cannot always be found because they require specialised testing, monitoring over time, or an intrusive inspection.
- 7.8. It should be emphasised that because the technique (and indeed it's mode of instruction) was new, the surveyors concentrated on the hazards expected to score more than 100 and recording only atypically bad situations. With this approach surveyors will not have scored some hazards, such as falls on the level or falls on stairs where they are typical for their age-band and type. If however the hazard could be considered worse than average for the age-band of the dwelling then the surveyor would have scored the hazard. No attempt has been made to model the typical cases from average scores. For this reason the main emphasis in the report is on high scoring hazards i.e. the most dangerous.
- 7.9. The one hazard where data has been modelled is the hazard from excessive cold. The measure of energy efficiency, the SAP rating (see Chapter 9) has been used to model this information with all dwellings with a SAP below 10 assumed to have a hazard rating of 1000.
- 7.10. In 35% (12,800) of the housing stock atypical hazards were noted and scored, in these 31% (4,000) yielded scores of over 1,000 (hereafter be referred to as serious hazards) (Table H3). These are shown in Table 7.1 below.

Hazards with a rating score in excess of 1,000.

Table 7.1 Occurrence of hazard scores greater than 1000

Hazard	Total Hazards	Per cent of dwellings
--------	---------------	-----------------------

		with a serious hazard (>1000)
Excessive cold	1600	4
Falls on stairs etc	2100	6
Falls on the level	1200	3
Fire	140	<1
Hot surfaces and materials	370	<1
Damp and mould growth	350	<1
Total dwellings with serious hazards	4,000	11

7.11. The most frequently occurring serious hazards are falls on stairs (6%), excessive cold (4%) and falls on the level (3%). Damp and mould growth, fire, and hot surfaces and materials occurred at rates of less than 1%. The majority of these serious hazards were found to be present individually in dwellings (8% of the stock), with a further 3% presenting 2 or more such problems (Table H8).

7.12. A hazard was noted in 32% of fit dwellings, compared to 85% of unfits. Table 7.2 shows the figures in the serious hazard bands i.e. in excess of 1,000. In fit dwellings 8% of hazards exceeded this score, compared with 55% in unfits.

Table 7.2 Hazard bands by fitness status

Hazard bands	Fit	% of fit dwellings	Unfit	% of unfit dwellings	Total
>5,000	90	0	670	37	760
2,000-5,000	760	2	140	8	900
1,000-1,999	2100	6	190	10	2290
>1000	3000	8	1000	55	4000

7.13. In general unfit dwellings were more likely to have serious hazards with 25% of all recorded serious hazards, despite accounting for only 5% of the stock (Table H6 and H6a).

7.14. The figures by construction date need to be considered with caution due to low numbers in the sample involved. However, some general trends are discernible. The highest score is for 1919-1944 dwellings, with 58% presenting a hazard. Almost the same percentage (57%) of pre-1919 stock has had hazards recorded. This falls gradually to 39% for the 1945-1964 age band and to 19% for the post-1964 stock (Table H10). When the figures exceeding 1,000 are examined the position is similar, with 21% of pre-1919 stock falling to 5% for those built post-1964. These findings are consistent with what might be expected i.e. reduced risk with newer properties although the similar proportions found in both pre 1945 age bands is somewhat surprising.

7.15. Terraced houses have the highest rate of hazards identified at 43%, semi-detached houses are next with 37%, falling to 30% for purpose built detached houses. Flats returned low scores; converted 21%, purpose built 17% (Table H11). The figures exceeding 1,000 indicate the same pattern as for all atypical hazards with terraced houses at 12%, semi-detached at 12%, and detached at 10%. The lowest percentages were once again for flats, both converted and purpose built returning 7% (Table H11a).

7.16. The overall position by tenure is not quite as expected with 34% of privately rented dwellings presenting an atypical hazard, 36% of owner-occupied and 9% of housing association dwellings (Table H12). The private rented result was expected to be higher than the owner occupied. For bands above 1,000, these figures are 14%, 11% and 0% respectively which is closer to expectations.

7.17. Both at national and local level one of the most frequent serious hazards, which has returned a high percentage, is excessive cold. Excessive cold is defined by the DETR as dwellings with a SAP rating less than 10. This method of modelling this information may underestimate the extent of the problem. The subjective judgement of the surveyor is largely removed and unusual circumstances such as particularly inadequate draught proofing will not be included in the SAP model.

Vulnerable groups and hazards

7.18. In 32% of dwellings where serious hazards were identified members of the most vulnerable groups were residents (Table H20). The criteria for this assessment are those groups most at risk from each individual hazard (e.g. for fire, children of all ages are considered the most vulnerable group).

Table 7.3 Dwellings with serious hazards occupied by members of a most vulnerable group.

Hazard	Total Hazards	% all serious hazard dwellings
Excessive cold	560	35
Falls on stairs etc	440	21
Falls on the level	0	0
Fire	0	0
Hot surfaces and materials	280	76
Damp and mould growth	0	0
Total	1300	32

7.19. These would be the dwellings where the Council would need to urgently consider intervention or assistance when the new system is introduced.

Serious hazards by area

7.20. As hazard scores were recorded for each individual dwelling it is possible to examine the distribution of hazards by area. The distribution of serious hazards by area is given below.

Table 7.4 Serious hazards by area

Area	Dwellings with hazard/s over 1000	Total Dwellings	Per cent with hazard/s over 1000
Tenterden	180	3000	6
Rural	2,500	15,700	16

Chapter 7: Housing health and safety rating

Ashford Town	1,300	18,100	7
All Areas	4,000	36,900	11%

Conclusions

- 7.21. The Rural area has the highest rate of serious hazards at 16% with Ashford and Tenterden returning far lower results. The large numbers of dwellings in the Rural area and the dispersed nature of the stock will make this a difficult problem to target.
- 7.22. These results are based on one of the first attempts to utilise the health and safety rating and may therefore be the subject of considerable scrutiny.
- 7.23. There are over twice as many dwellings with serious hazards than dwellings which fail the current fitness standard. It would seem that this must be largely due to the three most frequently occurring serious hazards, excessive cold, falls on stairs and falls on the level. Defects arising from these three hazards are unlikely to result in an unfit determination using the current standard.
- 7.24. For the same reason the relationship between the existing measure of unfitness and serious hazards is a weak relationship but it does still remain, with a greater proportion of unfit dwellings being found to contain serious hazards than fit dwellings.
- 7.25. Serious hazards tend to be found mainly in the older stock but as with fitness and repair cost the variation between the pre-1945 age bands is not great. This is a phenomenon noted in other local house condition surveys and there is a suggestion that inter war stock is now declining at a faster rate than the pre-1919.
- 7.26. The Council is now in a position of being one of a limited number of local authorities in the country to have information on housing hazards gathered at the local level. This will without doubt prove an invaluable resource as the Council continues in the development of its housing strategy. It should be a matter of some concern to the Council that the percentage of dwellings with serious hazards is double the current unfitness rate and furthermore a very large proportion of them occur in the Rural area whose dispersed character will make them difficult to target.

8. Households and dwellings

Age of head of household

8.1. Dividing age of head of household into four age bands allows comparisons to be made with the national position:

- 16-49 - Ashford Borough 17,900 (50%), England 51%;
- 50-59 - Ashford Borough 6,300 (18%), England 15%;
- 60-74 - Ashford Borough 8,000 (22%), England 22%;
- 75+ - Ashford Borough 3,500 (10%), England 12%.

(Table R01)

8.2. The age profile of heads of household in Ashford Borough is broadly similar to the national position with a slightly lower incidence of the very oldest heads of households (Table R01).

8.3. Figure 8.1 shows the distribution of age of head of household by tenure.

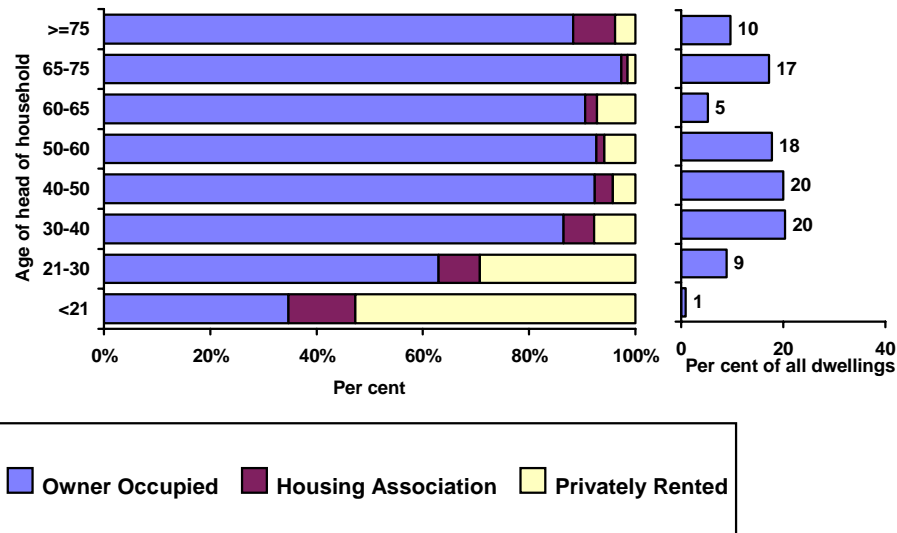


Figure 8.1 Dwellings by age of head of household and tenure

- 8.4. There is a very strong association between the private rented sector and age with a decline in private renting up to the 30-40 age group. Private renting remains at very low levels for all groups above this and is at its very lowest in the 65-75 age group.
- 8.5. Housing association occupancy follows a familiar bipolar pattern with large proportions of the very youngest and very oldest households. Owner occupancy shows a steady rise up to 65-75 age group but for the oldest group there is a reduction as housing association tenure increases.
- 8.6. The highest levels of unfit dwellings are found where heads of households are less than 21 at 29% but this from a very small sample.
- 8.7. The 40-50 and 65-75 age groups both return 6% but this is only slightly above the Borough average of 5% (Table RU01).
- 8.8. There is a fairly clear relationship between the distribution of unfit dwellings by age of head of household and the distribution of repair costs. The over 60 age group have the highest comprehensive costs at £8,400. The next highest are the under 21 age group at £8,200 followed by the 40-50 age group at £7,700. While the order has changed these are similar groups to those which returned the highest unfitness rates (Table R10).
- 8.9. Single parent families occupy 1,500 (4%) dwellings, which is slightly lower than the national average (6%). When disaggregated by tenure, 69% of single parent families live in owner-occupied dwellings, 8% in privately rented stock, with the remaining 23% in housing association dwellings (Table RU03).

Unfit dwellings and age of heads of household

Repair costs and age of head of household

Single parent families

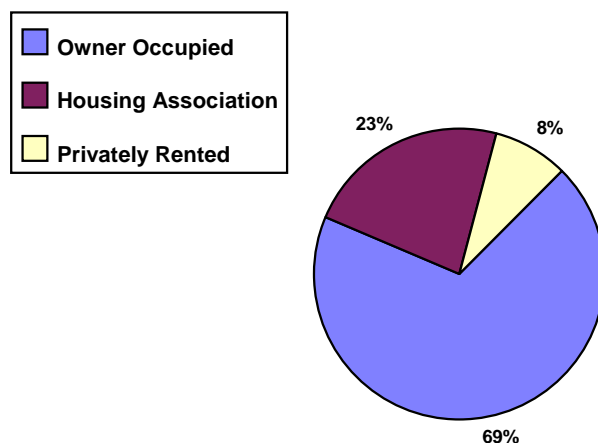


Figure 8.2 Single parent families by tenure

Single parent families and unfit dwellings

8.10. Overall, 7% of the dwellings occupied by single parents were unfit. Caution in placing too much significance on these figures is urged because of the very small sample size (Table RU03).

Income

8.11. Household incomes of less than £10,000 were reported by 34% of occupiers. In the housing association sector, this figure rises steeply to 75%. In private rented dwellings 23% report incomes below this level, whilst the owner occupied sector records 33% of households below this level. The figure for private rented dwellings is unusual, as most local house condition surveys tend to show lower incomes for this tenure than for owner-occupiers. At the opposite end of the scale 15% report incomes over £40,000 (Table RU04).

Income and unfit dwellings

8.12. The lowest income groups (less than £10,000) show no particular concentration of unfit dwellings. These groups account for 34% of all dwellings and 32% of all unfit dwellings. There is however a concentration in the £10,000-£14,999 group (11% of dwellings but 16% of unfits) and the £15,000-£20,000 group (8% of dwellings but also 16% of unfits) (RU04).

8.13. The relationship between lower income bands and unfitness is usually fairly strong and while less clear in Ashford Borough is still discernible.

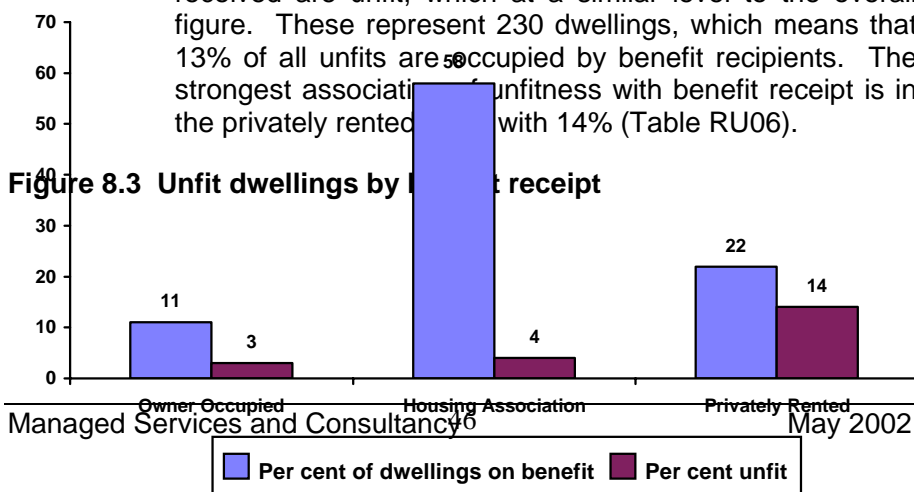
Receipt of benefit

8.14. A means tested benefit is received in 14% of dwellings. Benefit receipt is highest in housing association dwellings where 58% of occupiers reported receipt of a means tested benefit (Table RU06).

Receipt of benefit and unfitness

8.15. Overall, 5% of properties where a means tested benefit is received are unfit, which is at a similar level to the overall figure. These represent 230 dwellings, which means that 13% of all unfits are occupied by benefit recipients. The strongest association of unfitness with benefit receipt is in the privately rented sector with 14% (Table RU06).

Figure 8.3 Unfit dwellings by benefit receipt



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Disabled residents

- 8.16. Of the 36,900 dwellings in Ashford Borough 5,500 (15%) have at least 1 disabled resident (Table D1). Of these residents 1000 (19%) are fully mobile or able bodied. The least mobile are the 920 (17%) who are bed-bound or have to use a wheelchair either all the time, for short periods or when outdoors (Table D2).
- 8.17. An estimated 5,600 adaptations for the disabled are required. These range from grab rails to substantial structural alterations. The largest single unmet needs were for grab rails where 1,600 are estimated to be required. 310 cases are identified where an emergency alarm is required, 300 for a door answering system, 420 for a hoist and a further 370 required installation of a ramp. These are all relatively inexpensive to install. More expensive items, however, do occur in large numbers most notably bath/shower alteration (980), WC installation/relocation (480), and stairlifts (880). While there will be overlap with multiple adaptations required for individual cases there are still clear indications of a very large demand for adaptations for the disabled. (Table D8).
- 8.18. Disabled residents are less likely to live in unfit dwellings than Ashford Borough residents are in general. There are 170 (3%) dwellings, occupied by a disabled resident, that are unfit. (Table D3).
- 8.19. Those disabled residents whose annual income is less than £10,000 represent 38% of all disabled residents but 100% of those who live in unfit accommodation. This compares to 34% and 32% for the population as a whole (Tables D5 and RU04).
- 8.20. Disabled occupants who are wheelchair users or have the most serious mobility problems are less likely to live in unfit dwellings. Residents with less immobilising disabilities however are likely to present a larger demand for assistance in improving their housing conditions. There is also a significant proportion of people with disabilities who are on low incomes and unfitness is more prevalent in dwellings occupied by these low-income households. These residents are unlikely to be able to afford either the repairs that are required to their dwellings or the adaptations they need to improve the quality of their lives.

Household Types

8.21. The survey collected information on the number of children, adults and elderly in the dwelling. This information was used to create six household types: lone adult, lone older, two adults, large adult, family and single parent. These groups are used by the 1996 EHCS and therefore allow comparisons to the national position to be made.

8.22. The household types are defined as follows:

- Lone adult – 1 person over the age of 18 and under 60 if female or 65 if male.
- Lone older – 1 person over the age of 60 if female or 65 if male.
- Two adults – 2 people over the age of 18.
- Large adult – 3 or more people over the age of 18.
- Family – Two people over the age of 18 and 1 or more children under the age of 18.
- Single parent – 1 person over the age of 18 and 1 or more children under the age of 18.

8.23. Table 8.1 overleaf shows the distribution of household types in Ashford Borough and nationally.

Table 8.1 Household type distribution

	Ashford Borough% (2001)	England % (1996)
Lone adult	10	16
Lone older	9	14
Two adults	42	32
Large adult	8	7
Family	27	25
Single parent	4	6
	100	100

8.24. Table 8.1 shows how the proportions for household types in Ashford Borough differ from the national position. The most notable difference is the larger proportion of two adult households and smaller proportion of lone adult and lone older households found in the Borough (Table R100).

8.25. When broken down by tenure, clear patterns of household distribution emerge. Owner occupied dwellings tend to match the general pattern for all tenures. Housing Associations however, have a much higher proportion of dwellings occupied by lone older households (14%) single parents (25%) and family households (34%). Private rented dwellings tend to have a higher than average proportion of lone adult households (23%) and two adults households (44%) (Table R107).

8.26. The highest comprehensive costs by household type are lone older households at £9,100 (Table R101). When broken down by tenure for all but two household types, owner occupied costs are generally the highest. The sample sizes in these groups however are so small that the privately rented and housing association data for individual household types should be treated with some caution (Table R106)

Household types and costs

Table 8.2 Mean Comprehensive costs (in £s) by tenure and household types

Household types	Owner occupied	Housing association	Privately rented	Overall
Lone adult	7,000	290	3,500	6,000
Lone older	10,200	2,000	1,800	9,100
Two adults	7,100	910	4,300	6,700

Chapter 8: Households and dwellings

Large adult	7,300	500	2,000	6,700
Family	7,600	2,700	7,100	7,300
Single parent	8,000	1,200	18,200	7,000

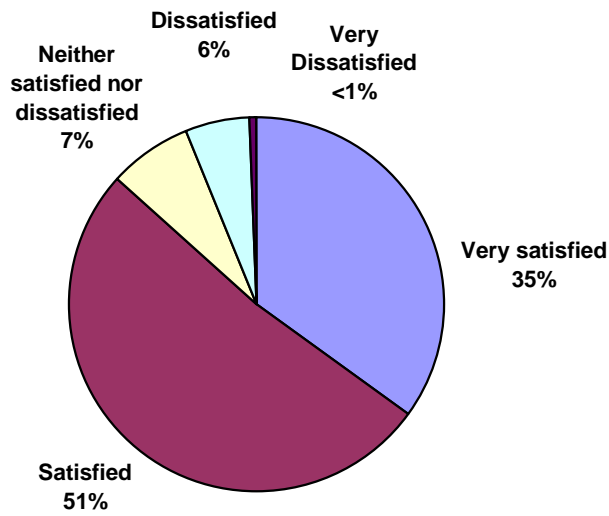
Household types and fitness

8.27. Rates of unfitness by household type show little variation, with the highest being for dwellings occupied by single parent households (8%) and the lowest for dwellings occupied by two adults (4%). Other groups were in the range of 4-5% (Table RU10).

Satisfaction with home

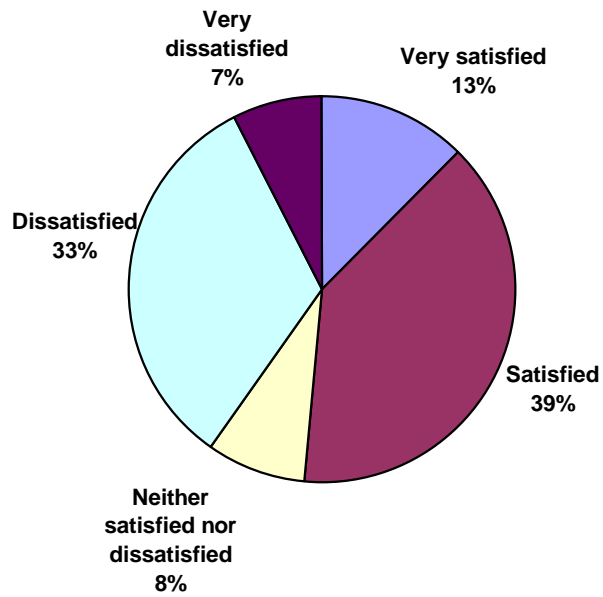
8.28. 31,100 (86%) of respondents were satisfied or very satisfied with their homes, only 2,200 (6%) claimed to be dissatisfied or very dissatisfied.

Figure 8.4 The level of satisfaction with home.



8.29. Occupiers of 40% (650) of unfit dwellings were dissatisfied or very dissatisfied with their homes. Occupiers of 52% (830) were satisfied or very satisfied with their unfit homes (Table R40a).

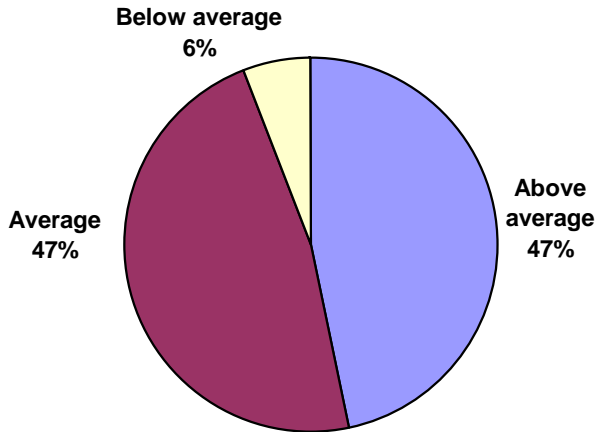
Figure 8.5 Satisfaction with home where unfit.



Local environment

8.30. An estimated 16,800 (47%) householders rated their local environment above average and 17,100 (47%) considered it to be average. Only 4,800 (6%) considered their local environment to be below average.

Figure 8.6 The level of satisfaction with local environment.



Local environment by area

8.31. When broken down by area it is again Tenterden and Rural that return very similar satisfaction levels with 53% and 55% believing their area to be above average. This compares to 38% for Ashford Town. There was less difference between the areas when looking at the percentages who believed their area to be below average with a range of 4-7%, once again with Ashford returning the least satisfactory result of 7%, and the Rural areas the most satisfactory of 4% and Tenterden returning 6%.

Conclusions

- 8.32. The highest levels of unfitness were found in dwellings occupied by the under 21 age band.
- 8.33. While the rate of unfitness was not high amongst the elderly the repair costs were, with lone older households returning the highest figures.
- 8.34. There was some indication of an association between low income and unfitness but this was less noticeable in the very lowest income group but there was a clear association with unfitness in the £15,000 -£25,000 household income band.

- 8.35. People with disabilities are another identifiable group with clear need for provision of facilities to improve the quality of their lives. A large number of adaptations are required and many of these are expensive items including stairlifts and bathroom and wc alterations and relocation. While unfitness was quite low amongst the disabled, all cases discovered by the surveys were in the lowest income group. Demand is therefore likely to be high both for assistance with disabled facilities grants and for renovation grants to remedy unfitness.
- 8.36. There are many reasons for a significant proportion of residents to be dissatisfied with their home but overall levels of satisfaction are high. In unfit dwellings levels of satisfaction are far lower indicating there is a real demand from occupiers for improvements to be made in their living conditions. Satisfaction with the local environment was generally high but lowest in Ashford and marginally higher in the Rural area than Tenterden.

9. Energy efficiency

- 9.1. The standard assessment procedure or SAP is a government rating for energy efficiency and is described in box 9.1 below. It is used in this report in conjunction with annual CO₂ emissions figures, calculated on fuel consumption, and the measure of that fuel consumption in kilo Watt hours (kWh), to examine energy efficiency.

Box 9.1 Definition of SAP rating

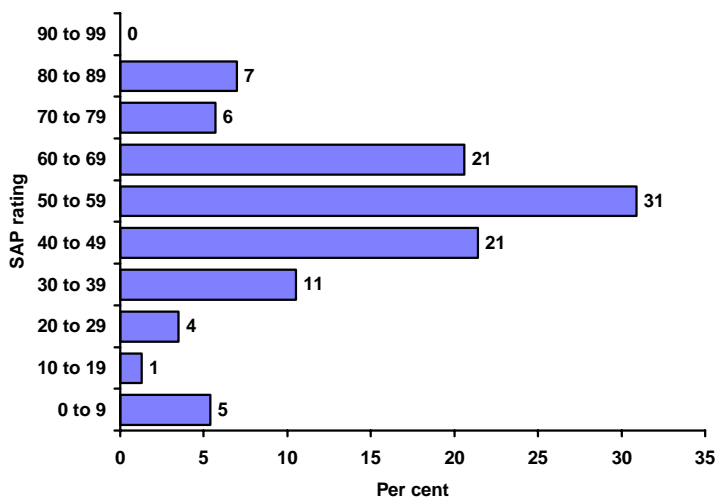
SAP rating: This is a government-specified energy rating for a dwelling. It is based on the calculated annual energy cost for space and water heating. The calculation assumes a standard occupancy pattern, derived from the measured floor area so that the size of the dwelling does not strongly affect the result, which is expressed on a 1-100 scale. The higher the number the better.

Distribution of SAP ratings

- 9.2. The average SAP rating for a dwelling in Ashford Borough is 50. This compares to a national average for all dwellings of 44 as reported by the EHCS 1996.

- 9.3. Figure 9.1 shows the distribution of SAP ratings.

Figure 9.1 Frequency distribution of SAP



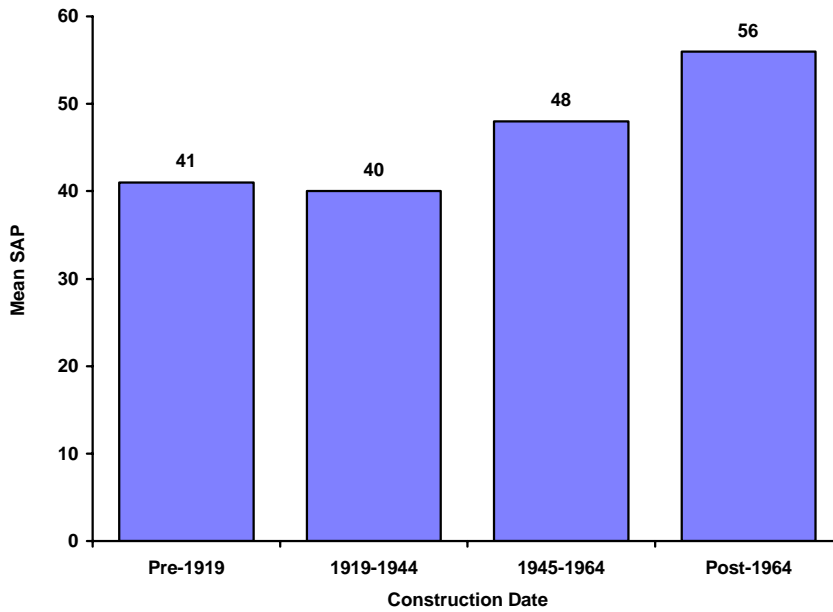
- 9.4. The majority of dwellings (73%) have a SAP rating between 40 and 70. At the national level a slightly smaller proportion (60%) fall in this range. Nationally 17% of dwellings have a SAP of less than 30 while in Ashford Borough 10% fall within this range (Table E2).

9.5. A total of 2,500 (7%) of dwellings in Ashford Borough have a SAP rating of less than 20 which is lower than the national figure of 8%. It should however be stated that the national figures date from 1996 and are likely to have improved since then (Table E2).

SAP and age of dwelling

9.6. Increases in SAP are usually associated with a reduction in dwelling age; thus the most modern stock has the highest SAP. This is generally true of Ashford Borough with a mean SAP of 56 for the most modern age band in the post 1964 era (Table E3).

Figure 9.2 SAP by age of dwelling

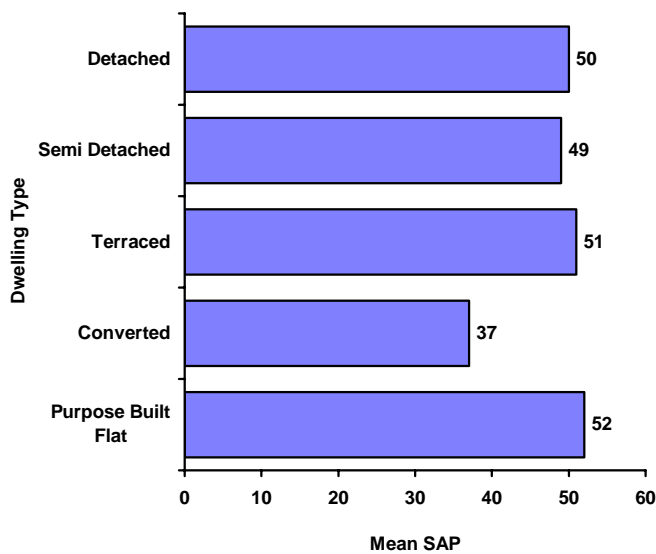


SAP ratings and building type

9.7. When examining SAP ratings by built form the distribution for Ashford Borough shows that the dwelling type with the lowest SAP is converted flats with a mean SAP of 37. All other building types fall in a very narrow range of 3 SAP points between 49 and 52.

- 9.8. Nationally SAP is considerably influenced by the degree of external exposure of particular building types. In general the more exposed building types suffer greater heat loss and return lower SAPs. Typically flats (with the exception of converted flats) return highest SAPs followed by terraced houses then semi-detached and finally detached houses. The same pattern can be seen in the Ashford Borough although there is less of a difference than is found at the national level.
- 9.9. A combination of insulation and heating systems can also have a dramatic effect on SAP and account for the variations in the typical age and type distributions. The effect of these factors is explored later in this chapter.

Figure 9.3 SAP rating by building types



SAP ratings and tenure

- 9.10. Owner occupied dwellings have a mean SAP of 50 compared to 62 for housing association dwellings and 46 for privately rented (Tables G11 and E6). The housing association stock is more modern and includes larger proportions of more efficient building types so it is easy to understand why it should have the most efficient stock.
- 9.11. The private rented sector has the oldest stock, which is a major factor in determining energy efficiency however this tenure is also typically characterised by poorer provision of insulation and heating systems. The impact of heating and insulation will be discussed later in the chapter.

9.12. Age and building type, therefore, are helpful to establish the potential efficiency of the stock but insulation and heating provision need to be examined to give a full picture.

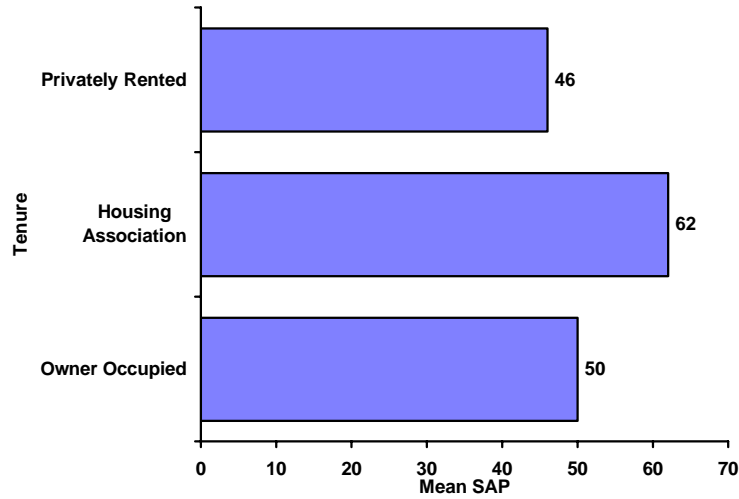
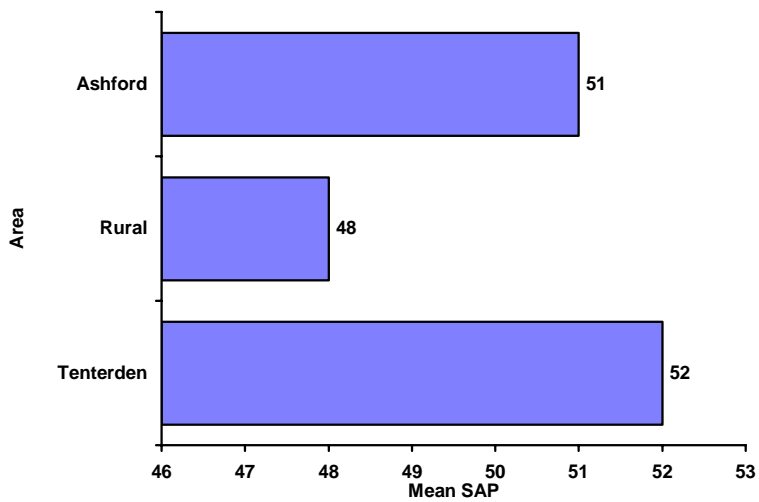


Figure 9.4 SAP ratings by tenure

SAP by area

9.13. The differences between SAP by area are relatively small although it is noticeable that Rural returned the lowest SAP ratings.

Figure 9.5 SAP by area



Insulation

- 9.14. The variation within housing types and ages is likely to be in part the result of improvements in insulation. To investigate the impact of insulation on the stock it is necessary to consider the existing provision when the dwelling was built as well as that which has been added since.
- 9.15. Information was collected on both wall and loft insulation. Loft insulation has been a requirement of the Building Regulations since 1965 but the current standard of 200mm of fibreglass (or equivalent to a U value of 0.25) was only introduced in 1995. Surveyors recorded insulation added since built. Table 9.1 gives the requirement with regard to loft and wall insulation made in Building Regulations since 1965.

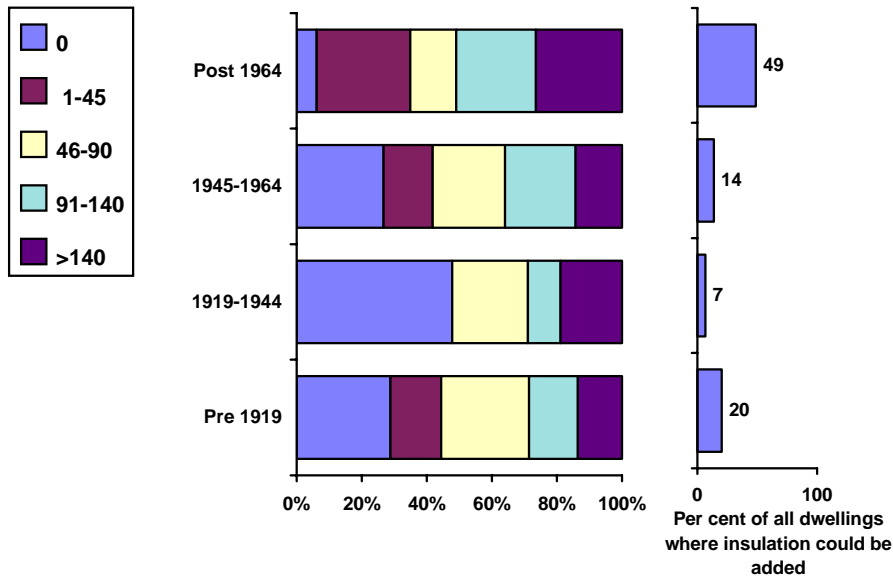
Table 9.1 Loft and cavity wall insulation requirements

Survey age band	Building Regs. Change	Loft insulation as fibre glass quilt (mm)	Wall insulation (U value)	Typical wall type
1965-1975		25	1.7	Brick cavity
1976-1981		50	1	Cavity brick and block
Post-1981	1982-1990	100	0.6	Varying constructions; brick and lightweight blocks; brick cavity with expanded polystyrene foam.
	Post-1990	150	0.45	
	Post-1995	200	0.25	

- 9.16. Figure 9.6 shows the extent to which loft insulation has been added to dwellings.

9.17. This analysis excludes dwellings without lofts. The remaining dwellings 35,200 (95%) represent the stock that could usefully have added loft insulation. Of these 17,900 (47%) dwellings already have 140mm of insulation or more. A total of 17,700 (53%) had less than 140mm of insulation and these are an obvious target group for low cost improvements in energy efficiency. A total of 2,100 (6% of the stock) are reported to have no loft insulation at all (Table E45).

Figure 9.6 Dwellings by loft insulation (millimetres of fibre glass)

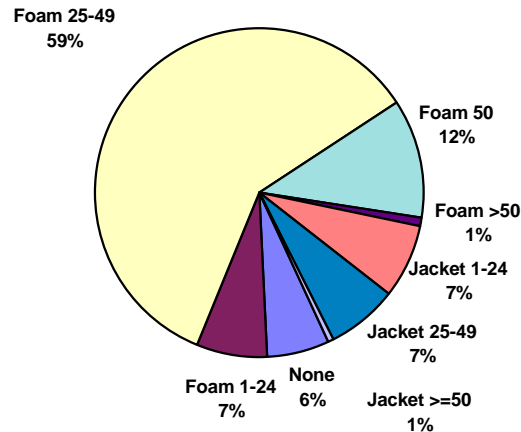


quilt or equivalent)

9.18. As with loft insulation, cavity fill is not something that can be added to all dwellings. In this analysis, it is assumed that all pre-1982 dwellings which have cavity construction will be without any form of fill unless there is evidence of this having taken place, or the occupier informed the surveyor that it had been carried out. In the 1976 – 1981 age band there may, depending on construction type, be some insulation originally built into the cavity, but in most instances this will not be the case, and this age band has therefore been assumed to be capable of retrofitting with cavity insulation. There are 26,600 pre-1982 dwellings in Ashford Borough, with cavity walls. Of these, 7,200 (27%) have had insulation retrofitted (Table E46).

9.19. The last insulation element to be considered is insulation to hot water cylinders. Information was collected on the presence of cylinders in the system and where these existed, the type and thickness of insulation present was examined.

Figure 9.7 Insulation to hot water cylinders (in mm)



9.20. 32,700 dwellings in Ashford Borough have hot water cylinders. Of these, 2,000 (6%) had no insulation at all. 4,800 (15%) cylinders have jacket insulation and of these, 2,400 have less than 25mm of jacket insulation. Provision of thicker jackets and replacement of cylinders with foam insulated cylinders would have a major impact on improving energy efficiency (Table E47).

SAP and heating systems

9.21. The high efficiencies of modern heating systems have a positive effect on the energy efficiency of a dwelling. Central heating is present in 34,900 (95%) dwellings, although not all have modern systems. The definition of central heating used here is a very wide one including electric storage radiators (Table E31).

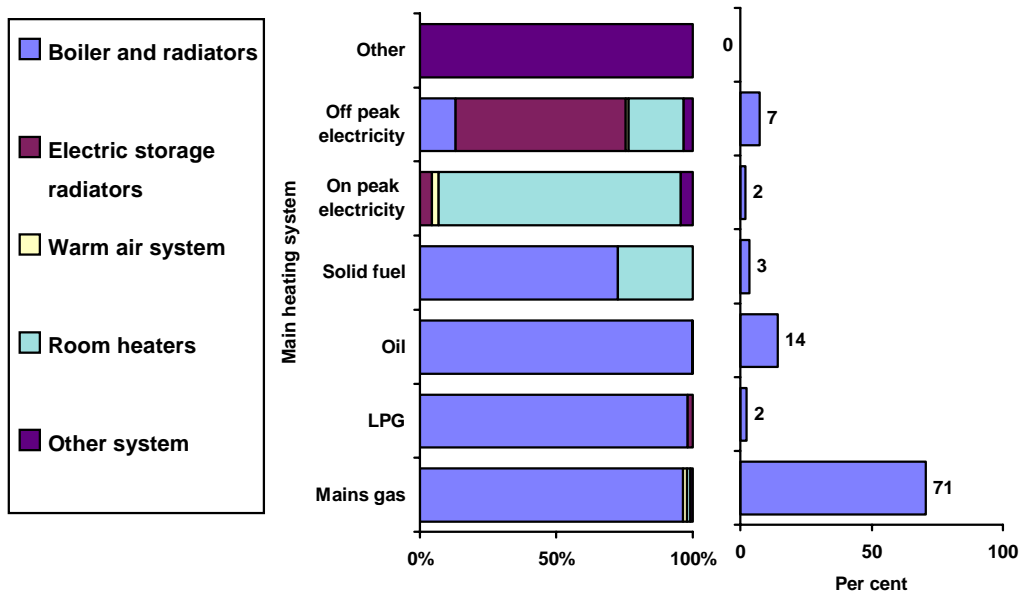
9.22. In dwellings with central heating, the average SAP is 51 compared to 27 for those without (Tables E13 and E14).

9.23. A gas-fired boiler and radiators are present in 25,400 (69%) of dwellings as their main heating system and a further 5,200 (14%) use oil fired wet systems. Off peak electric storage radiators account for 1,800 (5%). Warm air systems are used in 410 (1%) dwellings. Room heaters are used in 1,900 dwellings (5%) (Table E31).

9.24. Mains gas is the dominant fuel used for 26,100 (71%) main heating systems. The balance is made up by oil 5,300 (14%), off peak electricity 2,700 (7%), solid fuel or wood 1,200 (3%), LPG 850 (2%) and on peak electricity 750 (2%) (Table E31). The large proportion of non-mains gas users reflects the rural character of much of the Borough.

9.25. Figure 9.8 illustrates the type of heating systems and fuels used.

Figure 9.8 Dwellings by heating system and fuel



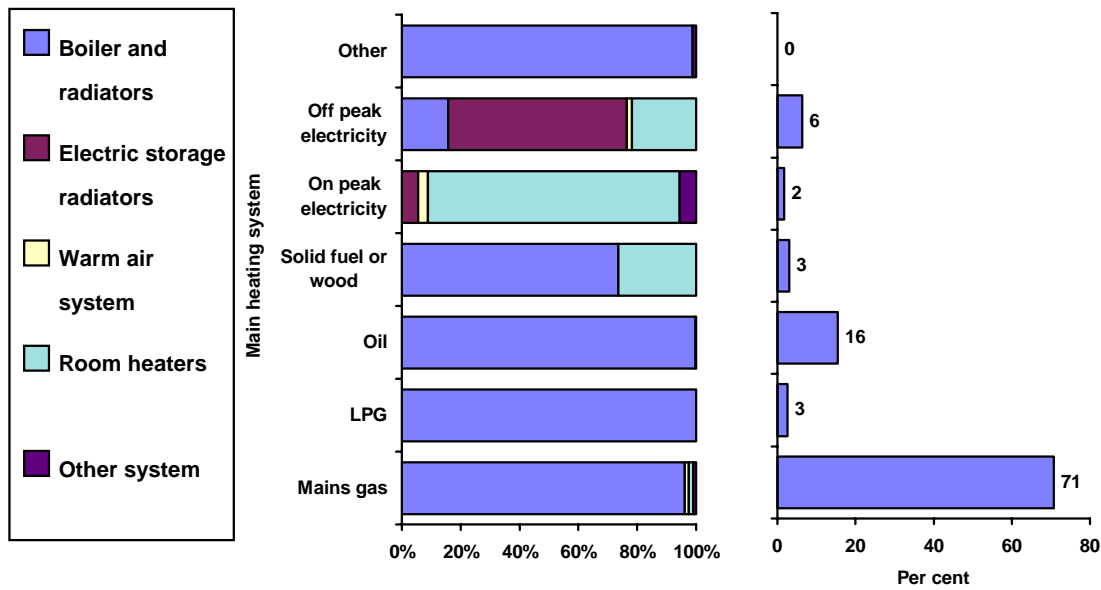
9.26. The high proportion of dwellings with central heating is one of the main reasons for the higher than average level of energy efficiency.

Heating systems in the owner occupied stock

9.27. The owner occupied sector is very similar to the overall profile. Some form of central heating is provided in 30,700 (95%) of the dwellings, the same as for the stock as a whole. There is a similar proportion of gas fired boiler and radiator systems (69%, 22,200 dwellings) as for the stock overall and a further 5,000 (16%) use oil fired wet systems. Off-peak electric storage radiators account for 1,200 (4%). Warm air systems are used in 370 (1%) dwellings. Room heaters are used in 1,600 dwellings (5%) (Table E31) (Table E32).

9.28. Gas is again the dominant fuel and it is used for 22,900 (71%) heating systems. There are slightly lower figures for off-peak electricity and on-peak electricity, while oil use is slightly higher (Table E32).

Figure 9.9 Heating systems by fuel in owner occupied dwellings

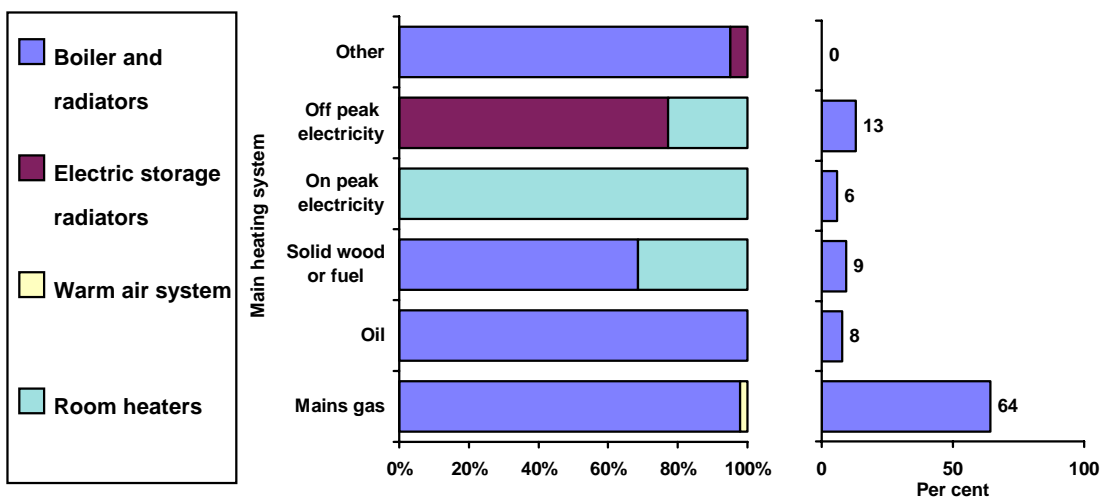


Heating systems in the private rented sector

9.29. The private rented sector has the lowest percentage of dwellings with some form of central heating, 2,600 (88%) compared to 95% generally (Table E34).

9.30. Only 1,800 (63%) dwellings have gas fired boiler and radiator systems, compared to the general level of provision, which is 69%. A further 230 (8%) use oil fired wet systems. Off peak electric storage radiators account for 290 (10%). Warm air systems are used in 40 (1%) dwellings. Room heaters are used in 340 dwellings (12%) (Table E31). (Table E32).

Figure 9.10 Dwellings by heating system and fuel in private rented



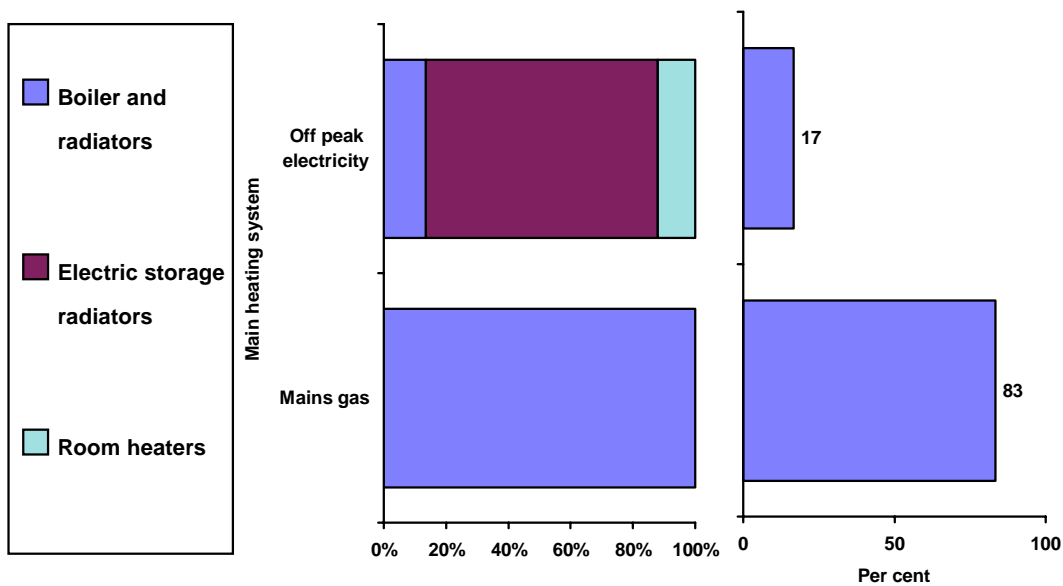
dwelling

Heating systems in the housing association stock

9.31. The housing association stock has the highest proportion (98%, 1,300 dwellings) having some form of central heating. Of these, 83% use gas-fired boiler and radiator systems, which is more than the stock average of 69%. However the results in relation to housing associations must be treated with caution due to the small number in the sample.

9.32. Mains gas is the dominant fuel for this tenure being used in 1,100 (83%) of dwellings. The remainder 220 (17%) use off peak electricity (Table E34).

Figure 9.11 Dwellings by heating system and fuel in housing association dwellings

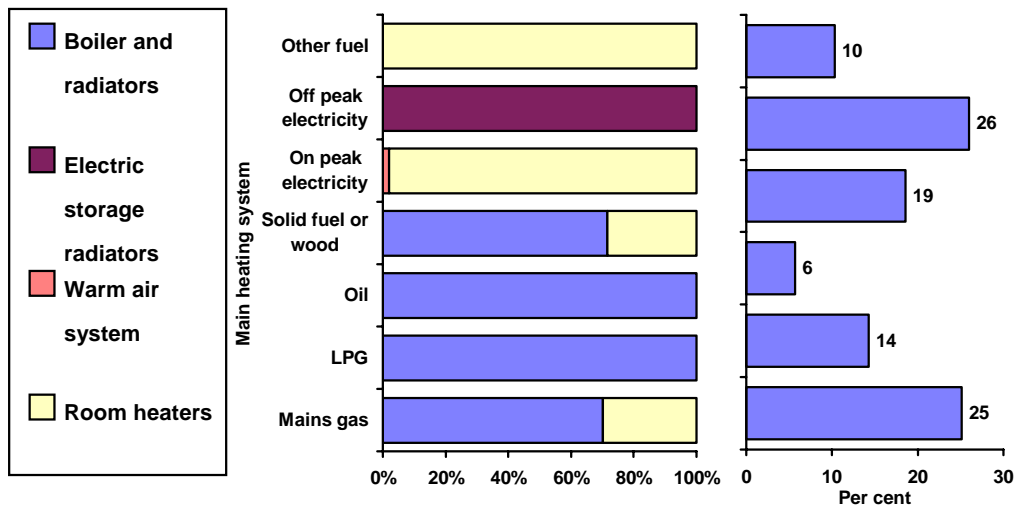


Heating systems and fuel by SAP ratings

9.33. From experience gained on a large number of similar surveys, it is well established that the type of heating system has the greatest effect on energy efficiency. For this reason, particular attention is paid to this area. To determine how important this factor is in Ashford Borough, the fuel/heating system mix was examined for those dwellings with the lowest and highest SAP ratings.

9.34. Figure 9.12 illustrates the position for the 2,500 (7%) dwellings with SAP ratings less than 20 (Table E35).

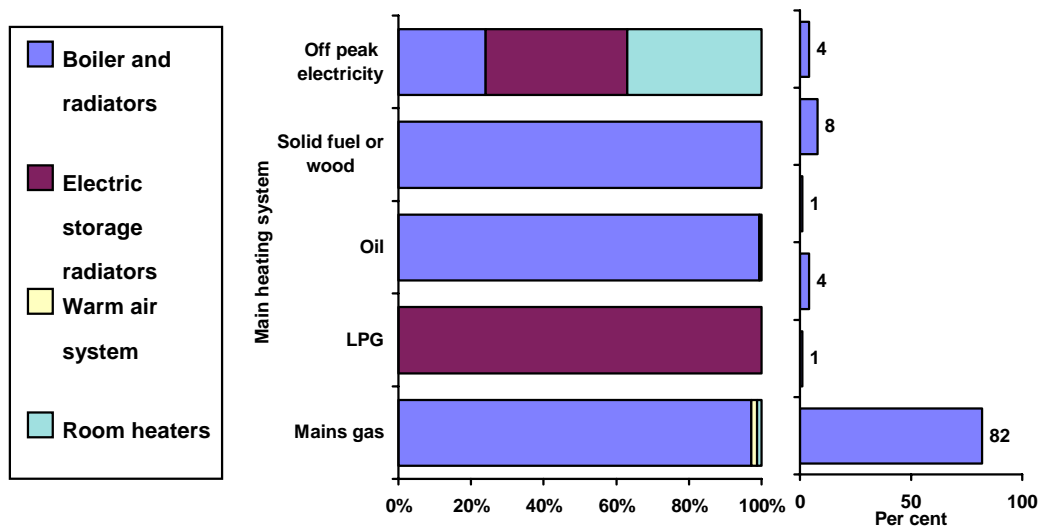
Figure 9.12 Main fuel and heating system in dwellings with SAP



less than 20

9.35. It is apparent that room heaters are associated with low SAP ratings. 820 (33%) dwellings with a SAP rating of less than 20 rely on room heaters for their main source of heat and of these only 2% use gas, 75% use on-peak electricity and 19% use solid fuel or wood (Table E35).

Figure 9.13 Main fuel and heating in dwellings with SAP greater



than 60

SAP ratings and socio- economic factors

- 9.36. The last graph, Figure 9.13, shows the other end of the scale illustrating the fuel/heat system profile for the stock with the highest SAP ratings. The results are typical of dwellings in this group. 93% of dwellings use either gas or oil fired boiler and radiator systems, and there is no use of on-peak electricity (Table E39).
- 9.37. Where a means tested benefit is received 8% of dwellings have a SAP rating below 20 compared to 7% generally (Table E12).
- 9.38. Those occupiers on lower incomes are least able to afford better heating systems and insulation and often live in the least energy efficient dwellings. This same group however often includes occupiers of social housing where energy efficiency tends to be high. This often results in a bipolar distribution with larger than expected proportions in the lowest income households found in the least and most efficient housing stock. There is strong evidence of this occurring in Ashford Borough where household incomes are less than £5,000 per annum and some where they are less than £10,000. At the other end of the scale the higher income earners (>£30,000 p.a.) do tend to be more highly concentrated in the more efficient stock. This is itself an important finding as it is not unusual to find an indifference to energy efficiency among the highest income earners and an acceptance of high heating costs (Table E24).

Conclusions

- 9.39. Ashford Borough has an above average SAP rating of 50. While this is higher than the national average there are similar proportions of dwellings with very poor SAP ratings.
- 9.40. SAP is strongly associated with dwelling age in Ashford Borough with pre 1945 dwellings returning much lower SAP ratings than the more modern stock.
- 9.41. There was a strong relation between SAP and tenure. The lowest SAP ratings by tenure are found in private rented dwellings. This appears to be a reflection of the older stock in this tenure together with poorer heating systems, particularly a greater reliance on room heaters.
- 9.42. Heating systems have a major influence on SAP in Ashford. Where central heating is present SAP is on average 24 SAP points higher than where it is not.

- 9.43. There is potential for improving the energy efficiency of the stock through loft and cavity wall insulation and greater provision of insulation to the water cylinder. In addition there is still potential for improving heating systems, as in the least efficient stock, with one third of these dwellings lacking central heating.
- 9.44. There was some evidence of a concentration of low-income groups living in the least energy efficient dwellings. This is not always found by house condition surveys as the very lowest income groups are usually found in more energy efficient housing association dwellings. This does not seem to be the case in Ashford as those households with incomes of less than £10,000 were found in larger proportions in the least efficient stock than were households with greater than this income level.

10. Improving energy efficiency

Introduction

- 10.1. The previous section considered the energy efficiency of the stock with regard to age, building type and tenure. The variation of insulation and heating systems was examined, the current position established and improvement options began to be identified. This section explores the effect of implementing a series of improvement options, both in terms of the overall energy efficiency of the stock as measured by the SAP rating, and in terms of reduction in energy use and CO₂ emissions. Energy consumption is measured in kWh (kilo-Watt-hours), MWh (mega-Watt-hours, which equate to 1,000 kWh), and in Gjoules (Gigajoules).
- 10.2. The chapter also examines the potential improvement combinations for given dwellings and estimates the likely cost of implementing these on a per-dwelling and Borough-wide basis. The effect of these measures is also given, allowing payback periods for these improvements to be calculated.

The cost and extent of improvements

- 10.3. The following figures are based on modelling changes in energy efficiency bought about by installing combinations of items listed in box 10.1 below. These are based on measures that have been provided by various local authorities and are loosely based on the Warm Front Scheme.

Box 10.1 Energy efficiency improvement measures

- Loft insulation to 200mm
- Cylinder insulation to 50mm jacket (unless foam already)
- Double glazing to all windows
- Cavity wall insulation
- Installation of a modern high efficiency gas boiler where none is present
- Full central heating where none is present

- 10.4. Different combinations would be required for different dwellings depending on the current provision of these items in each dwelling.

- 10.5. If all combinations of improvements were carried out to all dwellings the total cost would be £36.7million, an average of £990 per dwelling (Table EE11d). Replacement boilers and the installation of central heating systems are clearly the most expensive items. However, as the majority of dwellings have gas central-heating systems, the exclusion of these items would still leave the total cost for the Borough at £32.4 million or £880 per dwelling (Table EE11c).
- 10.6. Targeting those dwellings where the elderly live or where people are on benefit is usually a good starting point for any scheme. There are 12,100 dwellings that are occupied by an elderly person or person on benefit. The total cost of improvements to these dwellings would be £12.4million, an average of £1,030 per dwelling (Table EE11b).
- 10.7. The elderly or persons on benefit present a useful target group for energy efficiency programs. Many of the dwellings identified in these groups, however, would be eligible for the Warm Front and Warm Front Plus Schemes and may, therefore, already be eligible for this government funded and administered scheme. Warm Front and Warm Front Plus do not however cover all dwellings where residents are considered to be in fuel poverty. Energy efficiency improvement measures were therefore examined for a group comprising all those dwellings where the residents were in fuel poverty but not eligible for Warm Front assistance.
- 10.8. There are an estimated 3,700 dwellings in Ashford Borough where the residents are in fuel poverty but not eligible for Warm Front assistance. The cost of carrying out all the energy improvement works identified, for all these dwellings, would be £4.4million, an average of £1,200 per dwelling (Table EE11a).
- 10.9. Table 10.1 indicates that these occupiers are relatively well dispersed throughout the Borough although there is evidence of a relative concentration in Tenterden and the Rural areas. Unfortunately these being the most dispersed populations makes them very difficult to target for assistance.

Table 10.1 Fuel poverty for occupiers not covered by Warm Front

	Dwellings	Per cent	Per cent of those in fuel poverty

Chapter 10: Improving energy efficiency

Tenterden	520	17%	14%
Rural	2230	14%	61%
Ashford	920	5%	25%
Total	3670	10%	100%

Improvement cost analysis

10.10. Table 10.2 below gives a breakdown of cost, payback times and improvements in energy efficiency for applying measures for different groups. The measures applied comprise the full range as above except the "Basic scheme only" row which excludes boiler replacements and provision of central heating. The figures for energy reduction by group represent the improvement for those dwellings where applied. The figures for "Energy Reduction Borough" reflect the anticipated reduction in consumption across the whole Borough.

Table 10.2 Improvement options cost analysis

Target group	Total cost	Cost per dwelling	Pay back period	Mean SAP	New Mean SAP	Energy Reduction by group	Energy Reduction Borough
	<i>£millions</i>	<i>£s</i>	<i>Years</i>	<i>SAP</i>	<i>SAP</i>	<i>Per Cent</i>	<i>Per Cent</i>
Not in Warm Front	4.4	1,200	6.1	48	64	20	2
Benefit and Elderly	12.4	1,030	6.4	48	62	23	7
Basic scheme only	32.4	880	7.2	50	59	17	17
All dwellings	36.7	990	6.3	50	62	19	19

10.11. It is immediately clear that targeting different groups has different effects. The cost of applying all measures to all dwellings would, on average, be recouped in 6.3 years by the savings made in heating costs. This would also result in a reduction in energy consumption of 19%. Whether a 30% reduction in energy consumption by 2006 is achievable (the HECA target), will depend on what progress has already been made and but also on the remaining amount of improvement that is theoretically achievable. The relatively high mean SAP and the dominance of gas and oil fired central heating systems leaves more limited scope for improvement than is often available and an increased emphasis may have be placed on improving insulation measures to achieve energy efficiency improvement targets.

10.12. The three target sub-groups offer different advantages:

- Targeting those dwellings in the reduced scheme has the lowest mean cost per dwelling, but has the longest payback period (Table EE11c).
- Targeting dwellings where the elderly or benefit recipients live gives a higher cost but gives one of the best improvements in energy efficiency in any one group (Table EE11b).
- Targeting those dwellings outside the Warm Front Scheme, but with residents in fuel poverty gives the biggest fuel cost savings and consequently the best payback period of only 6.1 years (Table EE11a).

10.13. Clearly targeting allows different objectives to be met. However, it is not without problems. One of the best groups to target is those dwellings occupied by persons in fuel poverty falling just outside the Warm Front Scheme. Unfortunately, these are likely to represent the most difficult group to identify.

Conclusions

10.14. Improving energy efficiency in Ashford Borough to the levels required will be difficult to achieve. The improvement target of 30% over ten years was set in 1996 and some progress will already have been made. The 19% potential improvement is only achievable by undertaking measures to every dwelling the Borough to some degree. By applying basic measures to dwellings, such as heating systems and insulation the maximum improvement is 17%.

10.15. The already higher than average mean SAP ratings for Ashford Borough are the source of the difficulty in achieving a 30% improvement. The high cost for complete improvement work indicates that much of the effort in reducing energy consumption that is needed, will have to come from owners and occupiers carrying out work themselves. There is however an excellent case for assisting those occupiers in fuel poverty who are just outside the eligibility criteria for the Warm Front scheme. The occupiers of these 3,700 dwellings could be targeted for assistance as a key part of the authority's fuel poverty strategy. However this population appears to be highly dispersed and may well prove difficult to target.

11. Renovation grant implications

11.1. The total cost of repair and replacement for private sector dwellings in Ashford Borough over the next ten years (comprehensive repair costs) is an estimated £274 million, with an average of approximately £7,400. Over the next thirty years the total is £845 million, an average of £22,900 per dwelling. The mean costs for comprehensive repairs are relatively uniform by area but in the target area of Ashford Town they are still higher than average (Table C1).

Table 11.1 Comprehensive repair costs by area

	Mean cost (£s)	Total £millions
Ashford	5,900	108
Tenterden	9,700	30
Rural	8,700	137
Borough	7,400	274

11.2. These figures exclude the cost of normal maintenance such as external decoration. The owners of the dwellings will meet the majority of these repair costs but not all will be able to afford them and these may result in a demand for renovation grants.

11.3. Renovation grants can now be given entirely at the discretion of the Council and they are no longer mandatory for unfit dwellings. The Council still, however, has a duty to remedy unfitness and so it is worthwhile considering the potential renovation grant demand these dwellings represent.

11.4. Table 11.2 illustrates the potential renovation demand cost in the owner occupied stock if all of the unfit owner occupied dwellings were to apply for a renovation grant immediately. In reality many of these would not be eligible for a renovation grant and the demand would be spread over a number of years and would depend on the extent to which the Council promoted them.

Potential renovation grant demand

- 11.5. The costs are based on: (i) a minimalist approach of making the dwelling just fit, (ii) the cost of dealing with all repairs and replacements within five years and (iii) comprehensive repairs likely to be required within 10 years. The table is broken down by income bands. Adjustments have been made for the reduced response rate to questions on income and those dwellings where no data was available are assumed to be randomly distributed.

Table 11.2 Costs of repair in unfit owner occupied dwellings by income band.

Income bands	Unfit dwellings	Total just fit costs	Mean just fit costs	Total repair and replacement costs	Mean repair and replacement costs	Total comprehensive costs	Mean comprehensive costs
		£000s	£s	£000s	£s	£000s	£s
£9,999 or less	410	£2,707	£6,565	£6,298	£15,273	£11,561	£28,038
£10-25,000	520	£2,851	£5,507	£5,210	£10,065	£8,541	£16,501
> £25,000	510	£14	£27	£3,548	£6,962	£16,314	£32,008
Total	1,400	£5,571	£3,870	£15,056	£10,458	£36,416	£25,295

11.6. The three different costs can be a guide to the effect of applying three different standards. The costs for comprehensive repair are probably the closest to current renovation grant standards adopted by most local authorities.

11.7. The implications of adopting this standard are very clear with a potential grant demand of £36 million compared to £4 million for a 'just fit' approach to standards.

11.8. The potential grant demand would be limited by the application of the test of resources, which Table 11.3 attempts to illustrate. The assumption in Table 11.3 is that all households with a gross income of less than £10,000 would receive a 100% grant and those with between £10,000 and £25,000 would receive a 50% grant. Above this income level no grant aid would be paid (Table GR02).

Table 11.3 Potential grant demand in unfit owner occupied dwellings by income band

Income bands	Unfit dwellings	Total costs to make just fit	Total repair and replacement costs	Total comprehensive costs
		£000s	£000s	£000s
£9,999 or less	410	£2,707	£6,298	£11,561
£10-25,000	520	£2,851 x 50%	£5,210 x 50%	£8,541 x 50%
Total		£4.1 million	£8.9 million	£15.8 million

11.9. The effect of these assumptions is to reduce the potential grant demand for the three standards. If the standard for comprehensive repair is taken as the most accurate reflection of current grant policy, then the potential grant demand is approximately £16million. 36% of the demand comes from the middle income groups who would have to make some level of grant contribution and 35% would receive no grant all.

11.10. The grant demand would be less if the figures were due to a large number of low cost dwellings with relatively minor problems of technical unfitness. This is not the case in Ashford Borough as 86% of dwellings return a cost of more than £2,500 and 61% more than £10,000 (Table C11a).

11.11. The Rural area stands out as having a potentially high grant demand of £9.8million. Only Ashford returns relatively low mean costs. The Rural area returns the highest overall costs and this is due to the largest total of cases and the highest mean costs being found in the area.

Table 11.4 Grant demand by area (post test of resources)

	Cases	Total cost (£millions)	Mean cost per case
Tenterden	70	1.3	18,600
Rural	460	9.8	21,300
Ashford	400	5.4	13,500
Total	930	16.5	17,700

Potential Home Repair Assistance grant demand

11.12. Home Repair Assistance of up to £2,000 has been an effective and simple method of assisting those in greatest need. In Ashford Borough the grants may be made available to owner-occupiers who are over 60 and in receipt of benefit. The limit for grant has recently been raised to £5,000 making this potentially more effective but also more expensive.

11.13. A total of 350 dwellings occupied by persons meeting these criteria had urgent costs of less than £5,000. This would result in a grant demand of £426,000. The increase to £5,000 has resulted in an increase in demand of £23,000. Probably the most alarming aspect of this analysis is that these 350 households accounted for 34% of all owner occupiers over the age of 60 who were in receipt of a means tested benefit.

11.14. These calculations are necessarily crude and are based on table GR03 taking the mid-point of each cost band and multiplying by the number of dwellings in each cost band.

Discretionary grants for energy efficiency improvement

11.15. A final consideration is the potential for discretionary renovation grants for improving energy efficiency. A total of 10,000 dwellings could usefully have loft insulation added as they currently have less than 90mm of fibreglass or equivalent. This would cost £2.7 million. A further 10,100 dwellings could benefit from cavity wall insulation at a cost of £4.1 million. A total of 3,600 dwellings would benefit from a new heating system at a cost of £13.3million. These cost are based on the following assumptions:

- Cost of providing loft insulation of £270 per dwelling
- Cost of providing cavity wall insulation of £400 per dwelling
- Cost of providing a full gas central heating system with high efficiency boiler, distribution to radiators and insulated hot water cylinder of £3,700.

11.16. If the same estimates of the test of resources are applied as was discussed earlier in this chapter, this results in the costs described in Table 11.5 (Table GR01).

Table 11.5 Discretionary renovation grants demand for energy efficiency improvements

Income bands	Any insulation	Loft insulation	Loft insulation cost	Cavity wall insulation	Cavity wall insulation cost	Space heating	Space heating cost
£			£000s		£000s		£000s
0-9999	6,500	3,800	1,031	4,200	1,676	2,100	7,717
10000-25,000	5,600	3,600	969	3,300	1,335	1,000	3,621
25000 or more	4,400	2,700	724	2,600	1,045	500	1,957
Total	16,500	10,000	2,725	10,100	4,055	3,600	13,295

11.17. Applying a test of resources reduces demand significantly to £13.3 million. This compares to £20.1 million before the test of resources.

Grant demand from the private rented sector

11.18. The Council may wish to consider discretionary renovation grants for landlords to improve unfit private rented dwellings. There are a total of 350 unfit private rented dwellings with a mean comprehensive repair cost of £18,200 (less than for the owner occupied sector, although the sample is too small to be conclusive). The total cost of improving these dwellings is £6.4million. The amount which the Council might have to contribute depends entirely on the Council's decisions as there is no statutory requirement to provide this form of aid to landlords.

11.19. There is a further potential demand from landlords for grants for energy efficiency. The total costs are detailed in Table 11.6 below. The total cost of just short of £1.8million would not all fall to the Council. The proportion payable by the Council would depend upon what assistance, if any, the Council were prepared to offer landlords.

Table 11.6 Energy efficiency costs in the private rented sector

	Cases	Total cost (£millions)
Loft insulation	700	0.2
Cavity wall insulation	700	0.3
Space heating	300	1.3
Total	1700	1.8

Conclusions

- 11.20. As a mechanism for dealing with unfit owner occupied dwellings, the use of renovation grants will have only a limited effect as the potential demand of £16 million is far in excess of current levels of grant spending. Lower income groups who would not need to make some contribution to the cost of the works account for 29% of potential applicants. The rest would have to make some form of contribution and 35% would receive no grant at all.
- 11.21. The Council is not alone in having to face this high demand for renovation grants and other local authorities are facilitating loans as a means of assisting low income owner occupiers. The Council may need to consider such innovative measures given such a high level of potential demand.
- 11.22. When considering energy efficiency there is greater need in the grant-aidable sector. Applying the test of resources would therefore reduce the level of grant demand but at current levels of funding it is difficult to see any potential for assisting with energy efficiency except for those households in greatest need.
- 11.23. Demand for home repair assistance amounts to £426,000, based on those who are over 60 and in receipt of benefit.
- 11.24. Landlords in Ashford Borough face a bill of £8.2 million in improvements to their dwellings, the majority of which is to remedy unfitness. While the Council is not under any obligation to assist private landlords the very high average cost of repairs suggest that there will be cases where only provision of assistance will secure the improvements required.

12. Conclusions and policy implications

Introduction

- 12.1. This final section of the report seeks to summarise the key findings and examines some of their policy implications. It further identifies initiatives and measures that have been suggested by Central Government, some of which may be applicable in Ashford Borough. Indeed, it is understood that certain of them have already been adopted. These have not been separated out for comment, as it was not part of the survey brief to report on existing initiatives. It remains for others to assess these and the data gathered by the survey will be a major source for those charged with such a task.
- 12.2. This section concentrates on the results for the private sector, which was the principal target of the survey. Improving this, in particular the rented tenure and the worst of the owner occupied housing presents a major challenge which should be given special attention when considering claims on scarce resources.

General character of the stock

- 12.3. There are some marked differences between the national age and building type profiles and those found in Ashford Borough. At the national level, problems of dwelling disrepair and unfitness are associated with a range of issues. Of the physical factors, age of the stock has the strongest association with dwellings in poor condition. The stock profile in Ashford Borough is more modern than the national profile but the proportion of pre-1919 stock is the same and this accounts to some extent for some of the poorer housing conditions discovered by the survey.
- 12.4. The influence of building type on unfitness and disrepair is more positive. This is due to a greater proportion of detached houses present in Ashford Borough, which generally are found to be in better condition than other types.
- 12.5. The tenure most associated with poor conditions, the private rented sector, is present in a smaller proportion than is found nationally and this taken together with the age and property profile leads to an expectation of better than national average housing conditions.

Use of the stock

- 12.6. There is evidence of a relatively small number of medium to long-term vacant dwellings that could be brought into use. This result should however only be considered in the context of other evidence, as surveys of this type are not particularly effective in gathering data on vacant dwellings.
- 12.7. Overall dwellings are larger in terms of floor space compared to the national average but are occupied at a slightly higher rate. This results in Ashford Borough occupiers enjoying considerably more space per person than the national average. There was however evidence of over-crowding and while the greatest numbers were in the owner occupied sector the largest percentage was found in privately rented dwellings. At the opposite end of the scale there was evidence of under occupancy of dwellings and some of this was by elderly occupiers who may welcome assistance to sub-divide their dwellings.
- 12.8. While HMO numbers are relatively small they include 240 self contained flats in Ashford and Tenterden where because of their size there is a mandatory duty to inspect to ensure compliance with Fire Safety legislation.
- 12.9. At the most basic level Ashford Borough is well provided for in that nearly all dwellings (more than 99%) have all standard amenities. Looking beyond this, the level of provision in Ashford Borough is better than the national average (which itself is based on 5 year old data).
- 12.10. These amenity measures are important in the definition of a "Decent Home" and as this becomes acknowledged as a major housing indicator Ashford Borough is likely to be shown to be somewhat poorer than the national average which will result from the 2001 EHCS.
- 12.11. The "Decent Homes" standard is still being formulated but focuses on the age of amenities and other key items. The survey has gathered data on the ages of these key building elements which will become a valuable data source once the definition is agreed.

Facilities and services

Repair costs

- 12.12. Comparisons of general repair costs suggest that the repair and replacement costs are similar to the national average, but the comprehensive costs are more than twice the national averages. However this simple average may not be a particularly good comparison and it is for purposes of internal comparison that these costs are most useful. In this respect it is notable that the 1919-1944 stock has costs greater than those of the pre-1919 stock suggesting the stock from this period is in particularly poor repair.
- 12.13. Private rented sector costs are generally higher than those of owner occupied dwellings and the pattern of variation in cost between age bands is similar to the national position.
- 12.14. Detached houses were the building type with highest repair costs reflecting their large size and dominance of the poorer condition rural stock.
- 12.15. The majority of costs are attributable to external elements. The distribution of internal and external costs is similar to that found nationally.
- 12.16. The Rural sub-area had the highest repair costs per dwelling, which were significantly higher than those for Ashford and Tenterden.

Unfit dwellings

- 12.17. The overall rate of unfitness of 5% in Ashford Borough is slightly lower than the national average of 7%.
- 12.18. Disrepair is the main cause of failure of the fitness standard. The causes of unfitness are somewhat different to the national position with food preparation taking a less prominent role than nationally. Other frequent causes of unfitness include heating, dampness and ventilation.
- 12.19. Multiple fitness failures i.e. failures on more than one grounds of unfitness category, occur at a higher rate to the national average.
- 12.20. It was notable that the costs of making dwellings fit increased with the number of items on which a dwelling failed and was considerably higher than is often found by local house condition surveys in southern England.
- 12.21. These higher costs are almost certainly associated with detached houses being the most frequently occurring unfit building type and the relatively small number of unfit dwellings of smaller types such as converted and purpose built flats. Other obvious reasons for the higher costs are the larger number of items of unfitness on which dwellings fail, the presence of disrepair as a failure item in almost half of them and their age - over 60% are pre-1919 and 81% pre-1944.
- 12.22. While the overall level of unfitness is close to the 1996 national average, there are clear indications of a hard core of dwellings with severe problems of unfitness which will be very costly to make fit.
- 12.23. With the Rural area returning both the highest unfitness rate and the largest total of unfit dwellings (more than the rest of the Borough) there is a real concern that the unfit dwellings will be relatively scattered and difficult to target as well as expensive to remedy once found.

Housing Health and Safety Rating

- 12.24. This new system is based upon the calculation of risk of harm to persons using the dwelling. Most of these hazards are either rare, or very unlikely to cause a serious health and safety outcome. A hazard score of 1,000 or more implies that there is a risk of death equivalent to 1 in 1,000 and that is considered unacceptable.

12.25. There were 6 types of hazard yielding scores of over 1,000 identified in Ashford Borough. The most common hazards were excessive cold, falls on stairs and falls on the level. Priorities for action would be in the 1,300 dwellings where serious hazards were found and where they were occupied by members of the group most vulnerable to the particular hazard. These are mainly the elderly as most of these hazards are associated with excessive cold and falls on stairs. They also however include hazards to children due to hot surfaces and materials.

12.26. These results arise from a first attempt to utilise the Housing Health and Safety Rating and should therefore be interpreted with some caution. However careful training and quality control has produced information that compares credibly with what is known of the national position. It should be a matter of some concern to the Council that the percentage of dwellings with serious hazards is double the current unfitness rate and furthermore a very large proportion of them occur in the Rural area whose dispersed character will make them difficult to target.

Households and dwellings

12.27. The highest levels of unfitness were found in dwellings occupied by the under 21 age band.

12.28. While the rate of unfitness was not high amongst the elderly, the repair costs were, with lone older households returning the highest figures.

12.29. There was some indication of an association between low income and unfitness but this was less noticeable in the very lowest income group but there was a clear association with unfitness in the £15,000 -£25,000 household income band.

12.30. People with disabilities are another identifiable group with clear need for provision of facilities to improve the quality of their lives. A large number of adaptations are required and many of these are expensive items including stairlifts and bathroom and wc alterations and relocation. While unfitness was quite low amongst the disabled, all cases discovered by the surveys were in the lowest income group. Demand is therefore likely to be high both for assistance with disabled facilities grants and for renovation grants to remedy unfitness.

Energy efficiency

- 12.31. There are many reasons for a significant proportion of residents to be dissatisfied with their home but overall levels of satisfaction are high. In unfit dwellings levels of satisfaction are far lower indicating there is a real demand from occupiers for improvements to be made in their living conditions. Satisfaction with the local environment was generally high but lowest in Ashford and marginally higher in the Rural area than Tenterden.
- 12.32. Ashford Borough has an above average SAP rating of 50. While this is higher than the national average of 44 there are similar proportions of dwellings with very poor SAP ratings.
- 12.33. SAP is strongly associated with dwelling age in Ashford Borough with pre 1945 dwellings returning much lower SAP ratings than the more modern stock.
- 12.34. There was a strong relation between SAP and tenure. The lowest SAP ratings by tenure are found in private rented dwellings. This appears to be a reflection of the older stock in this tenure together with poorer heating systems, particularly a greater reliance on room heaters.
- 12.35. Heating systems have a major influence on SAP in Ashford. Where central heating is present SAP is on average 24 SAP points higher than where it is not.
- 12.36. There is potential for improving the energy efficiency of the stock through loft and cavity wall insulation and greater provision of insulation to the water cylinder. In addition there is still potential for improving heating systems, especially in the least efficient stock, with one third of these dwellings lacking central heating.
- 12.37. There was some evidence of a concentration of low income groups living in the least energy efficient dwellings. This is not always found by house condition surveys as the very lowest income groups are usually found in more energy efficient housing association dwellings. This does not seem to be the case in Ashford as those households with incomes of less than £10,000 were found in larger proportions in the least efficient stock than were households with greater than this income level.
- 12.38. The target of achieving a 30% reduction in energy consumption by 2006 will be difficult as there is the potential is limited to around 19% based on today's figures. However some improvement will already have taken place so it cannot be said that the target is unachievable.

12.39. The DETR have now issued guidance on tackling fuel poverty. It's emphasis is on actions to help reduce this in communities through improved energy efficiency in large part by ensuring that communities get their full share of the new Warm Front Scheme resources.

12.40. Local Authorities are encouraged to ensure, through e.g. partnership and publicity activities, that owner-occupiers and private rental tenants secure their full share of the increased help available to address fuel poverty. They will now need to report on their activities and achievements as part of the HECA annual process, as well as providing an input to local Best Value Plans and affordable warmth/fuel poverty strategies.

12.41. As part of this, a corporate commitment to improving energy efficiency is commended. In addition, existing investment, improvement and maintenance programmes should be reviewed, together with local performance indicators relating to fuel poverty and/or energy efficiency in housing.

12.42. In Ashford Borough, the Council may wish to take account of the following factors:

- 53% (17,700) of all dwellings have loft insulation of less than 140mm;
- 63% (19,400) of all pre-1982 cavity walled properties have not had insulation retro-fitted;
- the privately rented sector has the lowest SAP average at 46 and the smallest percentage of central heating;
- 4,400 hot water cylinders (13%) have inadequate or missing insulation;
- the average SAP rating for dwellings with central heating is 51 compared with 27 for those without, and 7% of dwellings have a SAP of less than 20.

Improvements in energy efficiency

12.43. The group of residents who would benefit most from direct council intervention/assistance are those found to be in fuel poverty who fall outside the existing Warm Front Scheme.

12.44. The current total cost of this would be £4.4M, which would offer the best payback period of 6.1 years and increase the mean SAP of these dwellings from 48 to 64. The Council would have to consider how best to target these residents.

Grant demand

- 12.45. In Ashford Borough, a reduction of 30% in energy consumption from 1996 levels will be difficult to achieve, even after applying the full range of measures. This conclusion is not surprising given the relatively high mean SAP and the dominance of gas and oil fired central heating systems, which limits scope for improvements.
- 12.46. As a mechanism for dealing with unfit owner occupied dwellings, the use of renovation grants will have only a limited effect as the potential demand of £16 million is far in excess of current levels of grant spending. Lower income groups who would not need to make some contribution to the cost of the works account for 29% of potential applicants. The rest would have to make some form of contribution and 35% would receive no grant at all.
- 12.47. The Council is not alone in having to face this high demand for renovation grants and other local authorities are facilitating loans as a means of assisting low income owner occupiers. The Council may need to consider such innovative measures given such a high level of potential demand.
- 12.48. When considering energy efficiency there is greater need in the grant-aidable sector. Applying the test of resources would therefore reduce the level of grant demand but at current levels of funding it is difficult to see any potential for assisting with energy efficiency except for those households in greatest need.
- 12.49. Demand for Home Repair Assistance amounts to £426,000, based on those who are over 60 and in receipt of benefit.
- 12.50. Landlords in Ashford Borough face a bill of £8.2 million in improvements to their dwellings, the majority of which is to remedy unfitness. While the Council is not under any obligation to assist private landlords the very high average cost of repairs suggest that there will be cases where only provision of assistance will secure the improvements required.

Best Value

- 12.51. Best Value is an important new development that is seeking to encourage cultural change within local authorities by challenging the services provided, the manner of their provision and the level of accountability to the local community. The aims are to improve services continuously, ensure cost-effective delivery, develop them in partnership with all interested parties and implement using committed and well-trained staff.
- 12.52. For the period 2001/02, the Audit Commission will not as previously specify statutory indicators. Instead, it will play more of a development role and consult on a set of voluntary quality of life and crosscutting indicators, measuring performance across traditional service boundaries and in partnership with other stakeholders. The aim is to move toward indicators of broader outcome, thereby reflecting this new policy.
- 12.53. All targets will continue to be set locally by authorities, who will need to take a corporate-level approach to this task, considering particularly the balance between cost and quality improvements, and the wishes of local people, in delivering improvements in economy, efficiency and effectiveness.
- 12.54. Recent DETR guidance on Best Value highlights three areas for consideration which are relevant to this survey i.e. unfit dwellings, energy efficiency and vacant properties. Related to these will be the question of grant policy. All three should be identified within the councils current housing strategy, but it is recommended that the relevant targets and priorities are reconsidered in the light of the findings of this survey and the requirements of Best Value.

Appendix A: Sample design and dealing with non-response

Sample Design

The sample was drawn from the Ashford Borough council tax list. The total number of private sector dwellings on the list was 37,510.

The target number of complete surveys was 1,000. This was to be met at an access rate of 60%.

The original sample was a stratified random sample of 1,668 addresses. The sample was stratified by area. This was done in order to increase the sample size to a minimum of 200 in Tenterden and Rural (rural areas outside Tenterden and Ashford Town itself). Table A1.1 below gives a breakdown of the sample.

Table A1.1 Sample stratification groups

Areas	Sample
Tenterden	417
Rural	417
Ashford	834
Total	1668

Stock total

The stock total is based initially on the council tax list. This constitutes the sample frame from which a proportion (the sample) is selected for survey. Any non dwellings found by the surveyors are marked as such in the sample. These will then be weighted to represent all the non-dwellings which are likely to be in the sample frame. The remaining dwellings surveyed are purely dwellings eligible for survey. These remaining dwellings are then reweighted according to the original sample fractions and produce a stock total.

In producing the stock total the amount by which the total is adjusted to compensate for non-dwellings is estimated, based on how many surveyors found. With a sample as large as 1,668 dwellings however, the sampling error is likely to be very small and the true stock total is likely, therefore, to be very close to the 36,900 (36,870 before rounding) figure reported. Sampling error is discussed later in this section.

Appendix A: Sample design and dealing with non-response

Response rates

Table A. 1 shows the response rates to the survey.

Table A.1 Response rates

	Dwellings	Per cent of addresses issued	Per cent of traceable eligible dwellings
Addresses issued	1668	100	N/A
Non-residential	15	1	N/A
Untraceable	21	1	N/A
Believed demolished	2	<1	N/A
Demolished	2	<1	N/A
Traceable eligible dwellings	1628	98	100
External data collected	1532	92	94
Vacant dwellings	38	2	2
Internal access data collected	995	60	61

The national survey in 1996 achieved a response rate of 44% which compares favourably to the 60% rate in Ashford Borough. The national survey excluded 7% of dwellings from the survey whereas in Ashford Borough 8% were excluded although 2% of these were ineligible for survey or impossible to find. The Ashford Borough survey therefore compares creditably with the national survey with regard to overall response.

Weighting the data

The original sample was drawn from the Ashford Borough council tax list. The sample fractions used to create the sample from this list, can be converted into weights. If applied to the basic sample these weights would produce a total equal to the original Council Tax list. However, before the weights are applied the system takes into account all non-residential and demolished dwellings. This revised sample total is then weighted to produce a total for the whole stock, which will be slightly lower than the original total from which the sample was drawn.

Dealing with non-response

Where access fails at a dwelling selected for survey the easiest strategy for a surveyor to adopt is to seek access at a neighbouring property. Unfortunately this approach results in large numbers of dwellings originally selected subsequently being excluded from the survey. These are the dwellings whose occupiers tend to be out all day, i.e. mainly the employed population. The converse of this is that larger numbers of dwellings are selected where the occupiers are at home most of the day, i.e. the elderly, the unemployed and families with young children. This tends to bias the results of such surveys as these groups are often on the lowest incomes and where they are owner occupiers they are not so able to invest in maintaining the fabric of their property.

Appendix A: Sample design and dealing with non-response

The methods used in this survey are designed to minimise the effect of access failures. The essential features of this method are the reduction of access failures to a minimum by repeated calls to dwellings and the use of first impression surveys as a proxy for complete inspections.

Surveyors were instructed to call on at least three occasions and in many cases they called more often than this. At least one of these calls was to be outside of normal working hours, thus increasing the chance of finding someone at home.

Where access failed this normally resulted in a brief external assessment of the premises. Among the information gathered was the surveyor's first impression of condition. This is an appraisal of the likely condition of the dwelling based on the first impression the surveyor receives of the dwelling on arrival. It is not subsequently changed after this, whatever conditions are actually discovered. The first impression groups and descriptions are listed in table A.2.

Table A.2 First impression groups and description

First Impression Group	Short Description	Full description
1	Seriously defective	Exterior condition suggests that dwelling/module is probably unfit.
2	Defective	Dwelling/module has serious problems and is likely to be 'borderline fit'.
3	Defective	Dwelling/module has major problems but is unlikely to be unfit. Dwelling/module in need of fairly major/extensive repairs.
4	Just acceptable	Dwelling/module is in generally poor condition with some faults but with no major problems. Dwelling/module in need of several minor repairs.
5	Just acceptable	Dwelling/module is in reasonable condition with a few minor repairs needed.
6	Satisfactory	Dwelling/module is in good condition with enhanced maintenance only required.
7	Satisfactory	Dwelling/module is in excellent condition and well maintained.

Where access fails no data is collected on the internal condition of the premises. During data analysis weights are assigned to each dwelling according to the size of sample fraction used to select the individual dwelling.

Where access to a particular dwelling fails the weight applied to all other dwellings in the first impression group is increased to compensate for the missing data. If no access is achieved in a dwelling where the first impression group is equal to 1 (seriously defective) then all dwellings in the same first impression group 1 have their weight increased.

Appendix A: Sample design and dealing with non-response

Sampling error

Results of sample surveys are, for convenience, usually reported as numbers or percentages when in fact the figure reported is at the middle of a range in which the true figure for the population will lie. It is usual to report these as the 95% confidence limits, i.e. the range either side of the reported figure within which one can be 95% confident that the true figure for the population will lie. For this survey the estimate of unfit dwellings is 4.9% and the 95% confidence limits are + or -1.6%. In other words one can say that 95% of all samples chosen in this way would give a result in the range between 3.3% and 6.5% (Table S1).

The 95% confidence limits for a proportion are found by multiplying the standard error for a sample by 1.96.

Appendix A: Sample design and dealing with non-response

The standard error for the results of this survey which arise from the overall sample and any sub-samples which include dwellings from different areas should be calculated using the general formula for a

$$s.e.(p_{st}) = \sqrt{\frac{1}{N^2} \sum \frac{N_i^2 p_i (1 - p_i)}{n_i - 1}}$$

disproportionate stratified sample:

Where $s.e.(p_{st})$ is the notation to describe the general formula for the standard error for a stratified random sample.

N = the number of dwellings in the population.

N_i = the population of dwellings in an individual stratum of the sample.

n_i = the number of dwellings in an individual stratum of the sample.

p_i = the proportion of dwellings in the sample with a particular attribute such as unfitness.

$$s.e.(p_{srs}) = \sqrt{\frac{p(1-p)}{n}}$$

Where results are for dwellings contained within the same sample group, the formula for a simple random sample can be used. The standard error of a proportion for a simple random sample is calculated using this formula:

where p = the proportion found with a particular attribute such as unfitness

$s.e.(p_{srs})$ = the standard error for a simple random sample

and n = the size of the sample

This formula can be used to calculate the confidence limits for the results of any attribute such as unfitness. Table A.3 gives a number of sample sizes and the confidence limits for a range of different possible results.

Table A.3 95% per cent confidence limits for a range of possible results and sample sizes

	Sample size									
Expected	100	200	300	400	500	600	700	800	900	1,000

Appendix A: Sample design and dealing with non-response

result as a percentage										
10	5.9	4.2	3.4	2.9	2.6	2.4	2.2	2.1	2	1.9
20	7.8	5.5	4.5	3.9	3.5	3.2	3	2.8	2.6	2.5
30	9	6.4	5.2	4.5	4	3.7	3.4	3.2	3	2.8
40	9.6	6.8	5.5	4.8	4.3	3.9	3.6	3.4	3.2	3
50	9.8	6.9	5.7	4.9	4.4	4	3.7	3.5	3.3	3.1
60	9.6	6.8	5.5	4.8	4.3	3.9	3.6	3.4	3.2	3
70	9	6.4	5.2	4.5	4	3.7	3.4	3.2	3	2.8
80	7.8	5.5	4.5	3.9	3.5	3.2	3	2.8	2.6	2.5
90	5.9	4.2	3.4	2.9	2.6	2.4	2.2	2.1	2	1.9

The formula takes no account of the size of the population the sample is drawn from as this is not significant unless the sample size is large compared to the population. Where this occurs this complete version of the formula for the standard error should be used:

$$s.e.(p_{srs}) = \sqrt{\left(1 - \frac{n}{N}\right) \frac{p(1-p)}{n}}$$

This takes account of the size of the population N .

For general purposes the figures quoted in Table A3 will provide a reasonable approximation of the confidence limits calculated by the full formula for the stratified random sample.

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