IPSWICH BOROUGH COUNCIL

Housing Stock condition Energy efficiency Study

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Fordham RESEARCH

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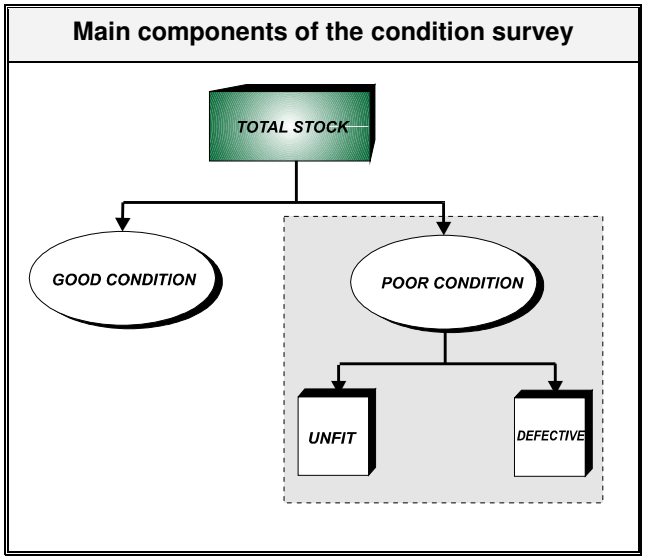
EXECUTIVE SUMMARY

Introduction

This document provides a Summary Overview of a comprehensive stock condition survey carried out on behalf of Ipswich Borough Council. The study has been conducted on behalf of the Council by Fordham Research Ltd.

In stock condition surveys it is usual to describe the physical condition of the housing stock in terms of two main indicators: unfitness and disrepair. For the purpose of the survey the fitness standard applied was that laid out in Section 604 of the 1985 Housing Act.



Additionally, the survey focuses considerable attention on various other elements relating to stock condition. Notably:

- Energy efficiency
- Decent homes
- HHSRS

Survey structure and response

The survey comprised two related surveys undertaken simultaneously: a housing needs interview of households and a physical survey of dwellings. The survey set out to complete 1,000 inspections over the whole of the Borough within the private sector stock only (including RSL); in total 1,006 were achieved. However, this figure included 8 Council dwellings so a total of 998 responses were used.

The survey data was weighted by dwelling and household variables, mainly sub-area and tenure, so as to be representative of all private sector dwellings in Ipswich. In total it is estimated that there are 44,564 private dwellings in the District, of these 1,319 are vacant leaving a total of 43,245 occupied dwellings.

Profile of the housing stock

Some 65.3% of the housing stock is owner-occupied, and another 16.0% is Council stock. 11.6% is privately rented whilst the remaining 7.1% is rented from an RSL. Ipswich has a higher than average proportion of social sector dwellings compared to both the East of England and to England as a whole Overall, some 85.3% of dwellings are houses and 14.7% flats. The survey estimated that almost a third of the housing stock (28.9%) was built after 1964, with a further 26.8% of dwellings pre-1919. This is a somewhat older profile proportion of dwellings than nationally and particularly regionally; however it should be remembered that the data for Ipswich are for the private sector only, whilst data for the East and England includes Council owned dwellings. The most numerous dwelling type in the District are post-1980 detached houses, accounting for 10.5% of the stock.

Typology of the housing stock

Building type	Dwelling age			
	Pre-1919	1919-1944	1945-1964	Post-1964
Detached house				
Semi-detached house				
Terraced				
Flats				

Disrepair

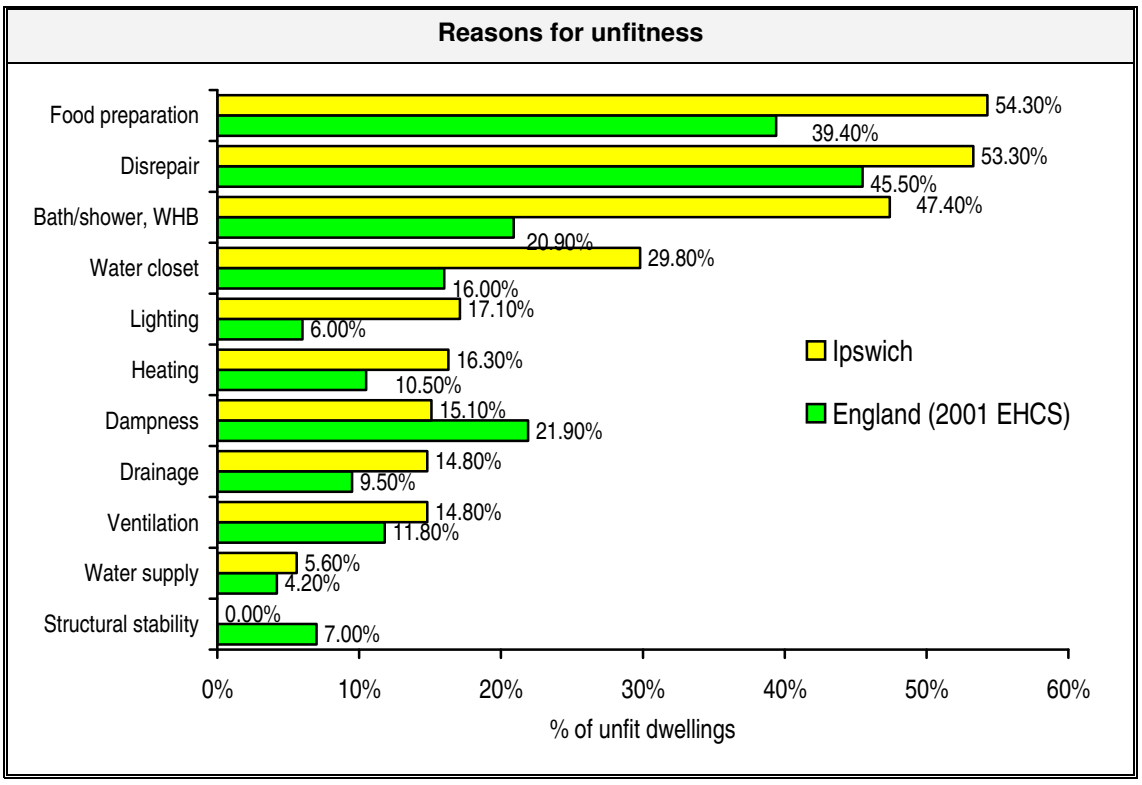
The survey studied faults to dwellings and associated repair costs. Repair costs are based on a standard schedule provided by the Building Research Establishment (BRE) and have been updated to a 1st quarter 2004 base for the East region. Some of the main findings of the analysis were:

- The average cost per dwelling of urgent repairs (i.e. those needing to be done within the next year) was £1,372 – this totals £61.1m District-wide.
- The average cost per dwelling for basic repairs (i.e. all work needing to be done within the next 5 years) was £2,349 – totalling £104.7m District-wide.
- The main problem area (in terms of the amount needing to be spent) was '*External doors and windows',* accounting for a quarter (24.6%) of the total cost. '*Walls, fences, paved areas and outbuildings'* and *'heating systems'* were also areas needing attention.
- The private rented sector showed the highest urgent repair costs as did vacant and pre-1919 dwellings.
- Mid-terrace dwellings and those in the 'Central' area generally showed the highest repair costs
- Single pensioner households have the highest urgent repair costs while single non-pensioner households show the highest overall standardised costs.

Unfitness

Under the provisions of Section 604 of the 1985 Housing Act (amended by the 1989 Local Government and Housing Act) a dwelling house is fit for human habitation unless it fails to meet one or more of eleven requirements and as a result of that failure, is not reasonably suitable for occupation.

An estimated 2,004 private sector dwellings are unfit, accounting for 4.5% of the private sector housing stock, this compares to an unfitness rate of 4.2% nationally and 3.0% in the East of England (2001 EHCS). The most common reasons for unfitness in Ipswich are food preparation (1,089 dwellings – 54.3%) and disrepair (1,069 dwellings – 53.3%).



The following were some of the main findings in relation to unfitness in Ipswich:

- Private rented dwellings are most likely to be unfit – 6.5% of all private rented dwellings were found to be unfit.
- Older dwellings were particularly likely to be unfit – 6.6% of pre-1919 were unfit, whilst only 0.8% of dwellings built after 1980 were unfit.
- Mid-terrace dwellings and those in the 'Central' sub-area are particularly likely to be unfit
- 19.6% of all vacant dwellings in the District are estimated to be unfit.
- An additional 7,432 dwellings are estimated to be 'fit but defective' (representing 16.7% of the dwelling stock).

Housing Health and Safety Rating System

The Housing Health and Safety Rating System (HHSRS) will replace the fitness standard as the enforceable standard of housing (having gained royal ascent as part of the 2004 Housing Act). The HHSRS takes into account the potential hazards of a dwelling in relation to any persons using it rather than a study of the fabric condition of the home.

It is estimated that around 13.9% of dwellings require a mandatory response, which is significantly higher than the estimated level of unfitness in the Borough of 4.5%. Below are some characteristics of 'hazardous' homes:

- The main hazards in Ipswich relate to *excessive cold* and *falls on stairs*.
- Private rented and pre-1919 dwellings appear particularly likely to be 'hazardous'.
- There is some link between unfitness and the hazard rating although a number of dwellings fail on only one of the two measures.

Energy efficiency

An important part of any stock condition survey is the measurement of energy efficiency. The Standard Assessment Procedure (SAP) is the Government's recommended system for home energy rating – where a high score (on a scale from 1 to 120) means a dwelling is more energy efficient.

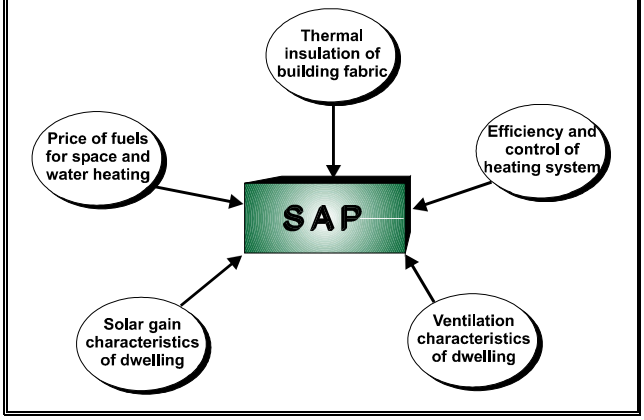
Definition of SAP rating

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 1-120 scale. The higher the number the better the standard.

The individual energy efficiency Standard Assessment Procedure (or SAP) rating of a dwelling depends upon a range of factors that contribute to energy efficiency. These are shown on the diagram opposite.

The average (mean) SAP rating for all dwellings in Ipswich is estimated to be 51. This is comparable with the national average (2001) of 51 and the average for the East of England (51).

Factors influencing SAP



Additionally:

- A total of 7.5% of dwellings have a SAP of below 30 (compared with a national average of 9.4% and a regional average of 9.1%)
- Older (pre-1919) dwellings show particularly low mean SAP ratings, as do converted flats
- Different type of household group does not greatly affect SAP ratings: the mean value is similar across the categories

Dwellings/households with particularly high/low SAP ratings			
Low SAP ratings		High SAP ratings	
Group	SAP rating	Group	SAP rating
Central sub-area	47	RSL	63
Pre-1919	44	Post-1980	59
Converted Flat	37	Purpose-built Flat	64
End Terrace	47	South-West sub-area	56

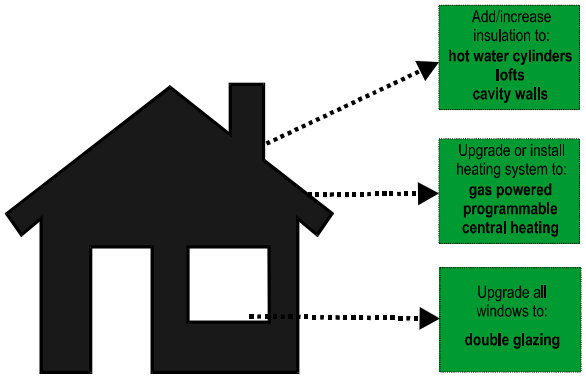
Additionally, it is estimated that households' current heating systems make for an average (mean) requirement to spend £440 on space and water heating and that the average dwelling produces 5.50 tonnes of CO2 per year.

It is estimated that on average a household in Ipswich spends around 2.4% of net disposable income of fuel. Overall, 2,955 households in Ipswich are in fuel poverty. This represents 6.8% of households in the Borough. This compares to a national figure of 11.7% and a regional figure of 8.6% households in the East of England as fuel poor. Dwellings in the private rented sector, the 'Central' sub-area and built before 1919 most likely to contain households in fuel poverty. Single pensioners and vulnerable households are more likely than other households to be fuel poor.

Improving energy efficiency

The survey also suggested ways of improving energy efficiency in the District. This is both in terms of improving SAP ratings and reducing the amount required to be spent on fuel. In looking at fuel costs, it is possible to calculate a 'payback' period, which is simply calculating the amount of time it would take for the cost of improvements to equal the cost savings. There are three main ways in which the energy efficiency of dwellings can be improved; these are shown in the diagram opposite.

Improvements to energy efficiency



The analysis looked at the costs and savings of each of these measures in isolation as well as in combination. The main aim of improving energy efficiency considered by the survey was:

- Action required and costs of improving average SAP ratings by 30% (to 66)
- Action required and costs of improving average SAP ratings to 65

A 30% improvement in energy efficiency for the stock appears possible but difficult to achieve. A full range of measures will increase the mean SAP rating of dwellings from 51 to 67 (an improvement of 31.4%), however the total cost of this is estimated to be £113.1m. A more realistic aim might be to look at upgrading or installing heating systems to more efficient central heating systems along with a programme of insulation; these two measures would increase the mean SAP rating from 51 to 65 (an improvement of 27.7%) at a total cost of £65.6m. It can be seen therefore that there is a clear trade-off between further improvements to energy efficiency and the cost of bringing about these improvements, although there will be a 'payback period' before improvements pay for themselves (13.8 years in the case of an increase to a rating of 65).

Decent homes

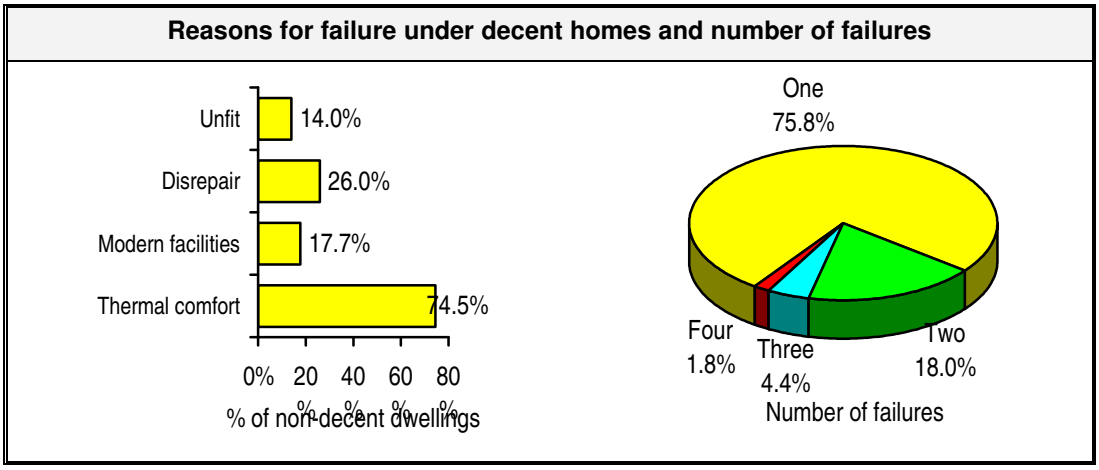
The government's housing objective is "to ensure that everyone has the opportunity of a decent home and so promote social cohesion, well being and self-dependence". In 2000 the Government set a standard for 'decent homes' whereby housing should:

i) Meet the current statutory minimum standard for housing (i.e. not unfit)
ii) Be in a reasonable state of repair
iii) Have reasonably modern facilities and services
iv) Provide a reasonable degree of thermal comfort

The results suggest that 32.1% of private sector dwellings failed the standard under one or more of these headings (14,300). This figure compares with a national estimate of 33.1% (all dwellings). Some of the main findings relating to 'non-decent' homes were:

- The main reason for failure was thermal comfort: 74.5% of non-decent homes failed under this heading. This is also the main reason nationally.
- Some three quarters (75.8%) of 'non-decent' homes fail on only one of the four factors.
- Groups with high levels of 'non-decency' included: private rented, pre-1919 dwellings, dwellings in the 'Central' area and single pensioner households.
- The Borough-wide cost of remedying non-decent homes is £53.1m.

The data also showed that vulnerable households are more likely than other households to be living in non-decent accommodation. However, the proportion of vulnerable households in non-decent homes (34.7%) is below national estimates of around 43%.



In addition, a decent homes calculation was carried out by replacing the unfitness part of the assessment with calculations made under HHSRS. This showed a slightly higher number of failures (16,423 dwellings – 36.9% of dwellings) In total, the survey estimated that 16,316 households are living in non-decent homes, of these 5,852 are considered to be vulnerable households. Using this calculation, which will be in force once the HHSRS replaces the fitness standard, the proportion of vulnerable households in non-decent homes rises to 47.8%.

HMOs

The survey also considered the characteristics of houses in multiple occupation (HMOs), defined as houses occupied by persons who do not form a single household. The main reason for interest in HMOs is an additional standard under Section 352 of the *1985 Housing Act,* whereby HMOs must be reasonably suitable for the number of occupants.

The survey followed as closely of possible Chartered Institute of Environmental Health definitions and in total it was estimated that there were 839 buildings acting as HMOs at the time of the survey. The following are some of the main characteristics of HMOs in Ipswich:

- A large proportion of HMOs were found to be in the private rented sector (71.8%) – this compares with 13.8% of all dwellings.
- In general the buildings forming HMOs are older, with 64.6% dating pre-1919 compared with 26.8% of all dwellings.
- The majority of households living in HMOs are non-pensioner households without children (93.1%), this group makes up 51.7% of all households.
- Generally HMO buildings had higher repair costs than other dwellings.

Intervention and financial assistance

One important issue in the stock condition survey was to consider to what extent households are able to fund any necessary improvements. The analysis looked at the total costs of repairs and energy efficiency improvements required. Some of the main findings were:

- To carry out all urgent repairs required to unfit owner-occupied dwellings (occupied dwellings) would cost an estimated £7.5m.
- Households' income levels could reduce this figure to a potential demand for financial assistance of £5.6m whilst including the scope for equity release would reduce this figure to £3.8m.
- To carry out all urgent repairs required to owner-occupied dwellings (occupied dwellings) would cost an estimated £39.9m. Again, this figure could be reduced dramatically when taking into account households income and equity levels to £21.9m and £14.9m respectively.
- In the private rented sector the total bill for carrying out all urgent repairs comes to £12.2m. The equivalent figure for RSL dwellings is £2.4m.

The survey data therefore suggests that there is considerable scope for the use of equity release schemes. However, in practice this issue is a complicated area due to people's perception of equity in their home, lack of suitable products available, additional mortgage/loan payments that would arise from releasing equity on a property. In many cases this will be an additional barrier to access such schemes, this is especially the case for those households classified as vulnerable due to their low household income.

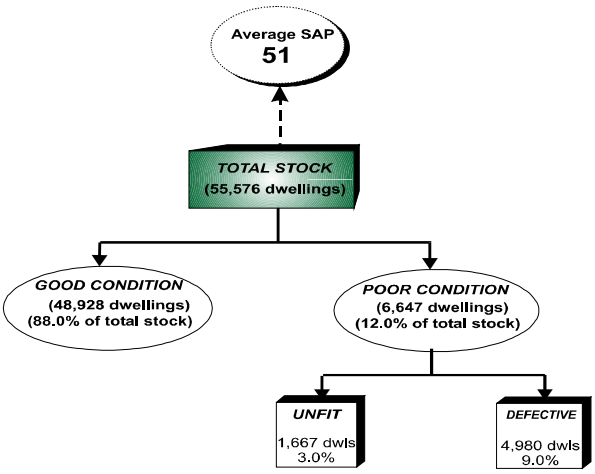
Conclusions

The Stock Condition Survey in Ipswich generally shows similar dwelling conditions and energy efficiency levels compared to those found nationally (2001 EHCS). The costs of making the necessary improvements to dwelling condition and the suggested improvements to energy efficiency may however be quite prohibitive. The Council will therefore need to consider a package of measures (including both grants and the use of owners' own finances) to achieve considerable improvements to the housing stock and, indeed, to prevent further deterioration. Heating was a noticeable issue, with many Ipswich households failing to achieve sufficient levels of thermal comfort and suffering from excessive cold due to inadequate insulation, central heating or double glazing.

In determining a strategy to implement an appropriate package of measures, account could be taken of those categories where the highest incidence of unfitness/disrepair/low energy efficiency was identified, i.e.

- Private rented sector
- Pre-1919 stock
- Vacant dwellings
- Single pensioners
- Dwellings in the 'Central' area

Summary of condition assessment



SECTION A: CONTEXT OF THE STUDY

This report is the result of a Housing Stock Condition Assessment undertaken by Fordham Research on behalf of Ipswich Borough Council. It provides an overview of the housing situation in Ipswich, as well as calculating estimates of measures of housing stock condition such as disrepair, unfitness, energy efficiency, decency, and severity of hazards.

Data collection and analysis for the assessment has been implemented in line with ODPM guidance, which was published in 2000 in an attempt to standardise Housing Stock Condition Assessments. These assessments are a key piece of research for Local Authorities, informing the development of housing policies.

The report is divided into five sections. The first presents the methodology of the survey, and discusses the structure in more detail. An initial profile of the key characteristics of the area's households and dwellings is also laid out. The second section examines the general condition of the housing stock, according to the standards of 'unfitness' and 'disrepair'.

The third section assesses the energy efficiency of the Council's housing stock, and examines the most cost-effective way of improving this. The fourth section considers emerging areas of policy and housing condition standards, looking at levels of decency of homes in the area, studying houses in multiple occupation (HMO's), and providing an assessment of hazards according to the Housing Health and Safety Rating System (HHSRS). In the final section, the study considers the implications of the main findings for policy, and how improvements can best be achieved.

It is important to note that the data in some of the tables in this report may not necessarily add up to the totals presented, or alternatively some of the percentage figures may not sum to 100%. This is due to the rounding of the survey data during the analysis.



1. Introduction

1.1 Introduction

This report provides the account of a private sector stock condition survey carried out on behalf of Ipswich Borough Council by *Fordham Research*. The survey was carried out in conjunction with a short socio-economic interview, in order that a number of analytical links between dwellings and their occupants could be established.

The comprehensive survey is required to inform and support the Council's private sector housing and Home Energy Conservation Act (HECA) strategies, as well as other Governmental submissions. The survey fully complies with the DTLR Good Practice Guidance: "*Collecting, Managing and Using Housing Stock Information*" volumes 1, 2 and 3 (2000), and uses other Government publications for analysis, for which the principles are discussed below.

1.2 Joint condition/needs surveys

The ODPM guides to both Housing Need and Stock Condition encourage the idea of joint stock condition and housing needs surveys. This is done both for reasons of economy and co-ordination as well as for the purpose of the cross-analysis which can be done and which casts valuable further light on the housing issues which involve both the physical fabric and the households within the dwellings.

The Housing Needs Survey Guidance refers to joint surveys as a 'neglected refinement', implying that their value has been underestimated by local authorities. *Fordham Research* was the lead consultant for the first such joint surveys (notably for the *London Borough of Brent* in 1996).

It would be true to say that the full potential of such joint surveys has not been illustrated in practice. There are considerable practical difficulties in organising two separate firms to do surveys on the same address and produce consistent data. This problem has now been resolved in the case of *Fordham Research* by the fact that we have the experience and expertise to undertake both surveys. This produces a far higher quality of joint research.

1.3 The basis for carrying out a condition survey

The duty to regularly consider the condition of the housing stock was consolidated in the *1985 Housing Act*. Stock Condition Surveys are one of the most satisfactory means of fulfilling that duty. There has been a different evolution of the public sector surveys, which have been quite rigorously carried out, and the private sector condition surveys, which have not. The latter were not treated so seriously by local authorities, and as a result their quality has been somewhat variable.

The first 'good practice' guidance on this topic: three volumes are collectively entitled *Collecting, Managing & Using Housing Stock Information – A Good Practice Guide*, was published by the *Office of the Deputy Prime Minister* (ODPM) in August 2000.

ODPM Guide [Volume 1, Page 5]

'…Information about the housing stock has been collected by local authorities for many years, and for a wide variety of purposes...'

A broad summary of the basic reasons for a condition survey is provided in the good practice Guide (Volume 3, para 2.9) and reproduced below. In summary, stock condition surveys are useful in a variety of ways:

- Providing a key component of an asset management strategy of the Council's own stock, including a range of possible stock options;
- Providing an authority-wide picture of housing conditions as part of a strategic survey of housing demand and supply within the authority's 'enabling' role;
- Assessing the need for an 'intervention' role by the authority, for example through renovation grants;
- Ascertaining the stock condition element of a local regeneration initiative;
- Meeting information needs on specific stock, such as HMOs.

This amounts to a quite demanding set of requirements. A series of tests have been developed to enable measures comparable across different local authority areas to be derived.

1.4 The basic assessment of stock condition

The fitness standard (as set out in Section 604 of the *1985 Housing Act* and amended by the *1989 Local Government and Housing Act*) details a list of criteria which must be met if the dwelling is to be considered fit for human habitation. A dwelling-house is unfit for human habitation if it fails to meet one or more of the requirements listed below and by reason of that failure is not reasonably suitable for occupation.

Box 1.1 Fitness standard (*1985 Housing Act* as amended by *1989 Local Government and Housing Act*)

Under the provisions of Section 604 of the Housing Act 1985 a dwelling house is fit for human habitation unless it fails to meet one or more of the following requirements and as a result of that failure, is not reasonably suitable for occupation:

- Structural stability
- Free from serious disrepair
- Free from serious dampness prejudicial to the health of the occupants (if any)
- Adequate provision for lighting, heating and ventilation
- Adequate piped supply of wholesome water
- Satisfactory facilities in the dwelling house for the preparation and cooking of food, including a sink with a satisfactory supply of hot and cold water
- Suitably located WC for exclusive use of occupants (if any)
- Suitably located fixed bath or shower and wash-hand basin, each of which is provided with a satisfactory supply of hot and cold water for the exclusive use of the occupants (if any)
- Effective drainage system for waste and surface water

In addition, a flat may be not reasonably be suitable for occupation if the building in which it is located fails to meet one or more of the following requirements:

- Structural stability of the building or part of the building
- Free from serious disrepair
- Free from dampness
- Adequate provision for ventilation
- Effective drainage system for foul waste and surface water

Although this appears quite a simple list, the process of assessing fitness is quite complex. In the first instance all the items stand or fall individually: they are not cumulative. In some cases (e.g. serious disrepair) the various problems which make it up can however be cumulative.

In practice, a large proportion of unfitness is attributable to a small group of these headings, notably *'serious disrepair'* and *'facilities for the preparation and cooking of food'*. Other possible causes of unfitness are in practice less common. Nevertheless all causes of unfitness have been examined during the course of this survey.

1.5 Energy efficiency

The *1995 Home Energy Conservation Act* has, for the first time, required local authorities to develop a strategy for energy conservation. An important prerequisite to developing such a strategy is the existence of suitable methods of measuring energy efficiency. The present survey therefore includes a technical assessment of the energy efficiency of dwellings.

In addition to providing meaningful data on energy efficiency, estimates of carbon dioxide arising from domestic fuel consumption can be produced. This allows a baseline against which targets for reductions in energy use and carbon dioxide emissions can be set and for the development of strategies to achieve them. We have followed the Guide approach in addressing energy efficiency measurement.

ODPM Guide [Volume 2, Paras 5.2 & 5.3]

A domestic energy audit will normally be conducted in furtherance of the authority's broad environmental aims as presented in the Corporate Plan. There might also be related social aims, for example, to bring reasonable thermal comfort within the reach of all households.

In housing terms, you will need to express these aims slightly differently:

- *to reduce the need for domestic energy usage or at least maintain it at a constant level;*
- *to reduce the emission of greenhouse gases and pollutants from domestic energy use;*
- *to reduce the wastage of energy in the home;*
- *to ensure that all dwellings within the area can be adequately heated at a cost which occupants on low incomes can afford;*
- *to ensure compliance with the Home Energy Conservation Act 1995.*

1.6 Decent Homes

The government's housing objective is "to ensure that everyone has the opportunity of a decent home and so promote social cohesion, well being and self-dependence". In 2000 the Government set a standard for 'decent homes' whereby housing should:

i) Meet the current statutory minimum standard for housing (i.e. not unfit)
ii) Be in a reasonable state of repair
iii) Have reasonably modern facilities and services
iv) Provide a reasonable degree of thermal comfort

Although the Decent Homes standard was initially intended to be for the public sector housing stock only, it has more recently become an important issue in the private sector. A public service agreement (PSA) was set out by the ODPM in 2002. Of note from this document is PSA target 7 (PSA7) which deals with decent homes. The PSA target is '*By 2010, bring all social housing into a decent condition with most of this improvement taking place in deprived areas, and for vulnerable households in the private sector, including families with children, increase the proportion who live in homes that are in decent condition.*' It has been clarified by the ODPM that this definition does not include all families with children but that vulnerable households will include families with children.

For the private sector, the PSA has set targets for the proportion of vulnerable households achieving the decency standard by 2005, 2010 and beyond. Additionally, the 2001 EHCS applies the Decent Homes standard to all dwellings. In this report we study each of the above criteria to ascertain the number of homes which are 'non-decent' and the reasons why.

1.7 Housing Health and Safety Rating System

In July 2001, the ODPM published a report on the Housing Health and Safety Rating System (HHSRS). The HHSRS is seen as a potential replacement for the current fitness standard under the *1985 Housing Act*. The current housing fitness regime is based on ancient criteria: the term 'unfit for human habitation' was first introduced in the *1868 Artisans' and Labourers' Dwellings Improvement Act* and it's current 1985 Act definition owes a lot to that heritage. Nevertheless, major risks to health and safety (such as cold, fire risk, falls on stairs and exposure to radon) are either not covered at all, or, in the case of fire risk, are covered for HMOs only. Adding new requirements to the fitness standard would not resolve this problem, since they would not identify the likelihood or severity of harm.

At the time of writing this report, the newly issued Housing Act (December 2004) enforces the HHSRS, with its version 2 of the guidance, to replace the fitness standard. It is expected that the HHSRS will not replace the fitness standard until late 2005. In the meantime therefore local authorities will continue to use the current fitness standard (as used in this report).

In the case of Ipswich the survey was begun and survey forms agreed whilst version II of the HHSRS was in consultation. The survey has been able to cover much of the likely requirements of the new system, although not finalised yet. We have therefore included a section about the HHSRS although this has not been designed at this stage to replace the fitness standard calculations which are still taken to be the main measure of stock condition.

1.8 Summary

Although stock condition surveys have a long history, their quality has been rather variable. The ODPM has now issued a series of guides which should raise the standard of the research carried out. The central measure is still the Fitness Standard. However this is supported by more attention to checking the primary survey data collected (Quality Assurance). The main elements of the stock condition survey can be summarised as:

- Assessment of repair costs
- Unfitness
- Energy efficiency
- Decent homes
- Housing health and safety
- Financial assistance implications

2. Survey structure and response

2.1 Introduction

The survey comprised two related surveys completed simultaneously: an Interview Survey of households and a Physical Survey of dwellings. The survey only covered private sector dwellings in Ipswich (including RSL dwellings). This chapter reports on the survey fieldwork, responses and weighting of data to ensure results produced are representative of all private sector dwellings in the Borough.

The survey sample was drawn from the Council Tax Register. Addresses were selected on a simple random basis stratified by sub-area, age and vacancy (i.e. each address in each group had an equal probability of being selected). The survey set out to complete 1,000 inspections over the whole of the Borough and in total 1,006 were achieved. However, 8 of these were in Council dwellings so a total of 998 inspections were used for analysis in this report. The interviews from the 8 excluded from the condition analysis were used for analysis of the housing needs survey.

2.2 Fieldwork

All fieldwork staff were fully briefed by *Fordham Research* and followed our own survey practices which are summarised below. In addition, stringent back-checking of surveyors' work was used to ensure the accuracy of fitness assessments.

Surveyor instructions (conduct/customer care)

- Always use the photographic identification card provided
- Interviews may only be undertaken with the head of household or their partner

Record keeping

- Surveyors issued with pre-selected address lists (addresses not on list will not be visited)
- All addresses have an outcome (refusals are entered onto address database)
- Surveyors return all completed work weekly (including non-responses)

Quality assurance

- All surveyors are trained and briefed for each individual Local Authority survey
- A proportion of fieldwork re-inspected by field managers
- Desktop check (all forms checked for completeness)
- Telephone/written checks (on a sample of all surveyors work)
- Written comments provided to all surveyors regardless of their level of experience
- Regular meetings with field managers

Allocations and appointments

- Addresses allocated in batches of 21 (avoids surveyors being able to pick the easiest addresses)
- Expect minimum of 60-65% access rate
- Addresses visited minimum 3 times (including one weekend and one evening call)

2.3 Base figures

There are a number of sources that can be drawn upon in assessing the number of dwellings and households in the Borough. These include the Council Tax Register provided by the Council and additionally the 2004 H.I.P. return and Census information. The aim is to provide an estimate of the number of dwellings and occupied dwellings at the time of the survey. Hence we estimate the following bases for analysis:

Total number of private sector dwellings = 44,564.
Total number of occupied private sector dwellings (households) = 43,254.

2.4 Data weights

The survey data has been weighted to an estimated profile of the housing stock by tenure and sub-area. The tables below show the estimated patterns for each of these groups. The number of dwellings in each sub-area is derived from the Council Tax Register provided by the Council. Each sub-area was made up of wards as detailed in the table and map below.

Table 2.1 Wards making up the sub-areas of Ipswich

Sub-area	Ward names
South East	Holywells, Priory Heath, Gainsborough
South West	Gipping, Stoke Park, Sprites, Bridge
Central	Alexandra, St. Margarets, Westgate
North East	Rushmere, Bixley, St Johns
North West	Whitton, Whitehouse, Castle Hill

Figure 2.1 Ipswich – Private Sector Stock Condition Survey – Study area

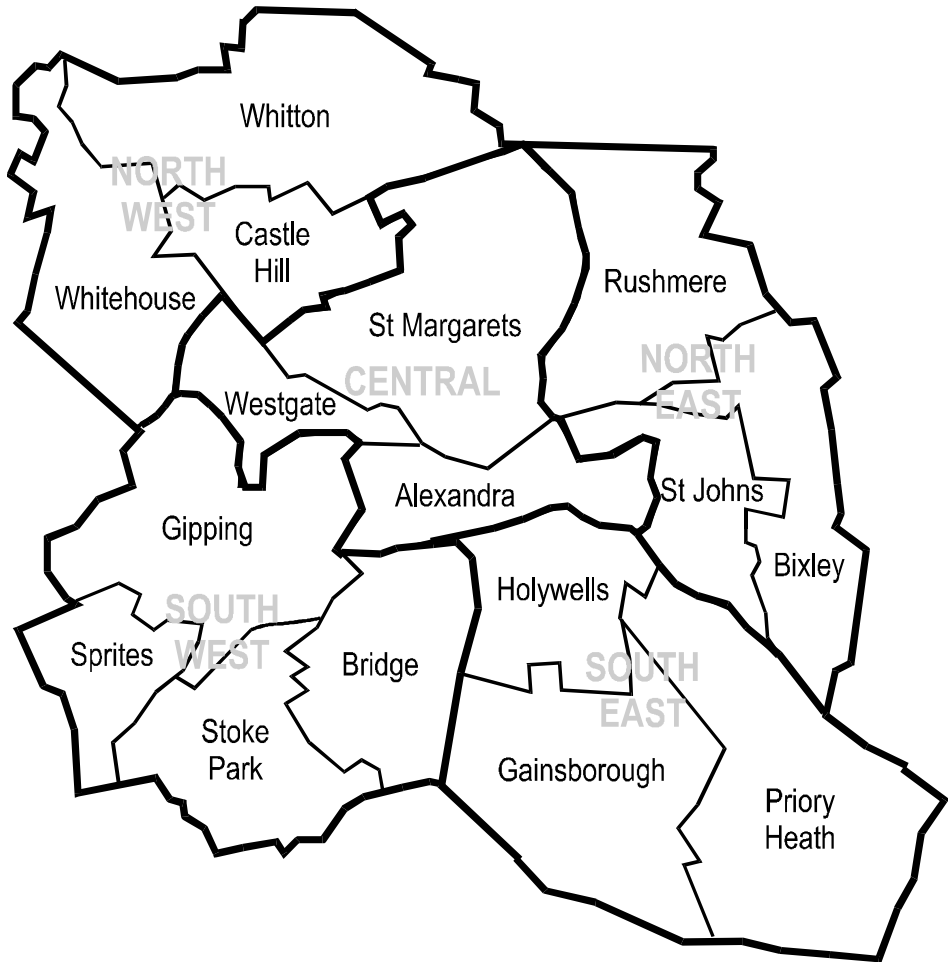


Table 2.2 Number of dwellings in each sub-area

Sub-area	Dwellings		Responses		Occupied dwellings	
	Number	%	Number	%	Number	%
South East	7,047	15.8%	160	16.0%	6,865	15.9%
South West	10,124	22.7%	206	20.6%	9,613	22.2%
Central	10,432	23.4%	253	25.4%	10,153	23.5%
North East	9,241	20.7%	190	19.0%	8,895	20.6%
North West	7,719	17.3%	189	18.9%	7,719	17.8%
TOTAL	44,564	100.0%	998	100.0%	43,245	100.0%

Table 2.3 Number of dwellings in each tenure group						
Tenure	Dwellings		Responses		Occupied dwellings	
	Number	%	Number	%	Number	%
Owner-occupied (no mortgage)	14,322	32.1%	330	33.1%	13,815	31.9%
Owner-occupied (with mortgage)	20,329	45.6%	413	41.4%	19,880	46.0%
RSL	3,769	8.5%	85	8.5%	3,674	8.5%
Private rented	6,143	13.8%	170	17.0%	5,876	13.6%
TOTAL	44,564	100.0%	998	100.0%	43,245	100.0%
Vacant dwellings	1,319	3.0%	25	2.5%	-	-

2.5 Other characteristics

Throughout this report many of the variables (e.g. unfitness) are tabulated along with tenure and sub-area. In addition, comparisons are also made with dwelling age and building type; the tables below show the number of dwellings in each of these groups. By dwelling type, mobile homes have been included in the detached category, whilst converted flats include non-residential dwellings with a flat.

Table 2.4 Number of dwellings in each age group						
Age group	Dwellings		Responses		Occupied dwellings	
	Number	%	Number	%	Number	%
Pre-1919	11,939	26.8%	274	27.5%	11,540	26.7%
1919-1944	10,744	24.1%	243	24.3%	10,349	23.9%
1945-1964	8,982	20.2%	205	20.5%	8,748	20.2%
1965-1980	7,168	16.1%	153	15.3%	7,094	16.4%
Post-1980	5,730	12.9%	123	12.3%	5,513	12.7%
TOTAL	44,564	100.0%	998	100.0%	43,245	100.0%

Table 2.5 Number of dwellings in each building type group						
Building type	Dwellings		Responses		Occupied dwellings	
	Number	%	Number	%	Number	%
End terrace	4,625	10.4%	104	10.4%	4,584	10.6%
Mid terrace	8,363	18.8%	193	19.3%	8,029	18.6%
Semi-detached	17,578	39.4%	399	40.0%	17,234	39.9%
Detached	7,466	16.8%	163	16.3%	7,102	16.4%
Purpose-built flat	4,663	10.5%	99	9.9%	4,426	10.2%
Converted flat	1,870	4.2%	40	4.0%	1,870	4.3%
TOTAL	44,564	100.0%	998	100.0%	43,245	100.0%
Bungalows	3,671	8.2%	84	8.4%	3,494	8.1%

2.6 Household characteristics

In addition to studying the characteristics of dwellings it is of interest to study the characteristics of the occupiers. In this survey, condition variables are tabulated along with household type and households receiving income or disability benefits (termed vulnerable households). It should be noted that the base total for these tables is 43,245 as the results exclude vacant dwellings.

Table 2.6 Number of households in each household type group

Household type	Occupied dwellings		Responses	
	Number	%	Number	%
Single pensioner	5,366	12.4%	115	11.8%
2 or more pensioners	4,270	9.9%	120	12.3%
Single non-pensioner	7,654	17.7%	133	13.7%
2 or more adults, no children	14,690	34.0%	349	35.9%
Lone parent	1,458	3.4%	37	3.8%
2+ adults, 1 child	3,807	8.8%	87	8.9%
2+ adults, 2+ children	6,000	13.9%	132	13.6%
TOTAL	43,245	100.0%	973	100.0%

NB A pensioner is taken as a male aged 65 or over or a female aged 60 or over. An adult is taken to be any other person aged 16 or over.

Table 2.7 Number of vulnerable households

Vulnerable	Occupied dwellings		Responses	
	Number	%	Number	%
Vulnerable	12,237	28.3%	280	28.8%
Not vulnerable	31,008	71.7%	693	71.2%
TOTAL	43,245	100.0%	973	100.0%

NB Vulnerable households are defined as in receipt of any of the following state benefits:

- Income Support
- Housing Benefit
- Council Tax Benefit
- Job Seekers Allowance
- Working Tax Credit
- Pension Credit
- Attendance Allowance
- Disability Living Allowance
- Industrial Injuries Disablement Benefit
- War Disablement Pension

2.7 Summary

The survey comprised two related surveys undertaken simultaneously: a socio-economic survey of households and a physical survey of dwellings. The surveys were carried out by trained surveyors who between them achieved 1,262 valid inspections. The survey data was weighted by sub-area and tenure so as to be representative of all private sector dwellings in Ipswich. In total it is estimated that there are 44,564 private sector dwellings in the Borough, of these 1,319 are vacant leaving a total of 43,245 occupied dwellings.

3. Profile of the housing stock

3.1 Introduction

At the broadest level the condition of the stock within the Borough is influenced by the relationship between the profile of the dwelling stock and the characteristics of occupants. This chapter seeks to provide an overview of the profile of the housing stock within Ipswich using information derived from the survey and sets the context for the subsequent condition analysis. We have, where appropriate, put the survey results from Ipswich into context with comparative regional and national figures.

The profile of the dwelling stock can be classified using a number of key characteristics. For the purpose of this chapter the main characteristics considered include tenure, type of property, age and size of dwelling. These are considered in turn. This chapter also comments on the vacant housing stock which is considered separately from the occupied stock. Some further details about the stock can be found in Appendix A1.

3.2 Typology of the housing stock

The composition of the stock is an important determinant of its condition. The survey data has been used to construct a dwelling typology which brings together those characteristics which can affect condition. These characteristics are age, types, size and tenure. The figure below shows a broad typology of the housing stock (four dwelling types by four dwelling ages) which differs slightly from the main categories used in this report.

Figure 3.1 A typology of the housing stock

Building type	*Dwelling age*			
	Pre-1919	*1919-1944*	*1945-1964*	*Post-1964*
Detached house				
Semi-detached house				
Terraced				
Flats				

3.3 Tenure

A range of four tenure types were identified as part of the survey plus vacant dwellings. These are defined below.

Box 3.1 Definition of tenure type categories	
Tenure type	*Definition*
Owner-occupied (no mortgage)	Includes all households who own their home outright.
Owner-occupied (with mortgage)	Includes all households buying their own home with a mortgage or loan. Includes shared ownership schemes.
RSL	Includes all households living in the property of registered social landlords.
Private rented	Includes all households living in privately owned property which they do not own. Includes households living rent free or in tied homes.
Vacant dwellings	Includes all dwellings which were un-occupied at the time of the surveyors visit (regardless of whether long or short term vacancy).

The table below sets out the results from the Ipswich survey in both a regional and national context. Ipswich has a higher level of social sector dwellings (both RSL and Council) when compared to both England as a whole and the East of England. The proportion of private rented dwellings is just slightly higher than the equivalent figures for both the East and England, whilst the level of owner-occupation is slightly lower than the equivalent national figure but notably lower than the level of owner-occupation in the East of England.

Table 3.1 Tenure in Ipswich, the East and England

Tenure	Ipswich	East	England
Owner-occupied	65.3%	73.3%	69.9%
Private rented	11.6%	10.0%	10.4%
RSL	7.1%	5.0%	6.6%
Council	16.0%	11.6%	13.2%
ALL TENURES	100.0%	100.0%	100.0%

NB Additional information about the Council stock has been taken from the 2004 H.I.P. return

3.4 Type of dwelling

At the broadest level the type of property can be classified in terms of houses and flats. The 2001 English House Condition Survey (EHCS) indicates that dwellings in England are predominantly houses, only 19% of the total stock are flats. A range of six dwelling types were identified as part of the survey which are defined below.

Box 3.2 Definition of dwelling type categories	
Dwelling type	*Definition*
Detached House	No other dwelling adjoins any part of the structure. This includes mobile homes
Semi-detached	A house that is only attached to one other dwelling. The two dwellings taken together should be detached from any other dwellings.
End Terrace	An end house forming part of a block where at least one house is attached to two or more other houses.
Mid Terrace	A house forming part of a block where it is attached to two or more other houses.
Purpose-built flat	A flat in a purpose-built block.
Converted flat	Flat in a building converted from a house or some other use or a flat with or without independent access in a building which is also used for non-domestic or commercial purposes.

Results, presented in the table below, indicate that a large proportion of private sector dwellings in Ipswich are houses (85.3%) compared to 14.7% of dwellings which are flats. The most common house type in Ipswich is semi-detached (39.4% of total stock), followed by terraced (29.2%). A much greater proportion of the flats are purpose-built. When comparing the data for Ipswich with England and the East, we find that Ipswich has a significantly higher proportion of semi-detached houses and a much lower proportion of detached houses. For flats, Ipswich shows a lower proportion of purpose-built flats than England or the East, but a higher proportion of converted flats.

It should be borne in mind when looking at these comparisons that the Ipswich Survey only covers the private sector (i.e. excluding Council owned stock). Figures for the East and England include all tenure groups.

Table 3.2 Type of dwellings in Ipswich, the East and England

Building type	Ipswich	East	England
Terraced	29.2%	26.2%	29.7%
Semi-detached	39.4%	30.8%	30.8%
Detached	16.8%	28.2%	20.8%
Purpose-built flat	10.5%	13.2%	15.4%
Converted flat	4.2%	1.6%	3.3%
TOTAL	100.0%	100.0%	100.0%

3.5 Age of property

The following table summarises the survey results in Ipswich and compares them with the national and regional picture derived from the EHCS (2001). Again, it should be remembered that the data for Ipswich are for the private sector only whilst data for the East and England includes Council owned dwellings. The age profile of the stock in Ipswich is very different to both that for the East and England as a whole. Ipswich has a somewhat older profile proportion of dwellings than nationally and particularly regionally. The proportion of pre-1919 dwellings in Ipswich is almost double that of the equivalent figure in the East, whilst dwellings built post-1964 are just over half that of the East.

Table 3.3 Age of dwellings in Ipswich, the East and England

Age	Ipswich	East	England
Pre-1919	26.8%	14.8%	20.8%
1919-1944	24.1%	11.8%	17.7%
1945-1964	20.2%	21.8%	21.2%
Post-1964	28.9%	51.7%	40.3%
ALL AGES	100.0%	100.0%	100.0%

3.6 Size of dwelling

The main measure available to assess the size of dwellings is the number of habitable rooms within the property forming part of the living space (a habitable room is defined as one which could be used for sleeping purposes and for the purposes of this survey includes kitchens which are large enough to accommodate a table and chairs at which the occupants could eat). Survey results indicate that almost two thirds (61.3%) have 4-5 habitable rooms, 21.2% are smaller whilst 17.4% are larger. The average number of habitable rooms in each property across the Borough is 4.56.

Table 3.4 Number of habitable rooms

Number of habitable rooms	Number	%
1-2	3,440	7.7%
3	6,024	13.5%
4	11,080	24.9%
5	16,254	36.5%
6	4,450	10.0%
7+	3,315	7.4%
TOTAL	44,564	100.0%

The mean dwelling size, calculated as average floor space, in Ipswich is 94.5m^2. This compares to a national and regional average of 86.8m^2. Again, it should be remembered that the data for Ipswich are for the private sector only whilst the national and regional averages include Council owned dwellings.

3.7 Vacant dwellings

The survey estimates that around 1,319 dwellings are vacant representing 3.0% of the total stock. This compares to 3.3% vacant dwelling stock in England. The survey found no evidence of second/holiday homes. This does not imply that there are none, just that the sample of only 25 vacant properties did not survey any.

Over four fifths of vacant dwellings are new to mid-term vacant; over a third of vacant dwellings appear to be newly vacant (up to one month) whilst a further 41.0% are mid-term vacant (vacant for up to 6 months). Only one fifth of vacant dwellings (19.5%) are long-term vacant. The EHCS estimates that 10% of vacant dwellings in England are newly vacant, with a further 40% empty for up to 6 months. The remaining stock (around half) is long-term vacant.

Table 3.5 Length of vacancy

Length of vacancy	Number	%
Newly vacant (less than a month)	509	38.6%
Mid-term vacant (1-6 months)	552	41.8%
Long-term vacant (over 6 months)	258	19.5%
Second/holiday home	0	0.0%
TOTAL	1,319	100.0%

Information from the Council suggests that there are 429 long-term vacant dwellings, of which 267 have been vacant for over 2 years. Therefore the survey appears to underestimate the number of long-term vacant dwellings. It is likely that some of the dwellings in the first two categories in the table above are long-terms vacants as it may be difficult for a surveyor to correctly estimate whether a dwelling is long-term or mid-term vacant.

3.8 Summary

Data from the survey suggests that Ipswich has somewhat different tenure profile to both the East and England as a whole. When compared with both national and regional data some of the main differences found were:

- Ipswich has a similar tenure profile with a greater proportion of RSL and Council sector dwellings
- Ipswich has a much higher proportion of semi-detached houses and a higher proportion of converted flats
- The dwelling stock in Ipswich also appears to be significantly older then the profile for the East of England

The comparisons (other than for tenure) should be treated with caution as both regional and national figures include all tenure groups.

SECTION B: GENERAL CONDITION

This section analyses the housing stock in Ipswich according to the standards of 'unfitness' and 'disrepair'. The first chapter examines different causes of disrepair, and goes on to analyse the cost of repairs by three different levels of urgency. The chapter also examines how repair costs correspond to the different characteristics of households and dwellings laid out in the profile of the housing stock.

The section goes on to make an analysis of dwellings that are classed as 'unfit'. The chapter breaks unfitness down by different housing characteristics, providing a numerical and a graphical comparison between different groups, and a further comparison between Ipswich and England as a whole. The section finishes by looking at dwellings classified as 'fit but defective'.



4. Disrepair

4.1 Introduction

This chapter addresses the details of repairs required to dwellings. Typical repairs required will include repairs to roofs, windows and amenities and services – the survey form at the back of the report shows the full range of possible repairs required to a dwelling. Repairs do not include cosmetic improvements such as cyclical painting. The subsequent analysis of repair costs looks at three different time periods (up to a year, up to five years and within the next ten years).

4.2 Measuring the extent of disrepair

An idea of the presence of faults provides useful information about the main problem areas, but does not represent either the extent of the problems or the cost of putting them right. The standard test for such repairs is the cost to put the building into good repair. This includes all the building elements and the overall cost of rectifying any work. The survey measured three levels of disrepair (shown in the box below).

Box 4.1 Categories of repair measured in the survey

Urgent repair – Where surveyors had recorded that work was needed to an exterior building element, they indicated whether work specified was urgent; defined as works needed to remove threats to the health, safety, security and comfort of the occupants and to forestall further rapid deterioration of the building. This is a measure of serious and immediate problems in the dwelling and includes all interior work.

Basic repair – All works identified by the surveyor as needing to be done within 5 years, including any urgent work as described above. These do not include replacement of building elements nearing the end of their life where the surveyor recorded that this action could be delayed by more than 5 years, often by short term patch repairs.

Comprehensive repair – This includes all repairs as specified above together with any replacements the surveyor has assessed as being needed in the next 10 years. Replacement periods are only defined for external elements and are given whether or not any repair work has been identified as needed. The replacement period is given as the number of years before the element needs replacing either following specified repair work or simply as the remaining life expectancy. This measure provides a better basis for identifying work which would form part of a planned programme of repair by landlords.

It should be noted that the above repairs categories are cumulative. Consequently figures for *basic repair* include the costs of *urgent repairs*, and both are in turn included in the figures for *comprehensive repairs*.

Standard repair costs are based on a schedule provided by the Building Research Establishment (BRE) and have been updated to a 1st quarter 2004 base for the East region.

The actual costs of work will vary depending on the size of dwellings. Therefore one further measure has been included – Standardised repair costs. The definition of this is shown in the box below.

Box 4.2 Standardised repair costs

The basic repair 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.

4.3 Assessment of repair costs – overall findings

The overall situation in terms of repairs costs for Ipswich is summarised in the table below. The data shows an average urgent repair cost of £1,372 per dwelling, this figure rises to £4,992 for comprehensive repairs – these costs include dwellings requiring no work.

Table 4.1 Overall repairs cost comparison

Repairs category	Ipswich 2004		England EHCS 2001 (all tenures)
	Total cost	Average cost per dwelling	Average cost per dwelling
Urgent repair	£61.1m	£1,372	£1,310
Basic repair	£104.7m	£2,349	£2,170
Comprehensive repair	£222.5m	£4,992	£3,820
Standardised repair cost (/m²)	-	£27.4	£18.7

If we compare repairs costs per dwelling for Ipswich with those from the EHCS, the assessed costs in Ipswich are generally higher than those for England as a whole. The standardised cost figure is also significantly higher than the 2001 England average.

Consequently, the total cost of repairs is considerable: comprehensive repairs will cost a total of £222.5 million, and even urgent repairs will amount to a total of £61.1 million. The table below looks at the distribution of these repair costs.

Table 4.2 Repairs costs by level of cost

Level of cost	Urgent	Basic repairs	Comprehensive repair
No repairs required	12,257	5,215	2,874
Under £1,000	17,919	17,771	10,163
£1,000-£2,499	7,867	9,488	8,507
£2,500-£4,999	4,033	5,832	7,810
£5,000-£9,999	1,610	4,432	8,011
£10,000-£14,999	474	1,023	3,966
£15,000 and above	404	803	3,233
TOTAL	44,564	44,564	44,564

For over a quarter (27.5%) of dwellings no *urgent* repairs are needed. For both the *urgent* and *basic* repair categories, the numbers requiring substantial expenditure are really quite small. However, over 7,000 dwellings will require expenditure of over £10,000 over the next ten years.

It is however worth considering that even properties requiring small amounts of repairs (say less than £1,000) will, if not addressed, deteriorate and require more substantial repair.

4.4 Elements of repairs

It is possible to look at the average cost of *basic repairs* for the individual elements examined in the survey. The elements are shown (in descending order of cost) in the table below.

Table 4.3 Average cost of individual elements – basic repair

Item	Average cost (£ per dwelling)	% of cost
External doors and windows	£577.69	24.6%
Walls, fences, paved areas and outbuildings	£249.64	10.6%
Heating systems	£226.71	9.7%
Bathrooms	£206.70	8.8%
Kitchens	£204.73	8.7%
Roofs	£201.63	8.6%
External walls	£180.48	7.7%
Insulation	£102.64	4.4%
Chimneys	£60.41	2.6%
Gas & electric	£55.18	2.3%
Water closet	£47.52	2.0%
Internal walls	£45.63	1.9%
Damp proof course	£32.03	1.4%
Condensation	£30.40	1.3%
Drainpipes and soil & waste pipes	£27.21	1.2%
Ceilings	£23.96	1.0%
Internal doors & frames	£23.22	1.0%
Floors	£16.12	0.7%
Staircases	£11.12	0.5%
Water & drainage	£10.30	0.4%
Internal drainage	£9.06	0.4%
Foundations	£6.61	0.3%
Common parts	£0.05	0.0%
TOTAL	£2,349.01	100.0%

Many items contribute to the total basic repairs cost. One item; *'External doors and Windows'* accounts for around a quarter (24.6%) of the total basic repair cost.

4.5 Repair costs and dwelling characteristics

The tables below show repair costs by tenure, age of dwelling, sub-area and building type. There are significant differences in repair costs by tenure, with RSL dwellings showing the lowest repair costs in each category. Private rented dwellings showed the highest repair costs in each category. As might be expected, repair costs are closely related to age of dwelling. The data shows the highest costs in each category for pre-1919 dwellings and the lowest costs in post-1980 dwellings. The standardised repair cost for pre-1919 dwellings is almost six times that found in post-1980 dwellings.

In terms of sub-areas, the *Central* sub-area generally shows higher repair costs. The two *South* sub-areas show the lowest costs. By dwelling type, purpose-built flats show the lowest repair costs. Mid terrace houses generally show the highest urgent repair costs.

Table 4.4 Repair costs by tenure

Tenure	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
Owner-occupied (no mortgage)	£1,294	£2,312	£5,490	£26.6
Owner-occupied (with mortgage)	£1,379	£2,430	£5,148	£25.3
RSL	£633	£872	£1,414	£15.1
Private rented	£1,984	£3,074	£5,512	£43.4
AVERAGE	£1,372	£2,349	£4,992	£27.4
Vacant dwellings	£6,537	£7,881	£9,277	£72.4

Table 4.5 Repair costs by age of dwelling

Dwelling age	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
Pre-1919	£2,014	£3,298	£5,751	£39.9
1919-1944	£1,450	£2,983	£6,693	£30.2
1945-1964	£1,356	£2,182	£5,394	£24.8
1965-1980	£1,115	£1,531	£3,399	£22.1
Post-1980	£233	£467	£1,586	£6.8
AVERAGE	£1,372	£2,349	£4,992	£27.4

Table 4.6 Repair costs by sub-area				
Sub-area	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
South East	£817	£2,159	£5,452	£23.4
South West	£928	£1,682	£3,245	£23.6
Central	£1,961	£2,970	£5,273	£35.7
North East	£1,786	£2,768	£5,961	£28.7
North West	£1,169	£2,055	£5,325	£23.0
AVERAGE	£1,372	£2,349	£4,992	£27.4

Table 4.7 Repair costs by building type				
Building type	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
End terrace	£1,077	£2,117	£4,705	£26.5
Mid terrace	£2,055	£3,166	£5,232	£39.4
Semi-detached	£1,259	£2,323	£5,562	£24.1
Detached	£1,473	£2,581	£6,227	£25.6
Purpose-built flat	£825	£1,146	£1,791	£21.1
Converted flat	£1,065	£1,596	£2,324	£28.9
AVERAGE	£1,372	£2,349	£4,992	£27.4
Bungalows	£1,081	£2,214	£6,039	£38.0

4.6 Repair costs and household characteristics

The table below shows repair costs by household type and vulnerable households. The data shows that single pensioner households generally have highest repair costs than other households. Single non-pensioners show the highest standardised repair cost of £31.7/m^2 compared to an average for all households of £26.0/m^2. However, pensioner households with two or more persons show low repair costs. Vulnerable households have higher costs for urgent and basic repairs and a higher than average standardised repair cost.

Table 4.8 Repair costs by household type				
Household type	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
Single pensioner	£1,614	£2,645	£5,514	£31.3
2 or more pensioners	£887	£1,597	£5,067	£16.5
Single non-pensioner	£976	£1,778	£3,461	£31.7
2 or more adults, no children	£1,222	£2,335	£5,051	£25.3
Lone parent	£1,496	£1,974	£4,299	£23.4
2+ adults, 1 child	£1,423	£2,609	£5,590	£29.4
2+ adults, 2+ children	£1,177	£2,093	£5,127	£21.0
AVERAGE	£1,214	£2,180	£4,861	£26.0

Table 4.9 Repair costs and vulnerable households				
Vulnerable households	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
Vulnerable	£1,311	£2,332	£4,647	£28.5
Not vulnerable	£1,176	£2,120	£4,946	£25.0
AVERAGE	£1,214	£2,180	£4,861	£26.0

4.7 Summary

The survey studied faults to dwellings and associated repair costs. Some of the main findings of the analysis were:

- The average cost per dwelling of urgent repairs (i.e. those needing to be done within the next year) was £1,372– this totals £61.1m Borough-wide.
- The average cost per dwelling for basic repairs (i.e. all work needing to be done within the next 5 years) was £2,349 – totalling £104.7m Borough-wide.
- The main problem areas (in terms of the amount needing to be spent) were *External doors and windows*.
- The private rented sector showed the highest standardised repair costs as did pre-1919 dwellings.

5. Levels of unfitness

5.1 Introduction

The fitness standard (as set out in Section 604 of the *1985 Housing Act* and amended by the *1989 Local Government and Housing Act*) details a list of criteria which must be met if a dwelling is to be considered fit for human habitation. A dwelling-house is unfit for human habitation if it fails to meet one or more of the requirements of the fitness standard (see Chapter 1) and by reason of that failure is not reasonably suitable for occupation.

5.2 Level of unfitness

An estimated 2,004 private sector dwellings are unfit, accounting for 4.5% of the private sector housing stock, this compares to an unfitness rate of 4.2% nationally and 3.0% in the East (2001 EHCS). The most common reasons for unfitness in Ipswich are *food preparation* 1,089 dwellings (54.3%) and *disrepair* 1,069 dwellings (53.3%). Both the figures for *food preparation* and *disrepair* are higher than the national average of 39.4% and 45.5% respectively. The table below shows the reasons for unfitness in both Ipswich and nationally (2001 EHCS).

Table 5.1 Reasons for unfitness

Reason	Number of dwellings	% of unfit dwellings	% of unfit dwellings (2001 EHCS)
Food preparation	1,089	54.3%	39.4%
Disrepair	1,069	53.3%	45.5%
Bath/shower, WHB	951	47.4%	20.9%
Water closet	598	29.8%	16.0%
Lighting	342	17.1%	6.0%
Heating	327	16.3%	10.5%
Dampness	303	15.1%	21.9%
Ventilation	297	14.8%	11.8%
Drainage	297	14.8%	9.5%
Water supply	111	5.6%	4.2%
Structural stability	0	0.0%	7.0%

The survey estimated that there are no properties failing the fitness standard on structural stability. This does not mean that there are zero such dwellings in Ipswich, just that none were found within the completed sample.

5.3 Severity of unfitness

It will be clear from the table above that it is possible for a dwelling to fall into more than one of the unfitness criteria used. The table below shows the numbers of unfit households with more than one reason for unfitness. It can be seen that 42.5% of dwellings only fail on one item, this is low when compared with 55.2% of dwellings nationally. Additionally a quarter of dwellings fail on four or more items, which compares to only a tenth of dwellings nationally.

Table 5.2 Unfit dwellings and number of items unfit

Number of items unfit	Number of dwellings	% of unfit dwellings	% of unfit dwellings (2001 EHCS)
One	851	42.5%	55.2%
Two	404	20.2%	23.3%
Three	242	12.1%	11.3%
Four or more	508	25.3%	10.2%
TOTAL	2,004	100.0%	100.0%

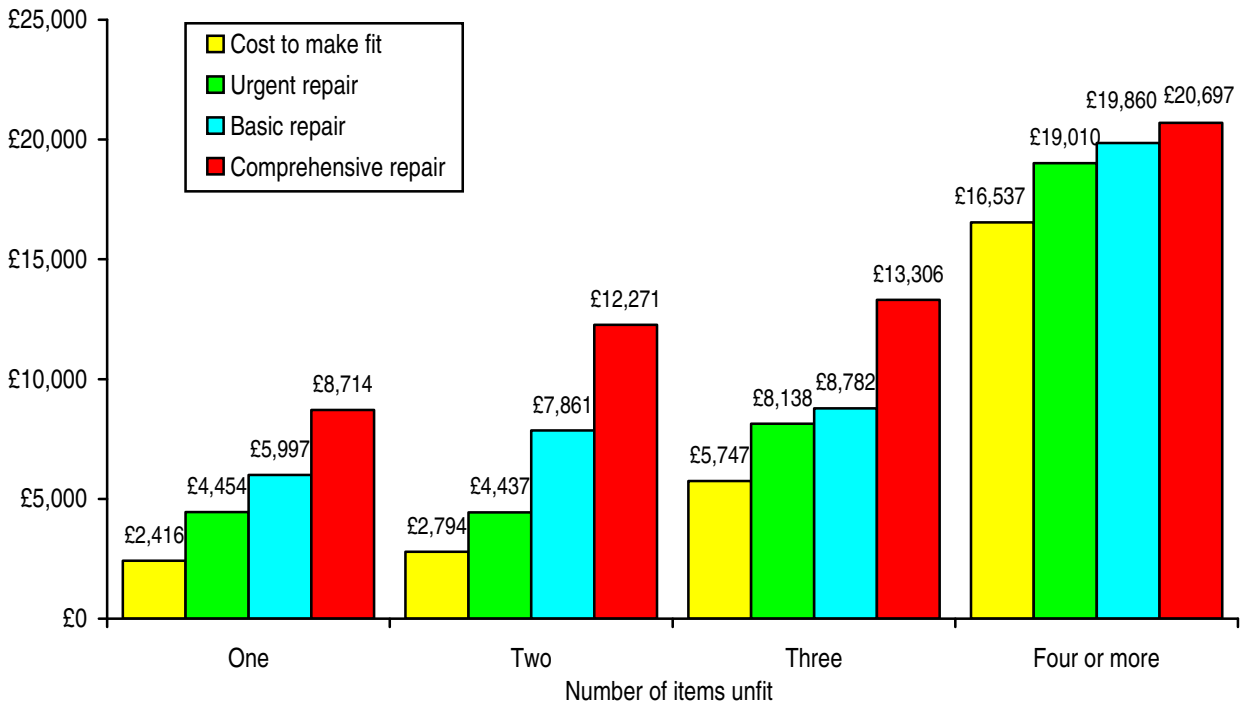
5.4 Cost to make fit

In addition to estimating the number of unfit dwelling the survey can estimate the cost of making dwellings fit for human habitation. The cost to make fit is the urgent cost associated with the reason for unfitness. For example, if a dwelling fails the fitness standard for food preparation only then the cost to make fit will be the total cost of those elements relating making food preparation fit only. It is quite possible that there are other urgent works required to the dwelling but which have not been deemed by a surveyor to make the dwelling unfit. Hence, in most cases the urgent cost for a dwelling will exceed the cost just to make fit.

In general it would be considered as uneconomical to achieve basic fitness where other urgent and basic repairs are required as, if these are not addressed, the property may become unfit again very quickly. It is therefore of use to include costs other than those just to meet the basic fitness standard.

The average cost to make unfit dwellings just fit is £6,470 per dwelling, the urgent costs in these dwellings averages £8,581, basic repair costs average £10,220 and comprehensive costs £13,020. Borough-wide these figures are £13.0m, £17.2m, £20.5m and £26.1m respectively. There is a clear relationship between the various costs and the number of items on which a dwelling fails, as shown by the figure below. As the number of items on which a dwelling fails increases, so do the associated costs.

Figure 5.1 Repair costs by number of items unfit



5.5 Dwelling characteristics of unfit dwellings

The following tables and figures show unfitness and tenure, dwelling age, sub-area and building type.

By tenure, the survey shows that private rented dwellings have the highest level of unfitness, whilst RSL dwellings show the lowest level. Unfitness is in general strongly associated with age. In the case of Ipswich the pre-1919 stock exhibits the greatest proportions of unfits, 6.6% of pre-1919 dwellings are classified as unfit, whereas only 0.8% of dwellings built after 1980 were classified as unfit. An estimated 73.3% of all unfit dwellings date from before 1944.

By sub-area, *Central* has the highest level of unfitness (at 7.0%). The *North West* and *South East* sub-areas show the lowest levels of unfitness. Trends in relation to building type show that mid terraced houses showed high levels of unfitness.

Table 5.3 Tenure of unfit dwellings

Tenure	Unfitness					
	In unfit housing	Not in unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group	% of group unfit and occupied by vulnerable households
Owner-occupied (no mortgage)	675	13,647	14,322	4.7%	33.7%	50.2%
Owner-occupied (with mortgage)	839	19,491	20,330	4.1%	41.8%	60.7%
RSL	89	3,680	3,769	2.4%	4.4%	100.0%
Private rented	402	5,742	6,144	6.5%	20.0%	57.1%
TOTAL	2,004	42,560	44,564	4.5%	100.0%	58.2%
Vacant dwellings	407	912	1,319	30.9%	20.3%	100.0%

Figure 5.2 Unfit dwellings and tenure

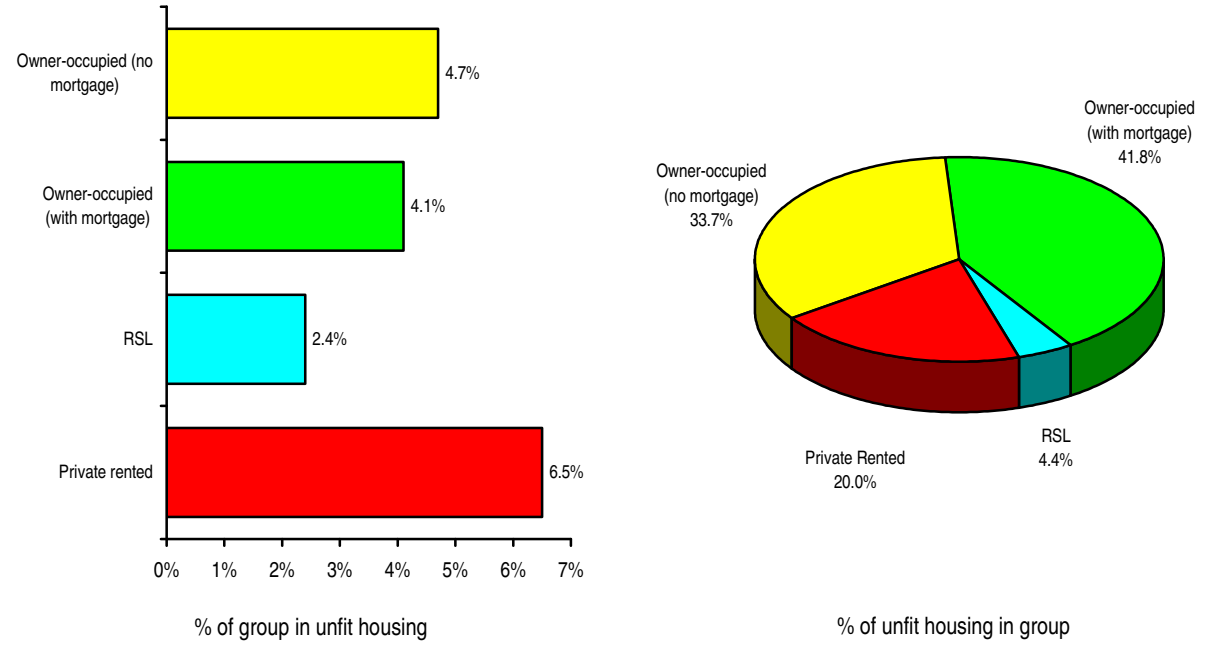
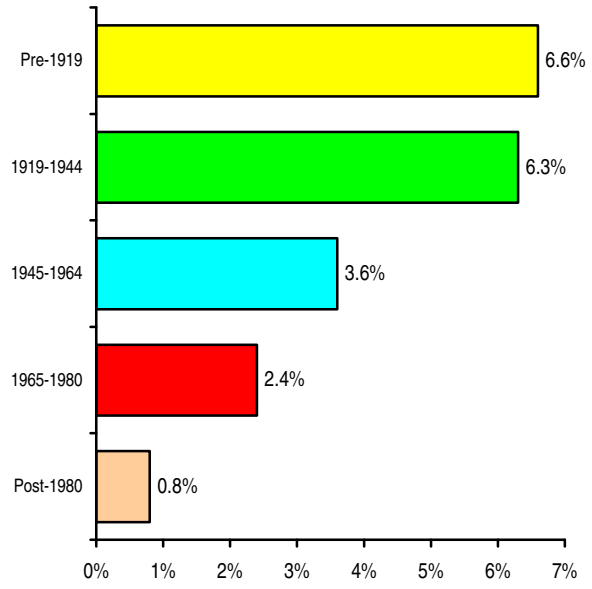


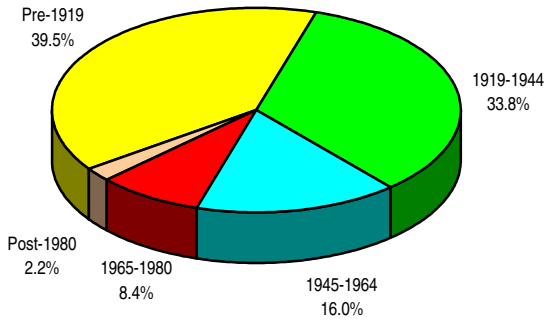
Table 5.4 Unfit dwellings and dwelling age

Age	Unfitness					
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group	% of group unfit and occupied by vulnerable households
Pre-1919	792	11,147	11,939	6.6%	39.5%	46.2%
1919-1944	678	10,067	10,745	6.3%	33.8%	65.6%
1945-1964	320	8,662	8,982	3.6%	16.0%	66.9%
1965-1980	169	6,999	7,168	2.4%	8.4%	57.4%
Post-1980	45	5,685	5,730	0.8%	2.2%	100.0%
TOTAL	2,004	42,560	44,564	4.5%	100.0%	58.2%

Figure 5.3 Unfit dwellings and dwelling age



% of group in unfit housing

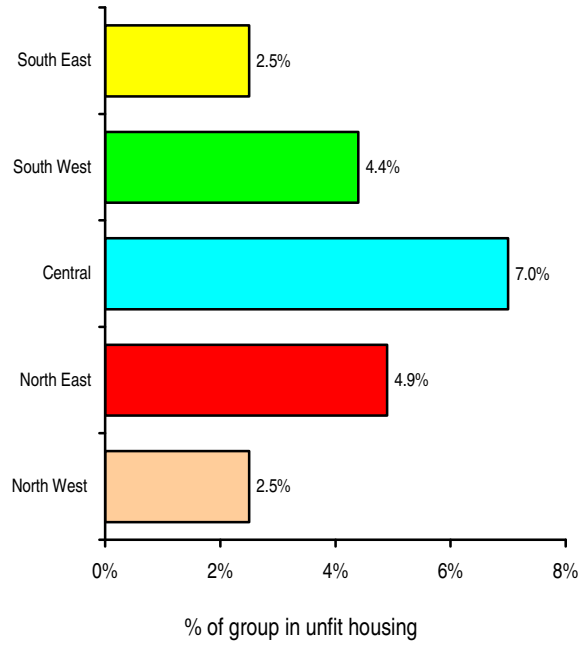


% of unfit housing in group

Table 5.5 Unfit dwellings and sub-area

Sub-area	Unfitness					
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group	% of group unfit and occupied by vulnerable households
South East	174	6,873	7,047	2.5%	8.7%	28.2%
South West	448	9,676	10,124	4.4%	22.4%	74.6%
Central	731	9,702	10,433	7.0%	36.5%	50.3%
North East	457	8,784	9,241	4.9%	22.8%	65.1%
North West	194	7,525	7,719	2.5%	9.7%	60.6%
TOTAL	2,004	42,560	44,564	4.5%	100.0%	58.2%

Figure 5.4 Unfit dwellings and sub-area



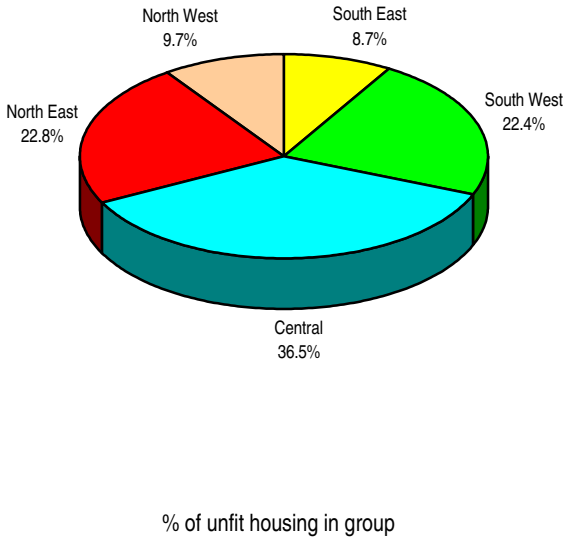
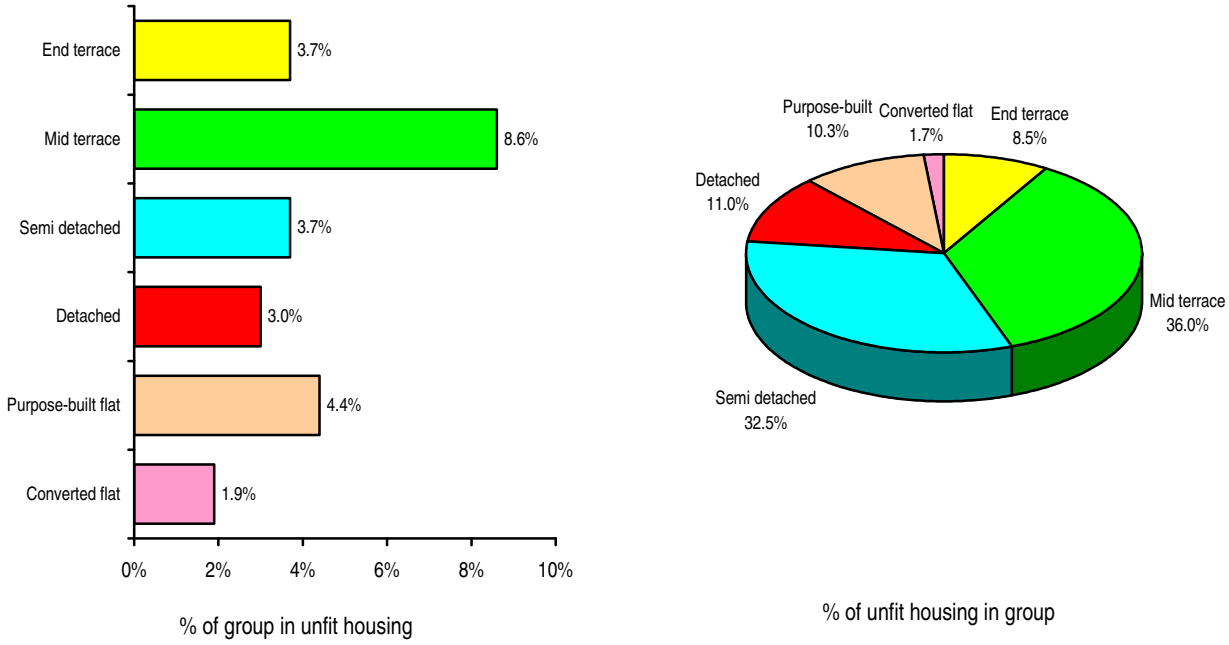


Table 5.6 Building type of unfit dwellings

Building type	Unfitness					
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group	% of group unfit and occupied by vulnerable households
End terrace	170	4,455	4,625	3.7%	8.5%	72.9%
Mid terrace	721	7,641	8,362	8.6%	36.0%	59.5%
Semi-detached	651	16,926	17,577	3.7%	32.5%	47.9%
Detached	221	7,245	7,466	3.0%	11.0%	43.4%
Purpose-built flat	206	4,457	4,663	4.4%	10.3%	100.0%
Converted flat	35	1,835	1,870	1.9%	1.7%	0.0%
TOTAL	2,004	42,560	44,564	4.5%	100.0%	58.2%
Bungalow	141	3,529	3,671	3.9%	7.0%	100.0%

Figure 5.5 Unfit dwellings and building type



5.6 Household characteristics and unfitness

The following tables show unfitness by household type and vulnerable households. The results show that single pensioners are most likely to be living in unfit housing. An estimated 6.9% of this group are living in unfit housing, this compares with 3.7% of all households in the Borough. Additionally, survey data suggests that vulnerable households are more likely than average to be living in unfit housing.

Table 5.7 Household type and unfitness

Household type	Unfitness				
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group
Single pensioner	369	4,997	5,366	6.9%	23.1%
2 or more pensioners	172	4,098	4,270	4.0%	10.8%
Single non-pensioner	236	7,418	7,654	3.1%	14.8%
2 or more adults, no children	413	14,277	14,690	2.8%	25.9%
Lone parent	53	1,405	1,458	3.6%	3.3%
2+ adults, 1 child	46	3,761	3,807	1.2%	2.9%
2+ adults, 2+ children	308	5,693	6,001	5.1%	19.3%
TOTAL	1,597	41,649	43,246	3.7%	100.0%

Table 5.8 Vulnerable households and unfitness

Vulnerable households	Unfitness				
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group
Vulnerable	629	11,608	12,237	5.1%	39.4%
Not vulnerable	968	30,040	31,008	3.1%	60.6%
TOTAL	1,597	41,648	43,245	3.7%	100.0%

5.7 Comparisons with 2001 EHCS

The following table compares the results of this survey with the 2001 EHCS. In general the two surveys show similar patterns with regard to the characteristics of unfit dwellings. It should be remembered when considering these figures that the overall level of unfitness in Ipswich is slightly higher than that found in the 2001 EHCS.

Table 5.9 Comparing 2004 Ipswich survey and 2001 English House Condition Survey

Comparator	Unfit dwellings	
	Ipswich	2001 EHCS
Overall unfitness	4.5%	4.2%
East		3.0%
Unfitness and tenure		
Owner-occupied	4.4%	3.2%
Private rented	6.5%	10.9%
RSL	2.4%	3.4%
Local Authority	-	4.7%
Vacant dwellings	30.9%	15.5%
Unfitness and dwelling age		
Pre-1919	6.6%	10.3%
1919 – 1944	6.3%	5.3%
1945 – 1964	3.6%	3.0%
Post-1964	1.7%	1.2%
Unfitness and building type		
All houses	4.6%	4.2%
Purpose-built flat	4.4%	3.0%
Converted flat	1.9%	10.5%
Main reasons for unfitness		
Food preparation	54.3%	39.4%
Disrepair	53.3%	45.5%

5.8 Defective dwellings

In addition to the main measure of unfitness dwellings could be recorded by surveyors as ‘fit but defective’ in one or more of the matters of unfitness. In total it is estimated that 7,432 dwellings (16.7%) are currently fit but defective. The table below shows the causes of defective dwellings, of these, the most significant is *food preparation*, followed by *disrepair*.

Table 5.10 Reasons for defective dwellings		
Reason	Number of dwellings	% of defective dwellings
Food preparation	3,274	44.0%
Disrepair	3,209	43.2%
Bath/shower, WHB	2,318	31.2%
Water closet	1,398	18.8%
Heating	937	12.6%
Dampness	774	10.4%
Ventilation	594	8.0%
Drainage	367	4.9%
Structural stability	360	4.8%
Lighting	188	2.5%
Water supply	47	0.6%

5.9 Summary

Under the provisions of Section 604 of the 1985 Housing Act (amended by the 1989 Local Government and Housing Act) a dwelling house is fit for human habitation unless it fails to meet one or more of eleven requirements and as a result of that failure, is not reasonably suitable for occupation. The following were some of the main findings in relation to unfitness in Ipswich:

- It is estimated that 4.5% of private sector dwellings in Ipswich are unfit (2,004 dwellings), this compares with a national average of around 4.2% and a regional average of 3.0%.
- The main causes of unfitness are *food preparation* and *disrepair*.
- Private rented dwellings are most likely to be unfit as are pre-1919 dwellings.
- An additional 7,432 dwellings are estimated to be 'fit but defective' (representing 16.7% of the private sector dwelling stock).

SECTION C: EMERGING STANDARDS

This section focuses on newer areas of housing condition policy – the Housing Health and Safety Rating System (HHSRS), Decent Homes, and houses in multiple occupation (HMOs). Whilst the Decent Homes standard is perhaps the broadest of all the housing stock condition standards in place, the other two issues are very specific.

The first chapter deals with the frequency and severity of hazards in the Borough, as measured by the HHSRS. Looking at ten specific hazards to determine the severity of each hazard, appropriate action required by the Council is analysed and an assessment made of which groups are most at risk.

The following chapter analyses those dwellings which are classified as non-decent. After looking at the reasons for dwellings failing the standard, an analysis is made of how non-decency correlates with different characteristics of households and dwellings. Finally, a comparison is made with England as a whole.

The final part of this section examines HMOs as a specific group, looking initially into their particular profile of characteristics. The chapter deals also with issues of safety, amenities, and repair costs for different levels of disrepair.



6. Housing health and safety rating system

6.1 Introduction

The 2004 Housing Act sets a new system for enforcing housing standards. The Housing Health and Safety Rating System (HHSRS) is a means of identifying faults in dwellings and of evaluating the potential effect of any faults on the health and safety of occupants, visitors, neighbours and passers-by. This will replace the present Fitness Standard for enforcing housing standards from the 1985 Housing Act (amended in 1989). Version 1 of the HHSRS was introduced in 2001 and followed by the release of version 2 in March 2004. Currently the HHSRS is assessed alongside the Fitness Standard. Due to the volume of training (it is estimated that up to 3,000 local authority staff will require training), and the need for secondary legislation to formally adapt the standards, it is not expected to fully replace the current Fitness Standard until at least late 2005.

The new system grades the severity of any dangers present in the dwelling. It also provides a means of differentiating between dwellings that pose a low risk to health and safety and those which pose a higher risk such as an imminent threat of serious injury or death. The system concentrates on threats to health and safety and is not concerned with matters of quality, comfort and convenience.

As part of a stock condition survey the system can assist in identifying dangerous housing conditions that could be given priority and indicate specific areas to be targeted. For individual dwellings, the system can help determine matters that require remedial action and the priority with which those matters should be tackled.

The form of construction, type and age of dwelling will not affect the identification and evaluation of hazards. These matters will however be relevant to the nature of remedial action.

This chapter does not seek to go into any detail about the rationale behind the HHSRS but merely concentrates on the results of the analysis, how hazards vary across different groups and how sensitive the rating system is to different assumptions about what is an acceptable hazard.

Additionally, this survey only studies 10 of the 32 potential hazards to be assessed under the system. The 10 hazards chosen were thought by the Council to be the most appropriate in the local situation. Nationally the 10 most important hazards (most of which are covered here) account for over 90% of all occurrences of hazardous dwellings.

6.2 The system

The hazard scoring procedure is discussed in detail in Appendix A3. This section briefly sets out the components of calculations and how they are used.

A hazard score is a numerical figure calculated for each hazard identified at a dwelling. The higher the score the greater the hazard (ODPM guidance then suggests taking the highest score for each dwelling to indicate the most serious hazard for that particular dwelling).

The hazard score is generated by looking at three factors:

1. The likelihood expressed as a ratio – in effect this is a 1 in x chance of any particular hazard occurring in a one year period.

2. A weighting given to each class of harm – there are four classes used in the calculation (Extreme, Severe, Serious and Moderate) in the case of falls these might represent a range from death to severe bruising.

3. A spread of health outcomes indicated as a percentage – this would mean that if the hazard occurs what are the chances of it being in each of the classes of harm (e.g. in the case of falls this might be no (or negligible) chance of death and 60% chance of severe bruising).

Once each dwelling has been assessed for each potential hazard the data is banded to provide more useful data. The bands suggested in ODPM guidance are shown in the Box below.

Box 6.1 Hazard scores equivalent risk of death and suggested response

Band	*Score*	*Equivalent annual risk of death*	*Response*
A	5,000 or more	1 in 200 or more	Mandatory
B	2,000 – 4,999	1 in 200 – 1 in 500	
C	1,000 – 1,999	1 in 500 – 1 in 1,000	
D	500 – 999	1 in 1,000 – 1 in 2,000	Discretionary
E	200 – 499	1 in 2,000 – 1 in 5,000	
F	100 – 199	1 in 5,000 – 1 in 10,000	
G	50 – 99	1 in 10,000 – 1 in 20,000	
H	20 – 49	1 in 20,000 – 1 in 50,000	
I	10 – 19	1 in 50,000 – 1 in 100,000	
J	Less than 10	Less than 1 in 100,000	Ideal

Our main analysis therefore concentrates on dwellings with any hazard in bands A to C and also bands D to I.

6.3 Individual hazards

Each of the individual hazards has been grouped into three categories shown in the box above as to the type of response suggested by the results of the surveyors assessment (Mandatory, Discretionary and Ideal). The table below shows the numbers of dwellings falling into each of these groups for each type of hazard.

Table 6.1 Type of hazard and suggested response								
Hazard	*Mandatory*		*Discretionary*		*Ideal*		*Total*	
	Number	*%*	*Number*	*%*	*Number*	*%*	*Number*	*%*
Falls on the level	651	1.5%	6,362	14.3%	37,552	84.3%	44,564	100.0%
Falls on stairs	1,509	3.4%	7,667	17.2%	35,388	79.4%	44,564	100.0%
Falls between levels	0	0.0%	1,148	2.6%	43,416	97.4%	44,564	100.0%
Carbon monoxide	0	0.0%	89	0.2%	44,475	99.8%	44,564	100.0%
Fire	0	0.0%	1,661	3.7%	42,903	96.3%	44,564	100.0%
Hot surfaces and materials	0	0.0%	1,917	4.3%	42,647	95.7%	44,564	100.0%
Damp & mould	54	0.1%	2,182	4.9%	42,328	95.0%	44,564	100.0%
Electrical hazards	79	0.2%	890	2.0%	43,595	97.8%	44,564	100.0%
Excessive cold	4,672	10.5%	987	2.2%	43,595	97.8%	44,564	100.0%
Structural failure	0	0.0%	158	0.4%	44,406	99.6%	44,564	100.0%

The table shows that the two hazard most likely to lead to a mandatory response from the Council are *excessive cold* and *falls on stairs.*

There are a number of hazards which show no failures under the mandatory heading. This does not mean that there are no such dwellings in Ipswich, just that none were found within the completed sample. This finding does however suggest that the number of properties failing on these items Borough-wide is likely to be small.

6.4 Grouped hazard scores

We can use the data in the above table to estimate the number of dwellings which fall into the mandatory group on any hazard, those which fall into the discretionary groups on any hazard (excluding those in the mandatory group) and finally dwellings with no hazards (ideal). The table below shows the results of this analysis.

Table 6.2 Grouped hazard scores		
Category of worst hazard	Number of dwellings	% of dwellings
Mandatory	6,181	13.9%
Discretionary	12,800	28.7%
Ideal	25,582	57.4%
TOTAL	44,564	100.0%

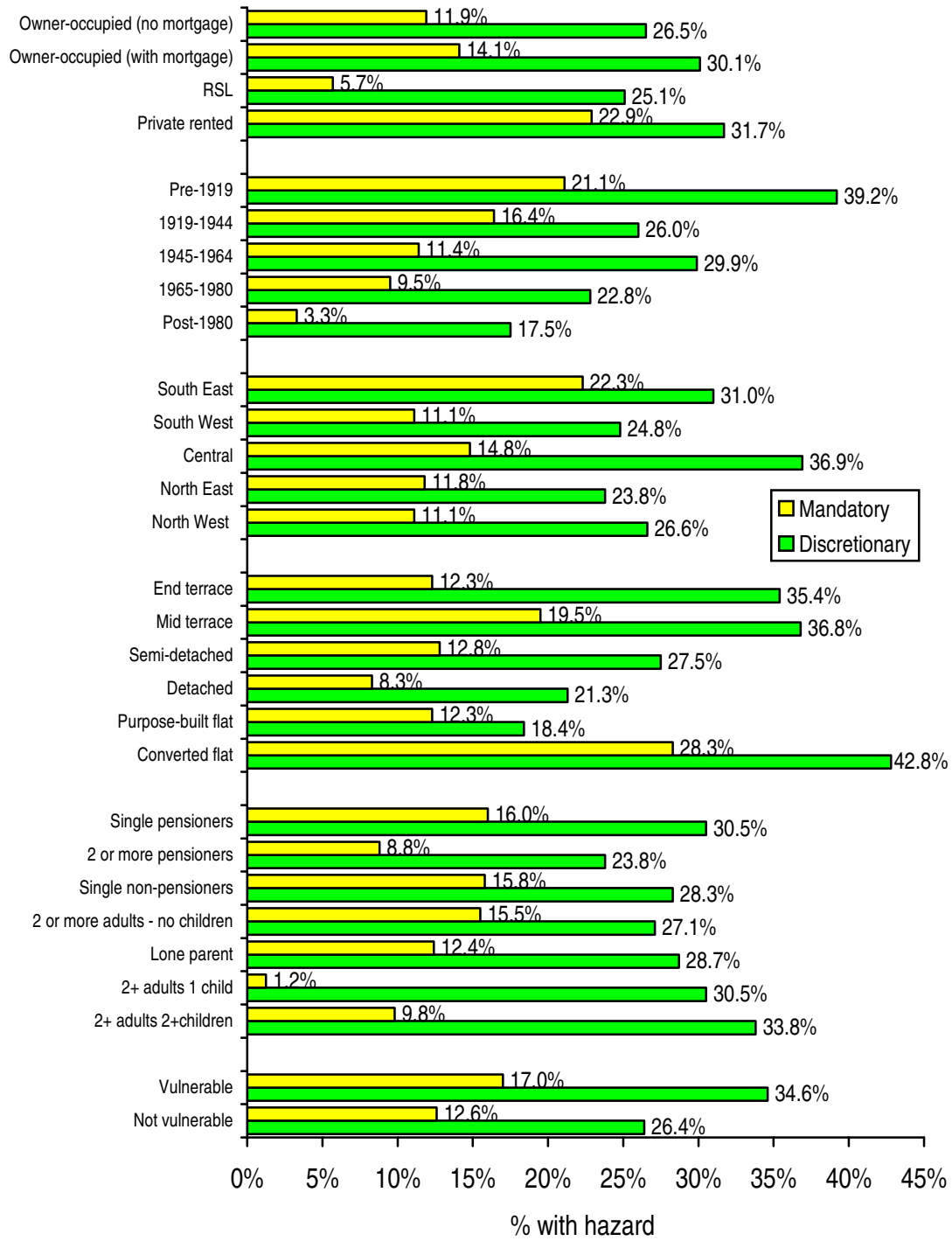
The table shows that a total of 13.9% of dwellings have at least one hazard described as requiring a mandatory response, a further 28.7% of dwellings have discretionary hazards leaving 57.4% with no recorded hazards – the dwellings therefore being described as 'ideal'. The failure rate under HHSRS is significantly higher than under the fitness standard (4.5% unfit). This is a normal finding from other surveys carried out by Fordham Research and is consistent with initial indications from the 2001 EHCS.

The figure below shows the mandatory and discretionary hazards by dwelling and household characteristics.

Private rented dwellings are most likely to be in the mandatory or discretionary category. Older dwellings also tend to be more likely than average to be in both categories. By sub-area, *South East* shows the highest proportion in the mandatory group, whilst *Central* has the highest proportion in the discretionary group. Converted flats and mid terraced houses have the highest proportion of dwellings requiring a response in both categories.

Additionally, single person households are more likely than average to be in the mandatory category. Vulnerable households are far more likely to be in either of the hazard categories than non-vulnerable households.

Figure 6.1 Characteristics of dwellings/households with hazards



6.5 Comparison with unfitness

Cross-tabulating the hazard ratings with unfitness and defective dwellings is shown in the table below. The table shows that there is some link between hazards and unfitness (and defective dwellings) but these links are far from clear. Of all dwellings in the mandatory category some 17.0% are also considered to be unfit, this compares with 4.7% in the discretionary group and 1.4% in the ideal group. Of unfit dwellings, 82.5% are in either the mandatory or discretionary group, this compares with 72.7% of dwellings in defective dwellings and 33.9% of dwellings described as in good condition. Of all dwellings in the mandatory hazard group some 44.4% are actually described as being in good condition.

Table 6.3 Unfit & defective dwellings, and hazard ratings

Hazard rating	Unfit and defective dwellings			
	Unfit	Defective	Good condition	TOTAL
Mandatory	1,053	2,385	2,744	6,181
Discretionary	601	3,016	9,183	12,800
Ideal	350	2,031	23,202	25,582
TOTAL	2,004	7,432	35,129	44,564

6.6 Summary

The Housing Health and Safety Rating System is an alternative method for looking at the condition of dwellings in an area taking into account the potential hazards of a dwelling in relation to any persons using it rather than a study of the fabric condition of the home.

It is estimated that around 13.9% of dwellings require a mandatory response, which is significantly higher than the estimated level of unfitness in the Borough of 4.5%. Below are some characteristics of 'hazardous' homes:

- The main hazards in Ipswich relate to *excessive cold* and *falls on stairs*.
- Private rented and pre-1919 dwellings appear particularly likely to be 'hazardous'.
- There is some link between unfitness and the hazard rating although a number of dwellings fail on only one of the two measures.

7. Decent homes

7.1 Introduction

The government's housing objective is "to ensure that everyone has the opportunity of a decent home and so promote social cohesion, well being and self-dependence". In 2000 the Government set a standard for 'decent homes' whereby housing should:

i) Meet the current statutory minimum standard for housing (i.e. not unfit)
ii) Be in a reasonable state of repair
iii) Have reasonably modern facilities and services
iv) Provide a reasonable degree of thermal comfort

The Decent Homes standard can be seen as a Government standard for Government reporting purposes. Although the Decent Homes standard was initially intended to be for the public sector housing stock only, it has more recently become an important issue in the private sector. The government (through PSA 7) has indicated targets for bringing private sector homes up to the decent homes standard. A public service agreement (PSA) was set out by the ODPM in 2002. Of note from this document is PSA target 7 (PSA7) which deals with decent homes. The PSA target is *By 2010, bring all social housing into a decent condition with most of this improvement taking place in deprived areas, and for vulnerable households in the private sector, including families with children, increase the proportion who live in homes that are in decent condition.*'

For the private sector, the PSA has set targets for the proportion of vulnerable households achieving the decency standard by 2005, 2010 and beyond. Government data states that the baseline for 2001 is 57% and that current targets are to increase this to 63% by 2005, to 70% by 2010 and to 75% by 2015/20. The general implication is that whilst individual local authorities are not necessarily expected to meet these targets (as this will very much depend on their own baseline) they are expected to contribute towards meeting targets nationally. This chapter studies each of the above criteria to ascertain the number of homes which are 'non-decent' and the reasons why.

7.2 Applying the standard

The 2001 EHCS sets out what factors would be considered to make a dwelling 'non-decent'. The table below shows the four criteria along with suggested measurements by the guidance, this is followed by our comment about how the current survey data has been used to meet the criteria.

Table 7.1 Decent homes criteria and comment on calculation		
Decent home criterion	*Summary of government guidance*	*Application in this survey*
Does it meet the current minimum standard?	Is dwelling unfit?	All unfit dwellings are included here.
Is it in reasonable state of repair?	Key components: external wall structure, wall finish/applied surface, chimney stacks, roof structure, roof covering, external doors, windows, gas system, electrical supply, heating boiler Non key components: kitchen amenities, bathroom amenities, heating system	The definition used in the survey is consistent with the EHCS and considers urgent work required to any of the key components or urgent work required to two or more of the non-key components.
Has it reasonably modern facilities?	Kitchen: modern (<20 years old), adequate space and layout. Bathroom: modern (<30 years old) Appropriately located bathroom and WC Adequate noise insulation Flats: common areas adequate size and layout	A dwelling must fail on at least three of these categories to be considered as non-decent. This is consistent with the EHCS.
Does it provide a reasonable degree of thermal comfort?	Has programmable heating system and (for gas/oil programmable heating) has it cavity wall insulation and/or at least 50mm of roof insulation, where appropriate (for electric storage heaters/LPG/programmable solid fuel central heating) has it cavity wall insulation and at least 200mm of roof insulation, where appropriate?	All of this information is available from the survey data and hence this part of the standard is replicated in full.

At present criteria 1 – 'Does it meet the current minimum standard?' applies to the Fitness Standard defined in the 1985 Housing Act. This will therefore require updating to the HHSRS minimum standard: free of category 1 hazards. As this will give a different figure or non-decent homes to the definition above, and will not be comparative to national results from the EHCS, the chapter will continue to use the Fitness Standard definition. A separate section at the end of the chapter then uses the HHSRS to show the impact of the change in minimum standard and can be used for future comparisons.

7.3 National figures

The 2001 EHCS estimates that a total of 7.0m dwellings are non decent. This represents 33% of all dwellings. Of these, 1.6m are social sector dwellings, representing 38% of the social sector. The remaining 5.4m non-decent homes are private sector dwellings, this represents 32% of the private sector. It is additionally estimated that 79% of non-decent dwellings fail on only one of the four criteria used. The table below shows estimates of the reasons for failure. It is clear that the main reason for a home to be considered as non-decent is under the heading 'thermal comfort'.

Table 7.2 Causes of non-decent homes for all dwellings (EHCS, 2001 – private sector and RSL dwellings)

Non decent due to	% of all dwellings	% of non-decent dwellings
Unfitness	4.1%	13.0%
Disrepair	8.8%	28.0%
Modern facilities	1.9%	5.9%
Thermal comfort	25.1%	79.4%

NB Percentages add up to more than 100 because some dwellings fail on more than one criterion

7.4 Decent homes in Ipswich

Having worked through each of the four headings used to determine decent (or non-decent) homes in Ipswich the survey estimates that in the private sector 32.1% of dwellings would be categorised as non-decent. This represents 14,300 dwellings in the Borough. The table below highlights the reasons for homes being considered as non-decent. The results suggests that the reasons for non-decency in Ipswich are similar to those found nationally (for all dwellings), however the figure for modern facilities is significantly larger than the national average.

Table 7.3 Causes of non-decent homes in Ipswich

Non decent due to	Number of non-decent dwellings	% of non-decent dwellings
Unfitness	2,004	14.0%
Disrepair	3,711	26.0%
Modern facilities	2,533	17.7%
Thermal comfort	10,661	74.5%

NB Percentages add up to more than 100 because some dwellings fail on more than one criterion

The table below shows the number of reasons for dwellings being considered non-decent. The table shows that the majority of non-decent dwellings (75.8%) are considered such on just one of the various items. This is comparable to the national estimate (for all dwellings) of 79%.

Table 7.4 Number of non-decent items		
Number of items	Number of non-decent dwellings	% of non-decent dwellings
One	10,834	75.8%
Two	2,582	18.1%
Three	623	4.4%
Four	261	1.8%
TOTAL	14,300	100.0%

7.5 Characteristics of non-decent homes

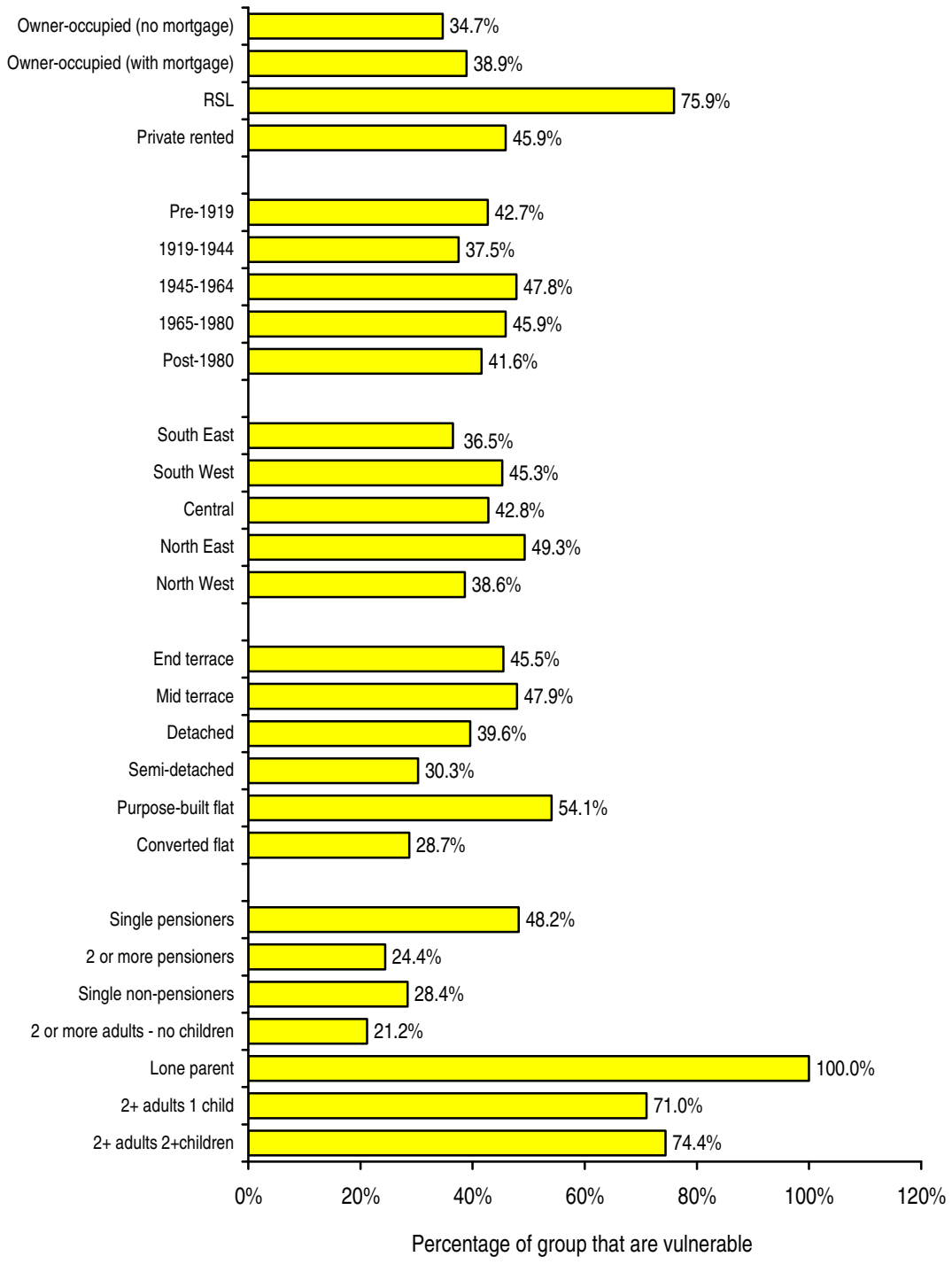
The figure below shows some dwelling and household characteristics of non-decent homes. Private rented dwellings are most likely to be considered non-decent, as are pre-1919 dwellings. Dwellings in the Central sub-area are most likely to be considered non-decent. Additionally converted flats and mid terrace dwellings are most likely to be non-decent. By household type, single person households show high levels of non-decency.

Finally, the data also shows that vulnerable households are more likely than other households to be living in non-decent accommodation. However, the proportion of vulnerable households in non-decent homes (34.7%) is below national estimates of around 43%.

Table 7.5 Non-decent homes and dwelling/household characteristics					
	% of dwellings in group that:				
Dwelling characteristic	Are non decent	Fail fitness	Fail disrepair	Fail modernisation	Fail thermal comfort
Tenure					
Owner-occupied (nm)	28.9%	4.7%	7.5%	7.5%	19.5%
Owner-occupied (wm)	30.1%	4.1%	7.3%	2.4%	24.4%
RSL	40.6%	2.4%	7.4%	5.6%	31.4%
Private rented	41.0%	6.5%	14.4%	12.5%	28.0%
Age of dwelling					
Pre-1919	42.7%	6.6%	17.1%	8.1%	30.9%
1919-1944	30.4%	6.3%	4.6%	4.7%	21.5%
1944-1964	29.8%	3.6%	5.9%	7.2%	21.9%
1965-1980	28.8%	2.4%	6.5%	5.8%	23.8%
Post-1980	20.7%	0.8%	3.2%	0.0%	17.3%
Sub-area					
South East	30.0%	2.5%	4.6%	6.4%	22.3%
South West	35.6%	4.4%	7.2%	2.8%	29.2%
Central	37.5%	7.0%	12.0%	8.1%	30.3%
North East	25.1%	4.9%	9.7%	5.5%	14.9%
North West	30.3%	2.5%	6.6%	5.6%	20.7%
Type of dwelling					
End terrace	35.8%	3.7%	7.8%	3.2%	32.1%
Mid terrace	45.8%	8.6%	13.8%	8.6%	34.9%
Semi-detached	26.2%	3.7%	6.2%	5.6%	17.9%
Detached	18.7%	3.0%	6.6%	3.6%	11.5%
Purpose-built flats	41.3%	4.4%	5.7%	3.3%	35.7%
Converted flat	47.4%	1.9%	18.9%	13.6%	31.2%
All dwellings	32.1%	4.5%	8.3%	5.7%	23.9%
Household type					
Single pensioners	39.0%	6.9%	6.1%	13.1%	30.3%
2 or more pensioners	21.3%	4.0%	1.4%	5.0%	15.9%
Single non-pensioners	37.5%	3.1%	6.3%	6.8%	30.4%
2+ adults, no children	32.0%	2.8%	8.7%	4.3%	24.2%
Lone parent	35.0%	3.6%	13.8%	3.6%	27.1%
2+ adults, 1 child	27.1%	1.2%	10.7%	2.5%	21.1%
2+ adults, 2+ children	22.4%	5.1%	5.9%	1.3%	14.8%
Vulnerable households					
Vulnerable	34.7%	5.1%	9.7%	6.9%	25.7%
Not vulnerable	29.7%	3.1%	6.2%	4.7%	23.0%
All households	31.1%	3.7%	7.2%	5.3%	23.7%

The figure below shows the proportion of households living in non-decent dwellings that are also vulnerable households. Results show that around three quarters of RSL households living in non-decent homes are considered to be vulnerable households. Additionally, all lone parent households in non-decent homes are vulnerable.

Figure 7.1 Vulnerable households as a proportion of non-decent dwellings/households



7.6 Cost to make homes decent

In addition to estimating the number of homes considered as non-decent it is possible to estimate the likely costs of making these homes decent. In the case of unfit homes or those not in a reasonable state of repair the costs can be taken directly from survey evidence about the causes of unfitness/disrepair. In the case of modern facilities the cost estimates are based on the cost of replacing a kitchen/bathroom (as appropriate) as well as separate costs where the reason for non decency is poor space, layout, or location. Finally for thermal comfort the costs are taken as the cost for providing central heating and insulation measures (where central heating is not present) and for providing insulation only where there is central heating.

The table below shows estimated costs for rectifying each reason for non-decency and the total cost Borough-wide. The table shows that the average non-decent home would cost £3,712 to make it decent. Borough-wide this would entail a total cost of £53.1m.

Table 7.6 Costs for remedying non-decent homes in Ipswich

Non decent due to	Number of non-decent dwellings	Average cost per non-decent dwelling	Total cost Borough-wide
Unfitness	2,004	£6,470	£13.0m
Disrepair	3,711	£2,186	£8.1m
Modern facilities	2,533	£5,145	£13.0m
Thermal comfort	10,661	£1,779	£19.0m
AVERAGE/TOTAL	14,300	£3,712	£53.1m

7.7 Comparisons with 2001 EHCS

The following table compares the results of this survey with the 2001 EHCS. In general the two surveys show similar patterns with regard to the characteristics of decent homes with the exception of a high level on non-decency in RSL dwellings. Overall, Ipswich shows a similar level of non-decency with both regional and national figures.

Table 7.7 Comparing 2004 Ipswich survey and 2001 English House Condition Survey

Comparator	Non-decent dwellings	
	Ipswich	2001 EHCS
Overall proportion non-decent	32.1%	33.1%
East		28.1%
Non-decency and tenure		
Owner-occupied	29.6%	29.4%
Private rented	41.0%	49.4%
RSL	40.6%	27.6%
Local Authority	-	42.7%
Vacant dwellings	64.0%	49.5%
Non-decency and dwelling age		
Pre-1919	42.7%	51.1%
1919 – 1944	30.4%	38.3%
1945 – 1964	29.8%	35.4%
Post-1964	25.2%	20.3%
Non-decency and building type		
All houses	30.2%	30.2%
Purpose-built flat	41.3%	45.4%
Converted flat	47.4%	46.7%

7.8 Decent homes using HHSRS

As previously discussed, using the HHSRS as a minimum standard (criteria 1) will give different results to using the current Fitness Standard. Having worked through each of the four headings (only the first heading changes) used to determine decent (or non-decent) homes in Ipswich the survey estimates that in the private sector 36.9% of dwellings would be categorised as non-decent. This represents 16,432 dwellings in the Borough. The table below highlights the reasons for homes being considered as non-decent. This shows a much higher proportion of non-decent dwellings failing due to the minimum standard criteria.

Table 7.8 Causes of non-decent homes using HHSRS in Ipswich		
Non decent due to	Number of non-decent dwellings	% of non-decent dwellings
Category 1 hazard	6,181	37.6%
Disrepair	3,711	22.6%
Modern facilities	2,533	15.4%
Thermal comfort	10,661	64.9%

NB Percentages add up to more than 100 because some dwellings fail on more than one criterion

The table below shows the number of reasons for dwellings being considered non-decent. The table shows that again, the majority of non-decent dwellings (69.7%) are considered such on just one of the various items.

Table 7.9 Number of non-decent items using HHSRS		
Number of items	Number of non-decent dwellings	% of non-decent dwellings
One	11,454	69.7%
Two	3,432	20.9%
Three	1,378	8.4%
Four	158	1.0%
TOTAL	16,423	100.0%

When comparing the proportion of non-decent dwellings by dwelling and household types, some different results are found to using the Fitness Standard. As before, pre-1919 dwellings and those in the private rented sector are more likely to be non-decent, with 49.3% and 45.4% non-decent respectively. However, dwellings in the South East sub-area are now the most likely to contain a non-decent dwelling. Again, converted flats and mid-terrace dwellings show high levels of non-decency. By household type, single non-pensioners and single pensioners show the highest proportions of households living in non-decent homes, with 43.0% and 41.9% respectively. There appears no significant difference between special needs and vulnerable households to other households.

In total, the survey estimates that 16,316 households are living in non-decent homes, of these 5,852 are considered to be vulnerable households.

7.9 Summary

Survey information was used to calculate a measure of 'decent homes' based on published government guidance. Although the decent homes standard was originally designed for social sector housing the principle has now been extended to the private sector. In assessing decent homes four factors are taken into account. These are:

- Unfitness
- Disrepair
- Modern facilities
- Thermal comfort

The results suggested that 32.1% of dwellings failed the standard under one or more of these headings. This figure compares with a national estimate (for all dwellings) of 33%. Some of the main findings relating to 'non-decent' homes were:

- The main reason for failure was thermal comfort, 74.5% of non-decent homes failed under this heading. This is also the main reason nationally.
- Three quarters of 'non-decent' homes fail on only one of the four factors.
- Groups with high levels of 'non-decency' included: private rented and pre-1919 dwellings, as well as single person and vulnerable households.
- The Borough-wide cost of remedying non-decent homes is £53.1m.

Since the 2004 Housing Act enforces the HHSRS as the minimum standard, replacing the current Fitness Standard, future estimates of decent homes will account for this. Using this definition, it is estimated that 36.9% of dwellings failed the decent homes standard, equivalent to 16,432 dwellings.

8. Houses in multiple occupation

8.1 Introduction

This chapter looks at the characteristics of houses in multiple occupation (HMOs). The Housing Act 1985 provides the legal definition of HMO that was subsequently amended by the Local Government and Housing Act 1989. The legal definition of an HMO is 'a house which is occupied by persons who do not form a single household'.

The main reason for interest in HMOs is an additional standard under Section 352 of the *1985 Housing Act*.

Box 8.1 HMO standard (*1985 Housing Act*)

Under the provisions of Section 352 of the Housing Act 1985, a house in multiple occupation is not reasonably suitable for the number of occupants, if it fails to meet one or more of the following requirements (having taken into account the numbers of individuals and/or households living on the premises) and as a result of that failure is not reasonably suitable for occupation by those occupants:

- Satisfactory facilities for the storage, preparation and cooking of food, including an adequate number of sinks with a satisfactory supply of hot and cold water
- Adequate number of suitably located WCs for the exclusive use of the occupants
- Adequate number of suitably located fixed baths or showers and wash hand basins each of which is provided with a satisfactory supply of hot and cold water for the exclusive use of the occupants
- Adequate means of escape from fire
- Adequate other fire precautions

HMOs have been split into 6 main categories as shown in the table below. The categories follow as closely as possible Chartered Institute of Environmental Health definitions. The table below estimates that there were 839 buildings acting as HMOs at the time of the survey – almost half of these were converted houses.

The English House Condition Survey estimates that there are a total of 638,000 HMO buildings in England. Almost half of these are shared houses/flats and over a quarter of these are converted houses (26.9%).

Council information shows a similar number of HMO buildings as the survey; 858 HMOs compared to the 839 shown above. However the HMO categories show quite different results. The most significant difference is that the survey appears to underestimate the number of Bedsits and overestimate the number of shared houses. Additionally, no registered homes were picked up in the survey sample.

Table 8.1 Categories of HMO				
Category	Survey data		Council information	
	Number of buildings	% of HMOs	Number of buildings	% of HMOs
Bedsits	44	5.3%	345	40.2%
Shared house	412	49.1%	69	8.0%
Linked to job/college	10	1.2%	7	0.8%
Hostel/B&B	3	0.3%	17	2.0%
Registered Home	0	0.0%	55	6.4%
Converted flats	371	44.2%	365	42.5%
TOTAL	839	100.0%	858	100.0%

Under the new Housing Act, it is the Council's duty to license some HMO buildings. It is proposed that those requiring a license contain three or more storeys and five or more occupants (comprising of two or more households). Survey data estimates that 80 HMO buildings contain three or more storeys and five or more occupants. This is slightly above Council estimates of 70.

For the purposes of much of the further analysis of HMO dwellings the data in the above table is split into two categories:

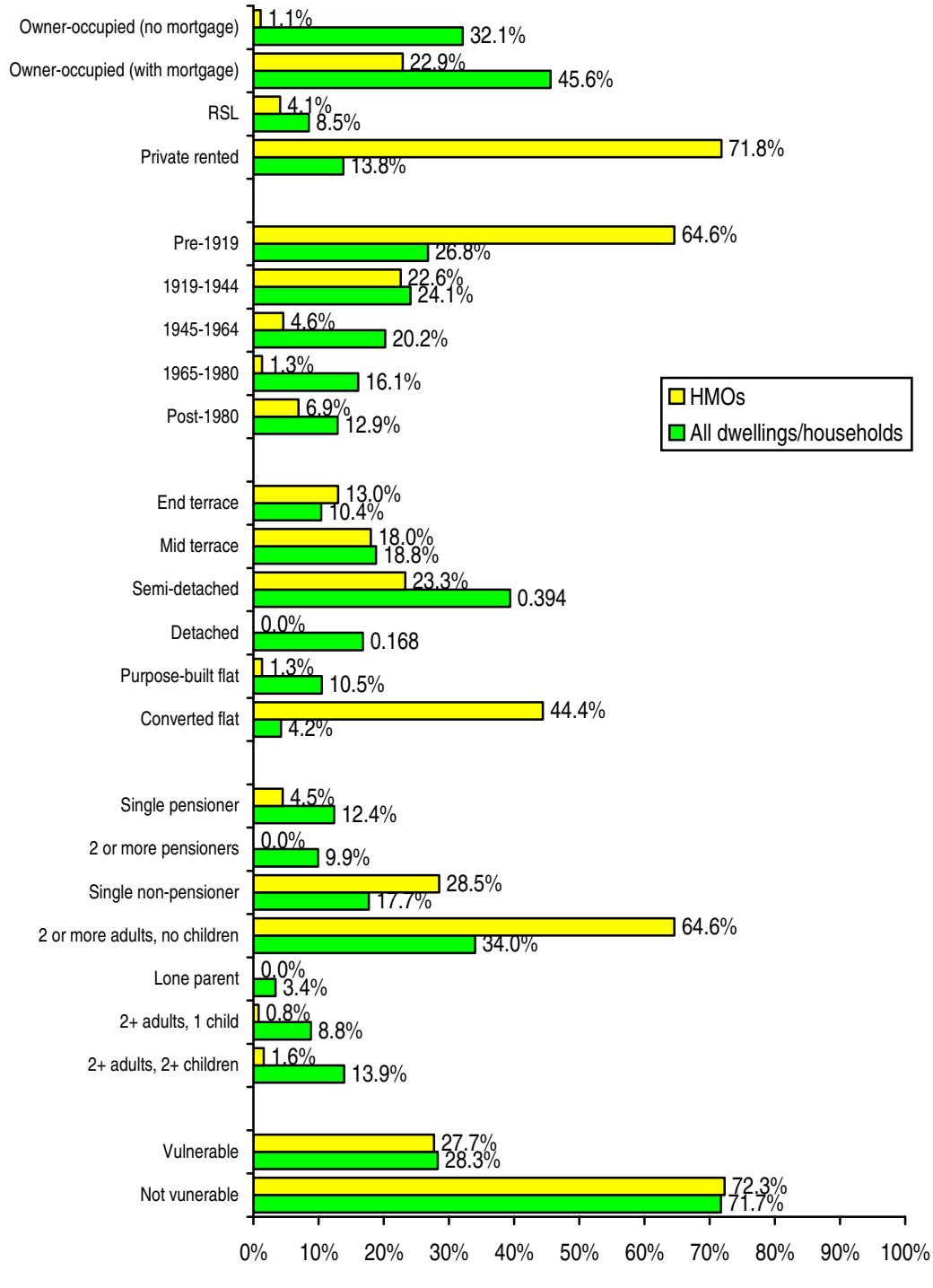
1. Non-self contained (all categories except converted flats)
2. Self-contained (converted flats)

8.2 Characteristics of HMOs

The figure below shows some of the main characteristics of HMOs, these figures are also compared with the overall stock. A large proportion of HMOs were found to be in the private rented sector (71.8%) – this compares with 13.8% of all dwellings. In general the buildings forming HMOs are older, with 64.6% dating from before 1919 compared with 26.8% of all dwellings. HMO dwellings are also more likely to be converted flats, 44.4% of HMOs are converted flats compared to only 4.2% of all dwellings.

The majority of households living in HMOs are non-pensioner households without children (93.1%), this compares with 51.7% of all households. Finally, there is little difference between the results for vulnerable and non-vulnerable households.

Figure 8.1 Characteristics of HMOs



8.3 HMOs and Stock Condition

The table below shows the estimated average repair costs for HMOs and all dwellings in the Borough. The data shows that for all repairs categories the average cost per building for HMOs is significantly higher than for all dwellings. The standardised repair cost is also noticeably higher than the figure for all dwellings in the Borough. Overall repair costs in self contained HMOs are higher, however, the standardised cost is slightly greater in the non-self contained HMOs.

Table 8.2 Overall repairs cost comparison (HMOs and all dwellings)

Repairs category	Non-self contained		Self contained		All dwellings	
	Total cost	Average cost per dwelling	Total cost	Average cost per dwelling	Total cost	Average cost per dwelling
Urgent repair	£0.7m	£1,587	£1.2m	£3,326	£61.1m	£1,372
Basic repair	£1.4m	£3,096	£2.1m	£5,641	£104.7m	£2,349
Comprehensive repair	£3.4m	£7,261	£2.9m	£7,910	£222.5m	£4,992
Standardised repair cost (/m²)	-	£39.5	-	£38.2	-	£27.4

8.4 Specific HMO issues

There are a number of issues specific to HMOs which need to be considered, these include means of escape from fire and the use of amenities. The following tables highlight these issues in relation to the HMOs found in the survey.

Table 8.3 Means of escape from fire

Means of escape from fire	Non-self contained			Self contained		
	Number of buildings	% of buildings	Of which 3+ storeys	Number of buildings	% of buildings	Of which 3+ storeys
Protected shaft, fire doors with strips and seals	1	0.3%	1	23	6.2%	15
Protected shaft, fire doors	1	0.3%	1	246	66.3%	122
Fire doors	10	2.1%	10	55	15.0%	35
Fire doors, poor condition	0	0.0%	0	0	0.0%	0
Not present	456	97.3%	0	46	12.5%	18
TOTAL	468	100.0%	13	371	100.0%	190

Table 8.4 Fire detection systems						
Fire detection system	Non-self contained			Self contained		
	Number of buildings	% of buildings	Of which 3+ storeys	Number of buildings	% of buildings	Of which 3+ storeys
Full, working AFD	13	2.7%	13	144	38.8%	85
Full, defective AFD	0	0.0%	0	0	0.0%	0
Mains AFD/smoke detectors	0	0.0%	0	89	24.0%	66
Battery smoke detectors only	167	35.6%	0	89	24.1%	18
No AFD or smoke detectors	289	61.7%	0	48	13.0%	20
TOTAL	468	100.0%	13	371	100.0%	190

NB AFD – Automatic fire detection system

The main results from the tables above are that 97.3% of non-self contained HMOs do not have any provision for escape from fire and 61.7% have no AFD system or smoke detectors. A further 35.6% have battery smoke detectors only. In terms of self contained HMOs we find that only 12.5% have no means of escape and only 13.0% have no AFD or smoke detectors

The table below shows the availability of amenities in HMOs. This table is only produced for non-self contained HMOs. The results indicate that all buildings have the use of all basic amenities. There are however, a number of dwellings sharing kitchens up to a ratio of 1:5.

Table 8.5 HMOs and amenities (non-self contained)				
Use	Amenity			
	Kitchen	Wash hand basin	Bath/shower	WCs
Exclusive use all lets	3	59	59	59
Exclusive use most lets	0	0	0	0
Shared up to 1:5	465	407	407	407
Shared worse than 1:5	0	1	1	1
None	0	0	0	0
TOTAL	468	468	468	468

For the non-self contained HMOs we also consider the condition of amenities. In around half of cases (47.5%) the amenities were marked as satisfactory with the remainder suffering from minor disrepair. The was no evidence of any amenities in major disrepair or requiring immediate replacement.

8.5 Management regulations

Finally the table below shows the adequacy of management of HMOs [level of compliance with The Housing (Management of Houses in Multiple Occupation) Regulations 1990]. The majority of HMOs have been categorised in the ‘good’ or ‘adequate’ categories although around a quarter of non-self contained HMOs are categorised as ‘inadequate’.

It should be noted that the management regulations assessment is made by a surveyor when visiting the dwelling. It may therefore be difficult to provide an assessment in some cases as this will inevitably be based on an assessment of the condition of common parts. Additionally it is worth noting that the management regulations assessment doe not relate to missing facilities (only the condition of such facilities where they do exist).

Table 8.6 HMOs and management regulations

Management regulations	Non-self contained		Self contained	
	Number of buildings	% of buildings	Number of buildings	% of buildings
Good	227	48.4%	103	27.8%
Adequate	127	27.1%	189	50.9%
Just adequate	0	0.0%	79	21.3%
Inadequate	115	24.5%	0	0.0%
Poor	0	0.0%	0	0.0%
TOTAL	468	100.0%	371	100.0%

8.6 Summary

The survey followed as closely of possible Chartered Institute of Environmental Health definitions and in total it was estimated that there were 839 buildings acting as HMOs at the time of the survey, of these, some 468 were non-self contained and 371 self contained (converted flats). The following are some of the main characteristics of HMOs:

- A large proportion of HMOs were found to be in the private rented sector (71.8%) – this compares with 13.8% of all dwellings.
- In general the buildings forming HMOs are older, with 64.6% dating pre-1919 compared with 26.8% of all dwellings.
- The majority of households living in HMOs are non-pensioner households without children (93.1%), this compares with 51.7% of all households.
- Generally HMO buildings had higher repair costs than other dwellings.

SECTION D: ENERGY EFFICIENCY

This section makes an assessment of the energy efficiency of the area's housing stock according to the Standard Assessment Procedure (SAP) rating system. After an initial analysis of what energy-saving measures and heating systems are already in use, the report rates the energy efficiency of the Borough's private sector housing as a whole, and that of different groups and characteristics. Having taken consideration of both the average SAP rating for each group, and the distribution of SAP ratings within it, a comparison is made with England as a whole.

The second chapter in this section looks at practical measures that can be taken to improve SAP ratings. Focussing on three particular possible improvements, the survey shows the impact of each improvement or combination of improvements, and its associated cost. The chapter also deals with how best to achieve a fixed level of improvement in SAP rating – 30% in this case.



9. Energy efficiency

9.1 Introduction

This chapter looks at the energy efficiency of dwellings in Ipswich. An energy rating is intended to give a measure of the overall energy efficiency of a dwelling. The Standard Assessment Procedure (SAP) is the Government's recommended system for home energy rating. The SAP rating is standardised for floor area so that the size of the dwelling does not strongly affect the result. SAP is expressed on a scale of 1 to 120 – the higher the number, the more energy efficient the dwelling. The box below gives a general description of the SAP rating.

Box 9.1 Definition of 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 1-120 scale. The higher the number the better the standard.

It is important for the occupants of a dwelling for it to be energy efficient. Not only does a less energy efficient property cost more to heat, it is also an important influence on the health of the occupants; cold and damp contribute to many excess deaths during the winter period. The office of national statistics (ONS) produces data on excess deaths between December and March each year. This has ranged from 24,000 to 49,000 over recent years.

A less energy efficient property is also more likely to fail the Decent Homes Standard under the thermal comfort criteria, and be classified as hazardous due to 'excessive cold' by the Housing Health and Safety Rating System (HHSRS). Both the Decent Homes Standard and HHSRS are analysed later in the report.

The first aspect of analysis relates to the amount of thermal insulation followed by a discussion of heating systems – these are two of the main factors which determine the SAP rating of a dwelling.

9.2 Thermal insulation

(i) Cavity walls

It is estimated that 66.5% of dwellings in Ipswich have cavity walls, of these a total of 54.7% have no cavity insulation. The table below shows this information by age of dwelling. It is clear that pre-1919 dwellings are least likely to have cavity walls, whilst almost all of dwellings built since 1945 have cavity walls. Some 71.4% of post-1980 dwellings with cavity walls contain insulation.

Table 9.1 Cavity walls and insulation by dwelling age				
Age of dwelling	Number of dwellings	Number with cavity walls	% with cavity walls	% of these with added insulation
Pre-1919	11,939	489	4.1%	18.0%
1919-1944	10,744	7,634	71.1%	37.9%
1945-1964	8,982	8,852	98.6%	46.3%
1965-1980	7,168	6,924	96.6%	32.5%
Post-1980	5,730	5,730	100.0%	71.4%
TOTAL	44,564	29,629	66.5%	45.3%

(ii) Double glazing

Information from the 2001 EHCS suggests that nationally around 76% of all dwellings have some double glazing. In Ipswich, 83.3% of dwellings have double glazing. A total of 60.8% have all windows double glazed and a further 22.5% have some double glazing. The results below show presence of double glazing by age of dwelling and tenure. Older dwellings are generally less likely to have full double glazing; only 35.3% of dwellings built before 1919 having full double glazing, this compares with 81.2% of post-1980 dwellings. By tenure we find that only 42.7% of private rented dwellings have full double glazing, this compares with 79.0% of RSL dwellings.

Table 9.2 Double glazing by dwelling age				
Age of dwelling	Number of dwellings	Number with full double glazing	Number with some double glazing	% with full double glazing
Pre-1919	11,939	4,215	3,845	35.3%
1919-1944	10,744	6,164	2,875	57.4%
1945-1964	8,982	6,266	1,986	69.8%
1965-1980	7,168	5,808	943	81.0%
Post-1980	5,730	4,652	380	81.2%
TOTAL	44,564	27,105	10,030	60.8%

Table 9.3 Double glazing by tenure				
Tenure	Number of dwellings	Number with full double glazing	Number with some double glazing	% with full double glazing
Owner-occupied (no mortgage)	14,322	8,934	3,421	62.4%
Owner-occupied (with mortgage)	20,329	12,567	5,406	61.8%
RSL	3,769	2,979	162	79.0%
Private rented	6,143	2,624	1,041	42.7%
TOTAL	44,564	27,105	10,030	60.8%

(iii) Loft insulation

The last insulation element to be considered is loft insulation. It is estimated that 87.3% of dwellings in Ipswich have loft insulation (8.2% have no loft). A great many dwellings with insulation (60.0%) had no more than 100mm of insulation whilst 14.5% were estimated to have 200mm or more (250mm being the current recommended standard of insulation).

Table 9.4 Loft insulation

Insulation thickness	Number of dwellings	% of dwellings	% with insulation
No loft	3,642	8.2%	-
Zero insulation	2,022	4.5%	-
Less than 50mm	2,693	6.0%	6.9%
50mm	4,791	10.8%	12.3%
75mm	3,283	7.4%	8.4%
100mm	12,561	28.2%	32.3%
150mm	9,941	22.3%	25.6%
200mm	4,860	10.9%	12.5%
More than 200mm	770	1.7%	2.0%
TOTAL	44,564	100.0%	100.0%

9.3 Heating systems and fuel use

(i) Main heating systems

For the purpose of this survey the 'main heating system' is taken as the system which heats the majority of the dwelling. The high efficiencies of modern heating systems have had a positive effect on the overall energy efficiency of dwellings. In Ipswich, it is estimated that 92.4% of dwellings have central or programmable heating. The definition of central/programmable heating used here is a very wide one including electric storage heaters and a small 'other' group. The national figure for 2001 showed 94% of dwellings had central or programmable heating systems. The results in general suggest that dwellings in Ipswich are slightly less likely to contain central/programmable heating than nationally. The table below shows the main heating system available in dwellings.

Table 9.5 Main heating systems

Main heating system	Number of dwellings	% of dwellings
Boiler with radiators	35,422	79.5%
Electric storage heaters	4,941	11.1%
Room heaters	3,365	7.6%
Other system	836	1.9%
TOTAL	44,564	100.0%

The figures below show heating system by tenure and age of dwelling. The data shows that owner-occupied dwellings are particularly likely to have central heating via a boiler with radiators. In total, 84.7% of owner-occupied dwellings (no mortgage) and 83.7% of owner-occupied dwellings (with mortgage) have this type of central heating, this compares with 58.1% of RSL dwellings. RSL dwellings are particularly likely to have room heaters whilst private rented dwellings are most likely to use electric storage heaters. Older dwellings are more likely to use room heaters. Additionally, post-1980 dwellings are most likely to have electric storage heaters.

Figure 9.1 Heating system and tenure

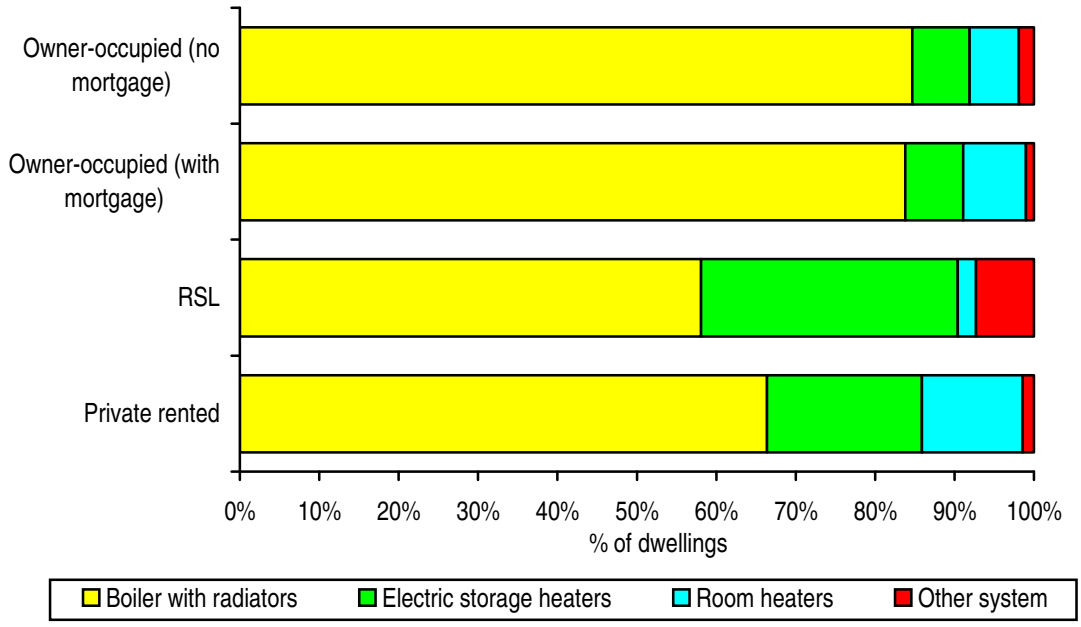
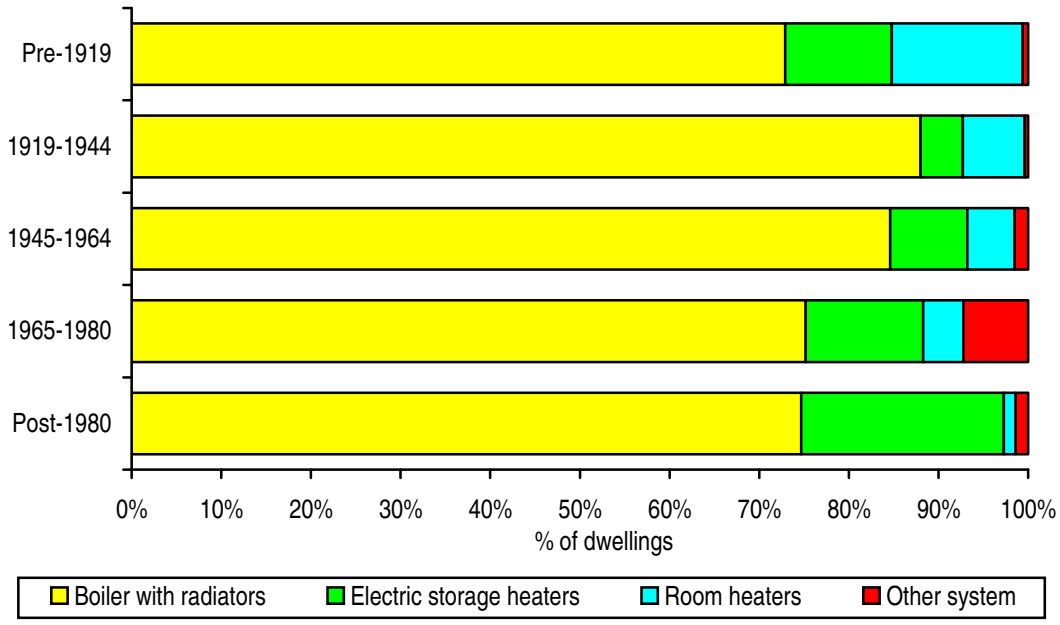


Figure 9.2 Heating system and age of dwelling



(ii) Fuel use

In terms of the fuel used for heating, the data shows the main type used is Gas (85.5% of dwellings), this is followed by off-peak electricity, these two fuel types account for 96.0% of all fuel used in Ipswich. The table below shows the distribution of fuel uses for main heating systems.

Table 9.6 Fuel used for main heating system

Fuel used	Number of dwellings	% of dwellings
Gas	38,124	85.5%
On-peak electric	1,192	2.7%
Off-peak electric	4,690	10.5%
Solid fuel	318	0.7%
Oil	240	0.5%
TOTAL	44,564	100.0%

9.4 The SAP rating

The SAP rating depends upon a range of factors that contribute to energy efficiency, namely:

- thermal insulation of the building fabric
- efficiency and control of the heating system
- ventilation characteristics of the dwelling
- solar gain characteristics of the dwelling
- the price of fuels used for space and water heating

The rating is not affected by factors that depend on the individual characteristics of the household occupying the dwelling when the rating is calculated, for example:

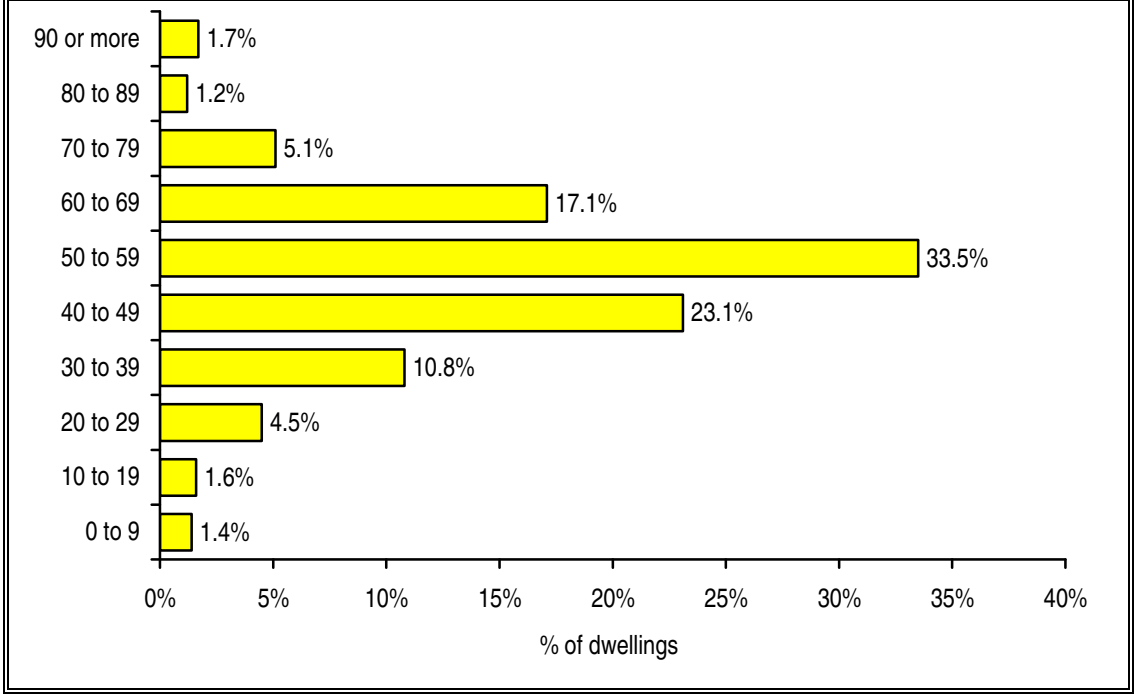
- household size and composition
- the ownership and efficiency of particular domestic electrical appliances
- individual heating patterns and temperatures

Nor is it affected by geographical location, so that a given type of dwelling has the same rating in all parts of the United Kingdom.

9.5 General results

The average SAP rating for Ipswich is 51. This compares with a national average (2001) of 51 and an average for the East of 51. The figure below shows the distribution of SAP ratings. The majority of dwellings have a SAP rating between 40 and 59 (56.6%). An estimated 7.5% of dwellings have a SAP of below 30 (compared with a national average of 9.4% and a regional average of 9.1% in the East).

Figure 9.3 Frequency distribution of SAP rating



9.6 SAP ratings and dwelling characteristics

The figures below show SAP ratings by tenure, dwelling age, sub-area and building type. Private rented dwellings show the lowest mean SAP rating (at 49), the highest being for RSL dwellings (at 63). Typically the older the dwelling, the lower the SAP rating. This is the case in Ipswich where dwellings built pre-1919 have an average SAP of 44. The highest mean SAP is found in the post-1980 age group (at 63). By sub-area, the *Central* sub-area shows the lowest mean SAP rating (at 47). The *South West* sub-area shows the highest mean SAP rating, of 56.

In terms of building type, exposure is often a key factor and hence we would expect lower SAP ratings for detached, semi-detached and end terraced dwellings. In Ipswich, mid terraced dwellings have a mean SAP of 54, whilst end terraced houses have a mean SAP rating of 47. Purpose-built flats show the highest mean SAP rating (of 64), whilst converted flats exhibit the lowest mean SAP rating (of 38).

Figure 9.4 SAP rating by tenure

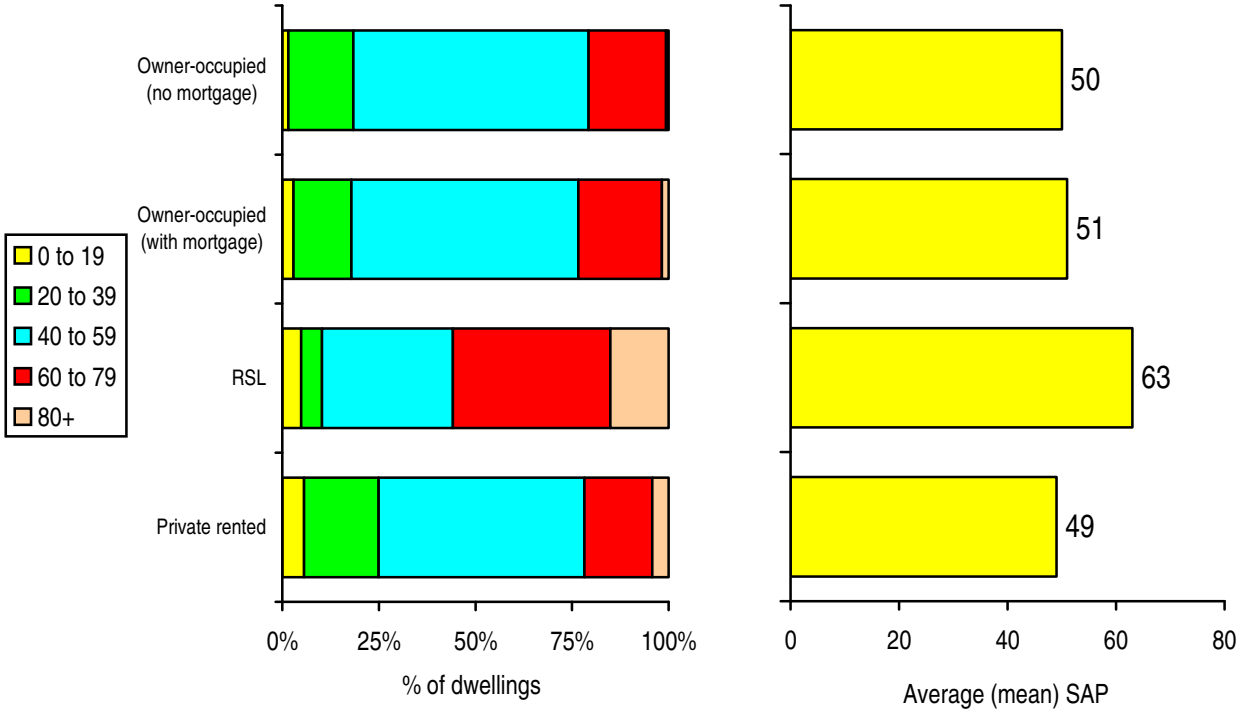


Figure 9.5 SAP rating by age of dwelling

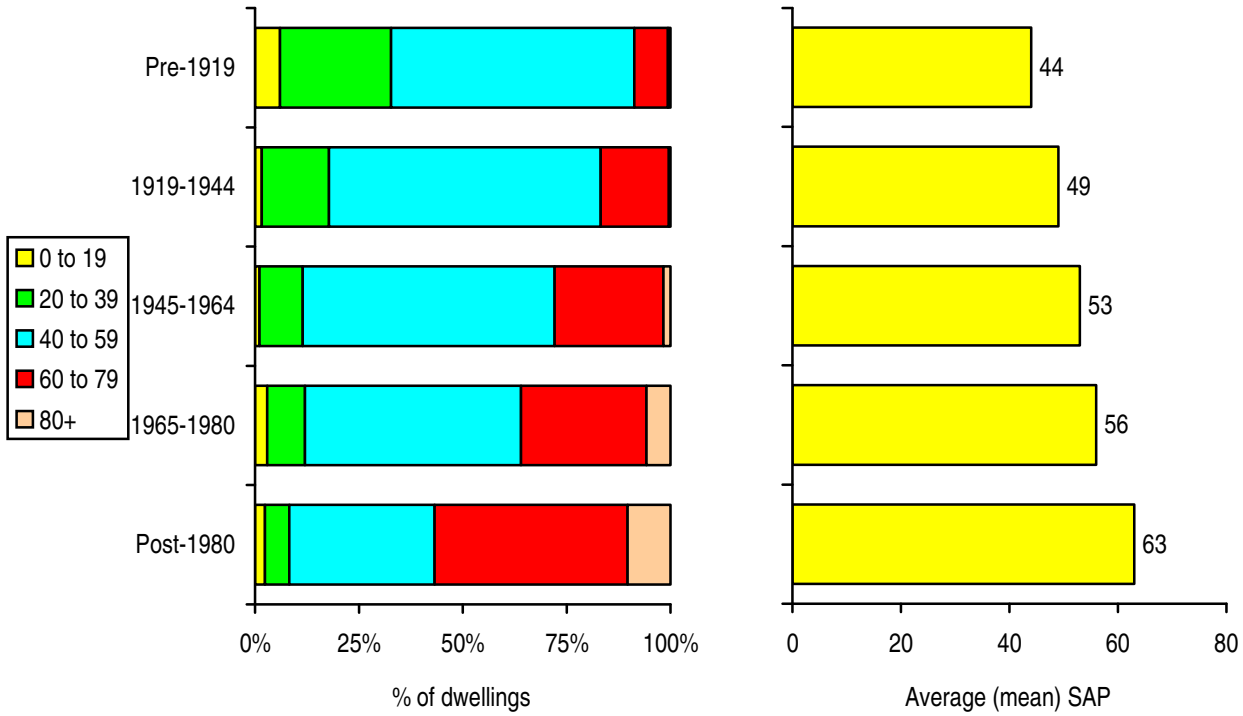


Figure 9.6 SAP rating by sub-area

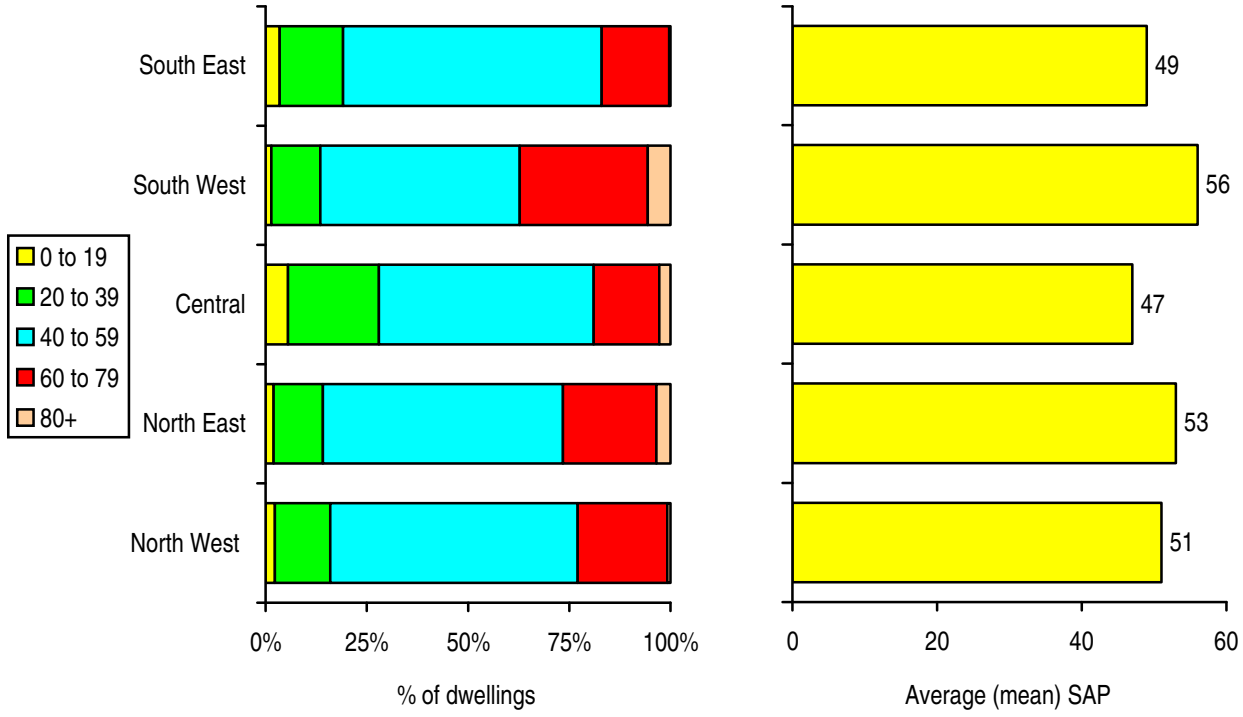
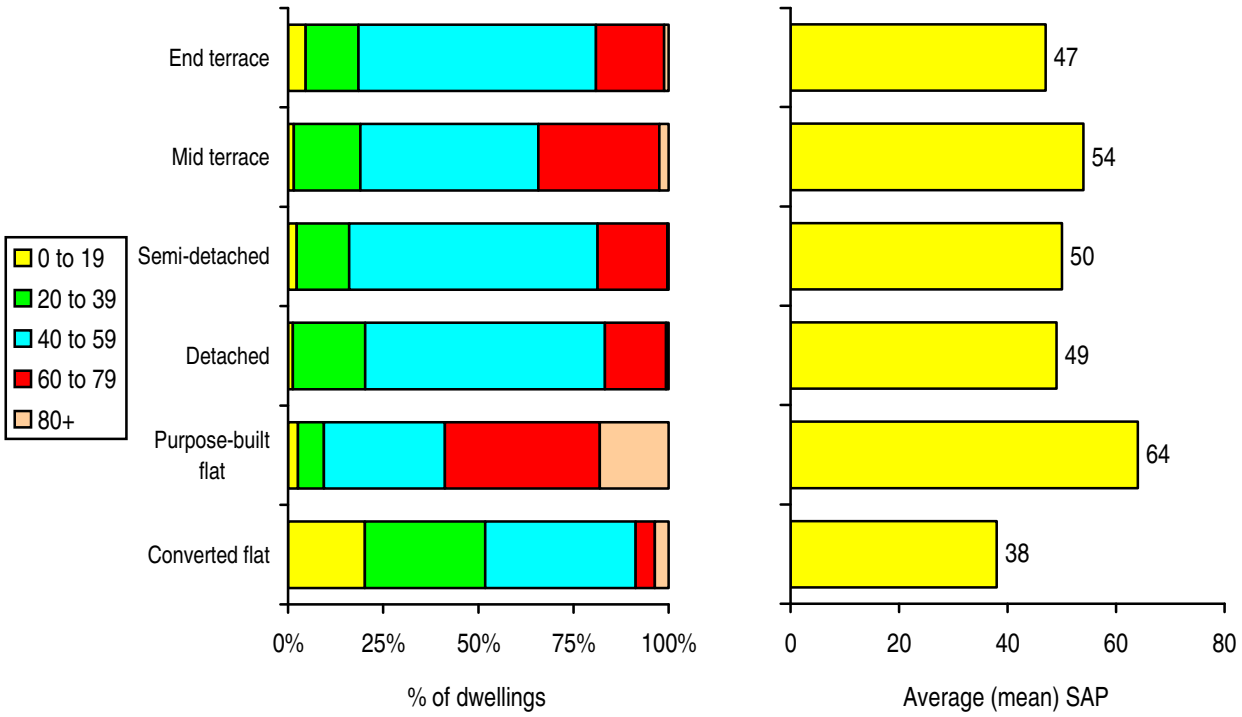


Figure 9.7 SAP rating by building type



The table below shows the mean SAP rating for each dwelling category for dwellings occupied by vulnerable households. Generally, vulnerable households show higher mean SAP ratings. However this is not the case in the private rented sector, the central sub-area, end terrace and detached houses, and converted flats.

Table 9.7 Comparing SAP ratings containing vulnerable households		
Category	SAP rating	
	Vulnerable	Not Vulnerable
SAP rating and tenure		
Owner-occupied (no mortgage)	50.1	49.8
Owner-occupied (with mortgage)	51.4	50.3
RSL	63.9	59.7
Private rented	48.2	49.2
SAP rating and dwelling age		
Pre-1919	43.7	43.7
1919 – 1944	49.9	48.2
1945 – 1964	54.5	51.9
Post-1964	58.3	54.4
SAP rating and sub-area		
South East	52.1	47.3
South West	58.6	53.3
Central	46.6	47.4
North East	53.7	52.1
North West	52.0	51.0
SAP rating and building type		
End terrace	45.8	48.3
Mid terrace	53.8	53.8
Semi-detached	51.1	49.9
Detached	47.3	48.5
Purpose-built flat	68.4	60.2
Converted flat	41.5	36.0

**NB Vacant dwellings have been excluded (results for occupied dwellings only)*

9.7 SAP ratings and household characteristics

The figures below show SAP ratings by household type and vulnerable households. The SAP rating is largely dependent on age of dwelling and building type, however it is of interest to see how SAP ratings vary between different types of household group. Results show that there is no significant difference between household type groups. However, it is notable that vulnerable households show a higher mean SAP rating than other households (although the proportion of vulnerable households with a SAP of below 20 is higher than average).

Figure 9.8 SAP rating by household type

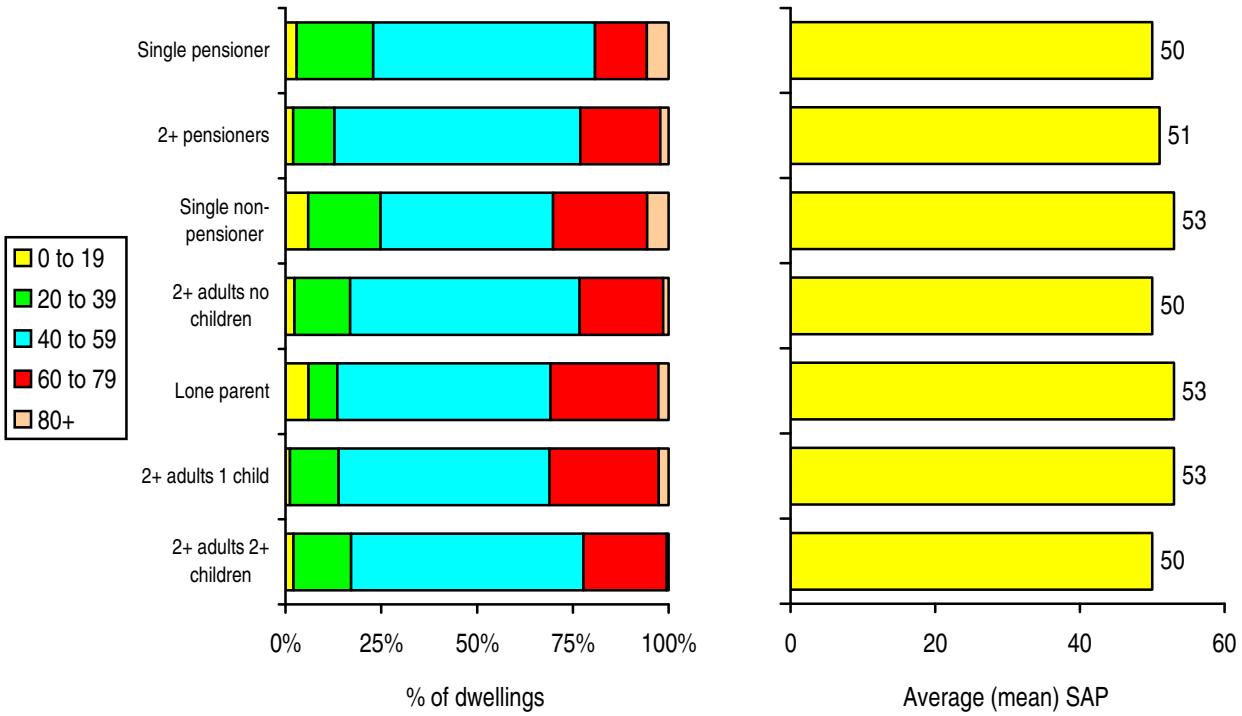
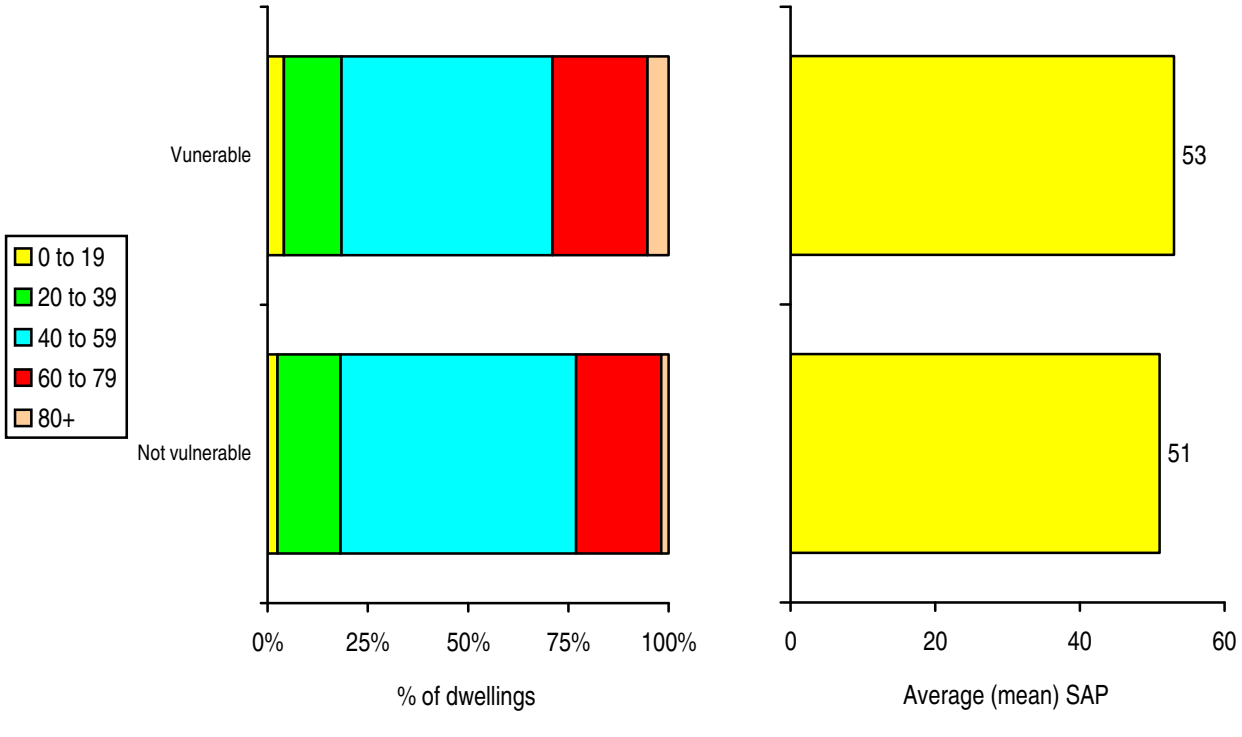


Figure 9.9 SAP rating by vulnerable households



The table below shows the mean SAP rating by households type category split by vulnerable and not vulnerable households. Vulnerable households show higher SAP ratings, with the exception of lone parent households and those with two or more children. Of the vulnerable households, single person households show the highest mean SAP rating, however of the not vulnerable households, Lone parents show the highest mean SAP rating.

Table 9.8 Comparing SAP ratings by household type containing vulnerable households

Category	SAP rating	
	Vulnerable	Not Vulnerable
SAP rating and household type		
Single pensioner	51.8	48.6
2+ pensioners	54.7	50.0
Single adult	55.0	51.5
2+ adults no children	52.5	50.0
Lone parent	52.6	57.6
2+ adults, 1 child	54.2	51.9
2+ adults, 2+ children	49.9	51.4

9.8 SAP ratings and heating types and fuel use

The figures below show SAP ratings and heating type and fuel use. These two factors have a significant impact on the SAP rating. By heating type, dwellings with central heating generally have higher SAP ratings than other dwellings. The mean SAP of dwellings with boiler and radiator central heating is 54, this figure compares with an average SAP of 34 for dwellings whose main heating type is room heaters. 'Other' heating systems show the highest mean SAP rating, of 77. By the main fuel types, dwellings using oil have the highest SAP rating (75). However, caution should be taken with results for oil and solid fuel as estimates are based on small sample sizes. At the other end of the scale, dwellings using on-peak electricity have a mean SAP of only 16.

Figure 9.10 SAP rating by heating type

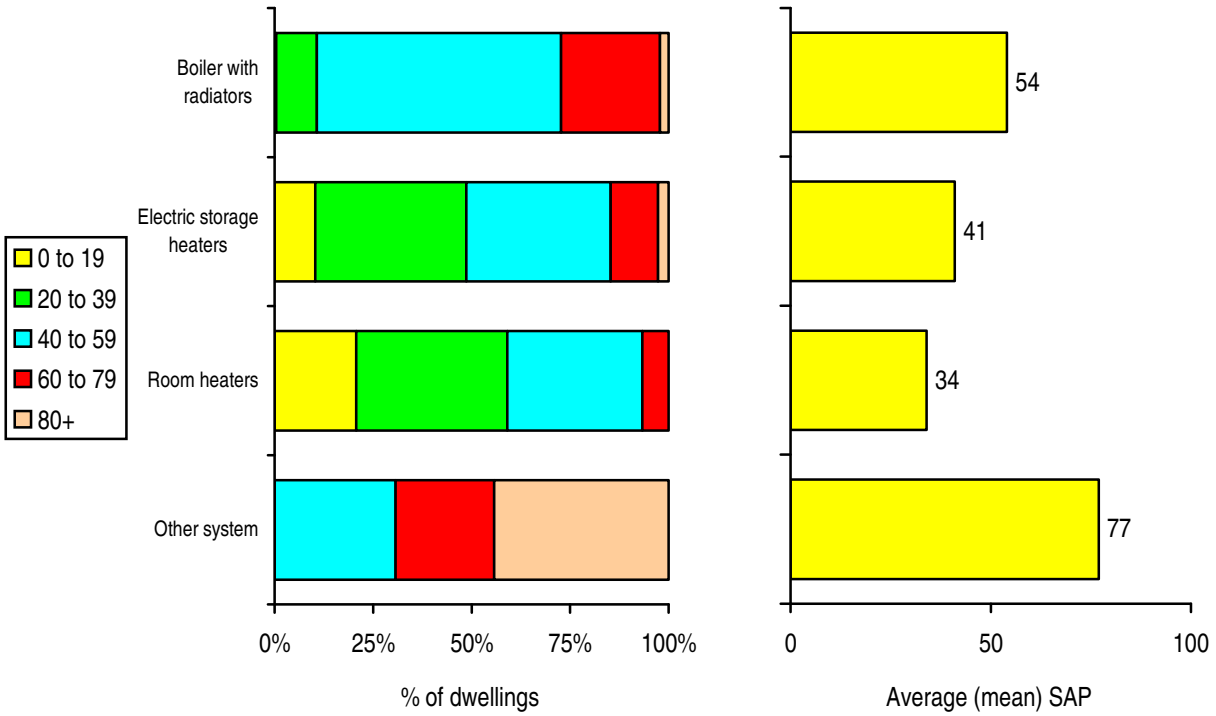
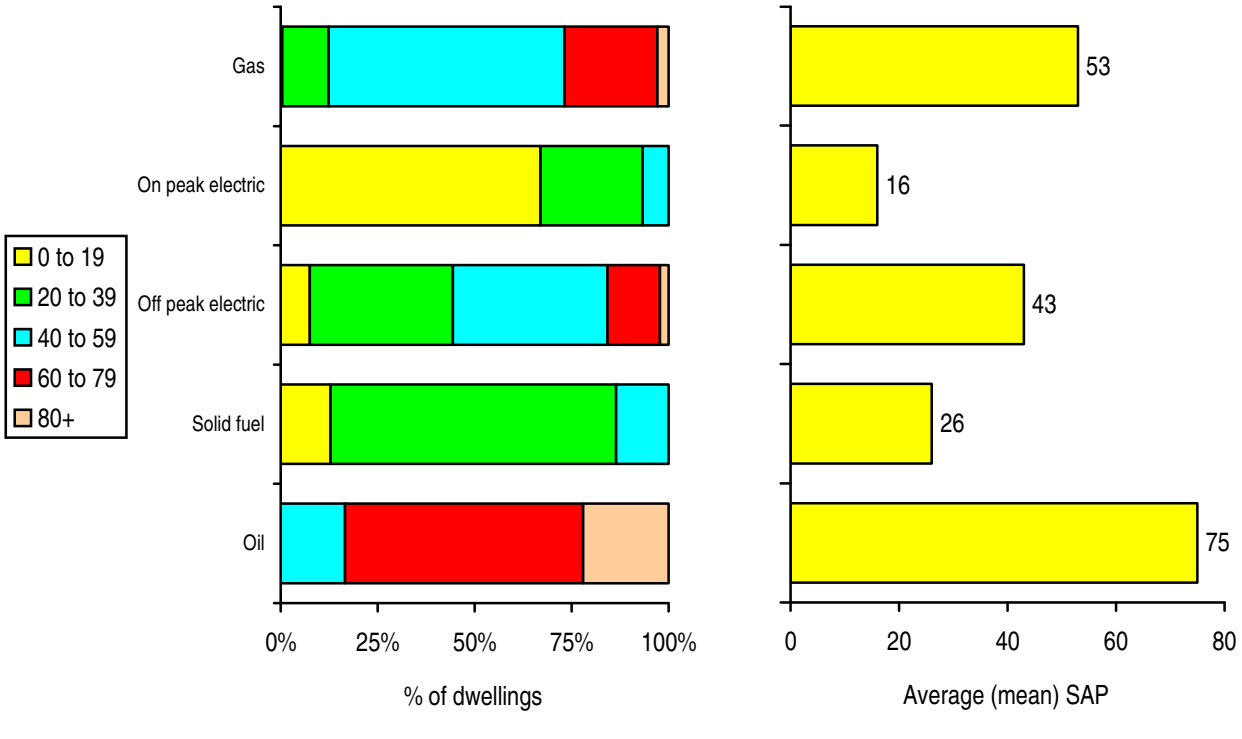


Figure 9.11 SAP rating by fuel type



Additionally, the survey provides some details about how the SAP rating varies depending on the loft insulation and wall construction of the dwelling. The table below gives the mean SAP ratings by each of these factors. The table shows that dwellings with 100mm or more loft insulation have much higher SAP ratings than those with less than 100mm. Dwellings with no loft have the highest SAP ratings. For cavity walls, the data shows that dwellings with filled cavity walls have the highest SAP ratings, dwellings with non-cavity walls show the lowest mean SAP.

Table 9.9 SAP ratings and loft insulation and cavity walls

Loft insulation	Mean SAP	Cavity walls	Mean SAP
Less than 100mm	46	Non-cavity walls	44
100mm or more	52	Insulated cavity walls	60
No loft	60	Uninsulated cavity walls	51
AVERAGE	51	AVERAGE	51

9.9 Households with low SAP ratings

Below are highlighted some characteristics of households with low SAP ratings. A low SAP rating in this instance is taken as a SAP rating of less than 30. Households living in the least efficient homes tend to:

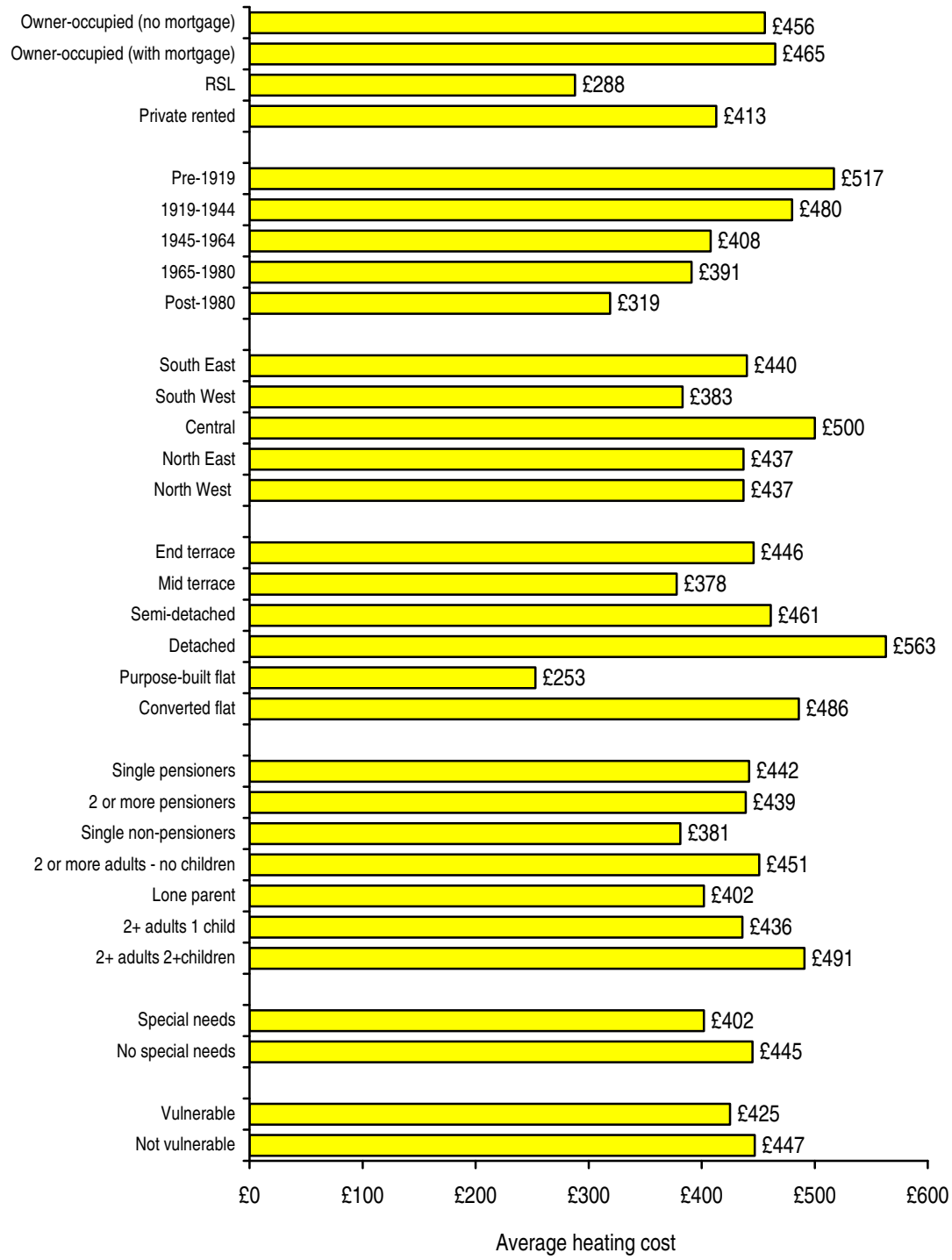
- Live alone – 40.0% of the least efficient homes contain only one person, whereas only 30.1% of all households are single person households.
- Be elderly – 28.5% of the least efficient homes only contain elderly people, 22.3% of all households are only older people.
- Have low incomes – the average gross earned income of households in the least energy efficient homes is £19,899 compared with £22,988 for all households.

9.10 CO_2 Emissions and cost of heating

As part of the SAP calculation a by-product is the calculation of Carbon Dioxide emissions and the costs for space and water heating. Overall it is estimated that households current heating systems make for an average (mean) requirement to spend £440 on space and water heating and that the average dwelling produces 5.50 tonnes of CO_2 per year.

The figure below shows some characteristics of dwellings/households by fuel costs. The results for CO_2 emissions would typically show the same trends as these are heavily influenced by the amount of fuel used (and hence the cost of fuel used).

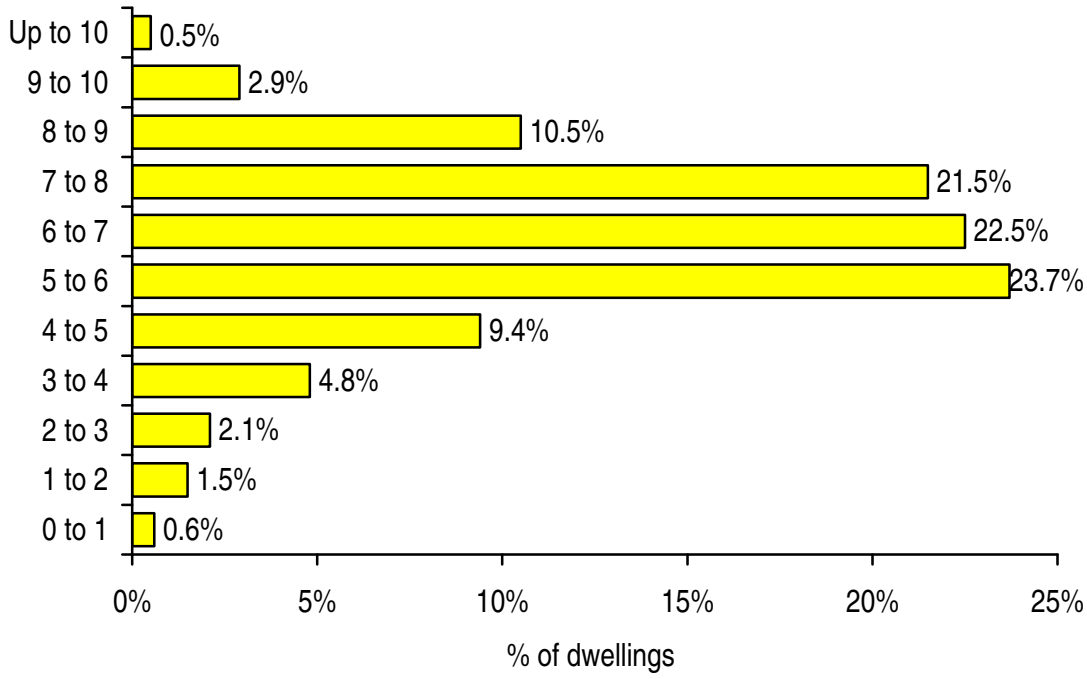
Figure 9.12 Average heating costs and dwelling/household characteristics



9.11 National Home Energy Rating

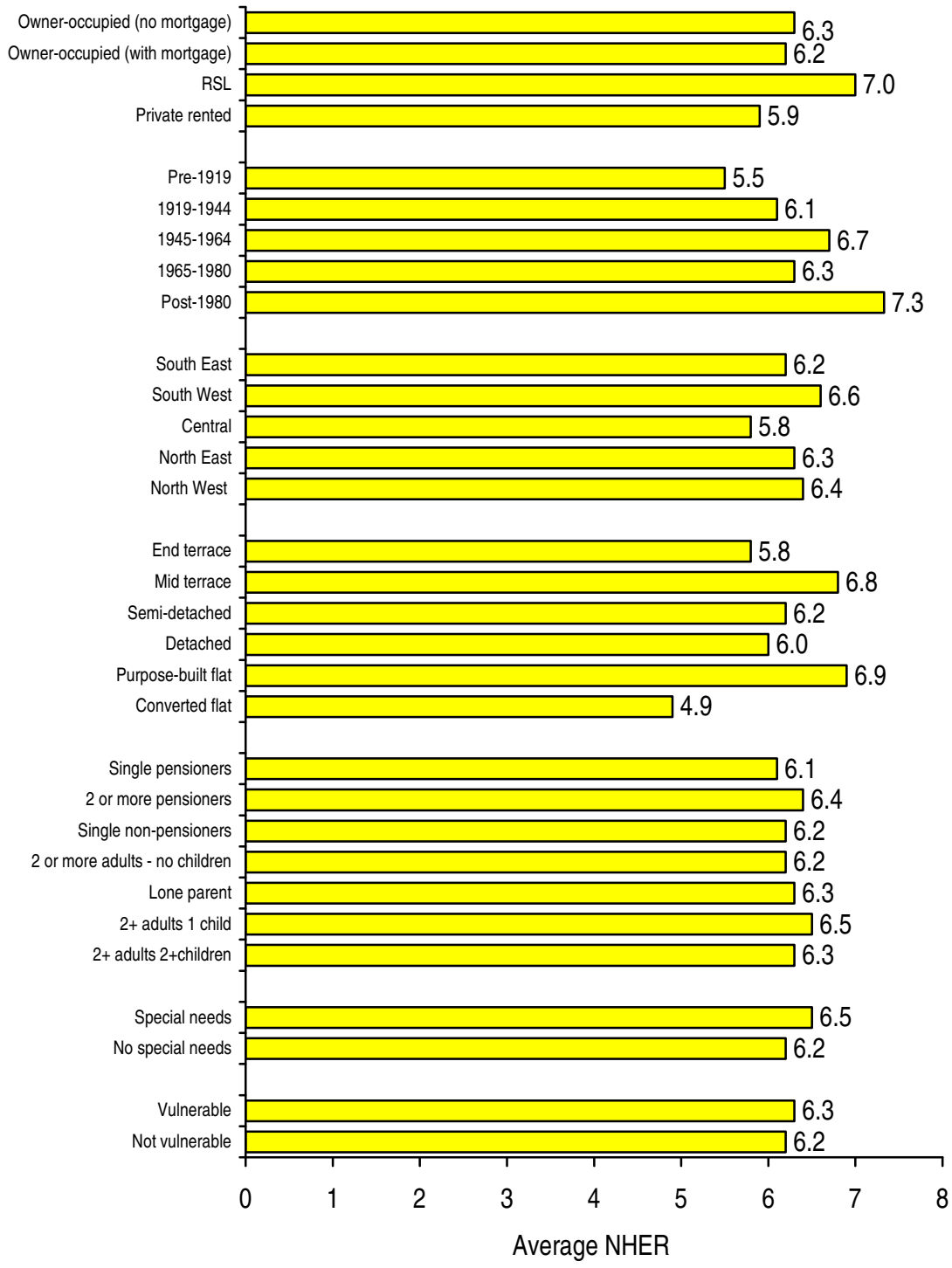
The National Home Energy Rating (NHER) is an extended calculation of SAP ratings by including costs for cooking, lighting & appliances (in addition to the space and water heating) and to account for location. The NHER rating is a figure between 0 and 10, the higher the rating the more energy efficient the dwelling. The average NHER rating for Ipswich is 6.3. The figure below shows the distribution of NHER ratings for dwellings in Ipswich.

Figure 9.13 Frequency distribution of NHER rating



The figure below shows the mean NHER by dwelling and household characteristics. Results show that private rented dwellings and those built before 1919 have low mean NHER ratings. Furthermore end terrace houses and converted flats show particularly low mean NHER ratings. There appears to be less diversity of NHER rating by households variables, single pensioner households occupy dwellings that show the lowest mean NHER rating. Dwellings that show high NHER ratings are owned by an RSL, post-1964 dwellings, mid terrace houses and purpose built flats.

Figure 9.14 Average NHER rating and dwelling/household characteristics



As previously stated, the NHER is an extended calculation of SAP ratings by including costs for cooking, lighting & appliances (in addition to the space and water heating) and to account for location. When these costs are accounted for, the average fuel cost for a dwelling in Ipswich is £550.

9.12 Fuel Poverty

Households are defined as in fuel poverty if, to maintain a satisfactory heating regime, they are required to spend more than 10% of their income on all households fuel use. (The definition of a satisfactory heating regime is considered to be where the main living room is at 21°C with other occupied rooms at 18°C). The table below shows the three main components that calculate fuel poverty; household income, housing costs and fuel costs.

Table 9.10 Background data required for measurement of fuel poverty

	Average per annum
Average net income	£21,721
Average housing costs	£3,046
Average net disposable income	£18,675
Average fuel costs	£439
% OF INCOME SPENT ON FUEL	2.4%

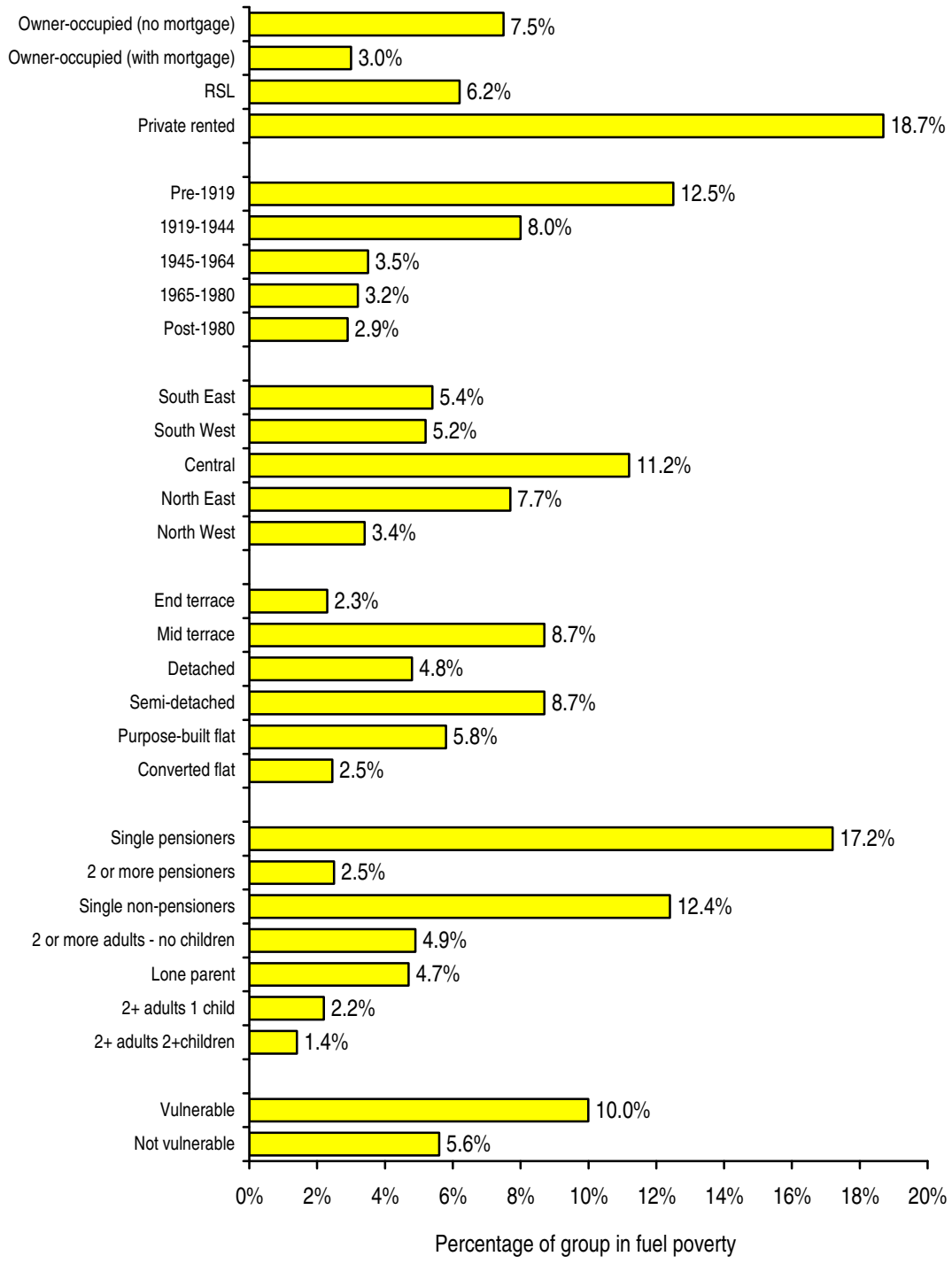
The table shows that the estimated average net income (including all benefits) is £21,721. Taking away average housing costs leave a net disposable income of £18,675. Taking into account fuel costs it is estimated that on average a household in Ipswich spends around 2.4% of net disposable income of fuel.

Overall, 2,955 households in Ipswich are in fuel poverty. This represents 6.8% of households in the Borough. This compares to a national figure of 11.7% and a regional figure of 8.6% households in the East of England as fuel poor. The figure below shows the dwelling and household characteristics of those households in fuel poverty.

Households in the private rented sector are significantly more likely to be considered fuel poor, with 18.7% of those in the private rented sector in fuel poverty. Generally, older dwellings contain more households who are in fuel poverty, some 12.5% of households in pre-1919 dwellings are in fuel poverty compared to just 2.9% of households living in post-1980 dwellings. By sub-area, *Central* has a notable high level of fuel poverty with 11.2% of households spending more than 10% of their disposable income on fuel. Additionally, converted flats show a significantly high level of fuel poverty at 24.5%.

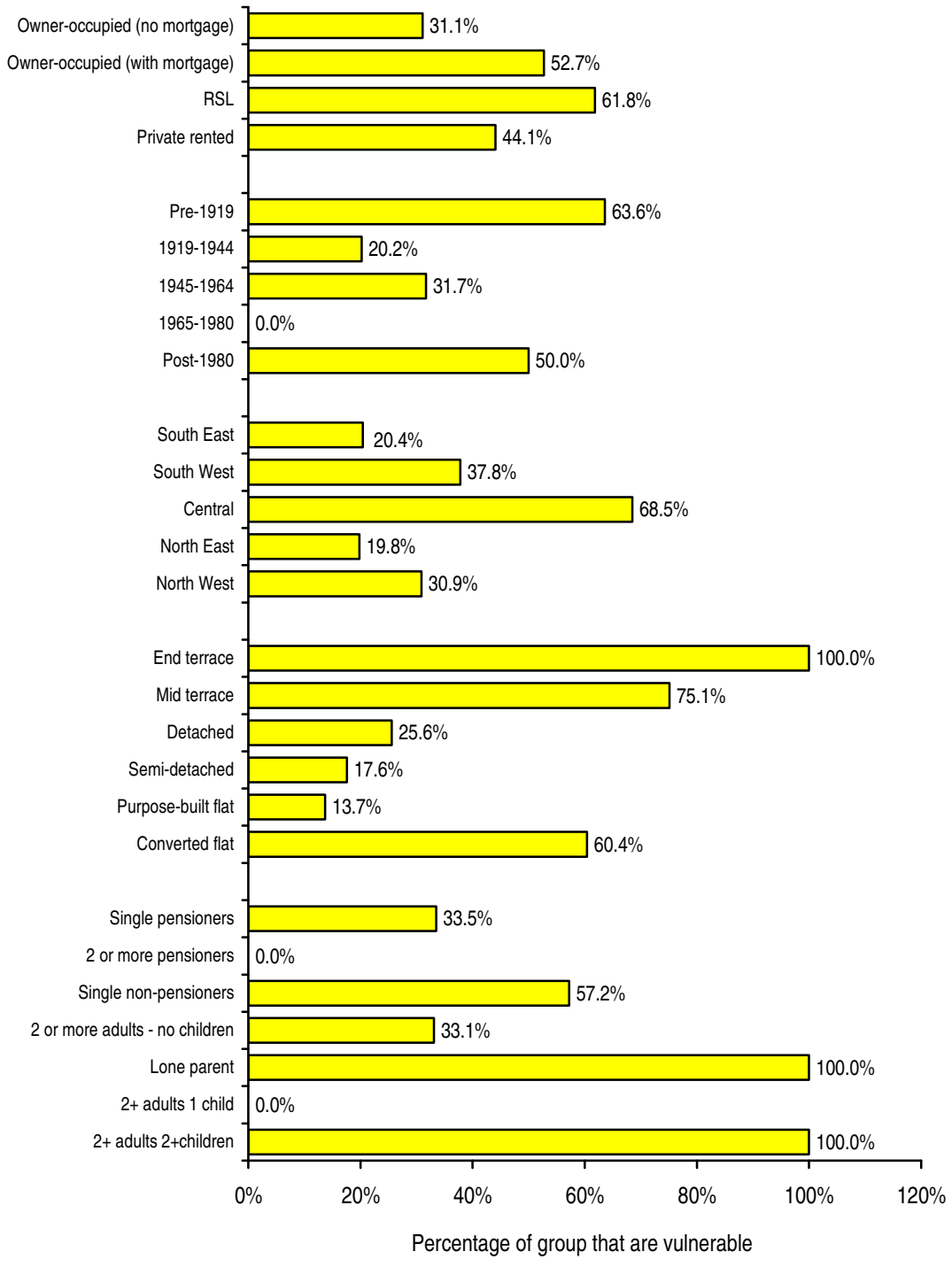
In terms of household type, single pensioners are particularly likely to be fuel poor with 17.2% of these households in fuel poverty. Additionally, vulnerable households are more likely to be in fuel poverty than other households.

Figure 9.15 Fuel poverty and dwelling/household characteristics



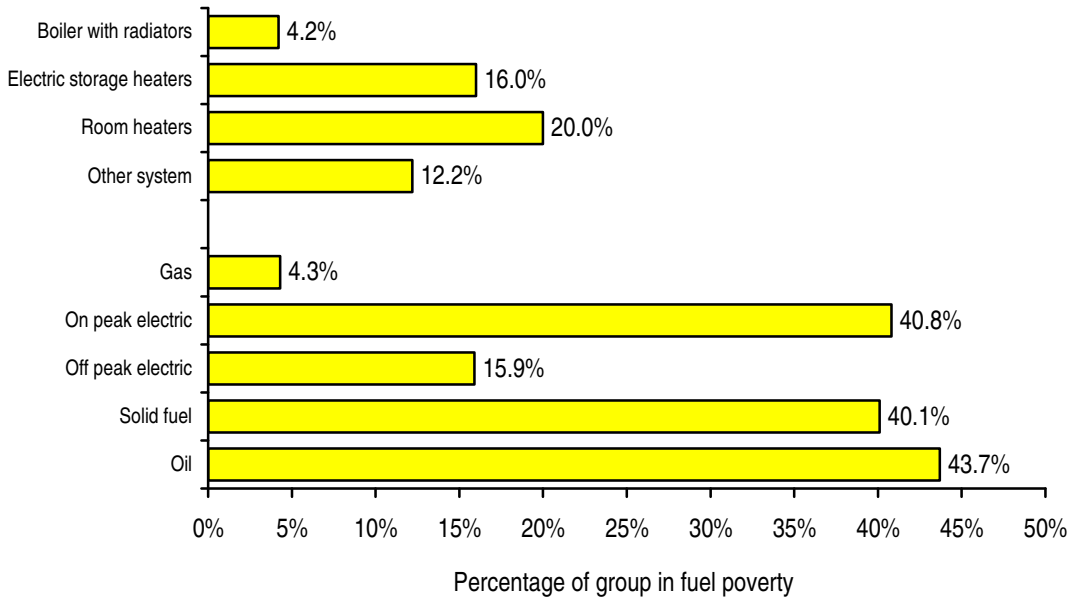
The figure below shows the proportion of these households in fuel poverty that are also vulnerable households. All households living in end terraced dwellings that are fuel poor are also vulnerable households. The same is the case for all lone parent and families with two or more children.

Figure 9.16 Vulnerable households as a proportion of households in fuel poverty



Additionally, we can examine fuel poverty by heating and fuel type. The figure below shows that households with room heaters are most likely to be fuel poor. Additionally, households using on-peak electricity, solid fuel and oil are more likely to be in fuel poverty.

Figure 9.17 Fuel poverty by heating type and fuel type



9.12 Comparisons with 2001 EHCS

The following table compares the results of this survey with the 2001 EHCS. In general the two surveys show very similar patterns with regard to energy efficiency

Table 9.11 Comparing 2004 Ipswich survey and 2001 English House Condition Survey

Comparator	SAP rating	
	Ipswich	2001 EHCS
Overall SAP rating	51	51
East		51
SAP rating and tenure		
Owner-occupied	50	50
RSL	63	60
Private rented	49	45
SAP rating and dwelling age		
Pre-1919	44	41
1919 – 1944	49	46
1945 – 1964	53	48
Post-1964	59	59
SAP rating and building type		
End terrace	47	46
Mid terrace	54	53
Semi-detached	50	48
Detached	49	49
Bungalow	-	46
Purpose-built flat	64	60
Converted flat	37	43
SAP rating and loft insulation		
Loft with less than 100mm insulation	46	46
Loft with 100mm insulation or more	52	52
No loft	60	55
SAP rating and cavity walls		
Non-cavity walls	44	43
Insulated cavity walls	60	60
Uninsulated cavity walls	51	50
SAP rating and heating system		
Central heating & ‘other’	54	53
Storage heaters	41	40
Room heaters	34	30

9.13 Comparisons with previous data for Ipswich

The table below shows the improvements made to energy efficiency for the Borough since 1996. The mean SAP rating of dwellings in Ipswich has risen from 45 to 51, whilst the mean NHER rating has improved from 4.8 to 6.3. Average Carbon dioxide emissions have fallen significantly, as have the number of dwellings with single glazed windows. There are however some 16,208 dwellings (54.7% of dwellings with cavity walls) which could install cavity wall insulation.

Table 9.12 Background data required for measurement of fuel poverty

	HECA 1996 report	Ipswich HCS 2000	Ipswich HCS 2004
Number of private sector properties	40,805	42,353	44,564
Average SAP	45	46	51
Average NHER	4.82	5.0	6.3
Average CO_2 emissions (tonnes/year)	11.5	8.4	5.5
Number of homes with unfilled cavity walls	21,500	22,117	16,208
Number of homes with < 100mm loft insulation	11,500	14,848	12,759
Number of homes with single glazed windows	23,000	16,509	7,429

9.14 Summary

An important part of any stock condition survey is the measurement of energy efficiency. The Standard Assessment Procedure (SAP) is the Government's recommended system for home energy rating – where a high score (on a scale from 1 to 120) means a dwelling is more energy efficient. Some of the main findings in Ipswich were:

- 92.4% of dwellings have central or programmable heating.
- 83.3% of dwellings have some double glazing.
- Ipswich has an average SAP rating of 51, which is the same as the average for both England and the Eastern region.
- Private rented and pre-1919 dwellings showed the lowest mean SAP ratings. RSL and post-1980 dwellings showed the highest SAP ratings.
- Households with particularly low SAP ratings also appear to show quite distinct characteristics such as single persons, the elderly, and those with low incomes.
- It is estimated that households current heating systems make for an average (mean) requirement to spend £440 on space and water heating and that the average dwelling produces 5.50 tonnes of CO_2 per year.
- Ipswich has a mean NHER rating of 6.3.

10. Improving energy efficiency

10.1 Introduction

This chapter is devoted to studying ways in which the Council could improve the energy efficiency of dwellings in the Borough. This is both in terms of improving SAP ratings and reducing the amount required to be spent of fuel. In looking at fuel costs it is possible to calculate a 'payback' period which is simply calculating the amount of time it would take for the cost of improvements to equal the cost savings. The report studies three main ways in which the energy efficiency of dwellings can be improved, these are:

- Add or increase insulation to hot water cylinders, lofts and cavity walls
- Upgrade or install heating systems to gas powered programmable central heating
- Upgrade all windows to double glazing

The analysis looks at the costs and savings of each of these measures in isolation as well as combinations of these. The analysis also studies only carrying out improvements to particular dwellings (e.g. those with initially low SAP ratings, the elderly etc.), this can help the Council in working out the most cost effective package of measures for energy efficiency improvement in the local area.

The two most typical aims of improving energy efficiency asked for in Councils' specifications are:

1. Action required and costs of improving average SAP ratings to 65
2. Action required and costs of improving average SAP ratings by 30%

The second of these points is a target set out in the Home Energy Conservation Act 1995 (HECA). In the case of Ipswich this would lead to an increase in mean SAP to 66 (given the current estimated average of 51). This chapter therefore seeks to inform both of these purposes.

10.2 The cost of improving energy efficiency

The table below shows the costs of improving the various measures mentioned in the introduction. It can be seen that in the case of insulation there are three elements and for central heating there are two. In the case of double glazing the actual cost per dwelling will depend on the amount of double glazing already present, adjusted by the size of dwelling. The cost shown is an estimate of the cost of full replacement in an average sized dwelling. A dwelling which currently has half double glazing and is half the size of the average dwelling would therefore have a cost of only a quarter of this average – such figures may therefore not be exact for any individual dwelling but should be of the right order (particularly when looking at the stock overall).

In the case of insulation a dwelling can be improved on between none and all three of the elements shown (e.g. if cavity walls do not exist then insulation is not an option) and no adjustments are made for size of the dwelling. In the case of central heating an upgrade is considered to be the option where a relatively inefficient central heating system already exists and full installation is the option where there is currently no central heating provision.

Hence whilst the costs of insulation measures can be cumulative, the costs of heating systems can only be one or other of those shown – in this way the maximum cost per average sized dwelling (with ten windows) will be £9,225 (£25+£200+£500+£4,000+£4,500).

Table 10.1 Cost of energy improvement measures (per dwelling)

Energy efficiency improvement measure	Cost per dwelling
Insulation	
Hot water cylinder jacket to minimum 80mm	£25
Loft insulation to minimum 200mm	£200
Cavity wall insulation	£500
Double glazing	
Install full double glazing per window	£400
Central heating	
Upgrade current system	£2,000
Install new central heating system	£4,500

10.3 Improvements to dwellings requiring energy efficiency measure

The table below shows the impact of applying various energy efficiency measures on dwellings requiring specific action (e.g. the insulation and double glazing group would only include those dwellings requiring both measures). This impact is measured in improvements to SAP ratings and also 'payback' periods (based on the cost of measures compared with the estimated reduction in running costs).

Table 10.2 Impact of energy improvement measures								
Energy improvement measure required	Number of dwellings requiring measures (including upgrades)	Cost per dwelling requiring improvement	Previous SAP	New SAP	Previous energy cost	New energy cost (per dwelling)	Payback period (years)	Total cost of measure (Borough-wide)
Insulation only	16,372	£421	55	61	£407	£358	8.6	£6.9m
Double glazing only	1,271	£2,267	56	59	£393	£365	80.6	£2.9m
Central heating only	1,803	£4,054	62	92	£292	£163	31.4	£7.3m
Insulation & double glazing	10,727	£3,261	49	57	£491	£415	43.1	£35.0m
Insulation & central heating	6,825	£3,780	47	82	£443	£211	16.3	£25.8m
Double glazing & central heating	896	£5,879	41	79	£413	£185	25.7	£5.3m
All three measures	4,565	£6,576	38	76	£583	£244	19.4	£30.0m
No additional measures suggested	2,105	-	69	69	£284	£284	-	-
TOTAL	44,564	-	-	-	-	-	-	£113.1m

The table shows for example that a total of 4,565 dwellings require improvements to all of insulation, double glazing and central heating. Carrying out these measures would increase the SAP rating of these dwellings from 38 to 76. The consequent improvement in running costs would be a reduction of £339 per dwelling per annum (from £583 to £244). However, with a cost per dwelling of £6,576 it would take 19.4 years (£6,576/£339) for the costs to be recouped.

10.4 Improvements to energy efficiency throughout the Borough

It is of more interest to the Council to study the impact of energy improvement measures on the Borough overall. The table below studies all dwellings in the Borough and measures are cumulative (e.g. all those dwellings requiring insulation will automatically be in the 'insulation and double glazing' group even if they do not require double glazing). Without any improvements, the current stock has a mean SAP rating of 51 with average heating costs (for space and hot water) of £440 per dwelling.

Table 10.3 Impact of energy improvement measures							
Energy improvement measure	Number of dwellings requiring measures (including upgrades)	Cost per dwelling requiring improvement	New SAP	New energy cost (per dwelling)	Total cost of improvements (per dwelling)	Payback period (years)	Total cost of measures (Borough-wide)
No extra measures	-	-	51	£440	-	-	-
Only insulation	38,489	£388	56	£395	£335	7.4	£14.9m
Only double glazing	17,459	£2,723	52	£428	£1,067	84.6	£47.5m
Only central heating	14,089	£3,597	61	£369	£1,137	16.1	£50.7m
Insulation &/or double glazing	40,656	£1,536	57	£382	£1,402	24.3	£62.5m
Insulation &/or central heating	41,188	£1,593	65	£333	£1,472	13.8	£65.6m
Double glazing &/or central heating	26,086	£720	62	£360	£421	5.2	£18.8m
Any of the three measures	42,459	£2,665	67	£323	£2,539	21.7	£113.1m

The table shows for example that altogether 38,489 dwellings could benefit from additional insulation. Carrying out this insulation would improve the SAP rating for the Borough from 51 to 56 and reduce average energy costs per dwelling to £395 per annum (from £440) a reduction of £45. The total cost per dwelling of these measures (including dwellings not requiring any improvement) would be £335 hence the payback period is 7.4 years (£335/£45). The total cost of adding insulation for the whole of the Borough is estimated to be £14.9m. For double glazing the payback period is considerably longer, whilst updating/installing central heating systems has a payback period of 16.1 years.

Combining measures suggests that insulation and central heating improvements together could improve the mean SAP to 65 with a cost per dwelling of £1,472 – this would reduce running costs by £107 giving a payback period of 13.8 years. Combining all three measures shows an improved SAP to 67 at a cost per dwelling of £2,539 and a payback period of 21.7 years. In general any package of measures which includes installing double glazing has a considerably longer payback period and smaller reductions in SAP ratings.

10.5 Targeted energy improvements

It is uncommon for any local authority to look at improvements for all types of dwellings/households, mainly due to the cost of such improvements. The table below suggests a few groups which might be targeted for energy improvement measures and the relative improvement possible to be made to the relevant dwellings. All the figures are based on the 'insulation and central heating' category although it should be recognised that where a group of households or dwellings show particularly high improvements it is likely that a lesser package of measures would still be more beneficial than if targeted towards other groups.

Targeting households where people are on benefit is often a starting point for any scheme, however this has the drawback that such households do not necessarily live in dwellings which are less efficient than dwellings in general. The table below shows characteristics of improving energy efficiency for dwellings with low SAP ratings (currently below 30), elderly households, vulnerable households, vulnerable elderly households and low income households (gross annual income excluding benefits) plus low income owner-occupiers. The bottom row of the table repeats the Borough-wide data for comparative purposes.

Table 10.4 Impact of energy improvement measures for different dwelling/household groups

Dwelling/household group	Number of dwellings requiring measures (including upgrades)	Cost per dwelling requiring improvement	Previous SAP	New SAP	Previous energy cost	New energy cost (per dwelling)	Payback period (years)	Total cost of measure (Borough-wide)
SAP < 30	3,479	£3,842	19	64	£826	£359	8.2	£13.4m
Elderly households	9,636	£1,769	51	66	£441	£321	10.4	£18.8m
Vulnerable households	10,897	£1,812	53	68	£415	£307	14.8	£19.7m
Vulnerable elderly households	3,376	£1,794	53	67	£410	£298	14.4	£6.1m
Income < £10k	14,646	£1,868	52	69	£416	£296	15.7	£27.4m
Owner-occupied (income < £10k)	9,734	£1,770	49	65	£450	£333	15.1	£17.2m
All dwellings	44,564	£1,472	51	65	£440	£333	13.8	£65.6m

The table shows that for three of the specific groups chosen for analysis a payback period in terms of the suggested works would be above the average for all dwellings in the Borough. The group which shows the shortest payback period (dwellings with SAP ratings below 30) is unfortunately the group which is most likely to be difficult to identify. Elderly households also show a payback period shorter than that for all households.

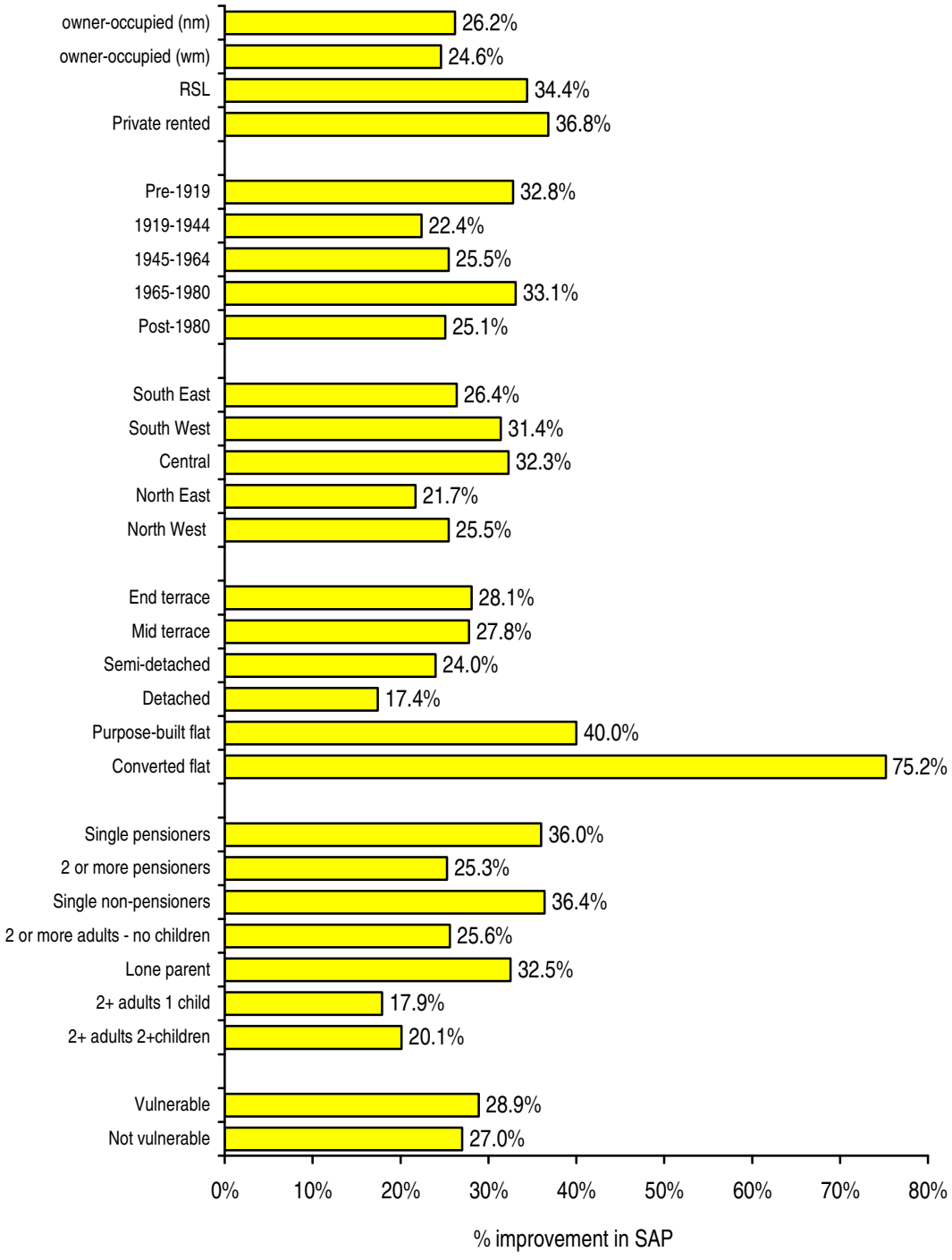
10.6 Improved SAP ratings and dwelling/household characteristics

The figure below shows how the average SAP ratings of individual dwelling/household groups' change from their current average (mean SAP Borough-wide of 51) to improving dwellings insulation and heating systems (mean SAP Borough-wide of 65), the average dwelling/household sees an improvement of 27.7%. Including double glazing in this measure could push the improvement up to 30.3%.

Dwellings/households that show particularly high improvements in SAP ratings include private rented dwellings (up 36.8%) and dwellings in the *Central* and *South West* sub-areas. By dwelling type, flats show greater improvement than houses. Of the houses, terraced dwellings show greater improvements. By household type, single person households show higher improvements in SAP ratings.

In contrast dwellings/households which show lower improvements include owner-occupied (with a mortgage) dwellings (up 24.6%), and detached houses (up 17.4%). Families with two or more adults also show lower improvements.

Figure 10.1 Improved SAP ratings and characteristics of dwellings/households



10.7 The aims of energy efficiency improvement

The Home Energy Conservation Act 1995 (HECA) sets a target of improving energy efficiency by 30% from 1996-2010. However, the energy efficiency of a dwelling is not defined by its SAP rating but by the amount of energy used. Therefore, although an improved SAP rating will imply an improvement in energy efficiency, it is not a direct indicator of energy use. Other measures, such as reducing CO2 emissions by 30%, must be considered in order to meet the HECA target. Nevertheless, improving the average SAP rating of the Borough will contribute greatly towards meeting the HECA target.

A 30% improvement in energy efficiency for the stock appears possible but difficult to achieve. A full range of measures will increase the mean SAP rating of dwellings from 51 to 67 (an improvement of 30.3%), however the total cost of this is estimated to be £113.1m. It must be remembered that these calculations use the target of 30% from the current time. The target set out in HECA uses a baseline of 1996 to achieve a 30% improvement by 2010, and therefore much progress will have already been made. In the case of Ipswich, since 1996 the SAP rating has increased from 45 and therefore already improved 14.6%. However a small amount of this progress was gained from the change in methodology of the SAP rating in 2001. By increasing the mean SAP ratings of dwellings to 67 will achieve an improvement in SAP of 49.3% from the 1996 baseline.

A more realistic aim might be to look at upgrading or installing heating systems to more efficient central heating systems along with a programme of insulation; these two measures would increase the mean SAP rating from 51 to 65 (an improvement from the current rating of 27.7%) at a total cost of £65.6m; £47.5m less than all improvements. This would achieve a 46.4% improvement since 1996. It can be seen therefore that there is a clear trade-off between further improvements to energy efficiency and the cost of bringing about these improvements.

In truth there is a limit to the amount dwellings can be improved – for example in the stock without cavity walls (and hence considerable exposure through inefficient walls) the amount that can reasonably be done to dwellings to improve efficiency is more limited than in other dwellings.

That said, there are considerable improvements possible from improving insulation in dwellings and upgrading or replacing heating systems.

An average SAP of 67 is technically possible. However this requires such a high take-up of energy efficiency measures that it might not be a sensible target over any reasonable time period. If however dwellings built in the future were included in the assessment, built under current Building Regulations to a SAP rating of 80, then an improvement in average SAP ratings of 30% might be a reasonable long term target.

10.8 Summary

Improving energy efficiency in Ipswich by 30% appears possible but difficult to achieve. To achieve an improvement of 30.3% would mean improving virtually every dwelling in the Borough to some degree. By applying insulation and central heating improvements to dwellings the increase in SAP is 27.7% (to a mean SAP of 65). Small further improvements could be made through double glazing although this does not appear to be very cost-effective. The package of measures estimated to achieve the highest mean SAP (of 67) would entail a total cost of £113.1m Borough-wide.

SECTION E: FURTHER HOUSEHOLD ANALYSIS

This section addresses particular household groups in terms of their general stock conditions. This section covers the following groups:

- Households with support needs
- Older person households
- Black and minority ethnic households (BME)
- Young person households



11. Support needs

11.1 Introduction

This chapter analyses support needs households. The survey identified as support needs households all those with one or more members who fall into one or more support needs groups. The groups covered were:

- Frail elderly
- Persons with a physical disability
- A learning disability
- A mental health problem
- Those with a severe sensory disability
- Others

For each person with support needs they could respond to as many of the above categories as is applicable. This means that we can differentiate between households that have more than one person with a support need and those that have one person with multiple support needs.

Overall there are an estimated 5,822 households in Ipswich with one or more members in an identified support needs group. This represents 13.5% of all households, which at the higher end of range of typical levels that *Fordham Research* has found nationally (11-13%). The table below shows the numbers of households with different types of support needs. The numbers of households in each category exceed the total number of support needs households because people can have more than one category of support need.

'Physically disabled' is the predominant group, as is typically the case nationally. There are 3,192 households with a *physically disabled* household member. The next largest group is *'frail elderly',* with 1,797 households having a member in this category. These two categories represent 54.8% and 30.9% of all support needs households respectively. Further analysis shows that the majority of support needs households (93.4%) only contain one person with a support need and that the majority of households with a support needs member do not have multiple support needs (86.2%).

Table 11.1 Support needs categories			
Category	Number of households	% of all households	% of support needs households
Frail elderly	1,797	4.2%	30.9%
Physical disability	3,192	7.4%	54.8%
Learning disability	406	0.9%	7.0%
Mental health problem	694	1.6%	11.9%
Severe sensory disability	582	1.3%	10.0%
Other	167	0.4%	2.9%

11.2 General characteristics

The table below shows how tenure correlates with support needs. A key finding is that support needs households are significantly more likely than others to owner-occupy their home, without a mortgage, with 48.8% of all support needs households in the category, compared to 31.9% of all households. Support needs households are around half as likely as others to owner-occupy their home with a mortgage, and are much less likely to rent privately. 21.3% of support needs households are in RSL accommodation, over three times as high a proportion as that of non-support needs households.

Table 11.2 Number of households in each tenure group						
Tenure	Support needs		Non-support needs		Total	
	Number	%	Number	%	Number	%
Owner-occupied (no mortgage)	2,841	48.8%	10,974	29.3%	13,815	31.9%
Owner-occupied (with mortgage)	1,225	21.0%	18,655	49.9%	19,880	46.0%
RSL	1,238	21.3%	2,436	6.5%	3,674	8.5%
Private rented	519	8.9%	5,357	14.3%	5,876	13.6%
Total	5,822	100.0%	37,423	100.0%	43,245	100.0%

Although support needs households are slightly less likely than average to live in a dwelling built between 1965 and 1980, they tend to live in much newer dwellings. Just 17.4%, or 1,011 households in the support needs group live in dwellings built before 1919, compared to 28.1% of the non-support needs group. This relatively young age profile may in part be accounted for the higher proportion of support needs households in RSL dwellings, which are typically newer.

Table 11.3 Dwelling age and support needs						
Dwelling Age	Support needs		Non-support needs		Total	
	Number	%	Number	%	Number	%
Pre-1919	1,011	17.4%	10,529	28.1%	11,540	26.7%
1919-1944	1,374	23.6%	8,975	24.0%	10,349	23.9%
1945-1964	1,564	26.9%	7,184	19.2%	8,748	20.2%
1965-1980	905	15.5%	6,189	16.5%	7,094	16.4%
Post-1980	967	16.6%	4,546	12.1%	5,513	12.7%
Total	5,822	100.0%	37,423	100.0%	43,245	100.0%

There is a clear pattern in dwelling type specific to the support needs group. The table below shows that they are less likely to live in a terraced house, or in a converted flat. They are, however, much more likely to live in a purpose-built flat with over a fifth of support needs households doing so, compared to just over a twelfth of non-support needs households.

Table 11.4 Dwelling age and support needs						
Dwelling type	Support needs		Non-support needs		Total	
	Number	%	Number	%	Number	%
End terrace	484	8.3%	4,100	11.0%	4,584	10.6%
Mid terrace	887	15.2%	7,142	19.1%	8,029	18.6%
Semi detached	2,069	35.5%	15,165	40.5%	17,234	39.9%
Detached	1,060	18.2%	6,042	16.1%	7,102	16.4%
Purpose built flat	1,263	21.7%	3,163	8.5%	4,426	10.2%
Converted flat	58	1.0%	1,812	4.8%	1,870	4.3%
Total	5,822	100.0%	37,423	100.0%	43,245	100.0%

11.3 Condition

The table below compares the three levels of repair costs analysed in chapter 4. As can be seen from the figures below, support needs households have somewhat lower repair costs. This is most noticeable for urgent costs, which are £110 less than average at £1,104 per support needs household, and comprehensive repair costs, which are £512 below repair costs at £4,349. Furthermore, when repair costs are adjusted to take account of house size, support needs households again show lower average costs, at £24.3 per square metre, compared to £26.0 for all households.

Table 11.5 Repair costs and support needs				
Support needs	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
Support needs	£1,104	£2,159	£4,349	£24.3
Non support needs	£1,232	£2,184	£4,941	£26.3
All households	£1,214	£2,180	£4,861	£26.0

The survey also looked at levels of unfitness according to support needs. The table below shows that support needs households are somewhat more likely to live in unfit housing, with 4.4% of this group, or 258 households, living in this condition. Additionally, of those households living in unfit housing, those with support needs are more likely to also be considered vulnerable.

Table 11.6 Unfitness and support needs						
Group	Unfitness					
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group	% of group unfit and occupied by vulnerable households
Support needs	258	5,564	5,822	4.4%	16.2%	61.5%
Non support needs	1,339	36,084	37,423	3.6%	83.8%	44.9%
All households	1,597	41,648	43,245	3.7%	100.0%	47.6%

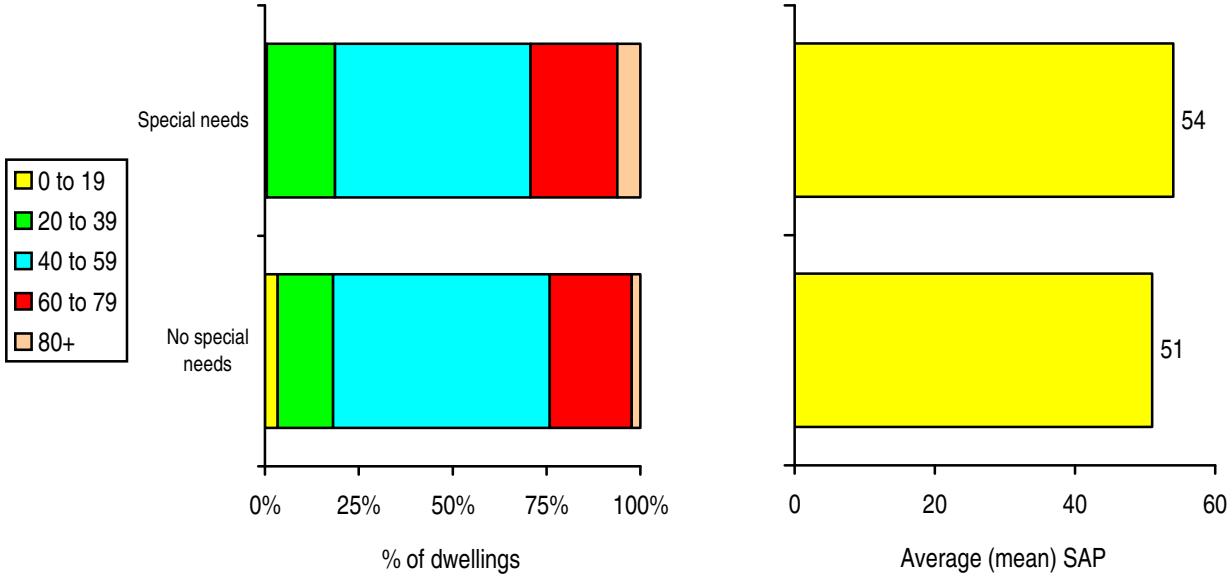
The final key measure of general condition is the level of households which are not unfit, but are defective. Support needs households, although being slightly more likely to live in unfit housing, are actually slightly less likely than average to live in housing that is defective. In total, 16.2% of support needs households are fit but defective, compared to 16.9% of all households.

Table 11.7 Defectiveness and support needs						
Group	Unfit		Defective		Good condition	
	Number	%	Number	%	Number	%
Support needs	258	4.4%	944	16.2%	4,620	79.4%
Non support needs	1,339	3.6%	6,327	16.9%	29,758	79.5%
All households	1,597	3.7%	7,271	16.8%	34,378	79.5%

11.4 Energy efficiency

The key means of measuring energy efficiency is the SAP rating system, as laid out in chapter 6. The graphs below show SAP by support needs, comparing the average SAP ratings of different groups, and showing the distribution of ratings within the group. Support needs households have an average SAP rating of 54 – higher than the 51 average. The support needs group shows both a higher proportion of households with a rating of 80 or higher; and a very low proportion of households with a rating of 19 or lower. This might be expected, given the high proportion of the support needs group in RSL dwellings and newer properties, both of which tend to have higher SAP ratings than average.

Figure 11.1 SAP rating by support needs



The survey also examines fuel poverty and how it relates to support needs. Support needs households are more likely to live in fuel poverty, with 9.7% in this category. This compares to 6.4% for all households.

Finally, this section examines the impact of energy efficiency improvement measures. In this case, the cost and the benefit of installing insulation and central heating are compared, and a payback period for the measures to pay for themselves produced. The table below shows that although support needs households would benefit from these measures as much as other households, increasing the average SAP rating by 14 points, the energy savings would not be as great as for all households. The payback period is therefore moderately higher, at 17.1 years, compared to 13.8 for all households. The total cost of these improvements is £9.5 million.

Table 11.8 Impact of energy improvement measures by support needs								
Group	*Number of dwellings requiring measures (including upgrades)*	*Cost per dwelling requiring improvement*	*Previous SAP*	*New SAP*	*Previous energy cost*	*New energy cost (per dwelling)*	*Payback period (years)*	*Total cost of measure (Borough-wide)*
Support needs	5,822	£1,640	54	68	£402	£306	17.1	£9.5m
All households	43,245	£1,472	51	65	£440	£333	13.8	£65.6m

11.5 Emerging standards

The key emerging standard for housing fitness, as laid out in the 2002 PSA 7, is decency. The survey shows that 31.5% or an estimated 1,835 households are non-decent. The tables show the levels of households failing each aspect of decency. There is only a small degree of difference between all households and support needs households, who are slightly more likely to fail on grounds of fitness, modernisation or thermal comfort.

Table 11.9 Decency and support needs					
Group	% of dwellings in group that:				
	Are non decent	Fail fitness	Fail disrepair	Fail modernisation	Fail thermal comfort
Support needs	31.5%	4.4%	4.4%	5.8%	24.5%
Non support needs	31.1%	3.6%	7.6%	5.2%	23.6%
All households	31.1%	3.7%	7.2%	5.3%	23.7%

The survey goes on to examine HMO's and support needs. Although 4.4% of all households in the area are HMO's, an estimated 1,891, just 58 of these (around 3%) are support needs households. As shown in the table below, only 1.0% of all support needs households are HMO's.

Table 11.10 HMO's and support needs						
Group	HMO's		Non-HMO's		Total	
	Number	%	Number	%	Number	%
Support needs	58	1.0%	5,764	99.0%	5,822	100.0%
Non support needs	1,833	4.9%	35,590	95.1%	37,423	100.0%
All households	1,891	4.4%	41,354	95.6%	43,245	100.0%

The final emerging standard of housing condition is the Housing Health and Safety Rating System (HHSRS). The survey analysed hazards, and suggests a response in one of three categories, as laid out in the table below. The main finding is that support needs households are slightly more likely to require a response to a hazard in their home, with 56.4% having an ideal response, compared to 57.6% of all households. However, there is a lower proportion of support needs households that require a mandatory response, and so it can be concluded that support needs households are less likely to contain a severe hazard.

Table 11.11 Type of hazard and suggested response

Group	Mandatory		Discretionary		Ideal	
	Number	%	Number	%	Number	%
Support needs	695	11.9%	1,842	31.6%	3,285	56.4%
Non support needs	5,295	14.1%	10,568	28.2%	21,560	57.6%
All households	5,990	13.9%	12,410	28.7%	24,845	57.5%

11.6 Summary

This chapter analysed support needs households in the Borough. It looked at both general housing characteristics, and measures of condition such as unfitness, SAP rating, and hazardousness. 13.5% of the households in the Borough are support needs households; a further 54.8% of this group has one or more members with a physical disability, and 30.9% have one or more members who are 'frail elderly'.

Support needs households have a quite different profile from that of all Ipswich households. They are much more likely than average to owner-occupy their home (without a mortgage), or to live in an RSL dwelling. They are more likely than average to live in a more recently built dwelling or to live in a purpose-built flat.

The survey then examines key aspects of condition. 4.4% of support needs households are unfit, compared to 3.6% of all households. However, they are marginally less likely to be fit but defective, and their repair costs are lower than average, both in absolute terms, and relative to household size. The SAP rating of support needs households, at 54, is above average, however such households are more likely to live in fuel poverty, and energy efficiency improvements would cost more and save less money than for the average household.

Finally the survey analyses support needs households with regards to some of the emerging standards in housing condition. Support needs households are marginally more likely to not be decent, with 31.5% failing the standard. Just 1.0% of support need households are HMO's, well below the 4.4% average for the Borough. Finally, support needs households are more likely to contain a hazard, but less likely to have one that require a mandatory response.

12. Older persons

12.1 Introduction

Data was collected in the survey with regard to the characteristics of households with older persons. This chapter looks at the general characteristics of older person households and goes on to analyse how age correlates with measures of condition and energy efficiency.

Older people are defined as those over the state pension eligibility age (65 for men, 60 for women). For the purpose of this chapter, households have been divided into three categories:

- Households without older persons
- Households with both older and non-older persons
- Households with only older persons

No adjustment is made to the "both older and non-older person" category based on the gender of the respondent as is sometimes the case in the data published by the Department of Work and Pensions. The table shows that 71.7% of all households in Ipswich contain no older people: a further 6.0% contain both older and non-older persons. In total, there are an estimated 9,636 older person only households in Ipswich.

Table 12.1 Older person households

Categories	Number of households	% of all households
Households without older persons	31,021	71.7%
Households with both older and non-older persons	2,589	6.0%
Households with older persons only	9,636	22.3%
TOTAL	43,245	100.0%

12.2 General characteristics

The table below shows how tenure correlates with age. A key finding is that older person households are significantly more likely than others to owner-occupy their home, without a mortgage, with 76.6% of all older person households in the category, compared to 19.1% of other households. Other households are around nine times as likely to owner occupy their house with a mortgage, and over twice as likely to rent privately (57.3% compared to 6.5%). Older person households are slightly more likely to live in RSL accommodation.

Table 12.2 Number of households in each tenure group						
Tenure	Older person h'holds		Other h'holds		Total	
	Number	%	Number	%	Number	%
Owner-occupied (no mortgage)	7,381	76.6%	6,434	19.1%	13,815	31.9%
Owner-occupied (with mortgage)	625	6.5%	19,255	57.3%	19,880	46.0%
RSL	1,039	10.8%	2,635	7.8%	3,674	8.5%
Private rented	591	6.1%	5,285	15.7%	5,876	13.6%
TOTAL	9,636	100.0%	33,610	100.0%	43,245	100.0%

The table below analyses dwelling ages by household age. The results show that there are two age categories with unusual proportions of older-person only households. Few live in older dwellings – 14.4% compared to 30.2% of other households - whilst a much higher proportion live in dwellings built between 1945 and 1964, 32.2% compared to 16.8%.

Table 12.3 Dwelling age and household older persons						
Dwelling Age	Older person h'holds		Other h'holds		Total	
	Number	%	Number	%	Number	%
Pre-1919	1,388	14.4%	10,153	30.2%	11,541	26.7%
1919-1944	2,178	22.6%	8,171	24.3%	10,349	23.9%
1945-1964	3,099	32.2%	5,650	16.8%	8,749	20.2%
1965-1980	1,746	18.1%	5,348	15.9%	7,094	16.4%
Post-1980	1,225	12.7%	4,288	12.8%	5,513	12.7%
Total	9,636	100.0%	33,610	100.0%	43,245	100.0%

There is a clear pattern in dwelling type specific to the older person group. The table below shows that they are less likely to live in a terraced house, or in a converted flat. They are, however, more likely to live in a purpose-built flat with 15.0% doing so, compared to just 8.9% of other households. Older person households are much more likely to live in a detached house, with 25.3% of the group in such a dwelling, compared to 13.9% of other households.

Table 12.4 Dwelling type and older persons						
Dwelling type	Older person h'holds		Other h'holds		Total	
	Number	%	Number	%	Number	%
End terrace	709	7.4%	3,875	11.5%	4,584	10.6%
Mid terrace	928	9.6%	7,101	21.1%	8,029	18.6%
Semi detached	3,873	40.2%	13,361	39.8%	17,234	39.9%
Detached	2,436	25.3%	4,666	13.9%	7,102	16.4%
Purpose built flat	1,443	15.0%	2,983	8.9%	4,426	10.2%
Converted flat	246	2.6%	1,623	4.8%	1,869	4.3%
Total	9,636	100.0%	33,610	100.0%	43,245	100.0%

12.3 Condition

The table below compares the three levels of repair costs. It can be seen in the figures below that older person households have higher absolute levels of repair costs than other households, whilst those for households with both older and non-older persons are considerably higher. Urgent repair costs for this group are £2,149 (compared to £1,214 for all households), rising to £6,890 for comprehensive repairs (still significantly higher than the £4,861 average). When adjusting these costs to take account of different household sizes, repair costs for older-person households are actually lower than average. Standardised repair costs for households with both older and non-older people are much higher than average, at £38.9 per square metre.

Table 12.5 Repair costs and older persons

Group	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
No older persons	£1,112	£2,022	£4,551	£25.3
Both older and non-older persons	£2,149	£4,079	£6,890	£38.9
Only older persons	£1,292	£2,181	£5,316	£24.7
All households	£1,214	£2,180	£4,861	£26.0

The survey also looked at levels of unfitness according to household age. The table below shows that older person only and both older and non-older person are considerably more likely to live in unfit housing, at 5.6% and 5.3% respectively. Whilst older person only households account for under a quarter of all households in the Borough, they constitute over a third of the total unfit housing in the area.

Table 12.6 Unfitness and older persons

Group	Unfitness					
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group	% of group unfit that are vulnerable
No older persons	919	30,102	31,021	3.0%	57.5%	54.6%
Both older and non-older persons	137	2,451	2,588	5.3%	8.6%	0.0%
Only older persons	541	9,094	9,635	5.6%	33.9%	47.7%
All households	1,597	41,647	43,244	3.6%	100.0%	47.6%

The final key measure of general condition is the level of households which are not unfit, but are defective. Older person only households, although being slightly more likely to live in unfit housing, are as likely as households with no older persons to live in a dwelling that is fit but defective. Households with both older and non-older persons are much more likely to live in a dwelling that is fit but defective, at 24.8%, compared to an average of 16.8%.

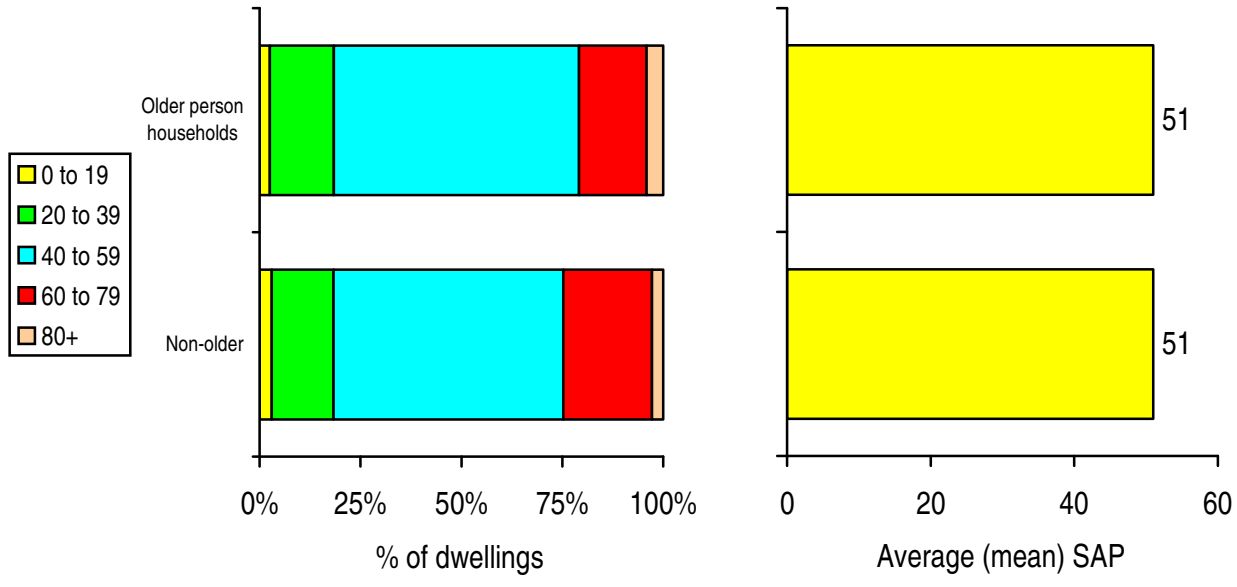
Table 12.7 Defectiveness and older persons

Group	Unfit		Defective		Good condition	
	Number	%	Number	%	Number	%
No older persons	919	3.0%	5,061	16.3%	25,041	80.7%
Both older and non-older persons	137	5.3%	641	24.8%	1,810	69.9%
Only older persons	541	5.6%	1,568	16.3%	7,526	78.1%
All households	1,597	3.7%	7,270	16.8%	34,377	79.5%

12.4 Energy efficiency

The key means of measuring energy efficiency is the SAP rating system, as laid out in chapter 6. The graphs below show SAP by household age, comparing the average SAP ratings of different groups, and showing the distribution of ratings within the group. Older person households have an average SAP rating of 51 – the same as the 51 Borough average. However, the graph of the distribution of SAP values shows that the older-person group contains slightly fewer households with an SAP of below 19, and a slightly higher proportion with 80 or more.

Figure 12.1 SAP rating by older persons



The survey also examines fuel poverty and how it relates to age. Older person households are around twice as likely to be in fuel poverty, with 10.7% in this category. This compares to 5.3% for all households.

Finally, this section examines the impact of energy efficiency improvement measures. In this case, the cost and the benefit of installing insulation and central heating are compared, and a payback period for the measures to pay for themselves produced. The table below shows that older person households would benefit from these measures slightly more than other households, increasing the average SAP rating by 15 points, and the energy savings would be more significant too. The payback period is therefore moderately lower, at 10.4 years, compared to 13.8 for all households. The total cost of these improvements is £18.8 million.

Table 12.8 Impact of energy improvement measures by older persons

Group	*Number of dwellings requiring measures (including upgrades)*	*Cost per dwelling requiring improvement*	*Previous SAP*	*New SAP*	*Previous energy cost*	*New energy cost (per dwelling)*	*Payback period (years)*	*Total cost of measure (Borough-wide)*
Older person	9,636	£1,769	51	66	£441	£321	10.4	£18.8m
All households	44,564	£1,472	51	65	£440	£333	13.8	£65.6m

12.5 Emerging standards

The key emerging standard for housing fitness, as laid out in the 2002 PSA 7, is decency. The survey shows that whilst older person only households are equally as likely as average households to fail decency, households with both older and non-older persons are considerably more likely, at 46.6%. The tables show the levels of households failing each aspect of decency for which there is a good deal of variation. Households with both older and non-older people are particularly likely to fail for reasons of disrepair, or thermal comfort.

Table 12.9 Decency and older persons

Group	% of dwellings in group that:				
	Are non decent	Fail fitness	Fail disrepair	Fail modernisation	Fail thermal comfort
No older persons	29.8%	3.0%	7.7%	3.7%	22.5%
Both older and non-older persons	46.6%	5.3%	12.8%	8.2%	37.3%
Only older persons	31.1%	5.6%	4.0%	9.5%	24.0%
All households	31.1%	3.7%	7.2%	5.3%	23.7%

The survey goes on to examine HMO's and household age. Although 4.4% of all households in the area are HMO's, an estimated 1,891, just 160 of these (around 8.4%) are older person households. As shown in the table below, only 1.7% of all older person households are HMO's, and 3.5% of households with both older and non-older persons, compared to 5.3% on average.

Table 12.10 HMO's and older persons

Group	HMO's		Non-HMO's		Total	
	Number	%	Number	%	Number	%
No older persons	1,640	5.3%	29,381	94.7%	31,021	100.0%
Both older and non-older persons	91	3.5%	2,498	96.5%	2,589	100.0%
Only older persons	160	1.7%	9,476	98.3%	9,636	100.0%
All households	1,891	4.4%	41,355	95.6%	43,245	100.0%

The final emerging standard of housing condition is the Housing Health and Safety Rating System (HHSRS). The survey analysed hazards, and suggests a response in one of three categories, as laid out in the table below. The main finding is that as is the case with levels of decency, households with both older and non-older people show high levels of poor condition, with 23.2% living with a mandatory response hazard. However, this group contains a lower proportion of households with a discretionary response level hazard, and so overall there is a slightly lower proportion of non-older person households that are without a hazard overall.

Table 12.11 Type of hazard and suggested response

Group	Mandatory		Discretionary		Ideal	
	Number	%	Number	%	Number	%
No older persons	4,157	13.4%	9,286	29.9%	17,578	56.7%
Both older and non-older persons	600	23.2%	474	18.3%	1,514	58.5%
Only older persons	1,233	12.8%	2,649	27.5%	5,753	59.7%
All households	5,990	13.9%	12,409	28.7%	24,845	57.5%

12.6 Summary

This chapter analysed household age in the Borough. It looked at both general housing characteristics, and measures of condition such as unfitness, SAP rating, and hazardousness. 22.3% of the households in the Borough are older person only households (an estimated 9,636 households); a further 6.0% of households contain both older and non-older persons.

Older person only households have a quite different profile from that of all Ipswich households. They are much more likely than average to owner-occupy their home (without a mortgage), 76.6% doing so, and a further 10.8% live in an RSL dwelling. They are half as likely as average to live in a dwelling built before 1919, and much more likely to live in a purpose-built flat or a detached house.

The survey then examines key aspects of condition. 5.6% of houses with just older people and 5.3% of those with both older and non-older people are unfit, compared to 3.6% of all households. Repair costs are somewhat higher for older-person only households, but when the costs are adjusted to take account of dwelling size they are somewhat lower. Repair costs for households with both older and non-older persons are much higher, at £2,149 for urgent repairs, or £38.9 per square metre. Almost a quarter of households in this group are fit but defective, much higher than average. Although there is little difference in SAP ratings by age of household, older person only households are twice as likely to live in fuel poverty, and although their efficiency improvement costs are higher they would benefit such households more, and have a much shorter payback time.

Finally the survey analyses household age with regards to some of the emerging standards in housing condition. As with the main measures of condition it is the group of households containing both older people and non-older people that shows higher levels of poor condition. 46.6% of this group is non-decent, and 23.2% have a hazard that would require a mandatory response. The chapter also looks at HMO's, and shows that these are proportionately less common in older person households.

13. Black and Minority Ethnic households

13.1 Introduction

Information was gathered in the survey to find out the ethnic origin of the head of household (and partner if applicable) for each sample household in the survey. The categories used on the survey forms were consistent with those used in the 2001 Census. These categories have been re-grouped into four different ethnic groups.

The table below shows estimates of the number of households in each of the four ethnic groups and the number of survey responses (the groups used have been re-grouped from 17 different ethnic groups used on the survey form). For the analysis in this chapter, the ethnic group of the survey respondent is taken to represent the head of household. It should be noted that estimates in this chapter should be treated with caution as for all groups (other than White) they are based on small sample sizes.

Table 13.1 Number of households in each ethnic group

Ethnic group	Total number of households	% of households
White	40,829	94.4%
Asian	673	1.6%
Black	828	1.9%
Mixed & other	915	2.1%
TOTAL	43,245	100.0%

The survey estimates that the majority of households in the Borough are headed by a White person. In total only 5.6% of households are headed by someone who describes themselves as non-white. Of the non-White households, 901 are Black, 735 Asian and 982 describe themselves as Mixed or from another ethnic background.

13.2 General characteristics

The table below compares ethnicity and tenure. That pattern that emerges shows that BME households are significantly less likely to be owner-occupiers with a mortgage, with just 3.7% of Asian households in this tenure group. BME households are generally at least as likely as white households to owner-occupy with a mortgage, and more likely to live in an RSL dwelling. Asian households are the most concentrated, with over 96% of respondents in these groups either owner-occupying with a mortgage, or in private rent.

Table 13.2 Tenure and ethnicity					
Tenure	Owner-occupied (no mortgage)	Owner-occupied (with mortgage)	RSL	Private rented	Total
White (numbers)	13,592	18,696	3,326	5,214	40,829
White (proportion)	33.3%	45.8%	8.1%	12.8%	100.0%
Asian (numbers)	25	347	0	302	673
Asian (proportion)	3.7%	51.5%	0.0%	44.8%	100.0%
Black (numbers)	79	349	165	234	828
Black (proportion)	9.6%	42.2%	20.0%	28.3%	100.0%
Mixed & other (numbers)	119	487	183	126	915
Mixed & other (proportion)	13.0%	53.2%	20.0%	13.8%	100.0%
All households (numbers)	13,815	19,879	3,674	5,876	43,245
All households (proportion)	31.9%	46.0%	8.5%	13.6%	100.0%

The table below shows the profile of dwelling ages for households by ethnicity. Compared to the average household (the vast majority of which are white), BME households have quite skewed profiles. Asian households have a much older dwelling age profile, with 47.5% living in pre-1919 dwellings. Black and 'mixed and other' ethnicity households are more polarised than average, with particularly few households living in dwellings built between 1945 and 1980. 46.3% of 'mixed and other' ethnicity households live in post 1980 dwellings.

Table 13.3 Dwelling age and ethnicity						
Dwelling Age	Pre-1919	1919-1944	1945-1964	1965-1980	Post-1980	Total
White (numbers)	10,780	9,760	8,642	6,856	4,791	40,829
White (proportion)	26.4%	23.9%	21.2%	16.8%	11.7%	100.0%
Asian (numbers)	320	151	106	61	35	673
Asian (proportion)	47.5%	22.4%	15.8%	9.1%	5.2%	100.0%
Black (numbers)	213	268	0	84	263	828
Black (proportion)	25.7%	32.4%	0.0%	10.1%	31.8%	100.0%
Mixed & other (numbers)	228	170	0	93	424	915
Mixed & other (proportion)	24.9%	18.6%	0.0%	10.2%	46.3%	100.0%
All households (numbers)	11,541	10,349	8,748	7,094	5,513	43,245
All households (proportion)	26.7%	23.9%	20.2%	16.4%	12.7%	100.0%

The table below displays the relationship between dwelling type and ethnicity. BME households are generally more likely to live in flats. Asian households are more likely to live in terraced houses than other ethnic groups are, and all BME households are less likely to live in semi-detached or detached houses.

Table 13.4 Dwelling type and ethnicity							
Dwelling Type	End terrace	Mid terrace	Semi detached	Detached	Purpose built flat	Converted flat	Total
White (numbers)	4,436	7,624	16,582	6,851	3,738	1,597	40,829
White (proportion)	10.9%	18.7%	40.6%	16.8%	9.2%	3.9%	100.0%
Asian (numbers)	113	134	140	82	117	88	673
Asian (proportion)	16.8%	19.9%	20.8%	12.2%	17.4%	13.1%	100.0%
Black (numbers)	35	136	205	50	321	81	828
Black (proportion)	4.2%	16.4%	24.8%	6.0%	38.8%	9.8%	100.0%
Mixed & other (numbers)	0	135	307	119	250	105	915
Mixed & other (proportion)	0.0%	14.7%	33.5%	13.0%	27.3%	11.5%	100.0%
All households (numbers)	4,584	8,029	17,234	7,102	4,426	1,871	43,245
All households (proportion)	10.6%	18.6%	39.9%	16.4%	10.2%	4.3%	100.0%

13.3 Condition

The table below compares the three levels of repair costs for households. Black and 'mixed and other' ethnicity households have higher urgent repair costs, whilst White and Black households have higher basic repair costs, at around £2,200, and comprehensive costs, at around £4950. When adjusted to take account of household size, Black households have considerably higher at £37 per square metre, compared to £26 on average.

Table 13.5 Repair costs and ethnicity				
Repair category	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
White	£1,196	£2,193	£4,945	£26
Asian	£1,056	£1,627	£3,273	£28
Black	£1,790	£2,280	£4,942	£37
Mixed & other	£1,642	£1,922	£2,227	£25
All households	£1,214	£2,180	£4,861	£26

The survey also looked at levels of unfitness according to ethnicity. The table below shows that unfitness is very concentrated in white households, which shows 98.6% of the total unfitness in the Borough, compared to 94.4% of all of the households. 3.3% of the Asian group was in unfit housing – a proportion close to the average. No Black or 'mixed and other' ethnicity households were found in unfit dwellings.

Table 13.6 Unfitness and ethnicity						
Ethnicity	Unfitness					
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group	% of group unfit & vulnerable
White	1,575	39,254	40,829	3.9%	98.6%	48.2%
Asian	22	652	674	3.3%	1.4%	0.0%
Black	0	828	828	0.0%	0.0%	0.0%
Mixed & other	0	915	915	0.0%	0.0%	0.0%
All households	1,597	41,648	43,245	3.7%	100.0%	47.6%

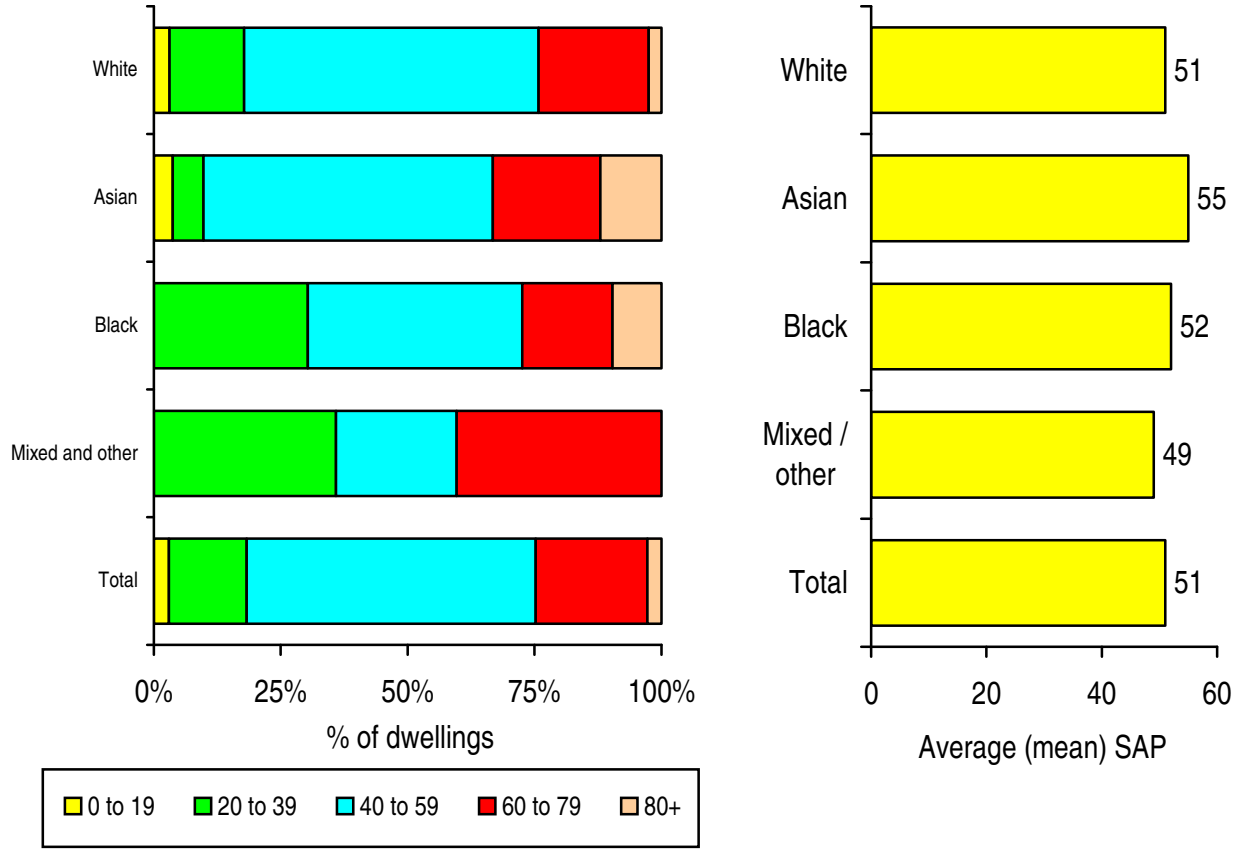
The final key measure of general condition is the level of households which are not unfit, but are defective. Whilst BME households show lower levels of unfitness, they are more likely than white households to be defective. This is especially true of Black households - 30.7% of this group, an estimated 254 households, is fit but defective, compared to 16.8% overall.

Table 13.7 Defectiveness and ethnicity						
Category	Unfit		Defective		Good condition	
	Number	%	Number	%	Number	%
White	1,575	3.9%	6,711	16.4%	32,543	79.7%
Asian	22	3.3%	111	16.5%	540	80.2%
Black	0	0.0%	254	30.7%	574	69.3%
Mixed & other	0	0.0%	195	21.3%	720	78.7%
All households	1,597	3.7%	7,271	16.8%	34,377	79.5%

13.4 Energy efficiency

The key means of measuring energy efficiency is the SAP rating system, as laid out in chapter 6. The graphs below show SAP by ethnic group, comparing the average SAP ratings of different groups, and showing the distribution of ratings within the group. The group with the highest SAP is the Asian one, with an average of 55. 'Mixed and other' ethnicity households have the lowest at 49. Black households and 'mixed and other' ethnicity households have the least spread out range of SAP's, with few households in either the highest or lowest categories.

Figure 13.1 SAP rating by ethnic group



The survey also examines fuel poverty and how it relates to ethnicity. The table below shows that White and 'mixed and other' ethnicity households are the most likely to live in fuel poverty, at 7.0% and 7.8% respectively. No Asian households were found in fuel poverty.

Table 13.8 Fuel poverty and ethnicity

Ethnicity	Fuel poverty					
	In fuel poverty	Not in fuel poverty	Total	% of group in fuel poverty	% of those in fuel poverty group	% of group in fuel poverty & vulnerable
White	2,850	37,979	40,829	7.0%	96.4%	44.2%
Asian	0	673	673	0.0%	0.0%	0.0%
Black	34	794	828	4.1%	1.2%	0.0%
Mixed & other	71	844	915	7.8%	2.4%	42.6%
All households	2,955	40,290	43,245	6.8%	100.0%	44.2%

Finally, this section examines the impact of energy efficiency improvement measures. In this case, the cost and the benefit of installing insulation and central heating are compared, and a payback period for the measures to pay for themselves produced. The table below shows that White households have the fastest payback time, at 13.8 years, and Asian households (who already have the best SAP) the longest at 17.6 years. Black and 'mixed and other' ethnicity households would receive the biggest energy cost saving at around £140 per household, but the cost for improvements per dwelling is higher than average at over £2,000.

Table 13.9 Impact of energy improvement measures by ethnicity

	Number of dwellings requiring measures (including upgrades)	*Cost per dwelling requiring improvement*	*Previous SAP*	*New SAP*	*Previous energy cost*	*New energy cost (per dwelling)*	*Payback period (years)*	*Total cost of measure (Borough-wide)*
White	40,829	£1,437	51	65	£440	£336	13.8	£58.7
Asian	673	£1,323	55	66	£374	£299	17.6	£0.9
Black	828	£2,041	52	75	£393	£255	14.7	£1.7
Mixed & other	915	£2,077	49	70	£473	£332	14.7	£1.9
All households	43,245	£1,472	51	65	£440	£333	13.8	£65.6m

13.5 Emerging standards

The key emerging standard for housing fitness, as laid out in the 2002 PSA 7, is decency. The survey shows that there is a large variation in decency, with 58.2% of Black households living in non-decent homes, and 42.9% of 'mixed and other' ethnicity households, compared to 25.9% of all Asian households. Groups with high levels of non-decency are significantly more likely to live in homes that do not provide a sufficient degree of thermal comfort. Black households are particularly likely to live in houses without modern facilities.

Table 13.10 Decency and ethnicity

Decency	% of dwellings in group that:				
	Are non decent	Fail fitness	Fail disrepair	Fail modernisation	Fail thermal comfort
White	30.4%	3.9%	7.0%	4.8%	23.0%
Asian	25.9%	3.3%	6.8%	6.7%	18.7%
Black	58.2%	0.0%	7.2%	28.4%	49.8%
Mixed & other	42.9%	0.0%	14.3%	7.0%	35.8%
All households	31.1%	3.7%	7.2%	5.3%	23.7%

The survey goes on to examine HMO's and ethnicity. Whilst no 'mixed and other' ethnicity HMO's were found, 19.2% of all Black households, an estimated 159 households, are HMO's. 9.4% of all Asian households are HMO's – much higher than the 4.4% average.

Table 13.11 HMO's and ethnicity						
Group	HMO's		Non-HMO's		Total	
	Number	%	Number	%	Number	%
White	1,669	4.1%	39,160	95.9%	40,829	100.0%
Asian	63	9.4%	610	90.6%	673	100.0%
Black	159	19.2%	669	80.8%	828	100.0%
Mixed & other	0	0.0%	915	100.0%	915	100.0%
All households	1,891	4.4%	41,354	95.6%	43,245	100.0%

The final emerging standard of housing condition is the Housing Health and Safety Rating System (HHSRS). The survey analysed hazards, and suggests a response in one of three categories, as laid out in the table below. There is very little variation in the occurrence of households with a mandatory hazard, but Black and 'mixed and other' ethnicity groups are much more likely to have a hazard requiring a discretionary response, at 41.7% and 51.5% respectively.

Table 13.12 Type of hazard and suggested response by ethnicity						
Hazard response	Mandatory		Discretionary		Ideal	
	Number	%	Number	%	Number	%
White	5,666	13.9%	11,451	28.0%	23,712	58.1%
Asian	94	14.0%	142	21.1%	437	64.9%
Black	99	12.0%	345	41.7%	384	46.4%
Mixed & other	131	14.3%	472	51.5%	313	34.2%
All households	5,990	13.9%	12,410	28.7%	24,846	57.5%

13.6 Summary

The survey estimated that 94.4% of households in the Borough are white, with between 1.6% and 2.1% of households having a head of household who is Black, Asian, or from a 'mixed or other' ethnic group. The chapter began by looking at the housing circumstances of different ethnic groups. By tenure, 96.6% of Asian households are owner-occupiers with a mortgage or rent privately. The other two BME groups are also much less likely than white households to own their own home outright, but are more likely than average to live in an RSL dwelling. When compared to white households, the group that generally determines the average, Asian households are the most likely to live in an old dwelling, 'mixed and other' ethnicity household a new one, whilst Black households are the least likely to live in a 1945 – 1980 dwelling. By dwelling type and household size Asian households stand out, being especially likely to live in a terraced house.

Looking at general condition, there is a large degree of variety between ethnic groups. Repair costs vary between group and category of repair, with Black households generally showing the highest costs, especially when adjusted to account for dwelling size. Unfitness was only found in White and Asian households, at around 3-4%, whereas much higher proportions of Black and 'mixed and other' ethnicity households were unfit but defective (30.7% and 21.3% respectively). Asian households have the highest SAP rating at 55, and 'mixed and other' ethnicity households the lowest, at 49. This group and the White group are much more likely to suffer from fuel poverty, at around 7%. Looking at possible efficiency improvements, Black and 'mixed and other' ethnicity households would receive the biggest energy cost saving at around £140 per household, but the cost for improvements per dwelling is higher than average at over £2,000.

The chapter finishes by examining how emerging standards relate to ethnicity. 58.2% of Black households living in non-decent homes, as are 42.9% of 'mixed and other' ethnicity households. These groups are particularly likely to fail on grounds of thermal comfort. Black HMO's are particularly common, with the survey finding HMO's for 19.2% of all Black households, (estimated 159 households), and 9.2% of all Asian households. Finally whilst there is very little variation in the presence of hazards that would require a mandatory response by ethnicity, Black and 'mixed and other' ethnicity households are particularly likely to live with a hazard that would require a discretionary response. This is true of 41.7% of all 'mixed and other' ethnicity households, and 51.5% of all Black households.

14. Young people

14.1 Introduction

This chapter analyses young person only households. Younger persons are defined for the purpose of this chapter as those under 30 and so households are divided up into the following categories:

- Younger persons only (no children)
- Younger persons and children under 16 only
- All other households

Overall there are an estimated 5,011 households in Ipswich with only young members. This represents 11.6% of all households. The table below shows the numbers of households in the three different groups.

Table 14.1 Younger person households

Category	Number of households	% of all households
Younger persons only	3,538	8.2%
Younger persons and children	1,473	2.9%
All other households	38,234	88.4%
TOTAL	51,681	100.0%

14.2 General characteristics

The table below shows how tenure correlates with young person households. A key finding is that young person households are less likely than others to owner-occupy their home with a mortgage, and significantly less likely to be owner-occupiers with no mortgage. Young person households not containing children are over four times as likely as households not composed of young people to be private renting their home. Those households with children are much more likely to be in RSL accommodation and are also much more likely to rent privately.

Table 14.2 Tenure of younger person households			
Tenure	% of younger persons only households	% of younger persons with children households	% of all other households
Owner-occupied (no mortgage)	5.9%	2.3%	35.5%
Owner-occupied (with mortgage)	38.1%	36.7%	47.1%
RSL	11.2%	25.3%	7.6%
Private rented	44.8%	35.7%	9.8%
TOTAL	100.0%	100.0%	100.0%

The distribution of dwelling age varies significantly between the three categories of household. Almost half of young person (no children) households live in pre-1919 accommodation, whereas those households with children are less likely than non-young households to live in a dwelling built before 1964. These households are particularly likely to live in newer dwellings – 36.3% of younger person with children households live in post-1980 accommodation compared to 25.0% of young person only households and just 10.7% of all other households.

Table 14.3 Dwelling age of younger person households			
Dwelling Age	% of younger persons only households	% of younger persons with children households	% of all other households
Pre-1919	45.6%	20.7%	25.2%
1919-1944	8.3%	8.5%	26.0%
1945-1964	7.2%	18.0%	21.5%
1965-1980	13.9%	16.6%	16.6%
Post-1980	25.0%	36.3%	10.7%
TOTAL	100.0%	100.0%	100.0%

The table below shows that young person households in general are much likely to live in a detached house, or in a semi-detached house (particularly those with no children). They are, however, much more likely to live in a purpose-built flat with around a fifth of young person households doing so, compared to just 8.9% of non-younger person households. Young households are more likely to live in terraced accommodation and young person-only households (no children) are the most likely groups to live in a converted flat.

Table 14.4 Dwelling type of younger person households			
Dwelling Type	% of younger persons only households	% of younger persons with children households	% of all other households
End terrace	15.1%	24.5%	9.7%
Mid terrace	32.0%	29.6%	16.9%
Semi detached	13.3%	27.0%	42.8%
Detached	2.0%	0.0%	18.4%
Purpose built flat	21.3%	18.9%	8.9%
Converted flat	16.2%	0.0%	3.4%
TOTAL	100.0%	100.0%	100.0%

14.3 Condition

The table below compares the three levels of repair costs analysed in chapter 4. As can be seen from the figures below, young person households have somewhat lower repair costs. This is noticeable for urgent costs, which are less than average at £1,048 per household with no children and only £885 per young household with children. However, comparing standardised repair costs shows a different trend, with young person only households having a significantly higher than average cost. This is not surprising considering the high proportion of this group living in pre-1919 dwellings.

Table 14.5 Repair costs for young person households				
Household type	Urgent repairs	Basic repairs	Comprehensive repairs	Standardised repair cost
	Repair cost per dwelling £			£ per sq. m
Younger persons only	£1,048	£1,728	£3,305	£35.0
Younger persons and children	£855	£1,305	£3,212	£18.6
All other households	£1,244	£2,256	£5,069	£25.5
All households	£1,214	£2,180	£4,861	£26.0

The survey also looked at levels of unfitness for young person households. The table below shows that young person only households are somewhat more likely to live in unfit housing, with 5.2% of this group, or 185 households, living in this condition. However, young person households with children are less likely than average to live in unfit housing.

Table 14.6 Unfitness and young households						
Group	Unfitness					
	Unfit housing	Not unfit housing	Total	% of group in unfit housing	% of those in unfit housing in group	% of group unfit & vulnerable
Younger persons only	185	3,353	3,538	5.2%	11.6%	24.3%
Younger persons and children	22	1,451	1,473	1.5%	1.4%	100.0%
All other households	1,390	36,844	38,234	3.6%	87.0%	79.1%
All households	1,597	41,648	43,245	3.7%	100.0%	47.6%

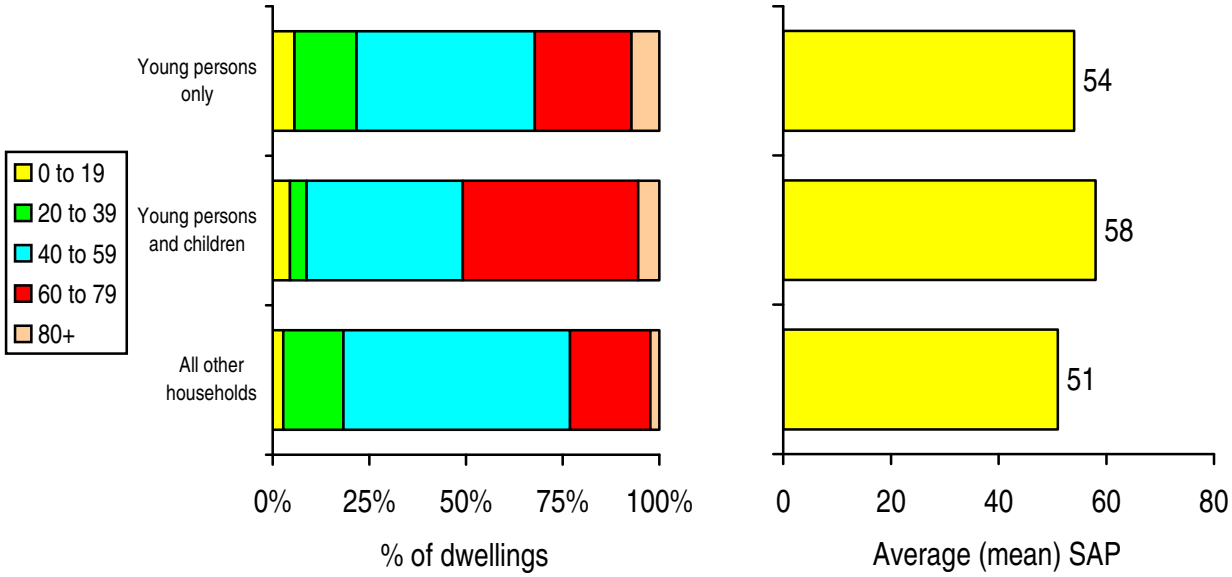
The final key measure of general condition is the level of households which are not unfit, but are defective. Younger person only households are slightly less likely than average to live in housing that is defective while those with children are more likely than average to live in defective accommodation.

Table 14.7 Defectiveness in young households						
Group	Unfit		Defective		Good condition	
	Number	%	Number	%	Number	%
Younger persons only	185	5.2%	491	13.9%	2,863	80.9%
Younger persons and children	22	1.5%	292	19.8%	1,159	78.7%
All other households	1,390	3.6%	6,488	17.0%	30,356	79.4%
All households	1,597	3.7%	7,271	16.8%	34,378	79.5%

14.4 Energy efficiency

The key means of measuring energy efficiency is the SAP rating system, as laid out in chapter 6. The graphs below show SAP for young person households, comparing the average SAP ratings of different groups and showing the distribution of ratings within the group. Young person households have higher than average SAP ratings, especially those with children.

Figure 14.1 SAP rating for young person households



The survey also examines fuel poverty and how it relates to younger person households. Households containing only young people and no children are more likely to be in fuel poverty, with 9.9% in this category. This compares to 6.6% for all other households. However, those with children are less likely than average to be fuel-poor: only 5.6%.

Finally, this section examines the impact of energy efficiency improvement measures. In this case, the cost and the benefit of installing insulation and central heating are compared, and a payback period for the measures to pay for themselves produced. The table below shows that although young person households would benefit from these measures as much as other households, increasing the average SAP rating by 14 or 20 points, the energy savings would not be greater than for all other households. The payback period is therefore moderately higher. The total cost of these improvements is £7.0 million for young person only households and £2.0m for those with children.

Table 14.8 Impact of energy improvement measures

Group	*Number of dwellings requiring measures (including upgrades)*	*Cost per dwelling requiring improvement*	*Previous SAP*	*New SAP*	*Previous energy cost*	*New energy cost (per dwelling)*	*Payback period (years)*	*Total cost of measure (Borough-wide)*
Young people only	3,538	£1,989	54	74	£348	£240	18.4	£7.0
Young people and children	1,473	£1,350	58	72	£354	£271	16.3	£2.0
All other households	38,234	£1,416	51	64	£451	£345	13.4	£54.1

14.5 Emerging standards

The key emerging standard for housing fitness, as laid out in the 2002 PSA 7, is decency. The survey shows that 31.5% or an estimated 1,835 households are non-decent. The tables show the levels of young person households failing each aspect of decency. Young person only households without children are more likely to be non-decent and are also more likely to fail thermal comfort and modernisation. Those young households with children are more likely to fail disrepair.

Table 14.9 Decency and young person households

Group	% of dwellings in group that:				
	Are non decent	Fail fitness	Fail disrepair	Fail modernisation	Fail thermal comfort
Young people only	35.1%	5.2%	7.9%	9.1%	29.3%
Young people and children	28.2%	1.5%	11.0%	0.0%	22.2%
All other households	30.9%	3.6%	7.0%	5.1%	23.3%
All households	31.1%	3.7%	7.2%	5.3%	23.7%

The survey goes on to examine HMOs. Although 4.4% of all households in the area are HMOs, an estimated 1,891, 857 of these (45.3%) are young person-only households. As shown in the table below, all of these young person households in HMOs contain no children

Table 14.10 HMOs and young people

Group	HMOs		Non-HMOs		Total	
	Number	%	Number	%	Number	%
Young people only	857	24.2%	2,681	75.8%	3,538	8.2%
Young people and children	0	0.0%	1,473	100.0%	1,473	3.4%
All other households	1,034	2.7%	37,201	97.3%	38,234	88.4%
All households	1,891	4.4%	41,354	95.6%	43,245	100.0%

The final emerging standard of housing condition is the Housing Health and Safety Rating System (HHSRS). The survey analysed hazards, and suggests a response in one of three categories, as laid out in the table below. Young person households are slightly less likely to require a mandatory response to a hazard in their home. However, there is a higher proportion of young person (with no children) households that require a discretionary response.

Table 14.11 Type of hazard and suggested response						
Group	Mandatory		Discretionary		Ideal	
	Number	%	Number	%	Number	%
Young people only	451	12.8%	1,199	33.9%	1,888	53.4%
Young people and children	191	13.0%	403	27.4%	879	59.7%
All other households	5,348	14.0%	10,808	28.3%	22,078	57.7%
All households	5,990	13.9%	12,410	28.7%	24,845	57.5%

14.6 Summary

This chapter analysed young person households in the Borough. It looked at both general housing characteristics, and measures of condition such as unfitness, SAP rating, and hazardousness for households containing only young people and also those with young people and children.

Young person households have a quite different profile from that of all Ipswich households. They are less likely than average to owner-occupy their home (with or without a mortgage), but are more likely to rent from a private landlord. Those with children are more likely to live in an RSL dwelling. They are also more likely than average to live in a younger dwelling or in a purpose-built flat.

The survey then examined key aspects of condition. Young person only households are somewhat more likely to live in unfit housing, with 5.2% of this group, or 185 households, living in this condition They also have higher standardised repair costs. However, young person households with children are less likely than average to live in unfit housing.

The SAP rating of young person households is above average, however such households (those without children) are more likely to live in fuel poverty, and energy efficiency improvements would not save more money than for the average household.

Finally the survey analyses young person households with regards to some of the emerging standards in housing condition. Young person households are marginally less likely to not be decent. However, 24.2% of young person households not containing children are HMOs, well above the 4.4% average for the Borough. Finally, young person households are less likely to have a hazard requiring a mandatory response under HHSRS.

SECTION F: POLICY IMPLICATIONS

This final section assesses the practical implications of the rest of the study. The following chapter deals with the implied financial demand of repair costs. Focussing in particular on owner-occupied dwellings, the chapter shows what potential impact might be had through schemes such as equity release. The chapter goes on to look at rented dwellings.



15. Intervention and financial assistance

15.1 Introduction

This chapter examines the ability of various household groups to afford the improvements required. Clearly in the private sector, the local authority's main role in this is advisory, since it can only intervene directly via grant or loan based financial assistance and enforcement action. However the local authority role as enabler has become more rather than less important as the overall level of financial assistance available has fallen.

It is more important now for the local authority to consider ways in which various groups (owners and landlords particularly), can be encouraged to fund the necessary improvements. This is the trend of H.I.P. Guidance as well as the logic of the national decline of funding in the public sector.

The chapter begins by looking at owner-occupiers ability to afford repairs and improvements to energy efficiency based on current income levels. This is followed by a similar analysis taking into account the possibility of using equity release schemes to fund repairs/improvements and finally a summary of the costs in the rented sectors. The final section includes figures for vacant owner-occupied dwellings.

Where energy efficiency is studied in this chapter it relates to the costs of improving/providing insulation and central heating (it will be remembered that this increases the mean SAP of all dwellings to 65 and with a relatively short payback period (of 13.8 years)).

It should also be noted that throughout this chapter the number of owner-occupiers in unfit housing is below the figure shown in the unfitness chapter; this is due to the existence of vacant properties. Vacant owner-occupied properties are dealt with separately at the end of this chapter.

15.2 Owner-occupiers' ability to fund

It will be recalled that owner-occupiers show some of the highest levels of unfitness in Ipswich (in terms of overall numbers). In addition owner-occupiers make up a large proportion of the total costs for repairs/energy efficiency improvements. For these reasons, it is important to analyse the ability of owner-occupiers to carry out the necessary works.

For repairs/improvements required in the owner-occupied sector the survey makes assumptions about the ability to afford based on income levels. The assumptions are shown in the table below. The means test applied here is quite simplistic, but nonetheless reasonable. Households with less than £14,200 of household income are unlikely to be able to afford any significant amount of repairs, and those in the intermediate band of income may in many cases not be able to do so. The value of £14,200 is used to distinguish vulnerable households (those in receipt of tax credit), whilst £25,000, more arbitrary, is the higher tier band of households eligible to gain child tax credit.

Table 15.1 Assumptions used in assessing a households ability to fund repairs/ improvements (owner-occupiers only)

Income band	Proportion of repairs/improvements to be made by household
Under £14,200	Zero
£14,200 to £25,000	Half
Over £25,000	All

NB The income band is based on annual gross earned income (including all benefits)

The table below shows the number of households in each of these broad income bands for both those in unfit housing and also all households. It can be seen from the table that households in unfit housing are much more likely to be in the lowest income bracket and significantly less likely to be in the highest income bracket when compared with all households. This implies that they will be less likely to fund the necessary repairs/improvements to their dwellings.

Table 15.2 Broad income levels of owner-occupiers

Income band	Unfit		All households	
	Number of households	% of households	Number of households	% of households
Under £14,200	736	63.3%	11,455	34.0%
£14,200 to £25,000	306	26.3%	8,962	26.6%
Over £25,000	120	10.3%	13,277	39.4%
TOTAL	1,162	100.0%	33,695	100.0%

The table below shows a summary of costs for owner-occupiers. This is then offset against the implied abilities to afford improvements based on households' income levels. The table is split between those in unfit housing and all households.

Table 15.3 Summary of costs in owner-occupied housing			
	Cost per dwelling	Total cost	Implied financial demand
UNFIT HOUSING – total number of dwellings – 1,162			
Make fit only	£4,452	£5.2m	£3.7m
All urgent repairs	£6,441	£7.5m	£5.6m
All repairs within 5 years	£8,057	£9.4m	£7.2m
All repairs within 10 years	£11,709	£13.6m	£10.8m
Energy efficiency improvements	£2,269	£2.6m	£2.2m
MAXIMUM TOTAL	£13,979	£16.2m	£13.0m
ALL OWNER-OCCUPIED DWELLINGS – total number of dwellings – 33,695			
All urgent repairs	£1,185	£39.9m	£21.9m
All repairs within 5 years	£2,206	£74.3m	£36.0m
All repairs within 10 years	£5,144	£173.3m	£79.6m
Energy efficiency improvements	£1,338	£45.1m	£26.0m
MAXIMUM TOTAL	£6,481	£218.4m	£105.6m

The table shows for example that the average cost to make unfit owner-occupied dwellings fit is £4,452 per dwelling – given a total number of unfit owner-occupied dwellings of 1,162 this makes for a total of £5.2m needing to be spent to make these dwellings fit for human habitation. Given the income levels of these households it is then further estimated that there would be a demand for financial assistance of £3.7m. Including all repairs required over the next 10 years along with suggested energy improvements the total cost figure rises to £16.2m with a potential demand for financial assistance of £13.0m.

Turning to all households it can be seen that the maximum total for all repairs/improvements comes to £218.4m, again using estimates of owners ability to afford this figure is reduced to a potential demand for assistance of £105.6m.

15.3 Equity release schemes

Against this background though: the owner-occupiers involved here will in most cases have some equity, there may be means of releasing some of the equity to repair the dwellings. This is likely to be a more realistic focus of Council attention than trying to increase the availability of financial aid by the necessary sum.

The Ipswich survey asked all owner-occupiers the following questions:

> *"If you sold your home now, how much money do you estimate you would get, after paying off any remaining mortgages and other associated debts?"*

and

> *"Would you be prepared to use the equity in your home to fund any repairs that you may need now or in the future?"*

Using information collected from these questions it is possible to make some broad estimates about the scope for equity release schemes to help fund repairs to owner-occupiers dwellings.

Releasing equity is seen as a way of using the debt free equity value of owner-occupied homes to provide repairs, improvements and adaptations at nil or minimal public cost. Schemes are primarily aimed at older person households who may be equity rich but cash poor, however, for analysis purposes there is no reason why this should not be extended to all owner-occupied dwellings in the Council area.

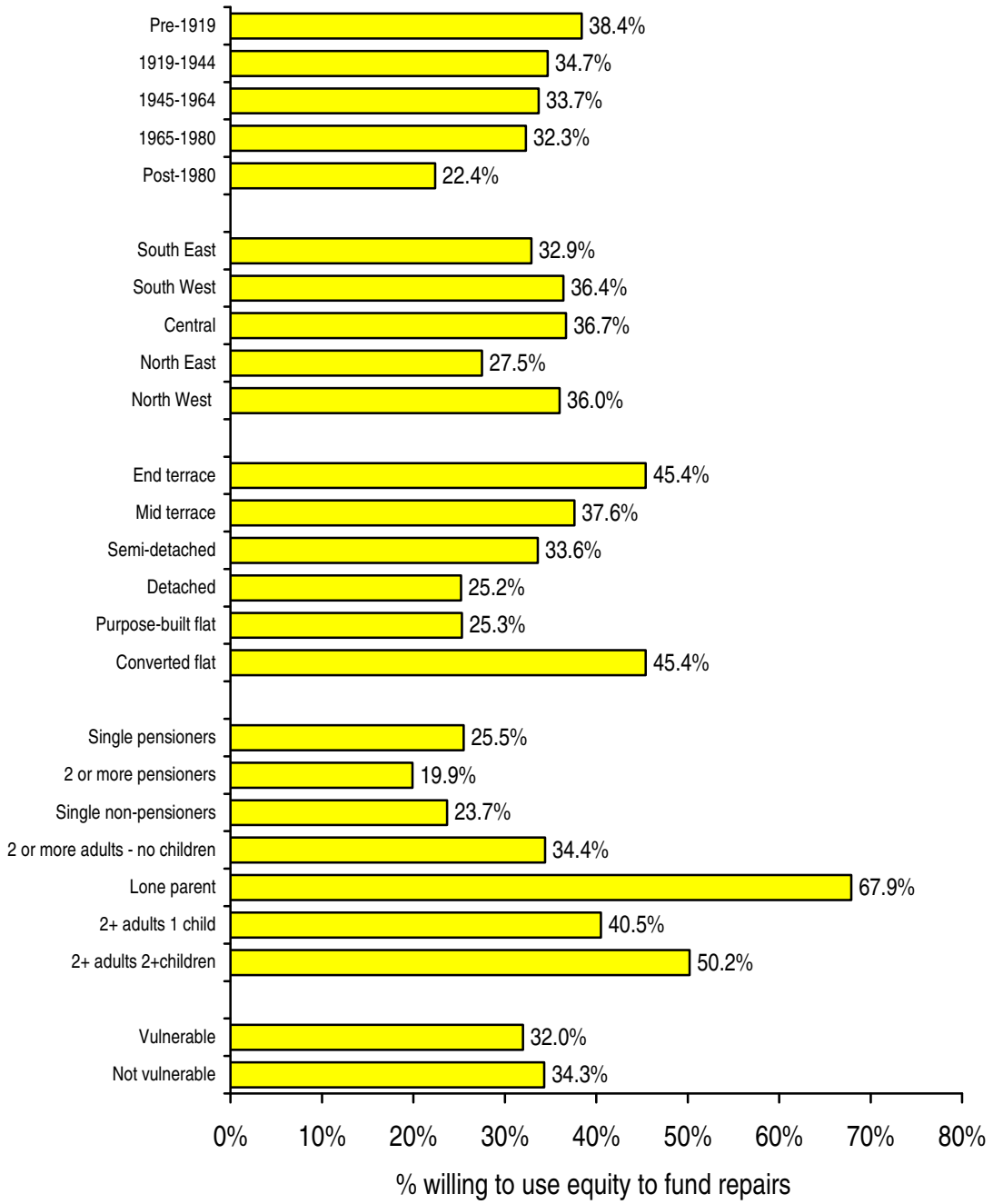
In terms of equity release itself a limit of 30% of a current dwelling value has been assumed (this is consistent with information available from the Home Improvement Trust). It is then assumed that the amount available to borrow could be used to directly offset any repairs/improvements required. The table below shows an estimate of the impact of equity release schemes for owner-occupiers. Again it is assumed that households with over £25,000 income would be able to fund any repairs and those with an income of £14,200 to £25,000 would fund half of all repairs.

It should be noted that this analysis considers both the possibility of using equity release schemes and also the willingness of owner-occupiers to use this form of finance to carry out repairs/improvements. Hence, any household who is unwilling to use equity release is not considered in this analysis. In total, 33.8% of owner-occupiers stated that they would be prepared to release equity to carry out repairs/improvements to their accommodation.

Finally, the analysis does not take account of the additional mortgage/loan payments that would arise from releasing equity on a property. In many cases this will be an additional barrier to access to such schemes. This is especially the case for those households classified as vulnerable due to their low household income.

The figure below shows the groups of owner-occupiers more likely to use equity on their home to fund repairs. Results shows that families with children are more willing to use equity release schemes, whilst pensioners are less willing. Vulnerable households are slightly less willing to use equity release schemes than non-vulnerable households.

Figure 15.1 Households prepared to use equity release schemes



The table below shows the impact of equity release schemes on total repair costs.

Table 15.4 Summary of costs in owner-occupied housing – including the maximum use of equity release schemes			
	Cost per dwelling	Total cost	Implied financial demand
UNFIT HOUSING – total number of dwellings – 1,162			
Make fit only	£4,452	£5.2m	£2.2m
All urgent repairs	£6,441	£7.5m	£3.8m
All repairs within 5 years	£8,057	£9.4m	£5.2m
All repairs within 10 years	£11,709	£13.6m	£8.3m
Energy efficiency improvements	£2,269	£2.6m	£1.7m
MAXIMUM TOTAL	£13,979	£16.2m	£10.2m
ALL OWNER-OCCUPIED DWELLINGS – total number of dwellings – 33,695			
All urgent repairs	£1,185	£39.9m	£14.9m
All repairs within 5 years	£2,206	£74.3m	£25.4m
All repairs within 10 years	£5,144	£173.3m	£58.1m
Energy efficiency improvements	£1,338	£45.1m	£18.4m
MAXIMUM TOTAL	£6,481	£218.4m	£77.4m

NB Unlike the previous table it is not possible to arrive at the total figure by adding up other totals. This is because the use of equity is taken as a one-off sum of money (i.e. whilst it is possible to take this away from any individual element required (i.e. repairs or improvements) it would only be possible to reduce costs of other elements if there was still money remaining. For example if all the equity has been used to pay for repairs then there would be nothing left to spend on energy efficiency improvements (i.e. the money can only be used once).

The table above shows a total of £218.4m of repairs required by owner-occupiers over the next ten years (including energy efficiency costs). Looking only at household income would suggest a requirement for public sector assistance to cover £105.6m of this. The impact of equity release for owner-occupiers could be considerable. Potentially over the next ten years it could reduce the public sector financial assistance requirement from £105.6m to £77.4m.

15.4 The rented and vacant stock

In the case of social and private rented dwellings, it is the financial ability of the landlord that matters rather than the income of the tenant. The table below shows the full range of costs again split between unfit and all dwellings. Vacant (owner-occupied) dwellings are included in the table below for reasons of completeness.

Table 15.5 Summary of costs in rented and vacant (owner-occupied) housing						
Tenure	RSL		Private rented		Vacant (owner-occupied)	
	Cost per dwelling	Total cost	Cost per dwelling	Total cost	Cost per dwelling	Total cost
UNFIT RENTED AND VACANT DWELLINGS						
Number of dwellings	89		402		351	
Make fit only	£58	£0.0m	£7,617	£3.1m	£13,457	£4.7m
All urgent repairs	£116	£0.0m	£10,339	£4.2m	£15,795	£5.6m
All repairs within 5 years	£1,158	£0.1m	£11,829	£4.7m	£17,826	£6.3m
All repairs within 10 years	£1,212	£0.1m	£14,615	£5.9m	£18,516	£6.5m
Energy efficiency improvements	£2,530	£0.2m	£2,706	£1.1m	£2,612	£0.9m
MAXIMUM TOTAL	£3,743	£0.3m	£17,321	£7.0m	£21,128	£7.4m
ALL RENTED AND VACANT DWELLINGS						
Number of dwellings	3,769		6,143		957	
All urgent repairs	£633	£2.4m	£1,984	£12.2m	£6,933	£6.6m
All repairs within 5 years	£872	£3.3m	£3,074	£18.9m	£8,548	£8.2m
All repairs within 10 years	£1,414	£5.3m	£5,512	£33.9m	£10,401	£10.0m
Energy efficiency improvements	£2,025	£7.6m	£1,851	£11.4m	£1,606	£1.5m
MAXIMUM TOTAL	£3,439	£13.0m	£7,363	£45.2m	£12,007	£11.5m

The table shows that the maximum total cost for the RSLs is £13.0 million (over the next ten years). This compares with the private rented sector where the ten year bill is £45.2 million.

On the face of it, therefore, the private landlords face a serious bill for the necessary repairs costs. We have no direct information as to the ability or willingness of private landlords to fund the improvements which have been identified through the survey. To establish this convincingly would itself require a substantial survey.

However it may well be possible, through organisations of landlords, for the Council to contact them and alert them to the need for some action now to prevent more serious costs arising in future.

15.5 Summary

This chapter looked at the total costs of repairs and energy efficiency improvements required. The analysis was separated by tenure and took account of owner-occupiers income and equity levels. Some of the main findings were:

- To carry out all urgent repairs required to unfit owner-occupied dwellings (occupied dwellings) would cost an estimated £7.5m.
- Households' income levels could reduce this figure to a potential demand for financial assistance of £5.6m whilst including the scope for equity release would reduce this figure to £3.8m.
- To carry out all urgent repairs required to owner-occupied dwellings (occupied dwellings) would cost an estimated £39.9m. Again, this figure could be reduced dramatically when taking into account households income and equity levels to £21.9m and £14.9m respectively.
- In the private rented sector the total bill for carrying out all urgent repairs comes to £12.2m. The equivalent figure for RSL dwellings is £2.4m.

GLOSSARY

Age/construction date of dwelling

The age of the dwelling refers to the date of construction of the oldest part of the building.

Average

The term ‘average’ when used in this report is taken to be a mean value unless otherwise stated.

Basic amenities

- kitchen sink
- bath or shower in a bathroom
- a wash hand basin
- hot and cold water to the above
- inside WC

Basic repairs

These are all urgent repairs plus all other repairs/replacements to external elements where the surveyor indicated a fault, but where the work was not specified as urgent. This is taken to be all work required in the next five years.

Central heating system

A heating system with a distribution system sufficient to provide heat in at least one room in addition to the room or space containing the boiler. In this report, the definition also includes electric storage heaters which run on off-peak electricity and programmable gas convector heaters.

Comprehensive repair

This includes all repairs as specified above together with any replacements the surveyor assessed as falling due over the next 10 years. For all exterior elements, whether work was specified or not, they recorded the replacement period of that element - the number of years before it would need replacing. This measure provides a better basis for identifying work which would form part of a planned programme of repair by landlords.

Cost to make fit

The costs of undertaking all 'urgent' basic repair work, plus any additional costs to rectify the problems of unfitness. These are the 'required expenditure' costs to make 'just fit' and not to secure the dwelling in the long term. The economics of undertaking the work varies between tenures for the same jobs.

Double glazing

Factory made sealed window units. Does not include windows with secondary glazing or external doors with double or secondary glazing (other than double glazed patio doors which count as 2 windows).

Dwelling

A dwelling is a self contained unit of accommodation where all rooms and facilities available for the use of the occupants are behind a front door. For the most part a dwelling will contain one household, but may contain none (vacant dwelling), or may contain more than one (HMO).

Fixed heating

Heating which is permanently stationed in a room whether it is fixed in place or not. It has a designated space in which it remains and is connected via a gas point, fused spur, dedicatable 13 amp power socket or is run from a centrally-located boiler or heat exchanger, either dedicated to the dwelling or as part of a Borough or common heating system. It also includes open fireplaces which are capable of use with minimum effort (not permanently blocked) and 'Aga' type cookers or ranges which also emit heat into the room.

Floorspace

The useable internal floor area of the dwelling as measured by the surveyor. The area under partition walls has been excluded, as has that for integral garages and stores accessed from the outside only.

Household

One person living alone or a group of people who have the address as their only or main residence and who either share one meal a day or share a living room.

Houses in multiple occupation (HMO)

An HMO is a dwelling-house which is occupied by more than one household. There are, for the purposes of this survey 6 categories of HMO:

1. *Bedsits*
2. *Shared house*
3. *Households with lodger*
4. *Bed & Breakfast*
5. *Registered Home*
6. *Converted House*

Modern bathroom

A bathroom which was installed less than 30 years ago.

Modern kitchen

A kitchen which was installed less than 20 years ago.

SAP rating

The energy rating as determined by the Government's Standard Assessment Procedure (SAP). This is an index of the notional annual cost of heating a dwelling to achieve a standard heating regime and normally runs from 1 (highly inefficient) to 120 (highly efficient).

Standardised costs

These are costs in £ per square metre (£/sqm). By reducing costs to a £/sqm basis the effect of the size of buildings on the amount of disrepair recorded is omitted, otherwise the extent of the disrepair measured is substantially determined by the size of the building.

Unfit housing

A dwelling house is unfit for human habitation if in the opinion of the local authority it fails to meet one or more of the requirements of the fitness standard as laid down in Section 604 of the *1985 Housing Act* as amended by *1989 Local Government and Housing Act* and by reason of that failure is not reasonably suitable for occupation.

Urgent repairs

These are any works specified to deal with an external fault where its treatment was specified as urgent, plus all recorded work to internal elements.

Vacant dwellings

The assessment of whether or not a dwelling was vacant was made at the time of the interviewer's visit. Clarification of vacancy was sought from neighbours. Surveyors were required where possible to gain access to vacant dwellings and undertake full inspections.

Appendix A1 Data tables

This appendix provides further detailed information from the stock condition survey. The tables below cross-tabulate some of the main variables used in the report. These are:

- Tenure
- Dwelling age
- Sub-area
- Dwelling type
- Household type
- Vulnerable households

To this list has been added the size of dwelling. This has been measured using the average number of habitable rooms and also the average (mean) floorspace of dwellings.

Table A1.1 Summary of dwelling/household characteristics and tenure					
	Tenure				
Dwelling characteristic	Owner-occupied (no mortgage)	Owner-occupied (with mortgage)	RSL	Private rented	Total
Age of dwelling					
Pre-1919	2,090	6,093	445	3,312	11,939
1919-1944	3,776	5,903	139	927	10,744
1945-1964	4,327	3,395	351	910	8,982
1965-1980	2,581	3,189	1,056	342	7,168
Post-1980	1,549	1,750	1,778	653	5,730
TOTAL	14,322	20,329	3,769	6,143	44,564
Sub-area					
South East	2,582	3,433	433	599	7,047
South West	2,610	4,630	1,601	1,284	10,124
Central	2,257	4,567	759	2,850	10,432
North East	3,888	3,861	548	943	9,241
North West	2,986	3,838	428	467	7,719
TOTAL	14,322	20,329	3,769	6,143	44,564
Type of dwelling					
End terrace	1,090	2,673	167	696	4,625
Mid terrace	1,392	4,589	484	1,898	8,363
Semi-detached	6,974	9,163	322	1,118	17,578
Detached	4,019	3,222	0	226	7,466
Purpose-built flats	749	339	2,529	1,047	4,663
Converted flat	98	345	267	1,160	1,870
TOTAL	14,322	20,329	3,769	6,143	44,564
Household type					
Single pensioners	3,646	389	943	388	5,366
2 or more pensioners	3,735	236	96	203	4,270
Single non-pensioners	1,277	3,348	1,038	1,991	7,654
2+ adults, no children	4,527	7,413	748	2,002	14,690
Lone parent	82	464	467	445	1,458
2+ adults, 1 child	199	3,043	149	417	3,807
2+ adults, 2+ children	349	4,987	233	431	6,000
TOTAL	13,815	19,880	3,674	5,876	43,245
Vulnerable households					
Vulnerable	4,060	3,766	2,429	1,983	12,237
Not vulnerable	9,755	16,114	1,245	3,893	31,008
TOTAL	13,815	19,880	3,674	5,876	43,245
Size of dwelling					
Av no. of rooms	4.9	4.8	2.9	3.9	4.6
Av floor space (m^2)	101.0	101.5	61.4	76.7	94.5

Table A1.2 Summary of dwelling/household characteristics and age of dwelling						
	Age of dwelling					
Dwelling characteristic	Pre-1919	1919-1944	1945-1964	1965-1980	Post-1980	Total
Tenure						
Owner-occupied (nm)	2,090	3,776	4,327	2,581	1,549	14,322
Owner-occupied (wm)	6,093	5,903	3,395	3,189	1,750	20,329
RSL	445	139	351	1,056	1,778	3,769
Private rented	3,312	927	910	342	653	6,143
TOTAL	11,939	10,744	8,982	7,168	5,730	44,564
Sub-area						
South East	1,213	3,499	751	470	1,114	7,047
South West	1,568	496	2,823	3,316	1,921	10,124
Central	6,846	1,260	707	274	1,345	10,432
North East	1,414	3,289	2,210	1,267	1,061	9,241
North West	898	2,200	2,491	1,841	289	7,719
TOTAL	11,939	10,744	8,982	7,168	5,730	44,564
Type of dwelling						
End terrace	1,754	807	839	752	473	4,625
Mid terrace	5,118	785	982	779	698	8,363
Semi-detached	2,705	6,110	5,270	2,418	1,074	17,578
Detached	798	2,669	1,056	1,579	1,363	7,466
Purpose-built flats	0	234	730	1,639	2,060	4,663
Converted flat	1,564	139	105	0	62	1,870
TOTAL	11,939	10,744	8,982	7,168	5,730	44,564
Household type						
Single pensioners	845	1,130	1,618	909	864	5,366
2 or more pensioners	543	1,048	1,481	837	361	4,270
Single non-pensioners	3,173	697	692	1,360	1,732	7,654
2+ adults, no children	4,047	4,293	2,554	2,361	1,436	14,690
Lone parent	257	235	279	369	319	1,458
2+ adults, 1 child	1,038	791	762	644	573	3,807
2+ adults, 2+ children	1,638	2,156	1,363	615	229	6,000
TOTAL	11,540	10,349	8,748	7,094	5,513	43,245
Vulnerable households						
Vulnerable	3,258	2,496	2,939	1,772	1,771	12,237
Not vulnerable	8,282	7,852	5,809	5,322	3,742	31,008
TOTAL	11,540	10,349	8,748	7,094	5,513	43,245
Size of dwelling						
Av no. of rooms	4.5	5.0	4.7	4.3	3.8	4.6
Av floor space (m^2)	93.8	102.9	94.3	93.9	81.6	94.5

Table A1.3 Summary of dwelling/household characteristics and sub-area						
	Sub-area					
Dwelling characteristic	South East	South West	Central	North East	North West	Total
Tenure						
Owner-occupied (nm)	2,582	2,610	2,257	3,888	2,986	14,322
Owner-occupied (wm)	3,433	4,630	4,567	3,861	3,838	20,329
RSL	433	1,601	759	548	428	3,769
Private rented	599	1,284	2,850	943	467	6,143
TOTAL	7,047	10,124	10,432	9,241	7,719	44,564
Age of dwelling						
Pre-1919	1,213	1,568	6,846	1,414	898	11,939
1919-1944	3,499	496	1,260	3,289	2,200	10,744
1945-1964	751	2,823	707	2,210	2,491	8,982
1965-1980	470	3,316	274	1,267	1,841	7,168
Post-1980	1,114	1,921	1,345	1,061	289	5,730
TOTAL	7,047	10,124	10,432	9,241	7,719	44,564
Type of dwelling						
End terrace	610	1,524	1,176	608	708	4,625
Mid terrace	817	2,232	3,363	895	1,055	8,363
Semi-detached	4,268	2,633	2,262	4,353	4,062	17,578
Detached	943	1,469	1,326	2,103	1,625	7,466
Purpose-built flats	375	1,850	1,154	1,101	184	4,663
Converted flat	34	418	1,151	181	85	1,870
TOTAL	7,047	10,124	10,432	9,241	7,719	44,564
Household type						
Single pensioners	756	811	1,113	1,592	1,094	5,366
2 or more pensioners	806	876	547	1,130	910	4,270
Single non-pensioners	956	2,148	2,668	1,196	686	7,654
2+ adults, no children	2,875	2,942	3,172	2,645	3,056	14,690
Lone parent	99	667	178	244	271	1,458
2+ adults, 1 child	649	1,246	734	638	541	3,807
2+ adults, 2+ children	725	922	1,741	1,451	1,161	6,000
TOTAL	6,865	9,613	10,153	8,895	7,719	43,245
Vulnerable households						
Vulnerable	2,363	3,088	3,081	1,981	1,723	12,237
Not vulnerable	4,502	6,524	7,071	6,914	5,996	31,008
TOTAL	6,865	9,613	10,153	8,895	7,719	43,245
Size of dwelling						
Av no. of rooms	4.7	4.3	4.5	4.6	4.9	4.6
Av floor space (m^2)	92.5	88.5	97.2	96.6	98.2	94.5

Table A1.4 Summary of dwelling/household characteristics and type of dwelling							
	Type of dwelling						
Dwelling characteristic	End terrace	Mid terrace	Semi-detached	Detached	Purpose-built flats	Converted flat	Total
Tenure							
Owner-occupied (nm)	1,090	1,392	6,974	4,019	749	98	14,322
Owner-occupied (wm)	2,673	4,589	9,163	3,222	339	345	20,329
RSL	167	484	322	0	2,529	267	3,769
Private rented	696	1,898	1,118	226	1,047	1,160	6,143
TOTAL	4,625	8,363	17,578	7,466	4,663	1,870	44,564
Age of dwelling							
Pre-1919	1,754	5,118	2,705	798	0	1,564	11,939
1919-1944	807	785	6,110	2,669	234	139	10,744
1945-1964	839	982	5,270	1,056	730	105	8,982
1965-1980	752	779	2,418	1,579	1,639	0	7,168
Post-1980	473	698	1,074	1,363	2,060	62	5,730
TOTAL	4,625	8,363	17,578	7,466	4,663	1,870	44,564
Sub-area							
South East	610	817	4,268	943	375	34	7,047
South West	1,524	2,232	2,633	1,469	1,850	418	10,124
Central	1,176	3,363	2,262	1,326	1,154	1,151	10,432
North East	608	895	4,353	2,103	1,101	181	9,241
North West	708	1,055	4,062	1,625	184	85	7,719
TOTAL	4,625	8,363	17,578	7,466	4,663	1,870	44,564
Household type							
Single pensioners	495	508	1,678	1,317	1,147	221	5,366
2 or more pensioners	214	419	2,196	1,120	296	25	4,270
Single non-pensioners	809	1,996	1,201	918	1,781	948	7,654
2+ adults, no children	1,864	2,838	6,413	2,415	621	539	14,690
Lone parent	303	256	479	136	285	0	1,458
2+ adults, 1 child	312	878	1,834	444	255	84	3,807
2+ adults, 2+ children	588	1,133	3,434	753	41	53	6,000
TOTAL	4,584	8,029	17,234	7,102	4,426	1,870	43,245
Vulnerable households							
Vulnerable	1,107	2,420	4,410	1,629	2,057	614	12,237
Not vulnerable	3,478	5,609	12,824	5,473	2,369	1,256	31,008
TOTAL	4,584	8,029	17,234	7,102	4,426	1,870	43,245
Size of dwelling							
Av no. of rooms	4.4	4.3	4.9	5.6	2.7	3.0	4.6
Av floor space (m^2)	85.5	82.7	99.7	133.4	55.6	63.1	94.5

Table A1.5 Summary of dwelling/household characteristics and household type								
	Household type							
Dwelling characteristic	Single pensioners	2+ pensioners	Single non-pensioners	2+ adults, no children	Lone parent	2+ adults, 1 child	2+ adults, 2+ children	Total
Tenure								
Owner-occupied (nm)	3,646	3,735	1,277	4,527	82	199	349	13,815
Owner-occupied (wm)	389	236	3,348	7,413	464	3,043	4,987	19,880
RSL	943	96	1,038	748	467	149	233	3,674
Private rented	388	203	1,991	2,002	445	417	431	5,876
TOTAL	5,366	4,270	7,654	14,690	1,458	3,807	6,000	43,245
Age of dwelling								
Pre-1919	845	543	3,173	4,047	257	1,038	1,638	11,540
1919-1944	1,130	1,048	697	4,293	235	791	2,156	10,349
1945-1964	1,618	1,481	692	2,554	279	762	1,363	8,748
1965-1980	909	837	1,360	2,361	369	644	615	7,094
Post-1980	864	361	1,732	1,436	319	573	229	5,513
TOTAL	5,366	4,270	7,654	14,690	1,458	3,807	6,000	43,245
Sub-area								
South East	756	806	956	2,875	99	649	725	6,865
South West	811	876	2,148	2,942	667	1,246	922	9,613
Central	1,113	547	2,668	3,172	178	734	1,741	10,153
North East	1,592	1,130	1,196	2,645	244	638	1,451	8,895
North West	1,094	910	686	3,056	271	541	1,161	7,719
TOTAL	5,366	4,270	7,654	14,690	1,458	3,807	6,000	43,245
Type of dwelling								
End terrace	495	214	809	1,864	303	312	588	4,584
Mid terrace	508	419	1,996	2,838	256	878	1,133	8,029
Semi-detached	1,678	2,196	1,201	6,413	479	1,834	3,434	17,234
Detached	1,317	1,120	918	2,415	136	444	753	7,102
Purpose-built flats	1,147	296	1,781	621	285	255	41	4,426
Converted flat	221	25	948	539	0	84	53	1,870
TOTAL	5,366	4,270	7,654	14,690	1,458	3,807	6,000	43,245
Vulnerable households								
Vulnerable	2,589	1,172	2,316	2,451	1,264	911	1,534	12,237
Not vulnerable	2,777	3,097	5,338	12,239	195	2,896	4,466	31,008
TOTAL	5,366	4,270	7,654	14,690	1,458	3,807	6,000	43,245
Size of dwelling								
Av no. of rooms	4.2	4.8	3.6	4.8	4.3	4.9	5.3	4.6
Av floor space (m^2)	87.8	97.9	74.9	98.8	87.9	102.1	110.4	94.7

Table A1.7 Summary of dwelling/household characteristics and vulnerable households			
	Vulnerable households		
Dwelling characteristic	Vulnerable	Not vulnerable	Total
Tenure			
Owner-occupied (nm)	4,060	9,755	13,815
Owner-occupied (wm)	3,766	16,114	19,880
RSL	2,429	1,245	3,674
Private rented	1,983	3,893	5,876
TOTAL	12,237	31,008	43,245
Age of dwelling			
Pre-1919	3,258	8,282	11,540
1919-1944	2,496	7,852	10,349
1945-1964	2,939	5,809	8,748
1965-1980	1,772	5,322	7,094
Post-1980	1,771	3,742	5,513
TOTAL	12,237	31,008	43,245
Sub-area			
South East	2,363	4,502	6,865
South West	3,088	6,524	9,613
Central	3,081	7,071	10,153
North East	1,981	6,914	8,895
North West	1,723	5,996	7,719
TOTAL	12,237	31,008	43,245
Type of dwelling			
End terrace	1,107	3,478	4,584
Mid terrace	2,420	5,609	8,029
Semi-detached	4,410	12,824	17,234
Detached	1,629	5,473	7,102
Purpose-built flats	2,057	2,369	4,426
Converted flat	614	1,256	1,870
TOTAL	12,237	31,008	43,245
Household type			
Single pensioners	2,589	2,777	5,366
2 or more pensioners	1,172	3,097	4,270
Single non-pensioners	2,316	5,338	7,654
2+ adults, no children	2,451	12,239	14,690
Lone parent	1,264	195	1,458
2+ adults, 1 child	911	2,896	3,807
2+ adults, 2+ children	1,534	4,466	6,000
TOTAL	12,237	31,008	43,245
Size of dwelling			
Av no. of rooms	4.3	4.7	4.6
Av floor space (m^2)	88.7	97.0	94.7

Appendix A2 Statistical issues

A2.1 Sampling errors

Estimates of dwelling and household characteristics produced from a sample survey may differ from the true population figures because they are based on a survey rather than a complete census. This is known as sampling error, and it is important to know the extent of this error when interpreting the results.

The size of the sampling error depends on the size of the sample. In general, the smaller the sample size the larger the potential error. For example, in this survey, estimates for dwellings in the private rented sector will be subject to a larger sampling error than owner-occupied dwellings. A way of taking account of sampling error is to calculate a confidence interval for an estimate. This is an interval within which it is fairly certain the true percentage figure lies. This section explains how 95% confidence intervals can be calculated for the key survey estimates – and comes from standard statistical theory for large samples.

The 95% confidence interval for a percentage estimate p, is given by the formula:

$$p+/-1.96\times se(p)$$

where se(p) represents the standard error of the percentage and is calculated by:

$$se(p)=\sqrt{(p(100-p)/n)}$$ (n is the unweighted sample size)

Estimating standard errors for results based on a simple random sample, which has no stratification, are fairly straightforward. However samples in stock condition surveys are rarely simple random ones so the standard errors could be corrected using a sample design factor. The design factor is calculated as the ratio of the standard error with a complex sample design to the standard error that would have been achieved with a simple random sample of the same size. Overall, design effects were assumed to be small and so no adjustment has been made in the example below (this is also the position taken by the 2001 EHCS).

A 95% confidence interval for a percentage may be calculated using the equations above. The width of the confidence interval depends on the value of the estimated percentage and the sample size on which the percentage was based.

Example:

> The estimated number of unfit dwellings is 2,004 or 4.5%. This percentage is based on the core sample of dwellings of 998. Using the equations above it is found that the margin of error based on this information is 1.3% (to 1 decimal place) giving a confidence interval of between 3.2% and 5.7%. In terms of the total number of dwellings (based on an estimated number of dwellings of 44,564) this is a confidence interval of 573, hence the estimate of the accuracy of the 2,004 figure is +/- 573 or between 1,431 and 2,577.

A2.2 Non-response and missing data

Missing data is a feature of all stock condition surveys: mainly due to the difficulty in accessing parts of a dwelling. For all missing data in the survey standard statistical imputation procedures were applied. In general, throughout the survey the level of missing data was minimal.

Non-response can cause a number of problems:

- The sample size is effectively reduced so that applying the calculated weight will not give estimates for the whole population
- Variables which are derived from the combination of a number of responses each of which may be affected by item non-response (e.g. calculating repair costs where a particular element was not included) may exhibit high levels of non-response
- If the amount of non-response substantially varies across sub-groups of the population this may lead to a bias in the results

To overcome these problems missing data was ‘imputed’. Imputation involves substituting for the missing value, a value given by a suitably defined ‘similar’ household, where the definition of similar varies depending on the actual item being imputed.

The specific method used was to divide the sample into subgroups based on relevant characteristics and then ‘Probability Match’ where a value selected from those with a similar predicted value was imputed. The main sub-groups used were tenure, dwelling age, and building type.

Appendix A3 The hazard scoring procedure

A3.1 Introduction

The scoring procedure, based on the surveyor's assessment of the dwelling, provides a numerical Hazard Score for each of the hazards identified at the property. The higher the score, the greater the severity of that hazard. The highest Hazard Score for an individual dwelling indicates the most serious hazard at that dwelling. A comparison of the Hazard Scores for a number of dwellings provides a means of grading those dwellings from the most dangerous to the safest.

A3.2 Potential hazards

All hazards that can be assessed using the HHSRS are listed in the following box. Those used in the survey have been highlighted in bold.

Box A3.1 List of all potential hazards	
Type of Hazard	*Hazard*
Hygrothermal Conditions	**Damp and mould growth** **Excess cold** Excess heat
Pollutants (non-microbial)	Asbestos (and MMFs) Biocides **Carbon Monoxide and fuel combustion products** Lead Radiation Uncombusted fuel gas Volatile Organic Compounds
Space, Security, Light & Noise	Crowding and space Entry by intruders Lighting Noise
Hygiene, Sanitation & Water Supply	Domestic hygiene, Pests and Refuse Food safety Personal hygiene, Sanitation and Drainage Water supply
Falls	Falls associated with baths etc **Falls on the level** **Falls associated with stairs and steps** **Falls between levels**
Electric Shocks, Fires, Burns & Scalds	**Electrical hazards** **Fire** **Hot surfaces and materials**
Collusions, Cuts & Stains	Collision and entrapment Explosions Ergonomics **Structural collapse and falling elements**

A3.3 Generating hazard scores

A formula is used to generate a Hazard Score. For this formula:

(a) The likelihood is expressed as a ratio;
(b) A weighting is given to each Class of Harm; and
(c) The spread of health outcomes is indicated as a percentage.

The Hazard Score is the sum of the products of the weightings for each class of harm which could result from the particular hazard, multiplied by the likelihood of an occurrence, and multiplied by the set of percentages showing the spread of harms.

Class of harm weightings

The weightings given to each Class of Harm reflect the degree of incapacity associated with each Class as shown in the box below.

Box A3.2 Weightings give to each of the four classes of harm

Class of harm		*Weighting*
I	*Extreme*	10,000
II	*Severe*	1,000
III	*Serious*	300
IV	*Moderate*	10

Spread of health outcomes

While there will be a most likely health outcome, there could also be a possibility of other outcomes, which may be less and/or more serious.

For example, it may be judged that there is a 60% chance that a vulnerable person falling to the ground out of a window on the second floor will suffer serious fractures (Class II). It may also be considered that there are other possible outcomes – a 10% chance of death (Class I), a 20% chance of concussion or sprains (Class III) and a 10% chance of severe bruising (Class IV). Another example is a fall out of a window on the fifteenth floor where it may be judged that there is a 100% chance of death (Class I).

The formula

An example of a Hazard Score using the formula is shown in the box below. In this example, the likelihood of an occurrence has been judged to be 1 in 100, with a 60% chance of a Class IV outcome, a 30% chance of a Class III outcome and a 10% chance of a Class II outcome.

Box A3.3 Formula for calculating a hazard score

	Class of harm weighting		*Likelihood 1 in*		*Spread of harm (%)*		
I	10,000	÷	100	×	0	=	0
II	1,000	÷	100	×	10	=	100
III	300	÷	100	×	30	=	90
IV	10	÷	100	×	60	=	6
					Hazard score	**=**	**196**

A3.4 To score a hazard

Likelihood

To score a hazard, the surveyor judges the likelihood of the occurrence resulting in a Class I to IV Harm to **a vulnerable person** over the following twelve months. For stairs, the surveyor determines the likelihood of a fall occurring which would result in a Class I to IV Harm to a vulnerable person. This involves taking account of such matters as the going, the presence or absence of handrails, the state of repair of the treads and the available lighting. For dampness, the surveyor determines the likelihood of the dampness causing Class I to IV Harm to a vulnerable person over the next twelve month period, taking into account the extent and degree of the dampness and its position.

Assessing likelihood is not determining that there **will** be an occurrence. The likelihood that there will be an occurrence over the next twelve months also means that it may not happen. Even where it is judged that there is a very high likelihood, such as a 1 in 10 probability, it is accepted that the likelihood of no occurrence is nine times greater than that of an occurrence.

Spread of outcomes

Next, the surveyor judges the most likely and other possible health outcomes to **a vulnerable person** from an occurrence.

In the case of a fall while using stairs, determining the spread of outcomes should take account of any secondary hazards such as a window or other glazing at the base of the stairs. It will also be influenced by factors such as the position of any fault which could result in a fall. If the occurrence happens at the base of the stairs there will be only a short distance to fall, but if the person is at the top there will be the full length of the stairs to fall.

Judging the extent to which individual features may increase or reduce the likelihood of an occurrence and the severity of the outcome is a matter of professional expertise. This is particularly so where disrepair may increase the risk of an occurrence. Guidance to inform professional judgement is given in the Profiles of Hazards.

While there is some information on the contribution individual features may make to hazards, it is limited. It relies on injuries or other health outcomes resulting from occurrences being reported by General Practitioners, hospitals or identified in research surveys. The surveyor indicates the spread of the Classes of Harm likely to result from an occurrence using percentages, giving the highest to the most likely outcome.

Appendix A4 Stock condition survey form