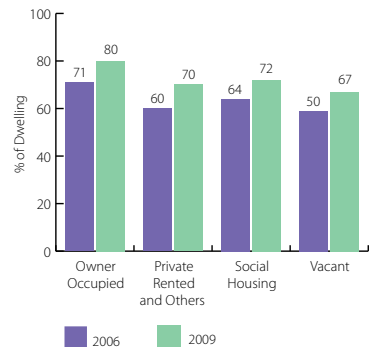
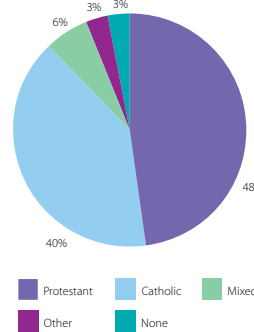
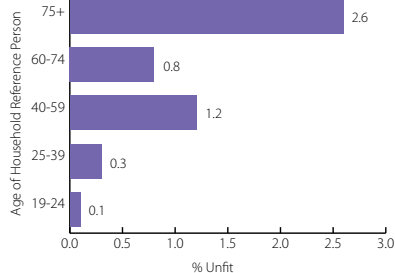
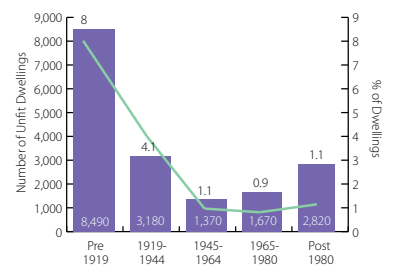
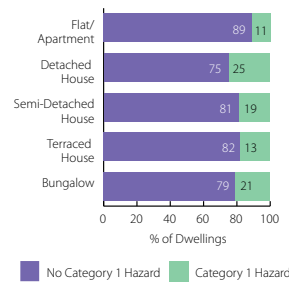
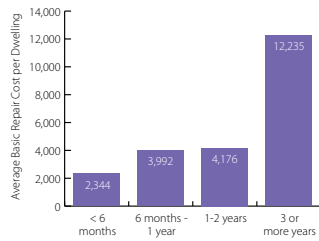
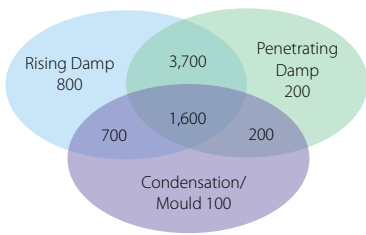
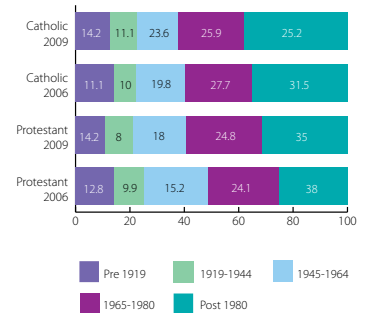
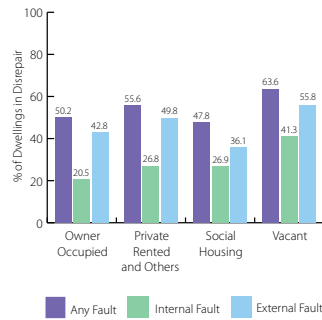
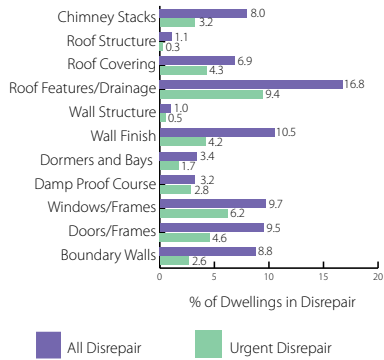


Northern Ireland HOUSE CONDITION SURVEY 2009

MAIN REPORT



Northern Ireland

HOUSE CONDITION SURVEY 2009

MAIN REPORT

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FOREWORD

We are pleased to introduce the final report from the 2009 House Condition Survey. House Condition Surveys provide us with a wide range of data on Northern Ireland's dwelling stock, its residents, the level of fitness, the state of repair, Fuel Poverty, Decent Homes Standard and the energy efficiency of homes. They allow us to measure and analyse change over time and gain greater insight into the dynamics of the housing market. It is an invaluable source of information for planning intervention in the housing market and monitoring progress and is used not only by housing managers and policy makers but indeed, is regularly sourced by political representatives, councils, government departments, agencies, charities and a range of private sector interests.

We have improved the efficiency of the survey by adopting electronic data capture. This approach allowed a faster turnaround of the survey results, improved data quality, and reduced overall costs.

The economic circumstances surrounding the housing market in Northern Ireland changed rapidly between the last two House Condition Surveys in 2006 and 2009. The impact of the rapid boom peaking in 2007 and the dramatic turnaround from an environment driven primarily by investor activity and the ready availability of buy-to-let mortgages to one of tightening credit especially for first time buyers can be tracked to some of the key results from the 2009 House Condition Survey.

Northern Ireland's housing stock continued to grow rapidly between 2006 and 2009 with an annual average increase of approximately 12,000 bringing the total stock to 740,000. Also, the 2009 Survey confirms the changing tenure structure of Northern Ireland's housing stock with the most significant developments taking place in the private rented sector where there was an annual average growth of nearly 15,000 properties so that by 2009 they constitute 17 per cent of the total stock. Also, for the first time the actual number of owner occupied dwellings fell, reflecting the challenging economic environment facing first time buyers.

The House Condition Survey is the only survey that provides robust estimates of two very important



Government measures: Decent Homes and Fuel Poverty. The figures for these measures are calculated in partnership with the Building Research Establishment using the latest statistical models and are therefore also comparable with figures from the English Housing Survey. The 2009 Survey confirms the fall in the proportion of dwellings failing the Decent Homes Standard from one-third to less than one-sixth (a reduction of some 94,000 dwellings). This is mainly due to the investment by both the public and private sector in energy efficiency measures.

The 2009 survey also provides the most recent update on Fuel Poverty. Although considerable progress had been made in reducing Fuel Poverty in Northern Ireland up to 2005, rising fuel costs since then have caused the rate of Fuel Poverty to increase from 34 per cent in 2006 to 44 per cent in 2009. Analysis of the HCS data, however, still underlines the importance of investing in modern heating systems and energy efficiency measures, especially considering the recent extreme cold weather experienced by people in Northern Ireland.

One of the key lessons from 40 years of the Housing Executive is that investment in housing across all sectors is crucial to building successful communities and improving people's wellbeing. It remains vital that in these very challenging economic times and in a changing housing market we direct our resources in the most appropriate way.

We are pleased to commend this document to you and trust you find the analysis it contains both informative and useful.

A handwritten signature in black ink, appearing to read 'Brian Rowntree'.

Brian Rowntree
Chairman

A handwritten signature in black ink, appearing to read 'Stewart Cuddy'.

Stewart Cuddy
Chief Executive (Acting)

*“shall regularly
examine housing
conditions and need”*

Chapter 1

INTRODUCTION

1.1 Background

The Northern Ireland Housing Executive's statutory responsibility in relation to housing research is set out in the Housing (NI) Order 1981. Article 6 states that the Housing Executive "shall regularly examine housing conditions and need".

This legislation provides the statutory basis for the Housing Executive to undertake House Condition Surveys. The 2009 survey is the tenth such survey to be carried out in Northern Ireland since 1974. All tenures and types of housing are included, for example, owner occupied and rented housing, vacant dwellings, houses in multiple occupation, apartments, urban and rural properties.

The House Condition Survey provides a wealth of information, which is readily available to, and is regularly requested by government departments, government agencies, the voluntary sector, charities, universities and many private sector interests.

1.2 Conduct of the Survey

The 2009 Survey was the first to use an electronic approach to data collection and validation. The main benefits of using this computer based approach were as follows:

- It replaced the paper based system, saving form handling and the time consuming data punching (and double punching);
- It enabled surveyors to complete more complex self-validation of their forms at the time of the survey;
- It improved data quality by reducing punching errors, missing data and data inconsistencies;
- It allowed a faster turn around of the survey results;

- It reduced costs through removing the need for the design, printing, punching and scanning of the survey forms and their subsequent transport and storage during the survey period. In addition, there were lower administrative costs by reducing time spent validating data.

The bespoke software used was developed by the Building Research Establishment (BRE) and permitted the recording of dwelling information through radio buttons, direct keying, selecting items from drop down menus and enabled surveyors to draw sketches. All these methods used a stylus pen on a touch screen. Validation and consistency checks were built into the programme and once a survey was completed it was uploaded to a database via a secure website.

The hardware (a Motion 5 Field Tool) was both a semi-rugged field tool and a standard Windows computer. It was designed for use outside and had to be able to withstand a fall, have a battery life long enough to reduce the need for a docking station and have a 'View Anywhere' display. In addition the digital ink capability made it easy to annotate, draw, scribble or use handwriting and it also had a built in camera. The hardware also had to provide secure user identification and device level security.

The new electronic approach, the project management, design, administration, quality assurance analysis and report writing were the responsibility of the Housing Executive's Research Unit.

Eighteen fully qualified surveyors undertook the fieldwork and were either Environmental Health Officers or Chartered Surveyors. All of the surveyors had worked on the 2006 survey. Four experienced supervisors were responsible for quality assuring the work of the surveyors.

A training course was held in June 2009. This was conducted by staff from the Housing Executive's Research Unit, the Building Research Establishment (BRE) and by the HCS supervisors. The aim of the training was to update the surveyors on changes to the form since 2006 and specifically to provide in-depth guidance on how to use the new tablet p.c., how to validate and how to upload the data. It also included a refresher module on the Housing Health and Safety Rating System (HHSRS) and energy elements of the form.

1.3 Survey Objectives

The key objectives of the 2009 Northern Ireland House Condition Survey were as follows:

- To provide a comprehensive picture of the dwelling stock and its condition in 2009 on the basis of the new council areas proposed under RPA;
- To facilitate a comparative analysis of housing conditions in Northern Ireland with other parts of the UK;
- To examine the association between dwelling conditions and the social and economic circumstances of households;
- To examine changes in the condition of the stock over time in terms of key Government measures: Decent Homes and the Housing Health and Safety Rating System;
- To examine the role of renovations including those funded by home improvement grants in improving housing conditions;
- To provide a reliable assessment of the energy efficiency of the stock and the level of Fuel Poverty in Northern Ireland on a comparable basis with the rest of the UK.

The objectives have remained broadly consistent with those in 2001, 2004 and 2006.

1.4 The E-Survey Form

The E-Survey form broadly remained the same as previous paper surveys and comprised five main sections of questions covering:

- The physical attributes of each dwelling (internal and external);
- The physical aspects of flats and common areas;
- Demographic, social economic and attitudinal information on households;
- The front and back plot of the dwelling, the local neighbourhood and area;
- The Housing Health and Safety Rating System.

The main area of change between 2006 and 2009 was in relation to the HHSRS. In line with England the 2009 NI HCS scored ten hazards and identified a further twelve which might pose an extreme risk. In addition, new questions were included regarding the electrical system and a number of items were dropped from the interior section.

The information gathered in the physical section allows measurement of repair costs, the Fitness Standard, The Decent Homes Standard, Fuel Poverty, SAP and the HHSRS.

Information from the social survey is cross referenced with the physical survey data to provide an indication of the types of households living in dwellings which are in the poorest condition and most likely to fail the standards above.

1.5 The Sample - Response Rates

In 2009 the total number of dwellings selected for participation in the HCS was 3,000. This included 220 properties in each of Northern Ireland's ten proposed new district council areas with 800 selected for the Belfast District Council Area (200 in North, East, South and West Belfast).

The sample comprised the following two main elements:

- A fresh sample based on a stratified random disproportionate sample of 1,500 properties from across Northern Ireland extracted by NISRA which uses the Land and Property Services database as its source. Dwellings were stratified by area and Capital Value to reflect the fact

that properties in poor condition tend to be concentrated in lower Capital Value bands.

- A resample of 1,500 properties drawn from the 2006 HCS database. This allows a longitudinal analysis of properties and provides an indication of flows in and out of unfit, disrepair, energy efficiency and tenure change. It includes all dwellings which were deemed unfit or defective in 2006.

The process of weighting and grossing ensures that the final figures reflect the actual housing stock.

The gross response rate for the 2009 House Condition Survey was very high. A total of 2,174 full inspections were successfully carried out giving an overall response rate of 72 per cent. The response rate for the 2006 House Condition Survey was 74 per cent.

The response rate for the social survey was very high at 99 per cent of all properties where a physical survey was undertaken (1,889 interviews completed out of a possible 1,901). This response rate is again consistent with earlier surveys.

Further details of the sample, response rates and the sample errors associated with the figures contained in the text of the report are set out in Appendix D.

1.6 The Structure of the Report

The aim of the 2009 House Condition Survey Report is to provide a comprehensive overview of Northern Ireland's dwelling stock and its occupants in 2009, in a readily digestible format. The report concentrates on issues and developments that are of particular importance in understanding the Northern Ireland housing market.


The statistical annex includes a range of tables containing information to support the description and analysis contained in the report and to provide a comprehensive reference for those requiring further details. The table numbers are prefixed with an A in the commentary to distinguish them from the tables included as part of the main body of the report.

The report concentrates on comparisons with the 2006 HCS, highlighting any significant changes since 2001.

Table 1.1
Fresh and Resample Totals by Proposed New Council Areas 2009

Derry City and Strabane	220
Armagh City and Bann	220
Lisburn and Castlereagh	220
Newry and Down	220
Antrim and Newtownabbey	220
Ards and North Down	220
Causeway Coast	220
Fermanagh and Omagh	220
Mid Antrim	220
Mid Ulster	220
East Belfast	200
South Belfast	200
West Belfast	200
North Belfast	200
Total	3000

Dwelling type by period of construction

	Pre-1919	1919-44	1945-64	1965-80	Post 1980
FLATS/APARTMENTS					
BUNGALOW					
DETACHED HOUSE					
SEMI-DETACHED HOUSE					
TERRACED HOUSE					

Chapter 2

SUMMARY OF KEY FINDINGS

2.1 Background

The 2009 Northern Ireland House Condition Survey was the tenth House Condition Survey to be carried out since 1974. The 2009 Survey provides an update of key figures in relation to The Decent Homes Standard, Fuel Poverty, SAP, unfitness and disrepair at Northern Ireland and District Council level. As in 2006, this report also provides an analysis of the Housing Health and Safety Rating System which in England replaced the Fitness Standard as a key measure of housing quality in 2007. Although this Standard has yet to be adopted by government in Northern Ireland, data collected through the HCS allows it to be measured at the regional and the district level. All the key figures are derived from the latest statistical models and are comparable with figures from the English House Condition Survey.

The longitudinal element of the Survey has allowed the Housing Executive to measure and analyse change over time and gain greater insight into the dynamics of the housing market, for example, inter-tenure movement and the impact of policy related issues such as house sales and energy efficiency.

The 2009 House Condition Survey has made an important contribution to a number of key ministerial programmes including the Housing Growth Indicators, Fuel Poverty Strategy and the Private Rented Sector Strategy. It also plays a key role in helping the Housing Executive to carry out its strategic role and contributes to the Review of the Housing Market and Home Energy Conservation. The Housing Executive spends more than £250 million annually on physical programmes and the House Condition Survey helps ensure that scarce resources are targeted to the dwellings and households where they are most needed. It also provides a wealth of information that is regularly requested by Members of the Legislative Assembly, elected representatives, councils, government departments, agencies, charities and from many voluntary and private sector interests.

2.2 Survey Objectives

The key objectives for the 2009 Northern Ireland House Condition Survey are:

1. To provide a comprehensive picture of the dwelling stock and its condition in 2009 at District Council as well as Northern Ireland level;
2. To facilitate a comparative analysis of housing conditions in Northern Ireland with other parts of the United Kingdom;
3. To examine the association between dwelling conditions and the social and economic circumstances of households;
4. To examine changes in the condition of the stock over time;
5. To examine the impact of renovation grants in reducing unfitness;
6. To provide a reliable assessment of Fuel Poverty in Northern Ireland as a whole on a comparable basis with the rest of the United Kingdom.

KEY FINDINGS

2.3 Northern Ireland's Dwelling Stock

Northern Ireland's housing stock continued to grow rapidly between 2006 and 2009 with an annual average increase of approximately 12,000 bringing the total stock to 740,000. The broad pattern of geographic distribution changed little and in 2009 almost 70 per cent of the stock was classified as urban. However, there were significant changes in terms of tenure. In particular almost 17 per cent of the stock (125,000 homes) was in the private rented sector, a figure which rises to almost 20 per cent (142,000 dwellings) if the tenure of vacant homes when last occupied is taken into consideration. For the first time too the actual number of owner-occupied dwellings fell as did the proportion in this sector, reflecting the dramatic turn around in both

the economic circumstances and specifically the tightening credit environment in Northern Ireland for first-time buyers.

The number and proportion of vacant properties continues to rise, a trend that is in many ways an inevitable by product of the growing number and proportion of dwellings in the private rented sector. However, the age profile of the stock is increasingly modern, with a steadily growing proportion of properties constructed after 1980; from 30 per cent in 2006 to 34 per cent in 2009. The impact of this on energy efficiency standards is examined in a later chapter.

2.4 Household Profile

The household data from the 2009 HCS confirmed a number of important housing trends including:

- A greater reliance on the private rented sector than in previous years combined with a reduction in the proportion of households living in owner occupied accommodation. This is particularly prevalent for younger household reference persons (aged 17-39) who have faced difficulties getting on the housing ladder due to restrictions on mortgage lending.
- Overcrowding was not a major issue in Northern Ireland in 2009 with only two per cent of households living in circumstances which fall below the Bedroom Standard.
- The proportion of households living in social housing in 2009 was similar to that in 2006 although there have been some changes by household type. A lower proportion of lone adult and two adult households are living in social housing while the proportions of these households living in private rented accommodation have increased.
- The greater propensity for smaller households. The HCS shows that the proportions of smaller household types have either slightly increased or stayed the same.
- As in 2006 similar proportions of Catholic and Protestant households lived in terraced and detached housing. Slightly higher proportions of Protestant compared to Catholic households owned their own homes which is consistent with findings in 2006. Differences in religion can

be seen by location with higher proportions of Protestant compared to Catholic households living in urban areas, particularly in the BMA. This is reversed in rural areas where a higher proportion of Catholic compared to Protestants households lived.

- Social housing makes up one-sixth of the housing stock in Northern Ireland. Lone parents, lone adults and lone older households are more likely than other household types to live in social housing.
- As in previous years the HCS shows links between income and dwelling age, dwelling type and dwelling tenure. Higher income households were more likely to live in the newest dwellings, in detached or semi-detached housing, and in owner occupied dwellings.
- The proportion of lower income households living in private rented accommodation continued to rise since the 2006 HCS.

2.5 Dwelling Unfitness and the State of Repair

Between 2006 and 2009 there was further improvement in the condition of Northern Ireland's housing stock:

- The headline unfitness rate fell from 3.4 per cent in 2006 to 2.4 per cent in 2009.
- In spite of this there still remained 17,500 dwellings that were statutorily unfit. The most common reasons for unfitness were unsatisfactory facilities for the preparation and cooking of food, serious disrepair, and dampness.
- These unfit dwellings were more likely to be in the private sector; in rural areas (particularly in isolated rural areas) and to have been built before 1919. Nearly three-fifths of them were vacant.
- The most vulnerable sections of society - the lone elderly, (particularly those over 75 years of age) the unemployed, people who were sick or had a disability and households on low incomes were all to be found in disproportionately high numbers in unfit dwellings.
- There was little change in the overall state of repair of Northern Ireland's dwelling stock between 2006 and 2009. The percentage of the dwelling stock with at least one fault remained at 52 per cent in 2009.

- However, there was significant improvement in terms of basic repair costs. In 2009 the average basic repair cost for the stock as a whole was £938 giving a total repairs bill of £694 million; in 2006 this was £1,206 giving a total repairs bill of £1,040 million.
- Average repair costs were particularly high in vacant dwellings and, in the case of the occupied stock, in the private rented sector.
- Disrepair was particularly prevalent in vacant dwellings (64%) but it was also higher than average in the private rented sector (56%).
- There was a clear relationship between the age of the dwelling and disrepair with nearly three-quarters (74%) of all dwellings built before 1945 having faults.

2.6 The Decent Homes Standard, 2009

There has been a further significant decrease in the number of dwellings failing the Decent Homes Standard. Since 2001 the number of dwellings failing this Standard has decreased from one-third (32%) to less than one-sixth (15%; a drop of seventeen percentage points and some 94,000 dwellings).

The types of dwellings most likely to fail the Decent Homes Standard in 2009 were:

- Vacant properties (38%; 50% in 2006) followed by privately rented dwellings (17%), however approximately half (52%) of all dwellings that failed the Decent Homes Standard were owner occupied;
- Older dwellings built before 1919 (32%);
- Located in isolated rural areas (20%);
- Headed by older HRP's (28%; 75 plus);
- Low income households (28%; less than £7,000 per annum).

Thermal Comfort

Overall 68 per cent of the stock in Northern Ireland failed the Decent Homes Standard on the thermal comfort criterion rising to 83% for the social housing sector.

The types of dwellings and households most likely to fail the Decent Homes Standard on the Thermal Comfort criterion in 2009 were lone parent (95%) and two adult households (89%), higher income households (82%; £30,000 plus per annum), located

in isolated rural areas (79%) and headed by younger HRP's aged between 25 and 39 (76%).

Lacking Modern Facilities and Services

Overall 27 per cent of the stock in Northern Ireland failed the Decent Homes Standard on lacking modern facilities and services rising to 37 per cent for vacant stock.

The types of dwellings and households most likely to fail the Decent Homes Standard on the modernisation criterion in 2009 were headed by older HRP's aged 75 plus (37%), two person older households (35%), single storey dwellings (35%) and older dwellings built before 1919 and between 1919 and 1944 (both 34%).

Disrepair

Overall 18 per cent of the stock in Northern Ireland failed the Decent Homes Standard on disrepair rising to 38 per cent for vacant stock.

The types of dwellings most likely to fail the Decent Homes Standard on the disrepair criterion in 2009 were large family households (39%), semi-detached dwellings (29%) and older dwellings built before 1919 and between 1919 and 1944 (23% and 24% respectively).

2.7 Fuel Poverty in Northern Ireland, 2009

Analysis of households in Fuel Poverty in 2009 shows that:

- Considerable progress had been made in reducing Fuel Poverty in Northern Ireland between 2001 and 2004 (from 27% to 23%) but by 2006 the rate of Fuel Poverty had increased to 34 per cent and then to 44 per cent in 2009, largely as a result of the very significant increases in the price of fuel.
- Low income has also been shown to be a significant cause of Fuel Poverty in Northern Ireland in 2009 (86% of households with an annual income of less than £7,000 were in Fuel Poverty). Indeed, 81 per cent of all households in Fuel Poverty had incomes of £14,999 per annum or less.

However, on the basis of these general factors the HCS indicates that Fuel Poverty was correlated to a number of other factors:

- Almost two-thirds (63%) of households living in older dwellings (pre 1919) were in Fuel Poverty;

- Also more than half (51%) of households living in isolated rural areas were in Fuel Poverty;
- Three-quarters (76%) of households headed by an older person (75 plus) were in Fuel Poverty in 2009. More than four-fifths (83%) of lone older households were fuel poor;
- Fuel Poverty was higher in households with HRPs who were unemployed (65%) or retired (65%).
- Overall 99 per cent of all dwellings had central heating (98% in 2006).
- There was an overall increase in the use of mains gas for central heating to 15 per cent (12% in 2006) with Housing Executive dwellings showing the highest increase in mains gas fuel use (27% to 34% in 2009).
- Although the use of solid fuel for central heating remained broadly static at around five per cent there was a small decline in the use of electricity (4%; 5% in 2006).

The 2009 HCS continues to confirm that even if the dwelling is given an efficient heating system and is insulated to the highest standards it does not mean that the household will automatically be brought out of Fuel Poverty. The cost of fuel and low income will remain important determinants of whether a household is still in Fuel Poverty.

2.8 Housing Health and Safety Rating System, 2009

Overall, 19 per cent of all dwellings in Northern Ireland had Category 1 hazards in 2009. Common hazards in dwellings in Northern Ireland were falls on stairs and excess cold. The EHCS showed that these hazards were also the most common in England in 2008.

The types of dwellings most likely to have Category 1 hazards were:

- vacant properties (40%) followed by owner occupied (21%);
- older dwellings built before 1919 (36%) and between 1919 and 1944 (28%);
- located in isolated rural areas (26%);
- headed by older HRPs (23%; 75 plus);
- headed by lone adults (24%).

Results have provided a baseline for the Northern Ireland dwelling stock and allows comparisons with England.

2.9 Energy

The 2009 House Condition Survey showed that since 2006 further progress has been made in achieving higher levels of energy efficiency in Northern Ireland's housing stock. This progress has been achieved through small improvements in key energy-related features:

Improvements were also noted for dwelling insulation and double glazing:

- Overall a small increase of 3 percentage points in the proportion of dwellings with full cavity wall was reported.
- Moreover there has been an increase in the use of the highest standard of loft insulation (more than 150mm) from 14 per cent in 2006 to 30 per cent in 2009.
- Improvement was also achieved with the proportion of dwellings with full double glazing increasing from 68 per cent in 2006 to 77 per cent in 2009.

While not as marked as between 2001 and 2006, these changes in the energy profile of the overall stock still combined to produce improvement in the overall SAP rating; which rose from 52.4 to 57.0 between 2006 and 2009.

Improvements in energy efficiency have taken place across all sectors of the housing market. However, older dwellings (pre 1919) were more likely to have solid fuel central heating. Furthermore, the use of an electric fuel source remains greater in urban areas, particularly in social housing.

Energy efficiency has also improved in homes for all household groups with the proportion of occupied homes with a SAP rating of less than 20, falling to nearly a fifth of the numbers reported in 2006 (1.2%; 8,330 in 2009 - 5.5%; 36,130 in 2006). Nevertheless, the households in these homes continue to be the most vulnerable groups where the household reference person was elderly, retired or on low income.



Table 3.1
Northern Ireland's Dwelling Stock - Key Figures 1974-09

	1974	1991	1996	2001	2006	2009
Total Stock	455,500	574,300	602,500	647,500	705,000	740,000
	100%	100%	100%	100%	100%	100%
Urban	269,400	404,100	402,100	434,600	493,800	508,500
	(59%)	(70%)	(67%)	(67%)	(70%)	(69%)
Rural	186,100	170,200	200,400	212,900	211,200	231,500
	(41%)	(30%)	(33%)	(33%)	(30%)	(31%)
Owner Occupied	212,200	347,200	381,200	432,300	468,900	461,800
	(46.6%)	(60.5%)	(63.3%)	(67%)	(66.5%)	(62.4%)
Private Rented (and Others)	72,200	28,600	38,000	49,400	80,900	124,600
	(15.8%)	(5.0%)	(6.3%)	(7.6%)	(11.5%)	(16.8%)
Housing Executive	153,500	158,200	141,200	116,000	93,400	110,200
	(33.7%)	(27.6%)	(23.4%)	(17.9%)	(13.3%)	
Housing Association	-	10,000	13,000	17,900	21,500	(14.9%)
		(1.7%)	(2.1%)	(2.8%)	(3.1%)	
Vacant	17,600	30,300	29,100	31,900	40,300	43,400
	(3.9%)	(5.3%)	(4.8%)	(4.9%)	(5.7%)	(5.9%)
Pre 1919	157,300	121,500	120,800	116,400	113,800	106,500
	(34.5%)	(21.2%)	(20.0%)	(18.0%)	(16.1%)	(14.4%)
1919 - 44	75,200	65,100	69,400	69,100	71,000	78,200
	(16.5%)	(11.3%)	(11.5%)	(10.7%)	(10.1%)	(10.6%)
1945 - 64	223,000	129,800	128,800	127,800	141,400	125,100
	(49.0%)	(22.6%)	(21.4%)	(19.7%)	(20.1%)	(16.9%)
1965 - 80	Included in	162,300	158,400	159,900	169,300	181,800
	1945 - 64	(28.3%)	(26.3%)	(24.7%)	(24.0%)	(24.6%)
Post 1980	-	95,600	125,100	174,300	209,500	248,400
		(16.7%)	(20.8%)	(27.0%)	(29.7%)	(33.6%)
Bungalow	-	-	145,200	157,000	159,900	162,600
			(24.1%)	(24.2%)	(22.7%)	(22.0%)
Terraced House	199,000	210,500	201,900	200,300	225,400	231,900
	(43.7%)	(36.7%)	(33.5%)	(30.9%)	(32.0%)	(31.3%)
Semi-detached House	91,000	139,800	110,400	123,500	141,300	146,800
	(20.0%)	(30.9%)	(18.3%)	(19.1%)	(20.0%)	(19.8%)
Detached House	133,700	177,300	93,400	115,000	122,400	138,900
	(29.4%)	(30.9%)	(15.5%)	(17.8%)	(17.4%)	(18.8%)
Purpose Built Flat	23,900	38,500	42,800	43,700	-	-
	(5.2%)	(6.7%)	(7.1%)	(6.7%)		
Coverted Flat	3,200	8,100	8,800	8,000	-	-
	(0.7%)	(1.4%)	(1.5%)	(1.3%)		
Flat/Apartment	-	-	-	-	56,000	59,800
					(8.0%)	(8.1%)

Due to rounding columns may not always add to total stock.

Bungalows were not counted separately until the 1996 Survey. The definition of a bungalow is a dwelling with "no fixed internal staircase". A loft conversion of a bungalow which then includes a permanent staircase becomes a "house".

The 1974 House Condition Survey used a slightly different dwelling type classification.

Chapter 3

DWELLING STOCK

3.1 Introduction

This chapter examines the profile of Northern Ireland's dwelling stock in 2009. It focuses on the characteristics of the stock - its distribution, tenure, age and dwelling type and compares them to the findings from 2006.

Table 3.1 sets out the key statistics used in this chapter. Additional tables are contained in the Statistical Annex.

3.2 The Total Stock and its Distribution

The House Condition Survey showed that in 2009 there were approximately 740,000 dwellings in Northern Ireland, a net increase of 35,000 (almost 12,000 per annum) since 2006. This represents a similar rate to that experienced between 2001 and 2006. The period 2006-2009 is characterised by a major turnaround in the market, with new private construction reaching a historic peak of almost 14,000 in 2006/07 before dropping sharply to less than 6,000 in 2008/09¹.

The broad pattern of geographic distribution of the housing stock has changed little in the three year period since 2006. Almost 69 per cent of the housing stock is classified as urban and the remainder as rural. However, within this overall picture there has been some significant change:

- The number of dwellings in the Belfast Metropolitan Area declined a little from 275,400 (39.1%) to 270,100 (36.5%).
- The number of dwellings in District and "Other" Towns grew rapidly, from 218,400 (31.0%) to 238,500 (32.2%).
- The total number of rural dwellings increased from 211,200 (30.0%) in 2006 to 231,500 (31.3%)

¹ DSD (2010) Northern Ireland Housing Statistics, 2009-10

in 2009. This reflected growth in both small rural settlements (from 106,900 to 116,500) and isolated rural settlements (from 104,300 to 115,000).

3.3 Dwelling Tenure

The 2009 House Condition Survey collected tenure information in five categories: owner occupied, private rented and others (including tied dwellings), Housing Executive, housing association and vacant. In addition vacant dwellings were classified on the basis of tenure when last occupied. However, while the sample size for the 2009 House Condition Survey was sufficiently robust to provide separate tenure statistics for Housing Executive and housing association dwellings overall, this was not the case for housing association properties on their own, when cross tabulating tenure with, for example, age and dwelling type. In these cases cross tabulations by tenure are based on social housing as a whole.

The following tenure profile emerged:

- In 2009 there were an estimated 462,000 (62.4 % of the total stock) occupied dwellings in the owner occupied sector. This represents a decline of approximately 7,000 since 2006 and is a result mainly of higher numbers of owner-occupied dwellings entering the private rented sector or becoming vacant. The decrease in owner-occupation is even more marked in proportional terms: in 2006, 66.5 per cent of the total stock was owner-occupied compared to only 62.4 per cent in 2009².
- The most significant developments, however, have taken place in the private rented sector. In 2006 there were approximately 81,000 occupied privately rented dwellings in Northern

² This downturn in owner occupation has been recorded by the Survey of English Housing (incorporating the English House Condition Survey) too.

Ireland, 11.5 per cent of the total stock. By 2009 the number had increased to approximately 125,000 (16.8%), an average annual growth of nearly 15,000 properties. This rapid growth is the outcome of the unprecedented housing boom in Northern Ireland, which peaked in 2007 and was driven primarily by investor activity, fuelled by the ready availability of buy-to-let mortgages.

- The number and proportion of Housing Executive dwellings has continued to decline a little, although the relatively small number of house sales since 2006 (mainly as a result of the combination of the capping of the discount level at £24,000 and soaring market valuations) has resulted in a slower rate of decline. In 2006 there were 93,400 (13.3% of the total stock) occupied Housing Executive properties, by 2009 this had fallen to 85,600 (11.6%).
- The number of housing association properties³ has grown from 21,500 (3.1%) in 2006 to 24,500 (3.3%), in line with the Social Housing Development Programme.

Vacant Properties (Tables A3.2 and A3.3)

In 2009 the total number of vacant properties at any one point in time in Northern Ireland was approximately 43,400 (5.9%). This represents a significant increase since 2006 when the comparable figures were 40,400 (5.7%). An insight into the reasons for this can be gained by a closer look at their geographical location and tenure when last occupied:

- Table 3.2 shows that while a higher number of vacant dwellings were located in urban areas (25,300) than in rural areas (18,100), the vacancy rate was much higher in rural areas (7.8% compared to 5.0%) and in particular in isolated rural areas (8.5%). However, it is interesting to note that while this pattern of distribution had remained broadly the same since 2001, the gap between the rural and urban vacancy rates has increased to 2.8 percentage points in 2009 compared to 2006 when it was only 2.2 percentage points (5.1% in urban areas and 7.3% in rural areas).

³ This figure excludes Co-ownership properties (which are traditionally counted as owner-occupied) and shared bed spaces - which are combined as one property as appropriate.

Table 3.2
**Vacant Dwellings and Vacancy Rate by Urban/
Rural Location, 2009**

	Vacants (% total vacants)	Vacancy Rate (%)
Belfast Urban Area	11,500 (26.5%)	4.3
District & 'Other' Towns	13,800 (31.9%)	5.8
Total Urban	25,300	5.0
Small Rural Settlement	8,300 (19.1%)	7.1
Isolated Rural	9,800 (22.6%)	8.5
Total Rural	18,100	7.8
All Vacant Dwellings	43,400	5.9

- In absolute terms the number of vacant dwellings previously in the owner occupied sector was the highest - approximately 19,000. This is slightly less than the 17,500 in 2006 and accounts for 43 per cent of all vacant properties. The comparable figure in 2006 was 48 per cent. The owner occupied sector as a whole had a vacancy rate of 4.0 per cent, a slight increase since 2006 when the comparable figure was 3.6 per cent, at least partly reflecting the difficulties owner-occupiers experienced in 2009 in selling properties at the price they desired.
- However, the private rented sector accounts for approximately 40 per cent of all vacant properties, a disproportionately high number (17,400) compared to other tenures. The rate of vacancy in the private rented sector is approximately 12 per cent - three times the rate in the owner-occupied sector but actually lower than it was in 2006 when the comparable rate of vacancy was 15 per cent.
- There were an estimated 7,000 vacant properties in the social sector, a vacancy rate of around 6 per cent.

More than one-third (36%) of all vacant properties were constructed before 1919 and more than one quarter (27%) between 1919 and 1964.

The most common vacant dwelling type was the terraced house (25%) followed by flat/apartments (24%) and the detached house (21%).

Dwelling Tenure - Urban/Rural Location (Table A3.3)

Two-thirds (64%) of the urban stock was owner occupied, a figure which remained almost unchanged since 2001. In rural areas this proportion was much higher at 72 per cent, a decrease of 4 percentage points since 2001.

Conversely, while 19 per cent of urban dwellings were in the social sector, only 5.5 per cent of rural dwellings were in this sector.

The proportion of total stock in the private rented sector in 2009 was 11.5 per cent. This proportion was higher in urban areas (13%) than in rural areas (9%).

3.4 Dwelling Age

The 2001 and 2006 House Condition Surveys had already indicated a gradual change in the age profile of Northern Ireland's housing stock as a result of:

- A small decline in the absolute number and proportion of dwellings in the older age categories, mainly as a result of demolition.
- A substantial increase in the post-1980 category as a result of the accelerated rate of construction of new dwellings since 1996.

These trends have been confirmed by analysis of the 2009 House Condition Survey:

- Approximately one third (33.6%; 27.0% in 2001) of all dwellings were built after 1980. Indeed almost 162,100 (21.9%; 14.5% in 2001) were built after 1990 and 88,100 (11.9%) after 2000.
- Conversely, only 106,500 (14%) dwellings were built before 1919 compared to 18 per cent in 2001.

Dwelling Age - Dwelling Tenure (Table A3.4)

Analysis of age by tenure reflects these overall trends - except in the case of the Housing Executive where there are no new dwellings being built:

- In the owner occupied sector the proportion of dwellings built since 1980 increased from 28 per cent in 2001 to 31 per cent in 2006 and to 36 per cent in 2009. The proportion of dwellings built prior to 1919 fell from 18 per cent in 2001 to 14 per cent in 2009.

- In the private rented sector, which traditionally had a much older stock profile than other tenures, the trend towards greater modernity continues. In 2001 38 per cent of dwellings were built prior to 1919. This had fallen to 28 per cent by 2006 and to 20 per cent by 2009, reflecting the rapid growth of the new buy-to-let market. Likewise the proportion built after 1980 continued to grow, from 15 per cent in 2001 to 25 per cent in 2006, to 28 per cent in 2009. Indeed nearly 14 per cent (17,100 dwellings) have been built since 2000.
- The number and proportion of Housing Executive and housing association houses built before 1919 remains very small; while more than one third (36%) were built after 1980.

In the case of vacant properties the age profile has changed steadily since 2001. At that time approximately half (50%; 15,800) of all vacant properties were built before 1919. By 2006 only two-fifths (44%; 17,700) had been built before 1919, but by 2009 this figure had dropped to 36 per cent. The proportion of post 1980 vacant properties also fell a little from 22 per cent in 2006 to 20 per cent in 2009.

Dwelling Age - Urban/Rural Location (Table A3.5)

Analysis of dwelling age by location indicates that in 2009:

- The proportion of Northern Ireland's total stock which was built before 1919 was 14.4 per cent. However a much higher proportion of the rural stock (50%) than urban stock (10%) was built during this period. Indeed more than half (55%) of all dwellings built before 1919 were in rural areas and more than a third (35%) were in isolated rural areas.
- One third (34%; 248,400) of all dwellings in Northern Ireland were built after 1980. A slightly higher percentage in rural areas (38%) than in urban areas (32%). However, these figures mask the fact that in isolated rural areas the proportion of newer stock built since 1980 is significantly higher (42%) than in other areas.

Dwelling Age - Proposed New Council Areas (Table A3.6)

The proportion of older pre-1919 dwellings in each of the proposed new council areas varies considerably: Fermanagh/Omagh has by far the

highest proportion (31%) whereas there are much lower percentages (less than 10%) in Antrim/Newtownabbey, Newry/Down and Lisburn/Castlereagh.

Similarly there are significant geographical variations in the proportion built since 1980. Newry/Down, Fermanagh/Omagh and Mid Ulster all have more than 40 per cent, reflecting the high rates of new housing construction in these areas in recent years, whereas less than 30 per cent of Belfast's stock has been built since 1980.

3.5 Dwelling Type

Northern Ireland's housing stock has traditionally been dominated by houses and bungalows (single storey houses, including cottages). The 2009 House Condition Survey confirms that this is changing only very slowly, despite the number of apartments which have been built in recent years, with a gradual decline in the proportion of bungalows and little change in the proportions of other dwelling types:

- The proportion of bungalows (single storey houses) has only fallen from 24 per cent in 2001 to 22 per cent in 2009.
- The proportion of terraced houses remained approximately the same at around 31 per cent.
- Semi-detached houses and detached houses each accounted for approximately one fifth of the stock (20% and 19% respectively).
- Apartments/flats accounted for eight per cent of the stock, approximately the same as in 2001.

Dwelling Type - Tenure

Analysis shows that there continue to be significant inter-tenure differences in the composition of the stock by dwelling type. In the owner-occupied sector the proportion of bungalows has declined from 26 per cent in 2001 to 23 per cent in 2009, largely compensated for by an increase in the proportion of detached houses from 24 per cent to 26 per cent.

In the private rented sector there are indications of more significant changes, with a considerable growth in the both the number and proportion of semi-detached houses in this sector: from 8,000

(16%) in 2001 to almost 30,000 (24%) in 2009. However, the sector continues to be dominated by the terraced houses (42% in 2009; 40% in 2001). The number of flats/apartments grew rapidly from approximately 7,000 in 2001 to 11,500 in 2009, but the proportion actually declined from 14 per cent to nine per cent.

In the social sector, the proportion of vacant flats/apartments remained approximately the same between 2001 and 2009, a little less than 25 per cent.

3.6 Summary and Conclusion

Northern Ireland's housing stock continued to grow rapidly between 2006 and 2009 with an annual average increase of approximately 12,000 bringing the total stock to 740,000. The broad pattern of geographic distribution changed little and in 2009 almost 70 per cent of the stock was classified as urban. However, there were significant changes in terms of tenure. In particular almost 17 per cent of the stock (125,000 homes) was in the private rented sector, a figure which rises to almost 20 per cent (142,000 dwellings) if the tenure of vacant homes when last occupied is taken into consideration. For the first time too in living memory the actual number of owner-occupied dwellings fell as did the proportion in this sector, reflecting the dramatic turn around in both the economic circumstances and specifically the tightening credit environment in Northern Ireland for first-time buyers.

The number and proportion of vacant properties continues to rise, a trend that is in many ways an inevitable by product of the growing number and proportion of dwellings in the private rented sector. However, the age profile of the stock is increasingly modern, with a steadily growing proportion of properties constructed after 1980; from 30 per cent in 2006 to 34 per cent in 2009. The impact of this on energy efficiency standards is examined in a later chapter.



Table 4.1
Household profile, 2009

		Owner Occupied		Private Rented and others		Social Housing		All Households		% of all
		Number and percentage of tenure								
Household Type	Lone adult	41,400	44.8	29,800	32.2	21,100	22.9	92,300	(100%)	13
	Two adults	70,200	68.0	25,900	25.1	7,200	6.9	103,300	(100%)	15
	Small family	56,700	65.5	20,500	23.6	9,400	10.8	86,500	(100%)	13
	Large family	60,700	85.3	5,200	7.3	5,200	7.4	71,200	(100%)	10
	Large adult	63,700	79.5	10,600	13.2	5,800	7.2	80,100	(100%)	12
	Two person older	83,400	85.3	3,600	3.7	10,800	11.0	97,800	(100%)	14
	Lone older	68,700	64.8	9,200	8.7	28,200	26.6	106,100	(100%)	15
	Lone parent	13,300	24.6	18,600	34.3	22,300	41.2	54,200	(100%)	8
	All Households	458,100	66.2	123,400	17.8	110,000	15.9	691,500	(100%)	100
Age of Household Reference Person	17 - 24	2,000	8.7	16,700	70.9	4,800	20.5	23,600	(100%)	3
	25 - 39	90,100	51.7	57,100	32.8	27,000	15.5	174,200	(100%)	25
	40 - 59	185,500	73.8	32,700	13.0	33,300	13.2	251,500	(100%)	36
	60 - 74	115,800	76.5	9,100	6.0	26,600	17.5	151,400	(100%)	22
	75 plus	64,700	71.2	7,800	8.6	18,300	20.2	90,800	(100%)	13
	All Households	458,100	66.2	123,400	17.8	110,000	15.9	691,500	(100%)	100
	All Households	458,100	66.2	123,400	17.8	110,000	15.9	691,500	(100%)	100
Employment Status of HRP	Employed	261,100	75.3	64,400	18.6	21,200	6.1	346,700	(100%)	50
	Unemployed	19,700	27.0	26,900	37.0	26,100	36.0	72,700	(100%)	11
	Retired from work	139,600	74.4	10,900	5.8	37,100	19.8	187,600	(100%)	27
	Permanently sick/disabled	25,000	49.0	10,500	20.6	15,600	30.5	51,100	(100%)	7
	Looking after family home	12,500	46.2	5,800	21.2	8,800	32.6	27,100	(100%)	4
	Other (inc. student/schoolchild)	200	3.2	4,900	77.9	1,200	18.9	6,300	(100%)	1
	All Households	458,100	66.2	123,400	17.8	110,000	15.9	691,500	(100%)	100
Gross Annual Income	Under £7000	33,000	52.4	14,800	23.6	15,100	24.0	63,000	(100%)	9
	£7,000 - £9,999	54,300	48.1	22,300	19.7	36,300	32.2	112,900	(100%)	16
	£10,000 - £14,999	82,000	50.2	40,400	24.7	41,000	25.1	163,300	(100%)	24
	£15,000 - £19,999	59,200	69.1	14,100	16.4	12,400	14.4	85,700	(100%)	12
	£20,000 - £29,999	89,600	83.6	13,000	12.1	4,600	4.3	107,200	(100%)	16
	£30,000 or more	140,000	87.8	18,800	11.8	600	0.4	159,400	(100%)	23
	All Households	458,100	66.2	123,400	17.8	110,000	15.9	691,500	(100%)	100
Household Religion	Protestant	232,100	69.7	48,100	14.4	53,100	15.9	333,200	(100%)	48
	Catholic	177,700	64.3	49,300	17.8	49,500	17.9	276,700	(100%)	40
	Mixed Religion	28,800	71.0	9,100	22.5	2,600	6.5	40,600	(100%)	6
	Other	8,100	40.8	9,600	48.4	2,100	10.8	19,700	(100%)	3
	None	11,400	53.4	7,300	34.1	2,700	12.5	21,300	(100%)	3
	All Households	458,100	66.2	123,400	17.9	110,000	15.9	691,500	(100%)	100
Other Groups	Households with children (0-15)	130,700	61.7	44,200	20.9	36,900	17.4	211,900	(100%)	31
	Lone Parent Households	13,300	24.6	18,600	34.3	22,300	41.2	54,200	(100%)	8
	Elderly Households (over 75)	64,700	71.2	7,800	8.6	18,300	20.2	90,800	(100%)	13
	Lone Adult Households	41,400	44.8	29,800	32.2	21,200	22.9	92,300	(100%)	13
	Unemployed or Permanently sick/disabled HRP	44,700	36.1	37,400	30.2	41,700	33.7	123,800	(100%)	18

(Due to rounding figures may not always add to total households)

Chapter 4

HOUSEHOLD PROFILE

4.1 Introduction

This chapter draws on the household⁴ questionnaire section of the Northern Ireland House Condition Survey (NIHCS). It provides an update of the household profile of dwellings in Northern Ireland and an insight into the relationship between key dwelling characteristics and the social and economic characteristics of households. It also notes any changes since the 2006 HCS and examines trends over the eight year period since the 2001 Survey.

Social survey information from the HCS is used widely among housing practitioners in areas such as the assessment of future housing needs, household tenure trends, affordability and social exclusion. It has been used to provide information for strategic decisions, in recent years in relation to the private rented sector, home improvement grants and Fuel Poverty.

The household questions are reviewed during the questionnaire design stage of each survey. Comments from surveyors and other HCS clients are considered and used to help guide changes either in the question wording, layout or in the addition of new questions on emerging housing or social topics.

The surveyors complete the household questionnaire with the household reference person⁵ or partner (if applicable), as part of the survey process. In 2009, a total of 1,889 interviews were achieved out of a possible 1,901 interviews (physical inspections excluding vacant dwellings). This gives a very high response rate for the household survey at 99 per cent, and is consistent with previous surveys.

⁴ A definition of household is included in Appendix E

⁵ A definition of household reference person is included in Appendix E

4.2 Dwelling Profile of Northern Ireland Households

The Bedroom Standard

The bedroom standard, as defined by the General Household Survey, is used to estimate the occupation density by allocating a standard number of bedrooms to each household in accordance with its age, gender and marital status composition and the relationship between members. A separate bedroom is allocated to each married or cohabiting couple, any other person aged 21 or over, each pair of adolescents aged 10 to 20 of the same gender, and each pair of children, regardless of gender, less than 10 years old. Any unpaired person aged 10 to 20 is paired, if possible, with a child under 10 of the same gender, or given a separate bedroom, as is any unpaired child less than 10 years old. This standard number of bedrooms is then compared with the actual number of bedrooms available for sole use of the household and deficiencies or excesses are tabulated. The bedroom standard does not take account of bedroom size. Overcrowding is defined as falling below the bedroom standard by one or more bedrooms.

Key findings:

- Two per cent of households in Northern Ireland fell below the bedroom standard, i.e. were overcrowded in 2009. This proportion has remained relatively unchanged since 2001 but has declined from seven per cent in 1996.
- There has been no change in the proportion of households meeting the bedroom standard since 2006. Almost one-fifth (18%) of households in 2009 and 2006 met the bedroom standard compared to 23 per cent in 2001.
- Under-occupation has increased over time, from 68 per cent in 1996 to 74 per cent in 2001, 78 per cent in 2006 and 81 per cent in 2009.

The bedroom standard was analysed by tenure, household size and religion.

The Bedroom Standard - Tenure, Household Size and Religion

Generally, patterns were similar to findings in 2006:

- There was little variation in overcrowding from the overall average (2%) by tenure. Social housing dwellings were slightly more likely to be overcrowded (3%). As expected, the larger the household the more likely the dwelling was to be overcrowded. Two per cent of three person households lived in overcrowded accommodation compared to seven per cent of four or more person households. Catholic households (3%) were more likely to live in overcrowded accommodation compared to Protestant households (1%) but this is largely a reflection of the different household sizes and age structures of the two groups.
- The proportion of homes where the bedroom standard was met varied by tenure. Less than one-sixth (12%) of owner occupied households lived in homes where the standard was met compared to 37 per cent of social housing households (the overall average was 18%). More than one-fifth (21%) of Catholic households were living in homes where the standard was met compared to 15 per cent of Protestant households.
- More than one-half (55%) of owner occupied households lived in under-occupied homes (with two or more bedrooms above the standard) compared to one-third (35%) of private rental, and 12 per cent of social housing households. As expected, as household size increased the proportions under-occupying decreased. Finally, in terms of religion almost half (48%) of Protestant households lived in undercrowded homes compared to 40 per cent of Catholic households.

Age of Household Reference Person⁶

Key findings:

- More than three-fifths (61%) of household reference persons (HRP) were aged between 25 and 59 and more than one-third (35%) were 60 or older (13% were 75 or older).

- As in 2006, 30 per cent of household reference persons were pensioners⁷.
- Table 4.2 shows the age profile of the household reference person in 2001, 2006 and 2009. Overall, there has been little change in the age groups since 2001.

Table 4.2
Age Profile of the Household Reference Person, 2001-09

Age band	2001 HCS %	2006 HCS %	2009 HCS %
17-24	3	4	3
25-39	24	23	25
40-59	37	37	36
60-74	23	24	22
75+	13	13	13
Total	100%	100%	100%

Tenure, dwelling age, dwelling type and location were analysed by the age of the household reference person.

Age of the Household Reference Person - Dwelling Tenure (Table A4.1)

Figure 4.1
Age of Household Reference Person and Tenure, 2006-09



⁶ There were no household reference persons aged 17 interviewed during the 2009 HCS. Appendix tables therefore show the age group as 18-24.

⁷ This figure is based on age and gender (aged 65 or older for males and aged 60 or older for females)

Affordability was a major issue at the time of the 2006 Survey. Although there have been changes in the housing market since then, first time buyers still find it difficult to enter the market partly due to difficulties in finding the necessary deposit. This is reflected in a decrease in the rates of owner occupation among younger household reference persons (17-39), and an increase in the proportion of people in this age group in the private rented sector. The following bullet points summarize the dynamic nature of tenure and age of household reference person 2006 to 2009.

- In 2009 two-thirds of all household reference persons lived in owner occupied homes. Below average proportions of household reference persons aged between 17 and 24 (9%; 26% in 2006) and 25 and 39 (52%; 64% in 2006) lived in owner occupied homes.
- Above average proportions of household reference persons aged between 60 and 74 (77%) and 40 and 59 (74%) lived in owner occupied homes. This pattern was also seen in 2001 and 2006.
- Since 2006 the private rented sector has increased from 12 per cent (80,900 homes) to 18 per cent (123,400 homes). Previous House Condition Surveys have shown that younger households are disproportionately represented in the private rented sector. Since 2006 the proportion of younger people living in private rented accommodation has increased considerably. Almost three-quarters (71%) of household reference persons aged 17-24 lived in privately rented homes compared to 54 per cent in 2006. In 2009 three-fifths (60%) of the private rented sector comprised household reference persons aged 17-39, an increase of six percentage points since 2006.
- The proportion of household reference persons of all age groups living in social housing has remained broadly similar to 2006. Higher than average proportions of household reference persons aged between 17 and 24 (21%) and 75 plus (20%) lived in social housing in 2009.

Age of Household Reference Person - Dwelling Age (Table A4.2)

- There has been little change in the overall proportions of stock by dwelling age between 2006 and 2009 (See Chapter 3). Analysis of age of HRP by dwelling age confirms previous trends.
- In 2009, 13 per cent of the stock had been built prior to 1919 (14% in 2006). For most age groups there was a similar proportion of the age group living in stock built before 1919 with the exception of household reference persons aged 75 plus (18%; 18% in 2006).
- In 2006, higher than average proportions of younger household reference persons lived in newer stock; 33 per cent of household reference persons aged 17-24 and 38 per cent of household reference persons aged 25-39 lived in post 1980 stock compared to an average of 30 per cent. In 2009, while the trend has continued for the 25-39 age group, there has been a decrease in the proportion of household reference persons aged 17-24 living in post 1980 stock (25% compared to the overall average of 34%).

Age of Household Reference Person - Dwelling Type (Table A4.3)

- Overall there has been little change since 2006, findings reflect tenure and again show similar patterns to 2001.
- Older household reference persons (75 plus; 33%) were over-represented in single storey dwellings. Overall, almost one-quarter (22%) of the occupied stock was classified as single storey dwellings. Only a small proportion of younger household reference persons aged between 17 and 24 (3%) and 25 and 39 (13%) lived in single storey dwellings.
- Overall, almost one-third (32%) of household reference persons lived in terraced houses. A much higher than average proportion of younger household reference persons aged between 17 and 24 (59%) lived in this type of dwelling.
- The proportions of household reference persons of all age groups living in semi-detached houses has remained broadly similar to 2006, with the exception of household reference persons aged between 17 and 24. This age group has seen a decrease from 25 per cent to 15 per cent.

- As in 2006, household reference persons aged between 17 and 24 were least likely to occupy detached housing (8%). Household reference persons aged between 40 and 59 were most likely to occupy detached housing (23%; 19% overall).
- Household reference persons aged between 17 and 24 (16%) and 75 plus (11%) were most likely to occupy flats/apartments. This pattern has been consistent since 2001.

Age of Household Reference Person - Location (Table A4.4)

- Although a small group, households with reference persons aged between 17 and 24 had the highest rate of urban living (89% compared to 70% overall). Other age groups showed little variation from the overall average.
- The reverse was true for rural areas in that households with reference persons aged between 17 and 24 had the lowest rate (11% compared to 30% overall). Again other age groups showed little variation from the overall rural average.
- The pattern for the youngest age group reflected in figures for the Belfast Metropolitan Area (42% compared to 37% overall) and for isolated rural areas (<1% compared to 15% overall).

Household Type

Households were classified into eight types according to the number and ages of the members. A description of each household type and results from earlier House Condition Surveys are included in Table 4.3.

Key findings:

- Table 4.3 shows that the preponderance of each household type varied from eight per cent for lone parent households to 15 per cent for two adult households and lone older households.
- Two adult, lone parent and small family households have all shown marginal increases since 2006. All other household types have decreased slightly or remained the same.
- Lone parent households are one of the household types that have increased marginally since 2006 (from 6% to 8%). Before this it had remained at six per cent since 1991. There were approximately 54,200 lone parent households in 2009. Approximately 95,000 children (less than 16 years old) belonged to households designated as lone parent. (See table 4.8 for more detailed sub-group analysis)

Tenure, dwelling age, dwelling type and location were analysed by household type categories.

Table 4.3
Household Types, 1996 -09

	HCS %			
	2009	2006	2001	1996
Lone Adult (one adult below pensionable age - 65 for men, 60 for women)	13	14	12	12
Two Adult (two people, related or unrelated, below pensionable age - 65 for men, 60 for women)	15	14	12	12
Lone Parent (one adult living with one or more dependent children aged under 16)	8	6	6	6
Small Family (two adults, related or unrelated, living with one or two dependent children aged under 16)	13	12	13	12
Large Family (two adults, related or unrelated, living with three or more dependent children aged under 16; OR three or more adults living with one or more dependent children aged under 16)	10	10	13	15
Large Adult (three or more adults, related or unrelated, and no dependent children aged under 16)	12	13	15	15
Two Person Older (two people, related or unrelated, at least one of whom is of pensionable age - 65+ for men, and 60+ for women)	14	16	14	13
Lone Older (one person of pensionable age or older, 65+ for men, 60+ for women)	15	15	15	15
Total	100	100	100	100

Household Type - Tenure (Table A4.5)

The main changes by tenure since 2006 can be seen in the owner occupied and private rented sectors. The social rented sector has remained similar to 2006. This is in contrast to the period 2001 and 2006 when there were changes in the private and social rented sectors while the distribution of household types within the owner occupied sector remained largely unchanged.

The main changes between 2006 and 2009 are highlighted below:

- Home ownership decreased by five percentage points from 71 per cent to 66 per cent. Figure 4.2 shows that home ownership was lowest among lone parent households (25%; 21% in 2006) and highest among two person older (85%; 87% in 2007/08) and large family households (85%; 83% in 2006).
- The largest decrease in home ownership is among small family households (from 80% in 2006 to 66% in 2009). Lone adult and two adult households both decreased by seven percentage points.
- Overall 18 per cent of all household types lived in privately rented accommodation. The

household type with the highest proportion renting privately was lone parents (34%). Since 2006 there has been a considerable increase in the proportions of lone adults (32%; 20% in 2006), two adults (25%; 15% in 2006) and small families (24%; 9% in 2006) renting privately, and a corresponding decrease for these household types in the owner occupied sector.

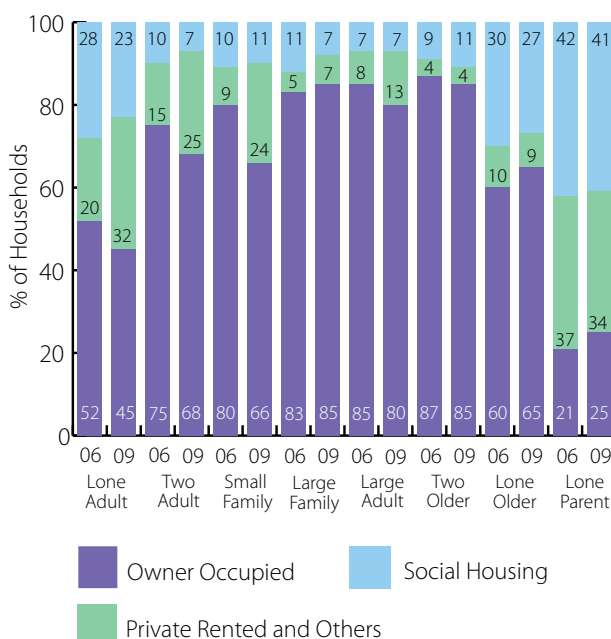
- Above average proportions of lone parents (41%), lone adults (23%) and lone older (27%) households occupied social housing (16% overall). Conversely, only seven per cent of large adult and large family households lived in social housing.

Household Type - Dwelling Age (Table A4.6)

Overall the proportions of the dwelling stock in the various age categories remained similar to 2006:

- One-third (34%) of all dwellings were built after 1980. Above average proportions of large family (50%) and small family households (48%) occupied post 1980 stock. The household type least likely to occupy the newest stock was lone adult households (21%).
- Below average proportions of lone parent households (4%) occupied pre 1919 housing (compared to 13% overall).

Figure 4.2
Household Types and Tenure, 2006-09
(% of Household)



Household Type - Dwelling Type (Table A4.7)

As with dwelling age, the overall proportions of the dwelling stock classified by type showed little change over time.

- As in 2006, the highest proportion (32%) of households lived in terraced housing. Lone parent households (51%) were most likely to occupy terraced housing.
- Two person older (32%) and lone older (31%) households were more likely than other household types to occupy single storey houses.
- The most common household types living in detached housing were large families, large adult and small families (35%, 26% and 25% respectively).
- Higher proportions of lone adult (19%) and lone older (16%) households occupied flats (7% overall).

Household Type - Location (Table A4.8)

- More than two-thirds (70%) of all households lived in urban areas. There was considerable variation between household types, from 78 per cent and 76 per cent (for lone parent and lone adult households), to 58 per cent and 64 per cent (for large family and small family households).
- Much higher than average proportions of two adult households (51% compared to 37% overall) lived in the BMA. Lower than average proportions of large family households (27% compared to 37% overall) lived in the BMA.
- Large family households were more likely than other household types to live in rural areas (42% compared to 30% overall).
- Eight per cent of households were lone parent families. Higher than average proportions of lone parent households were found in West Belfast (17%), North Belfast (16%), Derry City and Strabane (11%), Newry and Down (11%), and Fermanagh and Omagh (11%). (Table A4.9)

4.3 Social and Economic Profile of Northern Ireland Households

The key socio-economic characteristics examined are:

- The employment status of the household reference person;
- Household income; and
- Household religion.

Employment Status of the Household Reference Person

Key findings:

- Half (50%) of all household reference persons were employed (36% were working full time, 7% were working part time and 7% were self-employed). One-tenth (10%) of household reference persons were unemployed (4% were seeking work and 6% were not seeking work).
- More than one-quarter (27%) of household reference persons were retired, seven per cent were permanently sick/disabled and four per cent were looking after family/home.

Table 4.4

Comparisons of Employment Groups, 2001-09

Employment category	Household Ref. Persons (%)		
	HCS		
	2009	2006	2001
Self-employed	7	8	9
Working full-time	36	37	36
Working part-time	7	6	5
Not working but seeking work	4	3	4
Not working and not seeking work	6	5	4
Retired from work	27	29	29
Permanently sick or disabled	7	7	7
Looking after family home	4	5	6
Other (including student) ⁸	1	1	1
Total	100	100	100

Tenure, dwelling age, dwelling type and location were analysed by the employment status of household reference persons

Employment Status of Household Reference Person - Tenure (Table A4.10)

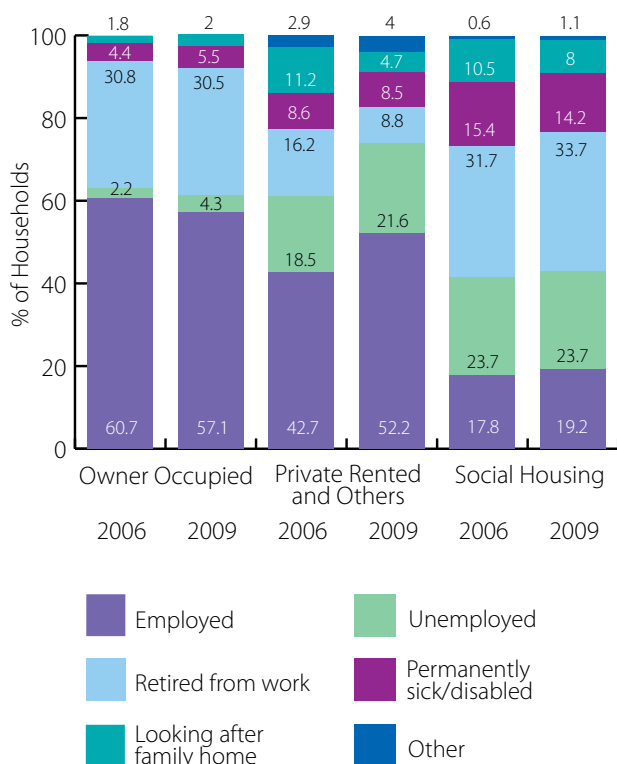
As in 2006 unemployment (seeking work and not seeking work) was highest in social housing and in the private rented sector:

- The proportions of household reference persons in employment varied from 57 per cent for owner occupied dwellings to 19 per cent for social housing (compared to 50% overall).
- As in 2006, home ownership was highest among household reference persons who were self employed (89%) and working full time (75%), although there has been a decrease in home ownership for both these employment types.
- One-sixth (16%) of all households lived in social housing. Above average proportions of household reference persons categorised as unemployed (36%), permanently sick/disabled (31%), or looking after the family home (33%) occupied social housing.

⁸ Due to small numbers this category has been excluded from further analysis

- Above average proportions of household reference persons who were unemployed (37%) lived in privately rented accommodation (18% overall). In 2006 the proportion of unemployed household reference persons living in private rented accommodation was 28 per cent and in 2001 it was 17 per cent.
- Figure 4.3 shows tenure within each employment group and changes since 2006.

Figure 4.3
Employment Status of HRP and Tenure, 2006-09 (% of Dwelling)



Employment Status of Household Reference Persons - Dwelling Age (Table A4.11)

Generally, findings were consistent with 2006:

- Overall, 13 per cent of all dwellings were built before 1919. Lower than average proportions of household reference persons who were unemployed - seeking work (5%) and unemployed - not seeking work (7%) lived in dwellings that were built before 1919.
- Household reference persons who were self employed (44%) or working full time (42%) were most likely to occupy post 1980 stock. Those who were unemployed - not seeking work (22%) were

less likely to occupy post 1980 stock. Household reference persons classified as other (including student) (19%) were least likely to occupy the newer stock, although this is a small group overall.

Employment Status of Household Reference Person - Dwelling Type (Table A4.12)

There was some variation in dwelling type by employment group and these show links with tenure:

- For terraced properties this variation ranged from only 12 per cent for the self employed to 43 per cent for unemployed households.
- Above average proportions of retired household reference persons (32%) lived in single storey houses (compared to 22% overall).
- Self-employed household reference persons (42%) and those working full time (24%) were more likely to occupy detached housing.

Employment Status of Household Reference Person - Location (Table A4.13)

- More than two-thirds (70%) of household reference persons lived in urban areas. Self-employed household reference persons (47%) were least likely to live in urban areas.
- A higher than average proportion of self-employed household reference persons (53%) lived in rural areas, compared to 30 per cent overall. Only 15 per cent of household reference persons lived in isolated rural areas and again, the proportion was much higher for self employed household reference persons (34%).

Annual Household Income

The HCS defines household income as the total annual income before tax for the respondent and partner (if applicable). This was to include all income from savings, employment, benefits, or other sources. Income was recorded in bands and these have been grouped together for ease when reporting.

Key findings:

- Overall, one quarter (25%) of all households had an annual income of less than £10,000. A smaller proportion of households had an annual income of less than £7,000 (9%). Analysis of this group shows that almost three-fifths (59%) were single person households, 48 per cent were aged sixty or older and 52 per cent lived in owner occupied dwellings.

- Almost one-quarter (24%) of households had an annual income of £10,000 to £14,999.
- Less than one-sixth (12%) of households had incomes of between £15,000 and £19,999, 16 per cent of households had incomes between £20,000 and £29,999 and 23 per cent had household incomes of £30,000 or more.
- The following table shows changes by income band 2001 to 2009 and compares 2009 results with the 2008/09 Family Resources Survey (FRS) and the 2009/10 Northern Ireland Continuous Household Survey (CHS)⁹.

Table 4.5
Comparison of Annual Income Bands HCS, FRS (2008-09) and CHS (2009-10)

Income Band	HCS 2009 (%)	CHS 09-10 (%)	FRS 08-09 (%)	HCS 2006 (%)	HCS 2001 (%)
Under £3,000	<1	7	2	<1	2
£3,000 - £6,999	9	8	6	11	20
£7,000 - £9,999	16	12	9	18	14
£10,000 - £14,999	24	19	17	23	19
£15,000 - £19,999	12	11	15	13	16
£20,000 - £29,999	16	16	19	14	18
£30,000 - £39,999	14	11	13	13	6
£40,000 - £49,999	5	5	7	3	2
£50,000 or more	5	11	12	4	3
Total	100	100	100	100	100

Tenure, dwelling age, dwelling type and location were analysed by annual household income.

⁹ Although the survey methodology and income bands were not directly comparable with the HCS, findings provide a useful contrast. The sample size of the CHS was 1868 and the FRS was 1929.

Annual Household Income - Tenure (Table A4.14)

Overall patterns were consistent with 2006. The private rented sector continued to show an increase in lower income households which is consistent with the employment status changes.

- Figure 4.4 clearly shows that as household income increased so did the likelihood of owner occupation; 52 per cent of household reference persons with an annual income of less than £7,000 were owner occupiers, compared to 88 per cent of household reference persons who earned £30,000 or more.

Figure 4.4
Annual Household Income (Gross) and Tenure, 2006-09 (% of Household)



- Generally, proportions of private renting decreased as annual income increased. Consistent with earlier findings on employment changes, figure 4.4 shows that since 2006, there has been an increase in lower income households within the private rental sector.
- Similarly, proportions of social renting decreased as annual income increased. One-quarter (24%) of households with less than £7,000 per annum lived in social housing compared to less than one per cent of households with annual income of £30,000 or more per annum.

- Almost half (47%) of social housing households had an annual income of less than £10,000, compared to 30 per cent of private rental households and 19 per cent of owner occupier households.

Annual Household Income - Dwelling Age (Table A4.15)

As in 2006, higher income households were more likely to live in the newest dwellings.

- Approximately one-quarter (27%) of households with an annual income of less than £7,000 lived in dwellings built post 1980 compared to 52 per cent of households with an annual income of £30,000 or more.
- One-third (33%) of all pre 1919 dwellings were lived in by households with annual incomes of less than £10,000, 31 per cent were occupied by households with annual incomes between £10,000 - £19,999 and 23 per cent by households with annual incomes of £30,000 or more.

Annual Household Income - Dwelling Type (Table A4.16)

Overall, patterns have remained consistent since 2006 and show links with tenure.

- Generally, higher income groups were more likely to live in detached (39%; £30,000 or more per annum) and semi detached (27%; £30,000 or more per annum) housing.
- Lower income groups were more likely to live in terraced housing (43%; less than £7,000 per annum) and flats (14%; less than £7,000 per annum).

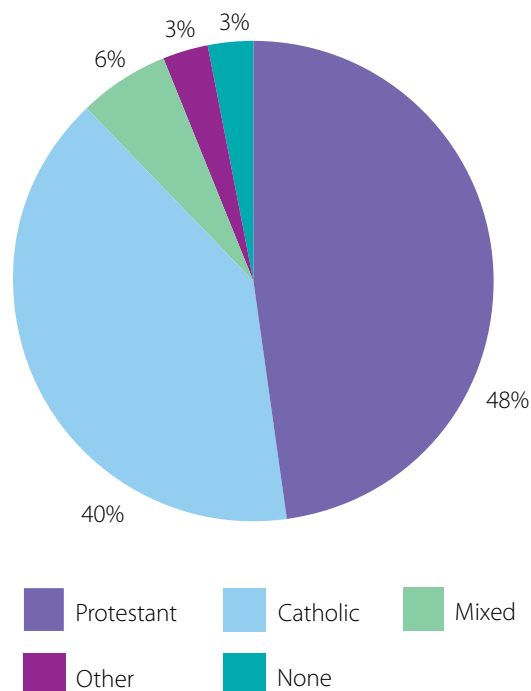
Annual Household Income - Location (Table A4.17)

- Urban areas showed little variation by income group. Households with incomes of between £15,000 and £19,999 had the highest proportion living in urban areas (76% compared to 70% overall).
- Rural areas also showed little variation by household income. Households with incomes of between £7,000 and £9,999 were least likely to live in rural areas (27% compared to 30% overall).

Household Religion

The Survey gathered information on the religious make-up of the household and this is summarised in Figure 4.5. Respondents were asked for the religion of the household.

Figure 4.5
Households by Religion, 2009



Key findings:

- Forty-eight per cent (52% in 2006 and 54% in 2001) of respondents designated their household religion as Protestant and 40 per cent (38% in 2006 and 2001) as Catholic.
- Small proportions of respondents described their household religion as 'Mixed' (Protestant & Catholic 6%), 'None' (3%) and 'Other' (3%).

Tenure, dwelling age, dwelling type and location were analysed by household religion.

Household Religion - Tenure (Table A4.18)

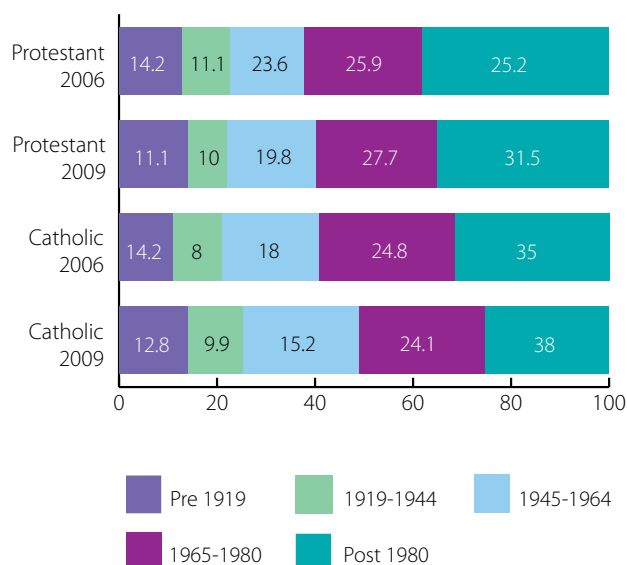
Overall the tenure pattern by religion was similar to 2006.

- Slightly higher proportions of Protestant (70%) compared to Catholic (64%) households owned their homes. The proportions in 2006 were 73 per cent and 67 per cent respectively.
- Around one-sixth of Catholics (18%) and Protestants (14%) lived in privately rented accommodation.
- Similar proportions of Protestants (16%) and Catholics (18%) occupied social housing.

Household Religion - Dwelling Age (Table A4.19)

- A slightly higher proportion of Catholics (38%; 35% in 2006) lived in post 1980 stock than Protestants (32%; 25% in 2006).
- Similar proportions of Catholic (13%) and Protestant (11%) households lived in the oldest stock (pre-1919).

Figure 4.6
Household Religion and Age of Dwelling, 2006-09



Household Religion - Dwelling Type (Table A4.20)

As in 2006, similar proportions of Catholic and Protestant households occupied all dwelling types.

- Approximately one-third of Catholic (33%) and Protestant (31%) households lived in terraced housing.

Table 4.6
Household Sub-Groups, 2001-09

Sub-Groups	2009		2006		2001	
	%	No	%	No	%	No
Households with children (dependent child(ren) under 16; includes lone parent households)	31	211,900	29	188,300	32	193,100
Lone Parent Households (sole adult living with dependent child(ren) under 16)	8	54,200	6	42,500	6	37,000
Households headed by a person aged 75 years or older	13	90,800	13	84,000	13	81,500
Lone Adult Households (non-pensionable, under 65 for men and under 60 for women)	13	92,300	14	92,900	12	73,900
Households headed by person who is unemployed or permanently sick/disabled	18	123,800	15	96,800	15	90,600

- Almost one-fifth of Protestant (19%) and Catholic (18%) households lived in detached housing.

Household Religion - Location (Table A4.21)

As expected there were differences between the two main religious groups in location .

- Almost three-quarters (72%) of Protestant households lived in urban areas compared to 63 per cent of Catholic households.
- There has been a slight decrease in the proportion of Protestant households living in the BMA (44%; 48% 2006). As in 2006, a much smaller proportion of Catholic households (26%; 25% 2006) lived in the BMA.
- An above average proportion of Catholic households (37%) lived in rural areas compared to Protestant households (28%; 30% overall).

4.4 Profiles of Household Sub-Groups

The decline of the traditional nuclear family and the rise of single person households have been well documented. Analyses of household trends are important for the planning of future housing requirements.

This next section provides a synoptic analysis of a number of household sub-groups that are of particular importance in understanding the housing market and estimating the need and demand for housing. A list of the sub-groups is provided in Table 4.6. The socio-economic circumstances, for each sub-group, along with key variables such as tenure, age, location and dwelling type are compared with the occupied stock as a whole in tables 4.7 to 4.11. Key changes 2006-2009 follow after the tables.

Table 4.7
All Households with Children, 2009

By		% of Households		No of Households	
		in sub group	in whole survey	in sub group	in whole survey
Age of H'hold Reference Person	18-24	6	3	117,000	23,600
	25-39	52	25	109,000	174,200
	40-59	42	36	89,000	251,500
	60-74	1	22	2,100	151,400
	75 plus	0	13	0	90,700
Employment Status of HRP	Employed	70	50	148,200	346,600
	Unemployed	15	11	32,000	72,700
	Retired from work	1	27	1,800	187,600
	Permanently sick/disabled	5	7	11,400	51,100
	Other (including keeping house, student)	9	5	18,500	33,400
Annual Household Income	Under £7,000	4	9	8,200	63,000
	£7,000-£9,999	10	16	21,800	112,900
	£10,000-£14,999	22	24	46,600	163,400
	£15,000-£19,999	14	12	28,900	85,700
	£20,000-£29,999	18	16	38,700	107,200
	£30,000 or more	32	23	67,700	159,400
Religion	Protestant	38	48	80,800	333,200
	Catholic	49	40	102,700	276,600
	Mixed Religion	7	6	14,800	40,600
	Other/None	6	6	13,500	41,100
Tenure	Owner Occupied	62	66	130,700	458,100
	Private Rented	21	18	44,200	123,400
	Social Housing	17	16	36,900	110,000
Construction Date	Pre 1919	8	13	17,900	87,400
	1919-1944	8	11	17,400	72,400
	1945-1964	12	17	25,900	118,800
	1965-1980	26	25	55,300	174,700
	Post 1980	45	34	95,500	238,200
Settlement Type	BMA	31	37	65,300	258,100
	District Town/Other Town	35	33	73,800	224,400
	Small Rural Settlement	16	15	33,900	106,500
	Isolated Rural	18	15	38,900	102,500
Dwelling Type	Bungalow	17	22	36,600	153,600
	Terraced House	33	32	69,400	219,800
	Semi-Detached House	23	20	48,400	140,300
	Detached House	24	19	50,500	128,600
	Flat/Apartment	3	7	7,000	49,300

Table 4.8
Lone Parent Households, 2009

By		% of Households		No of Households	
		in sub group	in whole survey	in sub group	in whole survey
Age of H'hold Reference Person	18-24	17	3	9,100	23,600
	25-39	64	25	34,700	174,200
	40-59	19	36	10,400	251,500
	60-74	0	22	0	151,400
	75 plus	0	13	0	90,800
Employment Status of HRP	Employed	49	50	26,600	346,600
	Unemployed	26	11	14,000	72,700
	Retired from work	0	27	0	187,600
	Permanently sick/disabled	6	7	3,000	51,100
	Other (including keeping house, student)	20	5	10,500	33,400
Annual Household Income	Under £7,000	7	9	4,100	63,000
	£7,000-£9,999	22	16	11,800	112,900
	£10,000-£14,999	45	24	24,700	163,400
	£15,000-£19,999	14	12	7,600	85,700
	£20,000-£29,999	8	16	4,100	107,200
	£30,000 or more	4	23	2,000	159,400
Religion	Protestant	32	48	17,500	333,200
	Catholic	62	40	33,400	276,600
	Mixed Religion	<1	6	140	40,600
	Other/None	6	6	3,100	41,100
Tenure	Owner Occupied	25	66	13,300	458,100
	Private Rented	34	18	18,600	123,400
	Social Housing	41	16	22,300	110,000
Construction Date	Pre 1919	4	13	2,300	87,400
	1919-1944	14	11	7,700	72,400
	1945-1964	12	17	6,300	118,800
	1965-1980	37	25	20,000	174,700
	Post 1980	33	34	18,000	238,200
Settlement Type	BMA	37	37	19,800	258,100
	District Town/Other Town	42	33	22,600	224,400
	Small Rural Settlement	12	15	6,500	106,500
	Isolated Rural	10	15	5,300	102,500
Dwelling Type	Bungalow	13	22	7,300	153,600
	Terraced House	51	32	27,800	219,800
	Semi-Detached House	20	20	10,800	140,300
	Detached House	7	19	3,800	128,600
	Flat/Apartment	8	7	4,500	49,300

Table 4.9
Elderly Household Reference Persons (aged 75 or older), 2009

By		% of Households		No of Households	
		in sub group	in whole survey	in sub group	in whole survey
By Household Size	1	59	29	53,400	198,400
	2	35	32	31,300	223,500
	3	5	17	4,100	116,400
	4	1	13	1,300	91,300
	5+	1	9	700	61,900
Employment Status of HRP	Employed	1	50	700	346,600
	Unemployed	0	11	0	72,700
	Retired from work	91	27	82,500	187,600
	Permanently sick/disabled	5	7	4,400	51,100
	Other (including keeping house, student)	4	5	3,200	33,400
Annual Household Income	Under £7,000	16	9	14,400	63,000
	£7,000-£9,999	34	16	30,900	112,900
	£10,000-£14,999	32	24	28,600	163,400
	£15,000-£19,999	14	12	12,600	85,700
	£20,000-£29,999	3	16	2,700	107,200
	£30,000 or more	2	23	1,600	159,400
Religion	Protestant	63	48	57,400	333,200
	Catholic	31	40	27,900	276,600
	Mixed Religion	3	6	2,700	40,600
	Other/None	3	6	2,800	41,100
Tenure	Owner Occupied	71	66	64,700	458,100
	Private Rented	9	18	7,800	123,400
	Social Housing	20	16	18,300	110,000
Construction Date	Pre 1919	18	13	16,500	87,400
	1919-1944	12	11	11,300	72,400
	1945-1964	26	17	23,400	118,800
	1965-1980	21	25	19,400	174,700
	Post 1980	22	34	20,200	238,200
Settlement Type	BMA	38	37	34,300	258,100
	District Town/Other Town	30	33	27,600	224,400
	Small Rural Settlement	17	15	15,400	106,500
	Isolated Rural	15	15	13,500	102,500
Dwelling Type	Bungalow	33	22	29,900	153,600
	Terraced House	29	32	26,000	219,800
	Semi-Detached House	13	20	12,000	140,300
	Detached House	14	19	13,000	128,600
	Flat/Apartment	11	7	9,800	49,300

Table 4.10
Lone Adults Households (Under Pension Age), 2009

By		% of Households		No of Households	
		in sub group	in whole survey	in sub group	in whole survey
Age of H'hold Reference Person	18-24	4	3	4,000	23,600
	25-39	28	25	25,900	174,200
	40-59	59	36	54,100	251,500
	60-74	9	22	8,300	151,400
Employment Status of HRP	Employed	49	50	45,400	346,600
	Unemployed	24	11	21,800	72,700
	Retired from work	3	27	2,900	187,600
	Permanently sick/disabled	22	7	20,600	51,100
	Other (including keeping house, student)	2	5	1,700	33,400
Annual Household Income	Under £7,000	19	9	17,100	63,000
	£7,000-£9,999	26	16	23,800	112,900
	£10,000-£14,999	24	24	22,000	163,400
	£15,000-£19,999	9	12	8,100	85,700
	£20,000-£29,999	15	16	13,700	107,200
	£30,000 or more	8	23	7,600	159,400
Religion	Protestant	46	48	42,600	333,200
	Catholic	43	40	40,000	276,600
	Mixed Religion	5	6	4,200	40,600
	Other/None	6	6	5,600	41,100
Tenure	Owner Occupied	45	66	41,400	458,100
	Private Rented	32	18	29,800	123,400
	Social Housing	23	16	21,200	110,000
Construction Date	Pre 1919	16	13	14,800	87,400
	1919-1944	20	11	18,400	72,400
	1945-1964	15	17	13,700	118,900
	1965-1980	28	25	25,700	174,700
	Post 1980	21	34	19,700	238,200
Settlement Type	BMA	38	37	35,200	258,100
	District Town/Other Town	37	33	34,500	224,400
	Small Rural Settlement	13	15	11,800	106,500
	Isolated Rural	12	15	10,800	102,500
Dwelling Type	Bungalow	21	22	19,700	153,600
	Terraced House	40	32	36,900	219,800
	Semi-Detached House	13	20	11,800	140,300
	Detached House	7	19	6,700	128,600
	Flat/Apartment	19	7	17,200	49,300

Table 4.11
Unemployed or Permanently Sick/Disabled, 2009

By		% of Households		No of Households	
		in sub group	in whole survey	in sub group	in whole survey
Age of H'hold Reference Person	18-24	7	3	8,900	23,600
	25-39	20	25	24,600	174,200
	40-59	57	36	71,000	251,500
	60-74	12	22	15,000	151,400
	75 +	4	13	4,400	90,800
Employment Status of HRP	Not working - seeking work	25	4	30,600	30,600
	Not working - not seeking work	34	6	42,100	42,100
	Permanently sick/disabled	41	7	51,100	51,100
Annual Household Income	Under £7,000	21	9	26,100	63,000
	£7,000-£9,999	31	16	38,000	112,900
	£10,000-£14,999	32	24	39,100	163,400
	£15,000-£19,999	9	12	10,600	85,700
	£20,000-£29,999	4	16	5,200	107,200
	£30,000 or more	4	23	4,700	159,400
Religion	Protestant	38	48	47,400	333,200
	Catholic	50	40	61,600	276,600
	Mixed Religion	6	6	7,000	40,600
	Other/None	6	6	7,900	41,100
Tenure	Owner Occupied	36	66	44,700	458,100
	Private Rented	30	18	37,400	123,400
	Social Housing	34	16	41,700	110,000
Construction Date	Pre 1919	9	13	10,900	87,400
	1919-1944	9	11	11,700	72,400
	1945-1964	18	17	21,700	118,900
	1965-1980	35	25	43,000	174,700
	Post 1980	30	34	36,600	238,200
Settlement Type	BMA	27	37	33,900	258,100
	District Town/Other Town	45	33	55,900	224,400
	Small Rural Settlement	17	15	20,700	106,500
	Isolated Rural	11	15	13,400	102,500
Dwelling Type	Bungalow	26	22	31,800	153,600
	Terraced House	40	32	49,400	219,800
	Semi-Detached House	16	20	19,500	140,300
	Detached House	7	19	8,700	128,600
	Flat/Apartment	12	7	14,400	49,300

4.5 Summary of Changes in Household Sub-Groups 2006-2009

All household sub-groups show some inter tenure movement between 2006 and 2009. These and other changes are summarized below.

Households with Children 2009

Between 2006 and 2009 there has been a marginal increase in the proportion of households with children. The proportion of households with children living in the private rented sector continued to increase while the proportion living in owner occupied dwellings decreased.

Lone Parent Households 2009

The proportion of lone parent households increased marginally between 2006 and 2009 (after remaining steady since 1996). There was a small decline in the proportion of lone parent households who rented privately and a corresponding increase in the proportion of households who lived in owner occupied accommodation. The proportion of households who lived in social housing remained similar to 2006.

Elderly Households (Aged 75 or Older) 2009

The proportion of households headed by someone aged 75 or older has remained the same as in 2006 and 2001. There was no change in the proportion of those households living in owner occupied accommodation (71% in 2006; 71% in 2009). Since 2006 there has been a small increase in households renting privately and a corresponding decrease in those living in social housing.

Lone Adult Households (Under Pension Age) 2009

Overall, there has been little change in the proportion of lone adult households between 2006 and 2009. However, there have been some changes in this group by tenure. There has been an increase in the proportion of lone adult households living in the private rented sector (32%; 20% in 2006), and a decrease in those living in owner occupied dwellings (45%; 52% in 2006) and in social housing (23%; 28% in 2006).

Unemployed or Permanently Sick/Disabled 2009

The proportion of households headed by a person who is unemployed or permanently sick/disabled increased slightly between 2006 and 2009. This group saw an increase in the proportion who lived in the private rented sector (30%; 22% in 2006) and in the owner occupied sector (36%; 31% in 2006). The proportion who lived in social housing decreased (34%; 46% in 2006).

4.6 Summary and Conclusion

The household data from the 2009 HCS confirmed a number of important housing trends including:

- A greater reliance on the private rented sector than in previous years and a concomitant reduction in the proportion of households living in owner occupied accommodation. This is particularly prevalent for younger household reference persons (aged 18-39) who have faced difficulties getting on the housing ladder due to restrictions on mortgage lending.
- Overcrowding was not a major issue in Northern Ireland in 2009 with only two per cent of households living in circumstances which fall below the Bedroom Standard.
- The proportion of households living in social housing in 2009 was similar to that in 2006 although there have been some changes by household type. A lower proportion of lone adult and two adult households are living in social housing while the proportions of these households living in private rented accommodation have increased.
- The greater propensity for smaller households. The HCS shows that the proportions of smaller household types have either increased slightly or at least stayed the same.
- As in 2006 similar proportions of Catholic and Protestant households are living in terraced and detached housing. Slightly higher proportions of Protestant compared to Catholic households own their own homes; again this is consistent with findings for 2006. Differences in religion can be seen by location with higher proportions of Protestant compared to Catholic households living in urban areas, particularly in the BMA. This is reversed in rural areas where a higher proportion of Catholic compared to Protestants households lived.
- Social housing makes up one-sixth of the housing stock in Northern Ireland. Lone parents, lone adults and lone older households are more likely than other household types to live in social housing.
- As in previous years the HCS shows links between income and dwelling age, dwelling type and dwelling tenure. Higher income households were more likely to live in the newest dwellings, in detached or semi-detached housing, and in owner occupied dwellings.
- The proportion of lower income households living in private rented accommodation continued to rise since the 2006 HCS.



Table 5.1
Unfitness - Key Figures, 2001-09

		2001		2006		2009	
		No	%	No	%	No	%
Location	All Urban	13,600	42.9%	12,800	53.1%	8,000	46.0%
	All Rural	18,000	57.1%	11,400	46.9%	9,500	54.0%
Tenure	Owner Occupied	13,000	38.0%	7,500	31.0%	4,400	25.0%
	Private Rented and others	4,300	13.6%	2,200	8.9%	2,700	15.5%
	Social Housing	1,300	4.1%	600	2.5%	100	0.6%
	Vacant	14,000	44.4%	13,900	57.6%	10,300	58.9%
Dwelling Age	Pre 1919	19,300	61.1%	15,000	62.3%	8,500	48.4%
	1919 - 1944	5,000	15.7%	3,800	15.5%	3,200	18.1%
	1945 - 1964	2,800	9.0%	2,500	10.1%	1,400	7.8%
	1965 - 1980	2,300	7.1%	900	3.9%	1,600	9.5%
	Post 1980	2,200	7.0%	2,000	8.2%	2,800	16.1%
All Unfit Dwellings	All Unfit Dwellings	31,600	4.9%	24,200	3.4%	17,500	2.4%

Table 5.2
The State of Repair - Key Figures, 2009

		Dwellings in Disrepair		Average Urgent Mean Repair Cost (£)
Tenure	Owner Occupied	231,900	50.2%	493
	Private Rented & Others	69,300	55.6%	556
	Social Housing	52,600	47.8%	213
	Vacant	27,600	63.6%	5,516
Dwelling Age	Pre 1919	79,700	74.9%	2,736
	1919 - 1944	56,800	72.6%	1,028
	1945 - 1964	73,800	59.0%	496
	1965 - 1980	97,600	53.7%	379
	Post 1980	73,500	29.6%	230
Dwelling Type	Bungalow	80,800	49.7%	788
	Terraced House	137,600	59.3%	526
	Semi-Detached House	74,500	50.7%	400
	Detached House	66,900	48.2%	1,591
	Flat	21,600	36.2%	497
Location	Belfast Metropolitan Area	149,500	55.4%	461
	District/Other Town	112,500	47.2%	460
	All Urban	262,000	51.5%	460
	Small Rural Settlement	53,200	45.7%	710
	Isolated Rural	66,200	57.6%	2,112
	All Rural	119,400	51.6%	1,407
	All Dwellings in Disrepair	381,400	51.5%	756

Chapter 5

UNFITNESS AND THE STATE OF REPAIR

5.1 Unfitness - Introduction

House Condition Surveys have assessed dwelling conditions against the Statutory Fitness Standard since 1974. Since 1991 they have provided a robust assessment of the level of unfitness in Northern Ireland and have demonstrated the substantial progress made in improving housing conditions. The 2009 House Condition Survey again shows a continuing fall in the number of unfit dwellings in Northern Ireland. The relative importance of the Fitness Standard has declined with the introduction of new government measures such as The Housing Health and Safety Rating System, which replaced the Fitness Standard in England and Wales in April 2006 and the 'Decent Homes' standard. However, the assessment of the fitness of dwellings remains an important component of the House Condition Survey in Northern Ireland.

The Fitness Standard

The current Fitness Standard is set out in Schedule 5 of the Housing (Northern Ireland) Order 1992. This schedule states that a dwelling is unfit for human habitation if it fails to meet one or more of the following requirements:

- It is structurally stable.
- It is free from serious disrepair.
- It is free from dampness prejudicial to the health of the occupants (if any).
- It has adequate provision for heating, lighting and ventilation.
- It has an adequate supply of wholesome water.
- There are satisfactory facilities in the house for the preparation and cooking of food, including a sink with a satisfactory supply of hot and cold water.
- It has a suitably located water closet for the exclusive use of the occupants (if any).
- It has, for the exclusive use of the occupants (if any), a suitably located fixed bath or shower and wash-hand basin each of which is provided with a satisfactory supply of hot and cold water.
- It has an effective system for the draining of foul, waste and surface water.

In addition, flats may be classified as unfit if the building or part of the building outside of the flat fails to meet any of the following requirements and by reason of that failure is not suitable for occupation:

The building or part is structurally unstable.

- It is free from serious disrepair.
- It is free from dampness.
- It has adequate provision for ventilation.
- It has an effective system for the draining of foul, surface and waste water.

5.2 Profile of Unfitness

The 2009 House Condition Survey estimated that there were some 17,500 dwellings that were statutorily unfit in Northern Ireland. This represents a headline rate of 2.4 per cent (see Table 5.1). This compares with 24,200 unfit dwellings (3.4%) in the 2006 House Condition Survey and 31,600 dwellings (4.9%) in the 2001 House Condition Survey.

Unfitness - Dwelling Location Urban/Rural (Table A5.1)

In broad terms the geographical pattern of unfitness has remained similar to that of 2006 with the relatively higher rates of unfitness continuing to be located in the more remote rural areas of Northern Ireland.

Analysis of table 5.1 (and Tables A5.1 and A5.2) shows the following:

In 2009 the Belfast Metropolitan Area (BMA) had a rate of unfitness of 1.6 per cent (4,400 dwellings). Over half (2,400) were in Belfast itself which had an unfitness rate of 1.9 per cent.

Northern Ireland's towns also have a very low rate of unfitness. In all 3,700 dwellings (1.5%) failed to meet the fitness standard.

In rural areas, however, the rate of unfitness continued to be much higher. In 2009 a total of 9,500 (4.1%) rural dwellings were unfit compared with 8,100 (1.6%) in urban areas. This compares

with 2006 figures of 11,300 (5.4%) for rural areas and 12,800 (2.6%) for urban areas indicating a marked improvement in urban and rural areas over this three-year period.

Most unfit dwellings are now located in rural areas (54% of all unfit dwellings) compared to urban areas (46%), this is a change from 2006 when more than half (53%) of all unfit dwellings were in rural areas compared to urban areas (47%). However, the condition of dwellings in isolated rural areas has remained relatively poor. A total of 6,000 (5.2%) isolated rural dwellings failed to meet the Fitness Standard and although this has reduced since 2006 (9,300 dwellings 8.9%) it continues to be the primary location for unfit dwellings. Indeed one-third (34%) of all unfit dwellings in Northern Ireland were in isolated rural locations.

Proposed New Council Areas (Table A5.2)

Belfast City Council area has one of the lowest unfit rates at 1.9 per cent. The highest unfit rate was in the Fermanagh and Omagh area with a rate of 6.6 per cent; in 2006 the individual unfit rates for these two council areas was 7.4 per cent in Fermanagh and 4.9 per cent in Omagh. The next highest unfit rate was 5.1 per cent in Mid Ulster followed by Mid Antrim at 4.0 per cent and Antrim and Newtownabbey at 3.5 per cent.

Unfitness - Dwelling Tenure (Table A5.3)

As in 2006 there was a clear association between unfit and tenure (see Figures 5.1a and 5.1b)

Nearly three-fifths (10,300; 59%) of all unfit properties were vacant and conversely 24 per cent of all vacant properties failed the Fitness Standard. The high level of association between vacancy and unfit is illustrated by the fact that in 2009 the rate of unfit for the occupied housing stock was only 1.0 per cent.

An illustration of the complexity of the relationship between vacancy and unfit is provided by comparing the 2009 figures with their 2001 and 2006 equivalents:

In 2009, 59 per cent of all unfit properties were vacant compared to 58 per cent in 2006 and 44 per cent in 2001, showing that the increased concentration of unfit properties in this sector of the market had remained unchanged over the later part of the decade. However, only 24 per cent of all

Figure 5.1a
Dwelling Tenure and Unfitness Rates, 2006

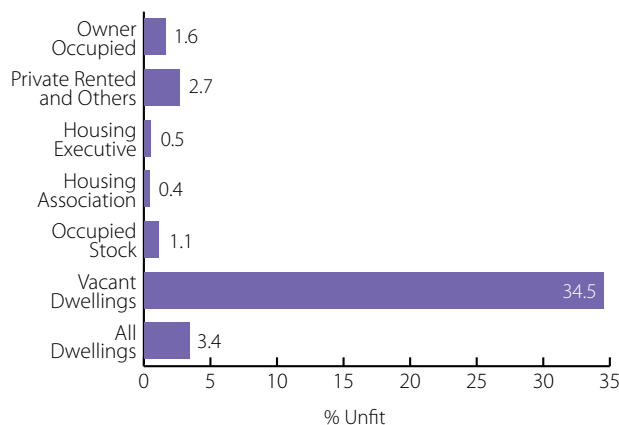
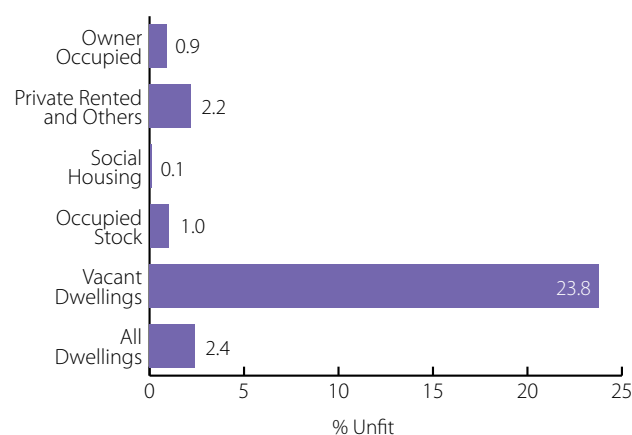


Figure 5.1b
Dwelling Tenure and Unfitness Rates, 2009



vacant properties were unfit compared to 35 per cent in 2006 and 44 per cent in 2001.

Within the occupied stock the highest rate of unfit was found in the private rented sector with 2.2 per cent (2,700 dwellings) being unfit. This is a reduction from 2006, when the rate of unfit was 2.7 per cent.

Some 4,380 unfit dwellings were owner occupied in 2009 representing an unfit rate of 0.9 per cent and accounting for one-quarter (25%) of all unfit properties. This represents a reduction, since 2006 from 1.6 per cent in the unfit rate (7,500; 31% of all unfit houses were owner occupied).

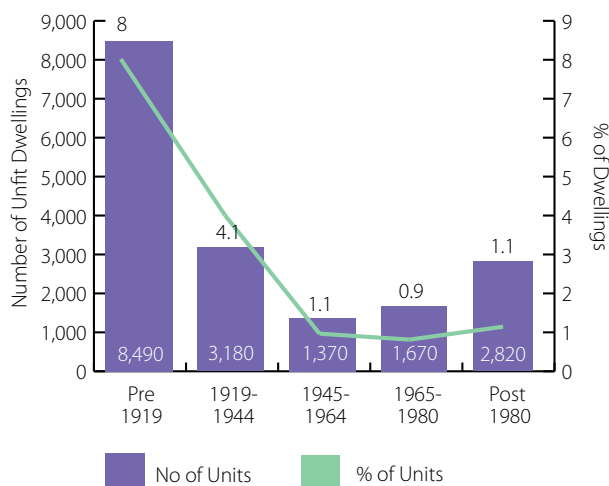
Levels of unfit in the social sector remain very low; in all 100 occupied properties (around 0.1%) were unfit. This again indicates a reduction

in unfitness since 2006 when approximately 600 occupied properties in the social sector were unfit.

Unfitness - Dwelling Age (Table A5.4)

As with tenure there was a clear relationship between unfitness and dwelling age; as the age of dwellings increased so did the likelihood of unfitness (see Figure 5.2).

Figure 5.2
Dwelling Age and Unfitness, 2009



Almost half (8,500; 48%) of all unfit dwellings were built before 1919. The rate of unfitness among pre - 1919 dwellings was eight per cent and much higher than any other age group. This pattern has not changed since 2006 when some 15,000 unfit dwellings, representing 62 per cent of all unfit dwellings, had been built before 1919.

In 2009 the proportion of unfit properties built between 1919 and 1944 was 18 per cent compared to 16 per cent in 2006. However the unfitness rate for this age group decreased from 5.3 per cent in 2006 to 4.1 per cent in 2009. Dwellings built since 1945 accounted for the remaining 34 per cent of unfit dwellings in 2009.¹⁰

Unfitness - Dwelling Type (Table A5.5)

Analysis by dwelling type reveals a fairly even spread of unfitness between all dwelling types. Unfitness by dwelling type is closely related to unfitness by age and location.

10. The relatively high number of unfit dwellings built since 1990 is essentially due to modern dwellings still being in the final stages of construction, or in the process of major renovation, and therefore technically unfit at the time of the Survey.

Single storey houses represented 27 per cent of all unfit housing (4,700 houses) with the unfitness rate for such properties being a little under three per cent. Many of these properties are (often vacant) rural dwellings in more isolated areas.

A little over 30 per cent of all unfit dwellings (5,420) were detached houses and such properties had the highest unfitness rate of any tenure (nearly 4%). Once again there is a direct relationship with age and location, with the majority of these houses being older properties in rural areas.

Terraced houses represented 30 per cent of unfit houses with an unfitness rate of 2.2 per cent. Unfitness in this dwelling type reflected the inner city location of these mostly Victorian properties.

Semi-detached houses made up 3.7 per cent of all unfit dwellings (600 properties). The rate of unfitness for such houses was the lowest of all tenures (0.4%). Nine per cent (1,600) of unfit dwellings were flats/apartments. Flats/apartments had an unfitness rate of 2.6 per cent.

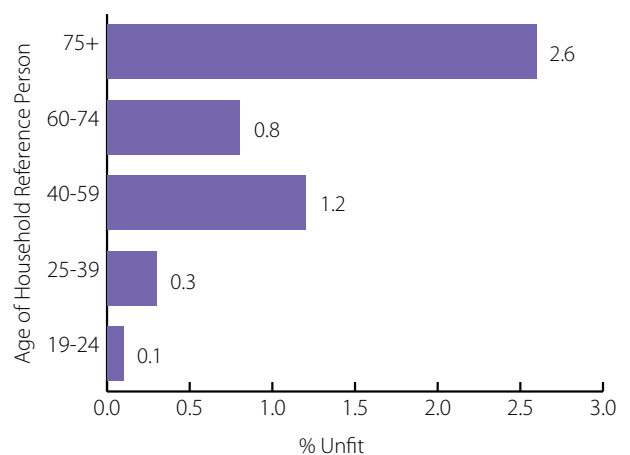
Unfitness - Household Characteristics

The rate of unfitness for the occupied stock was 1.0 per cent (compared to 1.5% in 2006). Analysis by household characteristics, however, shows a number of noteworthy deviations from this overall figure.

Age of Household Reference Person (Table A5.6)

There was a close relationship between unfitness and the age of the Household Reference Person (HRP) (see Figure 5.3). A much higher than average

Figure 5.3
Unfitness and Age of Household Reference Person, 2009



proportion of HRPs aged 75 years or more lived in unfit dwellings (2.6%; 5% in 2006). The percentage was also higher for HRPs aged 40-59 (1.2%; 1.7% in 2006). Indeed, in 2009 HRPs from these two age groups resided in three-quarters (76 per cent) of all occupied unfit dwellings (compared to 61% in 2006). The proportion of HRPs aged 60-74 who live in unfit dwellings decreased from 1.9 per cent in 2006 to 0.8 per cent in 2009.

Household Type (Table A5.7)

The rate of unfitness was particularly high for lone older households (2.6%) reflecting to a large extent the influence of age. This compares with 6.2 per cent in 2001. In comparison, the rate for lone parent households was the lowest (0%) reflecting the fact that a relatively high proportion of this group live in social housing.

Employment Status (Table A5.8)

The rate of unfitness was higher in dwellings occupied by HRPs who were permanently sick / disabled (2.1%), retired (1.7%), looking after the family/home (1.1%) or unemployed (1.0%). Indeed in almost one-half (45%) of all occupied unfit dwellings the HRP was retired.

Household Income (Table A5.9)

There was a clear relationship between household income and unfitness (see Figure 5.4). In the case of households with an income of less than £7,000 per annum 3.4 per cent lived in unfit dwellings.

Household Religion (Table A5.10)

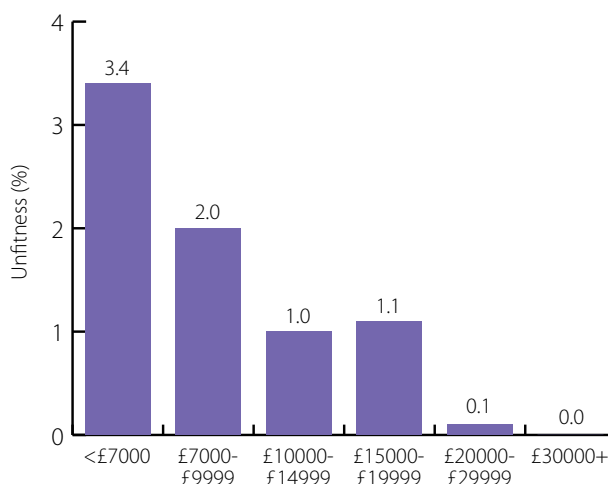
There was a statistically insignificant difference in the levels of unfitness of dwellings occupied by Protestant (1.1 per cent) and Catholic (0.9%) households. Mixed religion households were more likely to live in unfit dwellings (1.8%). Protestant families lived in more than half (53.2%) of the occupied unfit houses, reflecting to a considerable degree the older age profile of Protestant households in Northern Ireland.

5.3 The Scale of Unfitness

The Assessment

The 2009 House Condition Survey estimated that a total of some 17,500 dwellings were unfit. In order to be classified as unfit a dwelling must fail on one or more of the 11 individual criteria set out in the nine point Fitness Standard. Dwellings in need of some

Figure 5.4
Unfitness and Annual Income, 2009



repair work may or may not be classified as unfit. In each case the surveyor, using his or her professional expertise, assessed the nature of any faults together with their severity and extent or scale. The risks associated with these faults were also assessed to determine whether or not a particular dwelling should be classified as unfit for human habitation. An important element of the House Condition Survey training programme was to maximise the consistency of surveyors' judgements.

The Causes of Unfitness

The analysis in this HCS report concentrates on the 3 most common reasons for a property being classified as unfit;

- Unsatisfactory facilities for the preparation and cooking of food was the most common reason for unfitness (10,500 dwellings; 60% of all unfits).
- The second most common cause of unfitness was serious disrepair (9,900 dwellings; 57% of all unfits).
- The third most common reason was dampness recorded as a cause of unfitness in a total of 7,400 dwellings (42% of all unfits).

5.4 The Nine Point Standard

A more detailed analysis of unfit dwellings on the basis of the nine point standard set out by the Housing Order (Northern Ireland) 1992 reveals that the three most common reasons for unfitness are food preparation, disrepair and dampness.

“There are satisfactory facilities in the house for the preparation and cooking of food ...”

Unsatisfactory facilities for the preparation and cooking of food was the most common reason for a dwelling failing to meet the fitness standard. An estimated 10,500 dwellings failed on this point. This is one of the most complex aspects of the Fitness Standard and when judging a dwelling a surveyor must take into account, the presence of a fixed kitchen sink with a drainer and a piped hot and cold water supply, worktop or worktops, cooker point and the number and location of electrical power points;

- The suitability of the sink and worktops for cleaning;
- The adequacy of the hot water supply;
- The size of the sink, worktops and cooker space;
- The dimensions and layout of the kitchen or kitchen area.

Kitchen Amenities

Surveyors were asked to note which of eight specified kitchen amenities were present in the kitchen, and also whether refrigerators, washing machines and tumble driers were available in the dwelling.

Table 5.3 sets out the findings for the 17,500 dwellings found unfit on the basis of unsatisfactory facilities for the preparation and cooking of food. It shows that the vast majority of these unfit properties had no extractor fan (14,000; 85%) and one-fifth or more lacked work tops (3,800; 22%), a hot water supply (3,600; 21%) and cupboards (3,500; 20%).

Table 5.4 shows that the number of kitchen amenities lacking in a dwelling is a good indicator of unfitness on the grounds of preparation and cooking of food. Where a dwelling is lacking two or more of these amenities it is unfit in two-thirds of cases (66 per cent).

Safety and Hygiene

Surveyors were asked to assess safety and hygiene in kitchens on the basis of space, layout and cleanability. The guidance notes to surveyors drew their attention to the following:

- The dimensions of the kitchen should be sufficient for the safe provision of the necessary facilities.
- The safe location of the cooker space, particularly in relation to the doorways and

**Table 5.3
Presence of Kitchen Amenities in Unfit Dwellings, 2009**

	Not Present		Present (Not Working)	
	Count	Percentage	Count	Percentage
Cold Water Drinking Supply	1,200	7%	2,100	12%
Hot Water	3,600	21%	4,300	25%
Sink	3,100	18%	2,800	16%
Fixed Waste	3,100	18%	1,400	8%
Cooking Provision	2,400	14%	3,200	18%
Cupboards	3,500	20%	4,900	28%
Work Top	3,800	22%	4,600	26%
Extractor Fan	14,900	85%	100	<1%
Total Unfits	17,500	100%	17,500	100%

**Table 5.4
Dwellings Lacking Kitchen Amenities, 2009**

	Unfit Dwellings		All Dwellings	
Number of Amenities Lacking	Count	Percentage	Count	Percentage
0	2,500	14%	562,100	76%
1	10,100	58%	170,600	23%
2	700	4%	2,700	<1%
3	900	5%	1,300	<1%
4+	3,300	19%	3,300	<1%
Total	17,500	100%	740,000	100%

whether there was sufficient floor space for the retrieval of items from the oven and for safe circulation within the kitchen generally.

- The nature of the work surfaces and adjacent walls and ceilings being sufficiently smooth and non-porous to allow for effective cleaning.

Analysis of the 10,500 dwellings classified as unfit on the basis of unsatisfactory facilities for the preparation and cooking of food (See Table A5.14) revealed that:

- More than one-fifth (2,500; 24%) were seriously defective in relation to space.
- More than half (5,300; 51%) were seriously defective in relation to layout.
- More than two-thirds (7,000; 67%) were seriously defective in relation to cleanability.

The 2009 survey showed that kitchen size was an important indicator of unfitness. (see table 5.5). The average size of all kitchens in the dwelling stock was 14 square metres. For unfit dwellings, however it was only 11.5 square metres.

Table 5.5
Kitchen Size and Fitness, 2009

	Unfit Dwellings		All Dwellings	
0-5.00m ²	2,700	15%	17,500	2%
5.01-10.00m ²	8,500	49%	211,900	29%
10.01-15.00m ²	2,100	12%	236,700	32%
15.01-20.00m ²	2,200	13%	159,500	22%
Over 20m ²	1,900	11%	114,100	15%
Missing Data	100	<1%	300	<1%
Total	17,500	100%	740,000	100%

Fifteen per cent of kitchens in dwellings found to be unfit on the grounds of the preparation and cooking of food had kitchens of five square metres or less compared to only two per cent of all dwellings. Forty nine per cent of these unfit dwellings had kitchens of between 5 and 10 square metres compared to 29 per cent of the stock as a whole. Conversely, unfit dwellings were less likely to have kitchens of at least 10 square metres than the dwelling stock as a whole.

Further analysis of dwellings unfit on the grounds of the preparation and cooking of food (See Table A5.13) shows the following:

- Two-thirds (66%) were vacant and a further one-quarter (25%) were owner occupied.
- More than two-fifths (43%) were in isolated rural areas although a further 25 per cent were located in the Belfast Metropolitan Area.
- One-third (33%) were detached houses, almost one-third (30%) were terraced houses and almost one-quarter (24%) were single storey dwellings.
- Nearly half (45%) were built before 1919 and a further 20 per cent after 1980.

"It is free from serious disrepair ..."

Almost 10,000 (57% of all unfits) failed the Fitness Standard on the basis of serious disrepair. An indication of the level of seriousness of disrepair in these dwellings is given by Table 5.6 that compares their average repair costs with those of all dwellings and unfit dwellings in general.

Table 5.6
Repair Costs and Unfitness, 2009

% Dwellings	Unfit on Disrepair (£)	All Unfits (£)	All Dwellings (£)
5	2,248	1,326	0
10	5,603	2,248	0
25	8,645	6,406	0
50	14,258	8,819	11
75	36,416	19,205	626
90	54,705	38,930	1,958
95	77,683	57,647	4,010
Av. Basic Repair Cost	23,966	16,379	938
Av. Urgent Repair Cost	22,926	15,382	756

One-quarter of all dwellings required basic repair costs of at least £626. However, for all unfit dwellings this rose to £19,205 and for those dwellings unfit on disrepair the figure rose to £36,416. These figures reinforce the view that disrepair is concentrated in the unfit stock. A similar picture is seen when the repair costs for the five per cent of dwellings most in need of repair for each of the three categories are compared: the average basic repair cost for the worst five per cent is £4,010 but this increases by nearly 20 fold to £77,683 for dwellings unfit on the basis of disrepair.

Further analysis of the 9,900 dwellings that failed the Fitness Standard on grounds of disrepair indicates the following (See Table A5.11):

- Three-quarters (75%) are vacant properties and a further 16 per cent were in the owner occupied sector.
- More than one-third (37%) are located in isolated rural areas, 29 per cent are in the Belfast Metropolitan Area and a further 28 per cent are in small rural settlements.
- Slightly less than one-third (32%) were detached houses and more than one-quarter (27%) were single storey dwellings.
- Sixty four per cent were built prior to 1919 and a further 18 per cent were built between 1919 and 1944.

Typically unfitness on the basis of disrepair was found in pre-1919 dwellings and rural dwellings and these dwellings were usually vacant or in the owner occupied sector.

"It is free from dampness prejudicial to the health ..."

In 2009 there were approximately 7,400 dwellings that were unfit on the grounds of dampness. Surveyors classified dampness as rising damp (6,800; 92%), penetrating damp (5,700; 77%) and serious condensation and/or mould growth (2,600; 35%).

Figure 5.5 (a) shows how these three forms of damp occurred both singly and in combination with one another; and that in these unfit dwellings there was a strong tendency for at least two of these forms to occur simultaneously; in all nearly 8,000 (71 per cent) had at least two forms, the most common combination being rising damp and penetrating damp.

Figure 5.5(a)
Number of Dwellings Unfit on Grounds of Dampness, 2009

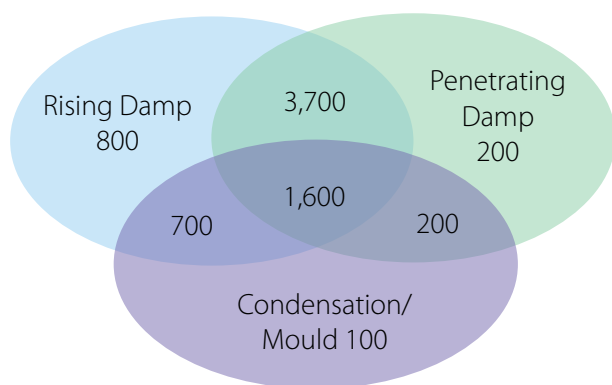
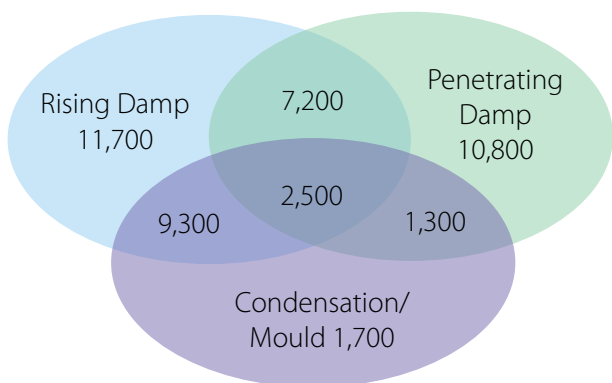


Figure 5.5 (b) confirms how a combination of the three forms of dampness is much more prevalent in unfit dwellings. Taking the stock as a whole, some 44,500 dwellings have recorded dampness but in this case more than two-thirds of these (70 per

Figure 5.5(b)
Number of Dwellings with Dampness, 2009



cent) have only one of the three forms. In all, the vast majority where a dwelling simultaneously had rising damp, penetrating damp and condensation/mould, it was found to be unfit.

Further analysis of dwellings classified unfit on the grounds of dampness (See Table A5.11) shows the following:

- The majority (77%) were vacant and a further thirteen per cent owner occupied.
- More than half (52%) were in isolated rural areas and a further 36 per cent in smaller settlements.
- More than four-fifths were either single storey dwellings (42%) or detached houses (39%).
- The vast majority (85%) were built before 1919.

5.5 Future Action

During the course of their survey of each property the surveyors were asked not only to assess whether the property was unfit, but if so what was the most appropriate course of action in respect of that property. Recommended actions were divided into those suitable for dwellings where the surveyor recommended retention (78%) and those recommended for demolition (23%). This has changed a little from 2006 when surveyors recommended that 72 per cent of unfit properties be retained and the remaining 28 per cent be demolished. In 2009, of the unfit dwellings to be retained the vast majority (84%) were recommended for repair or improvement on a single unit basis (65% of all unfit dwellings). For a further 2,200 (13%) unfit dwellings the survey indicated that the best course of action was area based repair or improvement.

Table 5.7 shows how this contrasts with the recommendations for the dwelling stock as a whole where for 92 per cent there was no action recommended.

Recommended actions for unfit dwellings varied considerably by tenure which in turn reflected the rate of unfitness in each of the five tenures.

- For vacant stock (59% of all unfit dwellings) surveyors recommended demolition for 34 per cent and repair or improvement for the remainder.
- For the occupied stock demolition was recommended for only five per cent of unfit occupied dwellings.
- In the owner occupied stock repair or

Table 5.7
Recommended Future Action for Unfit Dwellings, 2009

	Unfit Dwellings		All Dwellings	
None	-	-	679,100	(92%)
Repair/Improve Single Dwelling	11,400	(65%)	53,000	(7%)
Repair/Improve Block/Group of Dwellings	2,200	(13%)	3,300	(<1%)
Demolish/Replace Single Dwelling	3,400	(20%)	4,000	(<1%)
Demolish/Replace Block/Group of Dwellings	500	(3%)	500	(<1%)
Total	17,500	(100%)	740,000	(100%)

improvement was recommended for 93 per cent of unfit dwellings.

- In the private rented sector the figure was even higher at 98 per cent with two per cent being recommended for demolition.

5.6 Summary and Conclusion

Between 2006 and 2009 there was again an improvement in the condition of Northern Ireland's housing stock. The headline unfitness rate fell from 3.4 per cent in 2006 to 2.4 per cent in 2009. In spite of this there still remained 17,500 dwellings that were statutorily unfit. The most common reasons for unfitness were unsatisfactory facilities for the preparation and cooking of food, serious disrepair, and dampness. These unfit dwellings were more likely to be in the private sector; in rural areas (particularly in isolated rural areas) and to have been built before 1919. Nearly three-fifths of them were vacant. The most vulnerable sections of society - the lone elderly, (particularly those over 75 years of age) people who were sick or had a disability and households on low incomes were all to be found in disproportionately high numbers in unfit dwellings.

5.7 State of Repair - Introduction

Assessing the state of the dwelling stock and the associated repair costs have been key elements in the Northern Ireland House Condition Surveys since 1974.

The method of assessing and modelling repair costs has been refined and has become more complex in more recent surveys, but the basic approach to disrepair has remained essentially the same:

- Surveyors were trained to observe and record the presence of defects.
- The extent of the defects was recorded on the survey form.

- Particular treatments were specified by the surveyor and recorded.
- The cost of the required work was then estimated.

For the 2009 survey, the estimation of the repair costs was, once again carried out by the Building Research Establishment using its most up to date computer-based model. These repair costs provided a sound estimate of the aggregate cost of the remedial work required. The costs were those required to bring the dwelling into good repair using a high standard of professional workmanship and good quality materials and components. The scale of the treatment as determined by the surveyor is the most critical factor in assessing repair costs. In order to negate the influence of dwelling size on repair costs, the model also produced standardised costings based on £ per m².

This model was exactly the same as that used for the English Housing Survey (previously the English House Condition Survey) thus permitting direct comparisons with England, (see appendix C).

For the 2009 survey, repairs were classified into urgent repairs, basic repairs and comprehensive repairs:

Urgent Repairs - work which needs to be undertaken to prevent further significant deterioration to the external fabric of the dwelling in the short term.

Basic Repairs - urgent repairs to the exterior fabric plus additional visible work required to be carried out to the internal and external fabric of the dwelling in the medium term.

Comprehensive Repairs - basic repairs plus any replacements the surveyor has assessed as being needed in the next 10 years .

The state of repair of a dwelling is also a key element of the “Decent Homes” Standard. In order for a dwelling to be considered “decent” it must be in “a reasonable state of repair”. Chapter 6 looks at the Decent Home Standard (including the state of repair) in more detail.

5.8 Dwelling Faults

Surveyors observed and recorded faults in more than half (381,400; 52%) of all dwellings, the same proportion as in 2006. The comparable figure was 59 per cent in 2001.

Dwelling Faults - Element (Table A5.15)

Dwellings were much more likely to have faults in their exterior fabric (323,400; 44%) than their interior fabric (175,700; 24%). In 2006, the proportion of dwellings with faults to their exterior fabric (43%) was also considerably higher than those with faults to their interior fabric (26%), but overall the relative importance of exterior and interior faults has changed very little.

However, between 1996 and 2009 the proportion of the total stock affected by disrepair has fallen considerably: by 21 percentage points for all disrepair, 13 percentage points for external disrepair and 15 percentage points for internal disrepair.

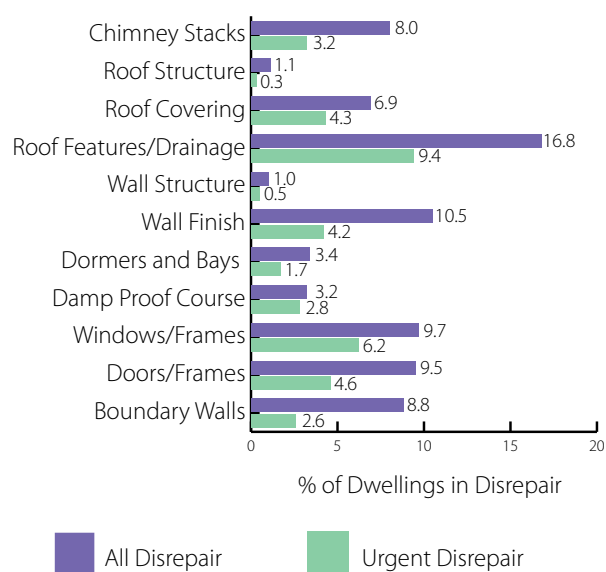
Further analysis of faults to exterior elements shows:

- Faults to roof elements were the most common type recorded (178,100; 24%), affecting, in particular, roof features such as fascias, rainwater gutters and down pipes and valley gutters (124,300; 17%).
- Faults to boundaries and plots were recorded in less than one-fifth of dwellings (126,100; 17%).
- Faults to windows and doors were recorded in approximately one-sixth of dwellings (109,900; 15%).
- Less than one-sixth of dwellings (113,600; 15%) had faults in their wall elements with the most common faults affecting the wall surface (pointing or rendering).
- Structural faults to roofs and walls were relatively rare, being found in less than two per cent of properties in both cases.

- In the case of interior disrepair faults were most commonly recorded to walls (76,200; 10%), ceilings (69,900; 9%) and windows (48,100; 7%). Smaller proportions of dwellings had faults to doors (33,400; 5%), floors (21,800; 3%) and stairs (15,900; 2%).

Surveyors also had to record their estimate of the urgency of the treatment required for any faulty exterior elements. Figure 5.6 illustrates the relationship between the existence of external faults and the required urgency of repair to those elements. The overall pattern was not dissimilar to that for all disrepair, with urgent repairs required to 52 per cent of all faults to external dwelling elements. However, where faults to the damp proof course or roof features/roof drainage the figures were higher (84% and 56% respectively) reflecting the damage that penetrating or rising damp can do to the fabric of the dwelling. In addition, in 64 per cent of properties where faults to window frames were recorded and 49 per cent of properties where faults to doors were recorded urgent repairs were required. Overall, almost 167,000 (23%) dwellings had faults which required urgent attention.

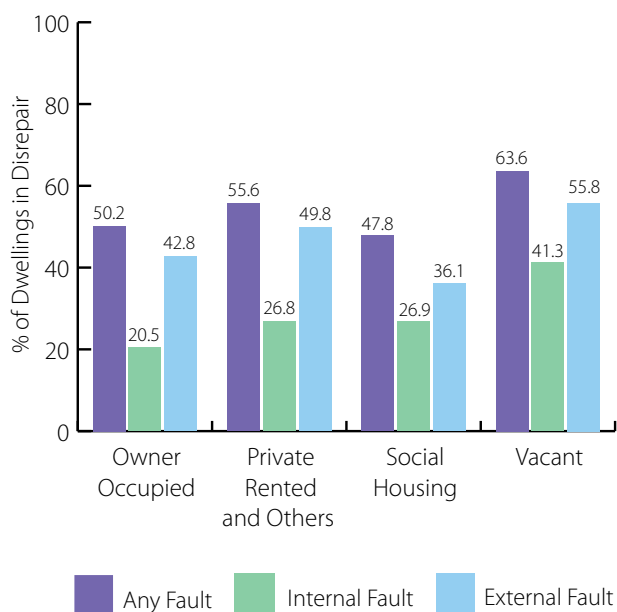
Figure 5.6
External Faults and Their Urgency, 2009



Disrepair- Dwelling Tenure (Table A5.16)

Nearly two-thirds (64%) of vacant dwellings had faults. The likelihood of disrepair (external or internal) was clearly associated with the length of time a dwelling had been vacant. More than three-fifths (64%) of all dwellings that had been vacant for less than one year had at least one fault, whereas

Figure 5.7
Disrepair and Dwelling Tenure, 2009



for dwellings vacant for more than one year the figure rose to 85 per cent. In the case of urgent faults the difference was even greater; 43 per cent of dwellings vacant for less than one year required at least one urgent repair compared to 71 per cent for dwellings vacant for more than one year.

Faults were recorded in 56 per cent of privately rented dwellings and 48 per cent of occupied social dwellings. Half (50%) of owner-occupied dwellings had faults.

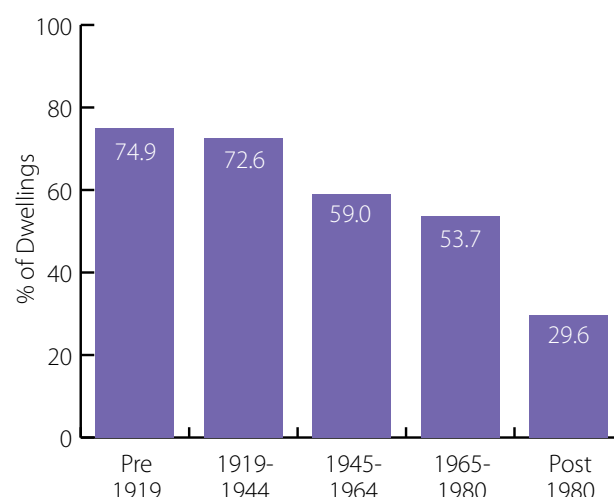
In the case of internal disrepair there is a similar pattern to that for all disrepair. More than two-fifths (41%) of all vacant properties and more than one-quarter (27%) of privately rented and social dwellings required repair to the internal fabric. The percentages were lower in the case of the owner-occupied sector (21%).

A broadly similar pattern emerges for external repairs with more than half (56%) of all vacant properties and half (50%) of those in the private rented sector requiring external repairs. Less than one-half (43%) of owner occupied properties and more than one-third (36%) of social dwellings required repair to the external fabric.

Disrepair - Dwelling Age (Table A5.17)

There is a clear relationship between dwelling age and disrepair: the older the dwelling the more likely

Figure 5.8
Disrepair and Dwelling Age, 2009



it was to have a fault with the internal or external fabric or its amenities and services. (See Figure 5.8)

Dwellings built before 1919 and those built between 1919 and 1944 were most likely to have faults (75% and 73% respectively). This proportion steadily declined through the age groups to 30 per cent for houses built since 1980.

The pattern is repeated for internal disrepair - proportions of dwellings with faults in their internal fabric declined from 39 per cent for dwellings built before 1919 to 13 per cent for those built after 1980.

For external disrepair the pattern is again repeated with 67 per cent of properties built before 1919 having faults in their external fabric. A slightly lower percentage (66%) of properties built between 1919 and 1944 had external faults while less than one-quarter (22%) of properties built since 1980 had external fabric faults.

Disrepair - Dwelling Type (Table A5.18)

There is only a small discernible relationship between disrepair and dwelling type. Terraced houses (59%) had the highest incidence of disrepair and flats had the lowest (36%). Interior disrepair was highest in terraced houses (31%) and lowest in semi-detached houses (18%). Exterior disrepair was highest in terraced houses (49%) and lowest in flats (30%).

Disrepair - Dwelling Location (Table A5.19)

There was no difference between the rate of disrepair for the urban (52%) and rural (52%)

dwelling stock. However, it was higher in isolated rural areas (58%) and the BMA (55%).

Interior disrepair was higher in BMA (29%) and isolated rural areas (24%) compared to 19 per cent in small rural settlements and 20 per cent in district and other towns.

More than half (53%) of dwellings in isolated rural areas suffered from external disrepair compared to the other locations where it ranged from 40 per cent in district and other towns and small rural settlements to 45 per cent in the BMA.

5.9 Repair Costs

Urgent, Basic and Comprehensive Repair Costs

The BRE model provided a sound estimate of the actual costs¹¹ of any remedial work specified by the surveyors. The key figures from this model were as follows:

The average cost per dwelling of urgent repairs for the housing stock as a whole in 2009 was £756. This equated to £8.57 per m². (The comparable figures for 2006 were £1,206 and £15.86 per m²).

The average basic repair cost was £938 which was equivalent to £10.55 per m². (The comparable figures for 2006 were £1,476 and £18.70 per m²).

The average cost for comprehensive repairs was £3,099 or £42 per m². (The comparable figures for 2006 were £3,600 and £47 per m²).

Total Repair Costs

The model estimates, therefore, that the resources required to remedy the urgent repairs required to Northern Ireland's dwelling stock as a whole would cost approximately £560 million; for basic repairs the figure was £694 million and for comprehensive repairs over a 10 year period, £2.3 billion. The previous section already indicated in physical terms how the standard of repair improved between 2006 and 2009.

This is reflected in the financial estimates. In nominal terms the total resources required to remedy urgent and basic disrepair has decreased (by £290 million and £346 million respectively).

¹¹ This included costs of preliminary work, access and any relevant uplifts - these amount on average to one-third of actual repair costs

Table 5.8
The Distribution of Repair Costs, 2009

Actual repair required costing at least (£)		
% of Dwelling Stock	Urgent	Basic
1	11,011	13,137
2	6,265	7,440
5	2,844	4,010
10	1,376	1,958
25	381	626
50	0	11
Mean (£)	756	938
Median (£)	0	11
Mean per m ² (£)	8.57	10.55
Median per m ² (£)	0	0

The estimated repair costs continue to indicate that substantial resources are required on an ongoing basis to ensure that Northern Ireland's dwelling stock does not deteriorate.

Distribution of Repair Costs

Closer analysis of the modelled figures shows that a relatively small proportion of dwellings in a very poor state of repair skewed the distribution of repair costs (see Table 5.8).

This is reflected in the considerable disparities between the means and medians for both urgent and basic repairs. It is also reflected in the fact that in the case of urgent repairs only one per cent of dwellings required repairs costing more than approximately £11,000, only five per cent required costs of more than approximately £2,800, and at least 50 per cent required no urgent repairs at all.

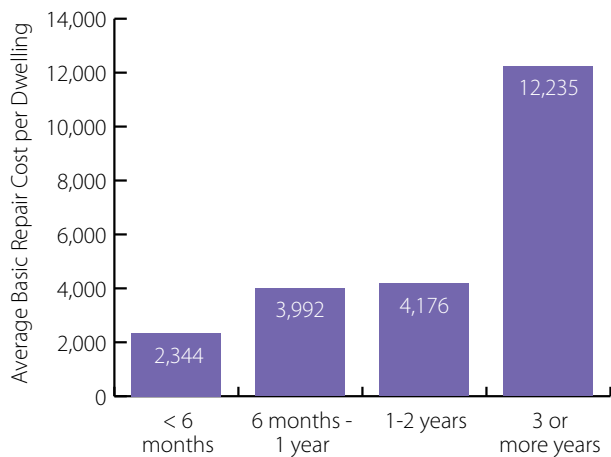
A similar pattern existed for basic repairs. One-half of the stock requiring repairs costing only £11, and only five per cent required repairs costing more than approximately £4,000.

Repair Costs - Tenure (Table A5.20)

There was a clear association between estimated repair costs and tenure. The average urgent repair cost for vacant dwellings was much higher than for any occupied tenure. At £5,516 it was approximately 12 times higher than for the occupied stock as a whole (£460).

A similar concentration is apparent for basic repair costs where the figure for vacant stock was £5,695 compared to only £642 for occupied dwellings.

Figure 5.9
Repair Costs of Vacant Dwellings and Period of Vacancy, 2009



Indeed, more than two-fifths (43 per cent) of the total urgent repair costs for all stock and more than one-third (36 per cent) of the total basic repair costs was needed for the six per cent of the housing stock that were vacant.

The length of time that a vacant dwelling had been vacant was an important factor in determining the cost required to remedy the repairs (see Figure 5.9). For example, the average basic repair cost increased from £2,344 for dwellings that had been vacant for less than six months to £12,235 for those that had been vacant for at least three or more years, more than a five fold increase (see Figure 5.9).

The private rented sector had the next highest average urgent repair cost (£556) and average basic repair cost (£798). In all, over £99m was required to remedy basic repair costs in this sector.

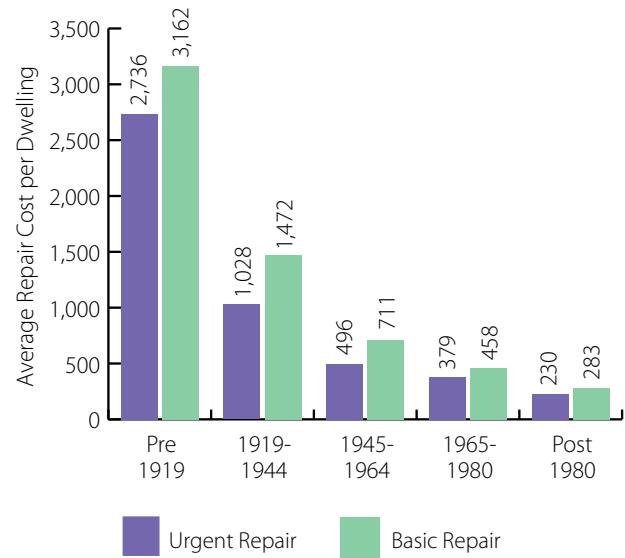
Owner-occupied dwellings required an average of £493 for urgent and £693 for basic repairs. This amounted to a total bill of over £319m (46 per cent of the total) for basic repairs.

The average repair costs for social housing were much lower at £212 for urgent and £253 for basic (a total basic repairs bill of £27.9 million).

Repair Costs - Dwelling Age (see Table A5.21)

Figure 5.10 shows that there was a clear positive relationship between dwelling age and the cost of disrepair. The pre-1919 stock had by far the highest average basic and urgent repair costs (£3,162 and

Figure 5.10
Repair Costs and Dwelling Age, 2009



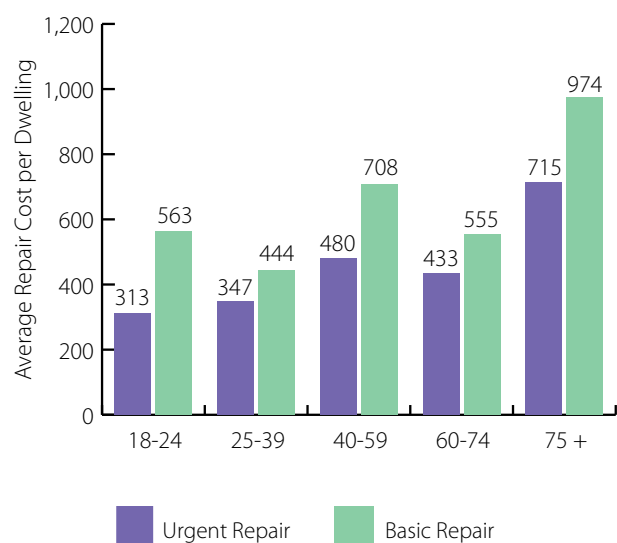
£2,736 respectively); this fell to only £283 for basic repairs and £230 for urgent repairs for dwellings built since 1980.

Repair Costs - Dwelling Type (Table A5.22)

There were some considerable differences in the average repair costs for different dwelling types. In the case of basic repair costs these ranged from £1,912 for detached dwellings to only £680 for terraced houses, £558 for semi-detached houses and £565 for flats. However, this difference was partly a function of the different sizes of these dwelling types. Using the standardised cost the picture is somewhat different. In this case costs per m² for detached houses (£14), terraced houses (£10), semi-detached houses (£7) and flats (£12) were proportionately much closer. The figure for single storey houses (£12) was similar to other dwelling types.

The figures for urgent repairs show a similar picture with the average cost per dwelling being highest for detached houses (£1,591), and lowest for semi-detached houses (£400). The average cost for single storey houses was £788, terraced houses (£526) and flats (£497). The relative difference again reduced considerably for costs per m². Once again semi-detached houses had the lowest costs at £5m² compared to £8m² for terraced houses, £10m² for single storey houses, £10m² for flats and £12m² for detached houses.

Figure 5.11
Repair Costs and Age of Household Reference Person, 2009



Repair Costs - Dwelling Location (Table A5.23)

There was a major difference in the average repair costs for urban and rural dwellings. Rural dwellings had an average basic repair cost (£1,627), more than double the corresponding figure for urban dwellings (£625). This was also the case when costing basic repair per square metre, £16 for rural dwellings £8 for urban dwellings. A similar picture emerged for urgent repair costs; £1,407 for rural and £460 for urban dwellings.

Indeed in the case of isolated rural dwellings the average basic repair cost rose to £2,428 (£21 per m²) compared to only £837 (£10 per m²) for small rural settlements. The much higher vacancy rate in isolated rural areas (see Chapter 3) was an important factor in this difference.

Repair Costs - Proposed New Council Areas (Table A5.24)

Average basic repair costs for all dwellings in 2009 by proposed new council areas showed a wide variation. The lowest average basic repair cost per dwelling (£328) was in the Lisburn and Castlereagh council area. Ards and North Down Council area had the next lowest average basic repair cost of £494. The districts with the highest average basic repair cost were mainly located in the West of Northern Ireland. They were; Fermanagh and Omagh (£2,117), mid Antrim (£1,548), Mid Ulster (£1,125) and Armagh City and Bann (£1,040).

Repair Costs - Household Characteristics (Table A5.25)

There were considerable variations in the repair costs required to the dwellings occupied by households with different characteristics.

Age Of Household Reference Person

Dwellings occupied by an elderly Household Reference Person (and particularly one aged at least 75) had a much higher average repair cost than the comparable figure for the occupied stock as a whole. For example, for dwellings with a household reference person aged at least 75 the basic repair cost was £974 compared to the average of £638 (see Figure 5.11).

Household Type

Small family, Lone parent and two adult households lived in dwellings with the lowest average basic repair costs (£435, £420 and £415 respectively). In the case of lone parents this reflected their propensity to live in social housing where repair costs are lower.

By far the highest average basic repair costs were found in dwellings occupied by lone adult households (£985); the next highest was for lone older households (£872); Evidence for the size of this gap was reinforced when repair costs per m² were examined. Here too lone adult and lone older households lived in dwellings with much higher average basic repair costs (£12 per m²) compared to all other household types.

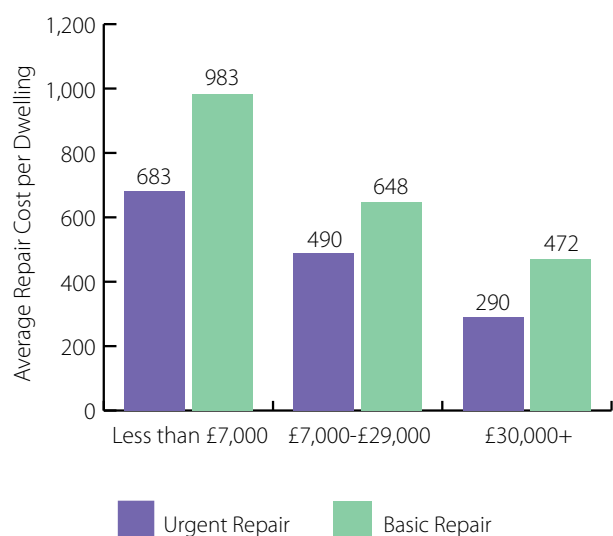
Employment Status

Households where the HRP was not working were more likely to live in dwellings with higher repair costs with an average basic repair cost of £759. Dwellings with Household Reference Persons who worked full or part time had the lowest average basic repair costs (£583). Households where the HRP was retired had an average basic repair cost of £687. Others (including students, permanently sick/disabled and looking after family home) had an average basic repair cost of £649.

Annual Income

Households with the lowest incomes tended to live in dwellings with the highest basic repair costs. Those with an income below £7,000 per year had basic repair costs of £983 compared to £648 for households with an income of between £7,000 - £29,999 and £472 for households with an income of £30,000 or more. Analysis of the costs per m² showed a similar pattern with those for households having an income

Figure 5.12
Repair Costs and Annual Income, 2009



below £7,000 (£14) being three times that for those with an income above £30,000 (£4) (see Figure 5.12).

Household Religion

Protestant households lived in dwellings with an average basic repair cost of £672 compared to Catholic households where the comparable figure was £534.

5.10 Repairs and Improvements

As part of the household survey, respondents were asked about repairs and improvements carried out to their dwellings during the previous five years. This provided a valuable insight into the resources committed to the existing dwelling stock by occupiers and landlords. Indeed it is most likely an underestimate, not only because respondents sometimes forget, but also because with a recent change of occupancy, the full five-year repair/improvement history of the dwelling will not be known.

Overall some 319,000 dwellings had some form of repair or improvement work carried out in the five years prior to 2009. This represented almost one-half (46%) of the total occupied stock. The 2006 House Condition Survey found that some 331,000 dwellings had been repaired or improved during the previous five years. This represented more than one-half (52%) of the stock at that time. This lower percentage in 2009 reflected the growing proportion of new

dwellings in the stock and the steadily improving conditions of the existing stock as a whole.

The highest rates of repair and improvement were among owner occupied (53%) stock, and social housing (47%) reflecting the ongoing commitments of owner occupiers wishing to improve their homes, and the Housing Executive and housing associations to maintain and improve the standard of housing in Northern Ireland.

In the private rented sector, the figures were much lower. Only 20 per cent of privately rented dwellings had been repaired or improved, possibly reflecting a lack of investment incentives for private landlords. The high turnover of occupants in privately rented dwellings, however, also resulted in limited knowledge among interviewees of the extent of repair within the previous five years, hence the high proportion of “don’t know” responses in Table 5.9.

The proportion of dwellings with repair or improvement work carried out in the five year period to 2009 also varied by age. The highest proportions, however, were for dwellings built between 1981 and 1990 (63%), 1965 and 1980 (58%), not as might be assumed for dwellings built prior to 1919 (47%).

Table 5.10 shows that the most common repair/improvement work carried out over the five year period to 2006 was providing/refitting a kitchen (157,600 dwellings; 21% of the stock), providing/refitting a bathroom (146,000 dwellings; 20% of the stock), providing/refitting a kitchen (137,100 dwellings; 19% of the stock), replacing windows (112,200 dwellings; 15% of the stock), replacing doors (103,200 dwellings; 14% of stock), and installing/replacing central heating (117,600 dwellings; 17% of the stock). For all other work the number of dwellings affected was much lower.

Figure 5.13 illustrates the cost breakdown of repair and improvements carried out in the 319,000 dwellings that had work carried out in the five year period to 2009.

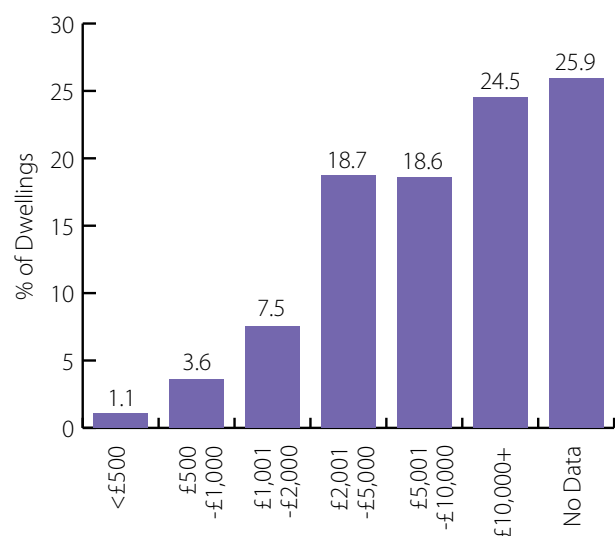
In one-quarter (25%) of dwellings the work cost more than £10,000, in 19 per cent of dwellings the cost was £2,001 - £5,000 and £5,001 - £10,000. The majority of respondents (186,800; 59%) stated that they had paid all of the cost themselves and the remainder had contributed some of the expenditure (11%) or none of it (31%). In the case of

Table 5.9
Repairs and Improvement Work by Tenure, 2009

Tenure	Repair/Improvement		No Work		Don't Know		Total Occupied Dwellings	
Owner Occupied	241,700	53%	216,300	47%	100	<1%	458,100	100%
Private Rented	25,000	20%	57,200	46%	41,200	33%	123,400	100%
Social Housing	52,000	47%	46,700	42%	11,300	10%	110,000	100%
Total	318,700	46%	320,200	46%	52,600	8%	691,500	100%

(All Occupied and have had repairs/improvements in last 5 years)

Figure 5.13
Repair and Improvement Work - Total Cost, 2009



those households who had contributed to the cost of the work (33,800 households) the most common contribution (26%) was £2,001 to £5,000.

5.11 State of Repair - Summary

There was little change in the state of repair of Northern Ireland's stock between 2006 and 2009 in terms of the percentage of dwelling stock with at least one fault (52 per cent in 2006 and 2009). However, the degree of disrepair was significantly lower, the average repair cost decreased from £1476 in 2006 to £938 in 2009, giving a total repairs bill of £694 million in 2006 compared to £1 billion in 2006.

Disrepair was particularly prevalent in vacant dwellings (64%) but it was also higher than average in the private rented sector (56%). There was a clear

Table 5.10
Repairs and Improvement Work, 2009

Repair/Improvement work	Total Dwellings	% of Total Stock
Re-Roofing/Roof Structure	32,000	4.3
Structural Repairs	15,900	2.1
Repointing/Rendering	22,100	3.0
Replacing Windows	112,200	15.2
Replacing Doors	103,200	13.9
Inserting/Replacing DPC	13,900	1.9
Internal Plastering	46,000	6.2
New Floors	43,000	5.8
Electrical Wiring	48,200	6.5
Providing/Refitting Kitchen	157,600	21.3
Providing/Refitting Bathroom	146,000	19.7
Installing/Replacing Central Heating	101,300	13.7
Rearranging Internal Space/Flat Conversion	22,000	3.0
Roof Insulation	57,200	7.7
Cavity Wall Insulation	35,900	4.9
Garage Added	4,900	0.7
Conservatory Added	6,800	0.9
Extension	33,700	4.6
Combining Two or More Rooms	10,400	1.4
Other Work	38,700	5.2
All dwellings	740,000	100.0

relationship between the age of the dwelling and disrepair with nearly three-quarters (74%) of all dwellings built before 1945 having faults.

Table 6.1
Decent Homes - Key Figures, 2001-09

		Non-Decency Rate		
		2001 %	2006 %	2009 %
Tenure	Owner Occupied	23.4	20.4	12.6
	Private Rented and Others	47.3	26.5	17.0
	Housing Executive	49.5	24.7	
	Housing Association	7.4	8.9	14.7
	Vacant	70.7	49.5	38.0
Dwelling Age	Pre 1919	50.1	41.1	32.4
	1919 - 1944	45.0	30.3	27.6
	1945 - 1964	41.2	28.6	19.9
	1965 - 1980	38.6	21.3	11.9
	Post 1980	1.1	8.3	3.7
Dwelling Type	Bungalow	26.8	21.6	13.0
	Terraced House	43.0	24.3	16.5
	Semi-Detached House	25.7	20.7	13.8
	Detached House	24.7	21.0	12.0
	Flat/Apartment	34.0	32.0	25.9
Dwelling Location	All Urban	32.3	22.0	14.5
	All Rural	30.6	25.3	16.4
	All Dwellings	31.8	23.0	15.1

Table 6.2
Fuel Poverty - Key Figures, 2001-09

		Homes in Fuel Poverty					
		2001		2006		2009	
		No	%	No	%	No	%
Tenure	Owner Occupied	97,900	22.8	148,000	31.8	178,000	38.9
	Private Rented and Others	21,400	44.0	35,300	44.1	67,800	54.9
	Housing Executive	46,100	40.1	37,800	40.8	56,500	51.4
	Housing Association	1,700	9.9	4,500	21.1		
Dwelling Age	Pre 1919	43,700	44.0	51,800	54.4	55,400	63.4
	1919 - 1944	25,700	40.2	27,600	41.4	42,600	58.9
	1945 - 1964	37,100	30.2	51,700	38.2	54,000	45.5
	1965 - 1980	40,400	26.0	52,700	32.2	82,900	47.4
	Post 1980	20,200	11.9	41,800	21.1	67,400	28.3
Dwelling Type	Bungalow	45,700	30.9	56,800	38.0	83,900	54.6
	Terraced House	54,100	28.5	76,900	35.8	104,600	47.6
	Semi-Detached House	29,100	24.2	40,700	30.6	46,700	33.3
	Detached House	26,900	25.0	36,500	31.9	43,200	33.6
	Flat/Apartment	11,300	24.6	14,700	30.9	23,900	48.4
Dwelling Location	All Urban	103,900	25.0	152,900	32.8	206,700	42.8
	All Rural	63,200	32.5	72,700	37.7	95,600	45.8
	All Dwellings in Fuel Poverty	167,100	27.3	225,600	34.2	302,300	43.7

Table 6.3
HHSRS - Key Figures, 2006-09

		Category 1 Hazards			
		2006		2009	
		No	%	No	%
Tenure	Owner Occupied	93,700	20.0	98,700	21.4
	Private Rented and Others	15,400	19.1	19,200	15.4
	Housing Executive	8,200	8.8	9,400	8.6
	Housing Association	700	3.1		
	Vacant	19,100	47.4	17,200	39.5
Dwelling Age	Pre 1919	47,400	41.6	38,400	36.1
	1919 - 1944	20,500	28.9	21,600	27.6
	1945 - 1964	27,200	19.2	29,300	23.4
	1965 - 1980	23,000	13.6	32,900	18.1
	Post 1980	19,000	9.1	22,300	9.1
Dwelling Type	Bungalow	35,400	22.2	33,600	20.7
	Terraced House	36,500	16.2	41,400	17.8
	Semi-Detached House	28,300	20.0	28,500	19.4
	Detached House	30,500	24.9	34,600	24.9
	Flat/Apartment	6,400	11.3	6,400	10.7
Dwelling Location	BMA	40,900	14.9	52,500	19.5
	District/Other Town	40,700	18.6	37,600	15.8
	All Urban	81,600	16.5	90,100	17.7
	Small Rural Settlement	22,200	20.7	24,100	20.7
	Isolated Rural	33,300	31.9	30,200	26.3
	All Rural	55,500	26.3	54,300	23.5
	All Dwellings	137,100	19.4	144,500	19.5

Chapter 6

DECENT HOMES, FUEL POVERTY AND THE HOUSING HEALTH AND SAFETY RATING SYSTEM

6.1 Decent Homes

Decent Homes - Introduction

Decent Homes was launched in April 2000 when the Government published a Housing Green Paper entitled "Quality and Choice: A Decent Home for All". It was the first comprehensive review of housing for 23 years and committed the Government to ensuring that "all social housing is of a decent standard within 10 years".

In June 2004 The Decent Homes Standard was adopted in Northern Ireland and was introduced to promote measurable improvements to Northern Ireland's housing. At that time it was hoped that social housing would meet this Standard by 2010. However, financial constraints mean that this date has had to be revised. Until 2007, the Standard applicable to Northern Ireland was essentially the same as that in England and followed the definition originally published by the ODPM, now DCLG. However, England introduced a new Decent Home Standard in 2007.

The Decent Homes standard applies in England and Wales and a similar measure the Index of Housing Quality applies in Scotland.

6.2 The Decent Home Standard - A Summary

A decent home is one that is wind and weather tight, warm and has modern facilities. A decent home meets the following four criteria:

Criterion a: It meets the current statutory minimum standards for housing.

The current minimum standard in Northern Ireland is the Fitness Standard set out in Schedule 5 of the Housing (Northern Ireland) Order 1992.

In England an identical standard, (contained in section 604 of the Housing Act 1985), was replaced in April 2006 by the Housing Health and Safety Rating System, which assesses 29 different hazards that may affect the dwelling. To qualify as a decent home in England the dwelling must not be affected by any Category 1 hazards (those for which statutory action by the Housing Authority is mandatory).

Criterion b: It is in a reasonable state of repair.

A dwelling satisfies this criterion unless:

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

Criterion c: It has reasonably modern facilities and services.

Dwellings that fail to meet this criterion are those that lack three or more of the following:

- A reasonably modern kitchen (20 years old or less);
- A kitchen with adequate space and layout;
- A reasonably modern bathroom (30 years old or less);
- An appropriately located bathroom and WC;
- Adequate insulation against external noise (where external noise is a problem);
- Adequate size and layout of common areas for blocks of flats.

Criterion d: It provides a reasonable degree of thermal comfort.

This criterion requires dwellings to have both effective insulation and efficient heating.

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 that are developed in the future. Heating sources that provide less energy efficient options fail the decent home standard.

Because of the differences in efficiency between gas/oil heating systems and the 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 a loft space) is an effective package of insulation.
- For dwellings heated by electric storage/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 cavity walls that can be insulated effectively).

For the purposes of analysis, all dwellings built since 1990 are assumed to meet the thermal comfort criterion.

6.3 Profile of Decent and Non-Decent Homes

In Northern Ireland, in 2009, approximately one-sixth (15%; 111,800) of all dwellings failed to meet the Decent Home Standard. This is a significant improvement from 2006 when nearly one-quarter of dwellings failed the standard (23%; 162,100) and from 2001 when nearly one-third failed the standard (32%; 206,000). In England in 2006 more than one-quarter (27%) failed the Decent Homes Standard (measured on the basis of the Fitness Standard). At the time of this report, the latest figures available for England were for 2008 when 33 per cent of dwellings failed the Decent Homes Standard (measured on the basis of the HHSRS as the minimum standard).

The following section examines the dwellings which fails to meet the Decent Homes Standard in 2009 (15%) by property and household characteristics. In a similar way three of the four criteria which make up the Standard - thermal

comfort, lacking modern facilities and services and disrepair are then examined in succession. The fourth criterion unfitness is covered in chapter five.

Decent Homes - Tenure (Table A6.1)

Variation in the non-decency rate by tenure remained broadly in line with 2006.

- Vacant dwellings had the highest rate of non-decency (38%);
- The non-decency rate in social dwellings (15%; Housing Executive 18%) and privately rented dwellings (17%) was similar to the overall average (15%);
- Owner occupied dwellings had the lowest rate of non-decency (13%).

It is important to note that of all dwellings that failed the Decent Home Standard approximately half (52%) were owner occupied and a further 19 per cent were privately rented dwellings.

Decent Homes - Dwelling Age (Table A6.2)

Figure 6.1 shows the consistent, clear association between dwelling age and failing the Decent Home Standard in 2006 and 2009. The older the dwelling the more likely it was to fail the Standard.

- One-third (32%) of all dwellings that had been built before 1919 were non-decent;
- This proportion fell to 28 per cent (1919-1944), 20 per cent (1945-64) and then to 12 per cent (1965-80), before dropping sharply for the post-1980 category where the figure was four per cent.

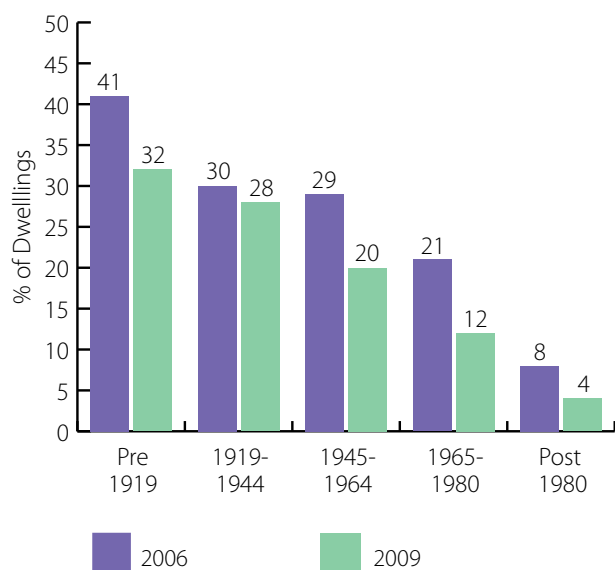
Of all dwellings that failed the Decent Homes Standard almost one-third (31%) were pre-1919 in age (34,500 dwellings).

Decent Homes - Dwelling Type (Table A6.3)

- The highest rates of non-decency were found in flats and apartments (26%) and terraced housing (17%). Single storey (13%) and Detached (12%) houses both had the lowest proportion of non-Decent Homes. This was broadly in line with 2006.

One-third (34%) of all non-Decent Homes were terraced houses and almost one-fifth (19%) were single storey houses.

Figure 6.1
Non-Decent Homes and Dwelling Age, 2006-2009



Decent Homes - Dwelling Location (Table A6.4)

- Isolated rural areas (20%) had the highest rate of non-decency followed by the Belfast Metropolitan Area (16%). District and Other Towns and Small Rural Settlements had the lowest rates of non-decency (both 13%).

Consistent with 2006 and broadly in line with the dwelling stock as a whole, two-thirds (66%) of all non-Decent dwellings were located in urban areas and the remainder (34%) in rural areas.

Decent Homes - New RPA Council Area (Table A6.5)

East Belfast (26%) and Armagh City and Bann (22%) had the highest rates of non-decent dwellings and Derry City and Strabane (7%) and West Belfast (8%) had the lowest rates.

6.4 Decent Homes - Household Characteristics (Table A6.6)

A little less than one-sixth (14%; 94,700) of all occupied dwellings failed the Decent Home Standard. This was examined by the following household characteristics:

Age of Household Reference Person

Consistent with 2006, Household Reference Persons over the age of 75 (28%) were much more likely to live in non-Decent Homes than other age groups. Other age groups showed little variation from the overall average (14%).

Household Type

Again, similar to 2006, lone older (25%) and lone adult (23%) households were more likely to live in non-decent homes than other household types. Large families (5%) were the least likely to live in dwellings that failed the Decent Homes Standard.

Employment Status

One fifth (20%) of Household Reference Persons who were retired in 2009 lived in non-decent homes compared to only ten per cent of HRP's who were working in 2009.

Annual Income

The 2009 House Condition Survey confirmed the clear relationship between annual income and the likelihood of living in a decent home. The lower the annual income the greater the likelihood of living in a non-decent home (see Figure 6.2).

Household Religion

Households describing themselves as Catholic (11%) were slightly less likely to live in non-decent homes than those describing themselves as Protestant (14%).

Figure 6.2
Non-Decent Homes and Annual Income, 2006-09



6.5 Thermal Comfort, Lacking Modern Facilities and Services and Disrepair

The Decent Home Standard is made up of four criteria including thermal comfort, lacking modern facilities and services, disrepair and unfitness (covered in Chapter Five). If a dwelling fails the Decent Home Standard it could fail on one or more of the four criteria. Indeed, 82 per cent (92,100) of the stock failed on one criterion, 11 per cent on two (12,000), four per cent (4,100) on three and three per cent (3,700) on four criteria.

Overall 111,800 dwellings (15%) failed the Decent Homes Standard in 2009. Of these:

- Two-thirds (68%; 75,700, dwellings) failed on the basis of thermal comfort criterion, a decrease in the proportion from 85 per cent in 2006;
- More than one-quarter (27%; 30,200) failed on the basis of lacking modern facilities and services, compared to 15% in 2006. This difference between 2006 and 2009 is mainly due to the effect of the smaller proportion of homes failing the Decent Home Standard in 2009 and in particular the significant reduction in number and proportion failing on the thermal comfort criterion.
- One-fifth (18%; 19,600) failed on the basis of disrepair, a similar proportion to 2006 (20%).

Thermal Comfort (Tables A6.1-A6.5)

Overall 68 per cent of the stock in Northern Ireland failed the Decent Home Standard on the thermal comfort criterion. The following highlights any variation in dwelling or households characteristics.

Thermal Comfort by Tenure

As in 2006, the social housing sector had the highest proportion failing on this criterion (83%; 96% in 2006). This is mainly due to the above average percentage of Housing Executive dwellings with solid fuel and electric heating systems. The privately rented sector had the lowest (61%) proportion failing on this criterion. The owner occupied sector had a similar proportion to the overall average (67%).

Thermal Comfort by Dwelling Age

Dwellings constructed before 1919 (72%) and between 1965-1980 (72%) were more likely to fail the Decent Home Standard on the basis of the thermal comfort criterion than dwellings

constructed in other age bands. In 2006 dwellings constructed between 1965 and 1980 (93%) had the highest proportion failing on this criterion.

Thermal Comfort by Dwelling Type

There was little variation by dwelling type.

Thermal Comfort by Dwelling Location

Dwellings in isolated rural areas (79%) were more likely to fail the Decent Home Standard on the basis of the thermal comfort criterion and dwellings in the BMA were least likely to fail on this criterion (63%). Indeed, only 22 per cent of dwellings in South Belfast failed on this basis.

Thermal Comfort - Household Characteristics (Table A6.6)

The vast majority (68%) of households failed the Decent Homes Standard on the basis of the thermal comfort criterion.

Age of Household Reference Person

There was some variation by age of the Household Reference Person. Households with HRP's aged between 25 and 39 (76%) were more likely to fail on the basis of thermal comfort and households with HRP's aged between 60 and 74 (63%) were least likely to fail on this basis.

Household Type

Two household groups, lone parent (95%) and two adults (89%) had very high proportions failing on the basis of the thermal comfort criterion. This compares with only 30 per cent for large family households.

Employment Status

As in 2006, households with HRP's who were not working had the high proportion failing Decent Homes on the thermal comfort criterion (79%).

Annual Income

Households with an annual income of £30,000 or more were more likely to fail the Decent Homes Standard on the basis of thermal comfort (82%) than households on incomes of less than £7,000 (74%), reflecting the larger older properties in which a significant number of higher income households have. This was consistent with findings from 2006.

Household Religion

There was little variation by household religion in relation to failing on the thermal comfort criterion: Protestant (70%), Catholic households (66%).

Lacking Modern Facilities and Services (Tables A6.1-A6.5)

Overall 27 per cent of the stock in Northern Ireland failed the Decent Home Standard on the modernisation criterion. The following highlights any variation in dwelling or households characteristics.

Lacking Modern Facilities and Services by Tenure

Not surprisingly vacant dwellings had the highest proportion (37%) failing on this criterion. The social (16%) sector had the lowest proportion failing on this criterion. Privately rented dwellings (34%) were more likely to fail Decent Homes on this criterion than owner occupied (25%) dwellings.

Lacking Modern Facilities and Services by Dwelling Age

As expected, dwellings in the youngest age band were least likely to fail on this criterion (post 1980 - 5%) compared to older dwellings (1919-1944 and pre 1919 both 34%).

Lacking Modern Facilities and Services by Dwelling Type

In 2009, single storey dwellings (35%) were more likely to fail on this criterion and semi-detached dwellings were the least likely (16%). In 2006, detached dwellings (22%) were more likely to fail on this criterion and semi-detached dwellings were the least likely (12%).

Lacking Modern Facilities and Services by Dwelling Location

There was no variation by urban and rural (both 27%) areas. Dwellings in small rural settlements were slightly more likely to fail on this criterion (32%).

There was a notable variation in the rate of dwellings failing the Decent Homes Standard on this criterion by new council area. Dwellings located in Mid Ulster (47%) and South Belfast (45%) had the highest proportions failing on this criterion compared to Derry City and Strabane which had the lowest (14%).

Lacking Modern Facilities and Services - Household Characteristics (Table A6.6)

In 2009, one-quarter (25%) of households failed the Decent Homes Standard on the basis of lacking modern facilities and services.

Age of Household Reference Person

Consistent with 2006, households with older HRP's were more likely to fail on the basis of modernisation than households with younger HRP's (75 plus 37% compared to 25-39 13% and 18-24 8%).

Household Type

As in 2006, and consistent with the findings by age, two older and lone older households had higher proportions failing on the basis of lacking modern facilities and services (35% and 32% respectively). Large family households also had a high proportion (33%) failing on this basis. This compares with only two per cent for lone parent households.

Employment Status

Consistent with age and household type, retired HRP's were much more likely to live in accommodation that had failed on the basis of modern facilities and services (36% compared to 15% for working household reference persons). This was a similar trend in 2006.

Annual Income

Households with annual income between £7,000 and £29,999 recorded the highest proportion failing on modern facilities and services (28%). In 2006 the households with annual income of less than £7,000 recorded the highest proportion failing on this basis (21%).

Household Religion

Linked to the age profile, Protestant households were more likely to fail on the basis of facilities and services than Catholic households (28% and 19% respectively).

Disrepair (Tables A6.1-A6.5)

Overall 18 per cent of the stock in Northern Ireland failed the Decent Home Standard on the disrepair criterion. The following highlights any variation in dwelling or households characteristics.

Disrepair by Tenure

A similar pattern to modernisation emerged in that vacant dwellings had the highest proportion failing on this criterion (38%) and the social housing sector had the lowest proportion failing on this criterion (8%; 4% in 2006). The owner occupied (15%) and privately rented (16%) sectors had similar proportions to the overall average.

Disrepair by Dwelling Age

Again, as expected, and similar to the modernisation criterion, dwellings in the younger age bands were the least likely to fail on this criterion (1965 to 1980 - 7% and post 1980 - 1%) compared to older dwellings (1919-1944 24% and Pre 1919 23%).

Disrepair by Dwelling Type

In 2006 detached dwellings (33%) were more likely than other dwelling types to fail on this criterion. However, in 2009 semi-detached houses (29%) were much more likely to fail on the basis of disrepair than other dwelling types.

Disrepair by Dwelling Location

Overall there was little variation by urban (18%) and rural locations (17%). However, dwellings located in the Belfast Metropolitan Area (22%) were somewhat more likely to fail on this criterion compared to dwellings located in District or Other towns (12%). In 2006 dwellings located in isolated rural areas (34%) were more likely to fail on this criterion compared to dwellings located in District or Other towns (10%).

Similar to modernisation, there was a notable variation in the rate of dwellings failing the Decent Homes Standard on this criterion by new council area. Dwellings located in South Belfast (56%) had the highest proportion failing on this criterion compared to Lisburn and Castlereagh which had the lowest (2%).

Disrepair - Household Characteristics (Table A6.6)

In 2009, 14 per cent of households failed on the basis of the disrepair criterion.

Age of Household Reference Person

The youngest Household Reference Persons (18-24) had the highest proportion (37%) failing the Decent Homes Standard on the basis of disrepair. However, this should be treated with some caution as this age group represented only a small proportion of occupied households (3%). Other household age groups showed little variation from the overall average (14%).

Household Type

Large family households (39%) were more likely than other household types to fail the Decent Homes Standard on the basis of disrepair. This compares with much lower proportions for two adult (3%) and lone parent (3%) households.

Employment Status

There was little variation by employment group.

Annual Income

Overall, in 2009 there was little variation by annual income group in relation to failing on disrepair. In 2006, however, households with annual income of less than £7,000 were more likely to fail on this basis (20%).

Household Religion

Catholic (18%) households had a higher proportion failing on disrepair than Protestant (10%) households. The reverse was found in 2006.

6.6 Decent Homes - Summary

There has been a further significant decrease in the number of dwellings failing the Decent Homes Standard. Since 2001 the number of dwellings failing this Standard has decreased from one-third (32%) to less than one-sixth (15%; a drop of seventeen percentage points and some 94,000 dwellings).

The types of dwellings most likely to fail the Decent Homes Standard in 2009 were:

- Vacant properties (38%; 50% in 2006) followed by privately rented dwellings (17%), however approximately half (52%) of all dwellings that failed the Decent Homes Standard were owner occupied;
- Older dwellings built before 1919 (32%);
- Located in isolated rural areas (20%);
- Headed by older HRP's (28%; 75 plus);
- Low income households (28%; less than £7,000 per annum).

Thermal Comfort

Overall 68 per cent of the stock in Northern Ireland failed the Decent Homes Standard on the thermal comfort criterion rising to 83% for the social housing sector.

The types of dwellings and households most likely to fail the Decent Homes Standard on the Thermal Comfort criterion in 2009 were lone parent (95%) and two adult households (89%), higher income households (82%; £30,000 plus per annum), located in isolated rural areas (79%) and headed by younger HRP's aged between 25 and 39 (76%).

Lacking Modern Facilities and Services

Overall 27 per cent of the stock in Northern Ireland failed the Decent Homes Standard on lacking modern facilities and services rising to 37% for vacant stock.

The types of dwellings and households most likely to fail the Decent Homes Standard on the modernisation criterion in 2009 were headed by older HRP's aged 75 plus (37%), two person older households (35%), single storey dwellings (35%) and older dwellings built before 1919 and between 1919 and 1944 (both 34%).

Disrepair

Overall 18 per cent of the stock in Northern Ireland failed the Decent Homes Standard on disrepair rising to 38% for vacant stock.

The types of dwellings most likely to fail the Decent Homes Standard on the disrepair criterion in 2009 were large family households (39%), semi-detached dwellings (29%) and older dwellings built before 1919 and between 1919 and 1944 (23% and 24% respectively).

6.7 Fuel Poverty

Fuel Poverty - Introduction

One of the key objectives of the 2009 Northern Ireland House Condition Survey (HCS) was to provide a reliable assessment of Fuel Poverty in Northern Ireland on a comparable basis, with the rest of the United Kingdom.

The definition of a fuel poor household is one needing to spend in excess of 10 per cent of its household income on all fuel use to achieve a satisfactory standard of warmth (21°C in the main living area and 18°C in other occupied rooms). Fuel Poverty assesses the ability to meet all domestic energy costs including space and water heating, cooking, lights and appliances.

Consistent with England, the figures for Northern Ireland Fuel Poverty are derived from a model constructed by the Building Research Establishment (BRE) in Watford. The Fuel Poverty model calculates a fuel poverty ratio for each dwelling. The calculation has three components energy prices, fuel consumption and income. For further detail see Appendix F.

All of the component models, with the exception of the fuel price model, use data from the 2009 Northern Ireland House Condition Survey. However, the fuel price model uses the Methods of Payment (MOP) data from the HCS.

6.8 Fuel Poverty - Key Results 2001 - 2009

Table 6.4
Northern Ireland Fuel Poverty Estimates 2001-09

H'holds in Fuel Poverty	2001	2004	2006	2009
2006	27%	23%	34%	44%
Method	167,000	146,000	226,000	302,000

6.9 Profile of Fuel Poverty

Table 6.4 above shows how the rate of Fuel Poverty has changed over time. The 2009 House Condition Survey estimated that approximately 302,300 (44%) households in Northern Ireland were in Fuel Poverty; an increase of ten percentage points and some 77,000 households since 2006.

The main reasons for the increase in Fuel Poverty between 2006 and 2009 were the generally rising fuel price levels from 2006 to 2009 and in particular large rises in the price of fuel in 2008. Both electricity and oil prices had risen sharply during this time (although both also showed reductions by 2009). Stagnating household incomes 2008/09 as a result of rising unemployment and subdued wage increases will also have had an impact.

Additional research into the causes and drivers of fuel poverty 2006-2009 and the quantification of the relative importance of each driver will help understand better the nature of Fuel Poverty.

Table 6.5 compares national Fuel Poverty figures. However, at the time of this report, the latest results available do not relate to the same year but are as close as possible to 2009.

Table 6.5
Fuel Poverty Estimates by Nation¹² (Latest Year Available)

Households in Fuel Poverty	Northern Ireland	England	Scotland
2009	44%	16% ¹³	33% ¹⁴

In 2009 the Fuel Poverty rate was much higher in Northern Ireland compared to the latest figures available for England or Scotland. The main reasons for this is a combination of lower incomes, and higher fuel prices (particularly gas) and higher dependence on oil, electric and solid fuel for heating in Northern Ireland.

6.10 Fuel Poverty by Key Dwelling Characteristics

Fuel Poverty and Dwelling Tenure (Table A6.7)

The rate of Fuel Poverty varied by tenure. However patterns generally remained the same 2006 to 2009.

- The tenure with the highest proportion in Fuel Poverty in 2009 was the Housing Executive (49,000; 57%), followed by the private rented sector (67,800; 55%). In 2001 and 2006 the private rented sector had the highest proportion in Fuel Poverty closely followed by Housing Executive households.
- The Housing Executive and Housing Association stock combined had a Fuel Poverty rate of 51 per cent (56,500 households) reflecting the much newer stock in Housing Associations.
- This finding may appear surprising after the number of new, more efficient heating systems¹⁵ installed in Housing Executive accommodation between 2006 and 2009. However, the combination of fuel price increases and the

¹² Much of the Fuel Poverty Methodologies between nations are identical with the exception of the Scottish methodology. Main differences between Scotland and the other nations relate to pensioner heating time and temperature, household size, geography and climate, household income and council tax deductions.

¹³ This figure is for 2008

¹⁴ This figure is for 2009

¹⁵ See Chapter 7

number of households on low incomes have reduced the impact of these energy efficiency improvements.

- In the owner occupied sector 39 per cent (178,000 households) were in Fuel Poverty in 2009. This compares with 32 per cent in 2006 (148,000 households). This equates to approximately 30,000 additional owner occupied households in Fuel Poverty in 2009.

It is important to note that three-fifths (59%) of all households that were fuel poor lived in owner occupied dwellings. The proportion in 2006 was 66 per cent.

Figure 6.3 summarizes the increase in Fuel Poverty by tenure over time.

Figure 6.3
Households in Fuel Poverty and Tenure, 2001-09



Fuel Poverty and Dwelling Type (Table A6.8)

The rates of Fuel Poverty were highest in households living in single storey (55%) and terraced houses (48%) and lowest for households in semi-detached (33%) houses and detached (34%). This was similar to the pattern in 2006. One area of change in Fuel Poverty 2006 to 2009 was in relation to Flat/Apartments which showed a much lower rate in 2006 (below average 31%) compared to 2009 (above average 48%; 44% overall).

Fuel Poverty and Dwelling Age (Table A6.9)

As with unfitness, the Decent Homes Standard and the Housing Health and Safety Rating system there was an association between dwelling age and Fuel Poverty. Households living in older dwellings had higher rates of Fuel Poverty. This is consistent with 2006 and 2001 findings.

- More than three-fifths (63%) of households living in dwellings built before 1919 were fuel poor. The figure for 2006 was 54 per cent.
- The rate of Fuel Poverty was slightly less for households living in dwellings built between 1919 and 1944 (59%; 2006 41%).
- However, the rate of Fuel Poverty for households living in new post 1980 stock was only 28 per cent (up from 21 per cent in 2006).

Of all households living in Fuel Poverty approximately 18 per cent lived in dwellings constructed prior to 1919 and 27 per cent lived in dwellings constructed between 1965 and 1980.

Fuel Poverty and Dwelling Location (Table A6.10-A6.11)

As in 2006, there was some evidence of an urban/rural dichotomy in relation to fuel poor households, with rates at 43 per cent and 46 per cent (respectively). The highest rate of Fuel Poverty was found in households living in isolated rural areas (51%).

Table 6.6 shows the rates of Fuel Poverty by proposed new council area. The highest rate of Fuel Poverty was found in West Belfast (54%), followed by Newry and Down (49%). The lowest rates were found in Lisburn and Castlereagh (38%) and South Belfast (38%).

Fuel Poverty and Fuel Source

There was considerable variation in the rate of Fuel Poverty by fuel used for heating. Households with electric (69%) or solid fuel (63%) central heating were more likely to be in Fuel Poverty than households with oil (41%) or mains gas (43%) central heating.

Table 6.6
Households in Fuel Poverty and New Council Area 2006-09

	Fuel Poverty	
	2006	2009
	%	%
Derry City and Strabane	33	43
Armagh City and Bann	33	46
Lisburn and Castlereagh	29	38
Newry and Down	35	49
Antrim and Newtownabbey	25	42
Ards and North Down	37	44
Causeway Coast	36	44
Fermanagh and Omagh	35	43
Mid Antrim	35	43
Mid Ulster	38	41
East Belfast	36	45
South Belfast	41	38
West Belfast	42	54
North Belfast	37	46
Belfast	39	45
Total	34	44

Fuel Poverty and Cavity Wall Insulation

Households living in dwellings with full cavity wall insulation (37%) were less likely to be in Fuel Poverty than households living in dwellings with partial (52%) or without any type of wall insulation (59%). Households living in dwellings with internal or external (60%) insulation had the highest rate of Fuel Poverty.

Fuel Poverty and Loft Insulation

There was a clear inverse relationship between loft insulation thickness and fuel poverty; in that as the thickness of loft insulation increased Fuel Poverty decreased. Almost half (49%) of households with loft insulation less than 100mm were in Fuel Poverty compared to around one-third (33%) of households with more than 150mm of loft insulation. Almost four-fifths (79%) of households with no loft insulation were in Fuel Poverty.

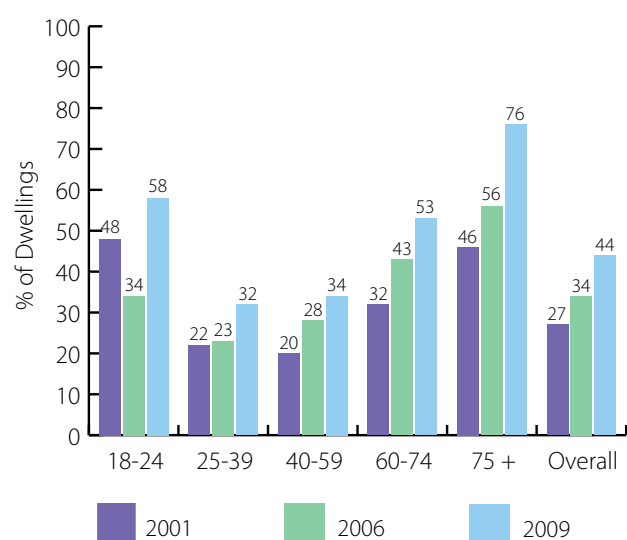
6.11 Fuel Poverty by Key Household Characteristics (Table A6.12)

Fuel Poverty and Age of Household Reference Person

As in 2006 and 2001 households headed by older people were much more likely to be living in Fuel Poverty.

- Household reference persons aged 75 plus (76%) and between 60 and 74 (53%) were more likely to be living in Fuel Poverty, compared to only 32 per cent of reference persons aged between 25 and 39 and 34 per cent of those aged between 40 and 59. Only three per cent of households had reference persons aged between 18 and 24; however the Fuel Poverty rate for this group was high at 58 per cent.
- Figure 6.4 shows how Fuel Poverty has increased over time for the different HRP age groups. The oldest HRP age group (75 plus) shows an increase of around 20 percentage points since 2006 (from 56% in 2006 rising to 76 per cent in 2009). The youngest HRP age group (18-24) also shows an equivalent increase, however, because this is a small group figures need to be treated with some caution.
- As in 2006, approximately half (49%) of all households that were fuel poor were headed by household reference persons aged 60 or more.

Figure 6.4
Households in Fuel Poverty and Age of HRP, 2001-09



Fuel Poverty and Household Type

The rate of Fuel Poverty varied by household type and was consistent with findings by age.

- A very high proportion of lone older (83%) households were in Fuel Poverty. This was an increase of 21 percentage points since 2006.
- Almost three-quarters (72%; 48% in 2006) of lone adult households were in Fuel Poverty, followed by 63 per cent (46%; 2006) of lone parent households.
- Similar to 2001 and 2006 large adult (13%) households were least likely to be in Fuel Poverty. In 2009 this was closely followed by large family (14%) households.

Fuel Poverty and Employment of Household Reference Person

There was considerable variation in Fuel Poverty by employment status.

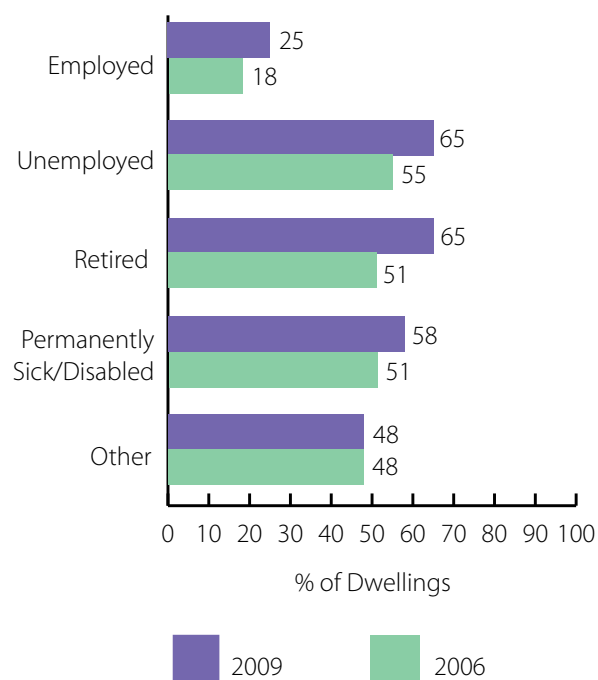
- Almost two-thirds (65% each) of households headed by a person categorized as unemployed and retired were living in Fuel Poverty in 2009.
- More than half of households with permanently sick or disabled (58%), or part-time working (53%) reference persons were living in Fuel Poverty.
- The lowest rate of Fuel Poverty was found in households headed by employed persons (only 25%; 18% in 2006).

Fuel Poverty and Income

Table 6.7 shows the clear relationship between income and Fuel Poverty. Low income households were much more likely to be living in Fuel Poverty, supporting the hypothesis that one of the most important underlying causes of Fuel Poverty is a low income. Patterns were consistent with 2006 and 2001 findings.

- In 2009, 86 per cent of households with an annual income of less than £7,000 per annum were in Fuel Poverty, this compares with 75 per cent in 2006.
- As income increased, the proportion of households in Fuel Poverty declined. The rate of Fuel Poverty for households with an annual income of between £15,000 and £19,999 was 42

Figure 6.5
Households in Fuel Poverty and Employment Status of HRP, 2006-09



per cent and only three per cent for those with an annual income of £30,000 or more.

- Households with annual incomes between £10,000 and £14,999 show the largest percentage point increase since 2006 (23 percentage points; from 41% to 64%). This was similar to 2001-2006.
- Consideration of all households in fuel poverty shows that 81 per cent had an annual household income of £14,999 or less.

Table 6.7
Fuel Poverty and Annual (Gross) Household Income, 2001-09

Annual Household Income	% in Fuel Poverty		
	2009	2006	2001
Less than £7,000	86%	75%	68%
£7,000 and £9,999	78%	59%	46%
£10,000 and £14,000	64%	41%	19%
£15,000 and £19,999	42%	26%	11%
£20,000 and £29,999	15%	8%	3%
£30,000 or more	3%	3%	<1%
Overall Rate	44%	34%	27%

Fuel Poverty and Religion

There was little variation in the rate of Fuel Poverty by the two main religious groups. More than two-fifths of households designated as Protestant (46%) and Catholic (44%) were in Fuel Poverty. The equivalent figures in 2006 were 36 per cent and 35 per cent.

6.12 Fuel Poverty - Summary

Analysis of households in Fuel Poverty in 2009 shows that:

- Considerable progress had been made in reducing Fuel Poverty in Northern Ireland between 2001 and 2004 (from 27% to 23%) but by 2006 the rate of Fuel Poverty had increased to 34 per cent and then to 44 per cent in 2009, largely as a result of the very significant increases in the price of fuel.
- Low income has also been shown to be a significant cause of Fuel Poverty in Northern Ireland in 2009 (86% of households with an annual income of less than £7,000 were in Fuel Poverty). Indeed, 81 per cent of all households in Fuel Poverty had incomes of £14,999 per annum or less.

However, on the basis of these general factors the HCS indicates that Fuel Poverty was correlated to a number of other factors:

- Almost two-thirds (63%) of households living in older dwellings (pre 1919) were in Fuel Poverty;
- Also more than half (51%) of households living in isolated rural areas were in Fuel Poverty;
- Three-quarters (76%) of households headed by an older person (75 plus) were in Fuel Poverty in 2009. More than four-fifths (83%) of lone older households were fuel poor;
- Fuel Poverty was higher in households with HRP's who were unemployed (65%) or retired (65%).

The 2009 HCS continues to confirm that even if the dwelling is given an efficient heating system and is insulated to the highest standards it does not mean that the household will automatically be brought out of Fuel Poverty. The cost of fuel and low income will remain important determinants of whether a household is still in Fuel Poverty.

6.13 Housing Health and Safety Rating System (HHSRS) Version 2

HHSRS - Introduction

The Housing Health and Safety Rating System (HHSRS) represents a very different approach to housing standards. It is a risk based system that identifies defects in dwellings and evaluates the potential effect of any defects or deficiencies on the health and safety of occupants, visitors, neighbours or passers-by. The System generates a score which represents the seriousness of any hazard. Any hazards that have a score of over 1,000 are described as 'Category 1' and are deemed to fail the statutory minimum standard.

Government commissioned Warwick University and the Building Research Establishment (BRE) to develop the HHSRS, as a replacement for the Fitness Standard. It has been the minimum standard for housing in England since 2006.

6.14 The HHSRS and the House Condition Survey

The 2006 Northern Ireland HCS reported findings from version 2 of the HHSRS. These results are not directly comparable with those from 2009 for three

Table 6.8
NIHCS Dwellings with Category 1 HHSRS Hazards 2006 and 2009

	2006		2009	
	No	%	No	%
Excess cold	83,100	11.8	39,600	5.3
Any falls hazards ¹⁶	38,900	5.5	85,900	11.6 ¹⁷
Any other hazards	15,100	2.1 ¹⁸	19,000	2.6
Any Category 1 hazards	137,100	19.4	144,500	19.5

16. This covers 3 hazards - falls on stairs, falls on the level and falls between levels. Note that numbers do not add up to 100% because some dwellings have more than one type of HHSRS Category 1 hazard.

17. The differences between 2006 and 2009 for excess cold and the falls hazards could be due to consistency of approach and will be addressed in the 2011 Survey. See also paragraph 6.14.

18. This excludes the additional hazards measured in 2009 - see Appendix G.

reasons. Firstly, the 2009 survey included far more hazards and a number of these were assessed in a different way (see Appendix G for more details). Secondly, the small sample sizes for most of the individual hazards mean that the results are subject to large sampling errors. Finally, the HHSRS assessment process is still very new in Northern Ireland and it is to be expected that assessments of individual hazards will fluctuate in the first few years until surveyors become more familiar with the system.

6.15 Common HHSRS Risks 2009

The most common risks in Northern Ireland in 2006 and 2009 were excess cold and falls on the stairs. The most common risks in England in 2008 were also excess cold and falls on the stairs.

6.16 HHSRS in Northern Ireland in 2009

Overall 19 per cent of dwellings in Northern Ireland were considered to have one or more Category 1 risks in 2009. This equates to approximately 144,500 dwellings. At the time of this report, the latest figure for England was 23 per cent for 2008 which was approximately just over five million dwellings.

6.17 HHSRS by Key Dwelling Characteristics

HHSRS and Dwelling Tenure (Table A6.13)

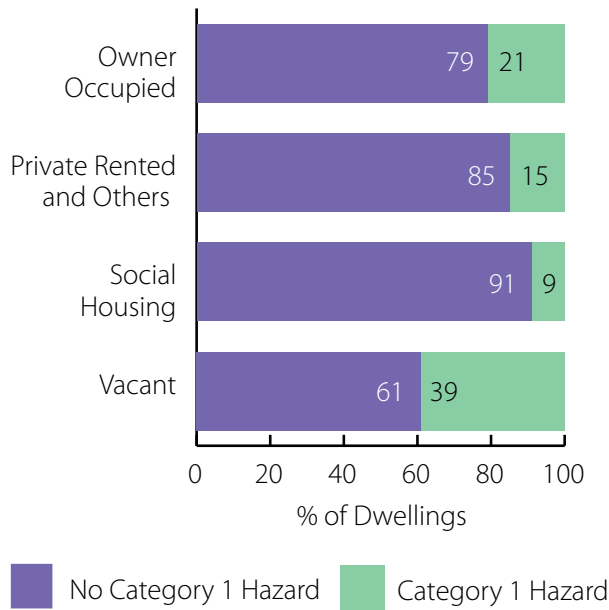
There was some variation by tenure in relation to dwellings failing the HHSRS standard. Not surprisingly, vacant dwellings were more likely to have Category 1 hazards (40%) than any other tenure.

Around one-fifth of owner occupied (21%) and private rented dwellings (15%) had Category 1 hazards. Only nine per cent of Social Housing dwellings had Category 1 hazards.

HHSRS and Dwelling Age (Table A6.14)

As in 2006, older dwellings were more likely to fail the HHSRS than newer dwellings. More than two-fifths (36%) of dwellings constructed before 1919 and 28 per cent of dwellings constructed between 1919 and 1944 had Category 1 hazards; compared to 18 per cent of those constructed between 1965 and 1980 and nine per cent of those built after 1980.

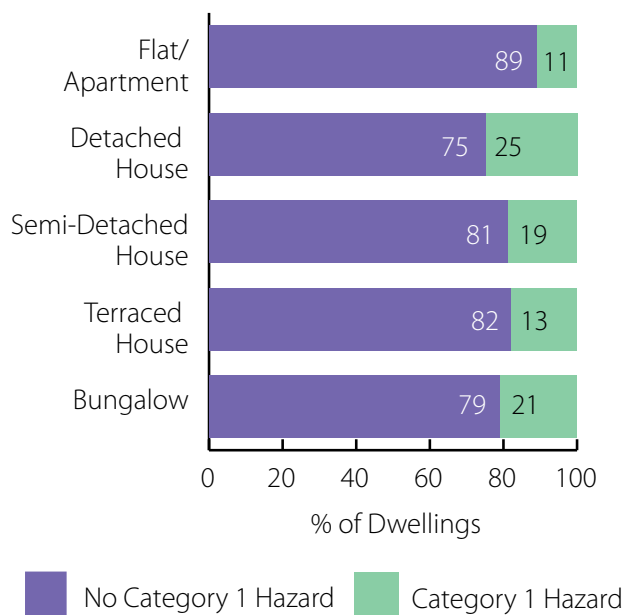
Figure 6.6
Category 1 Hazards and Dwelling Tenure, 2009



HHSRS and Dwelling Type (Table A6.15)

One-quarter (25%) of detached houses had Category 1 hazards. Single storey dwellings (21%) and semi-detached (19%) and terraced (18%) housing had similar proportions of Category 1 hazards. Only 11 per cent of flats had Category 1 hazards.

Figure 6.7
Category 1 Hazards and Dwelling Type, 2009



HHSRS and Location (Table A6.16)

Dwellings in rural areas (24%) were more likely to fail the HHSRS than dwellings in urban areas (18%). Dwellings in isolated rural areas (26%) had the highest proportion of Category 1 hazards.

HHSRS and the Proposed New Council Areas (Table A6.17)

The following table compares the proportion of the housing stock failing the HHSRS in 2009 by the proposed new Council Areas. High proportions of dwellings in Antrim and Newtownabbey, Mid Ulster and Mid Antrim had Category 1 hazards compared to low proportions in West Belfast and Derry City and Strabane. The table also provides the proportion of unfit housing in each Council Area in 2009.

Table 6.9
Category 1 Hazards by New Council Area, 2009

	Fails the HHSRS %	Unfit Dwellings %
Derry City and Strabane	7.8	0.6
Armagh City and Bann	20.7	2.3
Lisburn and Castlereagh	21.2	0.3
Newry and Down	18.2	2.9
Antrim and Newtownabbey	33.0	3.5
Ards and North Down	18.4	0.9
Causeway Coast	16.6	1.0
Fermanagh and Omagh	22.3	6.6
Mid Antrim	26.2	4.0
Mid Ulster	30.8	5.1
East Belfast	15.3	0.8
South Belfast	12.5	3.4
West Belfast	4.9	1.4
North Belfast	12.2	1.7
Belfast	11.8	1.9
Total	19.5	2.4

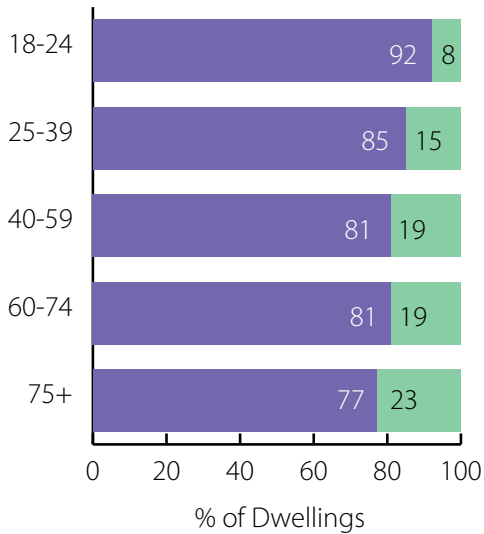
6.18 HHSRS and Key Household Characteristics (Table A6.18)

Overall, 18 per cent of occupied properties had Category 1 hazards.

Age of Household Reference Person

Figure 6.8 shows that as the age of the HRP increased so did the likelihood of failing the HHSRS. Dwellings with HRPs aged 75 or more had the highest rate of Category 1 hazards (23%).

Figure 6.8
Category 1 Hazards and the Age of HRP, 2009



■ No Category 1 Hazard ■ Category 1 Hazard

Household Type

The following table shows that there was some variation by household type. Lone parent (12%) and two adults (13%) households were least likely to have Category 1 hazards.

Table 6.10
Household Type and Category 1 Hazards, 2009

Household Type	Category 1 Hazards (%)
Lone adult	24
Two older	22
Lone Older	21
Large family	19
Small family	17
Large adult	14
Two adults	13
Lone Parent	12
Overall	18

Employment Status of Household Reference Person

Figure 6.9 shows there was little variation by employment group. Households with unemployed or retired HRP's were most likely to fail the HHSRS.

Figure 6.9
Category 1 Hazards and Employment Status of the HRP, 2009

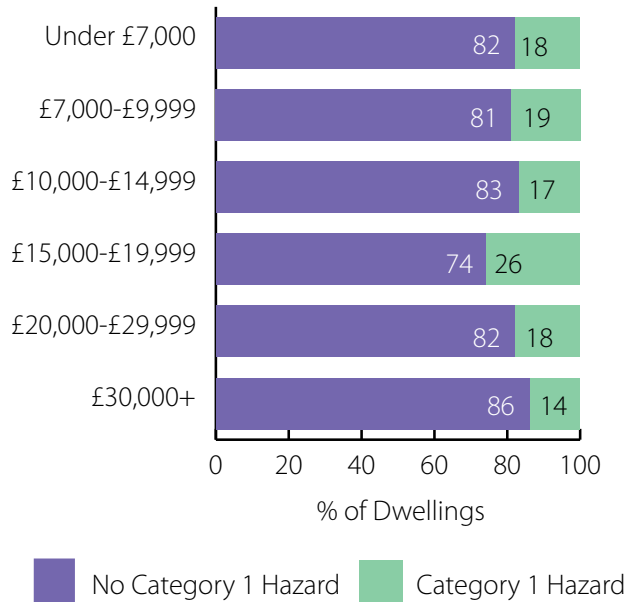


■ No Category 1 Hazard ■ Category 1 Hazard

Household Income

Again, there was little variation by income groups. Lower income groups tended to live in social dwellings which were less likely to have Category 1 hazards. Households with income between £15,000 and £19,000 had the highest proportion (26%) of Category 1 hazards.

Figure 6.10
HHSRS and Annual (Gross) Household Income, 2009



Household Religion

Households failing the HHSRS showed little variation by religion. Catholic households (15%) were slightly less likely to live in dwellings with Category 1 Hazards compared to Protestant households (19%).

6.19 Summary and Conclusion

Overall, 19 per cent of all dwellings in Northern Ireland had Category 1 hazards in 2009. Common hazards in dwellings in Northern Ireland were falls on stairs and excess cold. The EHCS showed that these hazards were also the most common in England in 2008.

The types of dwellings most likely to have Category 1 hazards were:

- vacant properties (40%) followed by owner occupied (21%);
- older dwellings built before 1919 (36%) and between 1919 and 1944 (28%);
- located in isolated rural areas (26%);
- headed by older HRP's (23%; 75 plus);
- headed by lone adults (24%).

This section has provided a baseline for the Northern Ireland dwelling stock in terms of the HHSRS, which allows comparisons with England. In England already, it has replaced unfit as the statutory standard and is the first element of the Decent Homes Standard. The Department for Social Development is currently reviewing the current statutory minimum standard with a view to determining whether it should be changed.

In the meantime, in the Northern Ireland HCS both the HHSRS and the current Fitness Standard will run in tandem.

Table 7.1
Central heating - key figures

	CH Gas		CH Oil		CH Solid Fuel		CH Electric		CH Dual		CH Other		Total Central Heating		Total Non Central Heating		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Owner Occupied	51,100	11.1	355,300	76.9	13,900	3.0	9,100	2.0	30,500	6.6	0	0.0	459,900	99.6	1,900	0.4	461,800	100.0
	44.9		70.4		42.4		30.3		66.3		0.0		62.8		25.3		62.4	
Private Rented and Others	20,800	16.7	81,300	65.3	4,400	3.5	4,800	3.8	12,200	9.7	200	0.2	123,700	99.3	900	0.7	124,600	100.0
	18.3		16.1		13.3		15.8		26.4		4.1		16.9		12.3		16.8	
Social Housing	35,000	31.7	45,900	41.6	9,600	8.8	12,000	10.9	1,900	1.8	5,000	4.5	109,400	99.3	800	0.7	110,200	100.0
	30.8		9.1		29.4		39.9		4.2		91.9		14.9		10.5		14.9	
Vacant	6,800	15.7	22,000	50.6	4,900	11.2	4,200	9.7	1,400	3.3	200	0.5	39,500	91.1	3,900	8.9	43,400	100.0
	6.0		4.4		14.8		14.0		3.1		4.1		5.4		52.0		5.9	
Total	113,700	15.4	504,500	68.2	32,800	4.4	30,100	4.1	46,000	6.2	5,400	0.7	732,500	99.0	7,500	1.0	740,000	100.0
	100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0	

Due to rounding figures may not add to totals shown

Chapter 7

ENERGY

7.1 Introduction

The Housing Executive is Northern Ireland's Home Energy Conservation Authority. In this role its primary objective is to improve energy efficiency. The Northern Ireland House Condition Survey is the primary data source for assessing progress towards improved energy efficiency.

The energy efficiency of a dwelling is determined primarily by the fuel source and heating type. Other factors such as insulation and double glazing are also important. This chapter examines these key energy-related features by tenure, dwelling age and type and household characteristics of the occupants and highlights any changes since 2006.

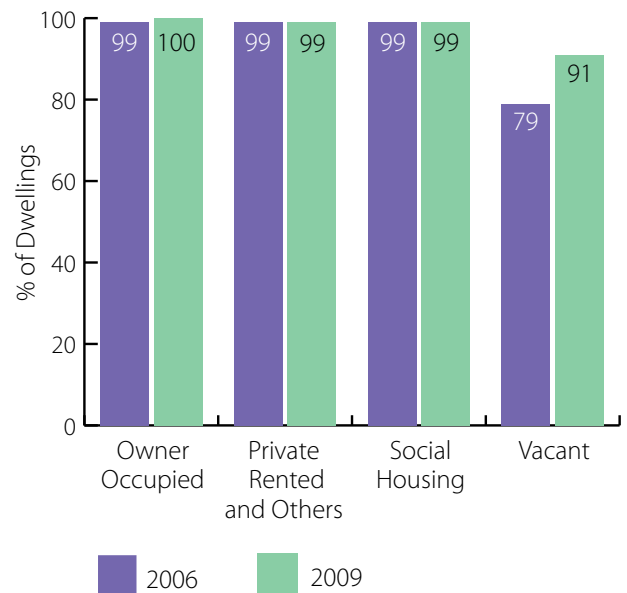
7.2 Central Heating

Central heating is traditionally seen as a key indicator of the standard of housing. The 2009 House Condition Survey defines "central heating" as a heating system with a distribution system sufficient to provide heat in at least two rooms. In addition, in dwellings where there was no boiler, but there was a heating system with some means of controlling temperature and timing, (for example, electric storage heaters) and at least two rooms were heated, this system was counted as central heating. This approach is consistent with the previous five House Condition Surveys.

Overall, the proportion of dwellings in Northern Ireland with central heating is very high. In 2006, a total of 692,200 (98%) dwellings were recorded as having central heating. By 2009, this had risen to 732,500 (99%).

In 2009 only approximately 7,500 properties in Northern Ireland did not have central heating; just over half (52%; 3,900) of these were vacant properties. This is an improvement since 2006 when approximately 12,800 dwellings did not have central heating.

Figure 7.1
Central Heating and Tenure, 2006-09



Central Heating - Dwelling Tenure (Table A7.1)

- Figure 7.1 shows that in 2009 the proportion of occupied dwellings with central heating was at least 99 per cent.
- The proportion of vacant dwellings with central heating was lower but nevertheless showed big improvement since 2006 (from 79% to 91% in 2009).

Central Heating - Age of Dwelling (Table A7.2)

The 2009 House Condition Survey shows there is now little variation between dwelling age and central heating. Indeed, almost all dwellings built after 1919 had central heating (houses built after 1980 recorded as having no central heating (0.4%) were either still in the process of construction or refurbishment). The proportion of dwellings built before 1919 that had central heating was 97 per cent (93% in 2006). Furthermore, 45 per cent of all dwellings with no central heating had been built before 1919; (66%; in 2006).

Central Heating – Dwelling Type (Table A7.3)

As in 2006, there was little variation by dwelling type, although the proportion of flats/apartments with no central heating was still higher (4%) than for other dwelling types (1% overall).

Central Heating - Dwelling Location (Table A7.4)

The same proportion of urban and rural dwellings had central heating in 2009 (99% for both). However, more than one third (38%) of all dwellings with no central heating were located in the Belfast Metropolitan Area.

Central Heating - Household Characteristics (Table A7.5)

This section examines central heating by key household variables. Overall, 99.6 per cent of occupied dwellings had central heating.

Age of Household Reference Person

As in 2006, the overall proportion of dwellings with central heating by age of the household reference person was high and did not vary much from the overall average (99%). However, the rate of dwellings without central heating was highest for household reference persons aged 18 to 24 (2%).

Household Type

There was little variation from the overall average by household type with the exception of dwellings with households described as lone adult. These dwellings were slightly more likely to have no central heating (2%).

Employment Status

There was little variation by employment status of households living in dwellings with central heating. However, analysis of all occupied dwellings with no central heating shows that more than one-third (39%; 13% in 2006) were headed by people not working.

Annual Income

There was little variation by annual household income for dwellings with central heating. However, analysis of all occupied dwellings without central heating shows that only 0.5 per cent were households with an annual income of £30,000 or more, 42 per cent were households with an annual income of less than £7,000 and 58 per cent were households with an annual income between £7,000 and £29,999.

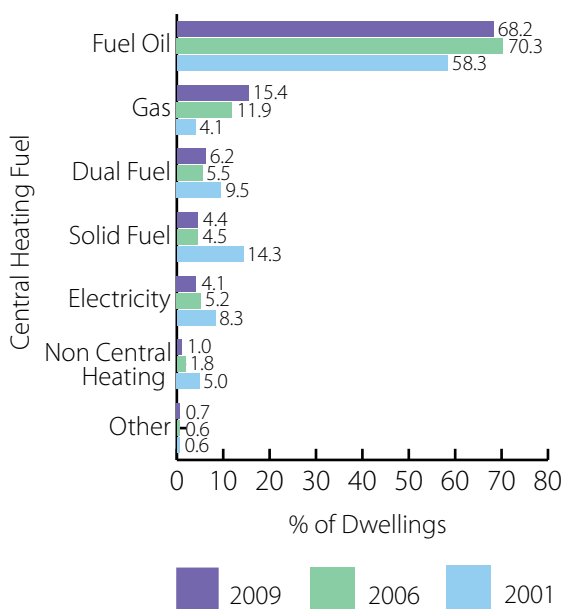
Household Religion

There was little variation from the overall average by household religion in term of those dwellings with central heating. However, analysis of dwellings with no central heating shows that 62 per cent were occupied by Protestant households and 22 per cent were by Catholic households.

7.3 Fuel Sources and Heating Systems

The type of fuel used for heating is a key determinant of the energy efficiency of a dwelling. Figure 7.2 shows the fuel sources used for heating homes in Northern Ireland.

Figure 7.2
The Changing Profile of Central Heating Fuel, 2001-09



- Whilst, slightly down on 2006 proportion, oil remains the preferred fuel for domestic heating in Northern Ireland. More than two-thirds (504,500, 68%; 70% in 2006) of all dwellings had oil central heating systems in 2009.
- Although there was a rapid decline in the use of solid fuel central heating between 2001 and 2006 (14% in 2001 to 5% in 2006), the figure for 2009 has remained broadly similar at four per cent (32,800 dwellings).

- The declining use of electricity for central heating continues. In 2009 approximately 30,100 (4%) properties had electric central heating systems. The comparative figures for 2006 were 36,900 (5%).
- Conversely, the increasing use of gas for central heating continues. In 2006 approximately 84,000 dwellings (12%) were heated by mains gas; by 2009 this had increased to 113,600 dwellings (15%).

Central Heating Fuel Source - Tenure (A7.1)

- In 2009, 68 per cent of all dwellings had oil fired central heating (70% in 2006). This increased to 77 per cent for owner occupied dwellings (79% in 2006). Owner occupied dwellings also had the smallest proportion of gas central heating (11%; 9% in 2006).
- Consistent with 2006 social housing sector dwellings are still most likely to have gas central heating (32%; 15% overall) and least likely to have oil fired central heating (42%; 68% overall).
- Although not at the rate reported in 2006, some level of fuel switching continues to take place in social housing, from solid fuel and electric to gas. In Housing Executive dwellings the switch

has been mainly from solid fuel (a decrease from 14% in 2006 to 11% in 2009) and electric (a decrease from 14% in 2006 to 10% in 2009) to gas (up from 27% to 34% in 2009).

Central Heating Fuel Source - Age of Dwelling (Table A7.2)

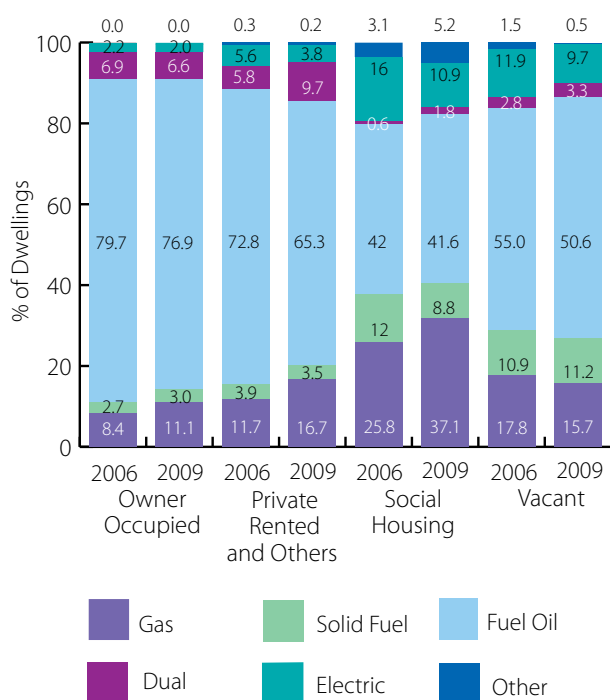
Dwellings built between 1965 and 1980 (72%) and post 1980 (70%) were most likely to have oil fired central heating and were least likely to have solid fuel central heating (3% for both; 4% overall). Dwellings built before 1919 were most likely to have solid fuel central heating (10%; 4% overall).

Central Heating Fuel Source - Dwelling Type (Table A7.3)

Analysis of central heating fuel source by dwelling type showed there were a number of differences:

- There remains considerable variation in the proportions of dwellings with oil central heating across dwelling types. More than four-fifths (87%; 85% in 2006) of detached houses had oil central heating compared to only nine per cent (15% in 2006) of flats.
- Detached dwellings were least likely to have gas central heating (3%; 5% in 2006) compared to 21 per cent of terrace housing (18% in 2006).
- However, flats had the highest proportion of dwellings with gas central heating (42%; 15% overall); an increase from 28 per cent in 2006.
- Flats/apartments also had the highest proportion of dwellings with electric central heating (34%; 4% overall). Indeed over two-thirds (67%) of all dwellings with electric central heating were flats/apartments.

Figure 7.3
Central Heating Fuel and Tenure, 2006-09



Central Heating Fuel Source - Dwelling Location (Table A7.4)

As in previous years the use of mains gas for heating continues to increase in the Belfast Metropolitan Area and although the use of electricity for central heating continues to decline over all, it remains concentrated in urban areas:

- More than one third (92,100; 34%) of all dwellings in the BMA had gas central heating, a six percentage point increase, with the vast majority of gas-heated dwellings located in urban areas (98%); reflecting the extent of the gas network.

- However, findings show there has been a shift in the use of gas central heating to include more dwellings situated in district towns. In 2009 17 per cent of gas heated dwellings were located in urban towns (7% in 2006), with the majority still located in the BMA (81%; 92% in 2006).
- Consistent with 2006, above average proportions of dwellings with oil fired central heating systems were found in rural areas (82%; 80% in 2006); this compares to 62 per cent in urban areas (66% in 2006).
- The majority of dwellings with electric (92%) central heating were located in urban areas, partly reflecting concentrations of Housing Executive dwellings.
- There has been a shift in the proportion of solid fuel central heating by dwelling location in that nearly half (43%) of all dwellings with solid fuel central heating were located in rural areas, an increase of 11 per cent on 2006 (32%). Conversely, just over half (56%) of all solid fuel central heating was located in urban areas compared to 68 per cent in 2006.

Central Heating Fuel Source - Household Characteristics (Table A7.5)

This section gives an overview of central heating fuel sources by key household characteristics.

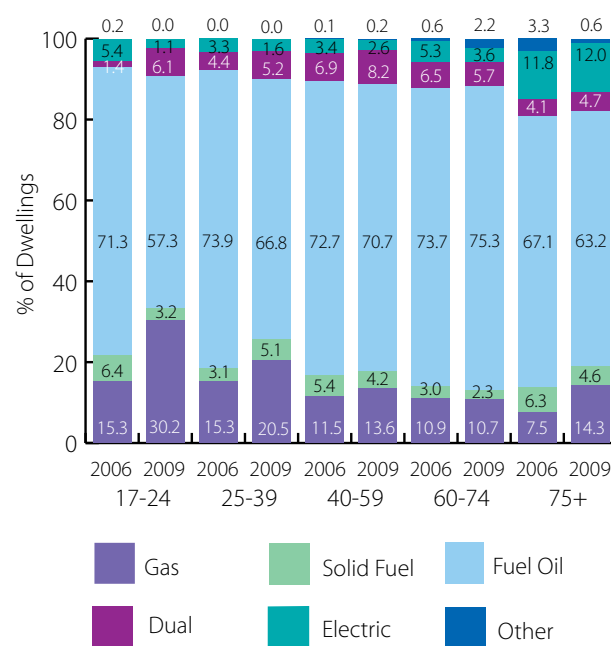
Age of Household Reference Person

- Dwellings with younger household reference persons (18-24 year olds (30%) and 25-39 year olds (21%)), were more likely to be heated by mains gas.
- Conversely, 18-24 year olds were least likely to live in dwellings with oil fired central heating (57%; 69% overall).
- Consistent with 2006, those aged 75 plus were more likely to live in dwellings heated by electricity (10,900 dwellings, 12%; 4% overall).

Household Type

- Consistent with 2006, analysis of central heating fuel by household type shows that lower proportions of lone adults (61%), lone older (64%) and lone parents (55%) lived in dwellings with oil fired central heating compared to 69 per cent of occupied dwellings overall.

Figure 7.4
Central Heating Fuel and Age of Household Reference Person, 2006 - 09



- As in 2006, a higher proportion of lone parent families lived in households with solid fuel central heating (9%; 4% overall). However the use of gas by lone parent families had increased from 19 per cent in 2006 to 25 per cent in 2009.
- Again consistent with 2006, single person households, especially lone older, were more likely to live in dwellings with electric central heating (lone older (13%) and lone adult (6%) compared to 4% overall).

Employment Status

- There was variation by employment status with 72 per cent for households categorized as working using oil as their central heating fuel source compared to 58 per cent of households categorized as not working.
- Dwellings where the household reference person was retired were slightly more likely to be heated by an electrical fuel source (7% compared to 4% overall).
- Household reference persons designated as not working were more likely to live in dwellings with solid fuel central heating (8%; 4% overall) as well as gas central heating (19%; 15% overall).

Annual Income

As in previous years there was a clear association between annual household income and the proportion of households with oil fired central heating:

- In households with an annual income of £30,000 or more 81 per cent had oil fired central heating whereas for households with less than £7,000 per annum, the corresponding figure was 56 per cent (61% in 2006).
- Conversely a much higher proportion of households with an income of less than £7,000 had solid fuel central heating (9%) and electric central heating (9%) compared to households with an income over £30,000 (2% and 1% respectively).

7.4 Dwelling Insulation

House Condition Surveys have shown that the proportions of dwellings with both wall and loft insulation have increased over time. Table 7.2 shows the progress made in relation to wall insulation between 2001 and 2009.

Between 2006 and 2009, the number and proportion of the stock with full cavity wall insulation increased from 434,000 to 477,000 dwellings (from 62% to 65%). However, there was little change in the number and proportion of dwellings with no wall insulation from 156,400 (22%) in 2006 to 153,600 (21%) in 2009.

The analysis of the housing stock in terms of wall insulation is complex, primarily due to the fact that many older dwellings (often with solid walls) now have modern extensions with insulated cavity

walls. For the purpose of this analysis the following classification has been adopted.

Full Cavity Wall Insulation

Dwellings constructed with cavity walls where all walls contain cavity wall insulation.

Partial Cavity Wall Insulation

Dwellings of full or part cavity wall construction; where at least one cavity wall contains insulation. A small number of dwellings in 2006 (5,000) were recorded as having no cavity walls but have cavity wall insulation. These dwellings have insulated concrete or timber panels and are classified as partial cavity wall insulation.

Internal/External Insulation

Dwellings originally built with solid wall construction, not included in the above category, but which have at least one wall with internal and / or external insulation.

No Wall Insulation

The remaining dwellings (of cavity wall or solid construction or both) where there is no evidence of insulation.

Wall Insulation - Tenure (Table A7.6)

- Consistent with 2006, figure 7.5 shows the highest rate of full cavity wall insulation in 2009 was found in social housing (89%; 83% in 2006).
- Conversely, the lowest proportion of full cavity wall insulation was found in vacant dwellings (33%).
- In 2009, 47 per cent of all vacant dwellings had no insulation followed by 29 per cent of all privately rented dwellings.

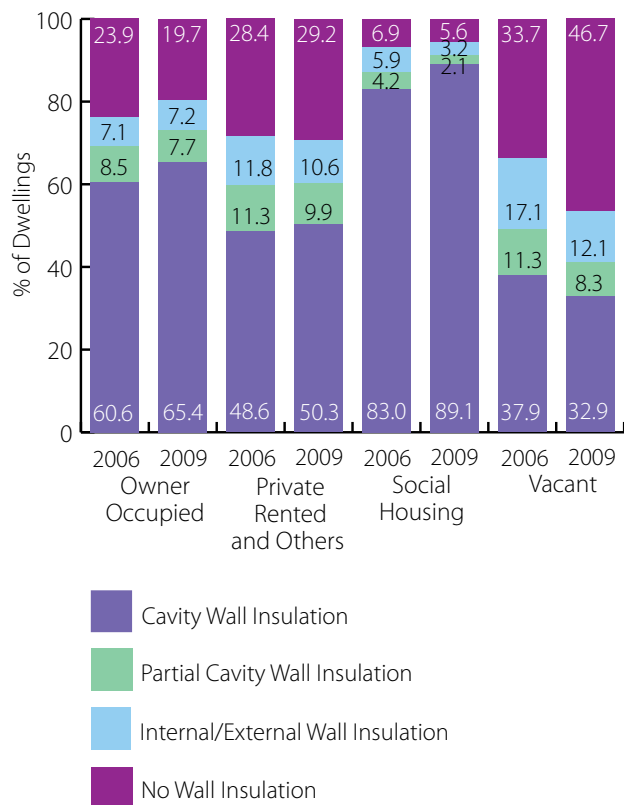
Table 7.2
Wall Insulation, 2001-09

	2001		2006		2009	
	No	%	No	%	No	%
Cavity Wall Insulation	324,300	50	434,000	62	477,000	65
Partial Cavity Wall Insulation	37,900	6	58,200	8	54,000	7
Internal and / or External Insulation	29,800	5	56,400	8	55,400	8
No wall insulation	255,600	39	156,400	22	153,600	21
All dwellings	647,500	100	705,000	100	740,000	100

Due to rounding figures may not add to totals shown

- Further analysis of all dwellings with no wall insulation shows that the majority were in the private sector (59%; 90,800 owner occupied, 24%; 36,400 privately rented).

Figure 7.5
Cavity Wall Insulation and Tenure, 2006 - 09



Dwelling Age - Wall Insulation (Table A7.7)

As in previous years there remains a clear association between dwelling age and wall insulation:

- The vast majority of dwellings built after 1980 (98%; 92% in 2006) had full cavity wall insulation. The proportion declined steadily by age group to one per cent of pre-1919 dwellings (4% in 2006), reflecting the solid wall construction that predominated during this period.
- There were increases in the proportion of dwellings with full cavity wall insulation built between 1965 and 1980 (78%; 74% for 2006).
- There was little difference between 2006 and 2009 with regard to the proportion of dwellings with no cavity wall insulation; there was a slight decrease (between 1% and 3%) across all age

bands. Consistent with 2006, more than half (60%; 55% in 2006) of all dwellings with no wall insulation were built before 1945.

Dwelling Type - Wall Insulation (Table A7.8)

In 2009 terrace houses had the lowest rate of full cavity wall insulation (57%; 65% overall) and the highest rate of no wall insulation (26%; 21% overall); comparable to 2006 figures. Conversely, single storey dwellings were most likely to have full cavity wall insulation (71%) and least likely to have no wall insulation (13%). Notably, there has been an increase in the proportion of flats with no cavity wall insulation from 16 per cent in 2006 to 23 per cent in 2009.

Dwelling Location - Wall Insulation (Table A7.9)

The 2009 House Condition Survey indicates that dwellings located in urban areas (65%) had a slightly higher rate of full cavity wall insulation compared to dwellings located in rural areas (63%). An increase in the rate of full cavity wall insulation was noted for dwellings located in the Belfast Metropolitan Area from 52 per cent in 2006 to 60 per cent in 2009. Consistent with 2001 and 2006 findings, the rate of full wall insulation rose to 74 per cent in small rural settlements compared to only 51 per cent in isolated rural areas and reflects the age profile of these dwellings.

Although an improvement on 2006, the highest proportion of dwellings with no insulation remains in the Belfast Metropolitan Area (26%; 32% in 2006) and the lowest in small rural settlements (11%; 14% in 2006).

Household Characteristics - Wall Insulation (Table A7.10)

This section examines wall insulation by key household variables. Overall, 67 per cent of occupied dwellings had full cavity wall insulation.

Age of Household Reference Person

As in 2006, dwellings with household reference person aged 75 or older (57%) were less likely to have full cavity wall insulation and most likely to have none (24%; 21% overall). In contrast to 2006 when household reference persons aged 17 to 24 lived in dwellings with the highest rate of full cavity wall insulation (61%; 66% in 2006), households with reference person aged 60 to 74 now live in dwellings with the highest at 71 per cent (63% in 2006).

Household Type

Dwellings occupied with 'lone adult' households had the highest rate of no wall insulation at 27 per cent (21% overall). Conversely, large family (74%), small family, (74%) and lone parent (72%) households lived in dwellings with the highest rate of full cavity wall insulation.

Employment Status

There was little variation in the proportions of full cavity wall insulation by employment status. Households categorised as not working lived in dwellings with a higher rate of full cavity wall insulation (70%) than those dwellings occupied by households categorised as working or retired (both 64%; 67% overall).

Annual Income

Variation by annual household income was found with 59 per cent (57% in 2006) of households with an annual income less than £7000 living in dwellings with full cavity wall insulation compared with 68 per cent (63% in 2006) of dwelling occupied by households with an income of £30,000 or more having full cavity wall insulation.

Religion

Compared to 2006, similar differences by religion were found in 2009. Two thirds of Protestants (66%) and nearly three quarters (72%) of Catholic households live in dwellings with full cavity wall insulation. Conversely, one-fifth (20%; 25% in 2006) of Protestants and 16 per cent (17% in 2006) of Catholics were without any wall insulation in their homes.

7.5 Loft Insulation

The 2009 House Condition Survey collected information on the presence and thickness of loft insulation in all dwellings with lofts, where access was available and where the householder granted permission. While comparison with findings from 2006 show little change in the overall proportion of dwellings with loft insulation 2009 figures show an increase in the proportion of dwellings found to have the highest standard of insulation in terms of thickness (more than 150mm).

The 2009 Survey estimated that some 698,200 (94%) dwellings had lofts. Of these around 66,900 had been converted to a room(s) with permanent stairs or the pitch of the roof was too shallow to permit access or insulation to be laid. This left a

total of 631,300 dwellings (85% of the total stock) where there was potential for loft insulation:

- Of these, 96 per cent (602,800 dwellings) had loft insulation; comparable to 2006 (95%).
- The proportion of dwellings with loft insulation of up to 150mm decreased between 2006 and 2009. Insulation less than 100mm was found in 20 per cent of dwellings in 2009 (25% in 2006).
- Similarly, a decrease from 54 per cent in 2006 to 44 per cent in 2009 was found for insulation between 100 and 150mm thickness.
- Conversely, 30 per cent of dwellings had loft insulation more than 150mm, an increase from 14 per cent in 2006.
- Five per cent (28,500) of dwellings had no insulation at all, consistent with figures collected in 2006.
- The remaining 13,100 dwellings (2%) had insulation but the surveyor was unable to determine the thickness.

Loft Insulation - Tenure (Table A7.11)

- As in 2006, almost all (99%) social dwellings had loft insulation in 2009.
- In 2009 four per cent of owner occupied and five percent of privately rented dwellings had no loft insulation; comparable to 2006 findings (5%).
- Compared to 2006 (22%) 15 per cent of vacant dwelling were found to have no loft insulation; a reduction of seven percentage points.

Loft Insulation - Dwelling Age (Table A7.12)

There remains a clear association between loft insulation and age of dwelling:

- The oldest age categories had the highest proportions of dwellings with no insulation (14% for pre-1919 dwellings and 15% for 1919 to 1944 dwelling; 5% overall).
- Consistent with 2006 findings almost all dwellings built since 1980 had loft insulation. Of these newer dwelling 56 per cent had insulation more than 150mm thick an increase from 36% in 2006 and well above the 2009 overall average of 30 per cent.

Loft Insulation - Dwelling Type (Table A7.13)

- Consistent with 2006 findings detached houses had the highest rate of no loft insulation (8% compared to 5% overall).
- However, the highest standard of loft insulation in terms of thickness (more than 150mm) was mostly found in detached houses 46%; a substantial increase from 24% in 2006.

Loft Insulation - Dwelling Location (Table A7.14)

- Comparable to 2006 findings, dwellings with lofts located in rural areas were slightly more likely to be without loft insulation compared to those in urban areas (7% and 4% respectively). This rose to 11 per cent for dwellings located in isolated rural areas.
- Little variation by location was found for dwelling with loft insulation less than 100mm (19% Urban; 20% rural). However, dwellings located in the Belfast Metropolitan Area were more likely to have loft insulation with a thickness between 100 and 150mm (58%) compared to dwellings in rural locations (31%).
- Dwellings in rural areas had the highest rate of loft insulation of more than 150mm (40% for both isolated and small rural). Conversely, only 21 per cent of dwellings located in the Belfast Metropolitan Area had loft insulation more than 150mm (25% for total urban); although a significant increase from 2006 (8%).

Loft Insulation - Household Characteristics (Table A7.15)

As in 2006, 96 per cent of occupied dwellings with lofts had loft insulation.

Age of Household Reference Person

Household reference persons aged 75 or more were most likely to live in dwellings with no loft insulation (9%; 4% overall). While 25 to 39 year olds (34%) were more likely to live in dwellings with the highest standard of loft insulation (more than 150mm in thickness), 64 to 74 year olds were least likely to live in dwellings with the highest standard of loft insulation (24%).

Household Type

As in 2006, households described lone older (8%) lived in dwellings with the highest rates of no loft insulation (4% overall). Small family (43%)

and two older (32%) households were more likely to live in dwellings with the highest standard of loft insulation (more than 150mm in thickness); a significant increase from 2006 (19% and 10% respectively).

Employment Status

Households with reference persons not working were more likely to live in dwellings with loft insulation less than 100mm (26%). Households with retired reference persons were more likely to live in dwellings with no insulation (6%); this was slightly above the overall average of five per cent.

Annual Income

Households with an income of £30,000 or more (37%) were more likely to live in dwellings with loft insulation of at least 150mm and least likely to have no insulation (2%). Households with incomes less than £7000 were slightly more likely to live in dwellings with no insulation (6%); (5% overall).

Religion

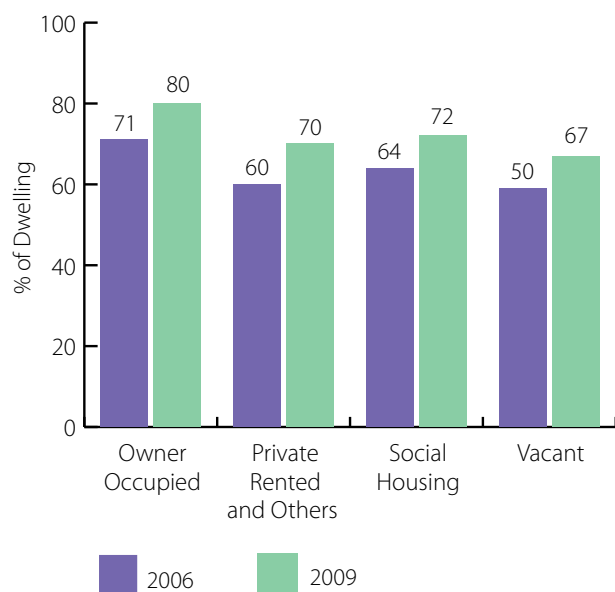
There was some variation by religion in relation to thickness of loft insulation, largely due to the differing age profiles and the tendency for Catholics to live in newer housing. Protestant households (26%) were less likely to live in dwellings with the highest standard of loft insulation (more than 150mm in thickness) compared to Catholic households (35%). Similar numbers with no insulation were found by religion with four per cent of Protestant households and three per cent of Catholic households having no loft insulation.

7.6 Double Glazing

The 2009 House Condition Survey indicates that further progress has been made in relation to this aspect of energy efficiency in Northern Ireland's dwelling stock.

- In 2006, an estimated two thirds (68%; 476,200) of all dwellings had full double-glazing. By 2009 this proportion had increased to 77 per cent (566,700 dwellings).
- The proportion of dwellings with partial glazing declined from 19 per cent to 15 per cent between 2006 and 2009 and the proportion of dwellings without double-glazing decreased from 14 per cent to nine per cent over the same period.

Figure 7.6
Full Double Glazing and Tenure, 2006-09



Double Glazing - Dwelling Tenure (Table A7.16)

Figure 7.6 shows improvements made in the levels of full double-glazing across all the tenures 2006 to 2009:

- Overall, owner occupied (80%) dwellings were most likely to have full double-glazing.
- Over the period 2006 to 2009, full double-glazing had increased the most in vacant dwelling stock (from 50% to 67%).
- There was a decline in the proportion of Housing Executive dwellings with no double glazing. In 2006 28 per cent of Housing Executive stock had no double-glazing. This proportion had reduced to 19 per cent by 2009.

Double Glazing - Dwelling Age (Table A7.17)

Whilst there remains a correlation between dwelling age and the presence of full double-glazing, improvements have been made:

- In 2009 the vast majority of dwellings built after 1980 (90%) had full double-glazing and this steadily declined by age of dwelling to 59 per cent for dwellings built before 1919. Whilst pre-1919 dwellings still had the highest proportion (16%) of dwellings without double-glazing this is a reduction on 2006 findings (25%).

- Dwellings in all age groups showed an increase in the proportion of dwellings with full double glazing. Dwellings built before 1919 showed the highest increase between 2006 (44%) and 2009 (59%); a rise of 15 percentage points.

Double Glazing - Dwelling Type (Table A7.18)

Analysis of full double-glazing indicates little variation from the 2009 average; findings ranging from 82 per cent for flats/apartments to 72 per cent for terraced houses (77% overall). As in 2006, flats/apartments (14%) and terraced housing (13%) were more likely to have no double-glazing compared to other dwelling types (9% overall).

Double Glazing - Dwelling Location (Table A7.19)

Full double-glazing figures show an increase for both urban and rural dwellings from two thirds in 2006 to over three quarters in 2009 with no variation by dwelling location (77%; in both cases). Similarly, no variation by location was found in terms of the proportion of dwellings without double-glazing (8% for both urban and rural in 2009).

Household Characteristics -

Double Glazing (Table A7.20)

The proportion of occupied dwellings with full double-glazing in 2009 was 77 per cent, an increase from 69 per cent in 2006. Conversely, eight per cent of occupied dwelling had no double-glazing in 2009, a decrease from 13 per cent in 2006.

Age of Household Reference Person

Whilst there is an increase in the proportion of dwellings with full double glazing across all age groups those aged 25 to 39 were more likely to live in dwellings with full double glazing (82%) compared to 65 per cent of those aged 75 or more in 2009. Conversely, household reference persons aged 75 or more were more likely to live in dwellings without double-glazing (16%; 8% overall). These patterns are consistent with previous years.

Household Type

Household types more likely to live in dwellings with full double glazing included small families, large families and those made up of two adults (81%, 89% and 82% respectively). Consistent with 2006, lone older (14%), lone adult (13%) and two older (9%) were most likely to be living in dwellings without double-glazing, compared to the overall average of eight per cent.

Employment Status

Consistent with 2006 there was some variation in the proportion of dwellings with full double-glazing by employment status. Households with reference persons working were more likely to live in dwellings with full double-glazing (83%; 77% overall). Moreover, those dwellings with a household reference person working were least likely to have no double glazing (4%; 8% overall), compared to those with household reference persons not working or retired (14% and 12% respectively).

Annual Income

As in 2006, there remains a relationship between household annual income and double glazing. Those dwellings with an income of less than £7000 were least likely to have full double glazing (71%) compared to those with an income of £30,000 or more (86%); (77% overall). Conversely, 16 per cent of dwellings with a household income of less than £7000 had no double glazing compared with two per cent of dwellings with a household income of £30,000 plus (8% overall).

Household Religion

Little variation was found in dwellings with full double glazing by household religion (Protestant, 76% and Catholic, 79%). Likewise, similar proportion of Protestant and Catholic households lived in dwellings with no double glazing (8% and 9% respectively).

7.7 SAP Rating (NI) 2005

The Standard Assessment Procedure (SAP) is the Government's standard method of rating the energy efficiency of a dwelling. The Building Research Establishment (BRE) has on behalf of the Government developed the current and previous models.

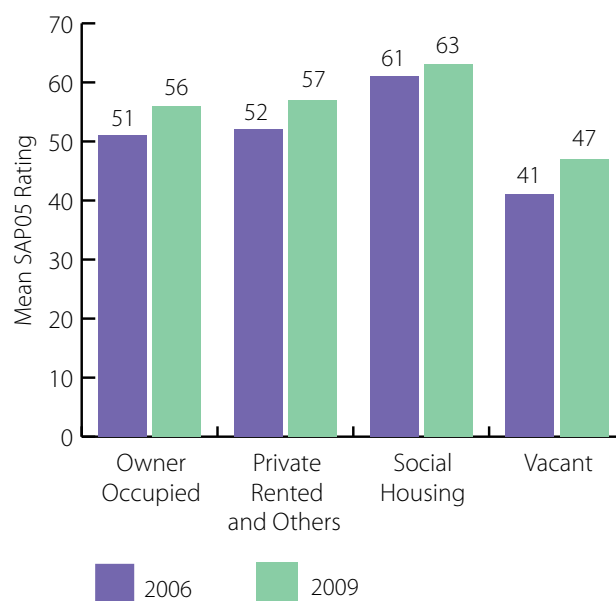
In 2001 BRE developed a modified SAP model for Northern Ireland to take into account the greater prevalence of solid fuel and electrical heating compared to England. This BRE model was comparable to the English model in all other aspects and provided the basis for the analysis of the data from the 2001 House Condition Survey. In 2005 the SAP model was modified, to take into account, in particular, thermal bridging. This new model (SAP05) was used to analyse the data from the 2006 and 2009 House Condition Survey with 2001 figures recalculated to provide a consistent time series.

The SAP rating is on a logarithmic scale and provides a comparative measure of the energy efficiency of dwellings. The lower the score the lower the energy efficiency and the higher the score (up to a maximum of 100) the higher the efficiency. Appendix H provides further information on how SAP was calculated for Northern Ireland.

In 2006, Northern Ireland's dwelling stock had an average SAP rating (SAP05) of 52.4; by 2009 this had increased to 57.0. The estimated average SAP05 for England in 2008 was 51.4.

This section outlines how the SAP rating varied by the physical characteristics of the dwelling and the socio-demographic characteristics of the household.

Figure 7.7
SAP05 Rating and Tenure, 2006-09



SAP Rating - Tenure (Table A7.21)

The SAP rating had increased for all tenures between 2006 and 2009.

- There was a five SAP point increase for owner-occupied dwellings, from 51 in 2006 to 56 in 2009. Moreover, there was a decrease in the proportion of privately owned dwellings (2% with a SAP rating of less than 20 (7% in 2006).

- Privately rented dwellings had an average SAP rating of 57 (52 in 2006) with just under half (47%; 39% in 2006) having a SAP rating of at least 60.
- Vacant dwellings had the lowest average SAP rating (47; 41 in 2006). The proportion of vacant dwellings with a SAP rating of less than 20 remained the highest at 17 per cent (23% in 2006).
- Housing Executive stock had a SAP rating of 61. More than two-thirds (65%; 59% in 2006) had a SAP rating of at least 60, reflecting the ongoing switch from solid fuel and electric central heating to gas central heating.

SAP Rating - Dwelling Age (Table A7.22)

While improvements have been made across dwelling age bands, there remains a clear relationship between the SAP rating and dwelling age. Older dwellings were less energy efficient and as age decreased the SAP rating increased. In pre-1919 dwellings the average SAP rating in 2006 was 37; this had increased to 43 in 2009. Dwellings built after 1980 had a mean SAP rating of 66 in 2009 (62 in 2006). Improvement was noted in older dwellings as the proportion of pre-1919 dwellings with a SAP rating of less than 20 having halved to nine per cent (10,200) in 2009 (18%; 20,300 in 2006).

SAP Rating - Dwelling Type (Table A7.23)

As in 2006 there was some variation in the SAP rating by dwelling type with single storey dwellings having the lowest SAP rating (52; 46 in 2006) and flats/apartments the highest SAP rating (65; 63 in 2006); 57 SAP points overall in 2009.

SAP Rating - Dwelling Location (Table A7.24)

Although improvement has been made in both urban and rural locations, urban dwellings (59; 54 in 2006) remain more energy efficient than rural dwellings (53; 47 in 2006). As in 2006, dwellings in isolated rural areas (50; 43 in 2006) continued to have the lowest average SAP rating compared to other locations. Isolated rural areas also continued to have the highest proportion of dwellings (6%; 6900) with a SAP rating of less than 20. However this has more than halved since 2006 where 14 per cent (14,600) of dwelling in isolated rural areas had a less than 20 SAP rating.

SAP Rating - Household Characteristics (Table A7.25)

The following outlines variations in average SAP ratings by household characteristics. Overall, the average SAP rating for occupied dwellings was 58; an increase from 53 in 2006.

Age of Household Reference Person

There was some association between age of the household reference person and the energy efficiency of dwellings.

- Older household reference persons were more likely to be living in dwellings that were less energy efficient. In 2009, households with reference persons aged 75 or older had the lowest average SAP (53); an indication of why a higher proportion of household reference persons from this age band were living in fuel poverty in 2009 (see Chapter 6).
- Average SAP steadily increased as household reference persons' age decreased, peaking at 63 for 17 to 24 year olds. This was consistent with the trend in 2006 and reflects the finding that younger household reference persons were more likely to live in newer dwellings.

Household Type

In general, analysis by household type shows little variation by average SAP rating. However, dwellings described as 'lone adult' and 'lone older' had the lowest average SAP rating (55 for both; 58 overall). They also had the highest proportion of SAP rating less than 20 (3% for both; 1% overall).

Employment Status

Consistent with 2006, household reference persons who were retired were more likely to live in the least energy efficient dwellings (average SAP rating 55) reflecting the higher proportion of these households living in the oldest stock (See Chapter 4). Little variation was noted for those dwelling with household reference person either working or not working (average SAP rating of 58 and 57 respectively).

Annual Income

There was a positive relationship between average SAP rating and annual household income, rising from 55 for households with an annual income of less than £7,000 to 59 for households in the highest income bracket (£30,000 or more). This trend remains consistent over the previous two surveys.

Religion

There was a small difference in the average energy efficiency of dwellings occupied by Protestant (average SAP 57; 52 in 2006) and Catholic (average SAP 60; 54 in 2006) households, reflecting both the age profile of households and the tendency for Catholic households to live in newer dwellings. This again is consistent with 2006 findings.

7.8 Summary

The 2009 House Condition Survey showed that since 2006 further progress has been made in achieving higher levels of energy efficiency in Northern Ireland's housing stock. This progress has been achieved through small improvements in key energy-related features:

- Overall 99 per cent of all dwellings had central heating (98% in 2006).
- There was an overall increase in the use of mains gas for central heating to 15 per cent (12% in 2006) with Housing Executive dwellings showing the highest increase in mains gas fuel use (27% in 2006 to 34% in 2009).
- Although the use of solid fuel for central heating remained broadly static at around five per cent there was a small decline in the use of electricity (4%; 5% in 2006).

Improvements were also noted for dwelling insulation and double glazing:

- Overall a small increase of 3 percentage points in the proportion of dwellings with full cavity wall was reported.
- Moreover there has been an increase in the use of the highest standard of loft insulation (more than 150mm) from 14 per cent in 2006 to 30 per cent in 2009.
- Improvement was also achieved with the proportion of dwellings with full double glazing increasing from 68 per cent in 2006 to 77 per cent in 2009.

While not as marked as between 2001 and 2006, these changes in the energy profile of the overall stock still combined to produce improvement in the overall SAP rating; which rose from 52.4 to 57.0 between 2006 and 2009.

Improvements in energy efficiency have taken place across all sectors of the housing market. However, older dwellings (pre-1919) were more likely to have solid fuel central heating. Furthermore, the use of an electric fuel source remains greater in urban areas, particularly in social housing.

Energy efficiency has also improved in homes for all household groups with the proportion of occupied homes with a SAP rating of less than 20, falling to nearly a fifth of the numbers reported in 2006 (1.2%; 8,300 in 2009 - 5.5%; 36,100 in 2006). Nevertheless, the households in these homes continue to be the most vulnerable groups where the household reference person was elderly, retired or on low income.



APPENDIX A

The Conduct of the Survey

Surveyor Training

A total of 18 professional surveyors were employed to work on the 2009 House Condition Survey (HCS); all of whom worked on the 2006 survey. Surveyors employed were Environmental Health Officers seconded from a number of District Councils or chartered surveyors or architects.

Four experienced supervisors were re-appointed all having carried out this role for the 2006 survey. Each supervisor was responsible for advising surveyors and ensuring their work was of a consistent and satisfactory quality.

All surveyors attended a three-day pre-briefing session in June 2009 held at the Canal Court Hotel, Newry, Co. Down. The purpose of the training was to introduce the new e-form and website approach, to discuss changes to the form since 2006, review more complex aspects of the form such as the Housing Health and Safety Rating System and also a refresh on interviewing techniques.

The training was conducted by the Building Research Establishment (BRE), Housing Executive Research Staff and by the HCS supervisors. Training included test inspections of selected dwellings in Newry.

After the fieldwork was completed, surveyors attended a one-day de-briefing session in November 2009 to discuss general and more specific problems that had arisen during the Survey.

Fieldwork

Fieldwork was due to begin in June and be completed in October 2009. In the event the vast majority of surveys were completed by 31st October, but a small number were completed in November 2009.

Each surveyor was responsible for between 80 and 210 full inspections depending on whether they were contracted on a part time or full time basis. They were required to work in at least two sample areas to reduce likelihood of differences between areas being the result of surveyor variability.

In 2009 (as in previous years) a system of 'payment by result' was used and there were four different rates of payment:

- Full physical inspection and household survey
- Full physical inspection but no household survey
- Full physical inspection of vacant dwellings
- Refusal/non-response

A property could be classified as a non-response only after a minimum of five visits. Surveyors were required to complete the first two pages and take at least one photograph for all dwellings. These photographs were to be an important part of the data quality assurance.

Each surveyor issued a letter and a leaflet to each household selected explaining the purpose of the survey 1-2 weeks prior to calling out.

Surveyors uploaded their completed forms to a secure website on a daily basis. Initial quality assurance checks were carried out by surveyors on the tablet p.c. The surveyors also completed further quality assurance and validation checks after the form had been uploaded to the website. Surveyors, on completion of their own checks, sent forms to their supervisors. Supervisors were then responsible for checking key technical data and completing and correcting as appropriate in consultation with the surveyor.

Each survey form was registered on a secure website using a unique schedule number. The website was designed to provide information on how the fieldwork was progressing, giving details by surveyor of the number of forms uploaded, or being validated, sent on to supervisor or completed.

Data Preparation and Validation

Further post-validation checks and analysis by the Research Unit indicated that, following validation, data quality was high.

APPENDIX B

The Survey Form

Please write address here

Surveyor Name

Surveyor Number

1. Survey record

	Date		Start time		Finish time		Internal inspection			External inspection			Household interview		
	Day	Month	Hrs	Mins	Hrs	Mins	Full	Partial	None	Full	Partial	None	Full	Partial	None
First visit							1	2	3	1	2	3	1	2	3
Last visit							1	2	3	1	2	3	1	2	3
Total number of visits			Inspection outcome			1	2	3	1	2	3	1	2	3	

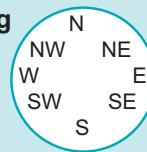
Survey Outcome

Full survey	Problems of access			Other problems				
	No contact made	Access refused to surveyor	Access refused at NIHE	Address untraceable	Dwelling derelict	Dwelling demolished	No longer usable as a dwelling	Other
1	2	3	4	5	6	7	8	9

Number of photographs taken

0	1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---	---

Compass Reading



Income Completed

1	2
1	2
1	2

HMO form

Photos taken

Settlement Type

Urban		Rural		Clear
BMA 1	District town / Other town 2	Small rural settlement 3	Isolated rural 4	

2. First impression of condition / Capital Value

Seriously defective	Defective		Acceptable		Satisfactory	
1	2	3	4	5	6	7

Capital value

Is the dwelling in accord with the Capital Value?

Yes	1
No	2

Inspect this dwelling

Is there another dwelling on the plot that better matches the Capital Value?

Yes	1
No	2

Is this a viable dwelling?

Yes	1
No	2

Inspect this dwelling

Inspect original dwelling

Inspect original dwelling

OFFICE USE ONLY

Address on PRAWL database?	Yes	No	Address on Grants database?	Yes	No	X Coordinate	
Prop ref number			Grants number			Y Coordinate	
Prop code	Tenant	Sold	Grant type	Renovation	Disabled Facilities	Pointer UPRN	
Date of sale			Date of construction from VLA			Postcode	

3. Dwelling description and occupancy

Type of occupancy

(clarify with household)

Single family dwelling 1	Shared house 2	Household with lodgers 3	Bedsits or flatlets 4	Purpose built with shared amenities 5	Hostel/ B&B 6
Close with household and refer address to RM					

Dwelling type (clarify with household)

House/bungalow						Flat		
End terrace 1	Mid terrace 2	Mid terrace w. passage 3	Semi detached 4	Detached 5	Temporary 6	Purpose built 7	Converted 8	Non residential plus flat 9

Bungalow? Y N

Tenure (clarify with household)

Owner occupied 1	Private rented 2	Local authority 3	Housing association 4
---------------------	---------------------	----------------------	--------------------------

Construction date (clarify with household)

Pre 1919 1	1919-1944 2	1945-1964 3	1965-1974 4	1975-1980 5	1981-1990 6	1991-2000 7	2001-2009 8	If Post 1990 specify year
								<input type="text"/>

Source of information

Occupancy (ask where possible)

Occupied 1	Vacant						
	Awaiting another owner 2	Awaiting another tenant 3	Awaiting demolition 4	Being modernised 5	New never occupied 6	Being used for other purpose 7	Other (specify) 8
If occupied: how long have the current occupants lived here?		Years <input type="text"/>	Months <input type="text"/>	If vacant: how long has the dwelling been vacant?		Years <input type="text"/>	Months <input type="text"/>
				Is the dwelling boarded up/secured?		<input type="checkbox"/> Y	<input type="checkbox"/> N

Permanent residence?

Yes 1	No - second home 2	No - holiday home 3
----------	-----------------------	------------------------

If occupants have moved in within the last 6 months, ask for date:-

Day <input type="text"/>	Month <input type="text"/>	Year <input type="text"/>
--------------------------	----------------------------	---------------------------

Source of information on tenure and occupancy

Occupant 1	Neighbour 2	Caretaker/ warden/agent 3	Estimate/ appearance 4	Other (specify): 5

IDENTIFY MODULE NOW

4. Is address one dwelling?

Yes 1	NO - dwelling is part of one address 2	NO - address is part of one dwelling 3
No. dwellings at address <input type="text"/>		No. addresses at dwelling <input type="text"/>
Consult supervisor if in doubt		
Continue		

5. Interior – amenities

Kitchen amenities

	Present				Working				None				Action				
	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5	Minor repair	Major repair	Replace	Install
Cold water drinking supply?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Hot water?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Sink?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Fixed waste?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Cooking provision?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Cupboards?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Worktop	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Extractor fan?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Washing Machine?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Tumble Dryer?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Refrigerator?	Y	N	Y	N	Y	N	Y	N	1	2	3	4	5				
Kitchen amenities last refurbished	Original	Pre 1960	1960's	1970's	1980's	1990's	2000's	In progress	8	1	2	3	4	5	6	7	

Drinking water supply pipework

	Pipework seen		Lead present		Mains								
	Y	N	Y	N	Y	N							
Before stopcock?	Y	N	Y	N	Y	N							
After stopcock?	Y	N	Y	N									
Adequate cooker space?	Y	N											
Adequate cupboard units?	Y	N											
Worktop (metres)	Under 1.5m	1.5 - 3m	Over 3m										
	1	2	3										
Are there significant problems with:	Space	Y	N	Kitchen adapted for disabled use? Y N									
	Layout	Y	N										
	Cleanability	Y	N										
Actual date of kitchen refurbishment (if known)	<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>												

Bathroom amenities

	Present		Working		Hot & cold water		None				Action				Floor			
	Y	N	Y	N	Y	N	1	2	3	4	5 <th>Minor</th> <th>Major</th> <th>Replace</th> <th>Install</th> <th>Basement</th> <th>Ground</th> <th>Specify</th>	Minor	Major	Replace	Install	Basement	Ground	Specify
Bath/shower?	Y	N	Y	N	Y	N	1	2	3	4	5					BB	GG	
Wash hand basin?	Y	N	Y	N	Y	N	1	2	3	4	5					BB	GG	
W.C.?	Y	N	Y	N	Y	N	1	2	3	4	5					BB	GG	
Extractor fan in bathroom?	Y	N	Y	N	Y	N	1	2	3	4	5							
Bath/shower last refurbished	Original	Pre 1960	1960's	1970's	1980's	1990's	2000's	In progress	8	1	2	3	4	5	6	7		

	Badly located?		Close to whb?		In bathroom?		If WC not in bathroom: Extractor fan?									
	Y	N	Y	N	Y	N	Y	N								
Bathroom adapted for disabled use?	Y	N														
Bathroom wheelchair accessible?	Y	N														
Actual date of bath/shower refurbishment (if known)	<table border="1"> <tr> <td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td> </tr> </table>															

Secondary amenities

	Present		Working		Hot & cold water		None				Action				Floor			In bedroom/en-suite
	Y	N	Y	N	Y	N	1	2	3	4	5 <th>Minor</th> <th>Major</th> <th>Replace</th> <th>Install</th> <th>Basement</th> <th>Ground</th> <th>Specify</th>	Minor	Major	Replace	Install	Basement	Ground	
Second kitchen?	Y	N	Y	N	Y	N	1	2	3	4	5					BB	GG	
Second bath/shower?	Y	N	Y	N	Y	N	1	2	3	4	5					BB	GG	
Second wash hand basin?	Y	N	Y	N	Y	N	1	2	3	4	5					BB	GG	
Second W.C.?	Y	N	Y	N	Y	N	1	2	3	4	5					BB	GG	

	Internal?	
	Y	N
Bathroom adapted for disabled use?	Y	N
Bathroom wheelchair accessible?	Y	N

Housing Health and Safety Rating System (hazards relate to whole dwelling interior)

Hazards that may require scoring

Falls associated with baths etc.

Significantly lower risk than average	Average risk	Significantly higher risk than average
1	2	3

If '3', score HHSRS in Section 22

Other hazards that may pose an extreme risk

- Water Supply
- Food Safety
- Personal hygiene, sanitation and drainage
- Position and operability of amenities

Significantly lower risk than average	Average risk	Significantly higher risk than average	Extreme risk
1	2	3	4
1	2	3	4
1	2	3	4
1	2	3	4

Describe 'extreme risk' in Section 22

5. Interior - Primary services

Gas system

		Action			
		None	Minor Repair	Major Repair	Replace
Present?	<input type="checkbox"/> Y <input type="checkbox"/> N	1	2	3	4
Mains supply?	<input type="checkbox"/> Y <input type="checkbox"/> N				

Housing Health and Safety Rating System (HHSRS)		Significantly lower risk than average	Average risk	Significantly higher risk than average	Extreme risk
Uncombusted fuel gas		1	2	3	4
Explosions		1	2	3	4
Describe 'extreme risk' in Section 22					

Electrical system

Present?	<input type="checkbox"/> Y <input type="checkbox"/> N	Normal mains supply?	<input type="checkbox"/> Y <input type="checkbox"/> N	Off-peak supply?	<input type="checkbox"/> Y <input type="checkbox"/> N
----------	---	----------------------	---	------------------	---

Location of meters	Under stairs or on wall 1	Special cupboard 2	External access to meter 3	Mixture 4	Unknown 5
Type of wiring	Lead or rubber covered 1	PVC sheathed 2		Mixture 4	Unknown 5
Earthing wires	Unsheathed or green cover 1	Yellow and green sheath 2		Mixture 4	Unknown 5
Consumer unit arrangement	Separate fuse boxes for each circuit 1	One or two "covered boxes" 2	One or two "accessible boxes" 3	Mixture 4	Unknown 5
Overload protection	Wire fuses 1	Cartridge fuses 2	MCB's 3	Mixture 4	Unknown 5
Personal protection	No RCD's 1	RCD in consumer unit 2	Separate RCD's 3	Mixture 4	Unknown 5
Power sockets	Round 2 or 3 pin 1	Square 3 pin 2		Mixture 4	Unknown 5
Lighting circuits	Wooden mounting blocks 1	Flush mounted switches or roses 2		Mixture 4	Unknown 5
Action	None 1	Minor Repair 2	Major Repair 3	Replace 4	Install 5

Housing Health and Safety Rating System (HHSRS)		Significantly lower risk than average	Average risk	Significantly higher risk than average	Extreme risk
Electrical safety		1	2	3	4
Describe 'extreme risk' in Section 22					

Cavity wall insulation

Is there any evidence of cavity wall insulation in/around the electricity or gas meters? Y N

Ventilation

Total number of open fireplaces

5. Interior – space heating

Primary heating

Present? Y N If present: Y N Main heat source in winter? (ask household) Y N

Individual 1	Location of system Communal system			If communal, number of dwellings served <input type="text"/>
	Estate 2	Block 3	Group of dwellings 4	

If present:

Primary heating group

Central heating (wet with rads) 1	Storage heaters 2	Warm air 3	Communal/CHP 4	Electric ceiling/underfloor 5	Room heaters 6
--------------------------------------	----------------------	---------------	-------------------	----------------------------------	-------------------

Primary heating fuel

Gas			Oil	Solid fuel				Electricity				Communal		Dual	
Mains 01	Bulk LPG 02	Bottled 03	04	Coal 05	Smokeless fuel 06	Anthracite 07	Wood 08	Economy 09	Home energy 10	Eco energy 11	Other 12	CHP/Waste heat 13	From boiler 14	Primary	
														Secondary	

Primary heating type

Standard (non condensing) 1	Back boiler 2	Combination (non condensing) 3	Condensing 4	Condensing Combi 5	Combined primary storage unit 6	No boiler 7	Unknown 9
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CRITICAL INFORMATION FROM TABLE

Primary heating appliance
First digit should match code for primary heating group

Code

Action

None	Minor repair	Major repair	Replace	Age
1	2	3	4	<input type="text"/>
1	2	3	4	<input type="text"/>

← Clarify with household

Primary heating distribution

If boiler driven system: Boiler

Manufacturer name:

Model name/number:

Primary heating controls (non storage heaters)

	Present?		
Overall on/off	Y	N	U
Boiler thermostat	Y	N	U
Central timer	Y	N	U
Manual override on timer	Y	N	U
Room thermostat	Y	N	U
Radiator controls (manual)	Y	N	U
Thermostatic radiator valves (TRVs)	Y	N	U
Time and temperature zone control	Y	N	U
Delayed start thermostat	Y	N	U

Primary heating controls (storage heaters)

	Present?		
Manual charge control	Y	N	U
Automatic charge control	Y	N	U
Collect type control	Y	N	U

Other heating

Present? Y N Main heat source in winter? (ask household) Y N

Type of system

Mains gas fires									LPG	Electric heaters			Solid fuel heaters		Paraffin	Other
Open flue 01	Balanced flue 02	Fan assisted 03	Condensing 04	Live effect - sealed to chimney 05	Live effect fan assisted flue 06	Decorative open to chimney 07	Flueless 08	Unknown 09	Fixed heaters 10	Panel, convector or radiant 11	Portable 12	Individual storage heater 13	Open fire 14	Stove/ space heater 15	Portable heaters 16	17

Action

None	Minor repair	Major repair	Replace	Age
1	2	3	4	<input type="text"/>

Housing Health and Safety Rating System (HHSRS)

Carbon monoxide and fuel combustion products

Significantly lower risk than average	Average risk	Significantly higher risk than average	Extreme risk
1	2	3	4

Describe 'extreme risk' in Section 22

Hot water system

Present?

Y	N
---	---

If present indicate all systems available

	Present?		Fuel							Action				Age
	Y	N	Mains gas 01	Bulk LPG 02	Bottled gas 03	Oil 04	Coal 05	Smokeless 06	Anthracite 07	Wood 08	None 1	Minor repair 2	Major repair 3	
Boiler with central heating	Y	N												
Boiler (water heating only)	Y	N	Mains gas 01	Bulk LPG 02	Bottled gas 03	Oil 04	Coal 05	Smokeless 06	Anthracite 07	Wood 08	1	2	3	4
Back boiler (water heating only)	Y	N	Mains gas 01	Bulk LPG 02	Bottled gas 03	Oil 04	Coal 05	Smokeless 06	Anthracite 07	Wood 08	1	2	3	4
Single immersion heater	Y	N	Standard 09	7 hr tariff 10	10 hr tariff 11	24 hr tariff 12				1	2	3	4	
Dual immersion heater	Y	N		7 hr tariff 10	10 hr tariff 11	24 hr tariff 12				1	2	3	4	
Separate instantaneous heater (Single point)	Y	N	Mains gas 01	Bulk LPG 02	Bottled gas 03	Oil 04	Standard 09			1	2	3	4	
Separate instantaneous heater (Multi point)	Y	N	Mains gas 01	Bulk LPG 02	Bottled gas 03	Oil 04	Standard 09			1	2	3	4	
Communal	Y	N	CHP/waste 13	From boiler 14										
Other	Y	N	Specify:						Fuel from facing page					

Cylinder present?

Y	N	U
---	---	---

If cylinder seen:

Size/volume	450 x 900mm (110 l) 1	450 x 1050mm (140 l) 2	450 x 1500mm (210 l) 3	450 x 1650mm (245 l) 4				
Cylinder insulation	Foam Factory insulated 1	Jacket Loose jacket 2	Other 3	None 4				
Cylinder insulation thickness	0 1	12.5mm 2	25mm 3	38mm 4	50mm 5	80mm 6	100mm 7	150mm 8

Water heating controls?

Present?

Time clock for water heating	Y	N	U
Cylinder thermostat	Y	N	U

6. Loft inspection

Inspect all houses and top floor flats

House/Bungalow	1	Top floor flat	2	Mid floor flat	3	Ground floor flat	4	Basement flat	5	GO TO SECTION 7 →			
Type of loft	Fully boarded 1	No boarding or partial boarding 2	Room(s) with permanent stairs 3	No loft (flat or very shallow pitched roof) 4	GO TO SECTION 7 →								
Roof insulation above living space?	Yes 1	No 2	Don't know 9										
Type of loft insulation	Mineral wool/fibre glass 1	Vermiculite beads 2	High performance quilt 3	Rigid foam board 4	Not applicable 8	Don't know 9							
Approximate thickness of loft insulation	No insulation 00	25mm 01	50mm 02	75mm 03	100mm 04	125mm 05	150mm 06	200mm 07	250mm 08	300mm 09	>300mm 10	Don't know thickness 99	
Loft information from:	Inspection 1		Occupant 2			no information 9							
Any roof structure problems seen?	Y	N	Is there any evidence of cavity wall insulation in the loft?									Y	N
If yes, describe and transfer to Section 21													

7. Household questionnaire

I would now like to ask you some questions about your home and the people who live in it.

Cooperated	Vacant	Occupant temporarily away	Refused	Reasons(s)
1	2	3	7	

Q1 Is this accommodation your household's only residence?

Yes

1

Go to Q3

No

2

Q2 Is this accommodation

Don't know

9

Your household's main residence

1

A home used for holidays/weekends by you or your family (for four weeks or more per year)

2

A home used for holidays/weekends by holiday makers (i.e. let out on a commercial basis)

3

A home used for holidays/weekends by your family (less than 4 weeks), & also holiday makers (on a commercial basis)

4

A home used as an alternative to your main residence in connection with your job but not for holidays/weekends

5

A home used by a student of a university or college

6

Don't know

7

(ASK ALL)

Q3 Do you (or your family) own this dwelling?

Own property outright

1

Go to Q4

Buying with mortgage or loan

2

Go to Q4

Co-Ownership

3

Go to Q4

(ASK ALL OWNERS)

Q4 From whom did you buy this dwelling?

Bought from the Housing Executive/
Housing Association

1

Go to Q5a

Bought from previous private owner

2

Go to Q5a

Bought new from builder/developer

3

Go to Q5a

Inherited

4

Go to Q7

Other (Please specify)

5

Go to Q7

or do you rent it?

Housing Executive tenant

4

Go to Q6 below

Private tenant

5

Go to Q6 below

Housing Association tenant

6

Go to Q6 below

Goes with job

7

Go to Q6 below

Other (Please specify)

8

Go to Q6 below

(ASK ALL TENANTS - HE, HA and Private Rented Sector)

Q6 When did you (or your family) first rent this dwelling?

Year

--	--	--	--

Go to Q7

Q5a Is this dwelling your first home purchase (i.e. are you a first time buyer?)

Yes

1

No

2

Q5b Did you (or your family) rent this dwelling before buying it?

Yes

1

No

2

Go to Q5d

Q5d When did you (or your family) buy this dwelling?

Year

--	--	--	--

Q5d When did you (or your family) buy this dwelling?

Year

--	--	--	--

Go to Q7

ASK ALL

Q7 Which of the following do you have in your home?
(Read out list and ring all that apply)

SURVEYOR DOUBLE CHECK DWELLING FOR CAVITY WALL INSULATION

Cavity wall insulation	Y	N	DK	N/A
Loft insulation	Y	N	DK	N/A
Double glazing	Y	N	DK	
Draught stripping on external doors	Y	N	DK	
Draught stripping on windows	Y	N	DK	
Low energy light bulbs	Y	N	DK	If YES, HOW MANY
Smoke alarm (battery)	Y	N	DK	If YES, HOW MANY
Smoke alarm (mains)	Y	N	DK	If YES, HOW MANY
Lead water pipes	Y	N	DK	
Mains drainage	Y	N	DK	If NO, ask type
Digital TV(Digital Box)	Y	N	DK	
Home computer	Y	N	DK	
Access to the internet	Y	N	DK	

The next questions are about repairs and improvements to your home.

Q8a Have any repairs or improvements been carried out to your home in the past 5 years by you or a landlord (if applicable)?

Yes	1	Go to Q8b
No	2	Go to Q9
Don't know	8	Go to Q9

Q8b Which of the following repairs and/or improvements have been carried out by you or a landlord in the past 5 years?
(Read out list and ring all that apply) **SHOW CARD**

Re-roofing/roof structure work	Y	N	DK	Providing or refitting bathroom	Y	N	DK
Structural repairs to walls, chimneys, foundations	Y	N	DK	Installing/replacing central heating	Y	N	DK
Repointing/rendering	Y	N	DK	Rearranging internal space/flat conversion	Y	N	DK
Replacing windows	Y	N	DK	Roof insulation	Y	N	DK
Replacing doors	Y	N	DK	Cavity wall insulation	Y	N	DK
Inserting/replacing damp proof course	Y	N	DK	Garage added	Y	N	DK
Internal plastering	Y	N	DK	Conservatory added	Y	N	DK
Putting in new floors	Y	N	DK	Extension (adding one or more rooms)	Y	N	DK
Electrical wiring	Y	N	DK	Combining two or more rooms	Y	N	DK
Providing or refitting kitchen	Y	N	DK	Other (please specify)			

Q8c Approximately how much did this work cost in total? (include VAT)

Less than £500	1	£5001-£10000	5	
£501-£1000	2	Over £10000	6	
£1001-£2000	3	DK	7	Go to Q9
£2001-£5000	4	Refused	8	Go to Q9

Q8d How much of the total cost of the work did you or your household pay?

All	1	Go to Q9
Some	2	Go to Q8e
None	8	Go to Q9

Q8e Approximately how much did this work cost your household (ie your contribution to the overall cost?)

Less than £500	1	£5001-£10000	5
£501-£1000	2	over £10000	6
£1001-£2000	3	DK	7
£2001-£5000	4	Refused	8

OWNERS GO TO Q9 RENTERS GO TO Q14

(ASK OWNERS)

Q9 Are you aware that grants may be available from the Housing Executive towards the cost of carrying out work to your property?

Yes	1	Go To Q10
No	2	Go To Q14

(ASK IF YES)

Q10 Have you applied for a grant from the Housing Executive in the last 5 years?

Yes	1	Go To Q11
No	2	Go To Q13
Don't know/Can't remember	9	Go To Q14

(ASK IF YES)

Q11 When did you apply? Year

Q12 What was the outcome?

Still awaiting outcome	1	All go to Q14
Executive refused	2	
Didn't pursue grant	3	
Awarded grant and still doing work	4	
Awarded grant and work now completed	5	
Other (please specify)	6	

ASK IF RESPONDENT HAS NOT APPLIED FOR GRANT Do not prompt: (Ring all that apply)

Q13 Why not?... any other reasons?

Reason(s)

No major work was required on the house	Y	N	All go to Q14
Didn't think the type of work which was required on the house would be grant-aided	Y	N	
Because of means testing	Y	N	
Didn't want the inconvenience	Y	N	
Heard that approval took too long	Y	N	
Thought the cost of work would be too high relative to grant	Y	N	
Previous grant - more than five years	Y	N	
Other (please specify)	Y	N	

The next questions ask about heating in your home.

Q14a How satisfied are you with each of the following aspects of your heating system?

	Very Satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
The type of heating	1	2	3	4	5
The cost of running your system	1	2	3	4	5
The amount of heat that you can get	1	2	3	4	5
The control over the level of heat	1	2	3	4	5
The ease of use of the system	1	2	3	4	5

Q14b SHOWCARD

Generally speaking, during winter when heating needs are greatest, when would you or someone else in your household have your heating on to stay warm? (For each option ring one only)

All day/all the time	1	2
Weekday morning	1	2
Weekday lunchtime	1	2
Weekday afternoon	1	2

Weekday evenings	1	2
Weekend daytimes	1	2
Weekend evenings	1	2
Don't know	1	

ASK ALL

Q15 SHOWCARD

Which of these methods do you mainly use to pay for your electricity? (Ring one only)

Direct debit	1
Budget payment	2
Easysaver / Energysaver Card	3
Power card meter	4
Cash or cheque	5
Key pad meters (Pay as you go)	6

Fuel direct	7
Standing order	8
Telephone / On-line banking	9
Included with rent	10
No mains electricity	11
Don't Know	12

Q16 SHOWCARD

REFER BACK TO SECTION 5 HEATING. ONLY ASK QUESTION 16 IF PRIMARY HEATING SERVICE IS MAINS GAS

Which of these methods do you mainly use to pay for your mains gas? (Ring one only)

Direct debit	1
Quarterly bill	2
Prepayment (key) meter / Pay as you go	3
Budget payment system	4
Telephone / On-line banking	5

Other (please specify)	6

Not applicable	7
Don't know	8

Q17 The next questions ask about the people who live in your home. I do not require names. I will start with the Household Reference Person.

Person	HRP	2	3	4	5	6	7	8	9	10
Age last birthday										
Gender	Male	1	1	1	1	1	1	1	1	1
	Female	2	2	2	2	2	2	2	2	2
Relationship to Household Reference Person	HRP	1								
	Partner (married)		2	2	2	2	2	2	2	2
	Partner (cohabiting)		3	3	3	3	3	3	3	3
	Partner (civil partnership)		4	4	4	4	4	4	4	4
	Child		5	5	5	5	5	5	5	5
	Parent		6	6	6	6	6	6	6	6
	Other Relative		7	7	7	7	7	7	7	7
	Lodger		8	8	8	8	8	8	8	8
	Other non-relative		9	9	9	9	9	9	9	9
Marital Status	Single (never married)	1	1	1	1	1	1	1	1	1
	Married (first marriage)	2	2	2	2	2	2	2	2	2
	Remarried	3	3	3	3	3	3	3	3	3
	Civil Partnership	4	4	4	4	4	4	4	4	4
	Separated (but still legally married)	5	5	5	5	5	5	5	5	5
	Divorced (but not legally remarried)	6	6	6	6	6	6	6	6	6
	Widowed (but not legally remarried)	7	7	7	7	7	7	7	7	7
	Co-habiting	1	1	1	1	1	1	1	1	1
Family Unit (See Surveyor Notes above)		1								
PERSONS AGED 16+ ONLY - Employment Status:										
	Self-Employed	01	01	01	01	01	01	01	01	01
	Working Full Time	02	02	02	02	02	02	02	02	02
	Working Part Time	03	03	03	03	03	03	03	03	03
	Not working - seeking work	04	04	04	04	04	04	04	04	04
	Not working - not seeking work	05	05	05	05	05	05	05	05	05
	Retired from work - excludes looking after family home	06	06	06	06	06	06	06	06	06
	Student (Further/Higher Education)	07	07	07	07	07	07	07	07	07
	Perm Sick/Disabled	08	08	08	08	08	08	08	08	08
	Looking after family/home	09	09	09	09	09	09	09	09	09
	Other (including schoolchild)	10	10	10	10	10	10	10	10	10
How does the person usually travel to work? (16+ and working) (Tick one box for the longest part, by distance, of the usual journey to work)										
	Work mainly at or from home	01	01	01	01	01	01	01	01	01
	Train	02	02	02	02	02	02	02	02	02
	Bus, minibus or coach (public or private)	03	03	03	03	03	03	03	03	03
	Motorcycle, scooter or moped	04	04	04	04	04	04	04	04	04
	Driving a car or van	05	05	05	05	05	05	05	05	05
	Passenger in car or van (Include sharing driving)	06	06	06	06	06	06	06	06	06
	Bicycle	07	07	07	07	07	07	07	07	07
	On foot	08	08	08	08	08	08	08	08	08
	Other	09	09	09	09	09	09	09	09	09
	Not applicable (does not work)	10	10	10	10	10	10	10	10	10
Does the person have any long-term illness, health problem or disability which limits his/her daily activities or the work he/she can do? (Include problems which are due to old age.)										
	Yes, has a health problem or disability which limits activities	1	1	1	1	1	1	1	1	1
	Has no such health problems	2	2	2	2	2	2	2	2	2
Does anyone in the household use the following aids indoors or outdoors? (For each person code the highest number used by that person)										
	No aids	01	01	01	01	01	01	01	01	01
	Stick	02	02	02	02	02	02	02	02	02
	Crutches	03	03	03	03	03	03	03	03	03
	Zimmer Frame	04	04	04	04	04	04	04	04	04
	Self-propelled wheel chair	05	05	05	05	05	05	05	05	05
	Wheel chair pushed by another person	06	06	06	06	06	06	06	06	06
	Battery powered scooter	07	07	07	07	07	07	07	07	07
	Adapted vehicle	08	08	08	08	08	08	08	08	08
	Confined to bed	09	09	09	09	09	09	09	09	09
To which of these ethnic groups does the person belong?										
	White	01	01	01	01	01	01	01	01	01
	Chinese	02	02	02	02	02	02	02	02	02
	Irish Traveller	03	03	03	03	03	03	03	03	03
	Indian	04	04	04	04	04	04	04	04	04
	Pakistani	05	05	05	05	05	05	05	05	05
	Bangladeshi	06	06	06	06	06	06	06	06	06
	Black Carribean	07	07	07	07	07	07	07	07	07
	Black African	08	08	08	08	08	08	08	08	08
	Black Other	09	09	09	09	09	09	09	09	09
	Mixed ethnic group (please specify)	10	10	10	10	10	10	10	10	10
	Any other ethnic group (please specify)	11	11	11	11	11	11	11	11	11
What does each person consider their nationality/citizenship to be?										
	British	01	01	01	01	01	01	01	01	01
	Irish	02	02	02	02	02	02	02	02	02
	Northern Irish	03	03	03	03	03	03	03	03	03
	British / Irish	04	04	04	04	04	04	04	04	04
	Scottish	05	05	05	05	05	05	05	05	05
	Portugese	06	06	06	06	06	06	06	06	06
	Latvian	07	07	07	07	07	07	07	07	07
	Lithuanian	08	08	08	08	08	08	08	08	08
	Polish	09	09	09	09	09	09	09	09	09
	Nigerian	10	10	10	10	10	10	10	10	10
	Other (please specify)	11	11	11	11	11	11	11	11	11

Enter person number of respondent	
Enter total number of people in the household	
Enter total number of adults (16 or over) in the household	
Enter number of family units in the household	
Enter number of children in the household	

OCCUPATION

Q18a What is the Household Reference Person's present/most recent (last) job?

Record full title of main job: (If job title is ambiguous probe for more details. If civil servant stated ask for department/division. If a manager ask how many people he/she manages.) If the person is retired ask for main job at retirement. If the person is of working age and not working, only ask for previous job if he/she has worked in last 5 years.

Q18b If HRP is currently working Ask:

Where is your place of work located? _____

If HRP reports to a depot, write in depot location. _____

(Tick as appropriate)

Mainly work at or from home No fixed place

Q19a Does the Household Reference Person or partner (if applicable) receive any of the following benefits?

(If no partner code N/A). (Read out list and ring all that apply) (SHOW CARD)

BENEFITS/TAX CREDITS

	Household Reference Person				Partner				
	Yes	No	Ref	D/K	Yes	No	Ref	N/A	D/K
Child Benefit	1	2	7	9	1	2	7	0	9
A Disability Benefit	1	2	7	9	1	2	7	0	9
Incapacity Benefit	1	2	7	9	1	2	7	0	9
Housing Benefit	1	2	7	9	1	2	7	0	9
Income Support	1	2	7	9	1	2	7	0	9
Jobseeker's Allowance	1	2	7	9	1	2	7	0	9
State Pension	1	2	7	9	1	2	7	0	9
Occupational Pension	1	2	7	9	1	2	7	0	9
Working Tax Credit	1	2	7	9	1	2	7	0	9
Child Tax Credit	1	2	7	9	1	2	7	0	9
Pension Credit	1	2	7	9	1	2	7	0	9
Rates Rebate (Owner Occupiers only)	1	2	7	9	1	2	7	0	9
Any others	1	2	7	9	1	2	7	0	9

(if yes, complete Q20b)

(if yes, complete Q20c)

Q19b Can I just check, how much does the Household Reference Person or partner (if applicable) receive from Housing Benefit each week? Code exact amount to nearest £, possible, if not known, probe and code estimate. Probe for weekly period, if other period given, calculate as weekly.

£

Estimate	1
Don't know	2
Refused	3

Q19c ASK OWNER OCCUPIERS ONLY

Can I just check, how much does the Household Reference Person or partner (if applicable) receive from Rates Rebate each week? Code exact amount to nearest £, if possible, if not known, probe and code estimate. Probe for weekly period, if other period given, calculate as weekly.

£

Estimate	1
Don't know	2
Refused	3

Q19d Did you receive the Winter fuel Payment in Autumn last year?

Y	N	D/K
---	---	-----

Q19e Did you receive the Household fuel Payment earlier this year?

Y	N	D/K
---	---	-----

Q20 Now I would like to ask you some questions about your income. Answers of individual respondents will not be disclosed to anyone outside the Housing Executive's Research Unit. No one outside the Research Unit is able to access this information. [SHOW CARD]. What is the total income before tax and other deductions of yourself and your partner (if you have one)? Please include all income from employment, benefits (including Housing Benefit), or other sources. (Ring one only) PLEASE USE SHOWCARD WITH WEEKLY, MONTHLY AND ANNUAL INCOME BANDS

Less than £60 per week	Less than £250 per month	Less than £3,000 per annum	1
£60-£79 per week	£251-£330 per month	£3,000 to £3,999 per annum	2
£80-£99 per week	£331-£419 per month	£4,000 to £4,999 per annum	3
£100-£119 per week	£420-£500 per month	£5,000 to £5,999 per annum	4
£120-£130 per week	£501-£580 per month	£6,000 to £6,999 per annum	5
£131-£150 per week	£581-£669 per month	£7,000 to £7,999 per annum	6
£151-£170 per week	£670-£750 per month	£8,000 to £8,999 per annum	7
£171-£190 per week	£751-£830 per month	£9,000 to £9,999 per annum	8
£191-£210 per week	£831-£919 per month	£10,000 to £10,999 per annum	9
£211-£230 per week	£920-£1,000 per month	£11,000 to £11,999 per annum	10
£231-£250 per week	£1,001-£1,080 per month	£12,000 to £12,999 per annum	11
£251-£269 per week	£1,081-£1,169 per month	£13,000 to £13,999 per annum	12
£270-£289 per week	£1,170-£1,250 per month	£14,000 to £14,999 per annum	13
£290-£310 per week	£1,251-£1,330 per month	£15,000 to £15,999 per annum	14
£311-£389 per week	£1,331-£1,669 per month	£16,000 to £19,999 per annum	15
£390-£580 per week	£1,670-£2,500 per month	£20,000 to £29,999 per annum	16
£581-£769 per week	£2,501-£3,330 per month	£30,000 to £39,999 per annum	17
£770-£960 per week	£3,331-£4,169 per month	£40,000 to £49,999 per annum	18
£961 or more per week	£4,170 or more per month	£50,000 or more per annum	19
Refused	Refused	Refused	99
Don't know	Don't know	Don't know	88

Q21 How would you describe the religious make-up of this household? (Ring one only)

Protestant	Catholic (RC)	Mixed religion (Protestant/Catholic)	Other	None	D/K	Refused
1	2	3	4	5	8	9

Q22 How would you describe the religious make-up of this estate/area? (Ring one only)

Totally Protestant	Mainly Protestant	Mixed Protestant/Catholic	Mainly Catholic (RC)	Totally Catholic (RC)	D/K	Refused
1	2	3	4	5	8	9

Q23 How many cars or vans are owned, or available for use, by one or more members of your household? (include any company car or van if available for private use). (Ring one only)

None	0
One	1
Two	2
Three	3
Four or more (please write in)	<input type="text"/>

Q25 As part of the Housing Executive's quality assurance role of the House Condition Survey a small number of respondents will be selected to ask for their views on how the survey was conducted. Would you be willing to take part in this? (Ring one only)

Yes	1	If Yes, go to Q28
Yes (in certain circumstances)	2	
No	3	

INTERVIEWER INSTRUCTION

If YES, in certain circumstances code main conditions to any follow-up survey.

Contact household beforehand	Y
Only at a convenient time	Y
Someone else (eg carer) needs to be there	Y
Other (please specify)	Y

N/A	0
-----	---

Q26 Would it be possible to have your telephone number, so the Housing Executive can contact you. (Ring one only)

Yes	1
No	2
No phone	3
N/A	0

IF YES, RECORD TELEPHONE NUMBER

Code	Telephone number

Q27 It is helpful to have a contact name to ask for.
Record as much of this as respondent will allow (Refusal enter 0)

NAME OF RESPONDENT	Title	Forename	Surname

Q28 If access to email, can I have your email address?

Y	Record email address:
N	
N/A	

9. Common parts of module.

Common parts exist

Y	N	IF NO, GO TO SECTION 10
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Does access/area exist?

Balcony/Deck/Corridor/Lobby

Spacious/Average/Tight

Enclosed?
In module?
Working?

Accessway					
Main horizontal of typical/ upper level		Stairway on typical/ upper level		Main entrance to module	
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N

Lift controls accessible to wheelchair user?

Lift controls accessible to a visually impaired person?

Lifts	
Y	N
Y	N
Y	N
Y	N

Refuse chutes	
Y	N
Y	N
Y	N

Security of module

Type of access

Multiple access	Single access	Restricted access
1	2	3

Concierge system

Present?	Working?	In module?			
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N

Door entry system

Floors/ treads (answer in m²)

Faults?

Modify structure

Renew surface

Repair surface

Y	N	Y	N	Y	N

Walls (answer in m²)

Faults?

Modify structure

Renew surface

Repair surface

Repaint surface

Y	N	Y	N	Y	N

Ceilings/soffits (answer in m²)

Faults?

Modify structure

Renew surface

Repair surface

Repaint surface

Y	N	Y	N	Y	N

Access doors/screens (answer in numbers)

Faults?

Replace

Repair/rehang

Repaint

Y	N	Y	N	Y	N

Accessway windows (answer in numbers)

Faults?

Replace

Repair

Repaint

Y	N	Y	N	Y	N

Accessway lighting (answer in numbers)

Faults?

Replace light fittings

Replace light switches

Y	N	Y	N	Y	N

Balustrades (answer in metre lengths)

Faults?

Replace

Repair

Y	N	Y	N	Y	N

Defects

Ventilation
Artificial lighting

Y	Y	Y
Y	Y	Y

Rats and Mice

Evidence of mice
Evidence of rats

Y	Y	Y	Y
Y	Y	Y	Y

Other location

Type of evidence: Traps seen?	Y	N	Chemicals seen?	Y	N
Other visual evidence?	Y	N	Told about it?	Y	N

Fire safety of flat surveyed

Escape route from flat surveyed to final exit from building

Flat is final exit	Through another flat	Through another flat and common areas	Through common areas
1	2	3	4

Fire precautions

Protection to stairs/lobbies?
Self closing fire doors?
Fire extinguishers?
Emergency lighting?
Sign posting?
Safe practices?
Alternative route?
Alarm system?

Present	Action			
	None	Minor	Major	Renew
Y N	1	2	3	4
Y N	1	2	3	4
Y N	1	2	3	4
Y N	1	2	3	4
Y N	1			4
Y N				
Y N				
Y N	1	2	3	4

Contribution to problems (within survey module)

Normal wear and tear
Inadequate maintenance
Inappropriate use
Poor design/specification
Vandalism
Graffiti
Litter/rubbish

	None	Minor	Major
	1	2	3
	1	2	3
	1	2	3
	1	2	3
	1	2	3
	1	2	3
	1	2	3

Health and Safety of common areas (affecting flat surveyed)

Falling on stairs etc
Falling on level surfaces
Falling between levels
Fire
Flames, hot surfaces, etc
Damp and mould growth
Entry by intruders
Noise
Collisions/entrapment

	Significantly lower risk than average	Average risk	Significantly higher risk than average
	1	2	3
	1	2	3
	1	2	3
	1	2	3
	1	2	3
		2	3
	1	2	3
	1	2	3
	1	2	3

If '3', score HHSRS in Section 22

10. Number of flats in module

This section is critical. Make every attempt to record correct number of flats in module

Number of flats in module

Specify <input style="width: 50px; height: 20px;" type="text"/>	Unknown 999
--	----------------

DOUBLE CHECK the number of flats against what you have defined as your module in **Section 8** before continuing

Level of lowest flat

Basement B	Ground floor G	Floor <input style="width: 30px; height: 20px;" type="text"/>	Unknown 9
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Use of ground floor

Dwelling only 1	Dwelling and services 2	Services only 3	Dwelling and non residential 4	Non residential only 5	Dwelling and void 6	Other 7
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Use of basement

No basement 8	Dwelling only 1	Dwelling and services 2	Services only 3	Dwelling and non residential 4	Non residential only 5	Dwelling and void 6	Other 7
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Non residential use

If any non residential use, % total floor area of module in non residential use

No non residential 88		Specify % <input style="width: 50px; height: 20px;" type="text"/>	Unknown 99
--------------------------	--	--	---------------

If 'dwelling with non residential': non residential use

Not 'dwelling with non residential' 8	Shop/business 1	Office 2	Industrial/Institutional 3	Surgery 4	Public House 5	Hotel 6	Other 7
--	--------------------	-------------	-------------------------------	--------------	-------------------	------------	------------

If 'dwelling with non residential':

Does the non-residential use include the handling/processing of food for commercial purposes?

Y	N	U
---	---	---

Other flats in module

Are they?

Survey flat is only one in module 8	Mostly same as survey dwelling 1	Mostly small flats 2	Mostly large flats 3	Mixture of small/large flats 4	Mixture of flats/maisonettes 5	Unknown 9
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Approximate number of vacant flats in module

Survey flat is only one in module 888	Specify <input style="width: 50px; height: 20px;" type="text"/>
--	--

11. Shared facilities and services (within 100m of survey dwelling)

Do shared facilities/services exist? Y N IF NO, GO TO SECTION 12

Stores and common rooms

	Location				Action		
	Present?	Integral?	Not Integral?	None	Minor	Major	
Tenant stores	Y	N	1	2	1	2	3
Bin stores	Y	N	1	2	1	2	3
Paladin stores	Y	N	1	2	1	2	3
Laundry	Y	N	1	2	1	2	3
Drying room	Y	N	1	2	1	2	3
Community room	Y	N	1	2	1	2	3
Warden cartaker office	Y	N	1	2	1	2	3

Communal parking facilities

	Location				Action		
	Present?	Integral?	Not Integral?	None	Minor	Major	
Garages	Y	N	1	2	1	2	3
Multi storey parking	Y	N	1	2	1	2	3
Underground parking	Y	N	1	2	1	2	3
Roof parking	Y	N	1	2	1	2	3
Other covered parking	Y	N	1	2	1	2	3
Open air parking bays	Y	N			1	2	3

Contribution to problems in condition (outside survey module)

	None	Minor	Major
Normal wear and tear	1	2	3
Inadequate maintenance	1	2	3
Inappropriate use	1	2	3
Poor design/specification	1	2	3
Vandalism	1	2	3
Graffiti	1	2	3
Litter/rubbish	1	2	3

Accessibility

Number of steps from pavement to entrance of module

Level Access	No step but slope > 1:20	1 step	2 step	3 or more steps
8	7	1	2	3
Space for ramp				
Not applicable	8	Yes 1	No 2	
Is path firm and even?				
<input type="checkbox"/> Y <input type="checkbox"/> N				
Is entrance adequately lit?				
<input type="checkbox"/> Y <input type="checkbox"/> N				
Is entrance covered?				
<input type="checkbox"/> Y <input type="checkbox"/> N				

Common/electrical services

	Present?			Action		
	Y	N	None	Minor	Major	
CCTV	Y	N	1	2	3	
TV reception	Y	N	1	2	3	
Lightning conductors	Y	N	1	2	3	
Communal heating	Y	N	1	2	3	
Burglar alarm system	Y	N	1	2	3	
External lighting	Y	N	1	2	3	

Surfaces and fences

	Present?			Action		
	Y	N	None	Minor	Major	
Drying areas	Y	N	1	2	3	
Children's play areas	Y	N	1	2	3	
Unadopted estate roads	Y	N	1	2	3	

Landscaping

	Present?			Action		
	Y	N	None	Minor	Major	
Paths	Y	N	1	2	3	
Walls/fences	Y	N	1	2	3	
Hard landscaping	Y	N	1	2	3	
Grass/planting	Y	N	1	2	3	

Design of paths

ANSWER IF PATHS PRESENT

('Y' IN BOX ABOVE)

Paths	Yes	No	Not applicable
At least 900mm wide?	1	2	3
Gradient gentler than 1 in 12?	1	2	3
Protected from adjacent drops?	1	2	3

Health and Safety of shared areas

(affecting dwelling surveyed)

	Significantly lower risk than average	Average risk	Significantly higher risk than average
Falling on stairs etc	1	2	3
Falling on level surfaces	1	2	3
Falling between levels	1	2	3
Entry by intruders	1	2	3
Collision and entrapment	1	2	3

If '3', score HHSRS in Section 22

12. House/module shape

Draw plan													Back												
Left																									Right
																									Front
Location of additional part	No additional part 77	Front elevation			Back elevation			Left elevation			Right elevation			Unknown 99											
		Left 01	Centre 02	Right 03	Left 04	Centre 05	Right 06	Front 07	Centre 08	Back 09	Front 10	Centre 11	Back 12												
Attic/basement in house/module															Attic only 1	Basement only 2	Both 3	Neither 4	Unknown 9						
Entry floor to house/module															Basement B	Ground G	Floor <input style="width:20px; height:20px;" type="text"/>	Unknown 9							

13. External dimensions of house/module

	No. of floors	Level (B, G, 1, 2 etc)	Width (metres)	Depth (metres)								
Main structure	<input style="width:30px; height:20px;" type="text"/>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Basement BB</td> <td>Ground GG</td> <td><input style="width:20px; height:20px;" type="text"/></td> <td><input style="width:20px; height:20px;" type="text"/></td> </tr> <tr> <td>None exists NN</td> <td>Basement BB</td> <td>Ground GG</td> <td><input style="width:20px; height:20px;" type="text"/></td> </tr> </table>	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>	<input style="width:20px; height:20px;" type="text"/>	None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>	<input style="width:30px; height:20px;" type="text"/> • <input style="width:30px; height:20px;" type="text"/>	<input style="width:30px; height:20px;" type="text"/> • <input style="width:30px; height:20px;" type="text"/>
Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>	<input style="width:20px; height:20px;" type="text"/>									
None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>									
Additional part	No. of floors	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>None exists NN</td> <td>Basement BB</td> <td>Ground GG</td> <td><input style="width:20px; height:20px;" type="text"/></td> </tr> </table>	None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>	Same as above SSS	Same as above SSS				
	None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>								
	None exists NN	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>None exists NN</td> <td>Basement BB</td> <td>Ground GG</td> <td><input style="width:20px; height:20px;" type="text"/></td> </tr> </table>	None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>	Same as above SSS	Same as above SSS				
	None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>								
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None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>									
None exists NN	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>None exists NN</td> <td>Basement BB</td> <td>Ground GG</td> <td><input style="width:20px; height:20px;" type="text"/></td> </tr> </table>	None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>	Same as above SSS	Same as above SSS					
None exists NN	Basement BB	Ground GG	<input style="width:20px; height:20px;" type="text"/>									

14. Material and construction of house/module (code one type only)

Code	Material	Construction	Type
01	Masonry	Boxwall	Solid
02	Masonry	Boxwall	Cavity
03	Masonry	Crosswall	
04	Concrete	Boxwall	In-situ
05	Concrete	Boxwall	Precast panel <1m wide
06	Concrete	Boxwall	Precast panel >1m wide
07	Concrete	Crosswall	In-situ
08	Concrete	Crosswall	Precast panel
09	Concrete	Frame	In-situ
10	Concrete	Frame	Precast
11	Timber	Frame	Pre 1919
12	Timber	Frame	Post 1919
13	Metal	Frame	
14	Other, please specify if known		

Proprietary system? Y N U

If Yes, name: _____

15. Improvements/alterations (to the house/module since original construction) Code most recent (or most significant)

Clarify with Household

	None	Pre 1945	1945-1964	1965-1984	1985-1990	1991-1995	1996-2008	In progress
Conversion to more than one dwelling	1	2	3	4	5	6	7	8
Conversion to HMO use	1	2	3	4	5	6	7	8
Conversion from non-residential use	1	2	3	4	5	6	7	8
Two or more dwellings combined	1	2	3	4	5	6	7	8
Complete refurbishment/modernisation	1	2	3	4	5	6	7	8
Rearrangement of internal space	1	2	3	4	5	6	7	8
Extension added for amenities	1	2	3	4	5	6	7	8
Extension added for living space	1	2	3	4	5	6	7	8
Alteration of external appearance	1	2	3	4	5	6	7	8
Over-roofing	1	2	3	4	5	6	7	8
Over-cladding	1	2	3	4	5	6	7	8
Structure replaced	1	2	3	4	5	6	7	8
Loft conversion	1	2	3	4	5	6	7	8
Radon remedial works (check postcode)	1	2	3	4	5	6	7	8

ASK HOUSEHOLD
Exact year of
loft conversion

--	--	--	--

16. Elevation features

Front face	Left face	Is part of face unattached?	Right face	Back face
Y N	Y N		Y N	Y N
		Gables (<i>tenths</i>)		
		Parapets (<i>tenths</i>)		
		Mono supporting walls (<i>tenths</i>)		
		Base walls (<i>tenths</i>)		
		Main walls (<i>tenths</i>)		
		Valley gutters (<i>number</i>)		
		Solar water heating panels (<i>number</i>)		
Y N	Y N	Solar photovoltaic (PV)?	Y N	Y N
Y N	Y N	Cavity wall insulation?	Y N	Y N
Y N	Y N	External insulation?	Y N	Y N
window void wall	window void wall	Fenestration (<i>tenths</i>)	window void wall	window void wall
		Is there any evidence from the air bricks of cavity wall insulation? Y N		Wind turbine present? Y N

17. Specification of views

Back view	10/10 attached	Not seen
B	A	N

Tenths attached

--

BACK FACE

Front view	Back view	10/10 attached	Not seen
F	B	A	N

Tenths attached

--

LEFT FACE

Front view	Back view	10/10 attached	Not seen
F	B	A	N

Tenths attached

--

RIGHT FACE

Front view	Tenths attached
F	

FRONT FACE

18. Exterior – of house/module

FRONT VIEW

Masonry		Other	
Y	N	Y	N
Y	N	Y	N
Y	N	Y	N

Pitched	Mansard	Flat	Chalet
Y	N	Y	N
Y	N	Y	N

Natural slate/stone /shingle	Man made slate	Clay tile	Concrete tile	Asphalt	Felt	Glass/ metal/ laminate	Thatch
Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N

Fascias	Valley gutters/ flashings	Gutters/ down-pipes	Stacks/ wastes	Party parapets	
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N

Chimney stacks (Number)

Present?

Number

Age

Faults?

Rebuild

Part rebuild

Repoint/refix pot

Leave

Urgent?

Replacement period

Roof structure (Tenths of area)

Tenths of area

Age

Faults?

Replace

Strengthen

Leave

Urgent?

Replacement period

Roof covering (Tenths of area)

Tenths of area

Age

Faults?

Renew

Isolated repairs

Leave

Urgent?

Replacement period

Roof features and drainage (Tenths of length)

Present?

Faults?

Replace

Repair

Leave

Urgent?

Replacement period

BACK VIEW

Masonry		Other	
Y	N	Y	N
Y	N	Y	N
Y	N	Y	N

Pitched	Mansard	Flat	Chalet
Y	N	Y	N
Y	N	Y	N

Natural slate/stone /shingle	Man made slate	Clay tile	Concrete tile	Asphalt	Felt	Glass/ metal/ laminate	Thatch
Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N

Fascias	Valley gutters/ flashings	Gutters/ down-pipes	Stacks/ wastes	Party parapets	
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N

18. Exterior – of house/module (continued)

FRONT VIEW

Masonry cavity	Masonry single leaf	9" solid	>9" solid	In situ concrete	Concrete panels	Timber panels	Metal sheet
Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N

Masonry pointing	Non-masonry natural	Rendered	Shiplap timber	Tile hung	Slip/tile faced	Wood/metal/plastic panels
Y	N	Y	N	Y	N	Y
Y	N	Y	N	Y	N	Y

Bays		Dormers		Porches		Conservatories (Survey dwelling)		Balconies	
Single storey	Multi storey	Standard	Roof extension						
Y	N	Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N	Y	N

Wall structure

(Tenths of area)

- Net tenths of area
- Age
- Faults?
- Rebuild/renew
- Repair
- Leave
- Urgent?
- Replacement period

BACK VIEW

Masonry cavity	Masonry single leaf	9" solid	>9" solid	In situ concrete	Concrete panels	Timber panels	Metal sheet
Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N

Masonry pointing	Non-masonry natural	Rendered	Shiplap timber	Tile hung	Slip/tile faced	Wood/metal/plastic panels
Y	N	Y	N	Y	N	Y
Y	N	Y	N	Y	N	Y

Wall finish

(Tenths of area)

- Net tenths of area
- Age
- Faults?
- Render
- Renew/repoint
- Isolated repairs
- Paint
- Leave
- Urgent?
- Replacement period

Dormers and bays

(Number)

- Present?
- Number
- Age
- Faults?
- Rebuild roof and walls
- Rebuild roof only
- Rebuild wall only
- Major repairs
- Minor repairs
- Demolish
- Leave
- Urgent?
- Replacement period

Bays		Dormers		Porches		Conservatories (Survey dwelling)		Balconies	
Single storey	Multi storey	Standard	Roof extension						
Y	N	Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N	Y	N

Damp proof course

(Tenths of length)

- Tenths of length
- Faults?
- Replace/install
- Leave
- Urgent?
- Replacement period

Physical barrier	Injection DPC	None
Y	N	Y
Y	N	Y

Physical barrier	Injection DPC	None
Y	N	Y
Y	N	Y

For all conservatories

- Closable door between conservatory and dwelling Y N
- Footprint of conservatory (Sq m)
- Conservatory window type SG DG
- Conservatory roof Glass Poly
- Fixed radiator or other fixed heater present? Y N

19. Around the house/module

Underground drainage

Drainage system

Mains	Septic tank	Cess pool	Private sewage system	Unknown
1	2	3	4	9

Faults?

Y	N
---	---

Blockage

Y

Other (specify)

Y

--

HHSRS

Personal hygiene sanitation and drainage

Significantly lower risk than average	Average risk	Significantly higher risk than average	Extreme risk
1	2	3	4
Describe 'extreme risk' in Section 22			

Rats and mice outside house/module

Evidence of mice?

Y	N
---	---

Evidence of rats?

Y	N
---	---

Pets/livestock kept outside?

Y	N
---	---

Type of evidence:

Traps seen?	Chemicals?	Other visual evidence?	Told about it?
Y N	Y N	Y N	Y N

Litter/rubbish around house/module

None	Minor	Major
1	2	3

HHSRS

Domestic hygiene pests and refuse

Significantly lower risk than average	Average risk	Significantly higher risk than average	Extreme risk
1	2	3	4
Describe 'extreme risk' in Section 22			

Parking provision of survey dwelling

ASK HOUSEHOLD

	Present?		On plot?		Car spaces	Action					Who owns garage/parking			
	Y	N	Y	N		None	Minor	Major	Renew	Demolish	Household	Local authority	Other landlord	Other
Integral garage	Y	N	Y	N		1	2	3	4		1	2	3	4
Attached garage	Y	N	Y	N		1	2	3	4	5	1	2	3	4
Detached garage	Y	N	Y	N		1	2	3	4	5	1	2	3	4
Car port	Y	N	Y	N		1	2	3	4	5	1	2	3	4
Designated parking space(s)	Y	N	Y	N		1	2	3	4	5	1	2	3	4
Street parking	Adequate		Inadequate		None									
	1		2		3									

Is there any off-plot parking located within 30 meters of the entrance to dwelling/module, with an even access route of less than 1:12 gradient?

Y	N
---	---

Cavity wall insulation summary

Evidence of cavity wall insulation:	Y	N	Area around meters (P5)
	Y	N	Loft space (P7)
	Y	N	Occupant response (P8)
	Y	N	Elevation features (P14)
	Y	N	Air bricks (P14)

Is there clear evidence that cavity wall insulation is present in the majority of the cavity walls?

Y	N
---	---

Exposure

Is the dwelling in an exposed position?

Not exposed	Slightly exposed	Exposed	Very exposed
1	2	3	4

20. Block

Number of houses/modules in block

Detached house/module	Specify number	More than 50
01		75

Approximate number of houses/modules in disrepair in block

Specify number

Situation of block

Major trunk road	Main road	Side road	Cul de sac/crescent	Private road	Unmade/no road
1	2	3	4	5	6

21. Structural defects

Any structural defects present? Y N

IF YES, DESCRIBE BELOW

IF YES OR NO, COMPLETE HHSRS ASSESSMENT AT BOTTOM OF PAGE

Defect	Action required?		Monitor/examine further?		Action described elsewhere on form?		Action required on assumption problem is progressive												
							Any additional action required that is not accounted for elsewhere												
							Treatment?			Extent									
Roof sagging	Y	Y	N	Y	N	Y	N												
Roof humping	Y	Y	N	Y	N	Y	N												
Roof spreading	Y	Y	N	Y	N	Y	N	Tie-ing	Y	N	Number:	<input type="text"/>							
								Other	Y	N	Specify	<input type="text"/>							
Sulphate attack	Y	Y	N	Y	N	Y	N	Chimney-liner	Y	N	Linear metres	<input type="text"/> m							
								Other	Y	N	Specify	<input type="text"/>							
Unstable parapets	Y	Y	N	Y	N	Y	N												
Wall bulging	Y	Y	N	Y	N	Y	N	Tie rods	Y	N	Number:	<input type="text"/>							
								Strapping	Y	N	Number:	<input type="text"/>							
								Other	Y	N	Specify	<input type="text"/>							
Differential movement	Y	Y	N	Y	N	Y	N	Movement-joint	Y	N	Linear metres	<input type="text"/> m							
								Other	Y	N	Specify	<input type="text"/>							
Lintel failure	Y	Y	N	Y	N	Y	N	Replace lintels	Y	N	Number:	<input type="text"/>							
Wall tie failure	Y	Y	N	Y	N	Y	N	Insert wall ties	Y	N	Wall area:	<input type="text"/> m ²							
Unstable floors, stairs or ceilings	Y	Y	N	Y	N	Y	N												
Dry rot/Wet rot	Y	Y	N	Y	N	Y	N	Wall & timber treatment	Y	N	Basement 1	One room 2	One floor 3	Loft 4	Most of building 5				
Wood-borer infestation	Y	Y	N	Y	N	Y	N	Timber treatment	Y	N	Basement 1	One room 2	One floor 3	Loft 4	Most of building 5				
Adequacy of balconies / projections	Y	Y	N	Y	N	Y	N	Replace fixings	Y	N	Total number:	<input type="text"/>							
								Other	Y	N	Specify	<input type="text"/>							
Foundation settlement	Y	Y	N	Y	N	Y	N	Underpin	Y	N	Linear metres	<input type="text"/> m							
								Other	Y	N	Specify	<input type="text"/>							
Integrity of structural frame	Y	Y	N	Y	N	Y	N	Making-good	Y	N	Wall area	<input type="text"/> m ²							
								Replace frame	Y	N									
Integrity of wall panels	Y	Y	N	Y	N	Y	N	Replace fixings	Y	N	Total number:	<input type="text"/>							
								Other	Y	N	Specify	<input type="text"/>							
Boundary wall - unsafe height	Y	Y	N	Y	N	Y	N												
Boundary wall - out of plumb	Y	Y	N	Y	N	Y	N												
Boundary wall - horizontal cracking	Y	Y	N	Y	N	Y	N												
Unstable retaining wall	Y	Y	N	Y	N	Y	N												
Any other problems	Y	Y	N	Y	N	Y	N	Specify	<input type="text"/>					Specify	<input type="text"/>				

Housing Health and Safety Rating System (HHSRS)

Structural collapse and falling elements

Significantly lower risk than average	Average risk	Significantly higher risk than average	Extreme risk
1	2	3	4

Describe 'extreme risk' in Section 22

22. Housing Health and Safety Rating System

Refer back to all the HHSRS flags. Consider each of the following hazards in turn in relation to the dwelling as a whole. Decide whether any hazards are significantly worse than average and need to be scored individually on pages 21 - 25. Decide if there are any other hazards listed below which represent an extreme risk. If yes, indicate below and describe risk. If there are no hazards to score move to the Local Area section on page 26.

HAZARDS WHICH MAY REQUIRE SCORING

Hazard	Review survey form	Significantly lower risk than average	Average risk	Significantly higher risk than average
Falling on stairs etc	Check flags on pages 3, 10, 12, 17	1	2	3
Falling on level surfaces	Check flags on pages 3, 10, 12, 17	1	2	3
Falling between levels	Check flags on pages 3, 10, 12, 17	1	2	3
Falls associated with baths etc	Check flag on page 4	1	2	3
Fire	Check flags on pages 3, 10	1	2	3
Flames, hot surfaces, etc	Check flags on pages 3, 10	1	2	3
Damp and mould growth	Check flags on pages 3, 10, 17		2	3
Entry by intruders	Check flags on pages 3, 10, 12, 17	1	2	3
Noise	Check flags on pages 3, 10	1	2	3
Collision and entrapment	Check flags on pages 3, 10, 12, 17	1	2	3

Are any hazards significantly higher than average (code 3)?
If **Yes**, describe below and score hazard on pages 21-25

<input type="checkbox"/> Y	<input type="checkbox"/> N
----------------------------	----------------------------

OTHER HAZARDS IDENTIFIED AS POSING AN EXTREME RISK

Hazard	Review survey form	Extreme risk?
Excess heat	Check flag on page 3	Y
Lighting	Check flag on page 3	Y
Water supply for domestic purposes	Check flag on page 4	Y
Food safety	Check flag on page 4	Y
Personal hygiene, sanitation and drainage	Check flags on pages 4, 18	Y
Position and operability of amenities	Check flag on page 4	Y
Uncombusted fuel gas	Check flag on page 5	Y
Explosions	Check flag on page 5	Y
Electrical safety	Check flag on page 5	Y
Carbon monoxide and fuel combustion products	Check flag on page 6	Y
Domestic hygiene, pests and refuse	Check flags on pages 3, 18	Y
Structural collapse and falling elements	Check flag on page 19	Y

If **Yes**, to any of the above, describe extreme risk below

Falling on stairs etc.

Likelihood of a person over 60 having a fall leading to harm

Significantly higher than average		Y		N		Average						
		1800	1000	560	320	180	100	56	32	18	6	2

Likely outcome if a person over 60 should fall

- Class 1 Extreme %
- Class 2 Severe %
- Class 3 Serious %

0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 1800	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%							E	D	C	B	A
0.2%						E-	E	D	C	B	A
0.5%						E	E	D	C	B	A
1.0%						E	E+	D	C	A-	A
2.2%				F	E-	E	D	C	B	A	A
4.6%				E-	E	D	C	B-	B	A	A
10.0%		E-	E	D	D	C	B-	B	A	A	A
21.5%	E	E	D	C	B	B	A	A	A	A	A
31.6%	E	D	C	C	B	B	A	A	A	A	A
46.4%	E	E	D	C	B	B	A	A	A	A	A
100%	D	C-	C	B	A	A	A	A	A	A	A

Action required

Action required?	Action	Coded elsewhere?		Quantity	
		Y	N	Metres:	
Y	Install handrail	Y	N	Metres:	
Y	Install balustrade	Y	N	Metres:	
Y	Cover dangerous balustrade/guarding	Y	N	Metres:	
Y	Repair/replace internal staircase (S5)	Y			
Y	Redesign internal, common or external staircase (design, not condition)		N	Number:	
Y	Repair/replace external/common staircase (S9)	Y			
Y	Repair/replace external steps (S11, S18)	Y	N	Number:	
Y	Cover slippery stairs	Y	N	Flights:	
Y	Repair/replace/provide additional lighting (S5, S9, S11)	Y	N	Number:	
Y	Remove obstacle		N	Number:	

Falling on level surfaces etc.

Likelihood of a person over 60 having a fall leading to harm

Significantly higher than average		Y		N		Average						
		1000	560	320	180	100	56	32	18	6	2	

Likely outcome if a person over 60 should fall

- Class 1 Extreme %
- Class 2 Severe %
- Class 3 Serious %

0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%						E	D	C	B+	A
0.2%						E-	D+	C	A-	A
0.5%						E	D	C	A	A
1.0%						E	D	B	A	A
2.2%				E	E	D-	D	C	B	A
4.6%			E	E	D	C	B	B	A	A
10.0%		E	E	D	C	B	B	A	A	A
21.5%	E	E	D	C	B	B	A	A	A	A
31.6%	E	D	C	C+	B	A	A	A	A	A
46.4%	E+	D	C	B	B	A	A	A	A	A
100%	C-	C	D	A	A	A	A	A	A	A

Action required

Action required?	Action	Coded elsewhere?		Quantity	
		Y	N	Metres:	
Y	Repair floors (S5, S9)	Y			
Y	Repair paths/external surfaces (S11, S18)	Y			
Y	Remove trip steps (S5, S9)		N	Number:	
Y	Redesign external pathways (S11, S18)		N	Metres:	
Y	Cover slippery surfaces	Y	N	Sq m:	
Y	Repair/replace/provide additional lighting (S5, S9, S11)	Y	N	Number:	
Y	Remove obstacle		N	Number:	

Falling between levels

Significantly higher than average Y N

Likelihood of a child under 5 having a fall leading to harm

Average												
5600	3200	1800	1000	560	320	180	100	56	32	18	6	2

Likely outcome if a child under 5 should fall

Class 1 Extreme %
Class 2 Severe %
Class 3 Serious %

0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 5600	1 in 3200	1 in 1800	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%				H	H	G	F	E-	E	E	E	B	A
0.2%			J	H	H	G	F	E	E	E	E	B	A
0.5%			I	H	H	G	F	E	E	D	D	B	A
1.0%			I	H	G	F	F	E	D-	D	D	A-	A
2.2%		I	H	H	G	F	E	E	D	D	B	A	A
4.6%	I	H	H	G	F	E	E	D	D	B-	B	A	A
10.0%	H	H	G	F	E	D	D	C	B	B	A	A	A
21.5%	H	G	F	E	D	D	C	B	B	A	A	A	A
31.6%	G	F	F	E	D	C-	C	B	A	A	A	A	A
46.4%	G	F	E	E	D	C	B	B	A	A	A	A	A
100%	F	E	D	C+	C	B	A	A	A	A	A	A	A

Action required

Action required?	Action	Coded elsewhere?		Quantity	
		Y	N	Number:	
Y	Install window safety catches	Y	N	Number:	
Y	Repair/replace/provide additional lighting (S5, S9, S11)	Y	N	Number:	
Y	Brick-up dangerous opening / raise cill height		N	Number:	
Y	Repair/replace balconies (S9, S18)	Y			
Y	Repairs to plot (S11, S18)	Y			
Y	Repair/replace existing guarding/balustrading (S5, S9, S11, S18)	Y			
Y	Install new guarding/balustrading/cover		N	Metres:	
Y	Remove obstacle		N	Number:	

Falls associated with baths etc.

Significantly higher than average Y N

Likelihood of a fall occurring if occupied by a person over 60

Average												
5600	3200	1800	1000	560	320	180	100	56	32	18	6	2

Likely outcome if a person over 60 should fall and be injured

Class 1 Extreme %
Class 2 Severe %
Class 3 Serious %

0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 5600	1 in 3200	1 in 1800	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%				I	I	H	G-	G+	F	E	D-	C	A
0.2%				I-	I	H	G	F+	F	E	D	C	A
0.5%				I	H	H	G	F	E	E	D	B	A
1.0%			I-	I	H	G-	F-	F	E	D	C-	B	A
2.2%		J	I	H	G-	G+	F	E	D	D+	C	A-	A
4.6%		I	H	G	G+	F	E	D	D+	C	B	A	A
10.0%	I+	H	G	F	F+	E	D	C	C	B	A	A	A
21.5%	H	G	F	E	D	D	C	B	B	A	A	A	A
31.6%	G	F-	F	E	D	C-	C	B	A	A	A	A	A
46.4%	G	F	E	E+	D	C	B	B+	A	A	A	A	A
100%	F	E	D	C	C	B	A	A	A	A	A	A	A

Action required

Action required?	Action	Coded elsewhere?		Quantity	
		Y	N	Number:	
Y	Repair/replace bath/shower (S5)	Y	N	Number:	
Y	Provide additional grabrail		N	Number:	
Y	Rearrange bathroom (S5)	Y	N	Number:	
Y	Re-site bathroom		N	Number:	
Y	Provide additional heating (S5)		N	Number:	
Y	Repair/replace/provide additional lighting (S5)		N	Number:	
Y	Remove obstacle		N	Number:	

Fire

Significantly higher than average Y N

Average Ave flat

Likelihood of a fire occurring leading to harm if occupied by a person over 60

5600	3200	1800	1000	560	320	180	100	56	32	18	6	2
------	------	------	------	-----	-----	-----	-----	----	----	----	---	---

Likely outcome if occupied by a person over 60
 Class 1 Extreme %
 Class 2 Severe %
 Class 3 Serious %

0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 5600	1 in 3200	1 in 1800	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%							G	F-	F	E	E	C	A
0.2%							G	F	E-	E	D	C	A
0.5%						H	G	F	E	D	D	B	A
1.0%							G	F-	F	E	D	C	A
2.2%					G	G	F	E	D	C	C	A-	A
4.6%	I	H	H	G	F-	F	E	D	C	C	B	A	A
10.0%	H	H	G	F-	F	E	D	C-	C	B	A	A	A
21.5%	H	G	F	E	E	D	C	B-	C	A	A	A	A
31.6%	G	F-	F	E	D	C-	C	B	B	A	A	A	A
46.4%	G	F	E	E	D	C	B	B	A	A	A	A	A
100%	F	E	D	C+	C	B	A	A	A	A	A	A	A

Action required

Action required?	Action	Coded elsewhere?	Quantity
Y	Repair/replace electrical system (S5)	Y	
Y	Provide additional sockets	N	Number: <input type="text"/>
Y	Repair/replace or reposition heater (S5)	Y	Number: <input type="text"/>
Y	Relocate cooker	Y	Number: <input type="text"/>
Y	Re-fit, extend, re-site kitchen (S5)	Y	Number: <input type="text"/>
Y	Repair/Install precautions to common areas (S9)	Y	Sq m: <input type="text"/>
Y	Replace non fire resistant/smoke permeable structure/poly. tiles	Y	Sq m: <input type="text"/>
Y	Upgrade stairway to protected route	Y	Flights: <input type="text"/>
Y	Replace inadequate heating system	N	
Y	Provide fire stop wall to loft space	N	Number: <input type="text"/>
Y	Provide self-closing doors	Y	Number: <input type="text"/>
Y	Install smoke detection measures	Y	Number: <input type="text"/>
Y	Provide suitable openable windows/doors for MOE (S5, S9)	N	Number: <input type="text"/>
Y	Provide fire escape	N	Flights: <input type="text"/>
Y	Remove obstacle	N	Number: <input type="text"/>

Flames, hot surfaces etc.

Significantly higher than average Y N

Average

Likelihood of a child under 5 being burnt/scalded

				1000	560	320	180	100	56	32	18	6	2
--	--	--	--	------	-----	-----	-----	-----	----	----	----	---	---

Likely outcome if a child under 5 is burnt/scalded
 Class 1 Extreme %
 Class 2 Severe %
 Class 3 Serious %

<0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%				H	F	E-	E	D	C	A
0.2%				G	F	E	D	D	C	A
0.5%				G	F	E	D-	D	B	A
1.0%				F	E-	E	D	C	B	A
2.2%			F-	F	E	D	D+	C	A	A
4.6%		F-	F	E	D	D	C	B	A	A
10.0%	F-	F+	E	D	C	C+	B	A	A	A
21.5%	E-	E	D	C	B	B	A	A	A	A
31.6%	E	D	C-	C	B	A	A	A	A	A
46.4%	E+	D	C	B	B+	A	A	A	A	A
100%	C-	C	D	A	A	A	A	A	A	A

Action required

Action required?	Action	Coded elsewhere?	Quantity
Y	Repair, replace or reposition heater, heating or hot water pipes, or cover (S5)	Y	Number: <input type="text"/>
Y	Relocate cooker	N	Number: <input type="text"/>
Y	Re-fit, extend, re-site kitchen (S5)	Y	Number: <input type="text"/>
Y	Remove obstacle	N	Number: <input type="text"/>

Damp and Mould Growth

Significantly higher than average Y N

Likelihood of a person under 15 suffering illness

Average											
560	320	180	100	56	32	18	6	2			

Likely outcome if a person under 15 should fall ill

Class 1 Extreme %
Class 2 Severe %
Class 3 Serious %

<0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 1800	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%			F-	I	H	G	F-	F	E	D+	A
0.2%											
0.5%											
1.0%											
2.2%											
4.6%											
10.0%											
21.5%											
31.6%											
46.4%											
100%											

Action required

Action required?	Action	Coded elsewhere?		Quantity
Y	Treat rising damp (S5, S18)	Y		
Y	Treat penetrating damp, leaking pipes and services (S5, S18)	Y	N	Number: <input type="text"/>
Y	Condensation - extractor fans to install/repair (S5)		N	Number: <input type="text"/>
Y	Condensation - repair/provide opening window (S9, S18)	Y	N	Number: <input type="text"/>
Y	Repair/replace/improve heating system (S5)	Y	N	Number: <input type="text"/>
Y	Improve Insulation (S5, S6, S16, S18)	Y		

Entry by intruders

Significantly higher than average Y N

Likelihood of a person being affected

Average											
32	18	6	2								

Likely outcome if a person is affected

Class 1 Extreme %
Class 2 Severe %
Class 3 Serious %

<0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 1800	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%								F	E	D+	A
0.2%											
0.5%											
1.0%											
2.2%											
4.6%											
10.0%											
21.5%											
31.6%											
46.4%											
100%											

Action required

Action required?	Action	Coded elsewhere?		Quantity
Y	Make doors to dwelling secure (S5, S18)	Y	N	Number: <input type="text"/>
Y	Make windows to dwelling secure (S5, S18)	Y	N	Number: <input type="text"/>
Y	Provide additional (security) lighting		N	Number: <input type="text"/>
Y	Install alarm system/CCTV to dwelling		N	
Y	Provide concierge or entry phone system to block of flats		N	
Y	Repair/provide defensible space to dwelling		N	Sq m: <input type="text"/>
Y	Neighbourhood problems which require measures other than improvements to dwelling security			

Noise

Significantly higher than average Y N

		Average										
		1000	560	320	180	100	56	32	18	6	2	
Likelihood of a person being affected												
Likely outcome if a person is affected	Class 1 Extreme %	<0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
	Class 2 Severe %	0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
	Class 3 Serious %	0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 1800	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%		J	I-	I	H	G	F-	F	E	D+	A
0.2%											
0.5%											
1.0%											
2.2%											
4.6%											
10.0%											
21.5%											
31.6%											
46.4%											
100%											

Action required

Action required?	Action	Coded elsewhere?		Quantity	
Y	Soundproof floors		N	Sq m:	
Y	Soundproof ceiling		N	Sq m:	
Y	Soundproof / move noisy machinery / equipment		N	Number:	
Y	Soundproof partitions		N	Sq m:	
Y	Soundproof party walls		N	Sq m:	
Y	Install secondary glazing to windows/repair windows	Y	N	Number:	

Collision and entrapment

Significantly higher than average Y N

		Average low headroom						Average				
		180	100	56	32	18	6	2				
Likelihood of a <u>child under 5</u> being injured												
Likely outcome if a <u>child under 5</u> is injured	Class 1 Extreme %	<0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
	Class 2 Severe %	0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100
	Class 3 Serious %	0.1	0.2	0.5	1	2.2	4.6	10	21.5	31.6	46.4	100

Must not add up to >100.2%

Look-up table

Likelihood Class 1 Outcome	1 in 1800	1 in 1000	1 in 560	1 in 320	1 in 180	1 in 100	1 in 56	1 in 32	1 in 18	1 in 6	1 in 2
0.1%								F	F+	D	A
0.2%								F	E	D	A
0.5%								E	E	C	A
1.0%							E	E	D	B-	A
2.2%							E	D	C	B	A
4.6%					E	E+	D	C	B	A	A
10.0%					D	C-	C	B	A	A	A
21.5%					C	B-	B	A	A	A	A
31.6%					C	B	A	A	A	A	A
46.4%					B	B+	A	A	A	A	A
100%					A-	A	A	A	A	A	A

Action required

Action required?	Action	Coded elsewhere?		Quantity	
Y	Repair/replace windows (S9, S18)	Y	N	Number:	
Y	Repair/replace doors (S5, S9, S18)	Y	N	Number:	
Y	Signpost low headroom		N	Number:	
Y	Remove obstacle		N	Number:	

23. Fitness Outcome

Review the survey form and assess whether the dwelling is fit for habitation against the following list of items. If the dwelling is unfit under any heading, describe the reasoning in the space provided.

	Unfit	Defective	Acceptable	Satisfactory	
1. Structural stability	1	2	3	4	
2. Disrepair	1	2	3	4	
3. Dampness	1	2	3	4	
4. Lighting	1	2	3	4	
5. Heating	1	2	3	4	
6. Ventilation	1	2	3	4	
7. Water Supply	1	2	3	4	
8. Food Preparation	1	2	3	4	
9. WC	1	2	3	4	
10. Bath / Shower / WHB	1	2	3	4	
11. Drainage	1	2	3	4	

Refer to the final fitness assessments above and confirm

Is the dwelling unfit?	Y	N
Is this a clear cut decision?	Y	N

If unfit on one or more of these items above:

Are there any migrating circumstances for unfitness decision?

None	Short-term refurbishment	Being made fit
1	2	3

If unfit or fit: What is the most appropriate course of action?

RETAIN			DO NOT RETAIN	
No action	Repair/Improve single dwelling	Repair/improve block/ group of dwellings	Demolish/replace individual dwelling	Demolish/replace block/group of dwellings
1	2	3	4	5

24. Local area

Clearly define an area of manageable size before completing this page.

Eight band definition	Urban					Rural		
	Band A	Band B	Band C	Band D	Band E	Band F	Band G	Band H
	Belfast Metropolitan Urban Area (BMUA)	Derry Urban Area	Large Town	Medium Town	Small Town	Intermediate Settlement	Village	Small Village, Hamlet, Open countryside
	1	2	3	4	5	6	7	8

Number of dwellings in area	Under 25	25-49	50-99	100-299	300-499	500+	Isolated	If isolated go to visual quality
	1	2	3	4	5	6	7	

Predominant age	Pre 1919	1919-1944	1945-1964	1965-1980	Post 1980	None
	1	2	3	4	5	6

Predominant residential building type	Houses				Flats				Mixed houses and flats
	Terraced	Semi-detached	Detached	Mixed houses	Converted flats	Low rise flats	High rise flats	Mixed flats	
	1	2	3	4	5	6	7	8	

Predominant tenure as built	Privately built	Local authority built	Housing association built	Mixed tenure	Impossible to ascertain
	1	2	3	4	9

Estate Number of dwellings on estate	Not on estate	Same as area	Under 25	25-49	50-99	100-299	300-499	500+
	8	1	2	3	4	5	6	7

If area is L.A. estate, % of RTB dwellings	Not on L.A. estate	None (0%)	1-10%	11-25%	26-50%	51-75%	76-99%	100%
	8	1	2	3	4	5	6	7

Best							Worst	
1	2	3	4	5	6	7		

Visual quality of local area

Problems in local area

	No problems			Major problems	
	1	2	3	4	5
Litter/rubbish/dumping	1	2	3	4	5
Graffiti	1	2	3	4	5
Vandalism	1	2	3	4	5
Dog/other excrement	1	2	3	4	5
Condition of dwellings	1	2	3	4	5
Vacant sites	1	2	3	4	5
Intrusive industry	1	2	3	4	5
Non-conforming uses	1	2	3	4	5
Vacant/boarded-up buildings	1	2	3	4	5
Ambient air quality	1	2	3	4	5
Heavy traffic	1	2	3	4	5
Intrusion from motorways/main roads	1	2	3	4	5
Railway/aircraft noise	1	2	3	4	5
Nuisance from street parking	1	2	3	4	5
Scruffy gardens/landscaping	1	2	3	4	5
Scruffy/neglected buildings	1	2	3	4	5
Condition of road, pavements and street furniture	1	2	3	4	5
Painted kerbs	1	2	3	4	5
Graffiti (sectarian)	1	2	3	4	5

APPENDIX C

Estimating Repair Costs

Introduction

This appendix briefly outlines the methodology used to produce the repair costs quoted in the main report. It looks at how the primary data was collected by surveyors and its interpretation by the Building Research Establishment's repair cost model to produce the final estimates.

Primary Data

Four types of information were used to calculate base repair costs:

- The surveyor's assessments of the types of internal repair needed and their extent. Much of this information was collected on the basis of how many tenths of a specific element required repair or replacement.
 - External elements and items were assessed on the basis of materials and forms. Appropriate treatments were recommended. In both cases the information was entered on to the survey form in tenths.
 - Building dimensions and forms were measured and entered in the survey form in meters.
 - Unit prices for different types of jobs were taken from the National Schedule of Rates and inflated using a tender price index to current levels, with a further cost factor of 0.75 to reflect the regional price difference for Northern Ireland.
1. Normally the interior was surveyed first, then the exterior.
 - A number of rooms were selected to give a representative view of the dwelling as a whole: living room, kitchen, bedroom and bathroom.
 - The total number of rooms present was noted and the overall estimates for the dwelling increased accordingly.
 - All the internal facilities and services, bath, WC, wash hand basin, sink etc were surveyed individually.
 2. For the common area of flats, only representative portions were surveyed and these were scaled up as appropriate.
 3. Dwellings were assessed externally from two viewpoints, chosen so that, taken together, the whole of the exterior was seen.
 4. Surveyors were instructed to make their assessments based on several assumptions:
 - Dwellings were assumed to have an indefinite life span.
 - Replacement was to be delayed if reasonable repairs could be carried out in the interim.
 - It was assumed that repairs rather than replacements would be carried out unless:
 - (i) this was impossible or (ii) replacement would still be necessary within five years or (iii) the element would need replacement in any case e.g. because it was unsuitable for its intended purpose.
 - Functionality was the criterion i.e. not modernisation, upgrading, fashion or cosmetic improvement.
 - Economies of scale were not to be a criterion e.g. if total replacement would cost little more than, say, 80 per cent of replacement, cost was nevertheless based on partial replacement.
 5. The assessment was based on:
 - Proportional area where appropriate e.g. roofs, walls etc.
 - Number of units e.g. doors, windows etc.
 - Linear amount for those for which area was inappropriate e.g. gutters.
 6. For linear elements the quantity was multiplied by unit cost e.g. for gutters per metre, for discrete elements e.g. doors by unit cost (£) and for area-based elements by cost per square metre.
 - Replacement was on a like-for-like basis e.g. slate roof for slate roof, wooden window frame for wooden window frame where practical.

7. All the costs were calculated for individual dwellings
 - For flats, the common areas and exterior costs were divided by the number of flats and added to the individual costs of the interiors - to give the total cost.
 - Where the surveyor recommended repairs which would have cost more than replacements the replacement cost was used.

Missing Data

8. Surveyors may have omitted some data or entered incorrect data.

Where appropriate, this was referred back to the surveyor, but otherwise imputation was applied on the following basis:

- Dimensions, where implausible or missing, were corrected with the help of photographs, and surveyor diagrams.
- Where data on components were missing e.g. where a roof had a pitched and flat section, and only the pitched section had its repair needs recorded, the same proportion needing repair was entered for the flat section.
- When an element, for which there was data on one view, was missing on the other view, it was assumed that both needed the same treatment.
- If whole elements were missing, e.g. windows the average for dwellings of a similar age and type was used.

Add-ons, up-lifts and preliminaries were used to modify base costs e.g. preliminary work before the specified work could begin, accessing equipment such as scaffolding and economies of scale. Economies of scale take account of the amount of work being done to one dwelling, say a call-out and whether more than one dwelling was likely to be included in one contract.

Repair Costs

9. The two main types of costs measures were:
 - a) The extent of disrepair in terms of elements or unit costs.
 - b) Overall cost per dwelling so that aggregated costs could be assessed.
 - Standardised (unit) costs were based on £ per square metre on the assumption that a contract contained five dwellings.
 - Required expenditure was total costs per dwelling based on single dwellings in the private sector. Unless a dwelling was specifically noted as a stand alone in the public sector the costs were based on the size of the estate the dwelling was on. For flats the basis was always the complete block.
 - Comparisons of cost may only be valid as an indication of relative condition if care is taken to ensure that all other factors are equal e.g. size and form.
10. The BRE model processed this detailed information to provide repair costs for each dwelling as a whole and for each of its main elements. The results were then aggregated and are presented in tabular form in the Annex or in the text of the Main Report.
 11. In statistical terms, the distribution of repair costs per dwelling was not normal:
 - Most dwellings required relatively little or no expenditure, but a few required a great deal.
 - Thus the mean level of expenditure gave a less accurate indication of the typical level of expenditure required than the median.
 - The median cost could not be used for grossing up to total expenditure requirements – the mean was used for this purpose.

Repair Costs 2006-09

The surveyors collecting the data were all briefed in the same manner in 2006 and 2009. However, surveyors' opinions can vary over time and consequently any comparisons made between the two surveys will include some unquantifiable error due to surveyor judgement shift.

APPENDIX D

Technical Issues

Sample Design

1. The 2009 Northern Ireland House Condition Survey was based on a stratified random disproportionate sample of 3,000 dwellings comprising two main elements:
 - A fresh sample of 1,500 properties.
 - A resample of 1,500, enabling the measurement of policy related change over time.
2. The sample was stratified by area and a total of 220 properties were selected in each of Northern Ireland's ten proposed new council areas, with 800 selected for the Belfast District Council Area (200 in North, East, South and West Belfast).
3. The sample frame for the fresh sample, in 2009, was the survey sampling database held at the Northern Ireland Statistics and Research Agency (NISRA). This database contained a subset of the computerised records for domestic residential property maintained by the Valuation and Lands Agency. Within each area the sample was stratified on the basis of Capital Value. Properties with a description of 'Outbuilding' or 'Lockup' (less than £25k) were excluded.
4. The sample frame was split into properties with a Capital Value of £90k or more and those with a Capital Value of less than £90k. Two-thirds of the properties were drawn from the less than £90k band and the remaining one-third from the £90k or more band. This was considered to be the nearest equivalent of the NAV bands £19-£150 and the above £150 used in 2001 and 2006. A total of 110 properties were selected from each area outside Belfast (10) and 100 properties for each of the four Belfast sectors.
5. The sample frame for the resample was the database containing the 2006 Survey records. In each area all unfit and defective properties were selected for resurvey. The numbers were made up to 110 in each area (100 for Belfast sectors) by a random sample of properties, divided on the basis of those which had

been acceptable and those which had been satisfactory. This sample was extracted by the Housing Executive's Research Unit.

6. The Survey used a Stratified Random Disproportionate sample design.
 - It was stratified in that the sample was chosen to have approximately even numbers in each proposed council area or area of Belfast. Each of these areas constituted a stratum. This had the benefit that sample errors were similar in each of these areas and the areas of Belfast, which facilitated comparisons during analyses.
 - Within each of these areas addresses were chosen at random, but in the case of the fresh sample, the sample frame was first split into properties with Capital Value above and below £90k.
 - A higher proportion of those in the lower band was chosen at random than would have occurred had the random selection extended across the whole address listing taken as one unit. This, along with the use of the sample size for areas with widely differing numbers of dwellings, made the sample disproportionate.

Weighting and Grossing

7. Weighting and grossing is the process whereby the information gathered by means of a sample survey is translated into figures that reflect the real world. The process has a number of stages reflecting the separate stages of the sampling process and the survey process itself. In the case of the 2009 HCS it also has to take account of the need to allow for new build and demolitions and to control the survey-based statistics to external totals (proposed council area by tenure).
8. The two strands of this process (weighting and grossing) were merged into a single 'weight' and applied to each sampled dwelling and the data held for it.
9. Non response is a potential source of error that can be difficult to correct. However, an initial adjustment was made for non response on the basis of tenure. Non response was higher in private sector dwellings than in the social sector. An adjustment was made to correct this imbalance.

10. An analysis of the VLA-based sample frame showed the proportion of dwellings in Northern Ireland with Capital Values at least £25k but less than £90k and £90k or more. The sample was drawn on the basis that two-thirds of the sample had Capital Values of £25k-£89.9k and one-third had Capital Values of £90k and above. The sample was then corrected by multiplying the results by the disproportion factors.
11. The disproportionate nature of the re-sample was also rectified by applying appropriate factors. Primarily in order to facilitate the longitudinal study of unfit and disrepair all 2006 unfit and defective dwellings were included (up to a total of 110 for each sample area). Proportions were corrected appropriately with allowances made for new build and demolitions.

Sample Error

12. It has become normal practice to estimate the sample errors at the 95% confidence level i.e. the results would be replicated nineteen times out of twenty if the survey were repeated.

The formula for sample error is:

$$\pm 1.96 \sqrt{\frac{P(100-P)}{N-1}}$$

Where P is the percentage in question and N is the sample size in question. Where N is large, for convenience this 1 is ignored. The result of application of this formula is that the percentage error increases as the sample size is reduced and the relative error increases when the percentage is very low or very high e.g. less than 10% or higher than 90%.

13. Taking an example of a sample size of 100 and where the percentage in question is 10

S sample error =

$$\pm 1.96 \sqrt{\frac{10 \times 90}{99}} = \pm 5.91\%$$

Thus the percentage (10%) should be read as 10% +/- 5.91% i.e. one can only be sure that the percentage is between 4.09% and 15.91%. For 50% and a sample size of 100 the sample error would be +/- 9.85% i.e. the range would be from 41.15% to 59.85%.

14. The table of sample errors opposite has been calculated for an approximate achieved sample, after allowance for non response, for a new proposed council area outside Belfast.
15. It is most important, when comparisons are being made between Areas or between Northern Ireland and other parts of the UK, or between results of this Survey and previous Surveys, that potential sample error is calculated, even approximately, to determine whether there are real differences.
16. The sample issued consisted of the following components.

Total Fresh Sample	1500
Total Resample	1500
Total Sample	3000

Response Rate

1. Table 2 on the following page summarises the Survey outcome.
2. Of the 3,000 addresses issued to surveyors, full surveys were completed for 2,174 properties giving a gross response rate of 72%. However, the potential response was 2,951 (excluding not traced, derelict and demolished), giving a response rate for the physical survey of 74% (2,174 out of 2,951).
3. The response rate for the household survey was higher. Overall, 1,901 inspected dwellings were occupied and of these 1,889 household interviews were achieved, a response rate of 99%.
4. The number of vacant dwellings visited during the Survey was 273. Therefore the total number of dwellings in which a household interview would have been possible was 2,951-273=2,678. This gives a social survey response rate of 71% (1,889 interviews out of 2,678).

Table 1
Sample Errors

% Sample Size:		5 or 95	10 or 90	15 or 85	20 or 80	25 or 75	30 or 70	35 or 65	40 or 60	45 or 55	50 50
	100	4.29	5.91	7.03	7.88	8.53	9.03	9.40	9.65	9.80	9.85
Area	150	3.50	4.82	5.73	6.42	6.95	7.36	7.66	7.87	7.99	8.03
Private Rented	300	2.47	3.40	4.05	4.53	4.91	5.19	5.41	5.55	5.64	5.67
Vacant	300	2.47	3.40	4.05	4.53	4.91	5.19	5.41	5.55	5.64	5.67
Social Housing	500	1.91	2.63	3.13	3.51	3.80	4.02	4.19	4.30	4.37	4.39
Belfast Total	600	1.75	2.40	2.86	3.20	3.47	3.67	3.82	3.92	3.98	4.00
	900	1.42	1.96	2.33	2.61	2.83	3.00	3.12	3.20	3.25	3.27
Owner Occupied	1000	1.35	1.86	2.21	2.48	2.69	2.84	2.96	3.04	3.09	3.10
Northern Ireland	2000	0.96	1.32	1.57	1.75	1.90	2.01	2.09	2.15	2.18	2.19

Table 2
Survey Outcome 2009

	Number	%
Full Survey	2,174	72
No contact made	284	10
Access refused to Surveyor	323	11
Access refused at NIHE	141	5
Address untraceable	1	<1
Dwelling derelict	33	1
Dwelling demolished	15	<1
No longer usable as a dwelling	18	<1
Other	11	<1
Total	3,000	100

Rounding

1. Annex table numbers are rounded to nearest 10 and percentages to the nearest 0.1.
2. However, in the main text percentages are rounded in an attempt to prevent readers gaining an exaggerated impression of their accuracy. Percentages were rounded up if the percentage was .5 or more (e.g. 10.5% was rounded up to 11%). There might be more than one instance of rounding up or down. Therefore, the total column may add to more or less than 100%. However, the total column in the table will still be shown as 100%.

The following table summarises the response rates:

Table 3
Response Rates 2009

Full surveys as a % of sample	72%
Full physical surveys as a % of existing dwellings	74%
Full social surveys as a % of inspected occupied dwellings	99%
Full social surveys as a % of existing dwellings	71%

APPENDIX E

Glossary

Basic Amenities:

There are five basic amenities:

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

Bedroom Standard

The bedroom standard is calculated as follows:

- A separate bedroom is allocated to each co-habiting couple, any other person aged 21 or over, each pair of young persons aged 10-20 of the same sex and each pair of children under 10 (regardless of sex).
- Unpaired young persons aged 10-20 are paired with a child under 10 of the same sex or, if possible, allocated a separate bedroom.
- Any remaining unpaired children under 10 are also allocated a separate bedroom.
- The calculated standard for the household is then compared with the actual number of bedrooms available for its sole use to indicate deficiencies or excesses.
- Bedrooms include bed-sits, box rooms and bedrooms that are identified as such by interviewees even though they may not be in use as such.

Central Heating System

Central heating was defined as a heating system with a distribution system sufficient to provide heat in at least two rooms. One of these may be to the room or space containing the boiler. For the purpose of this report, the definition also includes electric storage heaters that run on off-peak electricity.

Dwelling Age

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

Double Glazing

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

Dwelling Location

See Settlement Type (below)

Dwelling

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

Floorspace

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

Household Reference Person

The household reference person is the member of the household who owns or pays the rent or mortgage on the property. Where two people have equal claim (e.g. husband and wife jointly owns the property) the household reference person is the person with the highest annual income. This definition is for analysis purposes and does not imply any authoritative relationship within the households.

Household

A single person living alone or a group of people living at the same address as their only or main residence either sharing a living room or sharing at least one meal a day or sharing a substantial proportion of domestic shopping arrangements (e.g. food shopping). There should therefore be a degree of interaction between household members.

HOUSEHOLD TYPES

Lone Adult

One adult below pensionable age (65 for men, 60 for women).

Two Adults

Two people, related or unrelated, below pensionable age (65 for men, 60 for women).

Lone Parent

One adult living with one or more dependent children aged under 16.

Small Family

Two adults, related or unrelated, living with one or two dependent children aged under 16.

Large Family

Two adults, related or unrelated, living with three or more dependent children aged under 16; OR three or more adults living with one or more dependent children aged under 16.

Large Adult

Three or more adults, related or unrelated, and no dependent children aged under 16.

Two Person Older

Two people, related or unrelated, at least one of whom is of pensionable age (65 plus for men and 60 plus for women).

Lone Older

One person of pensionable age or older (65 plus for men, 60 plus for women).

REPAIR COSTS

Faults

A fault is any problem which is not of a purely cosmetic nature and which either represents a health or safety hazard, or threatens further deterioration to the specific element or any other part of the building.

Faults requiring urgent treatment

Where surveyors recorded work to be carried out to an exterior building element, they indicated whether the work specified was urgent; defined as that needed to be undertaken immediately to remove threats to the health, safety, security and

comfort of the occupants and to forestall further rapid deterioration of the building.

Urgent Repair Costs

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

Basic Repair Costs

These are all urgent repairs plus all other repairs/replacements to external elements where the surveyor indicated a fault, but where the work was not specified as urgent.

Comprehensive Repair Costs

This includes all basic repairs together with any replacements the surveyor assessed as falling due over the next 10 years. For all exterior elements, whether work was specified or not, the replacement period of that element was recorded i.e. the number of years before it would need replacing.

Standardised Costs

These are costs in £ per square metre (£/sqm²) based on prices for Northern Ireland. It is assumed that all work is undertaken by contractors on a block contract basis. For flats, the size of the contract is assumed to be the whole block and for houses it is taken as a group of 5 dwellings. As such, the costs are more closely associated with those that may be incurred by a landlord organising the work on a planned programme basis. By reducing costs to a £sq/m² basis the effect of the size of buildings on the amount of disrepair recorded is negated, otherwise the extent of the disrepair measured is substantially driven by the size of the building.

Second Home

A second home is a dwelling that is occupied by a household, but not as their primary residence. In Northern Ireland these are largely holiday homes, used solely for holidays or weekends, both for family use or as a commercial holiday let.

The House Condition Survey came across very few second homes for business purposes. The survey also recorded a third category: abandoned usually rural dwellings that belonged to a parent, grandparent or other relation and have now passed to a younger family member who lives elsewhere.

TENURE

The following categories are used for most reporting purposes:

Owner Occupied

Dwellings occupied by households who own their own homes outright or are buying them with a mortgage/loan. It includes houses part owned by Northern Ireland Co-ownership Housing Association.

Private Rented (and Others)

Occupied dwellings rented from private landlords. Includes households living rent free, or in tied homes or as wardens of, for example, housing association dwellings.

Social Housing

All occupied dwellings owned and managed by the Northern Ireland Housing Executive and all occupied dwellings owned and managed by housing associations (registered and unregistered) with the exception of NI Co-ownership Housing Association.

Vacant Dwellings

Classified as a separate "tenure" (see below) they were vacant on the day the surveyor carried out the survey.

SETTLEMENT TYPES

The settlement types used for the 2009 House Condition Survey were used in previous surveys. However, in 2004, 2006 and 2009 surveyors gathered the information themselves using a guidance booklet which categorised each address into one of the settlement groupings. In 2001 the settlement type information was added to the database afterwards using Geographical Information Systems (GIS).

In 2006, the categorization of the Belfast Area and District/Other Towns changed and the categories were reduced to four settlement groups. Therefore direct comparisons with 2001 and 2004 are no longer possible.

The hierarchy of 2009 settlement groups is as follows:

Belfast Metropolitan Area (BMA)

The concept of the old Belfast Urban Area has now been superseded by a more easily defined Belfast Metropolitan Area which includes the following six councils:

- Belfast
- Carrickfergus
- Newtownabbey
- Lisburn
- Castlereagh
- North Down

All dwellings in these six District Councils were classified as BMA.

District and Other Towns

The historic distinction by Planning Service between District and "Other" towns is no longer meaningful. The following towns are classified under this heading:

Antrim	Omagh
Armagh	Strabane
Ballycastle	Randalstown
Ballymena	Comber
Ballymoney	Donaghadee
Banbridge	Tandragee
Coleraine	Dromore
Cookstown	Rathfriland
Craigavon (including Lurgan and Portadown)	Carryduff
Derry	Portrush
Downpatrick	Portstewart
Dungannon	Newcastle
Enniskillen	Ballynahinch
Larne	Coalisland
Limavady	Dungiven
Magherafelt	Kilkeel
Newtownards	Warrenpoint
Newry	

Small Rural Settlements

These are defined as those dwellings served by street lights which are distinct from and usually separated by open land from District towns/Other towns and outside BMA.

This classification demands some judgement;

a)	A few street lights on a busy main road do not necessarily make a few scattered houses a settlement.
b)	The Housing Executive has some small estates in rural areas with street lights but no posted settlement name. These should be counted as smaller settlements.
c)	Where some smaller settlements are being swallowed up by District Towns they should be counted within the District Town.

The use of the street light definition rather than villages and hamlets is because the latter are based on the presence of such amenities as churches and pubs. This definition works in England where it originated but not in Northern Ireland. Likewise numbers of dwellings in the area are difficult to assess in the scattered settlement types in Northern Ireland.

Isolated Rural

Not served by street lights. Again judgement is needed on the edges of settlements. Any dwellings within BMA settlement area was defined as BMA even if not served by street lights.

Type of Dwelling

Dwellings are classified by surveyors as follows:

- Terraced house - a house forming part of a block where at least one house is attached to two or more other houses.
- Semi-detached house - a house that is attached to one other house.
- Detached house - a house where none of the habitable structure is joined to another building (other than garages, outhouses etc).
- Purpose built flat - a flat in a purpose built block. Includes cases where there is only one flat with independent access in a building which is also used for non-domestic purposes.

- Converted flat - a flat resulting from the conversion of a house or former non-residential building. Includes buildings converted into a flat plus commercial premises (typically corner shops).
- Bungalow was defined as a house with all of the habitable accommodation on one floor. It excluded chalet bungalows and bungalows with habitable loft conversions, which are treated as houses. In the interests of clarity these are usually referred to as single storey houses in the text of the main report.

Vacant Dwellings

The assessment of whether or not a dwelling was vacant was made at the time of the survey. Clarification of vacancy was sought from neighbours. Surveyors were required to gain access to vacant dwellings and undertake full inspections. The tenure when last occupied was noted for analysis purposes. However, in the private sector in particular, this does not mean it will be in this tenure when next occupied. Vacant dwellings are therefore normally analysed as a separate "tenure".

Cavity Wall Insulation

For the purposes of this analysis the following classification has been adopted:

- Full Cavity Wall Insulation - dwellings constructed with cavity walls where all walls contain cavity wall insulation.
- Partial Cavity Wall Insulation - dwellings of cavity wall construction or partly of solid wall and partly of cavity wall construction, where at least one cavity wall contains insulation. A small number of dwellings were recorded as having no cavity walls but have cavity wall insulation. These dwellings have insulated concrete or timber panels and are classified as partial cavity wall insulation.
- Internal/External Insulation - dwellings originally built with solid wall construction, not included in the above category, but which have at least one wall with external insulation or internal insulation.
- No Wall Insulation - the remaining dwellings (of cavity wall or solid construction or both) where there is no evidence of insulation.

Fitness Decisions

The terms Satisfactory, Acceptable, Defective and Unfit are somewhat artificial concepts used in House Condition Surveys to indicate the condition of a property on a 'sliding scale.'

The only true legal decision that the surveyors must make is whether the property is:

- "so far defective in one or more of the 9 points [or headings or criterion] contained in the fitness standard as to be unreasonable for occupation in that condition".

This definition must guide the surveyor's decision in deciding if the property is legally Fit or Unfit. The three terms Satisfactory, Acceptable and Defective are degrees of fitness.

Surveyors are given the following guidance in assessing fitness in the NIHCS:

- Satisfactory means that there are NO or very, very insignificant faults in relation to each heading.
- Acceptable means that there are some faults of a minor nature that do not significantly impact on the overall condition or fitness judgements.
- Defective indicates quite serious faults that are bringing the property close to a judgement of unfitness but not quite enough to make that final jump to a decision that the property fails the standard.
- Unfit means the property fails the fitness standard, is unsuitable for occupation in that condition, and that statutory action by the Housing Executive is required.

Note:

Surveyors are told that if the condition of the property makes them start thinking that it could be unfit under any of the headings, then it can not be any better than defective under that heading.

THE DECENT HOME STANDARD (NORTHERN IRELAND) - A SUMMARY

A decent home is one that is wind and weather tight, warm and has modern facilities. A decent home meets the following four criteria:

Criterion a: It meets the current statutory minimum standard for housing.

This current minimum standard for Northern Ireland is set out in schedule 5 of the Housing (Northern Ireland) Order 1992 (see Chapter 5). In England, the Unfitness Standard has been replaced by the Housing Health and Safety Rating as the first criterion in the Decent Homes Standard. In Northern Ireland the Department for Social Development is currently considering whether this should happen in Northern Ireland as well.

Criterion b: It is in a reasonable state of repair.

A dwelling satisfies this criterion unless:

- one or more key building components are old and, because of their condition need replacing or major repair; or
- two or more of the other building components are old and, because of their condition, need replacing or major repair.

Criterion c: It has reasonably modern facilities and services.

Dwellings that fail to meet this criterion are those that lack three or more of the following:

- A reasonably modern kitchen (20 years old or less);
- A kitchen with adequate space and layout;
- A reasonably modern bathroom (30 years old or less);
- An appropriately located bathroom and WC;
- Adequate insulation against external noise (where external noise is a problem);
- Adequate size and layout of common areas for blocks of flats.

Criterion d: It provides a reasonable degree of thermal comfort.

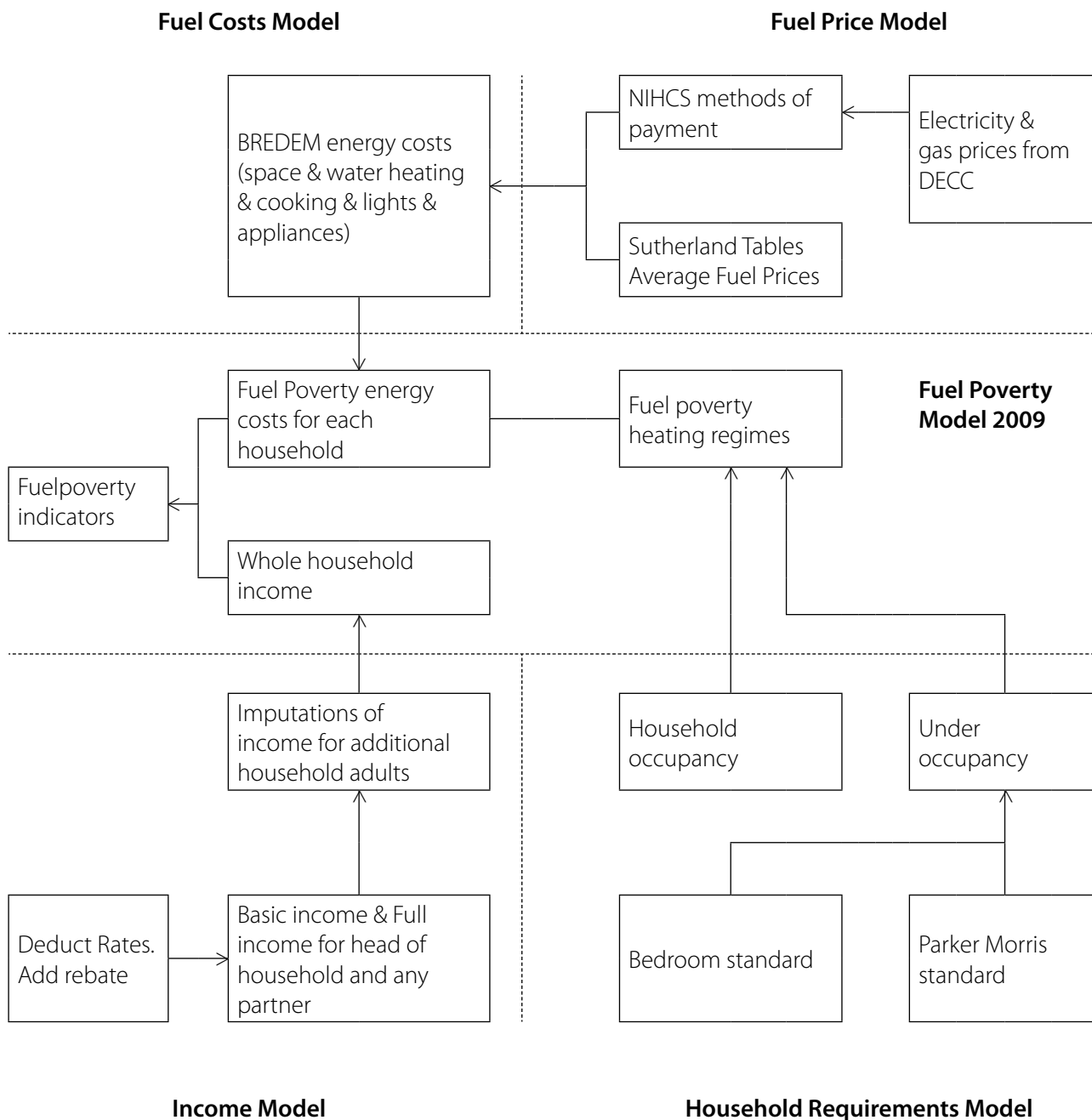
This criterion requires dwellings to have both effective insulation and efficient heating.

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 that are developed in the future. Heating sources that provide less energy efficient options fail the decent home standard.

Because of the differences in efficiency between gas/oil heating systems and the 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 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 cavity walls that can be insulated effectively).
- For the purposes of analysis all dwellings built since 1990 are assumed to meet the thermal comfort criterion.

**APPENDIX F:
Schematic Diagram of the 2009
Northern Ireland Fuel Poverty Model**



Northern Ireland Income Calculation summary

Gross annual income is collected for the HRP and Partner (where present) in each household. Income Tax and National Insurance are deducted where applicable. Where a household on certain benefits has an income below what they should be entitled to under income support their income is raised to that level. The income of additional adults is not collected and so an income amount for each additional adult in a household is imputed by a 'hot decking' technique using additional adult income data from the 2008 English Housing Survey, adjusted to reflect Northern Ireland wages and 2009 data. The variables used for the additional adult income imputations were sex, banded age and employment status. This additional adult income along with Winter Fuel Payment is added to the net income of the Primary Benefit Unit (HRP and Partner) to create a 'basic' income variable. Housing benefit is added to this variable and finally net rates payable are deducted to create a 'full' income variable.

Calculation of Fuel Prices

The fuel price element of the fuel poverty model generates a case by case output to be fed into the energy consumption model.

The price each household pays for its fuel depends on four main factors:

1. The household's location within the country (fuel prices vary regionally - however, only one region is considered for Northern Ireland).
2. The choice of supplier
3. The choice of tariff
4. The method of payment where relevant (i.e. payment by direct debit, credit etc).

Information on the exact tariff, or the supplier, is not collected in the NIHCS. The survey does however collect information on the geographical location of each case and on the method of payment (for metered fuels). This allows the application of an average fuel price for each region and method of payment. Fuel prices specific to each household are calculated for each case.

Household Requirements Model - Extent of Heating, Under Occupancy, Bedroom Standard and Parker Morris Standard

Some dwellings are considered excessive in size for the number of occupants that live there. In this case the house is assumed to be "under-occupied"

that is, only a proportion of the dwelling will need heating. In order for a dwelling to be considered under-occupied it must fulfil the following criteria that depend on both the number of bedrooms in a dwelling and the total floor area of the dwelling:

Bedroom Standard

A dwelling is considered to have surplus bedrooms if:

- 1) there are one or more extra bedrooms than required for homes without dependent children (children under 18 years).
or
- 2) there are two or more extra bedrooms than required for homes with dependent children.

The number of bedrooms required depends on the household constitution. The standard states that:

- A bedroom is required for each couple.
- Children of different sexes below the age of 11 years can share a room.
- Children/adolescents below the age of 21 years of the same sex can share a room.

Floor Area

There is surplus floor area in a property if the floor area of the property is over 200% of that considered to be the "standard" living area required for the number of occupants, as defined by the Parker-Morris Standard [4]. Table 1 defines this standard.

Table 1
Parker Morris Standard

Occupants	Standard living area required (m ²)
1	33
2	48.5
3	61
4	79
5	89.5
6	97
7	114.5
8	128
9	140

For the purposes of fuel poverty, a dwelling is considered to be under-occupied if there are both surplus bedrooms and surplus floor area.

If a dwelling is under-occupied then it is assumed that approximately half of the dwelling (based on the total floor-area of the dwelling and the layout of the floors) is heated, that is:

$A_{heated} \approx 0.5A$

where A is the total floor area of the dwelling.

Heating Regime

The following heating regimes are defined and used to calculate the energy consumption of a household:

Details of STANDARD Heating Regime

Heating Pattern Weekday 9 hours of heating
Weekend 16 hours of heating
Heating Extent Whole house
Demand Temperature Primary living zone 21°C
Secondary living zone 18°C

Details of FULL Heating Regime

Heating Pattern Weekday 16 hours of heating
Weekend 16 hours of heating
Heating Extent Whole house
Demand Temperature Primary living zone 21°C
Secondary living zone 18°C

Details of PARTIAL STANDARD Heating Regime

Heating Pattern Weekday 9 hours of heating
Weekend 16 hours of heating
Heating Extent Half house
Demand Temperature Primary living zone 21°C
Secondary living zone 18°C

Details of PARTIAL FULL Heating Regime

Heating Pattern Weekday 16 hours of heating
Weekend 16 hours of heating
Heating Extent Half house
Demand Temperature Primary living zone 21°C
Secondary living zone 18°C

Having defined the heating regime used by each household, the energy use for space heating can be approximated using the BREDEM model which calculates the energy required to bring each dwelling to the designated temperatures and for a set period of time each day and across the year. This calculation needs to take on board details about the heating systems, applied insulation and dwelling construction and materials.

Energy Consumption/Fuel Costs

The amount of fuel consumed to provide the energy needs of each household is required as one of the components of the fuel poverty ratio, to

assess whether a household is fuel poor. Under the fuel poverty definition, the energy required to heat and power a home includes energy for:

1. Space heating - ES (GJ).
2. Water heating - EW (GJ).
3. Lights and appliances - EL&A (GJ).
4. Cooking - EC (GJ).

The BREDEM model [2] is used to predict the energy use of a household where:

$Total\ household\ fuel\ consumption = ES + EW + EL\&A + EC.$

Total household energy-use includes space and water heating (to meet defined standards) and energy for lights, appliances and cooking. The amount of energy required to heat a dwelling will depend on the building specification such as insulation levels, heating systems and the geographical location of the dwelling. A household's demand for energy will depend on the number of people within the household and the habits of these individuals. Information from the NIHCS is used to provide details about both dwellings and households. The calculation method for each component of energy consumption is consistent with standard energy models such as the Standard Assessment Procedure (SAP) for calculating energy use in dwellings and the more general model from which SAP is derived (BREDEM).

Finally, fuel prices from the fuel price model are combined with the fuel consumption model to provide modelled fuel costs for each household.

Calculating the Fuel Poverty Ratio for Each Household

The final task in the estimation of fuel poverty is to combine the fuel costs with the incomes to calculate the Fuel Poverty Ratio (FPR)

For each case on the NIHCS, a 'fuel poverty ratio' is calculated. This calculation has three components - energy prices (unit and standing charges), fuel consumption and income.

$FPR = (Fuel\ Price * Fuel\ Consumption) / Income\ For\ each\ household$

If the fuel poverty ratio is greater than 0.1 (i.e. a household spends more than 10% of their income on fuel) then the household is considered to be fuel poor.

APPENDIX G

Modelling HHSRS Category 1 Hazards

This section presents an overview of the Housing Health and Safety Rating System (HHSRS) and how the various hazards are measured and modelled using data from the Northern Ireland House Condition Survey (NIHCS). It is divided into 3 sections:

- What is the HHSRS?
- How does NIHCS measure and model Category 1 hazards?
- Data quality and reliability

What is the HHSRS?

The HHSRS is a means of identifying defects in dwellings and of evaluating the potential effect of any defects on the health and safety of occupants, visitors, neighbours and passers-by. The System provides a means of rating the seriousness of any hazard, so that it is possible to differentiate between minor hazards and those where there is an imminent threat of major harm or even death. The emphasis is placed on the potential effect of any defects on the health and safety of occupants and visitors; particularly vulnerable people. Altogether 29 hazards are included (Table 1).

Table 1
The 29 hazards covered by HHSRS

Physiological Requirements	Protection Against Infection
Damp and mould growth etc	Domestic hygiene, pests and refuse
Excessive cold	Food safety
Excessive heat	Personal hygiene, sanitation and drainage
	Water supply
Asbestos etc	
Biocides	Protection Against Accidents
CO and fuel combustion productions	Falls associated with baths etc
Lead	Falling on level surfaces
Radiation	Falling on stairs etc
Uncombusted fuel gas	Falling between levels
Volatile organic compounds	Electrical hazards
Psychological Requirements	Fire
Crowding and Space	
Entry by intruders	Flames, hot surfaces etc
Lighting	Collision and entrapment
	Explosions
Noise	Position and operability of amenities etc
	Structural collapse and falling elements

The HHSRS scoring procedure uses a formula to generate a numerical Hazard Score for each of the hazards identified at the property - the higher the score, the greater the severity of that hazard. Potential hazards are assessed in relation to the most vulnerable class of person who might typically occupy or visit the dwelling. For example, for falls on stairs the vulnerable groups are children and the elderly (65+ years), for falls on the level it is the elderly, and for falls between levels it is children under 4 years old.

The hazard score formula requires the surveyor to make two judgements.

- The likelihood of the occurrence which could result in harm to a vulnerable person over the following twelve months. The likelihood is to be given as a ratio - eg, 1 in 100, 1 in 500, etc.
- The likely health outcomes or harms which would result from the occurrence. From any occurrence there may be a most likely outcome, and other possible ones which may be more or less severe. For example, a fall from a second floor window could result in a 60% chance of a severe concussion, but there may also be a 30% chance of a more serious injury and a 10% chance of something less serious. The 4 classes of harms and associated weightings are listed in Table 2.

Table 2
Classes of Harms and Weightings Used in the HHSRS

Class	Examples	Weighting
Class I	Death, permanent paralysis below the neck, malignant lung tumour, regular severe pneumonia, permanent loss of consciousness, and 80% burn injuries.	10,000
Class II	Chronic confusion, mild strokes, regular severe fever, loss of a hand or foot, serious fractures, very serious burns and loss of consciousness for days.	1,000
Class III	Chronic severe stress, mild heart attack, regular and persistent dermatitis, malignant but treatable skin cancer, loss of a finger, fractured skull, severe concussion, serious puncture wounds to head or body, severe burns to hands, serious strain or sprain injuries and regular and severe migraine.	300
Class IV	Occasional severe discomfort, chronic or regular skin irritation, benign tumours, occasional mild pneumonia, a broken finger, sprained hip, slight concussion, moderate cuts to face or body, severe bruising to body, 10% burns and regular serious coughs or colds.	10

From the judgements made by the surveyor, a hazard score can be generated for each hazard as illustrated below:

Class of Harm Weighting			Likelihood 1 in	Spread of Harm (%)		
I	10,000	÷	100	X	0	= 0
II	1,000	÷	100	X	10	= 100
III	300	÷	100	X	30	= 90
IV	10	÷	100	X	60	= 6
					Hazard Score	= 196

To provide a simple means for handling and comparing the potentially wide range of Scores and avoid placing too much emphasis on the exact numbers, a series of ten Hazard Score Bands have been devised as shown below:

Band	Equivalent Hazard Scores	Overall Severity
A	5,000 or more	Category 1
B	2,000 – 4,999	
C	1,000 – 1,999	
D	500 – 999	Category 2
E	200 – 499	
F	100 – 199	
G	50 – 99	
H	20 – 49	
I	10 – 19	
J	9 or less	

The reporting focuses on Category 1 hazards (those in Bands A, B or C). There are currently a large number of worked examples available for training and assessment purposes. CLG have also published a number of guidance documents detailing the matters to be taken into consideration in assessing each hazard and the average likelihoods and spread of outcomes for each hazard.

How Does NIHCS Measure and Model Category 1 hazards?

The NIHCS does not attempt to directly measure all 29 hazards because this would be extremely time-consuming (around half a day per assessment), require more extensive training and also the use of a specially programmed hand-held palm computer. It was agreed that the NIHCS could not be expected to carry out this type of assessment but BRE have devised a 'cut-down' method that would assess the key hazards in a way that could be incorporated into the existing NIHCS paper survey form. This was tested with a group of surveyors during 2000 and piloted as part of the 2001 NIHCS.

In the 2006 survey, surveyors were asked to rate five hazards directly. These five were chosen because the HHSRS statistics indicated that these would be the most frequent causes of failures of the HHSRS where NIHCS did not already collect relevant or proxy data in the physical survey.

In the 2009 survey and in line with the English HCS the Northern Ireland HCS measured ten hazards directly

- Falls on stairs etc.
- Falls on level surfaces
- Falls between levels
- Fire
- Flames, hot surfaces, etc
- Damp and mould growth
- Entry by intruders
- Noise
- Collision and entrapment

For a further 12 hazards, surveyors were asked to assess whether they represented an 'extreme risk' which would be the equivalent of a Category 1 hazard:

- Excess heat
- Lighting
- Water supply for domestic purposes
- Food safety
- Personal hygiene, sanitation and drainage
- Position and operability of amenities
- Uncombusted fuel gas
- Explosions
- Electrical safety
- Carbon monoxide and fuel combustion productions

- Domestic hygiene, pests and refuse
- Structural collapse and falling elements

The HHSRS guidance specifies, for each hazard, the group of occupants who are most likely to be at risk from the particular hazard; to have an increased likelihood of an incident happening and/or suffer more serious harms as a result (Table 3).

Table 3
Specified Vulnerable Group for Each Hazard

Hazard	Most vulnerable group
Dampness and mould growth	Age under 14
Excess cold	Age 65 or over
Carbon monoxide	Age 65 or over
Lead	Age under 3
Radon	Age 60-64
Crowding and space	None
Noise	None
Domestic hygiene etc.	None
Personal hygiene etc.	Age under 5
Falls on the level	Age 60 or over
Falls – stairs or steps	Age 60 or over
Falls between levels	Age under 5
Electrical hazards	Age under 5
Fire	Age 60 or over
Hot surfaces and materials	Age under 5
Collision and entrapment	Age under 5

NIHCS surveyors were clearly informed about the most vulnerable group for each hazard and they were instructed to assess the property ignoring the current occupancy and assume that the home was occupied by a member of that vulnerable group.

An additional four hazards were modelled using other data from the survey. The assumptions are the same as those used for modelling these hazards in the English Housing Survey (EHS). As with the measured hazards, current occupancy was ignored and the assumptions are summarised in Table 4.

Table 4
Methods Used to Model HHSRS Hazards Using NIHCS Data

Risk	Definition of category 1 hazard used
Excess Cold	SAP rating of less than 35. This threshold was based on modelling carried out by BRE.
Radon	Dwelling located in one of the 16 post code sectors critical based on radon exposure map AND was a house built before 1980.
Lead	Dwelling located in one post code based on drinking water quality map AND built before 1945 AND with lead piping present either before or after the mains stop cock.
Over-crowding	The occupants per habitable room ratio was calculated. If this exceeded 2 the dwelling had a category 1 hazard regardless of size. If it was equal to 2 and the number of habitable rooms was 2 or more the dwelling also had category 1 hazard.

This means that the Northern Ireland HCS covers 26 out of the 29 hazards in the HHSRS.

Table 5
Summary of How NIHCS Collects and Models
Information About HHSRS Hazards 2009

Hazard	2009
Dampness and mould growth	Fully measured
Excess cold	Modelled
Excess heat	Flagged
Asbestos (and MMF)	NOT COVERED
Biocides	NOT COVERED
Carbon monoxide	Flagged
Lead	Modelled
Radon	Modelled
Uncombusted fuel gas	Flagged
Volatile organic compounds	NOT COVERED
Crowding and space	Modelled
Entry by intruders	Fully measured
Lighting	Flagged
Noise	Fully measured
Domestic hygiene etc.	Flagged
Food safety	Flagged
Personal hygiene etc.	Flagged
Water supply	Flagged
Falls - baths	Fully measured
Falls on the level	Fully measured
Falls – stairs or steps	Fully measured
Falls between levels	Fully measured
Electrical hazards	Flagged
Fire	Fully measured
Hot surfaces and materials	Fully measured
Collision and entrapment	Fully measured
Explosions	Flagged
Ergonomics	Flagged
Structural collapse	Flagged

Data Quality and Reliability

Surveyors working on the HCS have received training and support to help ensure their HHSRS assessments are consistent and robust. They were given refresher training sessions in 2009 explaining the principles, how the form should be completed as well as conducting practical exercises with feedback sessions. While these measures will ensure some consistency in judgements, the HHSRS is still very new to surveyors in Northern Ireland and some variability is to be expected in the early years as surveyors become fully conversant with the methodology. The EHS approach to the HHSRS is now fixed and this will give surveyors the opportunity to fully consolidate their skills over the next few years.

APPENDIX H

Standard Assessment Procedure (SAP05)

The Standard Assessment Procedure (SAP) is the Government's recommended system for home energy ratings. SAP ratings allow comparisons of energy efficiency to be made, and can show the likely improvements to a dwelling in terms of energy use. The Building Regulations require a SAP assessment to be carried out for all new dwellings and conversions. The current version is SAP 2005, effective from April 2006. This is the version used throughout this report.

The SAP ratings give a measure of the annual unit energy cost of space and water heating for the dwelling under a heating regime, assuming specific heating patterns and room temperatures. The fuel prices used are averaged over the previous three years across the regions in the UK. The SAP takes into account a range of factors that contribute to energy efficiency, which include:

- thermal insulation of the building fabric;
- the shape and exposed surfaces of the dwelling;
- materials used for construction of the dwelling;
- efficiency and control of the heating system;
- the fuel used for space and water heating, ventilation and lighting;
- ventilation and solar gain characteristics of the dwelling;
- renewable energy technologies.

SAP is not affected by the individual characteristics of the household occupying the dwelling or by the geographical location.

The SAP Scale

The SAP¹⁹ rating is expressed on a logarithmic scale, which normally runs from 1 (very inefficient) to 100, where 100 represents zero energy cost. The rating can be above 100 for dwellings that are net exporters of energy, however this is currently an unlikely scenario for NIHCS dwellings. In extremely inefficient cases the formula that defines the rating can result in negative values when applied to the NIHCS sample. In practice when issuing SAP ratings the negative values would be reset to 1 but, for the

purpose of this report, the values produced by the SAP formula that fall outside the defined scale have been retained, so as not to distort the profiles of energy efficiency within the housing stock.

Calculation of SAP Ratings from NIHCS Data

A computerised version of the SAP 2005 methodology is used to calculate the SAP rating for each dwelling included in the NIHCS physical survey. Most of the data required for the calculation of the SAP are available from the survey, either directly from the questions asked or as a result of further modelling. Those data items that are not collected have very little impact on the final calculated rating. Where data items are missing these are dealt with using default information based on information from dwellings of the same age, built form, tenure, number of floors and size.

The original SAP procedure was first specified in 1996. Since this time, the procedure has been modified and updated. This has included updating the prices of each of the fuels used in the calculation.

However, it is desirable to attempt to neutralise the effect of changing fuel prices over time. This allows each version of SAP to be comparable to all earlier versions, and enables SAP to be a measure of changing energy consumption over time. Therefore, each new version of the Standard Assessment Procedure (SAP) attempts to remove the effect of changing fuel prices by multiplying the total cost of energy by an energy-cost-deflator (Ecf).

To remove the effect of fuel price changes between a 1996 calculation of SAP and a 2005 calculation, it is necessary to ensure that:

$$\text{Ecf}(96) \times \text{Total Cost of energy for SAP 96 prices} = \text{Ecf}(05) \times \text{Total Cost of energy for SAP 05 prices}$$

Where

$$\text{Total Cost of energy for SAP 96 prices} = Q_p \text{ £p}(96) + Q_s \text{ £s}(96) + Q_w \text{ £w}(96) + Q_e \text{ £e}(96)$$

$$\text{Total Cost of energy for SAP 05 prices} = Q_p \text{ £p}(05) + Q_s \text{ £s}(05) + Q_w \text{ £w}(05) + Q_e \text{ £e}(05)$$

and

¹⁹ 2005 version.

Q_p, Q_s, Q_w, Q_e :

is the energy (kWh/yr) associated with primary heating, secondary heating, water heating and electrical energy required for pumps, fans and lighting.

$E_{cf}(96)$ is the energy-cost-deflator for SAP1996;

$E_{cf}(05)$ is the energy-cost-deflator for SAP2005;

$£p(96)$ is the SAP price of the primary fuel in 1996 (p/kWh);

$£p(05)$ is the SAP price of the primary fuel in 2005 (p/kWh);

$£s(96)$ is the SAP price of the secondary fuel in 1996 (p/kWh);

$£s(05)$ is the SAP price of the secondary fuel in 2005 (p/kWh);

$£w(96)$ is the SAP price of the water-heating fuel in 1996 (p/kWh);

$£w(05)$ is the SAP price of the water-heating fuel in 2005 (p/kWh);

$£e(96)$ is the SAP price of the electricity in 1996 (p/kWh);

$£e(05)$ is the SAP price of the electricity in 2005 (p/kWh).

That is, if we calculate a SAP for one set of data based on the SAP 1996 prices and then recalculate the SAP using the same set of data but this time using SAP 2005 prices, the SAP ratings will remain the same. In this way the E_{cf} ensures that there will be no change in SAP due to fuel price changes alone.

In the published SAP 2005 procedure, a deflator is published for the whole of the UK. However, when examining Northern Ireland alone, it is not particularly suitable. The published UK deflator is calculated by assuming that the fuel mix is dominated by mains gas (and mains gas prices). However, in Northern Ireland, fuel oil is dominant and mains gas is a relative minority fuel. Therefore, in the calculation of the NIHCS SAP05 ratings, a new deflator with a value of 0.75 has been used. The deflator has been calculated by examining the mix of fuels used across all households in Northern Ireland and looking at the average spend on each fuel using 1996 and 2005 SAP prices.

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