CAMBRIDGE CITY COUNCIL

Private Sector House Condition Survey 2009
November 2009

FINAL REPORT

Cambridge City Council
Working in partnership with

cpc

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Executive Summary

Introduction

Private Sector House Condition Surveys (HCS) are conducted on a regular basis by local authorities as a means of maintaining a detailed picture of housing conditions in the private sector. Such a picture forms a useful evidence base on which to build strategies and inform investment decisions, and feed into statistical returns and other internal reports. The information is also useful in presenting the potential obligations on the authority in relation to current housing legislation:

- Section 3 Housing Act 2004

- Regulatory Reform Order (RRO)

The survey was a sample survey of a nominal 1,000 dwellings, covering all private sector tenures and registered social landlord (RSL) properties. The survey was based on a stratified random sample of addresses in Cambridge, in order to gain a representative picture across the City. A sample of 2,000 was drawn with 969 surveys being undertaken in total.

Comparisons to the position for all England are drawn from the EHCS 2006 and the Survey of English Housing 2006-2007, both of which are published by Communities and Local Government (CLG) and available as a download document from their website. Some comparative data is drawn from the Family Resources Survey 2006-2007 which is published by the Department for Works and Pensions (DWP).

The tenure profile of the housing stock is shown below:

Tenure	Cambridge 2008		EHCS 2006
Owner occupied	26,000	53%	70%
Private rented	12,300	25%	12%
Housing association (RSL)	3,200	7%	8%
Local Authority*	7,600	15%	10%
Total	49,100	100%	100%

Source: Cambridge Private Sector House Condition Survey 2009

* *Local authority figures are shown here for comparative purposes. Figures given generally throughout the report are in relation to the private sector and RSL stock only.*

General survey characteristics

The following list gives some of the key features of Cambridge's housing stock and population compared with national averages:

- A higher proportion of the housing stock was built pre 1919 and 1945 to 1964 with lower proportions built in all other age categories

- The stock has higher proportions of terraced and semi-detached houses and high rise purpose built flats (6 or more storeys) than national averages.

- A higher proportion of younger residents and a slightly lower level of older residents.

- Average incomes for all tenure groups are higher than those reported in the EHCS 2005 (including when adjusted for inflation), and so, correspondingly, the proportions of households with lower incomes are slightly below those found nationally.

- Benefit receipt at 11% is well below the national average.

Decent Homes Standard

It is Government policy that everyone should have the opportunity of living in a "decent home". The Decent Homes Standard contains four broad criteria that a property should:

A - be above the legal minimum standard for housing, and

B - be in a reasonable state of repair, and

C - have reasonably modern facilities (such as kitchens and bathrooms) and services, and

D - provide a reasonable degree of thermal comfort (effective insulation and efficient heating).

If a dwelling fails any one of these criteria it is considered to be "non decent". The following characteristics were identified in relation to non decency in Cambridge:

Criterion	Private Sector and RSL Non Decent	% Private Sector and RSL Non Decent	England % Non decent (EHCS 2006)
Category 1 hazards	9,000	21.8%	22.4%
In need of repair	3,900	9.4%	7.9%
Lacking modern facilities	700	1.7%	2.2%
Poor degree of thermal comfort	7,900	19.0%	16.7%
Cambridge overall	**15,200**	**36.8%**	**35.3%**

- Non decency, at 36.8%, is slightly higher than the national average of 35.3% for equivalent tenures.

- Failure rate largely driven by Category 1 hazards and energy efficiency standards.

- Non decency will have increased since April 2006 with the introduction of the Housing Health and Safety Rating System (HHSRS). The HHSRS is radically different from the former Fitness Standard it replaced due to its focus on the potential impact of deficiencies in design or maintenance on the health and safety of the occupants rather than property condition and provision of amenities. This led to a significant increase in the English House Condition Survey (EHCS) failure rate of dwellings not meeting the statutory minimum standard from just over 4% under the former housing fitness standard to 22.4% with Category 1 hazard failure reported in the EHCS 2006.

The following diagram illustrates the position in relation to the government's former Public Service Agreement 7 (PSA7). This agreement was aimed at ensuring vulnerable occupiers in private sector housing (excluding RSL dwellings) had the opportunity of living in a decent home. It required that 70% of vulnerable occupiers be able to live in a decent home by the year 2010.

Although this standard ceased to exist from April 2008, it is still a Communities and Local Government departmental strategic objective under DSO2 (2.8) with the indicator considering the percentage of vulnerable households in decent homes in the private sector. It also acts as a useful benchmark of local authority performance and may be taken into account by regional housing bodies.

**Decent Homes Standard and Vulnerable Occupiers
Private Sector Dwelling Stock 38,270**

| Decent Homes 23,770 (62.1%) | Vulnerable Households 3,730 (9.8%) | Non Decent 14,500 (37.9%) |

**Vulnerable and decent
2,070 (55.5%)**

**PSA7 target to make 70% of
dwellings occupied by vulnerable
households decent by 2010**

**Current shortfall
Dwellings: 950**
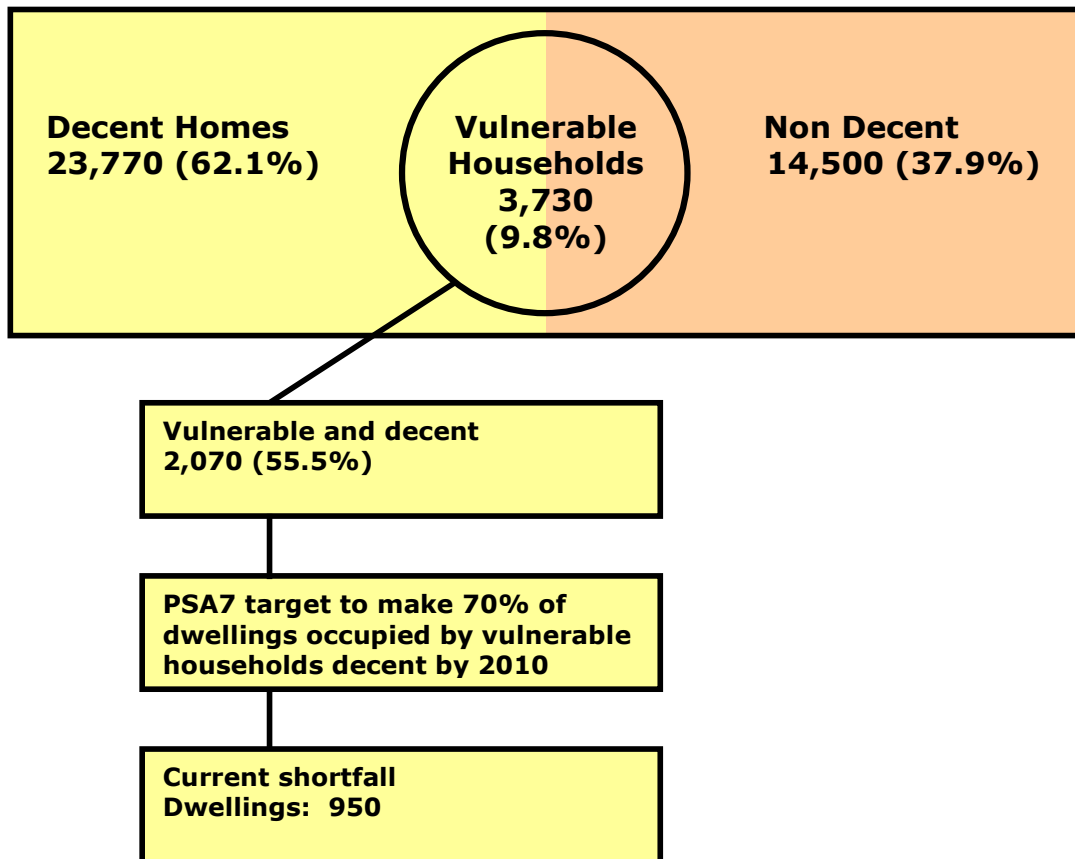
The diagram illustrates that there is currently a 950 dwelling shortfall against the 2010 decent homes target. This means that 55.5% of vulnerable households, in the private sector, are living in decent homes, a figure that should be raised to 70%.

Impact of the Housing Act 2004

The Housing Act 2004 removed many of the powers of the Housing Act 1985 and a number of other Acts and changed the obligations on local authorities in terms of private sector housing.

- Change from the Fitness Standard to the Housing Health & Safety Rating System (see below).

- The survey found an estimated 260 higher risk HMOs (shared houses, bedsits, etc of 3 or more storeys with 5 or more tenants forming two or more households) which now fall under the mandatory licensing regime introduced by the Housing Act 2004.

- Powers to grant Empty Dwelling Management Orders (EDMOs) and deal more effectively with long term with empty properties. The survey

results indicate that Cambridge has 310 vacant properties, 70 of which are considered to be long term vacant (6 months or more).

- New options for serving overcrowding notices.

University and Student Accommodation

There are just over 1,000 dwellings (halls, flats etc) used as university accommodation within the City. A further 1,040 HMOs are occupied by students renting from the private rented sector. The University maintains a strong relationship with the Council and this is reflected in the better than average dwelling conditions found within halls of residence and other University accommodation.

Category 1 hazards

One of the most significant changes under the Housing Act 2004 was a change in the minimum standard for housing. The fitness standard was removed and replaced by the Housing Health and Safety Rating System (HHSRS). The Housing Health and Safety Rating System (HHSRS) is a prescribed method of assessing individual hazards, rather than a general standard to give a judgment of fit or unfit. The HHSRS is evidence based – national statistics on the health impacts of hazards encountered in the home are used as a basis for assessing individual hazards.

The HHSRS system deals with a much broader range of issues than the previous fitness standard. It covers a total of 29 hazards in four main groups:

- *Physiological Requirements* (e.g. damp & mould growth, excess cold, asbestos, carbon monoxide, radon, etc)

- *Psychological Requirements* (crowding and space, entry by intruders, lighting, noise)

- *Protection Against Infection* (domestic hygiene, food safety, personal hygiene, water supply)

- *Protection Against Accidents* (e.g. falls on the level, on stairs and steps and between levels, electrical hazards, fire, collision, etc).

Whilst there are 29 potential hazards under the system, many of these (such as radiation) are not commonly found.

Examples of a category 1 might be:

- A dwelling that has little or no insulation and is using electric fires for heating.

- A dwelling with a steep, narrow poorly lit staircase that has no hand-rails.

- A dwelling with loose and uneven crazy paving over a large area with a high risk of causing a trip resulting in a fall.

The following indicates some of the key points in relation to hazards:

- Local authorities are required to take action where a category 1 hazard has been identified (as formerly with unfitness).

- Shift from unfitness to category 1 hazards is a major change with implications for training and resources.

- Primary hazard failures in Cambridge are excess cold and falls on stairs etc. and falling on level surfaces.

- Category 1 hazards are strongly associated with older dwellings and dwellings occupied by households where there are one or more residents with a disability and those in receipt of a benefit.

- Proportionately, Category 1 hazards are more strongly associated with the privately rented sector.

The distribution of Category 1 hazards by tenure is given below.
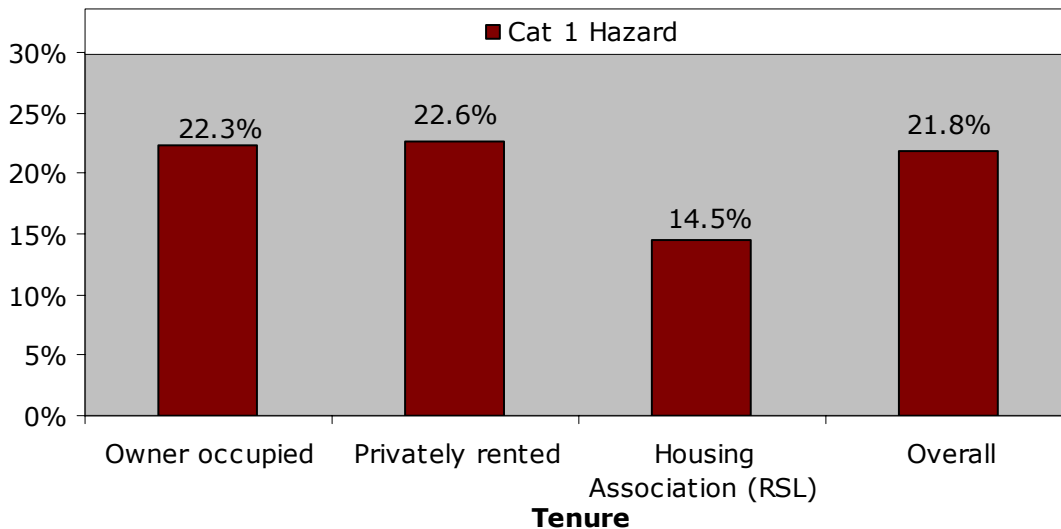
Energy Efficiency

Energy efficiency is a key consideration in private sector housing and the following illustrates some of the issues:

- The cost to remedy the 3,300 owner occupied dwellings in fuel poverty (i.e. spending more than 10% of income on heating) is £4.7 million.

- The mean SAP (energy rating on a scale of 0 (poor) to 100 (good)) is 51 in Cambridge, which is higher than that found nationally (49).

- The less energy efficient dwellings are older dwellings (pre 1919 and 1919 to 1944); converted flats and privately rented dwellings.

- Improving energy efficiency will contribute towards a range of Cambridge's corporate priorities

- The level of excess cold hazards is an issue given the numbers of older residents in Cambridge

Cost implications for repair and improvement

The following chart illustrates the total cost of remedying each of the causes of non decency listed. These costs are the total sum that would be needed for remedial work, regardless of the source of funding:
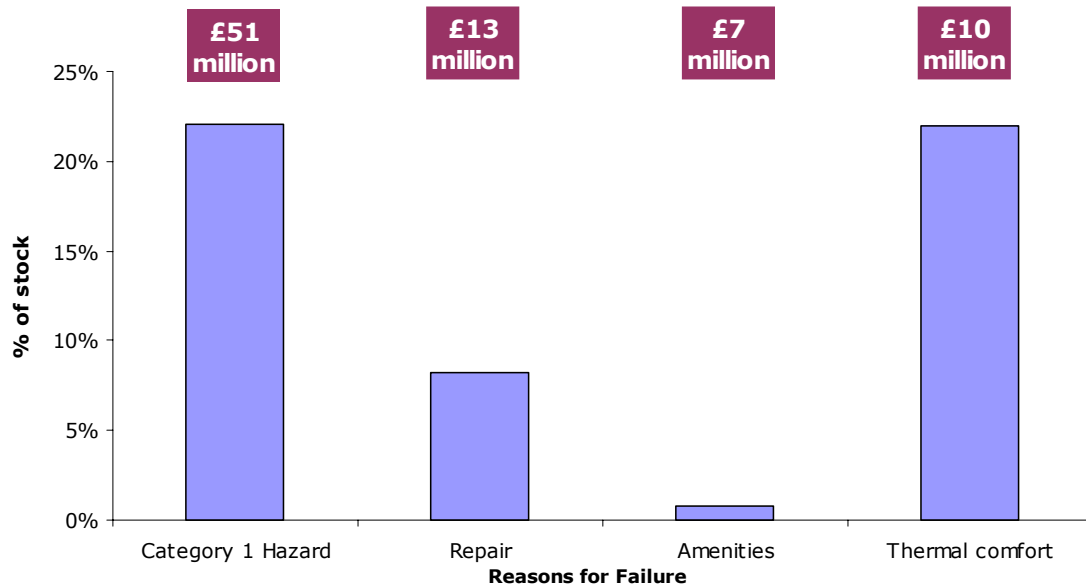
What of the future?

The comprehensive spending review by the government, published in late 2007, has had a significant impact on private sector housing. The principal change relates to the priorities that local authorities are expected be measured against. All previous targets, including Best Value Performance Indicators (BVPIs) have been removed and replaced with Public Service Agreements (PSAs) relating to 198 National Indicators.

Effects of the recent comprehensive spending review are yet to be fully considered but include:

- Removal of the PSA7 target for decent homes (as a national indicator, but monitoring likely to continue at a regional level)

- Flexible target setting for individual authorities from the list of 198 PSA and national targets. Most relevant to the condition of private sector housing are:

  ➢ PSA17 Tackle poverty and promote greater independence and well-being in later life;

  ➢ PSA20 Increase long term housing supply and affordability;

➢ NI 186 Per Capita CO2 emissions

➢ NI 187 Fuel Poverty

The national housing agenda is changing priorities, and moving away from dwelling condition toward:

- provision of sufficient affordable housing for all

- the health, safety and well being of occupiers

- reduction in carbon emissions through improved energy efficiency

Cambridge's private sector housing stock has a higher level of non decency to that found nationally, with poor degree of thermal comfort failure and properties in need of repair being higher than their national comparators. Practical issues regarding improvement to older dwellings still exist, and meeting national priorities especially for improving energy efficiency will be challenging in many cases.

1   Introduction

1.1   Purpose of the survey

1.1.1   Private Sector House Condition Surveys (HCS) are conducted on a regular basis by local authorities as a means of maintaining a detailed picture of housing conditions in the private sector. Such a picture forms a useful evidence base that can feed into statistical returns and other internal reports. The information is also useful in presenting the potential obligations on the authority in relation to current housing legislation, outlined in more detail in Appendix D.

1.1.2   In 2008 Cambridge City Council commissioned a comprehensive House Condition Survey to address this legal requirement, and also to inform the housing strategy and other housing policies. The survey work in Cambridge was conducted in the later part of 2008 and early part of 2009.

1.1.3   In addition to the mandatory duties outlined in Appendix D there are a number of non-mandatory powers available to the Authority under the Housing Act 2004. These include: taking the most satisfactory course of action in relation to category 2 hazards under the HHSRS (hazard categories are defined in chapter 5 of this report); additional licensing of HMOs that do not fall under the definition for mandatory licensing and serving of overcrowding notices. Part 3 of the Housing Act 2004, provides for selective licensing of other private rented sector accommodation subject to certain conditions being met.

1.1.4   This report will provide much of the evidence base, recommended under the ODPM guidance 05/2003, for the Authority's private sector renewal strategy. In addition, information in the report is likely to prove useful as a source for a wide variety of private sector housing issues.

1.2   Nature of the survey

1.2.1   The survey was a sample survey of a nominal 1,000 dwellings and covered all private sector tenures as well as including registered social landlord (RSL) properties. The survey was based on a stratified random sample of addresses in Cambridge, in order to gain a representative picture across the City. A sample of 2,000 was drawn with, in practice, 969 surveys being undertaken in total.

1.2.2   The sample was in fact drawn by the Building Research Establishment (BRE) using their Stock Modelling Procedure. This allocates properties into four bands of projected non decency having regard to information drawn from the Office of National Statistics Census data, the Land Registry and the English House Condition Survey.   Sampling is

concentrated on those properties most likely to be found not decent; 500 properties in the band where non decency is projected to be the highest, 300 in the next band, 200 in the next and 100 in the band where non decency is projected to be lowest.

1.2.3 Each of the 969 surveys conducted contained information on the following areas: General characteristics of the dwelling; condition of the internal and external fabric; provision of amenities; compliance with housing health and safety; age and type of elements; energy efficiency measures; compliance with the Decent Homes Standard and socio-economic information about the household (where occupied).

1.3 Central Government Guidance on house condition surveys

1.3.1 The 1993 Department of the Environment Local House Condition Survey Guidance Manual sets out a methodology that includes a detailed survey form in a modular format, and a step-by-step guide to survey implementation.

1.3.2 The 1993 guidance was updated in 2000 and under the new guidance local authorities are encouraged to make full use of the data gathered from house condition surveys in conjunction with data from other sources. Also included is guidance on the Housing Health and Safety Rating System. The 2008 Cambridge City Council HCS followed the ODPM 2000 guidance.

1.3.3 The Comprehensive Local Authority Stock Survey Information Collation (CLASSIC) software system (a CPC package) was used to analyse the results of the survey and to produce the outputs required from the data to write this report.

1.4 Comparative statistics

1.4.1 Comparisons to the position for all England are drawn from the 2006 English House Condition Survey (EHCS) and the Survey of English Housing 2006-2007, both published by Communities and Local Government (CLG) and available as a download document from their website. Additionally, some comparisons are made with the Family Resources Survey published by the Department for Works and Pensions (DWP).

1.4.2 Whilst the bulk of this report considers all of the tenure groups surveyed (owner occupied, privately rented and RSL) where vulnerability is concerned and the authority's position in respect of the former PSA 7 target which dealt with the number of vulnerable private sector households in non decent homes, only the owner occupied and privately rented stock is included and not RSL dwellings. Even though the PSA 7 target ceased to apply after 1 April 2008, it is still included in the Communities and Local Government (CLG), Departmental Strategic Objective DSO2 (To improve the supply, environmental performance

and quality of housing that is more responsive to the needs of individuals, communities and the economy) indicator 2.8 (percentage of vulnerable households in decent houses in the private sector).

1.5 Statistical Variance and Standard Deviation

1.5.1 By definition, sample surveys are seeking to give an accurate representation of a larger number of dwellings than those surveyed. The total to be represented is referred to in statistical terms as the 'population', and in the case of this survey the population is all private sector dwellings in Cambridge. Because any figure from a survey is based on a sample, it will be subject to some degree of variation. This statistical variance can be expressed in terms of 'confidence limits' and 'standard deviation'.

1.5.2 Standard deviation is the amount by which a given figure may be inaccurate either above or below its stated level. Confidence limits state that if the entire survey process were repeated, out of how many of these repetitions would there be confidence in staying within the variation. Traditionally, and in the case of this report, 95% confidence limits have been used, which state that if the survey were carried out 100 times, in 95 cases the standard deviation would be a given amount.

1.5.3 It should be borne in mind, therefore, that the figures in this report are estimates, and it is for this reason that figures are rounded, as described below. More detail on the calculation of standard deviation is given in the appendices.

1.6 Presentation of figures

1.6.1 Due to the nature of statistical variation, as outlined above, it is not necessary to quote each individual figure to the nearest dwelling, as this implies a spurious level of accuracy. As with the English House Condition Survey (EHCS), figures in this report are either quoted to the nearest 100 dwellings or 10 dwellings, dependent upon the size of any given figure. Percentages within the report are only quoted to 1 decimal place for the same reason.

2   Profile of the private sector housing stock

2.1   Size of the dwelling stock

2.1.1   At the time of the survey there were an estimated 43,500 private sector dwellings in Cambridge. The 43,500 total for the stock is the current estimated private sector and RSL stock total, as provided by Cambridge City Council and based on Council Tax Records. Individual weights were created for each dwelling surveyed, in accordance with the stratified sampling regime, such that each survey would represent a specific number of dwellings within Cambridge. Details of the sample stratification and weighting method are given in the Appendices.

2.2   Age of the dwelling stock

2.2.1   The age profile of the 43,500 owner occupied, privately rented and RSL stock in Cambridge differs from the national average with higher proportions of pre 1919 and 1945 to 1944 dwellings but with lower proportions in all other categories.

Figure 2.1 Dwelling age profile England and Cambridge
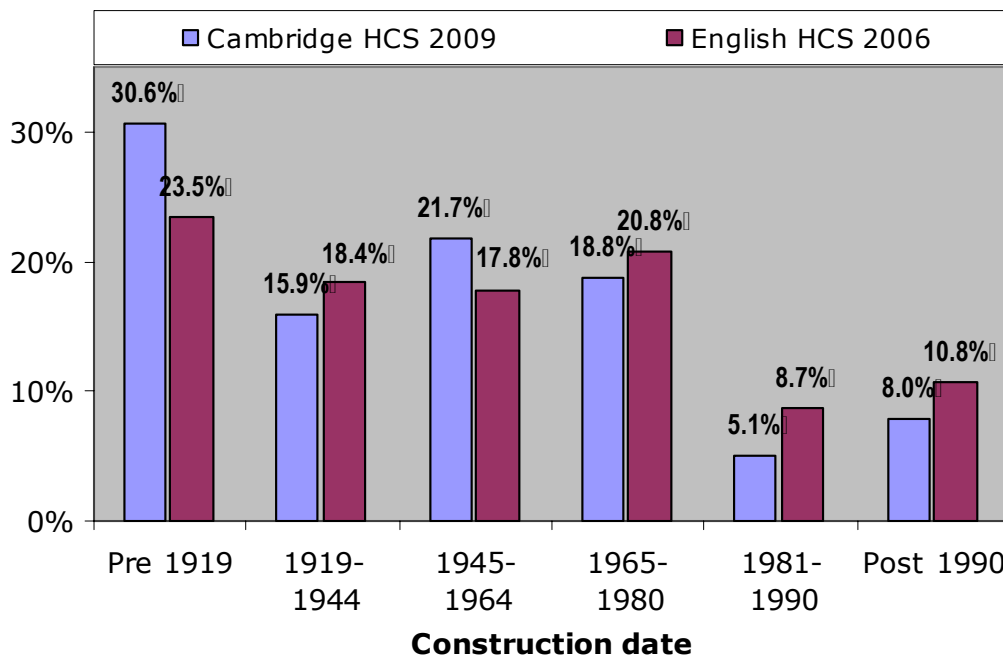
Source: 2009 House Condition Survey & EHCS 2006

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2.3 Dwelling type profile

2.3.1 The building type profile in Cambridge again differs from the national pattern with higher proportions of terraced and semi-detached properties and high rise purpose built flats (6 or more storeys). There are lower levels of the remaining dwelling types, particularly detached houses and bungalows.

Figure 2.2 Dwelling type profile Cambridge and England
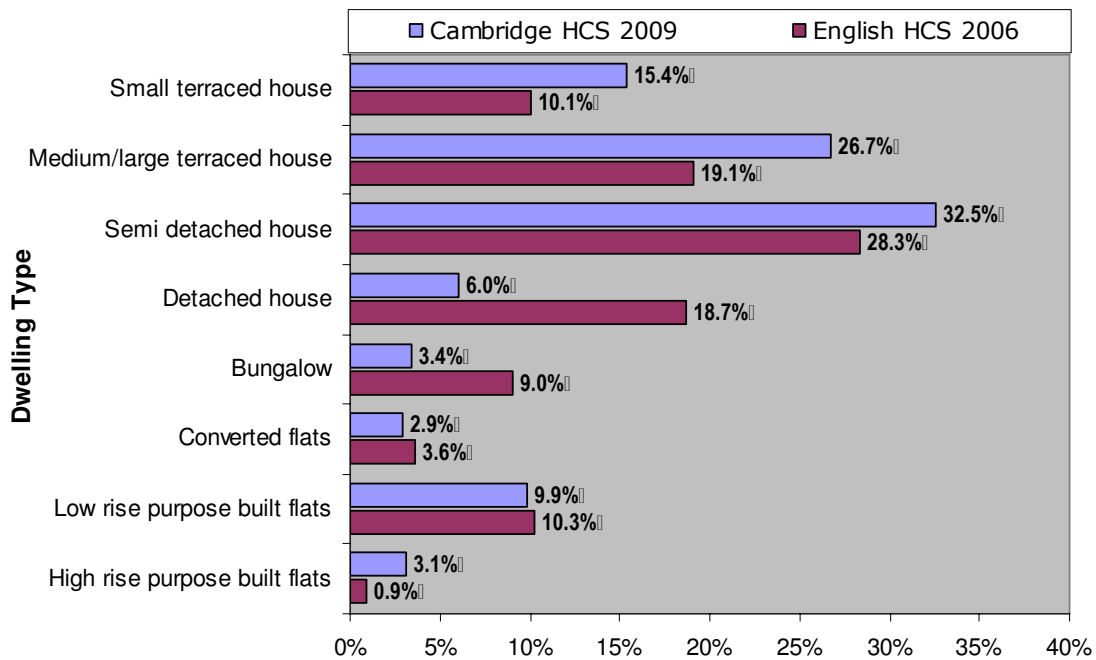
Source: 2009 House Condition Survey & EHCS 2006

2.4 Tenure

2.4.1 Table 2.1 draws tenure comparisons between the stock profile for Cambridge and that for England as a whole.

Table 2.1 Tenure proportions

Tenure	Dwellings	Percent	EHCS 2006
Owner occupied	26,000	53%	70%
Privately Rented	12,300	25%	12%
Private Sector Stock	*38,300*	*78%*	*82%*
Housing Association (RSL)	3,200	7%	8%
Local Authority	7,600	15%	10%
Social Housing	*10,800*	*22%*	*18%*
All Tenures	49,100	100%	100%

Source: 2009 House Condition Survey & EHCS 2006

2.4.2   The breakdown given in Table 2.1 includes local authority tenure for the sake of comparative purposes with the EHCS.

2.4.3   The tenure profile in Cambridge differs from the national average in the level of privately rented housing is significantly higher at 25% compared with 12%, which will be partly due to the student population within the City as well as a buoyant labour market which assists a high demand for people wanting to rent. In addition, the high cost of property purchase within the City and an average purchase cost to average earnings ratio of approximately 9:1, means that people looking for accommodation will consider all tenure alternatives. The overall proportion of social housing is higher at 22% compared with 18% nationally. This does have implications for future policy in that the high proportion of privately rented housing may potentially lead to an increase in the workloads on private sector housing staff.

2.5   Tenure and age comparisons

2.5.1   Figure 2.3 illustrates the differing dwelling age profile between the main private tenures.

Figure 2.3 Tenure by date of construction
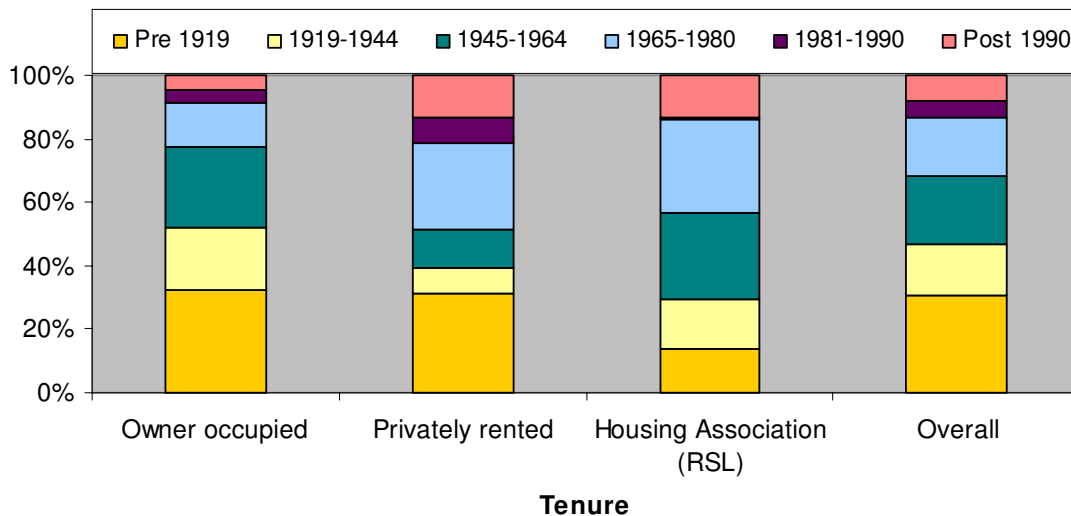
Source: 2009 House Condition Survey

2.5.2   As would be expected, the owner occupied stock (at 53% of all dwellings) has a similar age profile to the overall private sector stock position, with 52.3% living in homes built before 1944 compared with 46.6% overall. Both the owner occupied and the privately rented sector stock has similar proportions of pre 1919 dwellings (32.5% compared with 31.1%).

2.6   Dwelling Use and Houses in Multiple Occupation

2.6.1   Dwellings may be one of several different building types but these types may have different uses, for example a semi-detached house may have been converted into flats or be occupied as a House in Multiple Occupation (HMO).

Table 2.2 Dwelling use

Dwelling use	Dwellings	Percent
House	32,170	77.5%
Purpose Built Flat	3,390	8.2%
Converted Flat	720	1.7%
HMO	4,960	12.0%
Licensable HMO	260	0.6%
Total	**41,500**	**100%**

Source: 2009 House Condition Survey

2.6.2   The vast majority of dwellings (77.5%) are houses generally occupied as built. Of the remainder, most are purpose built or converted flats. An estimated 12.6% of dwellings are HMOs, representing 5,220 buildings being used to house multiple households. The national average for HMOs is approximately 2%.

2.6.3   The definition of HMO is that used in the Housing Act 2004, of which only some will potentially be subject to mandatory licensing (described below). Some converted flats are now within the new HMO definition as it explicitly includes converted flats where the work does not meet specified standards (generally the Building Regulations 1991) and where less than two thirds are owner occupied.

2.6.4   HMOs form a substantial part of the private sector stock in Cambridge stock with 260 being identified as potentially licensable HMOs. It should be borne in mind, however, that figures from the survey are estimates derived from the sample of properties inspected and are therefore subject to variation. It is important that the local authority continues to adopt measures to ensure that any potentially licensable HMOs are brought to light.

2.7   University Accommodation

2.7.1   A significant proportion of the dwelling stock within Cambridge is owned by educational establishments and provided as University accommodation. It is estimated that there are just over 1,000 halls of residents, flats and similar accommodation within the City, owned as University accommodation. As the stock condition survey is a dwelling based survey it is not possible to gain a reliable figure on how many students, staff and other persons live within this accommodation.

2.7.2   Whilst there is a substantial amount of accommodation owned by and used as University accommodation, this does not have the capacity to accommodate all students attending University. From the survey it has been possible to estimate that there are a further 1,040 HMOs within the City being used as housing by students.

2.8   **Vacant dwellings**

2.8.1   Vacant dwellings can be difficult to identify and there are frequently problems in gaining access. By using a combination of sources, including the survey, Council Tax lists, the Census and the council's own figures, it has been possible to estimate that there are 310 vacant dwellings, 0.7% of the private housing and RSL stock within Cambridge. The national average is approximately 4.1%.

2.8.2   Based on the results taken from the stock condition survey it is estimated that 70 (0.2%) of the private sector and RSL dwellings within Cambridge are long-term vacant, defined as any dwelling vacant for six months or more, or subject to unauthorised occupation. However, as figures from the survey are estimates derived from the sample of properties inspected they are subject to variation.

Table 2.3 All dwellings by Occupancy Status

Vacancy Status	Dwellings	Percent
Occupied	41,190	99.3%
Unlicensed occupation	0	0.0%
Vacant awaiting new owner	80	0.2%
Vacant awaiting new tenant	110	0.3%
Vacant being modernised	40	0.1%
New, never occupied	10	0.0%
Long term vacant*	70	0.2%
Total vacant dwellings	**310**	**0.7%**
Total stock	**41,500**	**100.0%**

Includes vacant dwellings to let where they are being modernised prior to letting or have not been let for over 6 months

2.8.3   The overall estimated proportion of long term vacant properties (taken from the survey results) at 0.2% is well below the average for England (approximately 1.5%). It is understood that the Council has instituted a programme to facilitate the bringing back in to use of 12 empty properties per year.

3 Profile of Residents

3.1 Introduction

3.1.1 This chapter will look at some of the key characteristics of households within the surveyed dwellings to determine whether links exist with dwelling condition. As the data can only be collected from occupied dwellings the results are set against a total occupied stock of 41,190.

3.2 Age Profile

3.2.1 The following chart examines the age distribution, of heads of household within the stock, both for Cambridge and for England as a whole.

Figure 3.1 Age of head of household Cambridge and England
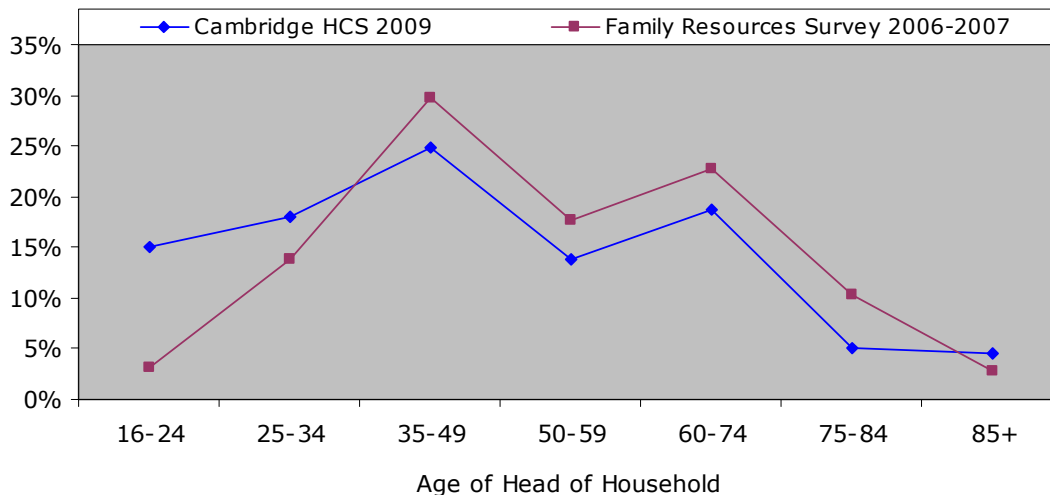
Source: 2009 House Condition Survey & Family Resources Survey 2006-2007

3.2.2 Data collected as part of the survey indicates that the age profile of heads of household in Cambridge differs from the national position. Due mainly to the large student population, there are much higher proportions of heads of household in those age bands 16 to 34 (33.1% compared with 17%) but with lower proportions between the ages 35 to 84, although the 85+ age band shows a higher proportion at 4.6% compared with 2.8%. This could have implications for private sector housing policy due to the potentially greater need for support typically associated with older households. It is also understood that significant growth planned for the City between now and 2021 is expected to have an impact on the demographic profile of the City which will also have implications for policy direction.

3.3 Household types

3.3.1 The following table gives the distribution of different household types, within the stock, and compares this to England as a whole. Household types are derived from interviewing occupiers and determining the number of adults and children within the household. These figures are then used to determine household type. For example, two or more adults who are not a couple are considered an 'other multi-person household' for the purposes of this analysis which follows the convention used in the Survey of English Housing.

Table 3.1 Household type distribution

Household type	Cambridge 2009		England 2007
Couple no Dependent Child	14,350	35%	37%
Couple with Dependent Child	8,400	20%	22%
Lone parent with dependent child	670	2%	6%
One person household	13,190	32%	27%
Other multi-person household	4,580	11%	6%
Vacant	310	1%	2%
Total Household Type	**41,500**	**100%**	**100%**

Source: 2009 House Condition Survey & Survey of English Housing 2006/2007

3.3.2 The distribution of households by type is broadly similar with couple no dependent child and couple with dependent child, but shows marked differences for one person and other multi-person households which have higher proportions, and particularly for lone parent with dependent child where there are much lower proportions than is found nationally (2% compared with 6%).

3.4 Students and household typology

3.4.1 The figures in table 3.1 above and figure 3.1 on the previous page reflect the large student population within the City. 'Other multi-person households' are twice the national average and this household type represents three or more adults (18+) living as a household with no dependent children. In most cases this will be three or more students sharing in halls or shared houses. There are also around 20% more one person households in Cambridge, which will include students living in flats or individual units in halls of residents, where they are so sub-divided.

3.5 Length of residence

3.5.1 The impact of transience is clearly shown, with the majority of residents (55.1%) having lived at their current address for between 1 and 5 years and an estimated 18.1% having lived at the same address 20 years or more. Similar data taken from the Survey of English Housing 2006/2007, shows that 36% of residents had lived in their

dwellings for between one and five years, which compares with the 39% for the authority area as a whole.

3.6   Income

3.6.1   Residents were asked about the income of the head of household and, where appropriate, the partner of the head of household. Responses were combined to give a gross household income and the results of these are given below.

Figure 3.2 Household incomes in bands
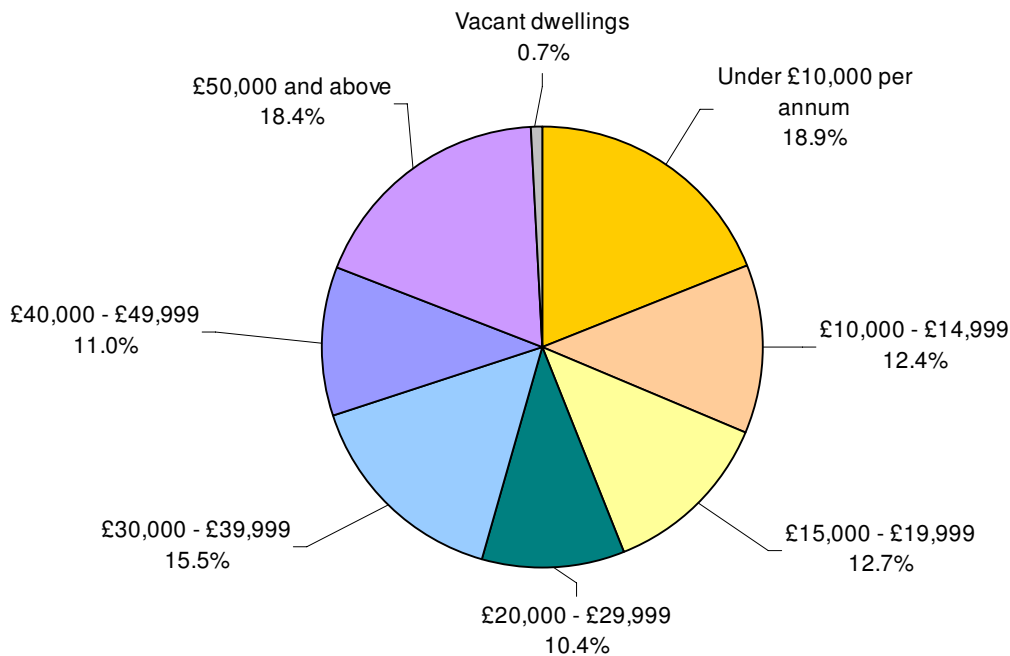
Source: 2009 House Condition Survey

Table 3.2 Number of households within each income band

Income band	No. of households Cambridge 2009		Family Resources Survey*
Under £10,000 per annum	7,840	18.9%	20%
£10,000 - £14,999	5,160	12.4%	15%
£15,000 - £19,999	5,260	12.7%	11%
£20,000 - £29,999	4,310	10.4%	17%
£30,000 - £39,999	6,430	15.5%	13%
£40,000 - £49,999	4,550	11.0%	9%
£50,000 and above	7,640	18.4%	15%
Vacant dwellings	310	0.7%	**n/a**
Total	**41,500**	**100%**	**100%**

* Source: Family Resources Survey 2006/2007 Department of Works and Pensions

Source: 2009 House Condition Survey

3.6.2 The figures in the chart and the table indicate that there are lower proportions than the national average of households with an income of less than £30,000 but with generally higher proportions for incomes above that, in particular with the income of £40,000 to £49,999. There are, however, still significant numbers of households within Cambridge with an income of less than £15,000 (31% compared with 35% nationally), which will potentially make affordability a significant issue affecting repair and improvement in the private sector dwelling stock.

Table 3.3 Average weekly income - Cambridge and England

Tenure	Cambridge HCS 2009	England 2005	Consumer Price Index Inflation Factored
Owner occupied	£739	£506	£550
Privately rented	£483	£377	£410
Housing Association (RSL)	£424	£234	£254
Average	£549	£372	£405

Source: 2009 House Condition Survey

3.6.3 These figures demonstrate that recent average incomes in Cambridge for all tenure groups are substantially higher than the England 2005 average and also when the 2005 national averages have been index linked against the Consumer Price Index to January 2009.

3.7 Income and age of head of household

3.7.1 Variations in income level are often associated with social characteristics such as the age of head of household, household type, disability etc. This section will look at the data from the survey to see what links can be shown and the possible associations between these links and unsatisfactory housing conditions described later.

Figure 3.3 High and low incomes by age of head of household
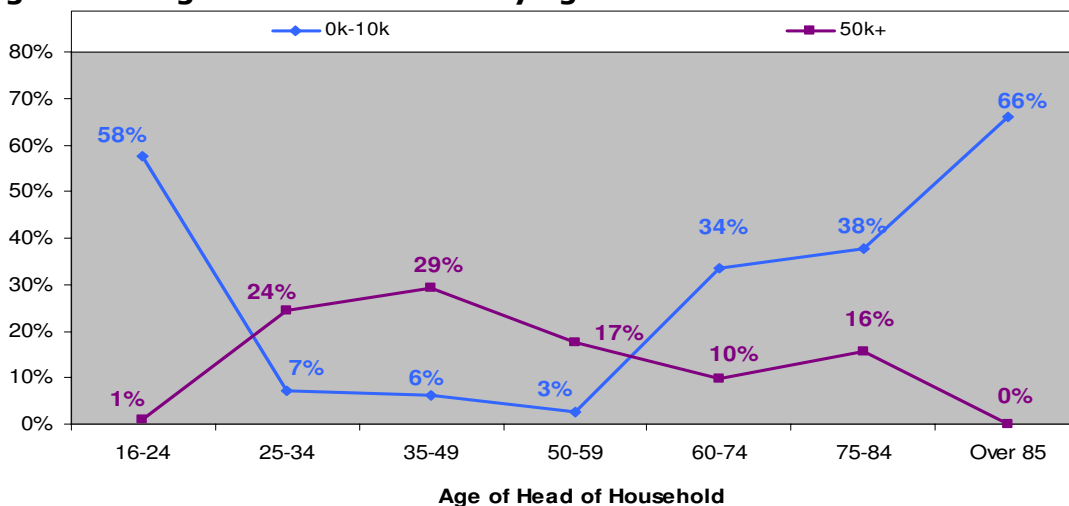
Source: 2009 House Condition Survey

3.7.2   The chart illustrates that low income (annual household income below £10,000 per annum) is mostly associated with the older age groups (60 years and older) and with heads of household under 24 years. As is commonly the case, households between 25 and 59 years have the lowest proportion of low incomes. The greatest proportion of high incomes is found in the 35 – 59 age bands. This pattern suggests that the greatest need for assistance to vulnerable occupiers is at the youngest and oldest ends of the age range.

3.8   Income and household type

3.8.1   The following table compares low and high annual household income figures by household type.

Table 3.4 Low and High household incomes by household type

Household Type	Low income (household income less than £10,000 per annum)	Medium income (household income £10,000 - £30,000 per annum)	High income (household income above £30,000 per annum)
Couple no Dependent Child	4%	44%	52%
Couple with Dependent Child	4%	33%	63%
Lone parent with dependent child	13%	87%	1%
One person household	51%	37%	12%
Other multi-person household	24%	50%	26%

Source: 2009 House Condition Survey

3.8.2   The table does show that clear associations exist. One person households are most strongly associated with low incomes, with high proportions of couple with dependent child and couple no dependent child associated with higher incomes.

3.9   Income and residents with disabilities

3.9.1   It is important to note that this survey used a broad definition of disabled person. This included residents that are frail elderly, as well as registered disabled persons and other persons with a disability.

3.9.2   There is a strong association between disability and income, as 49.1% of households with a disabled resident have a household income below £10,000 per annum, compared with 16.8% where there is no person with a disability. This represents approximately 1,400 such dwellings in Cambridge. The residents of these dwellings may not only have physical difficulty dealing with repairs, but may be less likely to be able to afford alternative provision.

3.10 Benefit receipt

3.10.1 In addition to income, householders were asked if anyone within the dwelling was in receipt of one or more of a range of means tested benefits. Overall 4,500 (11%) households are estimated to be in receipt of a benefit. At the national level 17% of private sector households have at least one resident in receipt of a benefit which is significantly higher than that found within this survey. The distribution of benefit receipt by tenure shows the highest proportion for the RSL tenure type (26%) followed by the privately rented sector (11%) and the owner occupied sector (10%).

Figure 3.4 Benefit receipt by tenure
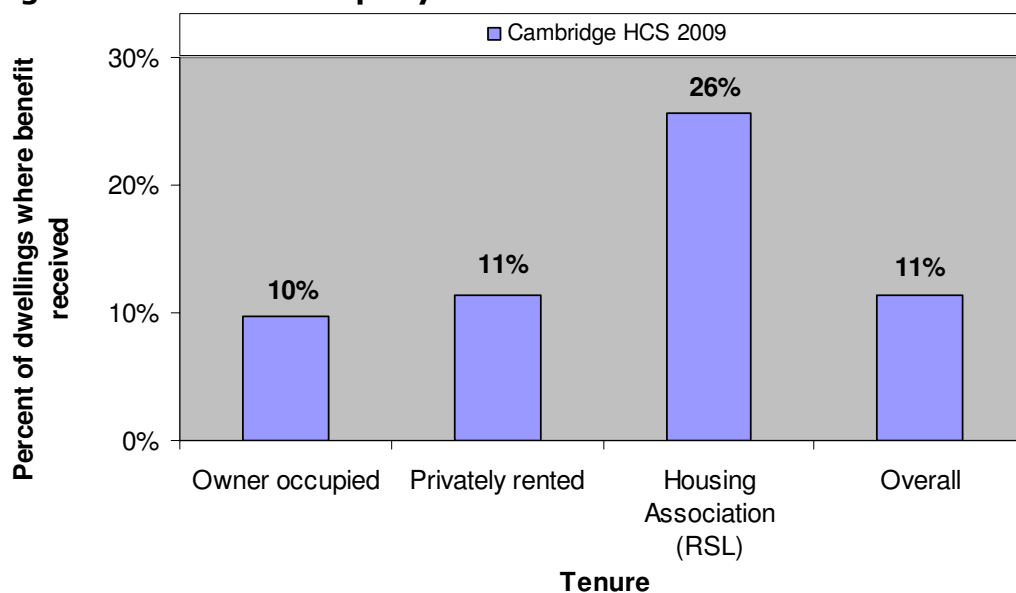
Source: 2009 House Condition Survey

3.11 Value of dwellings and equity

3.11.1 Owner occupiers were asked about the value of their dwelling, the level of any outstanding mortgage, any other debt and the consequent total equity. This was to allow the relationship between available equity and dwelling condition to be examined. Such relationships are relevant to the Regulatory Reform Order 2002; Government guidance focuses on local authorities moving towards facilitating loans/equity release rather than giving grants when offering financial assistance to householders.

3.11.2 The average value of a dwelling in Cambridge is £213,000. This figure is based on the average sale prices in Cambridge compiled by the Land Registry from October to December 2008. The figure is well above the average value across UK of £159,000. Of the four authorities in East Anglia, Cambridge has the highest average property value (the county average is £190,000).

3.11.3   The average mortgage level for owner-occupied dwellings in Cambridge, based upon occupier responses, is £109,000 resulting in an average equity of £104,000 per dwelling using the Land Registry average value.

3.11.4   Respondents were asked if they would be interested in a shared ownership scheme, with only 1.7% indicating that they would be.

3.12   Residents with disabilities

3.12.1   Residents were asked if any member of the household suffers from a long term illness or disability. It is estimated from the results of this question that 2,600 (6.3%) occupied dwellings have at least one resident with a long term illness or disability. Residents were further asked to choose the condition that best described their disability and the following chart illustrates the results of this.

3.12.2   The definition of disability used is very broad and it can be seen from the graph that 64.1% of people who responded stated that their disability was either walking using a frame or walking unaided, but unsteadily. The vast majority of these residents are frail elderly, but do represent people who are likely to have specific housing needs.

Figure 3.5 Residents with disabilities by type
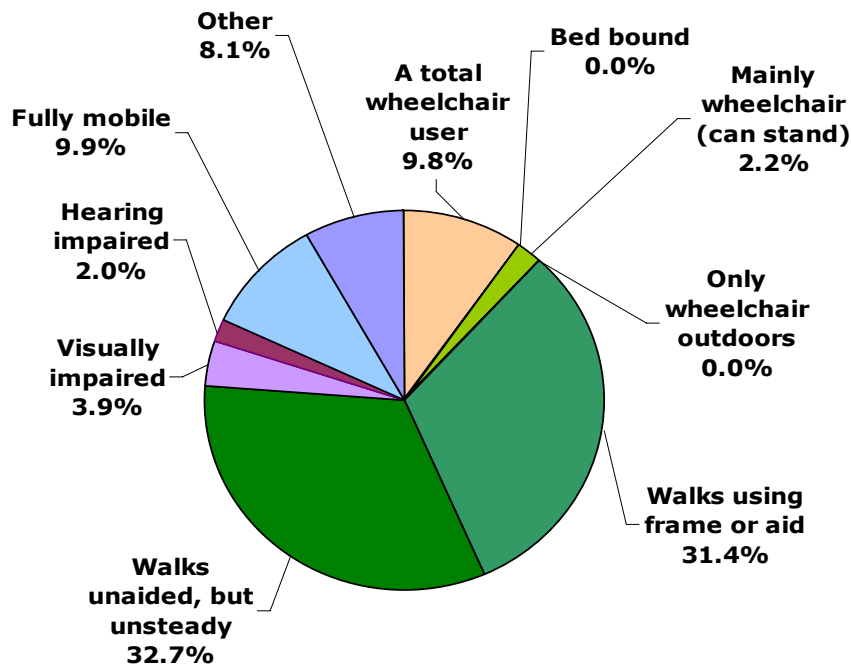
Source: 2009 House Condition Survey

3.12.3   In order to address the specific housing needs of residents with a disability, the provision of Disabled Facilities Grants (DFG) by local authorities remains mandatory. The potential requirement for

adaptations for disabled occupiers and the potential DFG demand are discussed in more detail below.

3.13   Adaptations

Where it was indicated that a member of the household suffered from a long term illness or disability, the survey form included a section regarding the existing provision of adaptations and also whether the occupier felt there was the need for further adaptations.

3.13.1   The provision of adaptations for disabled residents is mandatory under the Disabled Facilities Grants (DFG) scheme, and local authorities must consider this when assigning budgets to housing provision. There are two factors that mitigate this demand: firstly, DFGs are subject to means testing and secondly, the Council must consult with Social Services for an assessment by an Occupational Therapist who will decide whether an adaptation is necessary and appropriate.

3.13.2   The following chart illustrates the proportion of dwellings, with residents who have existing adaptations and their perceived need for further adaptations; although it should be made clear that the following need data has not been included as a direct result of a formal assessment of need. The chart is broken down by adaptation type.

Figure 3.6 Disabled adaptations present and required

Proportion of all dwellings with a resident who is disabled
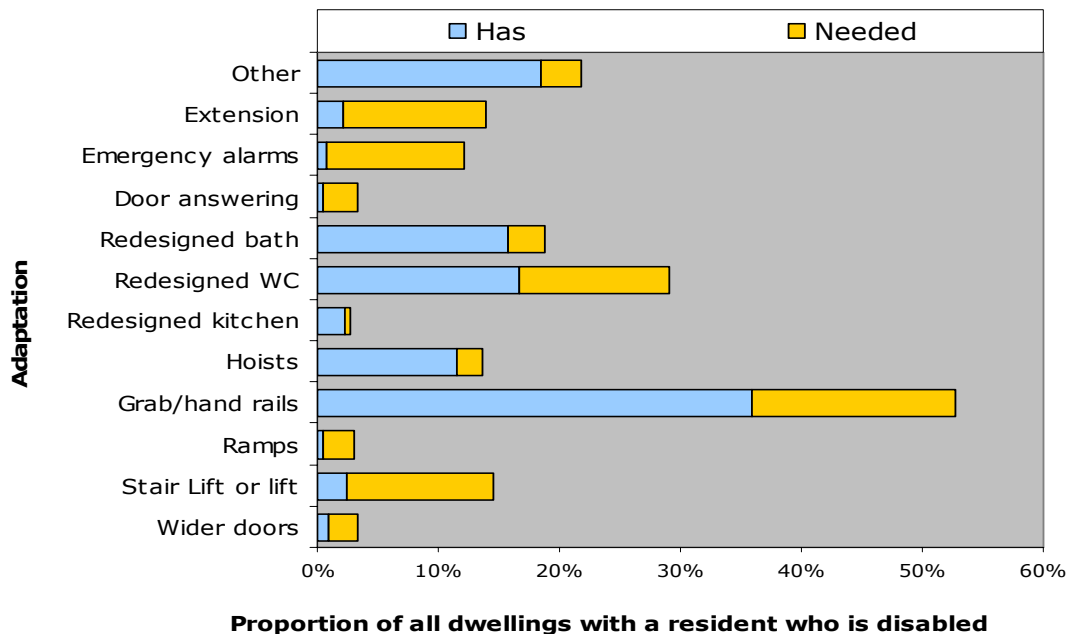
Source: 2009 House Condition Survey

3.13.3   The chart shows that grab/hand rails have the highest level of current provision, present in 36% of dwellings occupied by a resident with a

disability, followed by redesigned WC at 18%. The most needed are again grab/hand rails at 17% followed by redesigned WC (12%). When looking at the ratio of 'need' to 'have', the category 'emergency alarm' has the highest rate followed by the provision of a door answering system.

3.13.4 The following table takes the figures for adaptations a step further and looks at the numbers of adaptations needed and the cost of carrying out those adaptations. Costs are estimated averages for each of the elements listed below. As a full test of resources is the only accurate way of providing a figure for costs after means testing, some assumptions have been made in order to provided an estimated figure, with those on an income of less than £10,000 assumed to have a nil contribution, those on an income of between £10,000 and £25,000 having a 50% contribution and those on an income above that paying the full amount.

Table 3.5 Cost of adaptations for the disabled

Adaptations	Adaptations*	Adaptations Cost	Cost after means testing
Wider doors	100	£72,000	£27,000
Stair Lift or lift	300	£919,000	£770,000
Ramps	100	£169,000	£67,000
Grab/hand rails	400	£211,000	£127,000
Hoists	100	£107,000	£46,000
Redesigned kitchen	10	£85,000	£0
Redesigned WC	300	£772,000	£579,000
Redesigned bath	100	£371,000	£150,000
Door answering	100	£222,000	£80,000
Emergency alarms	300	£285,000	£244,000
Extension	300	£2,948,000	£2,476,000
Other	100	£42,000	£13,000
Total	**2,210**	**£6,203,000**	**£4,579,000**

Figures are for numbers of adaptations, some dwellings may need multiple adaptations

Source: 2009 House Condition Survey

3.13.5 The total cost of all adaptations that could potentially be fitted to benefit residents with a disability is just over £6.2 million. When means testing has been applied this total reduces to just under £4.6 million, which reflects the fact that there are residents with disabilities with average or above average incomes.

3.13.6 It should be considered that two factors will affect the £4.6 million figure in terms of DFGs. Firstly, the figure does not contain any reduction for occupiers that would not be considered after a visit by an occupational therapist, as this cannot easily be factored in. Secondly, many of the residents may not be aware of the need for an adaptation, may not want an adaptation or may not be aware that DFGs are available. The £4.6 million figure is an estimate of the amount that

would need to be spent by the authority on adaptations, although this would be spread over a period of five years. The figure is, however, indicative only and could vary substantially if there are significant adaptations for children (applications for which are no longer subject to the test of resources), which would significantly increase the authorities overall contribution. The figure does, however, give some indication of potential demand that need to be taken into account with future DFG budgets.

3.14 Ethnic origin

3.14.1 Residents were asked to specify the majority ethnic origin type within their household and the results are given in the following table:

Table 3.6 Ethnic origin

Ethnic Origin	Dwellings	Per cent
White British	33,640	81.06%
White Irish	660	1.59%
White Other	4,020	9.69%
White/Black Caribbean	20	0.05%
White/Black African	20	0.05%
White/Asian	70	0.17%
Other mixed	110	0.27%
Indian	330	0.80%
Pakistani	470	1.13%
Bangladeshi	0	0.00%
Asian Other	640	1.54%
Black Caribbean	240	0.58%
Black African	20	0.05%
Black Other	10	0.02%
Chinese	500	1.20%
Other	440	1.06%
Vacant	310	0.75%
Total	**41,500**	**100.0%**

Source: 2009 House Condition Survey

3.14.2 The majority of households described their ethnic origin as being predominantly White British (81.1%). The next largest group is households giving their origin as White Other (9.7%). The other ethnic groups are represented at such low levels they are not statistically robust enough to provide meaningful comparisons.

3.15 Repair Issues to Dwelling

3.15.1 Residents were asked if they were aware of any repair issues to the dwelling within which they lived. A total of 6,400 (16%) indicated that they were aware of repair issues, with an average cost to remedy, as estimated by the occupier, of £9,600. The distribution of estimated repair costs is given in the following table:

Table 3.7 Occupiers estimated cost of repair issues

Repair Cost Band	Percentage
£1 to £4,999	72.0%
£5,000 to £9,999	6.8%
£10,000 to £14,999	10.3%
£15,000 to £19,999	5.0%
£20,000 to £24,999	0.5%
£25,000 +	5.4%

Source: 2009 House Condition Survey

3.15.2 Where it was indicated that repair work was required owner occupiers were asked if they could afford to carry out the work or not with 74% saying that they were not affordable. The fact that 74% of households have identified housing condition issues but feel that no option is affordable reflects the level of households in receipt of benefit and/or on low incomes.

3.15.3 Residents were asked if they would consider a flexible loan for repairs, with 7.3% indicating that they would be interested and, in addition, whether they would be interested in equity release as a method of facilitating the cost of repair, works with 3.9% indicating that they would.

3.15.4 When asked if they had received a grant or loan from the Council previously, 1.4% said that they had.

3.16   Overcrowding

3.16.1 In the ODPM report Overcrowding in England: the national and regional picture it states that "Households that are statutorily overcrowded are so rare that a reliable estimate of numbers cannot be produced at a national (England) level even using data from the Survey of English Housing and the 2001 English House Condition Survey, which are relatively large surveys. It follows that estimates for individual regions cannot be produced using these sources".

3.16.2 As with the above comments, this survey, which is considerably smaller than both of those mentioned, cannot produce any results that would be of any statistical relevance. Given that and issues revolving around the sample size, this section attempts to provide some basic information on the level of estimated overcrowding within Cambridge.

3.16.3 The existing statutory overcrowding standards were set in 1935 and restated in Part 10 of the Housing Act 1985, and include both a room standard and a space standard.

3.16.4 In the Court of Appeal case Elrify v. City of Westminster Council (2007) it was established that both of the Housing Act measurements must be calculated to establish if a statutory overcrowding situation existed.

3.16.5   The Survey of English Housing uses a Bedroom standard as an indicator of occupation density, allocating a number of bedrooms to each household according to the age, sex and marital status composition coupled with the relationship of the members to one another.

3.16.6   If the Housing Act overcrowding measurement is taken, the estimated level of overcrowding by sub-area is contained within the following table:

Table 3.8 Statutory measurement of overcrowding

Area Name	Overcrowded	Not Overcrowded
Cambridge	2.6%	97.4%

Source: 2009 House Condition Survey

3.16.7   Looking at the Survey of English Housing bedroom standard of occupation density, the following table again provides a breakdown by sub-area:

Table 3.9 Bedroom standard measurement of overcrowding

Area Name	Overcrowded	Not overcrowded
Cambridge	2.7%	97.3%

Source: 2009 House Condition Survey

3.16.8   The statutory standard (2.6%) has a slightly lower level than the bedroom standard (2.7%). The bedroom standard being higher is to be expected as the bedroom standard uses a more limited room indicator of occupation density. It must, however, be taken in the context described by the ODPM report mentioned above that a reliable estimate of numbers cannot be produced. Both these systems result in an estimated total of between 1,070 and 1,100 overcrowded dwellings within the City. However, this data should be treated with caution.

3.16.9   Sections 139 to 144 of the Housing Act 2004 relate to the service of an overcrowding notice. It applies to an HMO if it has no interim or final management order in force and it is not required to be licensed under Part 2 of the Act. No HMOs were found to be overcrowded.

3.16.10 Under the Housing Health and Safety Rating Scheme, one of the elements to be considered is that of Crowding and Space, which takes into account a number of matters that are deemed likely to affect the likelihood and harm outcomes. This also indicates that the average likelihood of an illness or injury occurring is 1 in 8,000, which indicates the low average potential for harm. No properties during the survey were scored under this heading.

4   The Decent Homes Standard

4.1   Introduction

4.1.1   It is Government policy that everyone should have the opportunity of living in a "decent home". The Decent Homes Standard contains four broad criteria that a property should:

> A - be above the legal minimum standard for housing, and

> B - be in a reasonable state of repair, and

> C - have reasonably modern facilities (such as kitchens and bathrooms) and services, and

> D - provide a reasonable degree of thermal comfort (effective insulation and efficient heating).

4.1.2   If a dwelling fails any one of these criteria it is considered to be "non decent". A detailed definition of the criteria and their sub-categories are described in the ODPM guidance: "A Decent Home – The definition and guidance for implementation" June 2006.

4.1.3   The revised guidance does not substantially change the criteria for the decent homes standard laid out in 2002 with the exception of thermal comfort. This has changed from a calculated, energy efficiency based approach to a simpler, but more practical system which takes into account the heating systems, fuel and insulation in a dwelling to determine if it provides adequate thermal comfort.

4.1.4   Obligations under the Decent Homes Standard were originally directed solely at the social housing sector. Under "The Decent Homes Target Implementation Plan" June 2003 – as modified April 2004, the ODPM outlined its commitments under Public Service Agreement (PSA) 7. These stated that PSA 7 will have been met if:

- There is a year on year increase in the proportion of vulnerable private sector households in decent homes;

- If the proportion of vulnerable private sector households in decent homes is above 65% by 2006/07.

- If the proportion of vulnerable private sector households in decent homes is above 70% by 2010/11.

- If the proportion of vulnerable private sector households in decent homes is above 75% by 2020/21.

4.1.5   In the Comprehensive Spending Review 2007, the Government set out its intention to scrap the PSA7 target with effect from 1 April 2008.

This has now been implemented. However, the percentage of vulnerable households in decent homes in the private sector remains part of CLG's Departmental Strategic Objectives (DSO2, 2.8)

4.1.6 Accordingly the Cambridge house condition survey collected adequate and appropriate data to allow judgement of dwellings across all tenures against the Decent Homes Standard.

4.2 Change of emphasis and the Housing Act 2004

4.2.1 Whilst the changes under the revised definition and guidance for the decent homes standard apply, there has been a change in criterion A of the standard from April 2006. Prior to this change criterion A used the Housing Fitness Standard as the measure of whether a dwelling meets the minimum legal standard. From April 2006 the new Housing Health and Safety Rating System (HHSRS) under Part 1 of the Housing Act 2004 replaced the existing statutory fitness standard.

4.2.2 The new system assesses "hazards" within dwellings and categorises them into Category 1 and Category 2 hazards. Local housing authorities will have a duty to take action to deal with Category 1 hazards. The Housing Health and Safety Rating System also applies to the Decent Homes Standard – if there is a Category 1 Hazard at the property it will fail Criterion A of the standard.

4.2.3 As the new HHSRS regime came into effect in April 2006, this report will present findings relating to decent homes using Category 1 Hazards only. Detailed definitions of both the Rating System and Housing Fitness Standard are given in the following chapter.

4.3 The meaning of non decency

4.3.1 Concern has been raised by a number of local authorities over the term 'non decent', which tends to conjure up images of dilapidated houses and serious disrepair issues. It is the case, however, that a dwelling can fail the Decent Homes Standard on a single item, such as the heating system, whilst being in a very good state of repair. The owner of such a property may well not think that there is anything wrong with their home.

4.3.2 It is possible to regard the Decent Homes Standard as an ideal standard or a level to aspire to. In practice, it is a relatively low standard and failure to meet the standard should be regarded as a trigger for action. In some cases, however, it may not be practical to make a dwelling decent and it may also not be in the best interests of the occupiers to do so. The guidance on recording of outcomes recognises that there may be instances where it is appropriate to record cases where work to achieve only partial compliance with the standard has been achieved, or where non compliance results from the occupier refusing to have work carried out.

4.4 Overall level of non decency

4.4.1   Based on the House Condition Survey data 15,200 dwellings (36.8%) can be classified non decent. In England as a whole the rate is 35.3% (owner occupied, privately rented and RSL stock) making the Cambridge rate slightly higher than the national average.   The all England figure is taken as the proportion of non decent private sector dwellings from the EHCS 2006, which used the HHSRS for criterion A for the first time. This led to a significant increase in criterion A failure (homes not meeting the statutory component of the Decent Homes standard) from just over 4% under the old fitness standard to 22.4% under the HHSRS Category 1 hazard rate, increasing the overall non decency rate nationally from 26.8% for privately and RSL occupied dwellings in 2005 to 35.3% in 2006.

4.4.2   The Decent Homes Standard contains 4 criteria. The table below gives a breakdown of the reasons for failure.

Table 4.1 Reasons for failure of dwellings as a decent home.

Reason	Dwellings Cambridge	Percent (of non decent)	Percent (of stock)	Percent (EHCS 2006)
Category 1 hazard dwellings	9,000	59.1%	21.8%	22.4%
In need of repair	3,900	25.6%	9.4%	7.9%
Lacking modern facilities	700	4.6%	1.7%	2.2%
Poor degree of thermal comfort	7,900	51.8%	19.0%	16.7%

Source: 2009 House Condition Survey & EHCS 2006

4.4.3   The percentages by non decent do not total 100%. This reflects the fact that the categories are not mutually exclusive; although any dwelling can fail on just one criterion, it may fail on two or more.

4.4.4   In Cambridge, the hierarchy of reasons for failure follows the national profile with a higher rate of failure for Category 1 hazards than for thermal comfort. Prior to the EHCS 2006 headline report, poor degree of thermal comfort was the primary reason for failure of the Decent Homes Standard. It should be borne in mind that excess cold is the main Category 1 hazard reason for failure (see chapter 5) and this overlaps heavily with poor thermal comfort.

4.5 Numbers of failures per dwelling

4.5.1   As mentioned above, dwellings can fail to be decent for more than one reason. The total number of failures per dwelling can give an indication of the severity of problems in particular dwellings. The following chart looks at the number of failures per dwelling in non decent dwellings.

Figure 4.1 Degree of failure of the Decent Homes Standard
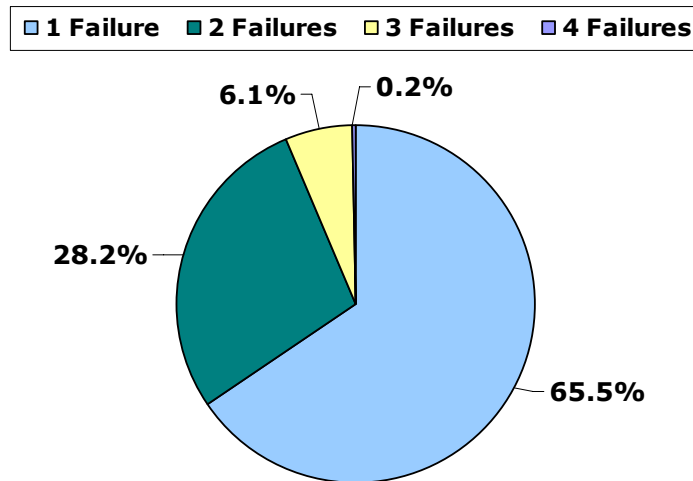
Source: 2009 House Condition Survey

4.5.2   It is clear that a majority of failures are in respect of one criterion only, with the number of properties with two or more failures being 34.5%. Realistically in the majority of cases this will relate to heating/insulation issues whether as a failure for an excess hazard or failure of the thermal comfort criterion.

4.6   Non decency by general characteristics

4.6.1   Figure 4.2 shows the proportions of non decent private sector dwellings by tenure. The distribution by tenure is typical of the national picture in that privately rented dwellings have the highest rate of non decency (46.1%), followed by owner occupied dwellings at 33.8% and RSL properties (24.7%).

Figure 4.2 Tenure by non decent dwellings
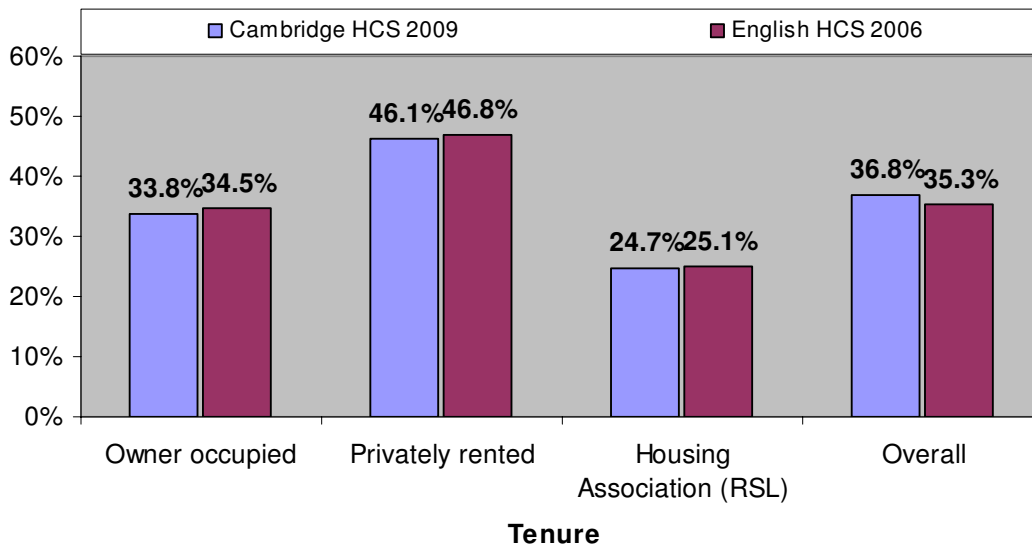
Source: 2009 House Condition Survey & EHCS 2006

4.6.2   The next chart examines decent homes failures by dwelling type.

Figure 4.3 Non decent dwellings by dwelling type
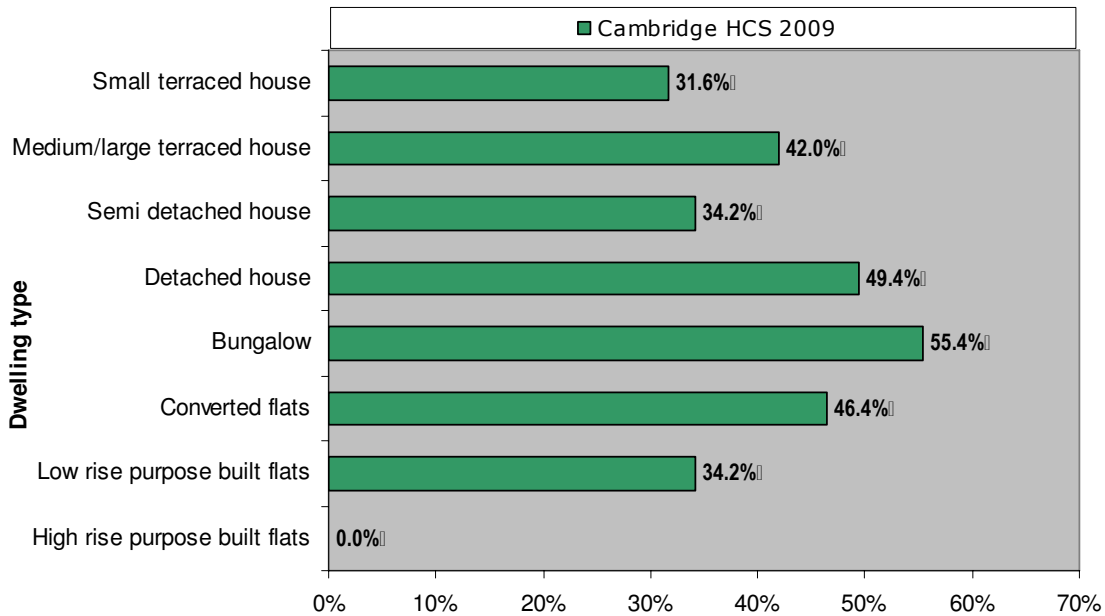
Source: 2009 House Condition Survey

4.6.3   The highest rate of non decency is found in bungalows (55.4%), although they account for only a small proportion (3.4%) of the total private sector housing stock, followed by detached houses (49.4%). The next highest rate is found in converted flats (46.4%) which tend to have an association with the private rented sector and poor repair. High rise purpose built flats registered no failures and the lowest recorded rate is for small terraced houses at 31.6%.

Figure 4.4 Non decent dwellings by date of construction
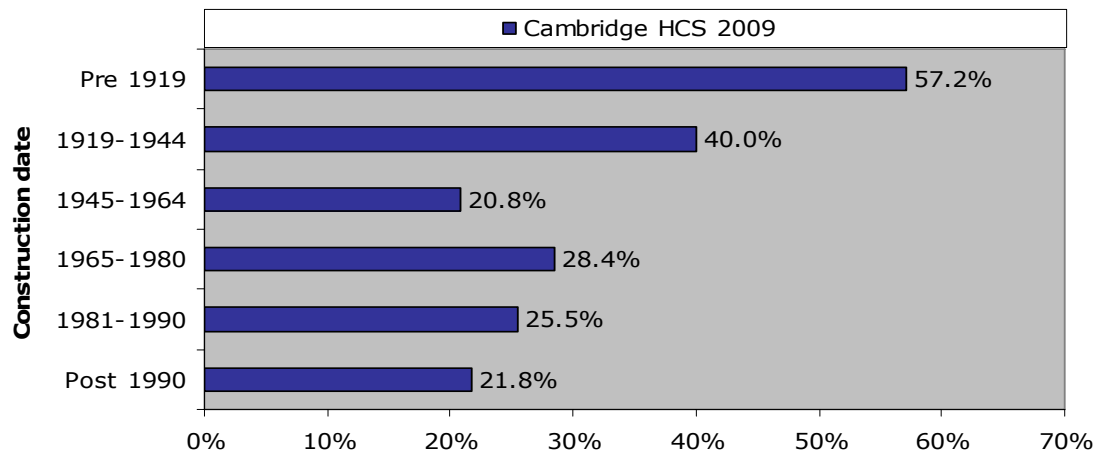
Source: 2009 House Condition Survey

4.6.4   In general terms, the usual pattern of an increasing rate with property age applies, with the exception of the 1945 to 1964 age group which shows a lower rate than the following age bands due to a much lower level of thermal comfort failure than that found in the later age bands.

4.7   Non decency and HMOs

4.7.1   Houses in Multiple Occupation form a significant part of the housing stock and are divided into three principal areas: university accommodation, HMOs rented by students from private landlords and HMOs rented from private landlords by non students.

4.7.2   The overall rate of non decency for HMOs is just under 30%, which is slightly lower than for the housing stock overall. This is an unusual finding as HMOs are often found to be in poorer condition than the remainder of the housing stock. The make-up of HMOs in Cambridge is unusual, however, given the high proportion of University Halls and University accommodation. For those properties that constitute University accommodation that rate of non decency is only 13.4%, which significantly reduces the overall level of non decency for HMOs.

4.7.3   The Council and Cambridge University have worked in close consultation for many years in order to ensure standards in halls of residence and other university accommodation is maintained. The impact of this joint working is clearly reflected in the findings from the survey.

4.8   Cost to Remedy

4.8.1   Having determined the reasons for dwellings being classified as non decent, it is possible to indicate what level of repairs / improvements would be needed to make all dwellings decent.

4.8.2   The cost to remedy non decency has been determined by examining the specific failures of each non decent dwelling and determining the work necessary to make the dwelling decent. This is done for each criterion of the standard and the table below shows the cost distribution for all non decent dwellings in the stock.

Table 4.2 Repair cost by non-decency reason (HHSRS)

Reason	Total Cost (£ million)	Cost per dwelling (£)
Category 1 Hazard	£51.4	£5,700
Repair	£13.0	£4,000
Amenities	£6.9	£11,400
Thermal comfort	£10.4	£900
Total	**£81.7**	**£5,400**

Source: 2009 House Condition Survey

4.8.3   The costs are based on the assumption that only the items that cause dwellings to be non decent are dealt with. Comprehensive repairs (referred to later) most closely resemble traditional renovation grant costs, but the costs given here are lower as they relate to the works necessary to deal only with items that fail the standard and not all repair issues.

4.9   Age of Head of Household and non decency

4.9.1   As part of the social survey a grid was filled in containing basic details for each of the residents in a dwelling, such as their age, working status, sex etc. It was left to residents to determine who was considered the head of the household, and therefore what the relationship between all other residents and the head was (e.g. spouse, child, parent, lodger etc).

4.9.2   Age of head of household is a useful indicator as it generally gives an impression of the age of the household and its profile. It has also been found that dwelling conditions often vary according to the age of the head of household.

4.9.3   The following chart illustrates the relationship between age of head of household and levels of non decency. Within age groups, the highest rate of non decency occurs where the age of head of household is aged 85 and over (55.9%); followed by the 25 to 34 age band (48.2%) and the 75 to 84 age band (47.9%). The lowest rate is found in the 16 to 24 age band (24.3%).

Figure 4.5 Non decency by age of head of household
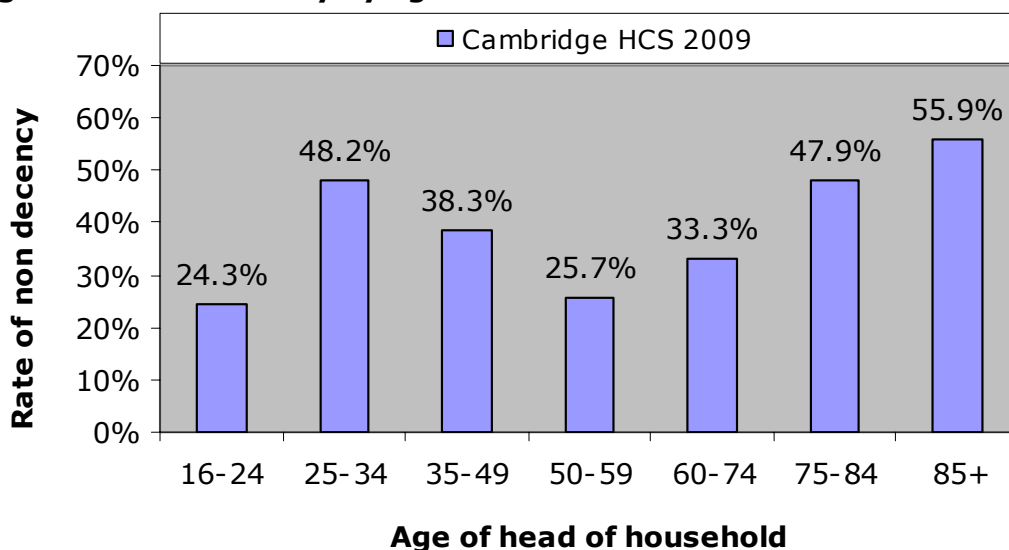
Source: 2009 House Condition Survey

4.10   Household income and non decency

4.10.1   The relationship between income and non decency can be analysed by combining household income figures with failures under the Decent Homes Standard. The largest proportion of dwellings found to be non decent are occupied by residents with an income between 20k and 30k (61%), followed by those on an income of £50k and over, which is likely to reflect the fact that Category 1 failures are less often linked to deficiencies in the fabric of the building than failures for the former fitness standard. For those on an income of less than £10k the rate is 29.5% and for those on an income of between £10k and £15k the rate is 40%.

Figure 4.6 Non decency by annual household income band
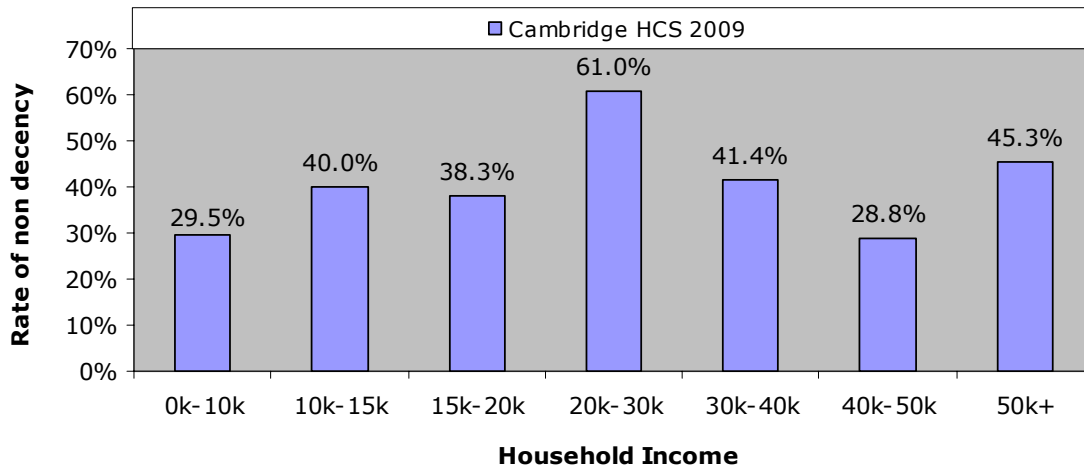
Source: 2009 House Condition Survey

4.11   Private sector vulnerable occupier base-line

4.11.1   Up until the 1 April 2008, the government target for achieving decency standards in the private sector was that set by PSA7, where 65% of all dwellings occupied by vulnerable residents should be made decent by 2006/07. In practice, the most challenging target was the 70% to be met by 2010/11. As indicated previously, although the PSA7 target no longer exists, it is still a CLG Departmental Strategic Objective under DSO2, 2.8). It is highly likely therefore, that Regional Housing bodies will continue to apply targeting in respect of vulnerable households in decent homes when making capital allocations.

4.11.2   Vulnerable households are defined as those in receipt of the benefits listed below, certain of which are means tested:

- Income support
- Housing benefit
- Council tax benefit

- Income based job seekers allowance

- Attendance allowance

- Disabled living allowance

- Industrial injuries disablement benefit

- War disablement pension

- Pension credit

- Working tax credit (with a disability element) [total income < £15,460]

- Child tax credit [total income < £15,460]

4.11.3   In Cambridge, at present there are 3,730 private sector dwellings (owner occupied and privately rented but excluding RSL dwellings) that are occupied by residents in receipt of one of the benefits listed above. Of these an estimated 1,660 are classified as non decent, which represents 44.5% of dwellings occupied by a vulnerable resident. Conversely this means that 55.5% are decent. The EHCS 2006 found that 41.2% of vulnerable households were living in non decent homes.

4.11.4   On this basis Cambridge failed to meet the target for 2006/07 for 65% of vulnerable households to be living in decent homes.

4.11.5   In order to raise the proportion of private sector dwellings, occupied by vulnerable people, above the 2010/11 70% threshold for decency, 950 dwellings will need to be made decent by 2010/11. As these figures are based on a sample survey they will be subject to statistical variance, but nonetheless this indicates some extensive work needs to be done to meet the 70% target.

4.11.6   The table below gives the numbers of non-decent dwellings within Cambridge with the rate of non decency, and also lists the level of shortfall in terms of meeting the 70% target for vulnerable occupiers in the private sector.

Table 4.3 Non decent dwellings with vulnerable households by sub-area

Area	Number of properties in area	Number of vulnerable households	Vulnerable households in non decent dwellings	Percent vulnerable households in non decent dwellings	Shortfall for vulnerable occupiers
Cambridge	**41,500**	**3,730**	**1,660**	**44.5%**	**950**

Source: 2009 House Condition Survey

5 Category 1 Hazards

5.1 Requirement to remedy poor housing

5.1.1 Formerly, under Part XI of the Housing Act 1985, local authorities had a statutory duty to take: 'The most satisfactory course of action', with regard to unfit dwellings and the Act was supported by relevant statutory guidance. A range of enforcement measures were available including service of statutory notices to make properties fit. Closure or demolition was only appropriate in the most extreme cases.

5.1.2 With owner occupied dwellings in particular, many local authorities looked to offer financial assistance, especially where owners were on low incomes. In the private rented sector enforcement action was much more likely in respect of unfit homes.

5.1.3 From April 2006 Part XI of the Housing Act 1985 was replaced by Part 1 of the Housing Act 2004. The new Act repeals the existing housing fitness standard and through statutory instruments and statutory guidance replaces it with the Housing Health and Safety Rating System.

5.1.4 As described in chapter one, the Act differentiates between Category 1 and Category 2 hazards. Local authorities have a duty to take 'the most appropriate course of action' in respect of any hazard scored under the HHSRS as Category 1 and in effect this duty replaces the existing fitness standard. Authorities have discretionary power to take action with Category 2 hazards (which do not score past the threshold for Category 1). Further information on the HHSRS is given in chapter one and below.

5.2 Definition of Hazards under the HHSRS and Category level

5.2.1 The Housing Health and Safety Rating System (HHSRS) is intended to be a replacement for the fitness standard and is a prescribed method of assessing individual hazards, rather than a conventional standard to give a judgment of fit or unfit. The HHSRS is evidence based – national statistics on the health impacts of hazards encountered in the home are used as a basis for assessing individual hazards.

5.2.2 After the trial, the system for collecting hazard information was subsequently reviewed, along with the underlying statistics and a new, second version produced. Guidance on Version 2 of the HHSRS was subsequently published in November 2004 and it is Version 2 that has been brought into force from April 2006, by statutory instruments made under the Housing Act 2004. The results from this survey will give an indication of likely future problems and will provide a useful comparative tool.

5.2.3   The new system deals with a much broader range of issues than the previous fitness standard. It covers a total of 29 hazards in four main groups:

- *Physiological Requirements* (e.g. damp & mould growth, excess cold, asbestos, carbon monoxide, radon, etc)

- *Psychological Requirements* (crowding and space, entry by intruders, lighting, noise)

- *Protection Against Infection* (domestic hygiene, food safety, personal hygiene, water supply)

- *Protection Against Accidents* (e.g. falls on the level, on stairs & steps & between levels, electrics, fire, collision…).

5.2.4   The HHSRS scoring system combines two elements: firstly, the probability that deficiency (i.e. a fault in a dwelling whether due to disrepair or a design fault) will lead to a harmful occurrence (e.g. an accident or illness) and the spread of likely outcomes (i.e. the nature of the injury or illness). If an accident is very likely to occur and the outcome is likely to be extreme or severe (e.g. death or a major or fatal injury) then the score will be very high.

5.2.5   All dwellings contain certain aspects that can be perceived as potentially hazardous, such as staircases and steps, heating appliances, electrical installation, glass, combustible materials, etc. It is when disrepair or inherent defective design makes an element of a dwelling significantly more likely to cause a harmful occurrence that it is scored under the HHSRS.

5.2.6   Surveyors were required to score all hazards under the HHSRS and the survey form allowed for this. Excess Cold was modelled from survey data, at the individual dwelling level, in order to provide a more accurate picture for this hazard type. The modelling of excess cold hazards by use of SAP (energy efficiency) information was outlined in CLG guidance in June 2006 and has been used by the BRE as part of the housing stock projections for excess cold hazards.

5.2.7   The modelling of excess cold hazards is based on the use of the individual SAP rating for each dwelling, which is scaled to give a hazard score. Where a dwelling has a SAP rating of less than 35, this produces a category 1 hazard score.

5.2.8   The exact scores generated under the HHSRS can be banded into one of ten bands from A to J, with bands A to C being further defined as Category 1 Hazards and those in bands D to J as category 2. The threshold score for a Category 1 Hazard is 1,000. As stated earlier, a Local Authority has a duty to deal with any Category 1 Hazards found and a discretionary power to deal with Category 2 hazards. This survey focuses particularly on Category 1 Hazards, but describes all hazards, including category 2, for comparative purposes.

5.3 Overall dwelling conditions

5.3.1 The overall proportion of dwellings with a Category 1 Hazard is 21.8% compared with 22.4% (owner occupied, privately rented and RSL dwellings) found in the EHCS 2006. This represents 9,000 dwellings across Cambridge with 8,300 being houses and 700 being flats.

5.4 Reasons for Category 1 Hazards

5.4.1 The following graph provides a breakdown of the proportions with a Category 1 hazard by type and ranked highest to lowest.

Figure 5.1 Category 1 Hazards by reason, as % of Category 1 Hazards

Category 1 hazards (y-axis) — Cambridge HCS 2009:

Category 1 hazard	%
Excess Cold	49.9%
Falls on Stairs	22.4%
Falls on the Level	19.3%
Entry by intruders	17.9%
Food safety	8.9%
Fire	4.0%
Damp & mould growth	2.6%
Personal Hygiene	1.0%
Falls between Levels	0.6%
Electrical hazard	0.6%
Water Supply	0.6%
Hot Surfaces	0.2%
Carbon Monoxide	0.2%
Domestic hygiene	0.2%
Crowding & Space	0.1%
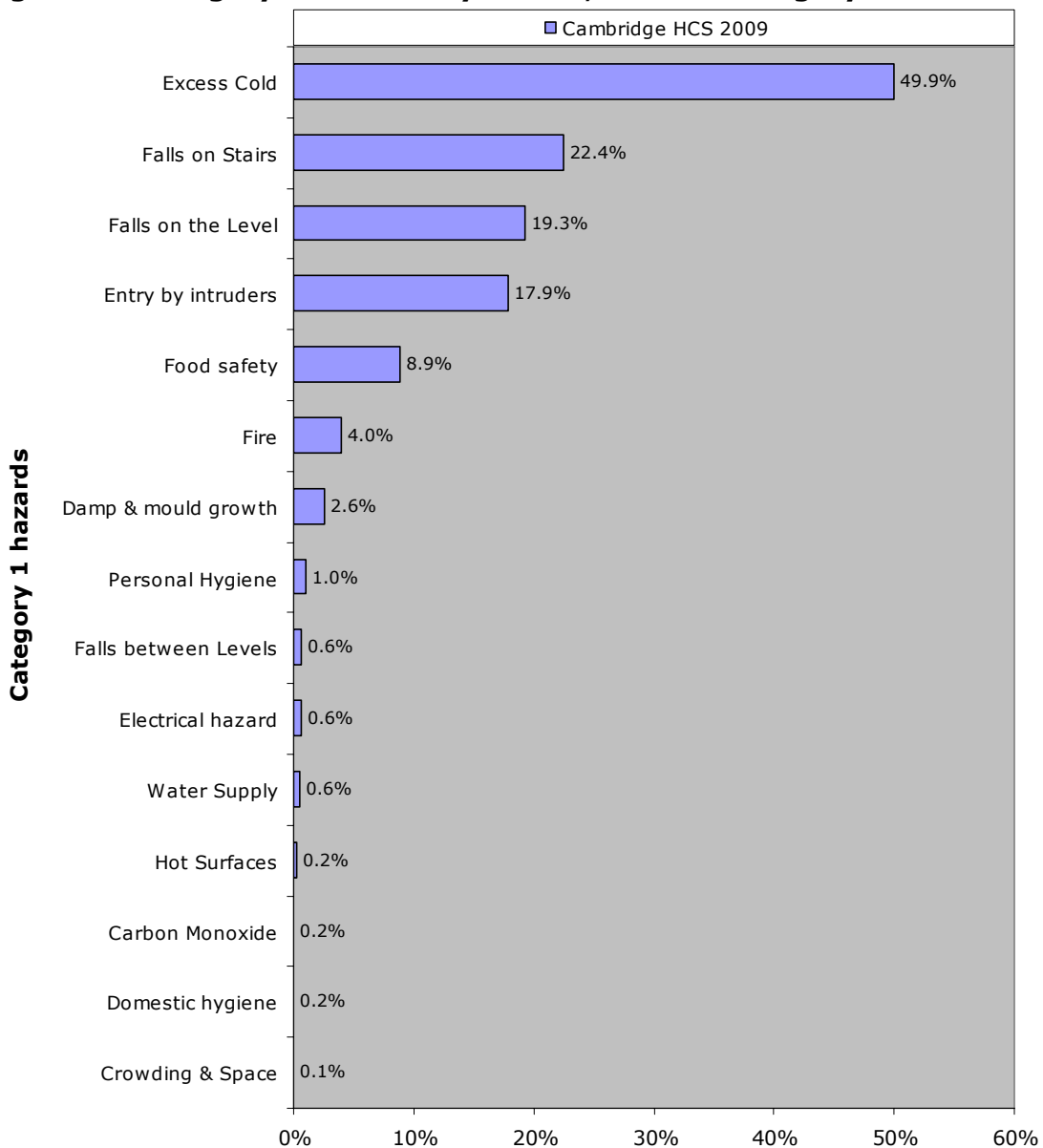
Source: 2009 House Condition Survey & EHCS 2006

5.4.2   The proportion of category 1 hazards attributable to excess cold is the highest by a substantial margin (49.9% of Category 1 hazards or 10.6% of the total stock included). BRE predictions, using census 2001 statistics as well as EHCS 2006 results, indicate an excess cold rate, against the overall stock total used, of 15%. However, this was based on owner occupied and privately rented stock only and, against a total stock of 33,700 compared to 38,300 for the same tenure groups in this survey. If the BRE stock total is used (33,700) against the pre 2002 stock only, the overall rate increases to 13.0%. The standard deviation (with a 95% confidence limit) is 2.2%, taking the survey results to an outer range of 15.2%, in line with the BRE predictions. The next highest rates are for falling on stairs etc and falls on level surfaces, with entry by intruders also figuring highly. (Note: the chart excludes those hazards where there was a nil return.)

5.5   Severity of Category 1 Hazards

5.5.1   One indication of the severity of Category 1 hazard failure is the number of items that a dwelling fails the standard on. Overall, 35.3% of dwellings have multiple Category 1 Hazards.

5.6   Category 1 Hazards by general characteristics

5.6.1   This section examines the relationship between those general stock characteristics set out in chapter two, with the level of Category 1 Hazards. The following charts and commentary examine the rates of Category 1 Hazards by tenure, dwelling type and construction date.

5.6.2   The highest rate of Category 1 Hazard failure is found in the privately rented stock (22.6%), followed very closely by the owner occupied sector (22.3%), both of which have rates that are higher than the City average. RSL dwellings have the lowest rate, significantly less than the City average.

Figure 5.2 Rates of Category 1 Hazards by tenure
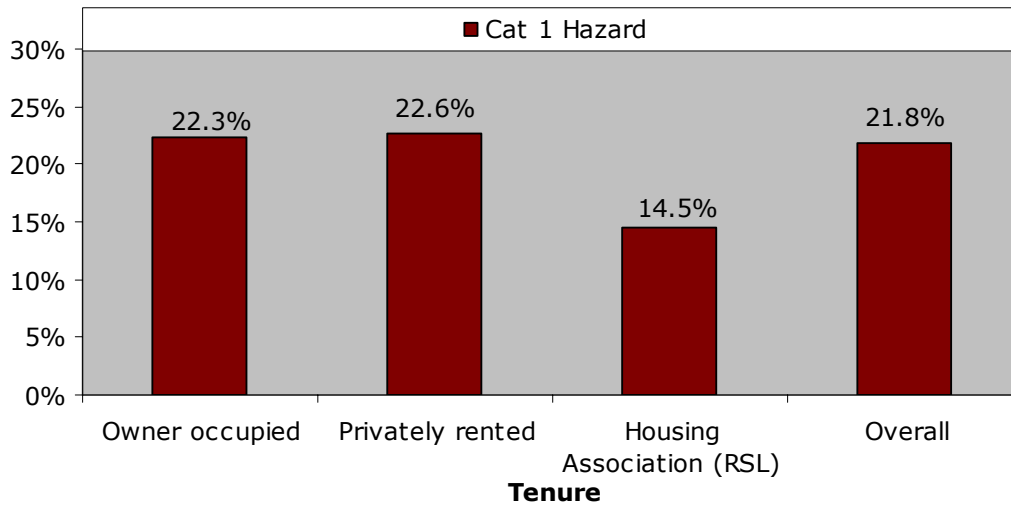
Source: 2009 House Condition Survey

5.6.3   The chart below shows the rates of Category 1 Hazards by build type. The highest rate is found in bungalows (35.9%), although they only represent 3.4% of the private sector stock, followed very closely by converted flats (35%). No Category 1 hazards were recorded in high rise purpose built flats (6 or more storeys) with low rise purpose built flats (less than 6 storeys) at 7.4% having the lowest recorded rate.

Figure 5.3 Rates of Category 1 Hazards by building type
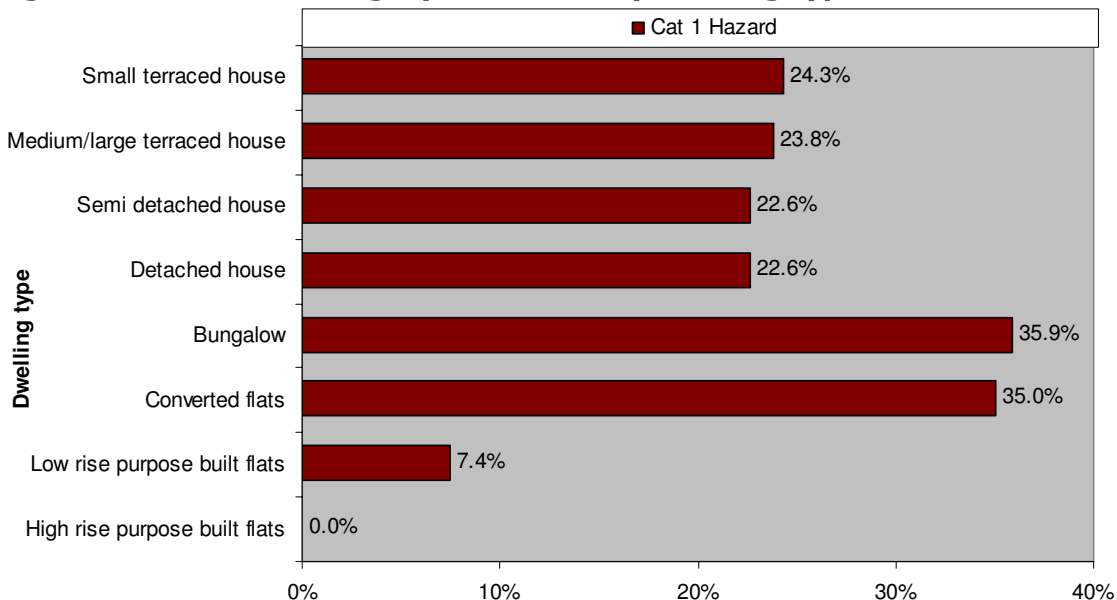
Source: 2009 House Condition Survey

5.6.4   Category 1 Hazards are generally much less closely linked with the deterioration of building elements, than the former fitness standard, as

the HHSRS system is concerned primarily with the effect of deficiencies, which may be due to design faults, as well as disrepair. There is, nevertheless, a general trend of increasing Category 1 hazard rates as dwellings become older.

Figure 5.4 Rates of Category 1 Hazards by construction date
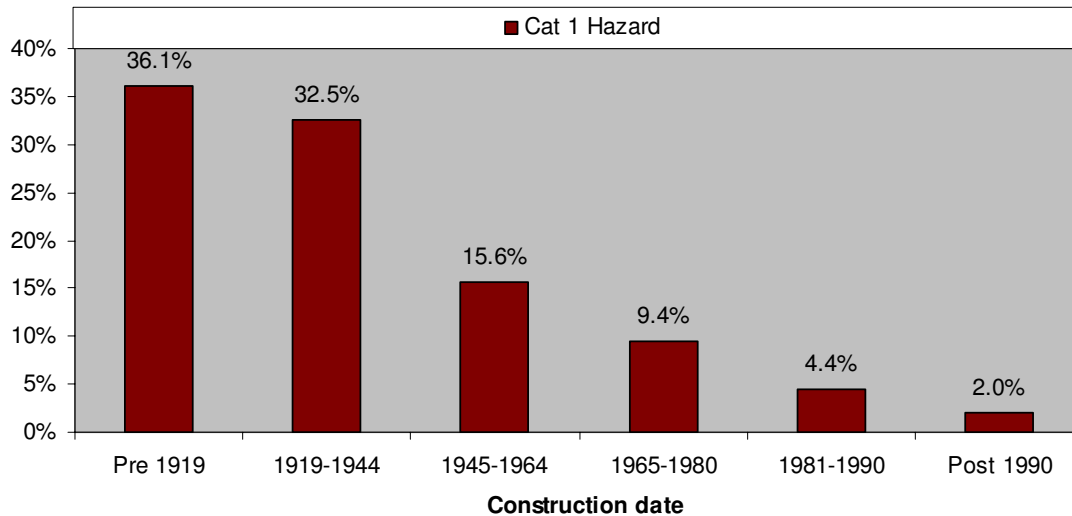
Source: 2009 House Condition Survey & EHCS 2006

5.7 Category 1 hazards by social characteristics

5.7.1 This section looks at the relationship between properties that have a Category 1 hazards and a number of social variables, such as age, income, benefit receipt and disability.

5.7.2 The following table shows that for three of the variables (benefit, over 65 and disability), the rate of Category 1 hazard failure is higher than the City average, with the rate for those on benefit and those under 25 being lower.

Table 5.1 Category 1 Hazards by social characteristics

Group	Category 1 hazard
Income under 10k	17.0%
On Benefit	22.7%
Under 25	13.7%
Over 65	31.5%
Resident with disability	28.6%
Cambridge average	**21.8%**

Source: 2009 House Condition Survey

5.8 Cost of works to dwellings with a Category 1 Hazards

5.8.1 This section seeks to present the cost not only basic failure items, but also the comprehensive cost of repairs in Category 1 Hazard dwellings.

Comprehensive repair is the level of repair and improvement needed such that no new work is required to the dwelling, in the next 10 years. This level of work most closely resembles the former mandatory renovation grant regime. The table below shows the basic remedial costs, the cost for urgent works and works required within 5 years and 10 years.

5.8.2   The total cost just to rectify category 1 hazards is an estimated £51 million at an average cost per dwelling of £5,700. The average cost per dwelling is highest with privately rented dwellings. The total level of comprehensive repair in dwellings with a Category 1 hazard in Cambridge is an estimated £161 million, an average of £17,800 per dwelling, with owner occupied dwellings having the highest average cost.

Table 5.2 Repair costs in Category 1 Hazard dwellings by tenure

Tenure	Remedial	Urgent[2]	5 year[2]	Comprehensive[2]
Owner occupied (£millions)[1]	**34.42**	**33.82**	**52.09**	**110.64**
Average (£s)	*6,000*	*5,900*	*9,000*	*19,200*
Privately Rented (£millions)[1]	**16.92**	**16.71**	**23.39**	**46.97**
Average (£s)	*6,100*	*6,000*	*8,400*	*16,800*
RSL (£millions)[1]	**0.02**	**0.15**	**0.38**	**3.44**
Average (£s)	*0*	*300*	*800*	*7,400*
All tenures (£millions)[1]	**51.35**	**50.67**	**75.86**	**161.05**
Average (£s)	*5,700*	*5,600*	*8,400*	*17,800*

1. Figures given in millions of pounds sterling

2. Figures are cumulative and therefore include the previous column

Source: 2009 House Condition Survey

5.9   Category 2 hazards in bands D and E

5.9.1   There are an estimated 25,000 (60.3%) dwellings in Cambridge that have at least one category 2 hazards (Bands D and E). Of those 19,600 (78.2%) have no corresponding category 1 hazard.

5.9.2   The following graph illustrates the distribution of category 2 hazards (Bands D and E) by age, building type and tenure.

Figure 5.5 Category 2 hazards by general characteristics

	Tenure	Dwelling type	Construction date

Owner occupied — 59%
Privately rented — 59%
Housing Association (RSL) — 74%
Small terraced house — 52%
Medium/large terraced house — 59%
Semi detached house — 68%
Detached house — 60%
Bungalow — 99%
Converted flats — 55%
Low rise purpose built flats — 54%
High rise purpose built flats — 17%
Pre 1919 — 78%
1919-1944 — 75%
1945-1964 — 47%
1965-1980 — 48%
1981-1990 — 60%
Post 1990 — 30%
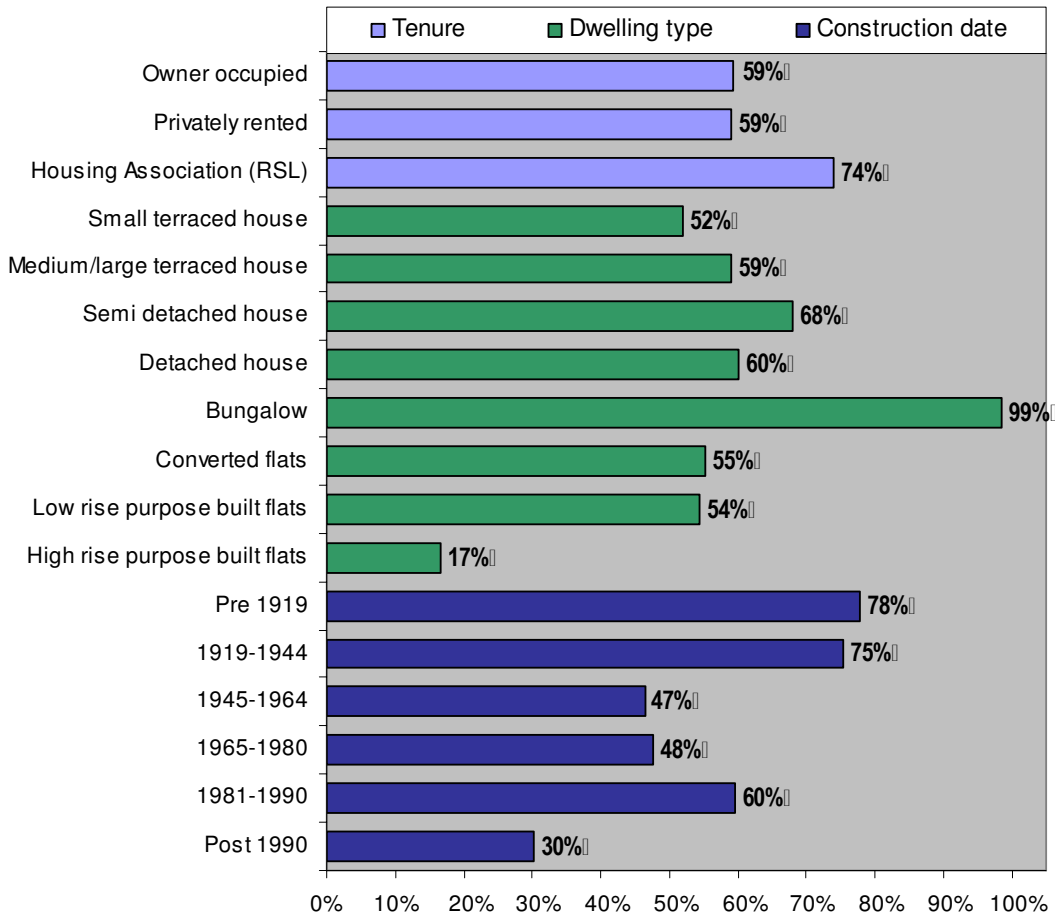
Source: 2009 House Condition Survey

5.9.3   The highest proportion of Category 2 hazards (scoring above average) are found in the pre-1919 and interwar age bands. In broad terms, the rate increases with property age, although the rate in properties built during the period 1981 – 1990 is an exception to the general trend.

5.9.4   Bungalows are the most likely dwelling type to have a Category 2 hazard with 99% having at least one atypical hazard.

5.9.5   The highest category 2 hazards (scoring above average) rate by tenure is to be found in the RSL stock (59%), higher than that for the either the owner occupied or privately rented stock.

5.9.6   The following graph illustrates the distribution of category 2 hazards (scoring above average) by hazard type and ranked highest to lowest.

Figure 5.6 Category 2 hazards by hazard type
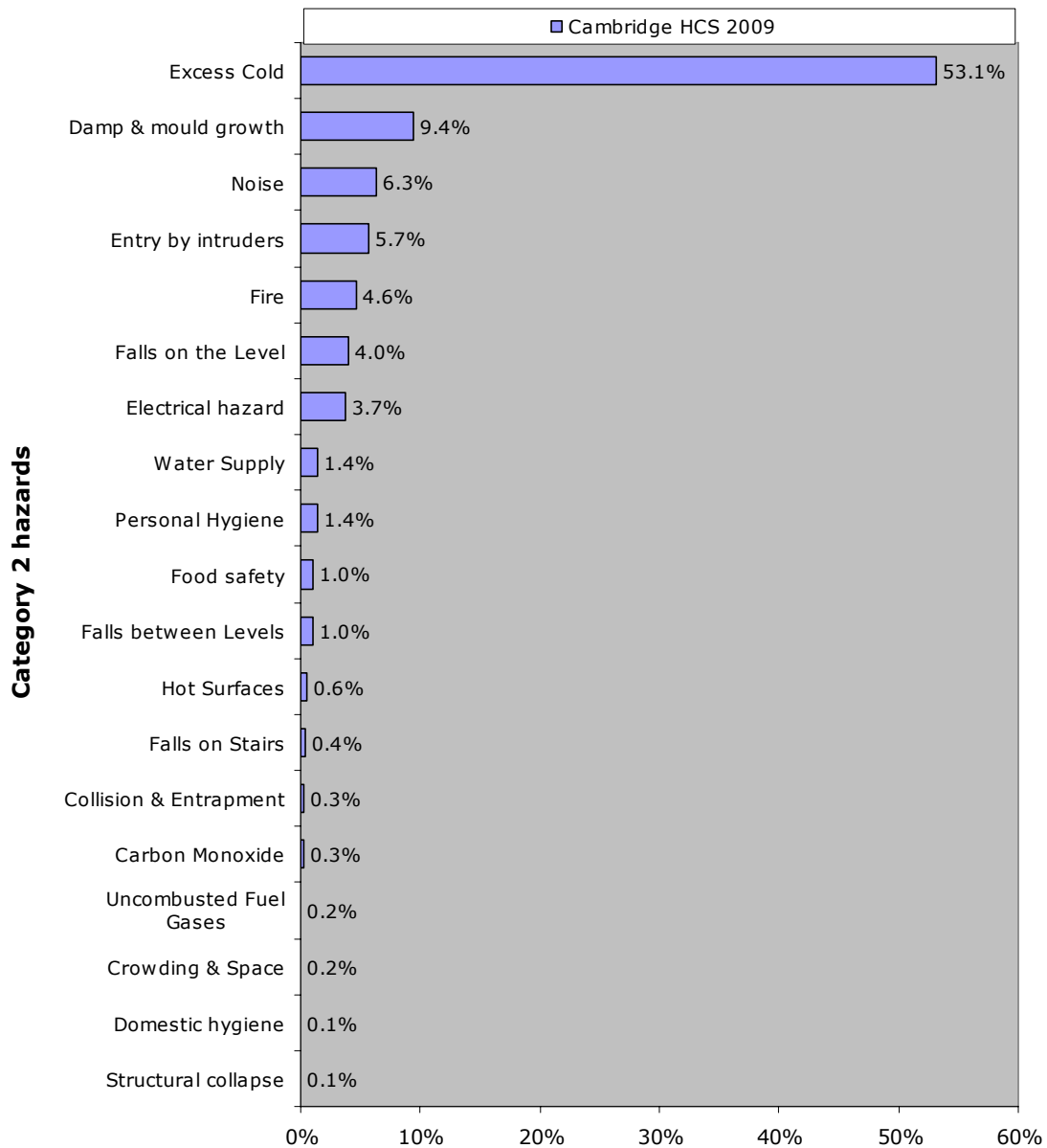
Source: 2009 House Condition Survey

5.9.7   As with category 1 hazards, category 2 hazards (scoring above average) hazards are heavily influenced by Excess cold issues.

6 Disrepair

6.1 Introduction

6.1.1 Criterion B of the Decent Homes Standard looks at the issue of the state of general repair of a dwelling, with a dwelling failing if it meets one or more of the following:

- One or more key building components are old (which are specifically defined in the criteria) and, because of their condition need replacing or major repair or:

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

6.1.2 A building that has component failure before the components expected lifespan does not fail the decent homes standard.

6.1.3 In Cambridge 3,900 dwellings fail this criterion which is above the national level (9.4% compared to 7.9%). BRE predictions, using census 2001 statistics as well as EHCS 2006 results, show 16% but this was based on owner occupied and privately rented stock only and, against a total stock of 33,700 compared to 38,300 for the same tenure groups in this survey. If the BRE stock total is used (33,700), against the same tenure groups and the pre 2002 stock only, the overall rate increases to 11.5%. The standard deviation (with a 95% confidence limit) is 2.2%, taking the survey results to an outer range of 13.7%. The overall rate is therefore, probably somewhere between the 16% and the 13.7%, which, even so, is considerably higher than the national average of 7.9%.

6.2 Disrepair and general characteristics

6.2.1 The overall repair cost within Cambridge is £13 million, an average of £4,000 per dwelling. (This is the cost of simply rectifying failures of the repair criterion of the Decent Homes Standard – it is not the cost of comprehensive repairs which is considered in Part 9 of this report.) The following section gives a breakdown of repair failure by a number of key variables.

Figure 6.1 Disrepair by general characteristics

	Tenure	Dwelling type	Construction date
Owner occupied	10.2%		
Privately rented	10.1%		
Housing Association (RSL)	0.3%		
Small terraced house		9.9%	
Medium/large terraced house		13.5%	
Semi detached house		7.9%	
Detached house		9.2%	
Bungalow		16.1%	
Converted flats		7.9%	
Low rise purpose built flats		3.8%	
High rise purpose built flats		0.0%	
Pre 1919			21.3%
1919-1944			12.3%
1945-1964			1.7%
1965-1980			2.1%
1981-1990			2.8%
Post 1990			0.0%
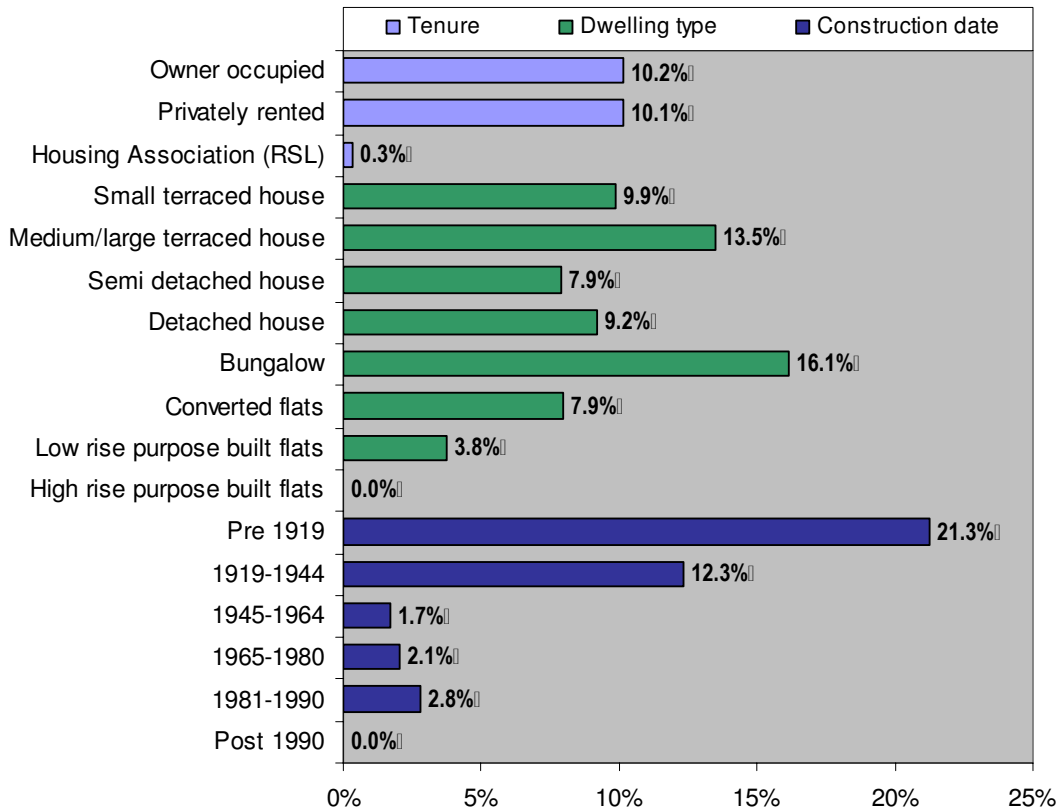
Source: 2009 House Condition Survey

6.2.2   Repair failure by construction date generally follows the usual pattern of increasing rates as dwellings get older, with the exception of properties in the 1981 – 1990 age band. No costs recorded in the post 1990 age band.

6.2.3   Bungalows have the highest proportionate rate at 16.1% followed by medium/large terraced houses at 13.5% and then small terraced houses at 9.9%. No disrepair was recorded in high rise purpose built flats, with the lowest recorded rate being found in low rise purpose built flats (3.8%).

6.2.4   By tenure, the highest proportionate rate is found, by a very small margin, within owner occupied dwellings (10.2%) and then privately rented dwellings (10.1%). Rates in RSL sector (0.3%) are significantly lower.

6.3   Disrepair by social characteristics

6.3.1   The relationship between properties in disrepair and a range of social variables, including age, benefit receipt and disability, is shown in the following table.

6.3.2   For two of the variables: those in receipt of benefit (13.3%) and those aged over 65 (13.3%) the disrepair rates are higher than the City average. For all of the other variables the rates are substantially lower.

Table 6.1 Disrepair by social characteristics

Group	In disrepair
Income under £10k	2.3%
On Benefit	13.3%
Under 25	4.3%
Over 65	13.3%
Resident with disability	2.7%
Cambridge average	**9.4%**

Source: 2009 House Condition Survey

7   Modern Facilities

7.1   Introduction

7.1.1   So far this report has considered Criterion A of the Decent Homes Standard: Category 1 Hazards (and former standard - unfitness) and Criterion B: dwellings failing due to disrepair issues. The third criterion of the Decent Homes Standard is that a dwelling should have adequate modern facilities, and this chapter deals with that issue.

7.1.2   Few dwellings within the private sector fail on this criterion at national level (2.2%). In Cambridge, the rate is lower than the national average with 700 (1.7%) dwellings failing for this reason. The low level of failure nationally, and in Cambridge, reflects the fact that a dwelling only fails if it lacks *three* or more of the following:

- A kitchen which is 20 years old or less
- A kitchen with adequate space and layout
- A bathroom that is 30 years old or less
- An appropriately located bathroom and WC
- Adequate noise insulation
- Adequate size and layout of common parts of flats

7.1.3   For example, if a dwelling had a kitchen and bathroom older than the specified date, it would not fail unless the kitchen had a poor layout or the bathroom was not properly located. With the geographical make up of Cambridge, and with a reasonable turnover in the housing stock, failure on this criterion is unusual.

7.1.4   As a result of the relatively small number of dwellings failing the Decent Homes Standard on this criterion, it is not possible to further subdivide those failures to examine their tenure distribution or other characteristics. However, this chapter will examine the general provision of facilities and in particular consider the potential for a greater level of failure in the future.

7.2   Key amenities bathrooms and kitchens

7.2.1   Under the Decent Homes Standard the age of bathrooms and kitchens is of importance to the modern facilities criterion. The following charts examine the age of these two facilities in dwellings within Cambridge.

Figure 7.1 Bathroom and Kitchen age
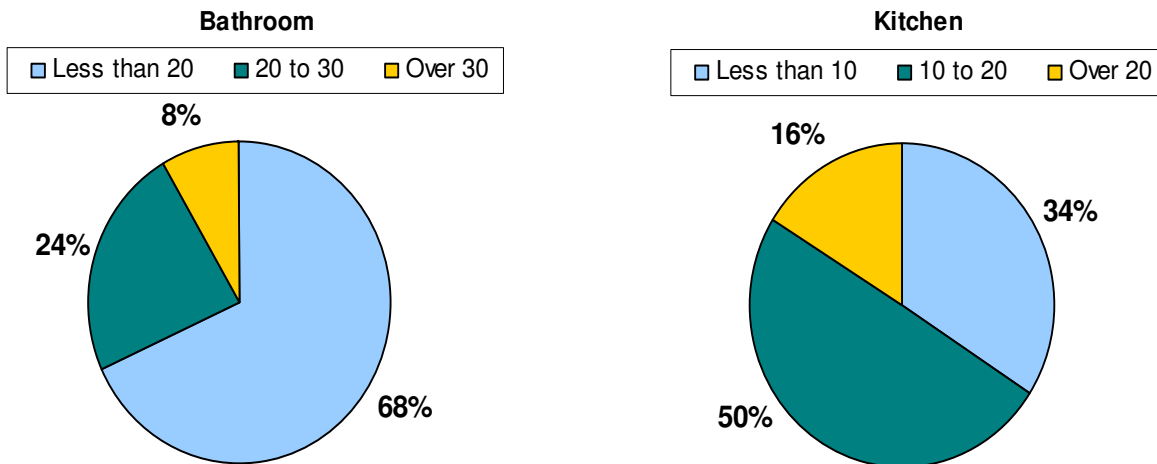
Source: 2009 House Condition Survey

7.2.2   It is possible to see from the two charts that potential for failure under the facilities criterion of the Decent Homes Standard is fairly low with bathrooms as the great majority (68%) are less than 20 years old but greater with kitchens as 66% are either older than the age specified in the criterion or will become so in the next 10 years.   For these dwellings to fail, however, it would be necessary that one of the other elements of this criterion be breached (such as inadequate noise insulation).   It is unlikely therefore that failure to replace older kitchens and bathrooms will cause any significant increase in non decency.

8 Thermal Comfort

8.1 Thermal comfort failures

8.1.1 Failure of the thermal comfort criterion, and consequently the work required to remedy that failure, is based on the combination of heating system type and insulation present within a dwelling. In Cambridge 7,900 dwellings (19%) fail the thermal comfort criterion compared to the national average of 16.7%.

8.1.2 The following are the three requirements under the thermal comfort criterion of the Decent Homes Standard:

- For dwellings with gas/oil programmable heating, cavity wall insulation (if there are walls that can be insulated effectively) or at least 50mm loft insulation (if there is a loft space) is an effective package of insulation.

- For dwellings heated by electric storage heaters/ LPG/ programmable solid fuel central heating a higher specification of insulation is required: at least 200mm of loft insulation (if there is a loft) and cavity wall insulation (if there are walls that can be insulated effectively).

- All other heating systems fail (i.e. all room heater systems are considered to fail the thermal comfort standard).

8.1.3 The chart below shows the distribution of thermal comfort failure by age, building type and tenure.

8.1.4 Thermal comfort failure rates usually increase with dwelling age. In Cambridge the highest rates are found in the pre 1919 (22.9%) and 1919 to 1944 (25.2%) age bands but then show a substantial reduction in the 1945 to 1964 age band (6.8%). After this, the rates rise again.

8.1.5 High rates of failure are found in detached and medium/large terraced house as well as converted and low rise purpose built flats, all of which have rates above the City rate, in most cases substantially so. The lowest rate is found in bungalows (7%).

8.1.6 As is common, the privately rented stock has the highest rate (24.4%), followed by owner occupied dwellings (17.5%). The RSL stock has the lowest rate (10.2%).

Figure 8.1 Thermal comfort failure by general characteristics

		Tenure	Dwelling type	Construction date

Category	Value
Owner occupied	17.5%
Privately rented	24.4%
Housing Association (RSL)	10.2%
Small terraced house	9.8%
Medium/large terraced house	22.5%
Semi detached house	16.3%
Detached house	35.3%
Bungalow	7.0%
Converted flats	32.3%
Low rise purpose built flats	29.2%
High rise purpose built flats	0.0%
Pre 1919	22.9%
1919-1944	25.2%
1945-1964	6.8%
1965-1980	19.8%
1981-1990	20.5%
Post 1990	21.7%

Source: 2009 House Condition Survey

9　Cost of Repair

9.1　Improving the stock

9.1.1　This chapter seeks to examine the extent of work required to rectify further defects in private sector housing. It looks at the wider issues of disrepair in the dwelling stock. In order to do this, three key questions must be considered:

- What is the cost of carrying out repairs and renewal?

- Where are the problems concentrated: what types of dwelling; which tenures; what ages of dwellings and what geographical areas?

- What are the financial circumstances of residents occupying these dwellings and how likely is it that they will be able to afford necessary repairs?

9.2　Cost calculation

9.2.1　Costs derived from the house condition survey are calculated for each individual dwelling surveyed.   Costs are calculated in four separate areas: external repairs, internal repairs, amenities costs and costs relating to common parts of flats (where common parts exist).   A schedule of rates is used that lists the unit cost of all elements of the dwelling, recorded during the survey (for example: the cost of roofing slates per square metre or the cost of guttering per metre length). The schedule of rates is derived from national information on building costs.

9.2.2　For external repair, a spatial model of the building is created using the dimension information. The proportion of repair is multiplied by the overall quantity for a given element and then by the unit cost for that element. For internal repair to elements, such as plasterwork, flooring etc, the actual quantity of repair required is recorded. Amenities are recorded on the basis of whether they require no work, repair, replacement or installation. Common parts repairs are recorded on the basis of the specific quantity noted by the surveyor.

9.2.3　Once all costs have been calculated, they are assigned to a time frame. Where a dwelling has a Category 1 hazard, certain works relating to this are indicated as being urgent and these costs are isolated to form the basic remedy costs. The remaining urgent costs represent those works that should be carried out within the next year. All other costs are generated based on the age of element and renewal period of that element.   These costs are banded into 5 year, 10 year and 30 year costs.

9.2.4   The term 'works' is used in relation to not only repair costs but to other activities in relation to housing condition.   The term is used, as frequently the cost described does not solely relate to repair, but can relate to replacement of building elements or installation of elements and/or amenities (i.e. improvements).
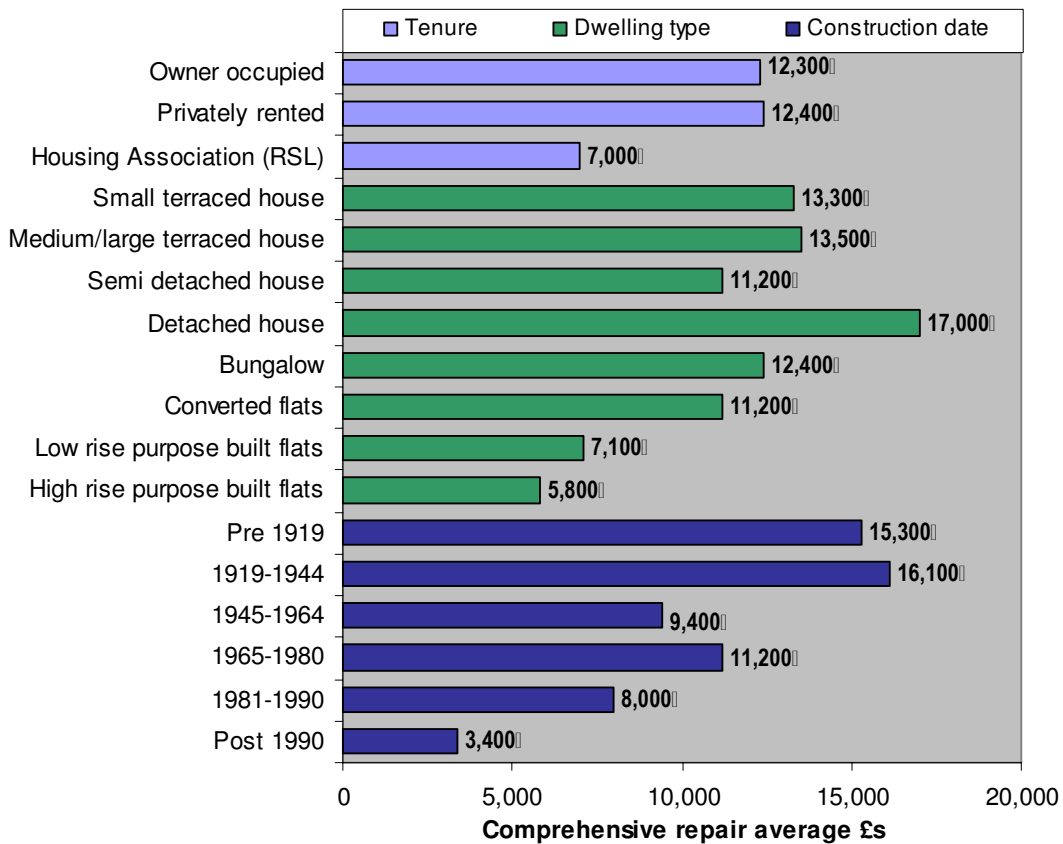
9.3   Overall repair costs

9.3.1   The total comprehensive cost, for all private sector dwellings in Cambridge, whether they meet the Decent Homes Standard or not, is just over £459.8 million, an average of £11,900 per dwelling.   This average reflects the fact there is a very wide range of repair costs with many modern dwellings having only minor repair requirements compared with many non decent dwellings with major repair costs. Repair costs for the dwellings in poorest condition are considered further later in this chapter.

9.4   Repair costs and general characteristics

9.4.1   Repair costs vary depending on the age, type and tenure of dwellings. The following section gives a breakdown of comprehensive costs by a number of key variables.

Figure 9.1 Comprehensive repair cost by general characteristics

Source: 2009 House Condition Survey

9.4.2   The repair by construction date generally follows the usual pattern of repair costs being higher in earlier construction periods, with the pre 1944 stock having the highest average costs and the post 1990 stock having the lowest average cost. This trend is however, not followed by properties in the 1965 – 1980 age band.

9.4.3   Detached houses have the highest average cost (£17,000) followed by terraced housing and bungalows. The lowest average cost is for high rise purpose built flats (£5,800).

9.4.4   Privately rented dwellings in Cambridge have the highest average repair costs at £12,400, closely followed by owner occupied dwellings at £12,300.

10 Energy Performance

10.1 Energy performance and SAP ratings

10.1.1 The Standard Assessment Procedure or SAP is a government rating for energy efficiency. It is used in this report in conjunction with annual CO_2 emissions figures, calculated on fuel consumption, and the measure of that fuel consumption in kilo Watt hours (kWh), to examine energy efficiency.

10.1.2 The SAP rating in this report is the energy rating for a dwelling and 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. It is expressed on a 0-100 scale. The higher the number the better the energy rating for that dwelling.

10.1.3 Originally SAP was produced with figures on a scale from 1 to 100, but in 2001 a new calculation was introduced with SAP ratings on a scale of 1 to 120. This revised SAP rating made minor alterations to take into account new dwellings with very high energy efficiency. The software used to calculate SAP ratings for this report uses SAP2005.

10.1.4 Further changes to the calculation of SAP ratings occurred with the introduction of SAP2005. This recalculation of SAP has now been introduced returning to the SAP scale of 1 to 100. As previously mentioned, this report uses SAP2005.

10.2 Distribution of SAP ratings

10.2.1 The average SAP ratings in Cambridge for owner occupied, privately rented and RSL dwellings is 51. This compares to an average SAP rating of just under 49 nationally, based on the findings of the EHCS 2006, which also used SAP2005.

10.2.2 Table 10.1 shows the energy performance distribution by tenure incorporation the same banding system used by the EHCS 2006. This indicates that the majority for each tenure group are contained within the 39 to 68 bandings, being 82% for owner occupied dwellings and 74.8% for the privately rented dwellings and 70.3% for the RSL stock. The overall stock rate is 79.0% within those bands compared with the national rate (71%).

Table 10.1 Energy performance SAP banded

EPC SAP Range Banded	Owner occupied	Privately rented	Housing Association (RSL)	Whole Stock	EHCS 2006
Band A (92-100)	0.0%	0.0%	0.0%	0.0%	0.0%
Band B (81-91)	0.5%	2.7%	0.5%	1.2%	0.2%
Band C (69-80)	6.2%	6.2%	22.3%	7.5%	7.0%
Band D (55-68)	30.6%	28.4%	11.6%	28.5%	29.8%
Band E (39-54)	51.4%	46.4%	58.7%	50.5%	41.2%
Band F (21-38)	10.5%	13.7%	6.9%	11.2%	17.5%
Band G (1-20)	0.7%	2.6%	0.0%	1.2%	4.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: 2009 House Condition Survey & EHCS 2006

10.2.3 The following table considers the proportion of dwellings with a SAP rating of less than 35 (used as a proxy for the likely presence of an excess cold Category 1 hazard) and dwellings with a SAP rating greater than 65. The distribution between owner occupied dwellings is fairly similar, whilst that for the privately rented stock shows a higher percentage (12.6%) with a SAP of less than 35. RSL stock has no recorded dwellings with a SAP of less than 35 and high proportion of dwellings with a SAP rating of more than 65 (25.2%)

Table 10.2 SAP less than 35 and greater than 65 by tenure

Tenure Name	SAP less than 35	SAP greater than 65
Owner occupied	10.9%	10.7%
Privately rented	12.6%	10.8%
Housing Association (RSL)	0.0%	25.2%

Source: 2009 House Condition Survey

10.3 SAP by general characteristics

10.3.1 The physical characteristics of dwellings have a major effect on the efficiency of a dwelling. The number of exposed external walls and the construction materials and methods all affect the overall heat loss and therefore the energy efficiency. Different types and ages of dwellings will have different energy characteristics.

10.3.2 The chart overleaf gives a breakdown of average SAP ratings by construction date, building type and tenure.

10.3.3 Increases in SAP are usually associated with a reduction in dwelling age; the most modern stock has the highest SAP. This pattern is generally followed in Cambridge; the lowest mean SAP is for pre-1919 and 1919 to 1944 properties and the highest in post 1990 properties at 63. The majority of the pre 1919 stock ((90%) are of non cavity wall construction, which lose more heat than cavity walls, with insulation works, either external or internal, being more expensive than cavity

wall insulation. There will however, be savings on heating bills, (estimated by the Energy Saving Trust to be around £400 per annum) which will, overtime, pay for the insulation works cost.

10.3.4   When examining SAP ratings by built form, converted flats have the lowest mean SAP rating (44), followed by detached houses (47). The highest average SAP rating is found in high rise purpose built flats (6 or more storeys) at 63.

10.3.5   The privately rented stock has the lowest average SAP rating at 50 followed by owner occupied dwellings at 52. The figure for RSL dwellings is higher at 54.

**Figure 10.1 SAP by general characteristics**
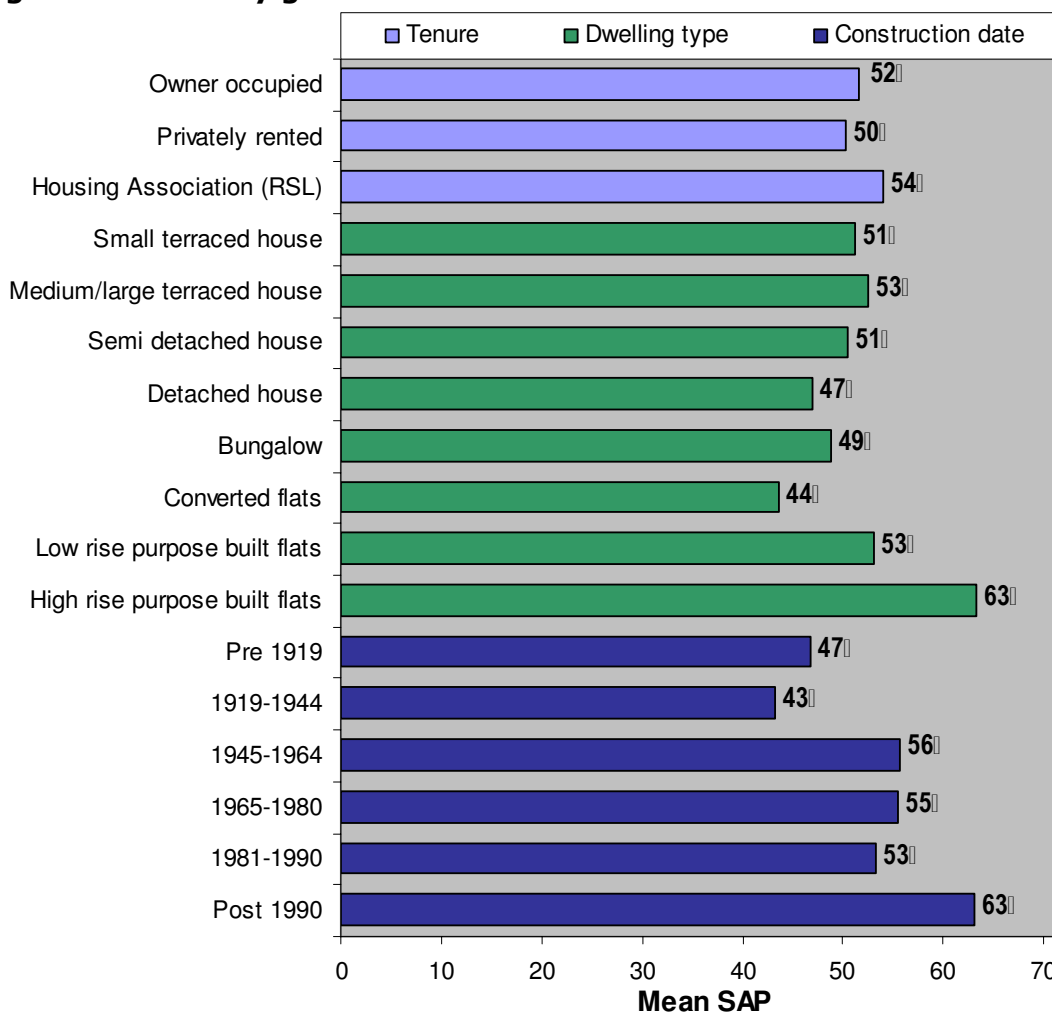
Source: 2009 House Condition Survey

10.3.6   Tenure, dwelling type, and age are helpful in establishing the efficiency of the stock, but insulation and heating provision need to be examined to give a full picture.

10.4 Carbon Dioxide emissions

10.4.1 As part of the 2007 Comprehensive Spending Review the Government announced a single set of indicators which would underpin the performance framework as set out in the Local Government White Paper "Strong and Prosperous Communities". To provide a more powerful and consistent incentive to local authorities, to develop and effectively implement carbon reduction and fuel poverty strategies, included within the set of indicators were a per capita reduction in Carbon Dioxide (CO_2) emissions in the Local Authority area and the tackling of fuel poverty.

10.4.2 PSA Delivery Agreement 27 (Lead the global effort to avoid dangerous climate change) states that "The overall framework for the Government's domestic action is set out in the Climate Change Bill for which Parliamentary approval will be sought". This has subsequently passed into legislation on 26 November 2008, through the Climate Change Act 2008, which includes legally binding targets to achieve greenhouse gas emission reductions through action in the UK and abroad of at least 80% by 2050, and reductions in CO2 emissions of at least 26% by 2020, against a 1990 baseline.

10.4.3 The CO_2 data provided as part of this survey indicates that emissions within the private sector stock of Cambridge are 168,200 tonnes per annum an average of 4.1 tonnes per annum per property or 1.4 tonnes per capita.

10.4.4 The following figure shows the range of dwelling CO_2 emissions released per annum. The majority of dwellings (63.3%) have emissions of between 2 and 5 tonnes per annum, with 27.1% having annual emissions above this, 11.7% of which have emissions above 6 tonnes per annum.

Figure 10.2 Annual dwelling CO2 emissions
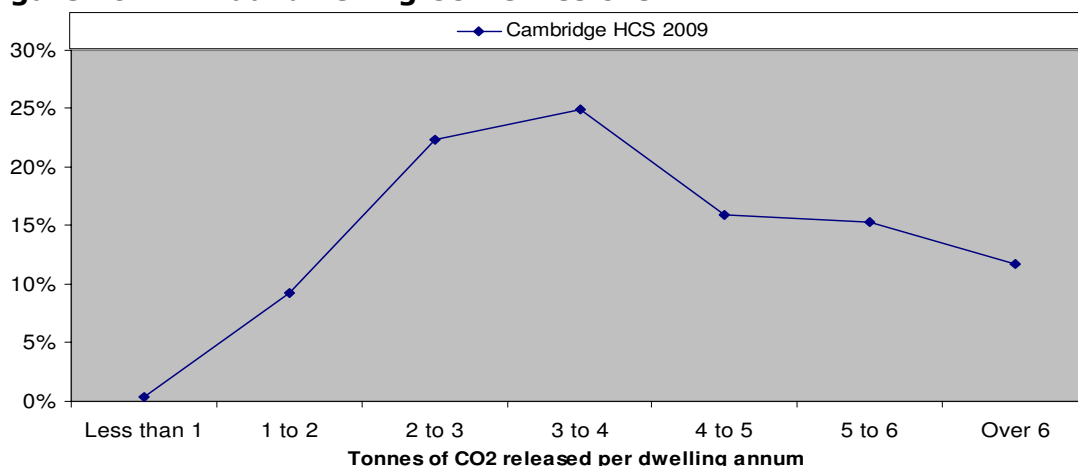
Source: 2009 House Condition Survey

10.4.5   Emissions per main fuel type are given below, with smokeless fuel having the highest average at 8.6 tonnes followed by on peak electricity (5.7 tonnes).

Table 10.3 Main fuel CO_2 emissions

Fuel main	CO_2 (tonnes)	Average CO_2 per property
Mains Gas	152,502	4.0
LPG/Bottled Gas	0	0.0
Oil	0	0.0
Coal/Wood	0	0.0
Anthracite	0	0.0
Smokeless Fuel	177	8.6
On Peak Electricity	5,161	5.7
Off Peak Electricity	10,383	4.2

Source: 2009 House Condition Survey

10.5   SAP and National Indicator 187

10.5.1   Following the 2007 comprehensive spending review guidance was issued on a change in measuring local authority performance through a revised set of indicators.   There are 198 indicators covering every aspect of Councils' responsibilities, but of primary interest here is National Indicator 187. NI187 requires local authorities to measure the proportion of households on an income related benefit living in dwellings with SAP ratings below 35 and 65 and above; the intention being to decrease the former and increase the latter.   The indicator refers to 'fuel poverty' but the measure is actually a surrogate for fuel poverty (see 10.9).   It is anticipated that Councils will measure progress using an annual postal survey.

10.5.2   The following table gives a breakdown of dwellings with SAP ratings below 35 and 65 and over, as well as combining this with information on income related benefit receipt. This information can be used as a baseline for NI187 against which future progress can be measured.

Table 10.4 SAP bands and NI187

Cambridge HCS 2009			
	Dwellings total	Households with an income benefit recipient	Rate
SAP less than 35	4,400	500	11.4%
	10.6%	**12.5%**	
SAP 35 to 64	32,200	3,100	9.6%
	77.6%	77.5%	
SAP 65 and over	4,900	400	8.2%
	11.8%	**10.0%**	
	41,500	**4,000**	**9.6%**

Source: 2009 House Condition Survey

10.5.3　The figures given in red are those required under NI187. They illustrate that 12.5% of households in receipt of an income related benefit live in a dwelling with a SAP rating below 35 and that 10% live in a dwelling with a SAP of 65 and over.

10.6　Energy efficiency improvement

10.6.1　The 1995 Home Energy Conservation Act (HECA) aims to improve the energy efficiency of dwellings across the country. The Act is part of a broader government strategy to reduce the consumption of fossil fuels and thereby reduce the impact of energy use on the environment. The provision of effective insulation and more efficient heating systems (e.g. condensing boilers) reduces the fuel burnt to provide space heating and domestic hot water. The Act places a duty on local authorities as follows:

"It shall be the duty of every energy conservation authority to prepare a report in accordance with this section.

(2) The report shall set out energy conservation measures that the authority considers practicable, cost-effective and likely to result in significant improvement in the energy efficiency of residential accommodation in its area.

(3) The report shall include—

(a) an assessment of the cost of the energy conservation measures set out in it;

(b) an assessment of the extent to which carbon dioxide emissions into the atmosphere would be decreased as a result of those measures; and

(c) a statement of any policy of the authority for taking into account, in deciding whether to exercise any power in connection with those measures, the personal circumstances of any person.

Nothing in this subsection shall be taken as requiring the authority to set out in the report energy conservation measures to be taken in relation to any particular dwelling or building.

(4) The report may, if the energy conservation authority considers it desirable, include—

(a) an assessment of the extent of decreases in emissions into the atmosphere of oxides of nitrogen and sulphur dioxide which would result from the implementation of the measures set out in the report;

(b) an assessment of the number of jobs which would result from the implementation of those measures;

(c) an assessment of the average savings in fuel bills and in kilowatt hours of fuel used that might be expected to result from the measures by different types of household in different types of accommodation;

(d) such other matters as it considers appropriate."

10.6.2   The target local authorities were asked to achieve, was a 30% reduction in energy consumption over 15 years (1996 to 2011). As part of this strategy, local authorities were required to implement schemes that would encourage and assist with measures to reduce energy usage, to submit an annual return detailing the amount of energy being consumed by dwellings in their area and to indicate how much of a reduction in consumption has occurred. The energy audit component of the HCS will provide a useful evidence base to determine if measures have been successful and identify new areas that can be tackled in future.

10.6.3   The provision of different heating systems and insulation within the dwelling stock does allow scope for some dwellings to have additional insulation, improved heating, draught proofing etc.   Such improvements can lead to a reduction in energy consumption with consequent reduction in the emission of gases such as carbon dioxide implicated in climate change.

10.6.4   However, it should be noted that improving energy efficiency does not necessarily equate to a reduction in energy consumption. In the majority of cases there will be a reduction, but, for example, where a household is in fuel poverty and improvements are made, energy consumption may well go up. In such dwellings the occupiers may well have been heating the dwelling to an inadequate level using expensive fuel. Use of cheaper fuels can create affordable warmth, but also lead to increased energy consumption.

10.7   **The cost and extent of improvement**

10.7.1   The following figures are based on modelling changes in energy efficiency, brought about by installing combinations of items listed below. These are based on measures that have been provided by many local authorities and are loosely based on the Warm Front scheme.

- Loft insulation to 270mm

- Cylinder insulation to 70mm Jacket (unless foam already)

- Double Glazing to all windows

- Cavity wall insulation

- Installation of a modern high efficiency gas boiler where none is present

- Full central heating where none is present

10.7.2   The computer model enters whatever combination of these measures is appropriate for a particular dwelling taking into account the provision of heating and insulation shown by the survey.

10.8   Future improvement

10.8.1   If all combinations of improvements listed above were carried out to all dwellings, the total cost would be just over £115.1 million, an average of £3,000 per dwelling where improvements are required.

10.8.2   The total cost of improvements given above is distributed among 39,400 dwellings, 95.0% of the stock. The majority of these dwellings will have complied with Building Regulations current at the time they were built and realistically most of them will currently provide an adequate level of thermal efficiency. In most cases, however, there is still scope for improvement even if only minor.

10.8.3   The following analysis looks at how many dwellings could have each type of measure applied.

Table 10.5 All energy efficiency measures that could be carried out

Measure	Dwellings	Percent of stock
Loft insulation	37,100	89.5%
Wall insulation	12,100	29.2%
Double glazing	12,300	29.7%
Cylinder insulation	20,000	48.2%
New boiler	7,500	18.1%
New central heating	500	1.2%
Any measures	**39,400**	**95.0%**

Source: 2009 House Condition Survey

10.8.4   The wide range of measures indicates that, in most cases, two or more improvements could be carried out. Generally loft insulation will be an improvement on existing insulation, rather than an installation where none exists. With cylinder insulation, most improvements would be the replacement of old cylinders with jackets, for new integral foam insulated cylinders. Installation of new central heating is only indicated where the dwelling currently relies solely on room heaters as the primary heating source.

10.8.5   The next two tables look at the current level of provision of both loft and cavity wall insulation.

Table 10.6 Loft insulation provision

Loft insulation thickness	Dwellings	Percentage
No Loft	5,600	13.5%
None	510	1.2%
25mm	1,070	2.6%
50mm	2,520	6.1%
75mm	2,970	7.2%
100mm	5,570	13.4%
150mm	6,000	14.4%
200mm	7,370	17.8%
250mm	6,340	15.3%
300mm	3,550	8.6%
Total	**41,500**	**100.0%**

Table 10.7 Main wall type and whether insulated or not

Main wall type	Insulated	Percentage of stock	No insulation	Percentage of stock
Cavity Wall	10,100	24.3%	12,100	29.2%
None Cavity Wall	500	1.2%	18,800	45.3%

10.8.6 The next tables provide a breakdown of the individual improvement measures that could be undertaken by dwelling type and construction date. Firstly, for the 37,100 requiring loft insulation improvements.

Table 10.8 Loft insulation improvements

Dwelling type/Age	Pre 1919	1919-1944	1945-1964	1965-1980	1981-1990	Post 1990
Small terraced house	8.5%	2.1%	3.1%	2.1%	0.8%	0.5%
Medium/large terraced house	16.2%	1.9%	4.4%	2.8%	0.2%	2.3%
Semi detached house	4.5%	10.9%	12.7%	6.1%	0.4%	0.7%
Detached house	0.2%	1.3%	0.7%	1.9%	0.6%	2.0%
Bungalow	2.7%	0.0%	0.7%	0.0%	0.0%	0.3%
Converted flats	1.3%	0.1%	0.6%	0.0%	0.1%	0.0%
Low rise purpose built flats	0.2%	0.0%	0.4%	2.9%	0.5%	1.9%
High rise purpose built flats	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%

10.8.7 The type with the largest proportions of required improvement works are medium/large terraced houses (27.9%) and semi detached houses (35.3%), concentrated in dwellings built before 1965.

Table 10.9 Cavity wall insulation improvements

Dwelling type/Age	1945-1964	1965-1980	1981-1990	Post 1990
Small terraced house	7.7%	2.5%	0.1%	1.0%
Medium/large terraced house	11.6%	6.0%	0.2%	0.6%
Semi detached house	16.7%	13.2%	0.8%	0.3%
Detached house	0.4%	4.1%	0.0%	1.9%
Bungalow	2.3%	0.0%	0.0%	0.0%
Converted flats	1.9%	0.0%	0.0%	0.0%
Low rise purpose built flats	4.4%	9.2%	3.4%	0.7%
High rise purpose built flats	0.0%	11.0%	0.0%	0.0%

10.8.8   Medium/large terraced houses and semi detached houses again have the highest proportionate rates of cavity wall improvements, found within the pre 1981 age groups. None being identified in the pre 1919 or 1919 to 1944 age bands.

Table 10.10 Double glazing improvements

Dwelling type/Age	Pre 1919	1919-1944	1945-1964	1965-1980	1981-1990	Post 1990
Small terraced house	13.5%	0.6%	0.4%	0.1%	0.0%	0.1%
Medium/large terraced house	35.6%	3.5%	2.0%	2.0%	0.1%	0.0%
Semi detached house	6.3%	9.4%	6.3%	0.0%	0.7%	1.9%
Detached house	0.5%	1.8%	0.0%	0.1%	0.0%	1.8%
Bungalow	0.1%	0.0%	0.5%	0.0%	0.0%	0.5%
Converted flats	3.2%	0.0%	0.1%	0.0%	0.0%	0.0%
Low rise purpose built flats	0.4%	0.0%	1.8%	1.5%	2.9%	0.6%

10.8.9   The greatest proportion of the 12,300 dwellings requiring double glazing improvements is found in terraced and semi detached housing, mainly in the pre 1919 age band.

Table 10.11 Cylinder insulation improvements

Dwelling type/Age	Pre 1919	1919-1944	1945-1964	1965-1980	1981-1990	Post 1990
Small terraced house	8.4%	1.4%	5.5%	1.4%	1.2%	0.6%
Medium/large terraced house	17.9%	0.7%	4.5%	4.5%	0.2%	3.4%
Semi detached house	4.2%	11.3%	9.7%	3.4%	0.0%	0.1%
Detached house	0.1%	0.0%	0.0%	1.4%	0.0%	1.2%
Bungalow	2.7%	0.0%	0.0%	0.0%	0.0%	0.3%
Converted flats	1.6%	0.0%	1.1%	0.0%	0.2%	0.0%
Low rise purpose built flats	0.0%	0.0%	1.6%	4.0%	1.8%	1.0%
High rise purpose built flats	0.0%	0.0%	0.0%	4.4%	0.0%	0.0%

10.8.10 Cylinder insulation improvements are needed in 20,000 dwellings with the majority being found in terraced and semi detached housing within properties built pre 1965.

Table 10.12 New boiler improvements

Dwelling type/Age	Pre 1919	1919-1944	1945-1964	1965-1980	1981-1990
Small terraced house	6.9%	0.9%	0.6%	2.9%	0.0%
Medium/large terraced house	16.5%	3.0%	8.8%	3.7%	0.9%
Semi detached house	0.3%	8.8%	15.3%	3.1%	0.6%
Detached house	0.0%	3.5%	0.0%	2.9%	2.9%
Bungalow	0.0%	0.0%	3.7%	0.0%	0.0%
Converted flats	2.3%	0.1%	0.0%	0.0%	0.0%
Low rise purpose built flats	0.7%	0.0%	3.5%	2.4%	2.0%

10.8.11 As with a number of previous improvement measures, the highest proportionate rate of the 7,500 dwellings in need of a new boiler, is found in terraced and semi detached houses within properties built pre 1965. No improvements were identified in the post 1990 age band.

Table 10.13 New central heating improvements

Dwelling type/Age	Pre 1919	1919-1944	1945-1964	1965-1980	Post 1990
Small terraced house	8.2%	0.0%	11.2%	9.1%	0.0%
Medium/large terraced house	2.8%	0.0%	11.2%	0.0%	0.0%
Semi detached house	0.0%	44.1%	0.0%	0.0%	0.0%
Converted flats	0.0%	0.0%	0.0%	0.0%	0.8%
Low rise purpose built flats	0.8%	0.0%	0.0%	0.0%	0.0%
High rise purpose built flats	9.9%	0.0%	0.0%	0.0%	0.0%

10.8.12 Following previous patterns, the types most needing central heating improvements are terraced and semi detached houses within properties built pre 1965, particularly semi detached houses within the 1919 to 1944 age band.

10.8.13 Overall, 91% of dwellings within Cambridge have a central heating system, compared with 89% found in the EHCS 2006, with the following table providing a proportionate breakdown by dwelling type and heating system, with low rise purpose built flats having the highest rate of storage heating (49.6%) and the lowest rate of central heating (49.0%).

Table 10.14 Heating system by dwelling type

Dwelling type/Heating system	Radiator system	Room heaters	Storage heaters	Warm air
Small terraced house	96.3%	2.2%	1.3%	0.2%
Medium/large terraced house	96.6%	0.6%	0.7%	2.1%
Semi detached house	96.0%	1.6%	2.0%	0.3%
Detached house	89.2%	9.0%	0.0%	1.8%
Bungalow	96.4%	0.3%	3.3%	0.0%
Converted flats	74.6%	5.1%	20.3%	0.0%
Low rise purpose built flats	49.0%	0.3%	49.6%	1.1%
High rise purpose built flats	100.0%	0.0%	0.0%	0.0%

10.9   Tackling fuel poverty

10.9.1 A key issue in reducing energy consumption is tackling fuel poverty. The occupiers of a dwelling are considered to be in fuel poverty if more than 10% of their net household income would need to be spent on heating and hot water to give an adequate provision of warmth and hot water.   Not only do dwellings where fuel poverty exists represent dwellings with poor energy efficiency, they are, by definition, occupied by residents with low incomes least likely to be able to afford improvements. In "Fuel Poverty in England: The Government's Plan for Action" published in 2004, the government set a target for the total eradication of fuel poverty by November 2016.

10.9.2 There are an estimated 5,800 (14%) households in fuel poverty in Cambridge. This compares to the 11.5% based on the findings of the EHCS 2006, although this figures could potentially have been affected by the substantial changes in energy costs seen over recent times.

10.9.3 Similar to the national average, the 5,800 dwellings represent a substantial number of households that are in fuel poverty and will present issues in terms of both energy efficiency and occupier health. The highest rate of fuel poverty is in fact found in the privately rented sector where 56% are in fuel poverty, compared with 13% in the owner occupied sector and 6% in RSL dwellings. Intervention programmes such as Warm Front have been set up to tackle fuel poverty among

vulnerable households in the private rented and owner occupied sectors, and provide grant packages to undertake energy efficiency measures for those eligible.

10.9.4   By the very nature of fuel poverty, it is almost always associated with those residents on the lowest incomes, who often occupy the worst accommodation. 3,100 households (53% of the households in fuel poverty) were households with incomes below £10,000 per annum, with the remaining 2,700 (47%) having income above £10,000 per annum. This means that, for those households who have an income below £10,000, the fuel poverty rate is 40%.

10.9.5   Fuel poverty is usually associated with dwellings where one or more residents are in receipt of a means tested benefit, which is generally an indication of low income. In Cambridge fuel poverty is found in 2,200 households where a benefit is received, which is 38% of all households in fuel poverty. This compares with 3,600 households (62% of households in fuel poverty) where occupiers do not receive benefit.

10.9.6   For owner-occupiers, assistance in the form of advice can be given, as well as grants and other partnership schemes with energy efficiency companies and other organisations. The total cost of energy efficiency improvements to dwellings in fuel poverty in the owner-occupied sector, is just under £4.7 million. This expenditure requirement is distributed between the 3,300 owner-occupied dwellings in fuel poverty where works are possible at an average cost per dwelling of £1,400.

10.10   Beyond fuel poverty

10.10.1 Tackling dwellings where fuel poverty exists helps those least able to afford either to heat their homes properly or to afford the improvement works necessary.

10.10.2 Beyond fuel poverty, however, the Authority has a duty under the Home Energy Conservation Act (1995) to help reduce energy consumption in dwellings within Cambridge.

10.11   Energy efficiency works to all other dwellings

10.11.1 The cost of carrying out all works to all dwellings where the residents are not in fuel poverty but where potentially improvements could be made is just under £110.3 million. This represents an average expenditure of approximately £3,100 per dwelling in 35,700 properties.

10.11.2 Targeting all these dwellings would not involve selecting any specific areas or types, as it involves the majority of the stock. Perhaps the best targets are likely to be those most in need of improvement, in particular those dwellings that are the least energy efficient at present.

10.11.3 There are 200 dwellings where the household is not in fuel poverty but where the mean SAP is less than 30. To carry out all improvement

works required for these dwellings would cost just over £0.8 million, with almost all of this cost being required for the owner-occupied stock. The mean cost per dwelling in the owner-occupied stock would be £4,100. The reason the average cost of improvements is higher is that many of these dwellings would require the installation of full central heating, insulation and other measures to bring their SAP above 30.

10.12   Achieving the 30% target

10.12.1 Given the work that has already been carried out on reducing energy consumption since 1996, the target of 30% is achievable. However households that have already improved energy efficiency are likely to be those more able, it is likely that those remaining will be more difficult to identify and therefore the targets will still be difficult to achieve.

10.12.2 To achieve a total reduction in energy consumption of 30% by 2011 will require a comprehensive range of measures to most dwellings where this is possible, although, as previously mentioned, households that have already improved energy efficiency are likely to be those more able and that those remaining will be more difficult to identify and therefore the targets will still be difficult to achieve. It is therefore, likely to prove difficult to locate sufficient dwellings to carry out these works and any strategy will need considerable engagement with residents.

11 Conclusions and Policy Implications

11.1 Introduction

11.1.1 This chapter summarises the key findings from each chapter of this report in turn. It seeks to give a summary of findings rather than specific recommendations as these should be dealt with separately in the context of current private sector housing strategy.

11.2 Stock Profile

11.2.1 The age profile of the 43,500 owner occupied, privately rented and RSL stock in Cambridge differs from the national average with higher proportions of pre 1919 and 1945 to 1944 dwellings but with lower proportions in all other categories.

11.2.2 The building type profile in Cambridge again differs from the national pattern with higher proportions of terraced and semi-detached properties and high rise purpose built flats. There are lower levels of the remaining dwelling types, particularly detached houses and bungalows.

11.2.3 The tenure profile in Cambridge differs from the national average in the level of privately rented housing is significantly higher at 25% compared with 12%, which will be due to the student population within the City. The overall proportion of social housing is higher at 22% compared with 18% nationally.

11.2.4 The estimated proportion of houses in multiple occupation (HMOs) is 12.6%, with an estimated 5,220 such properties. 260 higher risk HMOs, potentially subject to mandatory licensing, were identified. However, as this is a sample survey the authority may wish to take steps to confirm the numbers and location of HMOs in particular any which may be subject to mandatory licensing.

11.2.5 The proportion of empty properties was estimated to be 0.7%, well below the national average of 4.1%. The proportion of long term empty properties was estimated at 0.2% (70 properties), is again well below the national average of 1.5%. Under the Housing Act 2004, local authorities have increased powers and responsibilities in relation to empty properties.

11.3 Profile of Residents

11.3.1 The proportion of residents in Cambridge with incomes in the bands below £20,000 is slightly less than national averages. Overall benefit receipt is lower than national averages. Even so affordability could still

be an issue affecting repair and improvement in the private sector dwelling stock.

11.3.2   House prices are well above the national average, with Cambridge having the highest average value within East Anglia. Affordability of housing for younger residents and first time buyers is highly likely to be an issue because of the extent of low incomes found. There may also be maintenance/adaptation issues with 'equity rich cash poor' older owner occupiers.

11.3.3   The majority of households (81.1%) described themselves as White British.

11.3.4   There are an estimated 2,600 households (6.3%) where there is a resident with a disability. The cost of necessary adaptations, after allowing for means testing, is estimated to be £4.6 million.

11.3.5   The overall levels of household income and benefit receipt do have a bearing on the affordability of repairs, meeting decent homes targets, vulnerability and fuel poverty.

11.4   The Decent Homes Standard

11.4.1   An estimated 15,200 dwellings in Cambridge (36.8% of the stock) are non decent. The majority of dwellings are non decent because of Category 1 Hazards (21.8%) followed by thermal comfort failure (19%). 9.4% of the stock fails the disrepair criterion and only 1.7% because of lacking modern facilities and amenities.

11.4.2   In Cambridge non decent dwellings are most associated with bungalows, detached houses and converted flats, the private rented sector and properties built pre-1919. There are also associations with occupiers with a household income between £20k and £30k and those in receipt of benefit. Non decency is also associated with older heads of households.

11.4.3   Up until the 1 April 2008, the government target for achieving decency standards in the private sector was that set by PSA7, where 65% of all dwellings occupied by vulnerable residents should be made decent by 2006/07. In practice, the most challenging target was the 70% to be met by 2010/11. Although the PSA7 target no longer exists, it is still a CLG Departmental Strategic Objective under DSO2, 2.8. It is highly likely therefore, that Regional Housing bodies will continue to apply targeting in respect of vulnerable households in decent homes when making capital allocations.

11.4.4   At present it is estimated that Cambridge failed to meet the 65% target, and also falls short of the 70% target by 950 dwellings.

11.5 Housing Health and Safety Rating System

11.5.1 At present 9,000 (21.8%) dwellings are estimated to have at least one Category 1 Hazard. Category 1 Hazards are associated with pre 1919 dwellings, bungalows and converted flats, and the privately rented sector. There is an association between Category 1 Hazards and households with a disabled occupant, those in receipt of a benefit and those aged over 65.

11.5.2 The cost to remedy all Category 1 Hazards is £51.4 million, at an average cost of £5,700 per dwelling. If a more comprehensive standard were adopted (no further work required for at least 10 years) to dwellings with a Category 1 Hazard, rather than just remedying the hazard(s), the costs would be £161 million at an average cost per dwelling of £21,600 per dwelling.

11.5.3 The main reason for the presence of a Category 1 Hazard is excess cold followed by falls on stairs etc. and falling on level surfaces (see also 11.8.1).

11.6 Repair Costs

11.6.1 Maintaining the repair condition of dwellings is a key requirement of the Decent Homes Standard.

11.6.2 The total requirement for repair in all dwellings that fail under the repair criterion of the Decent Homes Standard is £13 million, an average cost of £4,000 per dwelling. Due to the distribution of household income levels in Cambridge, a significant part of the demand for repairs is likely to come from households where income is below £15,000 per annum and where vulnerable occupiers live.

11.6.3 In addition to making repairs to dwellings that fail the Decent Homes Standard, there are repair, and more particularly renewal, requirements on all dwellings. The total cost of comprehensive repairs, to include all private sector dwellings in Cambridge, is £459.8 million or an average of £11,900 per dwelling.

11.7 Modern Facilities

11.7.1 700 dwellings, 1.7% of the private sector housing stock, fail the Decent Homes Standard because they provide inadequate modern facilities. This is below the national average of 2.2%. The nature of this criterion of the Decent Homes Standard means that this number is unlikely to increase significantly in the coming years.

11.8 Thermal Comfort and Energy Efficiency

11.8.1 Tackling fuel poverty is an important issue for the Authority as it aids those residents most in need, as well as improving thermal comfort

(required under the Decent Homes Standard). It also potentially reduces the number of dwellings where a Category 1 Hazard exists. There are estimated to be 5,800 (14%) dwellings which contain households in fuel poverty within Cambridge. This is above the EHCS 2006 rate (11.5%), but fuel prices have become very volatile since then and the EHCS rate could now be higher. The fuel poverty figure is not linked to the NI187 data (see table 10.4) as the calculation criteria are different.

11.8.2   The greatest impact, in terms of reducing fuel poverty, can be achieved by focusing on making energy efficiency improvements to dwellings with: older heads of household; dwellings with benefit recipients; households on low incomes, households with disabled occupants and the privately rented stock. The Authority may wish to consider how to encourage landlords to improve the energy efficiency of their dwellings in the private rented sector.

11.8.3   The average energy efficiency level in Cambridge, using the Government's Standard Assessment Procedure, is 51 (on a scale of 1 to 100). This is above the all England average of 49 from the EHCS 2006.

11.8.4   Achieving targets for energy efficiency may be possible, although it is likely to be to become increasingly difficult to maintain the previous rates of improvement. Achieving targets will need to involve all dwellings that can have improvements made and therefore private, as well as public, investment will need to be encouraged.

Appendix A - Index of tables and figures

A.1   The following is a list of tables throughout the report which are referenced to the relevant chapter number by the first digit of the table number.

A.2 The following is a list of figures throughout the report which are referenced to the relevant chapter number by the first digit of the table number.

Appendix B- Methodology

B.1 The survey used a stratified random sample of 2,000 dwellings from an address file supplied by Cambridge City Council and sampled by the Building Research Establishment. The sample was a stratified random sample to give representative findings across the authority with the objective of gaining as many surveys as possible.

B.2 All addresses on the original address list were assigned an ID number and a random number generating computer algorithm was used to select the number of addresses specified for survey.

B.3 The survey incorporates the entire private sector stock, including registered social landlords (Housing Associations).

B.4 Each dwelling selected for survey was visited a minimum of three times where access failed and basic dwelling information was gathered including a simple assessment of condition if no survey was ultimately possible. To ensure the sample was not subject to a non-response bias, the condition of the dwellings where access was not achieved was systematically compared with those where the surveyors were successful. Where access was achieved, a full internal inspection was carried out including a detailed energy efficiency survey. In addition to this, where occupied, an interview survey was undertaken.

B.5 The basic unit of survey was the 'single self-contained dwelling'. This could comprise a single self-contained house or a self contained flat. Where more than one flat was present the external part of the building, encompassing the flat and any access-ways serving the flat were also inspected.

B.6 The house condition survey form is based on the survey schedule published by the ODPM in the 2000 guidelines (Local House Condition Surveys 2000 HMSO ISBN 0 11 752830 7).

B.7 The data was weighted using the CLASSIC Reports software. Two approaches to weighting the data have been used.

B.8 The first method is used for data such as building age, which has been gathered for all dwellings visited. In this case the weight applied to the individual dwellings is very simple to calculate, as it is the reciprocal of the sample fraction. Thus if 1 in 10 dwellings were selected the sample fraction is 1/10 and the weight applied to each is 10/1.

B.9 Where information on individual data items is not always present, i.e. when access fails, then a second approach to weighting the data is taken. This approach is described in detail in the following appendix, but a short description is offered here.

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

B.11 With an access rate above 50% there may be concern that the results will not be truly representative and that weighting the data in this manner might produce unreliable results. There is no evidence to suggest that the access rate has introduced any bias. When externally gathered information (which is present for all dwellings) is examined the stock that was inspected internally is present in similar proportions to those where access was not achieved suggesting no serious bias will have been introduced.

B.12 Only those dwellings where a full survey of internal and external elements, energy efficiency, fitness, housing health and safety and social questions were used in the production of data for this report. A total of 971 such surveys were produced.

B.13 The use of a sample survey to draw conclusions about the stock of the four areas as a whole introduces some uncertainty. Each figure produced is subject to sampling error, which means the true result will lie between two values, e.g. 5% and 6%. For ease of use, the data are presented as single figures rather than as ranges. A full explanation of these confidence limits is included in the following appendix.

Appendix C - Survey Sampling

Sample Design

C.1 The sample was drawn from the Cambridge City Council address file derived from Council Tax records. The total number of dwellings on the list was 43,500 including Housing Association dwellings. These totals constituted all addresses within the Local Authority boundaries.   The Council Tax register contains a reference for each individual address, whether or not it is occupied.   In addition, there will be a number of dwellings with multiple addresses, such as certain houses in multiple occupation (HMOs), and non-residential address within the register.

Stock total

C.2 The stock total is based initially on the address list; this constitutes the sample frame from which a proportion (the sample) is selected for survey. Any non-dwellings found by the surveyors are marked as such in the sample; these will then be weighted to represent all the non-dwellings that are likely to be in the sample frame. The remaining dwellings surveyed are purely dwellings eligible for survey. These remaining dwellings are then re-weighted according to the original sample fractions and produce a stock total.

C.3 In producing the stock total the amount by which the total is adjusted to compensate for non-dwellings is estimated, based on how many surveyors found.   With a sample as large as the final achieved data-set of 969 dwellings however, the sampling error is likely to be very small and the true stock total is likely, therefore, to be very close to the 41,500 private sector and housing association dwellings reported.   Sampling error is discussed later in this section. Table C.1 shows the response rates to the survey.

Weighting the data

C.4 The original sample was drawn from Cambridge City Council Address file. The sample fractions used to create the sample from this list can be converted into weights. If applied to the basic sample these weights would produce a total equal to the original address list.   However, before the weights are applied the system takes into account all non-residential and demolished dwellings.   This revised sample total is then weighted to produce a total for the whole stock, which will be slightly lower than the original total from which the sample was drawn.

Dealing with non-response

C.5 Where access fails at a dwelling selected for survey the easiest strategy for a surveyor to adopt is to seek access at a neighbouring property. Unfortunately this approach results in large numbers of dwellings originally selected subsequently being excluded from the survey. These are the dwellings whose occupiers tend to be out all day, i.e. mainly the employed population. The converse of this is that larger numbers of dwellings are selected where the occupiers are at home most of the day, i.e. older persons, the unemployed and families with young children. This tends to bias the results of such surveys as these groups are often on the lowest incomes and where they are owner-occupiers they are not so able to invest in maintaining the fabric of their property.

C.6 The methods used in this survey were designed to minimise the effect of access failures. The essential features of this method are; the reduction of access failures to a minimum by repeated calls to dwellings and the use of first impression surveys to adjust the final weights to take account of variations in access rate.

C.7 Surveyors were instructed to call on at least three occasions and in many cases they called more often than this. At least one of these calls was to be outside of normal working hours, thus increasing the chance of finding someone at home.

C.8 Where access failed this normally resulted in a brief external assessment of the premises. Among the information gathered was the surveyor's first impression of condition. This is an appraisal of the likely condition of the dwelling based on the first impression the surveyor receives of the dwelling on arrival. It is not subsequently changed after this, whatever conditions are actually discovered.

C.9 Where access fails no data is collected on the internal condition of the premises. During data analysis weights are assigned to each dwelling according to the size of sample fraction used to select the individual dwelling.

C.10 The final weights given to each dwelling are adjusted slightly to take into account any bias in the type of dwellings accessed. Adjustments to the weights (and only the weights) are made on the basis of the tenure, age and first impression scores from the front-sheet only surveys.

Sampling error

C.11 Results of sample surveys are, for convenience, usually reported as numbers or percentages when in fact the figure reported is at the middle of a range in which the true figure for the population will lie. It is usual to report these as the 95% confidence limits, i.e. the range either side of the reported figure within which one can be 95% confident that the true figure for the population will lie.

C.12 For this survey the estimate of dwellings with a category 1 hazard is 21.8% and the 95% confidence limits are + or − 2.6%. In other words one can say that 95% of all samples chosen in this way would give a result in the range between 19.2% and 24.4%.

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

Expected result as per cent	Sample size									
	100	200	300	400	500	600	700	800	900	1,000
10	5.9	4.2	3.4	2.9	2.6	2.4	2.2	2.1	2	1.9
20	7.8	5.5	4.5	3.9	3.5	3.2	3	2.8	2.6	2.5
30	9	6.4	5.2	4.5	4	3.7	3.4	3.2	3	2.8
40	9.6	6.8	5.5	4.8	4.3	3.9	3.6	3.4	3.2	3
50	9.8	6.9	5.7	4.9	4.4	4	3.7	3.5	3.3	3.1
60	9.6	6.8	5.5	4.8	4.3	3.9	3.6	3.4	3.2	3
70	9	6.4	5.2	4.5	4	3.7	3.4	3.2	3	2.8
80	7.8	5.5	4.5	3.9	3.5	3.2	3	2.8	2.6	2.5
90	5.9	4.2	3.4	2.9	2.6	2.4	2.2	2.1	2	1.9

Appendix D – Legislative Requirements

D.1 Section 605 of the Housing Act 1985 (as amended) placed a duty on Local Authorities to consider the condition of the stock within their area, in terms of their statutory responsibilities to deal with unfit housing, and to provide assistance with housing renewal. Section 3 of the Housing Act 2004 replaced this with a similar duty to keep housing conditions under review.

D.2 The Regulatory Reform (Housing Assistance) (England and Wales) Order 2002 came into effect on the 19 July 2003 and led to major change in the way Local Authorities can give financial help for people to repair or improve private sector homes. Before the Order, the Government set clear rules which controlled the way financial help could be given and specified the types of grant which could be offered. The Order set aside most of these rules (apart from the requirement to give mandatory Disabled Facility Grants). It now allows Local Authorities to adopt a flexible approach, using discretion to set up their own framework for giving financial assistance to reflect local circumstances, needs and resources.

D.3 The Office of the Deputy Prime Minister (ODPM), published guidance under Circular 05/2003. In order to use the new freedom, a Local Authority must prepare and publish a Private Sector Renewal Policy. The policy must show that the new framework for financial assistance is consistent with national, regional and local policies. In particular, it has to show that the local priorities the strategy is seeking to address have been identified from evidence of local housing conditions including stock condition.

D.4 The Housing Act 2004 received Royal Assent in November 2004. The Act makes a number of important changes to the statutory framework for private sector housing, which came into effect in April 2006:

- The previous fitness standard and the enforcement system have been replaced by the new Housing Health and Safety Rating System (HHSRS).
- The compulsory licensing of higher risk houses in multiple occupation (HMO) (three or more storeys, five or more tenants and two or more households).
- New discretionary powers including the option for selective licensing of private landlords, empty dwelling management orders and tenancy deposit protection.

D.5   Operating Guidance was published on the Housing Health and Safety Rating System in February 2006. This guidance describes the new system and the methods for measurement of hazards, as well as the division of category 1 and 2 hazards. Guidance has been issued by the ODPM on the licensing provisions for HMOs, which describes the high risk HMOs that require mandatory licensing and those that fall under additional, voluntary licensing.

D.6   As the Rating System has now replaced the fitness standard, this report will deal with findings based on statutory hazards, not unfitness.

Mandatory Duties

- Unfit houses (Housing Act 1985) - to take the most satisfactory course of action – works to make property fit, closure/demolition or clearance declaration.

With effect from April 2006 replaced by:

- Category 1 Hazards, Housing Health and Safety Rating System (HHSRS) (Housing Act 2004) – to take the most satisfactory course of action – improvement notices, prohibition orders, hazard awareness notices, emergency remedial action, emergency prohibition orders, demolition orders or slum clearance declaration.

- Houses in Multiple Occupation (Housing Act 1985) - to inspect certain HMOs, to keep a register of notices served, to require registration where a registration scheme is in force.

With effect from April 2006 replaced by:

- HMO Licensing by the Authority (Housing Act 2004) of all HMOs of three or more storeys, with five or more residents and two or more households. Certain exceptions apply and are defined under sections 254 to 259 of the Housing Act 2004.

- Overcrowding - (Housing Act 1985) - to inspect and report on overcrowding

Now In Addition

- Overcrowding – (Housing Act 2004) – to inspect and report on overcrowding as defined under sections 139 to 144 of the Housing Act 2004 along with statutory duty to deal with any category 1 overcrowding hazards found under the HHSRS.

- The provision of adaptations and facilities to meet the needs of people with disabilities (Housing Grants, Construction and Regeneration Act 1996) - to approve applications for Disabled Facilities Grants for facilities and/or access

- Energy Conservation (Home Energy Conservation Act 1995) - to have in place a strategy for the promotion and adoption of energy efficiency measures and to work towards specified Government targets to reduce fossil fuel use.

Appendix E - Definition of a Non Decent Home

Measure of a decent home

E.1   A dwelling is defined as non decent if it fails any one of the following 4 criteria:

Table E.1 Categories for dwelling decency

A	It meets the current statutory minimum standard for housing – at present that it should not have a Category 1 hazard under the HHSRS
B	It is in a reasonable state of repair – has to have no old and defective major elements*
C	It has reasonably modern facilities and services – Adequate bathroom, kitchen, common areas of flats and is not subject to undue noise
D	Provides a reasonable degree of thermal comfort

Described in more detail below

E.2   Each of these criteria has a sub-set of criteria, which are used to define such things as 'providing a reasonable degree of thermal comfort'. The exact details of these requirements are covered in the aforementioned ODPM guidance (see 4.1.2).

Applying the standard

E.3   The standard is specifically designed in order to be compatible with the kind of information collected as standard during a House Condition Survey (HCS). All of the variables required to calculate the standard are contained within a complete data set.

E.4   The four criteria used to determine the decent homes standard have specific parameters. The variables from the survey used for the criteria are described below:

Criterion A:

E.5   Criterion A is simply determined as whether or not a dwelling fails the current minimum standard for housing. This is now the Housing Health and Safety Rating System (HHSRS) – specifically Category 1 hazards. All dwellings surveyed were marked on the basis of the HHSRS and if any one or more Category 1 hazard was identified the dwelling was deemed to fail under criterion A of the Decent Homes Standard.

Criterion B:

E.6   Criterion B falls into 2 parts: firstly, if any one of a number of key major building elements is both in need of replacement and old, then the dwelling is automatically non decent. Secondly, if any two of a number of key minor building elements are in need of replacement and old, then the dwelling is automatically non decent. The elements in question are as follows:

Table E.2 Major Elements (1 or more)

Element	Age to be considered old
Major Walls (Repair/Replace >10%)	80
Roofs (Replace 50% or more)	50 for houses 30 for flats
Chimney (1 or more needing partial rebuild)	50
Windows (Replace 2 or more windows)	40 for houses 30 for flats
Doors (Replace 1 or more doors)	40 for houses 30 for flats
Gas Boiler (Major Repair)	15
Gas Fire (Major Repair)	10
Electrics (Major Repair)	30

Table E.3 Minor Elements (2 or more)

Element	Age to be considered old
Kitchen (Major repair or replace 3+ items)	30
Bathroom (Replace 2+ items)	40
Central heating distribution (Major Repair)	40
Other heating (Major Repair)	30

Criterion C:

E.7 Criterion C requires the dwelling to have reasonably modern facilities. These are classified as the following:

Table E.4 Age categories for amenities

Amenity	Defined as
Reasonably modern kitchen	Less than 20 yrs
Kitchen with adequate space and layout	If too small or missing facilities
Reasonably modern bathroom	Less than 30 yrs
An appropriately located bathroom and W.C.	If unsuitably located etc.
Adequate noise insulation	Where external noise a problem
Adequate size and layout of common parts	Flats

E.8 You may notice that the age definition for kitchens and bathrooms differs from criterion B. This is because it was determined that a decent kitchen, for example, should generally be less than 20 years old but may have the odd item older than this. The same idea applies for bathrooms.

Criterion D:

E.9 The dwelling should provide an adequate degree of thermal comfort. It is currently taken that a dwelling, which is in fuel poverty, is considered to be non decent. A dwelling is in fuel poverty if the occupiers spend more than 10% of their net income (after Tax, N.I and housing cost e.g. mortgage or rent) on heating and hot water.

E.10 A number of Local Authorities criticized this approach, as it requires a fully calculated SAP for each dwelling that is being examined. Whilst this is fine for a general statistical approach, such as this study, it does cause problems at the individual dwelling level for determining course of action.

E.11 The alternative, laid out in the new guidance, is to examine a dwelling's heating systems and insulation types. The following is an extract from the new guidance:

E.12 The revised definition requires a dwelling to have both:

Efficient heating; and

Effective insulation

Efficient heating is defined as any gas or oil programmable central heating or electric storage heaters or programmable LPG/solid fuel central heating or similarly efficient heating systems, which are developed in the future. Heating sources, which provide less efficient options, fail the decent homes standard.

Because of the differences in efficiency between gas/oil heating systems and other heating systems listed, the level of insulation that is appropriate also differs:

For dwellings with gas/oil programmable heating, cavity wall insulation (if there are cavity walls that can be insulated effectively) or at least 50mm loft insulation (if there is loft space) is an effective package of insulation;

For dwellings heated by electric storage radiators/LPG/programmable solid fuel central heating a higher specification of insulation is required: at least 200mm of loft insulation (if there is a loft) and cavity wall insulation (if there are cavities that can be insulated effectively).
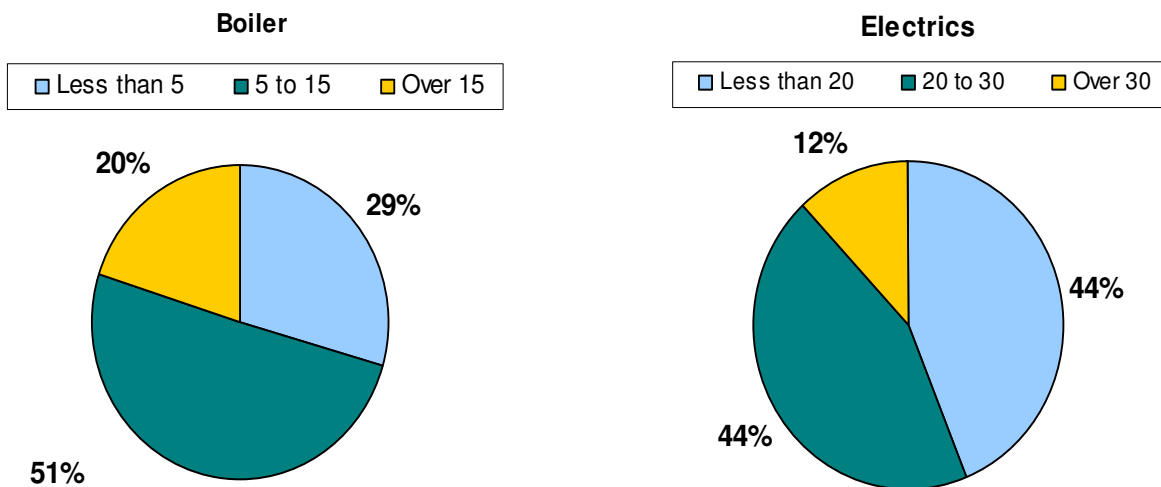
E.13 For the purposes of this study the above definition will be used in calculating the proportion of dwellings that are considered non decent.

Appendix F – Additional amenities

F.1 The following charts examine the position for electrical systems and boilers. Electrical systems over 30 years of age are considered as reaching a point where regular inspection and testing is advisable to ensure that they are not likely to present a hazard. Many boilers over the age of 15 will still be working satisfactorily but they will be reaching the end of their economic life and their energy efficiency is likely to be declining.   Boilers installed now have much higher levels of efficiency in order to meet current Building Regulations.

F.2 71% of boilers and 56% of electrical systems are either older than the age specified in the criterion or will become so in the next 10 years.

Figure F.1 Electrics and boiler age

Boiler

☐ Less than 5   ■ 5 to 15   ☐ Over 15

20%
29%
51%

Electrics

☐ Less than 20   ■ 20 to 30   ☐ Over 30

12%
44%
44%

Source: 2009 House Condition Survey

F.3 The age bands used in these charts and those used in chapter 7 differ, dependent upon the design life of the amenity in question. The second band in each chart represents where the amenity will become older than its design life during the next ten years.