

NORTHERN IRELAND
House Condition Survey

Repairs and Improvements

2017

MAIN REPORT

fuel poverty

household profile

House Condition Survey

decent homes

unfitness

repair dwellings

survey

Housing
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MAIN REPORT



Dwelling Type
fuel poverty
household profile

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survey

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We are pleased to introduce the main report from the 2011 House Condition Survey. The 2011 Survey is an invaluable source of information for planning intervention in the housing market, for monitoring progress in relation to our key objectives and allowing us to gain greater insight into the dynamics of Northern Ireland's housing market over time. It is used not only by housing managers and policy makers but indeed, is regularly sourced by Members of the Legislative Assembly (MLAs), councils, government departments, agencies, charities and a range of private sector interests.

The Survey provides an update of key figures in relation to the Decent Homes Standard, fuel poverty and the energy efficiency of homes. It also provides an update on the dwelling stock, its residents and the quality of the stock, including its state of repair.

The 2011 Survey used mobile field computers to collect and validate the data. This electronic approach was first used in 2009 and was reviewed and enhanced for the 2011 Survey. This approach proved successful in 2009 and in 2011, allowing a faster turnaround of the survey results, improving data quality, and reducing overall costs.

The underlying economic factors driving the housing market in Northern Ireland have continued to provide a challenging environment for policy makers, landlords, tenants and owner occupiers alike, between the last two House Condition Surveys in 2009 and 2011. The impact of this can be tracked in some of the key results from the 2011 House Condition Survey.

Northern Ireland's housing stock continued to grow between 2009 and 2011 with an annual average increase of approximately 10,000 bringing the total stock to 760,000, a significantly slower increase than in the years prior to this. The 2011 Survey confirms the changing tenure structure of Northern Ireland's housing stock; the most significant developments took place in the owner occupied sector, which reduced in proportion from 67% of the stock in 2006 to 62% in 2011, and in the private rented sector, which increased from 80,900 (11.5%) in 2006 to



The Survey provides an update of key figures in relation to the Decent Homes Standard, fuel poverty and the energy efficiency of homes.

It also provides an update on the dwelling stock, its residents, and the quality of the stock, including its state of repair.

125,400 in 2011 (16.5%). These changes reflect the ongoing difficulties faced by many households in attempting to become owner occupiers and the shortage of social housing in areas of high demand.

The House Condition Survey provides robust estimates of two very important Government measures: Decent Homes and fuel poverty which are comparable with figures from the English Housing Survey. Both measures have been impacted by the considerable investment, particularly in the social sector, in energy efficiency measures. The Housing Executive between 2009 and 2011 invested some £41m on heating conversions, insulation and double glazing in its housing stock. In addition, the Warm Homes Scheme invested more than £12m on insulation measures and heating replacements in eligible private homes. Alongside this, many owner occupiers themselves have made energy efficiency improvements. The result of this investment is reflected in the proportion of dwellings failing the Decent Homes Standard falling in two years from one-sixth in 2009 (15%) to approximately one-tenth (11%) in 2011 (a reduction of some 25,000 dwellings).

This investment has also had a positive impact on tackling fuel poverty in Northern Ireland. Despite higher fuel costs and lower disposable household income, the 2011 Survey confirms a very welcome two percentage point reduction in the overall rate of fuel poverty between 2009 and 2011 from 44 per cent to 42 per cent in 2011.


The 2011 House Condition Survey also provides more general figures on costs of undertaking necessary urgent repairs to Northern Ireland's housing stock - £1.43 billion. Setting aside vacant properties, the outstanding cost of urgently required repairs is £330 million. A recent Housing Executive report, entitled *The Cost of Poor Housing in Northern Ireland*, using data from the House Condition Survey, highlighted the total cost of reducing the most serious housing hazards (e.g. excess cold, falls and fire) to an acceptable level alongside the estimated costs to the NHS of

treating the results of these hazards and the overall costs to society. The policy implications of the findings are clear. There are direct economic benefits in terms of preserving the fabric of Northern Ireland's stock and providing employment for the hard pressed construction and retail sectors as well as the significant savings to be gained in terms of the Health Service.

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



Donald Hoodless
Chairman



Dr John McPeake
Chief Executive



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 2011 survey is the eleventh 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 2011 Survey used mobile field computers (Motion 5 Field Tools) to collect the data. This approach was first used in 2009 and was reviewed and enhanced for the 2011 Survey. The main benefits of this electronic approach included: enabling surveyors to complete more complex self-validation of their forms at the time of the survey, improving data quality by reducing punching errors, missing data and data inconsistencies and allowing a faster turnaround of the survey results.

The bespoke software used was developed by the Building Research Establishment (BRE) and it permitted the recording of dwelling information through radio buttons, direct keying, and 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 and locked into a database via a secure website.

The hardware was a Motion 5 mobile field computer which was both a semi-rugged field tool and a

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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 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 and 2009 Northern Ireland HCS. Four experienced supervisors were responsible for quality assuring the work of the surveyors.

A training course was held in May 2011. 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 2009 and to introduce the new enhancements to the e-form and to refresh surveyors on the Housing Health Safety Rating System (HHSRS) and energy elements of the form.

For further information see Appendix A

1.3 Survey Objectives

The key objectives of the 2011 Northern Ireland House Condition Survey were as follows:

- To provide a comprehensive picture of the dwelling stock and its condition in 2011 for Northern Ireland and each of the 26 District Council Areas;
- 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 Standard;
- 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, 2006 and 2009.

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 the 2009 and 2011 survey forms was the inclusion of a number of new energy items for surveyors to record and new questions for private rented tenants.

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 government standards.

(see Appendix B)

1.5 The Sample – Response Rates

In 2011 the total number of dwellings selected for participation in the HCS was 2,030.

The sample size was one area of significant change since 2009. Given budgetary pressures, it was agreed that the sample should be reduced from 3,000 in 2009 to approximately 2,000 in 2011. On its own this would make it impossible to produce robust housing condition figures for each of the District Councils. However, the HCS team in partnership with BRE are developing a linear regression model using 'paired cases' which, when applied to Census 2011 data, will enable key District Council data to be produced. A second tabular report of key district council data is to be produced by the autumn of 2013.

In 2011 the sample comprised a fresh random sample only. There was no re-sample element to the Survey. The method chosen was one considered to permit a better matching with the 2011 Census for the purpose of regression modelling. It consisted of a random sample of 2,030 dwellings completed in two stages. The first stage was a random sample of 1,000 properties from across Northern Ireland. A further random sample of 1,030 was selected by District Council Area to ensure that each district total added to 70.

The fresh sample of 2,030 properties from across Northern Ireland was extracted by NISRA using the Land and Property Services database as its source.

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

The gross response rate for the 2011 House Condition Survey was very high. A total of 1,434 full inspections were successfully carried out giving an overall response rate of 71 per cent. The response rate for the 2009 House Condition Survey was 72 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 (1,314 interviews completed out of a possible 1,322). This response 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

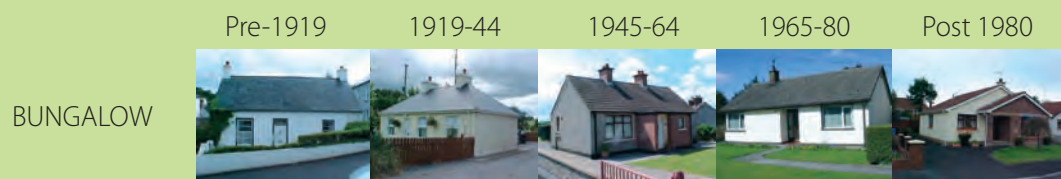
The aim of the 2011 House Condition Survey Report is to provide a comprehensive overview of Northern Ireland's dwelling stock and its occupants in 2011, in a readily digestible format. The report concentrates on issues and developments that are of particular importance in understanding the Northern Ireland 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 pre-fixed 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 2009 HCS, highlighting any significant changes since 2006.

An additional District Council Tabular report will be produced and published to the House Condition web page during 2013 once the regression modelling work has been completed.

dwelling type by period of original construction



2.1 Background

The 2011 Northern Ireland House Condition Survey was the eleventh House Condition Survey to be carried out since 1974. The 2011 Survey provides an update of key figures in relation to The Decent Homes Standard, Fuel Poverty, SAP, unfitness and disrepair at Northern Ireland level. District Council level figures will be produced as a separate appendix. As in 2006 and 2009, this report also provides an analysis of the Housing Health and Safety Rating System which in England replaced the Fitness Standard as the key measure of housing quality in the 2007 English House Condition Survey. 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 Housing 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 2011 House Condition Survey has made an important contribution to a number of key government strategies including the Housing Growth Indicators in the Regional Development Strategy, Fuel Poverty, Empty Homes and the Private Rented Sector Strategy and more recently to the analysis of the impact of the ongoing Welfare Reforms. 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, Home Energy Conservation and providing an evidence base for housing solutions for older people and people with disabilities. The Housing Executive spends more than £100 million annually on planned maintenance and improvement 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

Northern Ireland's housing stock continued to grow between 2006 and 2011 to reach a total of 760,000.

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 2011 Northern Ireland House Condition Survey were:

1. To provide a comprehensive picture of the dwelling stock and its condition in 2011 for Northern Ireland and each of the 26 District Council Areas;
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 in terms of key Government measures: Decent Homes and the Housing Health and Safety Rating System;
5. 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 United Kingdom.

Key Findings

2.3 Northern Ireland's Dwelling Stock

Northern Ireland's housing stock continued to grow between 2006 and 2011 to reach a total of 760,000. However, the rate of increase slowed significantly from 12,000 per annum between 2006 and 2009 to approximately 10,000 per annum between 2009 and 2011. The broad pattern of its distribution has changed little, with around 70 per cent located in urban areas.

However, there have been some significant changes in terms of its tenure composition. The proportion of (occupied) owner occupied stock fell from 66.5 per cent of the stock in 2006 to 61.7 per cent by 2011. Conversely the (occupied) private rented sector

increased rapidly from 80,900 in 2006 to 125,400 in 2011 (16.5%), reflecting the ongoing difficulties faced by many households in attempting to become owner occupiers and the shortage of social housing in areas of high demand.

The vacancy rate continued to increase from 5.7 per cent in 2006 to 7.2 per cent in 2011, reflecting partly the growth in the private rented sector – which brings with it a higher rate of vacancy (13% compared to 6% in the owner occupied sector) – the depopulation of many remoter areas in Northern Ireland and the subdued owner occupied market, with properties often staying significantly longer on the market before being sold. In addition, there are 3-4,000 completed, but unsold, properties which remain as testimony to the unsustainability of the housing boom in the mid-2000s.

The age profile of Northern Ireland's housing stock is increasingly modern, with approximately 40 per cent having been built since 1980, while a declining percentage were built before 1919 (11.5%).

2.4 Household Profile

The household data from the 2011 HCS confirmed a number of important housing trends including:

- The increase in private renting (from 12% to 18%) and decrease in owner occupation (from 71% to 66%) which was apparent between 2006 and 2009 levelled off in 2011, when two-thirds (67%) of households lived in owner occupied homes and almost one-fifth (18%) of households lived in privately rented accommodation.
- Only three per cent of households lived in homes which were overcrowded.
- The proportion of households living in social housing in 2011 was the same as in 2009. Older households and households with children were most likely to live in social housing.
- Protestant households were slightly more likely than Catholic households to own their own homes. There was no difference in the proportions of Protestant and Catholic

households living in terraced or detached housing. Differences between the two main religions can be seen when looking at location. Protestant households were more likely to live in urban areas, while there was a higher proportion of Catholics living in rural areas.

- As in previous years the House Condition Survey showed links between income and tenure, dwelling type and dwelling age. Higher income households were more likely to own their own homes, live in detached houses and live in newer dwellings.

2.5 Dwelling Unfitness and the State of Repair

Between 2009 and 2011 there was an increase in the rate of unfitness of Northern Ireland's housing stock.

- The headline unfitness rate increased from 2.4 per cent in 2009 to 4.6 per cent in 2011. This was associated with an increase in the rate of vacancy, particularly in isolated rural areas. In 2011 there were 35,200 dwellings that were statutorily unfit (compared with 17,500 dwellings in 2009). The most common reasons for unfitness were unsatisfactory facilities for the preparation and cooking of food; no, or unsuitably located, bath, shower and wash hand basin; and serious disrepair.
- There was little change in the state of repair of Northern Ireland's stock between 2009 (52%) and 2011 (51%) in terms of the percentage of dwelling stock with at least one fault. However, the degree of disrepair was significantly higher; the average basic repair cost (which had decreased from £1,476 in 2006 to £938 in 2009) increased to £2,123 in 2011, giving a total repairs bill of £1.6 billion compared with £694 million in 2009.
- Disrepair was particularly prevalent in vacant dwellings (75%; 64% in 2009) but it was also higher in the private rented sector and social housing (both 53%) than in the owner occupied sector (45%). There was a clear relationship between the age of the dwelling and disrepair with nearly three-quarters (73%) of all dwellings built before 1945 having faults.

- There was also a link between location and disrepair. The level of disrepair was higher in rural areas (53%) than in urban areas (48%). Isolated rural areas in particular had a high level of disrepair (55%), indeed isolated rural areas had higher levels of interior disrepair (30%; 22% overall) and exterior disrepair (51%; 42% overall) than any other location.

2.6 The Decent Homes Standard, 2011

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 approximately one-tenth (11%; a drop of twenty-one percentage points and some 119,200 dwellings).

The types of dwellings most likely to fail the Decent Homes Standard in 2011 were:

- Vacant properties (57%: 38% in 2009), however more than two-fifths (44%) of all dwellings that failed the Decent Homes Standard were owner occupied;
- Older dwellings built before 1919 (35%);
- Located in isolated rural areas (23%);
- Occupied by households with older HRPs (14%; 75 plus);
- Low income households (14%; less than £10,000 per annum).

Components of Decent Homes

Overall, 62 per cent of the stock in Northern Ireland which failed the Decent Homes Standard did so on the thermal comfort criterion. This compares with 68 per cent in 2009. This reduction is in part due to the significant investment in new and improved heating systems in the social sector. However, 42 per cent of the stock in Northern Ireland which failed the Decent Homes Standard did so on disrepair, much higher than the 2009 figure of 18 per cent. This proportional increase partly reflects the decline in the proportion of stock failing on the thermal comfort criterion. However, the fact

that the absolute number of properties failing the Decent Homes Standard on disrepair has increased would indicate a significant growth in disrepair in its own right. Failing to meet the Decent Homes Standard due to disrepair was particularly associated with vacant properties. In 2011, 55 per cent of all properties which failed the Decent Homes Standard on disrepair were vacant. Conversely, 64 per cent of all vacant properties which failed the Decent Homes Standard were in disrepair.

Overall, 24 per cent of the stock in Northern Ireland which failed the Decent Homes Standard did so on *lacking modern facilities and services*. This compares with 27 per cent in 2009.

2.7 Fuel Poverty in Northern Ireland, 2011

Analysis of households in fuel poverty in 2011 shows that:

- Considerable progress had been made in reducing fuel poverty in Northern Ireland between 2001 and 2004 (from 27% to 23%). By 2006 the rate of fuel poverty had increased to 34 per cent and then to 44 per cent in 2009. This was mainly due to very significant increases in the price of fuel and continued dependence on oil, electric and solid fuel for heating in Northern Ireland. The 2011 HCS shows some progress in reducing the proportion in fuel poverty (to 42%) despite rising fuel prices. This is largely as a result of significant investment, particularly in the social sector, in new energy efficiency measures such as heating conversions, insulation and double glazing by the Housing Executive in its own stock and also by the Warm Homes Scheme in private homes.
- Low income continued to be a significant cause of fuel poverty in Northern Ireland in 2011; 79 per cent of households with an annual income of less than £10,000 were in fuel poverty. Indeed, 75 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 (69%) of households living in older dwellings (pre 1919) were in fuel poverty;
- Half (50%) of households living in isolated rural areas were in fuel poverty;
- Almost two-thirds (66%) of households headed by an older person (75 plus) were in fuel poverty in 2011. Three-fifths (61%) of older households were fuel poor;
- Fuel poverty was higher in households with HRPs who were unemployed (55%) or retired (62%).

The 2011 HCS continues to indicate 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, 2011

Overall, 10 per cent of all dwellings in Northern Ireland had Category 1 hazards in 2011. The most common hazards in dwellings in Northern Ireland were excess cold and food safety.

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

- vacant properties (55%);
- older dwellings built before 1919 (36%) and between 1919 and 1944 (27%);
- located in isolated rural areas (27%);
- occupied by households with older HRPs (9%; 75 plus);

This section has provided a measure of Northern Ireland's dwelling stock in terms of the HHSRS, allowing comparisons with England, where the HHSRS has already replaced unfitness as the first element of the Decent Homes Standard. In Northern Ireland the HHSRS has not yet been accepted as an enforceable standard. However, it provides a useful indicator of the relatively high standard of Northern Ireland's housing stock generally, compared with England's.

2.9 Energy

The 2011 House Condition Survey shows the progress made in achieving higher levels of energy efficiency between 2006 and 2009 had been sustained:

- Overall 99 per cent of all dwellings had central heating (99% in 2009).
- The majority of dwellings (85%) had either oil fired (68%; 68% in 2009), or mains gas central heating (17%; 15% in 2009).

Small improvements were also noted for loft insulation and double glazing:

- There was an increase in the use of the highest standard of loft insulation (more than 150mm) from 30 per cent in 2009 to 35 per cent in 2011.
- The proportion of dwellings with full double glazing increased from 77 per cent in 2009 to 81 per cent in 2011; this was most notable in the private rented sector where there was an increase in the proportion of dwellings with full double glazing from 70 per cent in 2009 to 84 per cent in 2011.

The progress sustained and small improvements made were reflected in an increase in the overall SAP rating which rose from 56.7 to 59.6 (SAP09) between 2009 and 2011. This was most notable in dwellings with household reference persons aged 75 or older where there was a four point increase in SAP rating from 54 to 58 (SAP09).

However, whilst progress had been sustained across most sectors of the housing market there was a notable decline in some of the key energy-related features found in vacant dwellings. This reflects the number of older, poorer quality properties that are increasingly being left vacant.

Moreover, households living in dwellings with lower energy efficient ratings remain 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 1974-2011

	1974	1991	1996	2001	2006	2009	2011
Total Stock	455,500	574,300	602,500	647,500	705,000	740,000	760,000
	100%	100%	100%	100%	100%	100%	100%
Urban	269,400	404,100	402,100	434,600	493,800	508,500	529,700
	(59%)	(70%)	(67%)	(67%)	(70%)	(69%)	(70%)
Rural	186,100	170,200	200,400	212,900	211,200	231,500	230,300
	(41%)	(30%)	(33%)	(33%)	(30%)	(31%)	(30%)
Owner Occupied	212,200	347,200	381,200	432,300	468,900	461,800	469,100
	(46.6%)	(60.5%)	(63.3%)	(67%)	(66.5%)	(62.4%)	(61.7%)
Private Rented (and Others)	72,200	28,600	38,000	49,400	80,900	124,600	125,400
	(15.8%)	(5.0%)	(6.3%)	(7.6%)	(11.5%)	(16.8%)	(16.5%)
Housing Executive	153,500	158,200	141,200	116,000	93,400	110,200	110,800
	(33.7%)	(27.6%)	(23.4%)	(17.9%)	(13.3%)		
Housing Association	-	10,000	13,000	17,900	21,500	(14.9%)	(14.6%)
		(1.7%)	(2.1%)	(2.8%)	(3.1%)		
Vacant	17,600	30,300	29,100	31,900	40,300	43,400	54,700
	(3.9%)	(5.3%)	(4.8%)	(4.9%)	(5.7%)	(5.9%)	(7.2%)
Pre 1919	157,300	121,500	120,800	116,400	113,800	106,500	87,700
	(34.5%)	(21.2%)	(20.0%)	(18.0%)	(16.1%)	(14.4%)	(11.5%)
1919 - 44	75,200	65,100	69,400	69,100	71,000	78,200	68,100
	(16.5%)	(11.3%)	(11.5%)	(10.7%)	(10.1%)	(10.6%)	(9.0%)
1945 - 64	223,000	129,800	128,800	127,800	141,400	125,100	134,000
	(49.0%)	(22.6%)	(21.4%)	(19.7%)	(20.1%)	(16.9%)	(17.6%)
1965 - 80	Included in	162,300	158,400	159,900	169,300	181,800	169,500
	1945 - 64	(28.3%)	(26.3%)	(24.7%)	(24.0%)	(24.6%)	(22.3%)
Post 1980	-	95,600	125,100	174,300	209,500	248,400	300,700
		(16.7%)	(20.8%)	(27.0%)	(29.7%)	(33.6%)	(39.6%)
Bungalow	-	-	145,200	157,000	159,900	162,600	160,000
			(24.1%)	(24.2%)	(22.7%)	(22.0%)	(21.1%)
Terraced House	199,000	210,500	201,900	200,300	225,400	231,900	209,800
	(43.7%)	(36.7%)	(33.5%)	(30.9%)	(32.0%)	(31.3%)	(27.6%)
Semi-detached House	91,000	139,800	110,400	123,500	141,300	146,800	165,200
	(20.0%)	(24.3%)	(18.3%)	(19.1%)	(20.0%)	(19.8%)	(21.7%)
Detached House	133,700	177,300	93,400	115,000	122,400	138,900	158,500
	(29.4%)	(30.9%)	(15.5%)	(17.8%)	(17.4%)	(18.8%)	(20.9%)
Purpose Built Flat	23,900	38,500	42,800	43,700	-	-	-
	(5.2%)	(6.7%)	(7.1%)	(6.7%)			
Converted Flat	3,200	8,100	8,800	8,000	-	-	-
	(0.7%)	(1.4%)	(1.5%)	(1.3%)			
Flat/Apartment	-	-	-	-	56,000	59,800	66,500
					(8.0%)	(8.1%)	(8.7%)

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 and as a result 4,700 have been excluded from the table.

3.1 Introduction

This chapter examines the characteristics of Northern Ireland's dwelling stock in 2011 in terms of its distribution, tenure, age and dwelling type. Where significant it compares and contrasts them to the findings from House Condition Surveys undertaken in 2006 and 2009.

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 (Table A3.1)

The 2011 House Condition Survey showed that there were approximately 760,000 dwellings in Northern Ireland, a net increase of 55,000 (11,000 per annum) since 2006. This represents a somewhat lower rate to that experienced between 2001 and 2006 when the average annual increase in stock was 11,500. During the period 2006 to 2009, the annual rate of increase in stock was 12,000, while during the period 2009 to 2011 it was only approximately 10,000 per annum. The period 2006-2011 has been characterised by a major turnaround in the housing market in Northern Ireland, with the construction of new dwellings (in the public and private sectors) falling from a historic peak of more than 14,700 in 2006/07 to approximately 8,000 in 2010/11¹.

The broad pattern of geographic distribution of the housing stock has changed little in the five year period since 2006. Almost 70 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 268,700 (35.4%).
- The number of dwellings in District and "Other" Towns grew rapidly, from 218,400 (31.0%) to 261,000 (34.3%).
- The total number of rural dwellings increased from 211,200 (30.0%) in 2006 to 230,300 (30.3%) in 2011. This reflected growth in both small

The broad pattern of geographic distribution of the housing stock has changed little in the five year period since 2006. Almost 70 per cent of the housing stock is classified as urban and the remainder as rural.

¹ DSD (2011) Housing Statistics 2010/11

rural settlements (from 106,900 to 122,000) and isolated rural settlements (from 104,300 to 108,300).

3.3 Dwelling Tenure

The 2011 House Condition Survey collected information on dwelling tenure 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, the sample size of the 2011 Survey was not sufficiently large to produce robust statistics for housing association dwellings on their own. The analysis contained in the main body of the document as well as the Appendix tables, therefore, focus on social housing as a whole.

The following tenure profile emerged:

- In 2011 there were approximately 469,100 occupied dwellings in the owner occupied sector, 61.7 per cent of the total stock. This is very similar to the number of owner occupied dwellings in 2006 (468,900), but at that time this represented 66.5 per cent of the total stock.
- The most significant development has taken place in the private rented sector. In 2006 there were 80,900 occupied privately rented dwellings in Northern Ireland, 11.5 per cent of the total stock. However, by 2011 there were 125,400 (16.5%) dwellings in this sector. This represents an average annual growth of approximately 9,000 each year between 2006 and 2011, reflecting the growing demand for private renting from households unable to afford owner occupancy or gain access to social housing in an area of choice as well as growing interest from investors in the buy-to-let market.
- The number and proportion of dwellings in the social sector has continued to decline, mainly as a result of the house sales scheme. In 2006 there were 115,000 (16.4%) dwellings in the social sector; by 2011 this had fallen to 110,800 (14.6%). However, it should be noted that between 2009 and 2011 the occupied social stock actually grew

for the first time in decades (by approximately 600) reflecting almost insignificant levels of house sales and a larger programme of new social dwellings.

Vacant properties (Table A3.2)

In 2011 there were approximately 54,700 (7.2%) vacant properties. This represents both an absolute and proportionate increase since 2006 and 2009, when the comparable figures were 40,300 (5.7%) and 43,400 (5.9%) respectively, and may well be a reflection of lower rates of household formation as a result of the prolonged recession affecting Northern Ireland's economy.

An insight into the reasons for the increase in the number of vacant properties can be gained by a closer look at their geographical location and tenure when last occupied:

Table 3.2 Vacant Dwellings and Vacancy Rate by Location, 2011

	Vacant Dwellings	Vacancy Rate (%)
Belfast Metropolitan Area	12,800	4.8
District & "Other" Towns	13,300	5.1
Total Urban	26,100	4.9
Small Rural Settlement	10,100	8.3
Isolated Rural	18,500	17.0
Total Rural	28,600	12.4
All Vacant Dwellings	54,700	7.2

- Table 3.2 shows that in 2011 the number of vacant properties in rural areas (28,600) was higher than in urban areas (26,100). The vacancy rate was much higher in rural areas (12.4% compared to 4.9%) and in particular in isolated rural areas (17.0%). Although this pattern of distribution had remained broadly the same since 2001, the dichotomy between rural and urban vacancy rates has grown quite considerably since even 2009, when the vacancy rate was 7.8 per cent in rural areas as a whole and 5.0 per cent in urban areas, and only 8.5 per cent in isolated rural areas. This significant growth in isolated rural areas is at least partly to be explained by the ongoing

depopulation in remoter rural areas of Northern Ireland associated with the declining number of farms and the concentration of jobs in the Belfast Metropolitan Area².

Table 3.3 Vacant Dwellings by Tenure, 2011

	Vacant Dwellings	Vacancy Rate (%)
Owner Occupied	29,500	5.9
Private Rented	19,100	13.2
Social	6,100	5.2
All Vacant Dwellings	54,700	7.2

- In absolute terms the number of vacant dwellings previously in the owner occupied sector was the highest - 29,500. This is significantly higher than the figures for 2006 (21,600) and 2009 (19,000) and accounts for 54 per cent of all vacant properties. There can be little doubt that this significant increase reflects, at least in part, the subdued nature of the housing market with relatively low levels of sales in the owner occupied sector. The owner occupied sector as a whole had a vacancy rate of 5.9 per cent, a significant increase since 2009 and 2006 when the comparable figures were 4.0 per cent and 4.4 per cent.
- However, in relative terms the private rented sector accounts for by far the highest proportion of vacant properties. More than one-third (34.9%) of all vacant properties in 2011 were privately rented when last occupied. This represents an increase from the position in 2009 when the comparable figure was 12 per cent and may well reflect lower household formation rates.
- The proportion of vacant properties in the social sector was 5.2 per cent (approximately 6,000 homes) a decline of approximately 1,000 since 2009 when the comparable rate of vacancy was six per cent.

More than one-third (36%) of all vacant properties were constructed before 1919, reflecting the traditional abandonment of dwellings in more

remote rural areas, but more than one-fifth (21%) were built since 1980, partly reflecting the overhang of unsold newer properties built since the downturn in the housing market in 2007.

Dwelling Tenure - Urban/Rural Location (Table A3.2)

Less than two-thirds (59%) of the urban stock was owner occupied, a figure which was broadly in line with 2006 (62%) and 2009 (58%). In rural areas, the proportion had fallen, from 76 per cent in 2006 and 72 per cent in 2009 to 67 per cent in 2011.

Conversely, the proportion of stock in the private rented sector has increased in both urban areas (from 13% in 2006 to 18 per cent in 2011), and in rural areas (from nine per cent in 2006 to 13 per cent in 2011 – although this represents a small reduction since 2009 when the proportion was 15 per cent).

The proportion of urban housing in the social sector has gradually declined from 20 per cent in 2006 to 18 per cent in 2011. In rural areas in 2011 approximately seven per cent³ of the stock was in the social sector.

3.4 Dwelling Age

The 2001 and 2006 House Condition Surveys had already indicated a gradual change in the age profile on 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 between 1996 and 2006.

These trends were confirmed by analysis of the 2009 and 2011 House Condition Surveys:

- Approximately two-fifths (39.6%, 300,700; 33.6%, 248,400 in 2009⁴) of all dwellings were built after 1980.
- Conversely, only 11.5 per cent of dwellings were built before 1919 compared to 14.4 per cent in 2009.

² See Northern Ireland Census of Employment, 2011 and the Agricultural Census for Northern Ireland, 2011

³ Sample size for social dwellings in rural areas makes comparisons over time unreliable

⁴ It should be noted that the inclusion of a considerable number of unfinished properties in the sample frame has exaggerated this trend significantly.

Dwelling Age - Dwelling Tenure (Table A3.3)

Analysis of age by tenure reflects these overall trends.

In the owner occupied sector, the proportion of dwellings built since 1980 increased from 36 per cent in 2009 to 43 per cent in 2011. The proportion of dwellings built prior to 1919 fell from 14 per cent in 2009 to 10.0 per cent in 2011.

The private rented sector has seen a significant shift in its age profile too. In 2006 only 25 per cent of its stock had been built since 1980. By 2009 this had risen to 28 per cent and by 2011 to 41 per cent. Conversely, in 2006, 28 per cent of privately rented dwellings were built prior to 1919, falling to 20 per cent by 2009 and to only 15 per cent by 2011.

The number and proportion of dwellings in the social sector which were built before 1919 remains very small, but in 2011 approximately 32 per cent had been built after 1980.

In the case of vacant properties, the age profile has also changed somewhat since 2006. At that time more than two-fifths (44%) had been constructed prior to 1919 and only 22 per cent since 1980. By 2011 less than two-fifths (36%; 19,700) had been built before 1919 and 21 per cent had been built since 1980.

Dwelling Age - Urban/Rural Location (Table A3.4)

Analysis of dwelling age by location indicates that in 2011:

The proportion of Northern Ireland's total stock which was built before 1919 was 11.5 per cent (87,700). However, a much higher proportion of the rural stock (20.8%) than urban stock (7.5%) was built during this period. Indeed almost half (43.8%) of all dwellings built before 1919 were in isolated rural areas.

Almost two-fifths (39.6%; 300,700) of all dwellings in Northern Ireland were built after 1980, a higher percentage in rural areas (43.8%) than in urban areas (37.7%). However, these figures mask the fact that in Belfast Metropolitan Area (30.7%) the proportion

of this newer stock is much lower than other areas while in small rural settlements it is much higher (48.2%).

3.5 Dwelling Type

Northern Ireland's housing stock has traditionally been dominated by houses and bungalows (single storey houses, including cottages). The 2011 House Condition Survey confirms that this is continuing to slowly change, with a gradual decline in the proportion of bungalows and terraced houses and small increases in the proportions of other dwelling types.

- The proportion of bungalows (single storey houses) fell from 22.7 per cent in 2006 to 21.1 per cent in 2011.
- Over the same period, the proportion of terraced houses fell from 32.0 to 27.6 per cent.
- Semi-detached houses and detached houses each accounted for approximately one fifth of the stock (21.7% and 20.9% respectively), in 2011.
- Apartments/flats accounted for 8.7 per cent of the stock, compared with 7.9 per cent in 2006.

Dwelling Type – Tenure (Table A3.5)

Comparison with the findings from 2006 indicates that little has changed in the owner occupied sector, although there is evidence of a small decrease in the proportion of bungalows (23%) and terraced houses (23%) balanced by increases in semi-detached houses (24%), detached houses (27%) and flats/apartments (3%).

However, in the private rented sector there are indications of more significant changes, with a considerable decrease in the proportion of terraced houses (40%) and increases in semi-detached (25%) and detached houses (12%).

Since 2006 the social sector has experienced a decline in the proportion of terraced houses, from 45 per cent to 39 per cent, counterbalanced by smaller increases in the proportion of bungalows and semi-detached houses.

3.6 Summary and Conclusion

Northern Ireland's housing stock continued to grow between 2006 and 2011 to reach a total of 760,000. However, the rate of increase slowed significantly from 12,000 per annum between 2006 and 2009 to approximately 10,000 per annum between 2009 and 2011. The broad pattern of distribution has changed little, with around 70 per cent located in urban areas.

However, there have been some significant changes in terms of tenure composition. The proportion of (occupied) owner occupied stock fell from 66.5 per cent of the stock in 2006 to 61.7 per cent by 2011. Conversely, the (occupied) private rented sector increased rapidly from 80,900 in 2006 to 125,400 in 2011 (16.5%), reflecting the ongoing difficulties faced by many households in attempting to become owner occupiers and the shortage of social housing in areas of high demand.

The vacancy rate continued to increase, from 5.7 per cent in 2006 to 7.2 per cent in 2011, reflecting a combination of growth in the private rented sector – which brings with it a higher rate of vacancy (13% compared to 6% in the owner occupied sector) – the depopulation of many remoter areas in Northern Ireland and the subdued owner occupied market, with properties often staying significantly longer on the market before being sold. In addition, there are 3-4,000 completed, but unsold, properties which remain as testimony to the unsustainability of the housing boom in the mid-2000s.

The age profile of Northern Ireland's housing stock is increasingly modern, with approximately 40 per cent having been built since 1980, while a declining percentage was built before 1919 (11.5%). The importance of this for energy efficiency is analysed in a later chapter. Finally, the characteristics of the housing stock in terms of dwelling type are also beginning to change – the proportion of bungalows (including single storey houses and cottages) and terraced houses has declined slowly, but the perspective set out by some housing commentators in the mid-2000s that a growing proportion of

Northern Ireland's housing stock would be flats/ apartments has not so far materialised: less than 10 per cent of homes are of this type.

Table 4.1: Household Profile, 2011

	Owner Occupied		Private Rented and others		Social Housing		All Households		% of all Households
	Number and percentage								
Household Type									
Adult households	180,000	65.6	57,000	20.8	37,400	13.6	274,400	(100%)	39
Households with children	142,800	62.4	50,900	22.3	34,900	15.3	228,600	(100%)	33
Older households	145,000	73.2	14,900	7.5	38,300	19.3	198,200	(100%)	28
All Households	467,800	66.7	122,800	17.5	110,600	15.8	701,200	(100%)	100
Age of Household Reference Person									
17 - 24	*	6.5	*	57.5	*	36.0	25,300	(100%)	4
25 - 39	91,600	54.1	53,400	31.6	24,100	14.2	169,100	(100%)	24
40 - 59	197,000	73.4	36,500	13.6	35,000	13.0	268,500	(100%)	38
60 - 74	120,700	75.5	12,700	8.0	26,500	16.5	159,900	(100%)	23
75 plus	56,900	72.6	*	7.0	16,000	20.4	78,400	(100%)	11
All Households	467,800	66.7	122,800	17.5	110,600	15.8	701,200	(100%)	100
Employment Status of HRP									
Working	289,700	76.5	65,400	17.3	23,700	6.3	378,800	(100%)	54
Not working	40,300	30.4	43,000	32.5	49,100	37.1	132,400	(100%)	19
Retired	137,800	72.5	14,400	7.6	37,800	19.9	190,000	(100%)	27
All Households	467,800	66.7	122,800	17.5	110,600	15.8	701,200	(100%)	100
Gross Annual Income									
Less than £10,000	56,400	47.6	28,400	24.0	33,600	28.4	118,400	(100%)	17
£10,000 - £14,999	106,200	53.3	37,900	19.0	55,300	27.7	199,400	(100%)	29
£15,000 - £19,999	69,300	64.2	22,300	20.6	16,500	15.2	108,000	(100%)	15
£20,000 - £29,999	82,600	77.5	21,500	20.2	*	2.3	106,500	(100%)	15
£30,000 or more	153,300	90.8	12,700	7.5	*	1.7	168,900	(100%)	24
All Households	467,800	66.7	122,800	17.5	110,600	15.8	701,200	(100%)	100
Household Religion									
Protestant	257,300	70.4	48,600	13.3	59,700	16.3	365,600	(100%)	52
Catholic	170,200	63.4	54,000	20.1	44,200	16.5	268,400	(100%)	38
Mixed/Other/None	40,300	59.9	20,200	30.1	*	9.9	67,200	(100%)	10
All Households	467,800	66.7	122,800	17.5	110,600	15.8	701,200	(100%)	100
Other Groups									
Lone Adult Households	44,400	41.6	37,100	34.7	25,200	23.7	106,700	(100%)	15

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

* denotes a small number – use caution when quoting proportion

4.1 Introduction

This chapter draws on the household⁵ questionnaire section of the Northern Ireland House Condition Survey (NIHCS). It provides an update of the profile of the households 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 2009 HCS and examines trends over the ten 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 person⁶ or partner (if applicable), as part of the survey process. In 2011, a total of 1,314 interviews were achieved out of a possible 1,322 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.

4.2 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

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.

⁵ A definition of household is included in Appendix E

⁶ A definition of household reference person is included in Appendix E

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:

- Three per cent of households in Northern Ireland fell below the bedroom standard, i.e. were overcrowded in 2011. 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 (18% in 2011, 2009 and 2006).
- Under-occupation decreased slightly from 81 per cent in 2009 to 79 per cent in 2011. However, in general, under-occupation has been on the increase since 1996 when the proportion was 68 per cent.

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

The Bedroom Standard⁷ – Tenure, Household Size and Religion

Generally, patterns were similar to findings in 2009:

- Private rented homes (6%) were more likely than social housing (3%) or owner occupied homes (2%) to be overcrowded. 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 10 per cent of four or more person households. Catholic households

(4%) were more likely to live in overcrowded accommodation than Protestant households (2%) but this is largely a reflection of the different average household size and age structures of the two groups.

- The bedroom standard was met, i.e. the dwelling had the exact number of bedrooms required for their household, in less than one fifth (18%) of dwellings. This varied significantly by tenure. Almost half (42%) of homes in the social housing sector met the bedroom standard, compared with 13 per cent of owner occupied homes and 16 per cent of private rented homes. Proportions of Protestant (19%) and Catholic (17%) households living in homes that met the bedroom standard were similar to the overall average (18%).
- The majority (79%) of homes were under-occupied. Owner occupied homes (85%) were most likely to be under-occupied, with one or more bedrooms above the standard (53% had two or more bedrooms above the standard). There was little difference in under-occupation by religion (79% of both Protestant and Catholic households lived in under occupied homes).

Age of Household Reference Person

Key findings:

- A large proportion (62%) of household reference persons (HRPs) were aged between 25 and 59. One-third (34%) of household reference persons were 60 or older (11% were 75 or older). A small proportion (4%) of household reference persons were aged between 17 and 24. This age group has been excluded from further analysis due to small sample sizes.
- More than one-quarter (27%) of household reference persons were pensioners⁸.
- Table 4.2 shows the age profile of the household reference person in 2006, 2009 and 2011. Overall, there has been little change in the age groups since 2006.

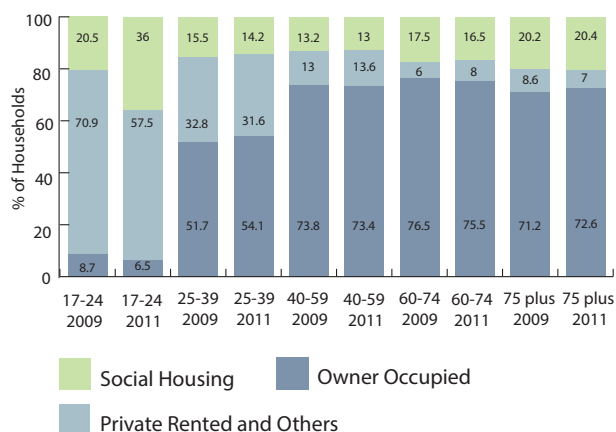
Table 4.2: Age Profile of the Household Reference Person, 2006-2011

Age band	2006 HCS %	2009 HCS %	2011 HCS %
17-24	4	3	4
25-39	23	25	24
40-59	37	36	38
60-74	24	22	23
75+	13	13	11
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, 2009-2011



Rates of owner occupation across age groups have remained broadly similar to 2009 showing there has been little change in the tenure structure of the housing market since this time. However, comparisons with the 2006 House Condition Survey show a significant decrease in the rate of owner occupation among younger households and a corresponding increase in younger households renting privately, reflecting the difficulties first time buyers have had entering the housing market between 2006 and 2011. The overall proportions of household reference persons living in private

rented accommodation were much the same as in 2009, although there was an increase between 2006 and 2009 (again reflecting the housing market conditions at that time). The proportion of household reference persons living in social housing was broadly similar in 2006, 2009 and 2011.

- Similar proportions of household reference persons in 2011 (67%) and 2009 (66%) lived in owner occupied homes (71% in 2006). Below average proportions of household reference persons aged between 25 and 39 (54%; 52% in 2009) lived in owner occupied homes. The corresponding figure in 2006 was 64 per cent.
- As in 2009 and 2006, household reference persons aged between 60 and 74 (76%; 77% in 2009; 77% in 2006) were most likely to live in owner occupied homes.
- The overall proportion of household reference persons living in private rented accommodation remained the same as in 2009 (18%), following an increase between 2006 and 2009 (from 12% to 18%). As in 2009, younger households were disproportionately represented in the private rented sector. Almost one-third (32%; 33% in 2009) of household reference persons aged between 25 and 39 lived in private rented accommodation. This was an increase from 2006 when almost one-fifth (19%) of household reference persons aged between 25 and 39 lived in private rented accommodation.
- There was little change in the overall proportion of household reference persons living in social housing (16% in both 2011 and 2009, and 17% in 2006). Higher than average proportions of household reference persons aged 75 plus (20% in both 2011 and 2009, and 23% in 2006) lived in social housing.

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 2009 and 2011 (See Chapter 3). The exception is the post 1980 group (41%; 34% in 2009) which shows a substantial increase.⁹

⁹The increase is, however, more than expected due to sample error.

- In 2011, ten per cent of the stock had been built prior to 1919 (13% in 2009). Household reference persons aged 75 plus (15%; 18% in 2009) were most likely to live in pre 1919 housing.
- Household reference persons aged between 25 and 39 were most likely to live in post 1980 stock (54% compared with 41% overall). This was an increase of 11 percentage points from 43 per cent in 2009.

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

- In general there has been little change in the proportions of dwelling types since 2009.
- As in 2009, household reference persons aged 75 plus were over-represented in single storey dwellings (34% compared with 21% overall). A smaller than average proportion (10%) of household reference persons aged between 25 and 39 lived in single storey dwellings.
- More than one-quarter (28%; 32% in 2009) of household reference persons lived in terraced houses. A higher than average proportion of household reference persons aged between 25 and 39 (35%; 38% in 2009) lived in this type of dwelling.
- Household reference persons aged between 25 and 39 were most likely to live in semi-detached houses (31% compared with 22% overall).
- One-fifth (20%) of occupied homes were detached dwellings. As in 2009, household reference persons aged between 40 and 59 were most likely to occupy detached dwellings (26%; 23% in 2009).

- Less than one-tenth (8%) of occupied homes were flats/apartments. A higher than average proportion (14%; 11% in 2009) of household reference persons aged 75 plus lived in this type of accommodation.

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

- Almost three-quarters (71%; 70% in 2009) of occupied dwellings were in urban areas. Most age groups showed little variation from the average.
- More than one-quarter (29%; 30% in 2009) of occupied dwellings were in rural areas. Again most age groups showed little variation from the average.

Household Type

Households were classified into three types - adult households, households with children and older households (in 2009 there were eight household types but these were grouped together in 2011 because of the smaller sample size). A description of each household type and results from earlier House Condition Surveys and the 2011 Census are included in Table 4.3.

Key findings:

- Table 4.3 shows that the most common household type was adult households (39%) followed by households with children (33%). More than one-quarter (28%) of households were older households.
- Households with children have shown a marginal increase since 2009. Adult households and older households have decreased slightly.

Table 4.3: Household Types, 2001 to 2011

	2011 HCS %	2011 Census %	2009 HCS %	2006 HCS %	2001 HCS %
Adult households (one or more adults below pensionable age – 65 for men, 60 for women, no dependent children)	39	44	40	41	39
Households with children (one or more adults living with dependent children)	33	34	31	28	32
Older households (one or more people, at least one of whom is of pensionable age 65+ for men, 60+ for women)	28	18	29	31	29
Other (Census only)	-	4	-	-	-
Total	100	100	100	100	100

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

Household Type - Tenure (Table A4.5)

Overall, there has been little change in the proportions of households living in each of the tenures since 2009 although there have been some changes since 2006.

The main changes between 2009 and 2011 are highlighted below:

- Home ownership remained broadly the same (67%; 66% in 2009 and 71% in 2006). Figure 4.2 shows that older households (73%; 75% in 2009 and 73% in 2006) were most likely to live in owner occupied homes.
- There was no change in the proportion of households living in private rented accommodation (18% in both 2011 and 2009; 12% in 2006). A below average proportion of older households (8%; 6% 2009 and 7% in 2006) lived in this type of housing. There was a small decrease in the proportion of adult households renting privately (21%; 24% in 2009). However, this followed an increase between 2006 and 2009 (from 14% to 24%). The household type with the highest proportion renting privately was households with children (22%; 21% in 2009 and 14% in 2006).
- The proportion of households living in social housing remained the same as in 2009 (16%; 17% in 2006). Older households (19%; 19% in 2009 and 20% in 2006) and households with children (15%; 17% in 2009 and 18% in 2006) were most likely to live in social housing.

Figure 4.2: Household Types and Tenure, 2009-2011 (% of Households)



Household Type - Dwelling Age (Table A4.6)

Overall, the proportions of the dwelling stock in the various age categories remained similar to 2009, with the exception of pre 1919 and post 1980:

- More than two-fifths (41%) of all dwellings were built after 1980. An above-average proportion of households with children (52%) occupied post 1980 stock. Older households (29%) were least likely to occupy the newest stock.
- A below-average proportion of households with children (6%) occupied pre 1919 housing (compared with 10% overall).

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 2009, the highest proportion (28%; 32% in 2009) of households lived in terraced housing. Households with children (31%) were most likely to occupy terraced housing.
- Higher than average proportions (33% compared with 21% overall) of older households lived in single storey houses.
- Households with children were most likely to live in detached houses (24% compared with 20% overall).
- Adult households (12%) were most likely to live in flats/apartments (8% overall). Households with children (4%) were the least likely household type to live in flats/apartments.

Household Type - Location (Table A4.8)

- Almost three-quarters (71%; 70% in 2009) of all households lived in urban areas. There was little variation between household types. Households with children (69%) were least likely to live in urban areas. Similar proportions of older households (73%) and adult households (72%) lived in urban areas.
- A lower than average proportion of households with children (32% compared with 36% overall) lived in the BMA.

- More than one-quarter (29%) of all households lived in rural areas. Households with children (31%) were more likely than other household types to live in rural areas.
- More than one-tenth (13%) of all households lived in isolated rural areas. There was little variation among household types. Older households (14%) were slightly more likely than the other household types to live in isolated rural areas.

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

Three key employment groups were identified—those where: the household reference person was working; the household reference person was not working; and the household reference person was retired. In previous House Condition Surveys there were nine groups but in 2011 these were combined due to the smaller sample size. An explanation of each group is below:

- Working – self-employed, working full-time, working part-time
- Not working – not working but seeking work, not working and not seeking work, permanently sick or disabled, looking after family/home, other (including student)
- Retired

Key findings:

- More than half (54%) of all household reference persons were working, while almost one-fifth (19%) of were not working.

- More than one-quarter (27%) of household reference persons were retired.

Table 4.4: Comparisons of Employment Groups, 2006 – 2011

Employment category	Household Reference Persons (%)		
	2011 HCS	2009 HCS	2006 HCS
Working	54	50	51
Not working	19	22	21
Retired	27	27	29
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 A4.9)

Unemployment was highest among household reference persons living in social housing and lowest in the owner occupied sector:

- A high proportion of household reference persons who lived in the owner occupied sector (62%) were working.
- Overall, 16 per cent of households lived in social housing. A higher than average proportion of unemployed household reference persons lived in social housing (37%).
- Almost one-fifth (18%) of households lived in private rented accommodation. A higher than average proportion (33%) of household reference persons who were not working lived in this type of accommodation. Retired household reference persons (8%) were least likely to rent privately.
- Figure 4.3 shows employment groups within tenure and changes since 2009.

Figure 4.3: Employment Status of HRP and Tenure, 2009-2011



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

Generally, findings were consistent with 2009:

- Overall, ten per cent of all dwellings were built before 1919 (13% in 2009). Household reference persons who were not working (7%) were least likely to live in dwellings that were built before 1919.
- Household reference persons who were working (49%; 41% overall) were most likely to live in post 1980 homes. Similar proportions of household reference persons who were not working (33%; 31% in 2009) or retired (31%; 28% in 2009) lived in post 1980 homes.

Employment Status of Household Reference Person - Dwelling Type (Table A4.11)

There was some variation in dwelling type by employment group:

- A higher than average proportion of household reference persons who were not working (37%; 28% overall) lived in terraced houses.
- Retired household reference persons (29%) were most likely to live in single storey houses (compared with 21% overall).

- A higher than average proportion of household reference persons who were working (26%; 20% overall) lived in detached houses. Household reference persons who were not working (8%) were least likely to live in detached houses.

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

- Almost three-quarters (71%) of household reference persons lived in urban areas. Proportions of employment groups living in urban areas ranged from 69 per cent of household reference persons who were working to 76 per cent of retired household reference persons.
- A slightly higher than average proportion of household reference persons who were working (31%; 29% overall) lived in rural areas. Retired household reference persons (25%) were least likely to live in rural areas.
- Proportions of household reference persons who were working (14%) or retired (13%) and living in isolated rural areas were similar to the overall average (13%). Household reference persons who were not working (9%) were least likely to live in isolated rural areas.

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, 17 per cent of all households had an annual income of less than £10,000 (compared with 25% in 2009). Analysis of this group showed that almost half (48%) lived in owner occupied homes, almost one-third (31%) had a household reference person aged between 40 and 59 and more than two-fifths (41%) were adult households.

- More than one-quarter (29%; 24% in 2009) of households had an annual income of £10,000 to £14,999.
- The same proportion of households had incomes of between £15,000 and £19,999 and between £20,000 and £29,999 (both 15%). Almost one-quarter (24%) of households had incomes of £30,000 or more.

The following table shows changes by income band 2006 to 2011 and compares 2011 results with the 2009/10 Family Resources Survey (FRS) and the 2011/12 Northern Ireland Continuous Household Survey (CHS)¹⁰.

Table 4.5: Comparison of Annual Income Bands HCS, FRS (2009-10) and CHS (2011-12)

Income Band	HCS 2011 (%)	HCS 2009 (%)	CHS 2011-12 (%)	FRS 2009-10 (%)	HCS 2006 (%)
Less than £10,000	17	25	22	16	30
£10,000 - £14,999	29	24	18	17	23
£15,000 - £19,999	15	12	12	16	13
£20,000 - £29,999	15	16	17	17	14
£30,000 or more	24	23	31	34	20
Total	100	100	100	100	100

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

Annual Household Income - Tenure (Table A4.13)

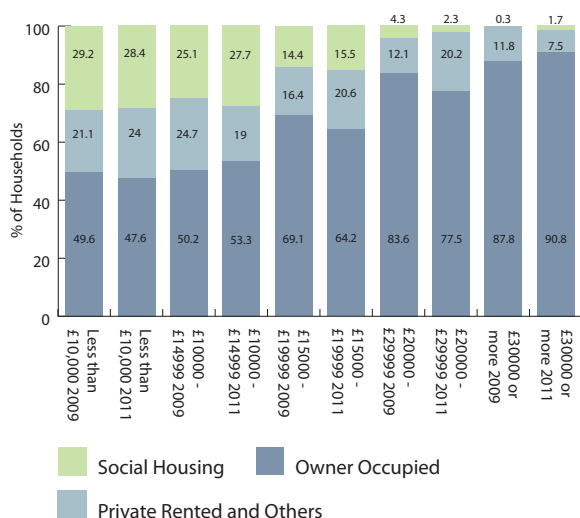
Overall patterns were consistent with 2009. The private rented sector continued to show an increase in lower income households which is consistent with the employment status changes.

- Figure 4.4 clearly shows that as household income increased so did the likelihood of owner occupation; 48 per cent of household reference persons with an annual income of less than

¹⁰ 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 2792 and the FRS was 2041.

£10,000 were owner occupiers, compared to 91 per cent of household reference persons who earned £30,000 or more.

Figure 4.4: Annual Household Income (Gross) and Tenure, 2009 – 2011 (% of Households)



- Generally, proportions of households in private rented accommodation decreased as annual income increased. Consistent with earlier findings on employment changes, figure 4.4 shows that since 2009, there has been an increase in the lowest income households within the private rental sector.
- Similarly, proportions of social renting decreased as annual income increased. More than one-quarter (28%) of households earning less than £10,000 per annum lived in social housing. A very small proportion (2%) of households with an annual income of £30,000 or more per annum lived in social housing.
- Almost one-third (30%) of social housing households had an annual income of less than £10,000, compared to 23 per cent of private rental households and 12 per cent of owner occupier households.

Annual Household Income - Dwelling Age (Table A4.14)

As in 2009, higher income households were more likely to live in the newest dwellings.

- Approximately one-quarter (26%) of households with an annual income of less than £10,000 lived in dwellings built post 1980 compared to 67 per cent of households with an annual income of £30,000 or more.
- More than one-quarter (29%) of all pre 1919 dwellings were lived in by households with annual incomes of less than £10,000, and 17 per cent were lived in by households with an annual income of £30,000 or more.

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

Overall, patterns have remained consistent since 2009 and show links with tenure.

- Generally, higher income groups were more likely to live in detached (42%; £30,000 or more per annum) or semi detached (26%; £30,000 or more per annum) housing.
- The highest proportion of households earning less than £10,000 per annum (31%) lived in terraced houses.

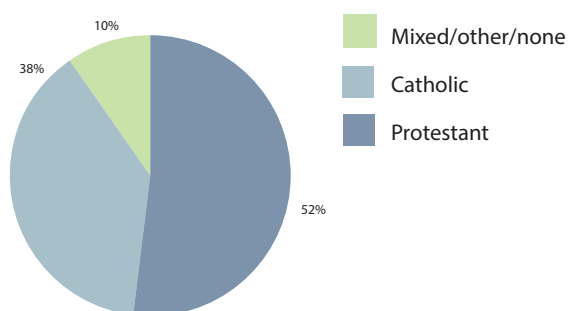
Annual Household Income - Location (Table A4.16)

- Almost three-quarters (71%) of households lived in urban areas. The proportions of income groups living in urban areas ranged from 65 per cent of households earning £30,000 or more, to 80 per cent of households earning between £10,000 and £14,999 per annum.
- Households with incomes of between £10,000 and £14,999 (20%) were least likely to live in rural areas, while those with £30,000 or more (35%) were most likely to live in rural areas (compared with 29% 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, 2011



Key findings:

- More than half (52%; 48% in 2009) of respondents designated their household religion as Protestant and 38 per cent (40% in 2009) as Catholic.
- A small proportion (10%) of respondents described their household religion as mixed (Protestant & Catholic)/other/none.

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

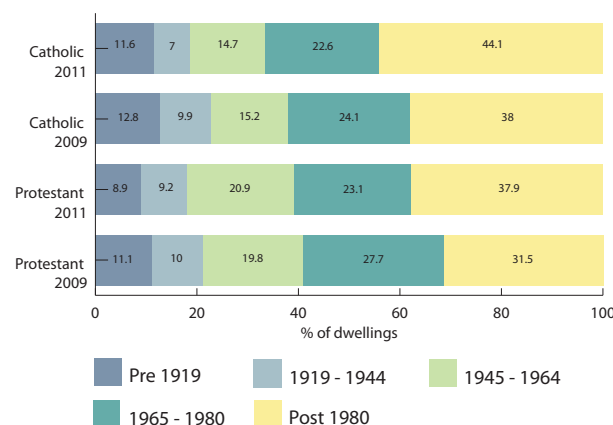
Household Religion - Tenure (Table A4.17)

Overall the tenure pattern by religion was similar to 2009.

- Slightly higher proportions of Protestant (70%; 70% in 2009) compared to Catholic (63%; 64% in 2009) households owned their homes.
- More than one-tenth (13%; 14% in 2009) of Protestant households and one-fifth (20%; 18% in 2009) of Catholic households lived in privately rented accommodation.
- Similar proportions of Protestant households (16%; 16% in 2009) and Catholic households (17%; 18% in 2009) lived in social housing.

Household Religion - Dwelling Age (Table A4.18)

Figure 4.6: Household Religion and Age of Dwelling, 2009 – 2011



- A higher proportion of Catholic households (44%; 38% in 2009) lived in post 1980 stock than Protestant households (38%; 32% in 2009).
- A higher proportion of Catholic households (12%; 13% in 2009) lived in the oldest stock (pre 1919) than Protestant households (9%; 11% in 2009).

Household Religion - Dwelling Type (Table A4.19)

As in 2009, similar proportions of Catholic and Protestant households occupied most dwelling types.

- More than one-quarter (28%) of both Catholic and Protestant households lived in terraced housing.
- One-fifth (20%) of both Protestant and Catholic households lived in detached housing.

Household Religion - Location (Table A4.20)

There were differences between the two main religious groups in location.

- Almost three-quarters (74%) of Protestant households lived in urban areas compared to 66 per cent of Catholic households.
- There was a further small decrease in the proportion of Protestant households living in the BMA (42%; 44% in 2009 and 48% in 2006). As in 2009, a much smaller proportion of Catholic households (27%; 26% in 2009) lived in the BMA.

- Catholic households (34%) were more likely than Protestant households (26%) to live in rural areas.

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.

Table 4.6: Household Sub-Groups, 2006-2011

Sub-Groups	2011		2009		2006	
	%	No	%	No	%	No
Households with children (dependent child(ren) under 16; includes lone parent households)	33	228,620	31	211,900	29	188,300
Older households (one or more people, at least one of whom is of pensionable age: 65+ for men, 60+ for women)	28	198,220	30	203,900	31	201,000
Lone Adult Households (non-pensionable, under 65 for men and under 60 for women)	15	106,700	13	92,300	14	92,900
Households headed by a person who is not working (includes unemployed, permanently sick/disabled, looking after family/home, student)	19	132,400	23	157,200	20	130,200

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 2009-2011 follow after the tables.

Table 4.7: All Households with Children, 2011

	% of Households		No of Households	
	in sub group	in whole survey	in sub group	in whole survey
by Age of Household Reference Person				
17-24	8	4	17,500	25,400
25-39	48	24	109,600	169,100
40-59	44	38	99,400	268,500
60-74	1	23	2,100	159,900
75 plus	0	11	0	78,400
by Employment Status of HRP				
Working	76	54	173,300	378,800
Not working	23	19	53,000	132,400
Retired	1	27	2,200	190,000
by Annual Household Income				
Less than £10,000	11	17	24,800	118,400
£10,000 - £14,999	23	29	53,200	199,500
£15,000-£19,999	16	15	35,900	108,000
£20,000-£29,999	13	15	30,100	106,500
£30,000 or more	37	24	84,600	168,900
by Religion				
Protestant	49	52	112,200	365,600
Catholic	40	38	91,000	268,500
Mixed/other/none	11	10	25,300	67,200
by Tenure				
Owner Occupied	62	67	142,800	467,800
Private Rented	22	18	51,000	122,800
Social Housing	15	16	34,900	110,600
by Construction Date				
Pre 1919	6	10	13,600	66,800
1919-1944	5	8	11,600	56,400
1945-1964	15	18	33,100	128,800
1965-1980	23	23	52,600	161,100
Post 1980	52	41	117,800	288,200
by Settlement Type				
BMA	32	36	72,000	254,200
District Town/Other Town	37	35	85,500	246,500
Small Rural Settlement	19	16	43,500	111,300
Isolated Rural	12	13	27,700	89,300
by Dwelling Type				
Bungalow	15	21	33,400	149,800
Terraced House	31	28	71,000	197,300
Semi-Detached House	26	22	60,000	156,900
Detached House	24	20	55,800	140,700
Flat/Apartment	4	8	8,400	56,600

Table 4.8: Older Households, 2011

	% of Households		No of Households	
	in sub group	in whole survey	in sub group	in whole survey
by Household Size				
1	49	29	97,900	204,600
2	51	31	100,300	216,700
3	0	15	0	106,100
4	0	14	0	97,900
5+	0	11	0	75,900
by Employment Status of HRP				
Working	13	54	26,100	378,800
Not working	7	19	13,100	132,400
Retired	80	27	159,100	190,000
by Annual Household Income				
Less than £10,000	23	17	45,000	118,400
£10,000 - £14,999	44	29	86,900	199,500
£15,000-£19,999	15	15	29,900	108,000
£20,000-£29,999	14	15	27,400	106,500
£30,000 or more	5	24	9,100	168,900
by Religion				
Protestant	60	52	119,200	365,600
Catholic	33	38	65,500	268,500
Mixed/other/none	7	10	13,500	67,200
by Tenure				
Owner Occupied	73	67	145,100	467,800
Private Rented	8	18	14,900	122,800
Social Housing	19	16	38,300	110,600
by Construction Date				
Pre 1919	11	10	21,600	66,800
1919-1944	10	8	19,400	56,400
1945-1964	23	18	45,900	128,800
1965-1980	27	23	54,400	161,100
Post 1980	29	41	56,900	288,200
by Settlement Type				
BMA	39	36	77,400	254,200
District Town/Other Town	34	35	68,100	246,500
Small Rural Settlement	13	16	24,700	111,300
Isolated Rural	14	13	27,900	89,300
by Dwelling Type				
Bungalow	33	21	64,400	149,800
Terraced House	24	28	48,400	197,300
Semi-Detached House	19	22	38,500	156,900
Detached House	15	20	30,000	140,700
Flat/Apartment	9	8	16,800	56,600

Table 4.9: Lone Adult Households (under pension age), 2011

	% of Households		No of Households	
	in sub group	in whole survey	in sub group	in whole survey
by Age of Household Reference Person				
17-24	4	4	4,200	25,400
25-39	30	24	31,900	169,100
40-59	56	38	59,700	268,500
60-74	10	23	11,000	159,900
by Employment Status of HRP				
Working	52	54	55,700	378,800
Not working	41	19	44,200	132,400
Retired	6	27	6,900	190,000
by Annual Household Income				
Less than £10,000	33	17	34,900	118,400
£10,000 - £14,999	23	29	24,700	199,500
£15,000-£19,999	18	15	19,300	108,000
£20,000-£29,999	14	15	14,600	106,500
£30,000 or more	12	24	13,300	168,900
by Religion				
Protestant	47	52	50,200	365,600
Catholic	43	38	45,500	268,500
Mixed/other/none	10	10	11,100	67,200
by Tenure				
Owner Occupied	42	67	44,400	467,800
Private Rented	35	18	37,100	122,800
Social Housing	24	16	25,200	110,600
by Construction Date				
Pre 1919	14	10	15,200	66,800
1919-1944	10	8	11,000	56,400
1945-1964	15	18	15,500	128,800
1965-1980	24	23	25,200	161,100
Post 1980	37	41	39,800	288,200
by Settlement Type				
BMA	42	36	44,700	254,200
District Town/Other Town	37	35	39,700	246,500
Small Rural Settlement	15	16	16,200	111,300
Isolated Rural	6	13	6,200	89,300
by Dwelling Type				
Bungalow	17	21	17,800	149,800
Terraced House	31	28	32,700	197,300
Semi-Detached House	20	22	20,900	156,900
Detached House	8	20	8,300	140,700
Flat/Apartment	25	8	27,000	56,600

Table 4.10: HRP not working, 2011

	% of Households		No of Households	
	in sub group	in whole survey	in sub group	in whole survey
by Age of Household Reference Person				
17-24	10	4	13,100	25,400
25-39	27	24	35,300	169,100
40-59	52	38	68,200	268,500
60-74	8	23	11,100	159,900
75 plus	4	11	4,800	78,400
by Key Benefits claimed				
Child Benefit	33	17	44,300	115,400
Disability Benefit	40	14	53,400	98,900
Incapacity Benefit	30	7	39,800	51,800
Housing Benefit	63	19	83,000	133,200
Income Support	41	9	54,800	65,400
Child Tax Credit	23	11	29,800	75,800
by Annual Household Income				
Less than £10,000	39	17	51,900	118,400
£10,000 - £14,999	46	29	60,800	199,500
£15,000-£19,999	11	15	14,000	108,000
£20,000-£29,999	3	15	4,400	106,500
£30,000 or more	1	24	1,300	168,900
by Religion				
Protestant	43	52	56,600	365,600
Catholic	47	38	62,200	268,500
Mixed/other/none	10	10	13,600	67,200
by Tenure				
Owner Occupied	30	67	40,300	467,800
Private Rented	33	18	43,100	122,800
Social Housing	37	16	49,100	110,600
by Construction Date				
Pre 1919	7	10	9,500	66,800
1919-1944	10	8	13,400	56,400
1945-1964	19	18	25,000	128,800
1965-1980	31	23	41,100	161,100
Post 1980	33	41	43,400	288,200
by Settlement Type				
BMA	36	36	47,400	254,200
District Town/Other Town	37	35	48,900	246,500
Small Rural Settlement	18	16	24,100	111,300
Isolated Rural	9	13	12,000	89,300
by Dwelling Type				
Bungalow	21	21	27,900	149,800
Terraced House	37	28	49,300	197,300
Semi-Detached House	19	22	24,600	156,900
Detached House	8	20	10,600	140,700
Flat/Apartment	15	8	20,000	56,600

4.5 Summary of Changes in Household Sub-Groups 2009-2011

Overall there was little inter tenure movement among household sub-groups between 2009 and 2011. Changes are summarised below.

Households with children 2011

Between 2009 and 2011 there was a small increase in the proportion of households with children (from 31% to 33%). There was little inter tenure movement among households with children.

Older households 2011

More than one-quarter (28%; 30% in 2009) of households were older households. As in 2009, the majority of older households (73%; 75% in 2009) lived in owner occupied homes.

Lone adult households (under pension age) 2011

The proportion of lone adult households increased slightly between 2009 and 2011 (from 13% to 15%). There was a small decrease in the proportion of lone adult households living in owner occupied homes (42%; 45% in 2009) and a small increase in the proportion of lone adult households living in private rented accommodation (35%; 32% in 2009).

Households with HRP not working 2011

The proportion of households where the HRP was not working decreased between 2009 and 2011 (from 23% to 19%). There was some inter tenure movement with the proportion living in owner occupied homes decreasing from 37 per cent in 2009 to 30 per cent in 2011. The proportion living in social housing increased from 33 per cent to 37 per cent.

4.6 Summary and Conclusion

The household data from the 2011 HCS confirmed a number of important housing trends including:

- Only three per cent of households lived in homes which were overcrowded.
- The proportion of households living in social housing in 2011 was the same as in 2009. Older households and households with children were most likely to live in social housing.
- Protestant households were slightly more likely than Catholic households to own their own homes. There was no difference in the proportions of Protestant and Catholic households living in terraced or detached housing. Differences between the two main religions can be seen when looking at location. Protestant households were more likely to live in urban areas, while there was a higher proportion of Catholics living in rural areas.
- As in previous years the House Condition Survey showed links between income and tenure, dwelling type and dwelling age. Higher income households were more likely to own their own homes, live in detached houses and live in newer dwellings.
- The increase in private renting (from 12% to 18%) and decrease in owner occupation (from 71% to 66%) which was apparent between 2006 and 2009 levelled off in 2011, when two-thirds (67%) of households lived in owner occupied homes and almost one-fifth (18%) of households lived in privately rented accommodation.



Table 5.1: Unfitness - Key Figures, 2006 – 2011

	2006		2009		2011	
Location						
All Urban	12,800	53.1%	8,000	46.0%	14,100	40.0%
All Rural	11,400	46.9%	9,500	54.0%	21,100	60.0%
Tenure						
Owner Occupied	7,500	31.0%	4,400	25.0%	*	13.0%
Private Rented & others	2,200	8.9%	2,700	15.5%	*	7.1%
Social Housing	600	2.5%	100	0.6%	*	0.4%
Vacant	13,900	57.6%	10,300	58.9%	28,000	79.5%
Dwelling Age						
Pre 1919	15,000	62.3%	8,500	48.4%	18,500	52.5%
1919 - 1944	3,800	15.5%	3,200	18.1%	*	16.7%
1945 - 1964	2,500	10.1%	1,400	7.8%	*	5.0%
1965 - 1980	900	3.9%	1,600	9.5%	*	11.2%
Post 1980	2,000	8.2%	2,800	16.1%	*	14.6%
All Unfit Dwellings	24,200	3.4%	17,500	2.4%	35,200	4.6%

Table 5.2: The State of Repair – Key Figures, 2011

	Dwellings in Disrepair		Average Urgent Mean Repair Cost (£)
Tenure			
Owner Occupied	209,300	44.6%	510
Private Rented and Others	65,800	52.5%	551
Social Housing	58,400	52.7%	192
Vacant	41,100	75.0%	20,190
Dwelling Age			
Pre 1919	63,100	72.0%	10,305
1919 - 1944	50,600	74.3%	2,998
1945 - 1964	72,100	53.8%	461
1965 - 1980	98,200	57.9%	449
Post 1980	90,700	30.1%	629
Dwelling Type			
Bungalow	79,500	49.7%	1,696
Terraced House	115,800	55.2%	640
Semi-Detached House	84,300	51.0%	756
Detached House	66,900	42.2%	5,377
Flat	28,200	42.4%	779
Location			
Belfast Metropolitan Area	140,500	52.3%	986
District/Other Town	111,100	42.6%	763
All Urban	251,600	47.5%	876
Small Rural Settlement	63,300	51.8%	1,102
Isolated Rural	59,800	55.2%	7,723
All Rural	123,000	53.4%	4,215
All Dwellings in Disrepair	374,600	49.3%	1,888

5.1 Unfitness - Introduction

House Condition Surveys have assessed dwelling conditions against the Statutory Fitness Standard since 1974, providing a robust assessment of the level of unfitness in Northern Ireland and demonstrating the substantial progress made in improving housing conditions. For the first time however, the 2011 House Condition Survey showed an increase in the number of unfit dwellings in Northern Ireland, reflecting a combination of factors including lower disposable household income, the higher rate of vacancy (particularly in the private sector), and the reduced availability of home improvement grants. 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 the English House Condition Survey (now the English Housing Survey) in 2007, 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).

House Condition Surveys have assessed dwelling conditions against the Statutory Fitness Standard since 1974, providing a robust assessment of the level of unfitness in Northern Ireland.

- 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 2011 House Condition Survey estimated that there were some 35,200 dwellings that were statutorily unfit in Northern Ireland. This represents a headline rate of 4.6 per cent (see Table 5.1). This compares with 17,500 unfit dwellings (2.4%) in 2009, 24,200 unfit dwellings (3.4%) in 2006 and 31,600 unfit dwellings (4.9%) in 2001.

Unfitness – Dwelling Location

Urban/Rural (Table A5.1)

As in 2009, higher than average rates of unfit were seen in rural areas of Northern Ireland (associated with higher rural vacancy rates) and particularly in isolated rural areas, explained at least in part by the depopulation of the more remote parts of Northern Ireland.

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

There was an increase in the rate of unfit in rural areas (from 4% in 2009 to 9% in 2011) although only 30 per cent of dwellings overall were located in rural areas. In isolated rural areas the unfit rate

increased from five per cent in 2009 to 14 per cent in 2011 (although only 14% of dwellings were located in isolated rural areas). There was little change in the rate of unfit in urban areas (2% in 2009; 3% in 2011).

Most unfit dwellings were also located in rural areas. Three-fifths (60%; 54% in 2009) of all unfit dwellings were in rural areas while two-fifths (40%; 46% in 2009) of all unfit dwellings were in urban areas.

Unfitness – Dwelling Tenure (Table A5.2)

The rate of unfit for most tenures was very small. The exception was vacant dwellings which had a clear association with unfit. Vacant dwellings had an unfit rate of 51.2 per cent. This was a substantial increase from 2009 when almost one-quarter (23.8%) of vacant dwellings were unfit. The increase was largely due to an increase in the number of properties described as – vacant ‘being modernised’.

The growth in the proportion of unfit dwellings that were vacant was already apparent in previous House Condition Surveys (59% in 2009; 58% in 2006 and 44% in 2001) and had become more pronounced in 2011 when the majority (80%) of all unfit dwellings were vacant.

Unfitness – Dwelling Age (Table A5.3)

There was a clear relationship between unfit and dwelling age. Pre 1919 dwellings had a much higher than average rate of unfit (21.1% compared with 4.6% overall). There was a considerable increase in the unfit rate for pre 1919 dwellings between 2009 and 2011 (from 8% to 21.1%).

More than half (53%; 48% in 2009) of all unfit dwellings were built before 1919.

Unfitness – Dwelling Type (Table A5.4)

Analysis by dwelling type showed that, as in 2009, detached houses had the highest rate of unfit (8.6% compared with 4.6% overall).

More than one-third (39%; 31% in 2009) of all unfit dwellings were detached houses.

Unfitness – Household Characteristics (Tables A5.5 – A5.9)

The rate of unfitness for the occupied stock was 0.9 per cent (compared with 1.0% in 2009). The overall number of unfit dwellings in the occupied stock was not big enough to enable analysis by household characteristics (see Tables A5.5 – A5.9).

5.3 The Scale of Unfitness

The assessment

The 2011 House Condition Survey estimated that a total of some 35,200 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 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 three most common reasons for a property being classified as unfit in 2011 were:

- Unsatisfactory facilities for the preparation and cooking of food (26,300 dwellings).
- No, or unsuitably located, bath, shower or wash hand basin (24,600 dwellings).
- Serious disrepair (22,200 dwellings).

This was a slight change from 2009 when the three most common reasons for a property being classified as unfit were: unsatisfactory facilities for the preparation and cooking of food, serious disrepair, and dampness.

5.4 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 (79%) and those recommended for demolition (21%). This was similar to 2009 when surveyors recommended that 78 per cent of unfit properties be retained and 23 per cent be demolished. In 2011, of the unfit dwellings to be retained the vast majority (76%) were recommended for repair or improvement on a single unit basis (61% of all unfit dwellings). For a further 5,500 (20% of unfit dwellings to be retained) the survey indicated that the best course of action was area-based repair or improvement (16% of all unfit dwellings).

Table 5.3 shows how this contrasts with the recommendations for the dwelling stock as a whole, where for 91 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 (80% of all unfit dwellings) surveyors recommended demolition for 22 per cent and repair or improvement for the remainder.
- In the owner occupied stock, repair or improvement was recommended for 65 per cent of unfit dwellings.
- In the occupied private rented sector, demolition was recommended for 31 per cent of unfit dwellings; repair or improvement was recommended for the remaining 69 per cent .

Table 5.3: Recommended Future Action for Unfit Dwellings, 2011

	Unfit Dwellings	All Dwellings
None	1,000 (3%)	690,800 (91%)
Repair/Improve Single Dwelling	21,300 (61%)	56,100 (7%)
Repair/Improve Block/Group of Dwellings	5,500 (16%)	5,800 (<1%)
Demolish/Replace Single Dwelling	6,800 (19%)	6,800 (<1%)
Demolish/Replace Block/Group of Dwellings	500 (2%)	500 (<1%)
Total	35,200 (100%)	760,000 (100%)

5.5 Summary and Conclusion

Between 2009 and 2011 there was an increase in the rate of unfitness of Northern Ireland's housing stock. The headline unfitness rate increased from 2.4 per cent in 2009 to 4.6 per cent in 2011. This was associated with an increase in the rate of vacancy, particularly in isolated rural areas. In 2011 there were 35,200 dwellings that were statutorily unfit (compared with 17,500 dwellings in 2009). The most common reasons for unfitness were unsatisfactory facilities for the preparation and cooking of food; no, or unsuitably located, bath, shower and wash hand basin; and serious disrepair.

5.6 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 2011 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 most recent English Housing Survey, thus permitting direct comparisons with England (see Appendix C).

For the 2011 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 Homes Standard (including the state of repair) in more detail.

5.7 Dwelling Faults

Surveyors observed and recorded faults in more than half (385,400; 51%) of all dwellings (52% in 2009).

Dwelling Faults – Element (Table A5.10)

Dwellings were much more likely to have faults in their exterior fabric (321,200; 42%) than their interior fabric (168,600; 22%). In 2009, the proportion of dwellings with faults to their exterior fabric (44%) was also considerably higher than those with faults to their interior fabric (24%).

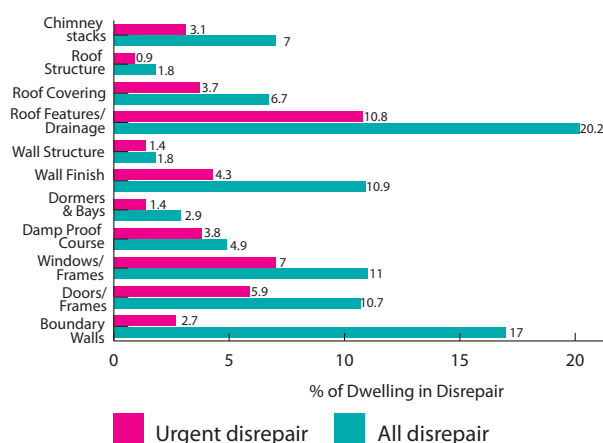
However, between 1996 and 2011 the proportion of the total stock affected by disrepair fell considerably: by 22 percentage points for all disrepair, 15 percentage points for external disrepair and 17 percentage points for internal disrepair.

Further analysis of faults to exterior elements shows:

- Faults to roof elements were the most common type recorded (193,600; 26%), affecting, in particular, roof features such as fascias, rainwater gutters and down pipes and valley gutters (153,600; 20%).
- Faults to boundaries and plots were recorded in less than one-fifth of dwellings (128,900; 17%).
- Faults to windows and doors were recorded in approximately one-sixth of dwellings (119,500; 16%).
- Almost one-sixth of dwellings, (112,200; 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 ceilings (84,100; 11%) and walls (72,600; 10%). Similar proportions had faults to windows (50,100; 7%), doors (46,800; 6%) and floors (43,500; 6%). A smaller proportion had faults to stairs (30,500; 4%).

Surveyors also had to record their estimate of the urgency of the treatment required for any faulty exterior elements. Figure 5.1 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 49 per cent of all faults to external dwelling elements. However, where faults to the damp proof course or wall structure were recorded the figures were higher (77% and 76% respectively). Overall, almost 159,000 dwellings (21%) had faults which required urgent attention.

Figure 5.1: External Faults and their Urgency, 2011



Disrepair – Dwelling Tenure (Table A5.11)

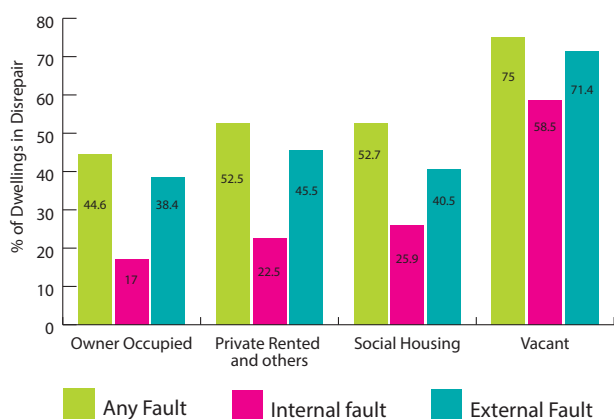
As with unfitness, there was a clear association between vacancy and disrepair. Three-quarters (75%; 64% in 2009) of vacant dwellings had faults. The likelihood of disrepair (external or internal) was clearly associated with the length of time a dwelling had been vacant. More than three-fifths (63%) of all dwellings that had been vacant for less than one year had at least one fault, whereas for dwellings vacant for more than one year the figure rose to 83 per cent. In the case of urgent faults the difference was even greater; 35 per cent of dwellings vacant for less than one year required at least one urgent repair compared with 68 per cent for dwellings vacant for more than one year.

Faults were recorded in the same proportion of privately rented dwellings and occupied social dwellings (both 53%). Almost half (45%) of owner-occupied dwellings had faults.

In terms of internal disrepair, there is a similar pattern to that for all disrepair. Vacant properties had the highest proportion of internal disrepair (59%). Similar proportions of social dwellings (26%) and private rented dwellings (23%) had internal disrepair. Internal disrepair was recorded in almost one-fifth (17%) of owner occupied dwellings.

A broadly similar pattern emerged for external repairs with almost three-quarters (71%) of all vacant properties requiring external repairs. More than two-fifths of both private rented (46%) and social dwellings (41%) required external repairs. External disrepair was recorded in almost two-fifths (38%) of owner-occupied dwellings.

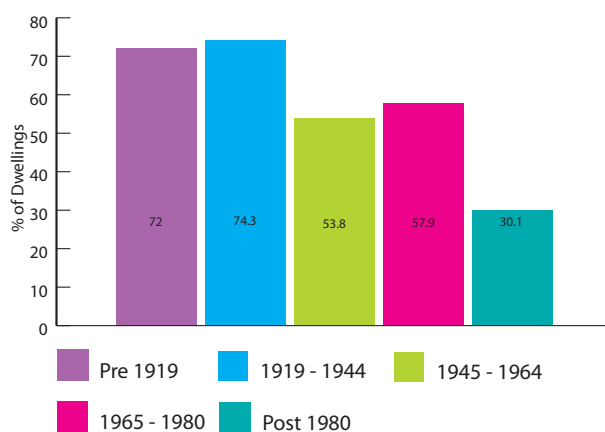
Figure 5.2: Disrepair and Dwelling Tenure, 2011



Disrepair – Dwelling Age (Table A5.12)

There is a clear relationship between dwelling age and disrepair: older dwellings were more likely to have a fault in the internal or external fabric or in amenities and services. (See Figure 5.3)

Figure 5.3: Disrepair and Dwelling Age, 2011



Dwellings built before 1919 (72%) and those built between 1919 and 1944 (74%) were most likely to have fabric disrepair. Dwellings built since 1980 (30%) were least likely to have fabric disrepair.

Pre 1919 dwellings (48%) and those built between 1919 and 1944 (42%) had the highest proportion of internal disrepair. Post 1980 dwellings (12%) had the lowest internal disrepair.

The pattern was similar for external disrepair, with proportions being higher for pre 1919 properties (67%) and those built between 1919 and 1944 (66%). External disrepair was lowest in dwellings built since 1980 (23%).

Disrepair – Dwelling Type (Table A5.13)

The proportion of fabric disrepair varied from 42 per cent for flats/apartments and detached houses, to 55 per cent for terraced houses. Terraced houses also had the highest level of external disrepair (47%) and internal disrepair (26%).

Disrepair – Dwelling Location (Table A5.14)

The level of rural disrepair (53%) remained similar to 2009 (52%). However, there was a decrease in the level of disrepair in urban areas (48%; 52% in 2009).

Interior disrepair was higher in the BMA (26%) than in district towns/other towns (16%). It was also higher in isolated rural areas (30%) than in small rural settlements (20%).

More than half (51%) of the dwellings in isolated rural areas had external disrepair. Dwellings in district towns/other towns had the lowest level of external disrepair (37%).

5.8 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. Repair costs have increased since 2009, largely associated with the increase in vacant dwellings. 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 2011 was £1,887.59. This equated to £19.62 per m² (The comparable figures for 2009 were £756.34 and £8.57 per m²).

The average basic repair cost was £2,122.83 which was equivalent to £22.10 per m². (The comparable figures for 2009 were £938.37 and £10.55 per m²).

The average cost for comprehensive repairs was £3,628 or £42.17 per m². (The comparable figures for 2009 were £3,099 and £42 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 £1.4 billion; for basic repairs the figure was £1.6 billion and for comprehensive repairs over a 10 year period, £2.8 billion.

In nominal terms the total resources required to remedy urgent and basic disrepair has increased by £875 million and £919 million respectively.

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 5.4).

Table 5.4: The Distribution of Repair Costs, 2011

Actual repair required costing at least (£)		
% of Dwelling Stock	Urgent	Basic
1	48,483	56,681
2	21,763	26,750
5	4,541	5,480
10	1,592	2,475
25	363	718
50	0	0
Mean (£)	1,888	2,123
Median (£)	0	0
Mean per m ² (£)	19.62	22.10
Median per m ² (£)	0	0

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 £48,000, only five per cent required costs of more than approximately £4,500, and at least 50 per cent required no urgent repairs at all.

A similar pattern existed for basic repairs. Half of the stock required no repairs at all, and only five per cent required repairs costing more than approximately £5,000.

Repair Costs – Tenure (Table A5.15)

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 £20,190 it was approximately 43 times higher than for the occupied stock as a whole (£467).

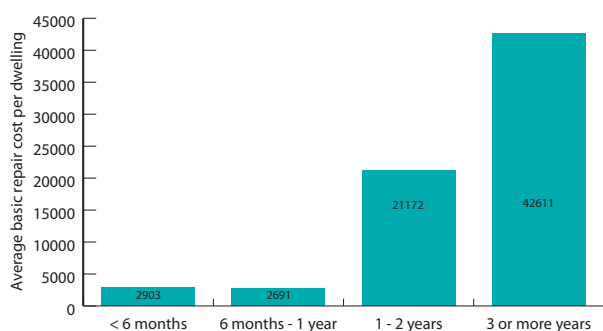
A similar concentration was apparent for basic repair costs, where the figure for vacant stock was £21,052 compared to only £654 for occupied dwellings. Indeed, more than three-quarters (77 per cent) of the total urgent repair costs for all stock and almost three-quarters (71%) of the total basic repair costs

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

was needed for the seven per cent of the housing stock that was vacant.

The length of time that a dwelling had been vacant was an important factor in determining the cost required to remedy the repairs (see Figure 5.4). For example, the average basic repair cost increased from £2,903 for dwellings that had been vacant for less than six months to £42,611 for those that had been vacant for three or more years, almost a fifteen fold increase.

Figure 5.4: Basic Repair Costs of Vacant Dwellings and Period of Vacancy, 2011



The private rented sector had the next highest average urgent repair cost (£551) and average basic repair cost (£739). In all, almost £93m was required to remedy basic repair costs in this sector.

Owner-occupied dwellings required an average of £510 for urgent and £712 for basic repairs. This amounted to a total bill of almost £334m (21 per cent of the total) for basic repairs.

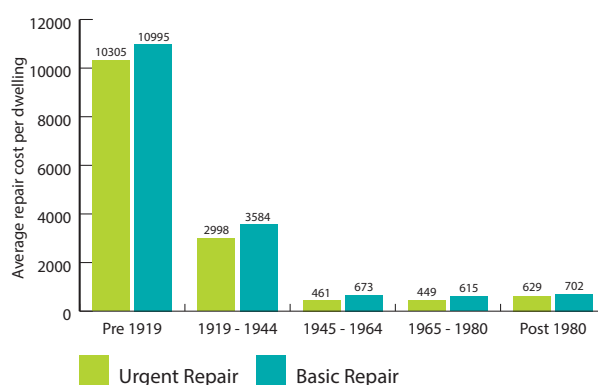
The average repair costs for social housing were much lower at £192 for urgent and £314 for basic (a total basic repairs bill of £34.8 million).

Repair Costs – Dwelling Age (see Table A5.16)

Figure 5.5 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 (£10,996 and £10,305 respectively). The lowest repair costs were found in dwellings built between 1965 and 1980 (£449 for urgent repair costs and £615 for basic

repair costs). Dwellings built since 1980 had higher repair costs (£629 for urgent repair costs and £702 for basic repair costs) but this age group included houses in which major work was ongoing.

Figure 5.5: Repair Costs and Dwelling Age, 2011



Repair costs – Dwelling Type (Table A5.17)

There were some considerable differences in the average repair costs for different dwelling types. In the case of basic repair costs, these ranged from £5,611 for detached dwellings to £852 for terraced houses. 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 were proportionately much closer for terraced houses (£14), semi-detached houses (£12) and flats (£13). Detached houses (£41) and single storey houses (£28) had higher than average costs per m².

The figures for urgent repairs show a similar picture, with the average cost per dwelling being highest for detached houses (£5,377), and lowest for terraced houses (£640). There was a substantial increase in cost per m² for detached houses (from £12 in 2009 to £40 in 2011).

Repair Costs – Dwelling Location (Table A5.18)

There was a major difference in the average repair costs for urban and rural dwellings. Rural dwellings had an average basic repair cost of £4,472 compared with a cost of £1,100 for urban dwellings. This was also the case when costing basic repair per

square metre: £47 for rural dwellings £11 for urban dwellings. A similar picture emerged for urgent repair costs: £4,215 for rural and £876 for urban dwellings.

In the case of isolated rural dwellings, the average basic repair cost was £8,077 (£81 per m²) compared with £1,275 (£17 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.

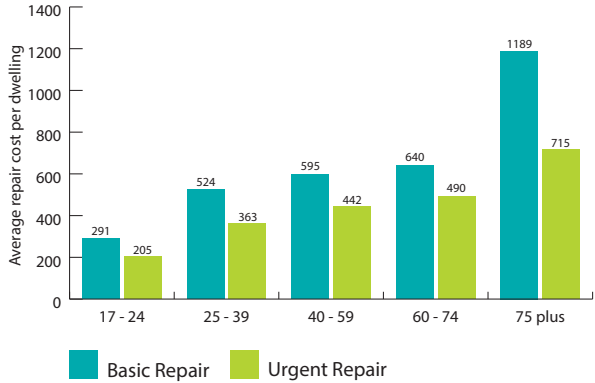
Repair Costs – Household Characteristics (Table A5.19)

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 older 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 £1,189 compared to the average of £644.

Figure 5.6: Repair Costs and Age of Household Reference Person, 2011



Household Type

Older households lived in homes with the highest basic repair costs (£805). The next highest basic repair costs were for homes occupied by adult

households (£673). Households with children lived in homes with the lowest basic repair costs (£467).

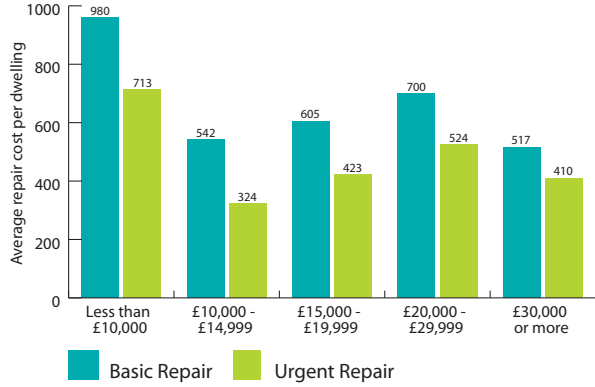
Employment Status

Retired households were most likely to live in homes with higher basic repair costs (£739). However, the cost per square metre was higher for households where the HRP was not working (£9 per m² compared to £8 per m² for retired households).

Annual Income

Households with the lowest incomes tended to live in dwellings with the highest basic repair costs. Those with an income below £10,000 per year had basic repair costs of £980 compared to £517 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 below £10,000 (£11) being almost three times that for those with an income of £30,000 or more (£4).

Figure 5.7: Repair Costs and Annual Income, 2011



Household Religion

Protestant households lived in dwellings with an average basic repair cost of £645 compared to Catholic households where the comparable figure was £657. (See Chapter 4).

5.9 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, although 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 286,000 dwellings had some form of repair or improvement work carried out in the five years prior to 2011. This represented more than two-fifths (41%) of the total occupied stock. In 2009 the House Condition Survey found that 319,000 dwellings had been repaired or improved during the previous five years. This represented almost half (46%) of the stock at that time. This lower

In the private rented sector, the figures were much lower. Only 21 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 5.5.

The proportion of dwellings with repair or improvement work carried out in the five year period to 2011 also varied by age. The highest proportions, however, were for dwellings built between 1981 and 1990 (52%), 1965 and 1980 (52%), not - as might be assumed - for dwellings built prior to 1919 (38%).

Table 5.6 shows that the most common repair/improvement work carried out over the five year period to 2006 was providing/refitting a kitchen (118,300 dwellings; 16% of the stock), providing/

Table 5.5: Repairs and Improvement Work by Tenure, 2011

Tenure	Repair/Improvement		No Work		Don't Know		Total Occupied Dwellings	
Owner Occupied	205,500	44%	260,400	56%	1900	<1%	467,800	100%
Private Rented	26,000	21%	65,600	53%	31,300	26%	122,800	100%
Social Housing	54,100	49%	47,500	43%	8,900	8%	110,600	100%
Total	285,600	41%	373,500	53%	42,200	6%	701,200	100%

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

percentage in 2011 undoubtedly reflects, at least in part, the more challenging economic circumstances of many households who have less money to spend on home improvements.

The highest rates of repair and improvement were among social housing (49%) and owner occupied (44%) stock. This reflects the ongoing commitments of the Housing Executive and housing associations to maintain and improve the standard of housing in Northern Ireland and owner occupiers wishing to improve their homes

refitting a bathroom (111,000 dwellings; 15% of the stock), installing/replacing central heating (101,000 dwellings; 13% of the stock), For all other work, the number of dwellings affected was much lower.

Table 5.6: Repairs and Improvement Work, 2011

Repair/Improvement work	Total dwellings	% of total stock
Re-Roofing/Roof Structure	16,900	2.2%
Structural Repairs	8,300	1.1%
Repointing/Rendering	9,000	1.2%
Replacing Windows	71,500	9.4%
Replacing Doors	60,900	8.0%
Inserting/Replacing DPC	3,000	0.4%
Internal Plastering	28,800	3.8%
New Floors	19,800	2.6%
Electrical Wiring	25,700	3.4%
Providing/Refitting Kitchen	118,300	15.6%
Providing/Refitting Bathroom	111,000	14.6%
Installing/Replacing Central Heating	101,000	13.3%
Rearranging Internal Space/Flat Conversion	10,900	1.4%
Roof Insulation	50,100	6.6%
Cavity Wall Insulation	23,300	3.1%
Garage Added	3,600	0.5%
Conservatory Added	5,300	0.7%
Extension	20,500	2.7%
Combining Two or More Rooms	4,300	0.6%
Other Work	31,300	4.1%
Any repairs/improvement to occupied stock	286,000	37.6%
All dwellings	760,000	

Figure 5.8 illustrates the cost breakdown of repair and improvements carried out in the 286,000 dwellings that had work carried out in the five year period to 2011.

In more than one-fifth (22%) of dwellings, the work cost more than £10,000, in 19 per cent of dwellings the cost was between £2,001 and £5,000. In 15 per cent of dwellings the cost was between £5,001 and £10,000, while for almost one-third (32%) of dwellings the total cost of work was unknown. For the dwellings where the total cost was known, the majority of respondents (153,000; 78%) stated that they had paid all of the cost themselves and the remainder had contributed some of the expenditure (11%) or none of it (11%). In the case of those

households who had contributed to the cost of the work (20,500 households), the most common contribution (28%) was between £1,001 and £2,000.

Figure 5.8: Repair and Improvement Work – Total Cost, 2011



5.10 State of Repair - Summary

There was little change in the state of repair of Northern Ireland's stock between 2009 (52%) and 2011 (51%) in terms of the percentage of dwelling stock with at least one fault. However, the degree of disrepair was significantly higher; the average basic repair cost (which had decreased from £1,476 in 2006 to £938 in 2009) increased to £2,123 in 2011, giving a total repairs bill of £1.6 billion compared with £694 million in 2009.

Disrepair was particularly prevalent in vacant dwellings (75%; 64% in 2009) but it was also higher in the private rented sector and social housing (both 53%) than in the owner occupied sector (45%). There was a clear relationship between the age of the dwelling and disrepair with nearly three-quarters (73%) of all dwellings built before 1945 having faults.

There was also a link between location and disrepair. The level of disrepair was higher in rural areas (53%) than in urban areas (48%). Isolated rural areas in particular had a high level of disrepair (55%), with higher levels of both interior disrepair (30%; 22% overall) and exterior disrepair (51%; 42% overall) than any other location.

Table 6.1: Decent Homes – Key Figures, 2001-2011

	Non-Decency Rate			
	2001	2006	2009	2011
	%	%	%	%
Tenure				
Owner Occupied	23.4	20.4	12.6	8.2
Private Rented and Others	47.3	26.5	17.0	10.2
Housing Executive	49.5	24.7		
Housing Association	7.4	8.9	14.7	3.7
Vacant	70.7	49.5	38.0	57.1
Dwelling Age				
Pre 1919	50.1	41.1	32.4	35.3
1919 - 1944	45.0	30.3	27.6	29.4
1945 - 1964	41.2	28.6	19.9	8.5
1965 - 1980	38.6	21.3	11.9	9.9
Post 1980	1.1	8.3	3.7	2.4
Dwelling Type				
Bungalow	26.8	21.6	13.0	12.6
Terraced House	43.0	24.3	16.5	11.3
Semi-Detached House	25.7	20.7	13.8	6.8
Detached House	24.7	21.0	12.0	14.1
Flat/Apartment	34.0	32.0	25.9	13.8
Dwelling Location				
All Urban	32.3	22.0	14.5	8.5
All Rural	30.6	25.3	16.4	18.0
All Dwellings	31.8	23.0	15.1	11.4

Table 6.2: Fuel Poverty – Key Figures, 2001-2011

	Homes in Fuel Poverty							
	2001		2006		2009		2011	
	No	%	No	%	No	%	No	%
Tenure								
Owner Occupied	97,900	22.8	148,000	31.8	178,000	38.9	190,000	40.6
Private Rented and Others	21,400	44.0	35,300	44.1	67,800	54.9	60,300	49.1
Housing Executive	46,100	40.1	37,800	40.8	56,500	51.4	43,900	39.7
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	45,900	68.7
1919 - 1944	25,700	40.2	27,600	41.4	42,600	58.9	30,200	53.6
1945 - 1964	37,100	30.2	51,700	38.2	54,000	45.5	63,200	49.1
1965 - 1980	40,400	26.0	52,700	32.2	82,900	47.4	78,100	48.4
Post 1980	20,200	11.9	41,800	21.1	67,400	28.3	76,800	26.7
Dwelling Type								
Bungalow	45,700	30.9	56,800	38.0	83,900	54.6	76,800	51.3
Terraced House	54,100	28.5	76,900	35.8	104,600	47.6	90,600	45.9
Semi-Detached House	29,100	24.2	40,700	30.6	46,700	33.3	62,300	39.7
Detached House	26,900	25.0	36,500	31.9	43,200	33.6	51,200	36.4
Flat/Apartment* <i>small numbers</i>	11,300	24.6	14,700	30.9	23,900	48.4	13,300	23.5
Dwelling Location								
All Urban	103,900	25.0	152,900	32.8	206,700	42.8	206,000	41.2
All Rural	63,200	32.5	72,700	37.7	95,600	45.8	88,200	44.0
All Dwellings in Fuel Poverty	167,100	27.3	225,600	34.2	302,300	43.7	294,200	42.0

Table 6.3: HHSRS- Key Figures, 2006-2011

	Category 1 Hazards					
	2006		2009		2011	
	No	%	No	%	No	%
Tenure						
Owner Occupied	93,700	20.0	98,700	21.4	34,300	7.3
Private Rented and Others	15,400	19.1	19,200	15.4	9,300	7.5
Housing Executive	8,200	8.8				
Housing Association	700	3.1	9,400	8.6	*	2.1
Vacant	19,100	47.4	17,200	39.5	29,800	54.5
Dwelling Age						
Pre 1919	47,400	41.6	38,400	36.1	31,700	36.2
1919 - 1944	20,500	28.9	21,600	27.6	18,600	27.2
1945 - 1964	27,200	19.2	29,300	23.4	*	4.7
1965 - 1980	23,000	13.6	32,900	18.1	12,700	7.5
Post 1980	19,000	9.1	22,300	9.1	*	2.2
Dwelling Type						
Bungalow	35,400	22.2	33,600	20.7	19,000	11.9
Terraced House	36,500	16.2	41,400	17.8	12,500	5.9
Semi-Detached House	28,300	20.0	28,500	19.4	14,700	8.9
Detached House	30,500	24.9	34,600	24.9	25,400	16.0
Flat/Apartment	6,400	11.3	6,400	10.7	*	6.4
Dwelling Location						
BMA	40,900	14.9	52,500	19.5	20,100	7.5
District/Other Town	40,700	18.6	37,600	15.8	15,200	5.8
All Urban	81,600	16.5	90,100	17.7	35,300	6.7
Small Rural Settlement	22,200	20.7	24,100	20.7	10,900	9.0
Isolated Rural	33,300	31.9	30,200	26.3	29,600	27.3
All Rural	55,500	26.3	54,300	23.5	40,500	17.6
All Dwellings	137,100	19.4	144,500	19.5	75,800	10.0

* denotes a small number - use caution when quoting proportion
 Due to rounding figures may not add to overall totals

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 Homes Standard in 2007 which replaced the unfitness element by the Housing Health & Safety Rating System. Northern Ireland has retained the Fitness Standard as the first component of the Decent Homes Standard.

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 Homes 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.

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

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

- 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 Homes 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, the percentage of dwellings failing Decent Homes has decreased considerably since 2001. The largest drop was between the years 2001 and 2006 (from 32%; 206,000 dwellings to 23%; 162,100 dwellings). Since 2009 the rate of decrease has been slowing down. In 2009, around one-sixth of dwellings (15%; 111,800) failed to meet the standard; this compares with approximately one-tenth (11%; 86,600) in 2011.

The proportion of dwellings failing Decent Homes in Northern Ireland in 2011 was around half the proportion failing in England. At the time of this report, the latest figures available for England were for 2010, when 26 per cent of dwellings failed the Decent Homes Standard (measured on the basis of the HHSRS as the minimum standard). Failure to meet individual components of the Decent Homes Standard is compared with England later.

The following section examines the dwellings which failed to meet the Decent Homes Standard in 2011 (11%) by property and household characteristics.

Decent Homes – Tenure (Table A6.1)

Variation in the non-decency rate by tenure in 2011 showed:

- Vacant dwellings had the highest rate of non-decency (57%), whereas occupied homes had a much lower proportion failing Decent Homes (8%).

This remained in line with 2006 and 2009 findings.

When vacants were included within tenure the highest failure rates were in the private sector (owner occupied 12% and private rented 15%), whereas social rented homes had a much lower proportion of dwellings failing Decent Homes (6%).

It is important to note that, of all dwellings that failed the Decent Homes Standard, more than two-fifths (44%) were owner occupied and a further 36 per cent were vacant dwellings.

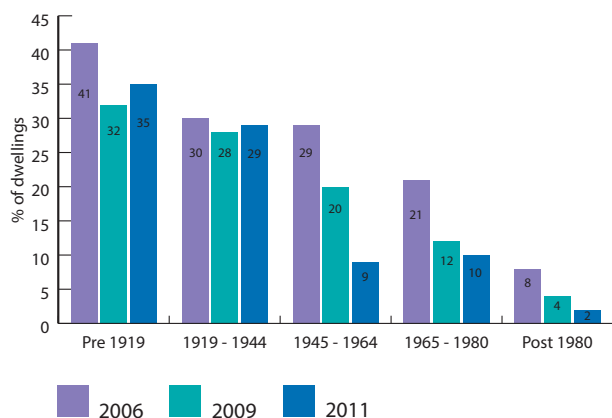
Decent Homes – Dwelling Age (Table A6.2)

Figure 6.1 shows that the rate of failure is very dependent on dwelling age. Older dwellings were more likely to fail the Standard.

- More than one-third (35%) of all dwellings that had been built before 1919 were non-decent;
- This proportion fell to 29 per cent for stock built in the period 1919 to 1944 and then to 10 per cent for stock built in the period 1965 to 1980. Very few post 1980 dwellings failed Decent Homes (2%).

Of all dwellings that failed the Decent Homes Standard more than one-third (36%) were pre-1919 in age (31,000 dwellings).

Figure 6.1: Non-Decent Homes and Dwelling Age, 2006-2011



Decent Homes – Dwelling Type (Table A6.3)

- In 2011 detached houses were more likely to fail Decent Homes (detached 14% and bungalows 13%) than terraced (11%) and semi-detached (7%) housing. Small sample sizes for flats and apartments mean that numbers should be treated with caution and are not reported here.
- More than one-quarter (27%) of all non-decent homes were terraced houses and 26 per cent were detached houses.

Decent Homes – Dwelling Location (Table A6.4)

- Isolated rural areas (23%) had the highest rate of non-decency followed by Small Rural Settlements (14%). The Belfast Metropolitan Area (11%) and District and Other Towns (6%) had the lowest rates of non-decency.

In 2011, more than half (52%) of all non-decent dwellings were located in urban areas and the remainder (48%) in rural areas.

6.4 Decent Homes – Household Characteristics (Table A6.5)

A little less than one-tenth (8%; 54,100) of all occupied dwellings failed the Decent Homes Standard. This was examined by the following household characteristics:

Age of Household Reference Person

Consistent with 2009, Household Reference Persons over the age of 75 (14%) were much more likely to live in non-decent homes than other age groups. However, due to small numbers this figure should be treated with some caution.

Household Type

Again, similar to 2009, older households (11%) were more likely to live in non-decent homes than other household types. Households with children (4%) were the least likely to live in dwellings that failed the Decent Homes Standard.

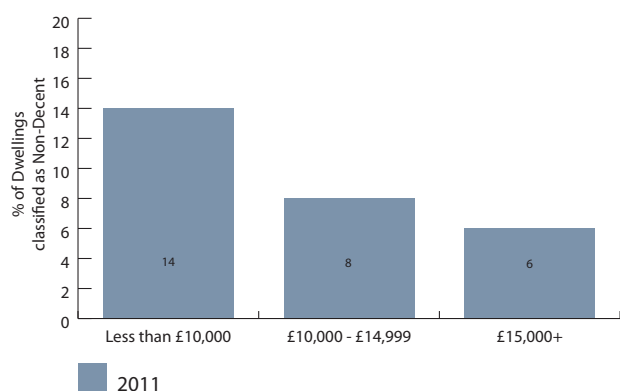
Employment Status

Approximately one tenth (9%) of Household Reference Persons who were retired in 2011 lived in non-decent homes compared with seven per cent of HRP's who were working in 2011.

Annual Income

The 2011 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).

Figure 6.2: Non-Decent Homes and Annual Income, 2011



Household Religion

Households describing themselves as Catholic (6%) were slightly less likely to live in non-decent homes than those describing themselves as Protestant (9%).

6.5 Thermal Comfort, Lacking Modern Facilities and Services and Disrepair

The Decent Homes Standard is made up of four components: thermal comfort; lacking modern facilities and services; disrepair; and unfitness (covered in Chapter Five). If a dwelling fails the Decent Homes Standard it could fail on one or more of the four criteria. Indeed, 67 per cent (57,700) of the stock failed on one criterion, 10 per cent on two (8,600), 12 per cent (10,700) on three and 11 per cent (9,600) on four criteria.

Overall 86,600 dwellings (11%) failed the Decent Homes Standard in 2011. Of these:

- More than three-fifths (62%; 53,500 dwellings) failed on the basis of the thermal comfort criterion, a decrease in the proportion from 68 per cent in 2009. This reduction is in part due to the significant investment in new and improved heating systems in the social sector;
- More than two-fifths (42%; 36,100) failed on the basis of disrepair, a higher proportion than 2009 (18%; 19,600). This proportional increase partly reflects the decline in the proportion of stock failing on the thermal comfort criterion.

However, the fact that the absolute number of properties failing the Decent Homes Standard on disrepair has increased would indicate a significant growth in disrepair in its own right. Failing to meet the Decent Homes Standard due to disrepair was particularly associated with vacant properties. In 2011, 55 per cent of all properties which failed the Decent Homes Standard on disrepair were vacant. Conversely, 64 per cent of all vacant properties which failed the Decent Homes Standard were in disrepair;

- Less than one-quarter (24%; 20,400) failed on the basis of lacking modern facilities and services, compared with 27% in 2009.

It should be noted that the thermal comfort component of Decent Homes has changed over time as refinements and improvements were made to the SAP model. The SAP01 model was used up to 2006 and the SAP05 model was used in 2009, but in 2011, thermal comfort was based on the SAP09 model. Chapter 7 Energy explains the effects of using SAP09 in more detail.

Comparison with England

Table 6.4 shows how Northern Ireland compares with England on the individual components that make up the Decent Homes Standard. There are notable differences between the two. More than three-fifths (62%) of dwellings failing the standard in Northern Ireland failed on thermal comfort compared to 37 per cent in England. More than two-fifths (42%) of those failing in Northern Ireland failed on disrepair compared to 21 per cent in England, and for modern facilities, the figures were 24 per cent in Northern Ireland and nine per cent in England.

Latest figures available at the time of writing this report show that overall, in England there is a higher failure rate for Decent Homes compared to Northern Ireland (26% compared to 11%). The reason for this appears to be because dwellings in England are more likely to fail on the HHSRS (64%). In Northern Ireland, the fitness standard is used and this accounts for 41 per cent of failures.

Table 6.4: Failing Decent Homes components - Northern Ireland and England

	Northern Ireland 2011		England 2010	
	Failing		Failing	
	No	%	No (000s)	%
Decent Homes				
Failing on unfitness	35,240	41	N/A	N/A
Failing on HHSRS	N/A	N/A	3,800	64
Failing on disrepair	36,100	42	1,300	21
Failing on modern facilities	20,400	24	500	9
Failing on thermal comfort	53,500	62	2,200	37
All dwellings failing Decent Homes	86,570	11	5,900	27

Due to the small sample size and the smaller proportion of dwellings failing the standard in 2011, it is not possible to provide detailed analysis of the four criteria which make up the Standard - thermal comfort, lacking modern facilities and services and disrepair - in the same way as the previous report in 2009. The fourth criterion, unfitness, is covered in more detail in chapter five.

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 approximately one-tenth (11%; a drop of twenty-one percentage points and some 119,200 dwellings).

The types of dwellings most likely to fail the Decent Homes Standard in 2011 were:

- Vacant properties (57%: 38% in 2009) - although more than two-fifths (44%) of all dwellings that failed the Decent Homes Standard were owner occupied;

- Older dwellings built before 1919 (35%);
- Located in isolated rural areas (23%);
- Occupied by households with older HRPs (14%; 75 plus);
- Low income households (14%; less than £10,000 per annum).

Components of Decent Homes

Overall, 62 per cent of the stock in Northern Ireland which failed the Decent Homes Standard did so on the thermal comfort criterion. This compares with 68 per cent in 2009. This reduction is in part due to the significant investment in new and improved heating systems in the social sector. However, 42 per cent of the stock in Northern Ireland which failed the Decent Homes Standard did so on disrepair, much higher than the 2009 figure of 18 per cent. This proportional increase partly reflects the decline in the proportion of stock failing on the thermal comfort criterion. However, the fact that the absolute number of properties failing the Decent Homes Standard on disrepair has increased would indicate a significant growth in disrepair in its own right. Failing to meet the Decent Homes Standard due to disrepair was particularly associated with vacant properties. In 2011 55 per cent of all properties which failed the Decent Homes Standard on disrepair were vacant. Conversely, 64 per cent of all vacant properties which failed the Decent Homes Standard were in disrepair.

Overall, 24 per cent of the stock in Northern Ireland which failed the Decent Homes Standard did so on *lacking modern facilities and services*. This compares with 27 per cent in 2009.

6.7 Fuel Poverty

Fuel Poverty - Introduction

One of the key objectives of the 2011 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 analysis calculates the level of fuel poverty in Northern Ireland, based on the definition as set out in the UK fuel poverty strategy, and aligned with previous analysis of fuel poverty in Northern Ireland. A household is considered to be in fuel poverty if, in order to maintain a satisfactory level of heating (21°C in the main living area and 18°C in other occupied rooms), it is required to spend in excess of 10 per cent of its household income on all fuel use. Fuel poverty assesses the ability to meet all domestic energy costs including space and water heating, cooking, lights and appliances. This is expressed by means of the fuel poverty ratio (FPR).

Consistent with England, the figures for Northern Ireland fuel poverty are derived from several computer models 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 2011 Northern Ireland House Condition Survey. However, the fuel price model uses the Methods of Payment (MOP) data from the HCS.

$$\text{Fuel poverty ratio} = \frac{\sum_{\text{All fuels}} (\text{Unit Fuel Price} \times \text{Fuel Consumption}) + \sum_{\text{All fuels}} (\text{Standing Charge})}{\text{Income}}$$

6.8 Fuel Poverty - Key Results 2001 – 2011

Table 6.5: Northern Ireland Fuel Poverty Estimates 2001-2011

Households in Fuel Poverty	2001	2004	2006	2009	2011
2006 Method	27% 167,000	23% 146,000	34% 226,000	44% 302,000	42% 294,000

6.9 Profile of Fuel Poverty

Table 6.5 shows how the rate of fuel poverty has changed over time. The 2011 House Condition Survey estimated that approximately 294,000 (42%) of households in Northern Ireland were in fuel poverty. It is clear that the general trend since 2001 has been an increase in the proportion of households that are fuel poor, although the 2011 data has shown a flattening of this trend, with the proportion of households that were fuel poor in 2011 slightly lower than in 2009.

Despite higher fuel costs and lower disposable household income, significant investment particularly in the social sector, in new energy efficiency measures has had a positive impact on tackling fuel poverty in Northern Ireland. The Housing Executive between 2009 and 2011 invested some £41m on heating conversions (almost 7,000), insulation and double glazing in its housing stock. In addition, the Warm Homes Scheme invested more than £12m on insulation measures (more than 13,000) and heating replacements in eligible private homes. Many owner occupiers themselves have made energy efficiency improvements in their homes, thus reducing the impact of fuel poverty. (See NIHE Home Energy Conservation Reports 2009-2011).

Table 6.6 compares national fuel poverty figures. At the time of this report, the latest results available do not relate to the same year but are as close as possible to 2011.

Table 6.6: Fuel Poverty Estimates by Nation¹² (latest year available)

Households in Fuel Poverty	Northern Ireland	England	Scotland
2011	42%	16% ¹³	28 ¹⁴

In 2011 the fuel poverty rate was much higher in Northern Ireland compared with the latest figures available for England or Scotland. The main reason for this is a combination of lower incomes, higher fuel prices (particularly gas) and higher dependence on oil, electric and solid fuel for heating in Northern Ireland.

Table 6.7 shows the level of fuel poverty in Northern Ireland in 2011 by different levels of severity. The table provides information on the proportion of households required to spend more than 15 per cent or more than 20 per cent of their income to meet the required fuel expenditure. It can be seen that six per cent of households in Northern Ireland would be required to spend more than 20 per cent of their income in order to meet the required fuel expenditure.

Table 6.7: Severity of Fuel Poverty in Northern Ireland, 2011

Households in Fuel Poverty	10%	15%	20%
Percentage of fuel poor households – full income	42.0	14.6	5.9
Number of fuel poor households – full income	294,000	103,000	41,000

6.10 Fuel Poverty by Key Dwelling Characteristics

Fuel Poverty and Dwelling Tenure (Table A6.6)

The rate of fuel poverty varied by tenure and patterns remain broadly similar to previous years.

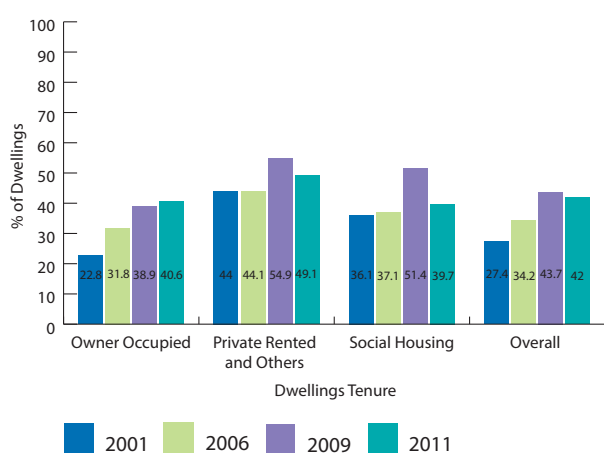
- The tenure with the highest proportion in fuel poverty in 2011 was the private rented sector (60,300; 49%), followed by the Housing Executive (38,000; 44%).
- The social housing stock had a fuel poverty rate of 40 per cent (43,900 households) reflecting in part the much newer stock managed by housing associations. This figure compares with 51 per cent (56,500 households) in 2009 and probably reflects the investment in energy efficiency measures in Housing Executive accommodation in recent years.
- In the owner occupied sector 41 per cent (190,000 households) were in fuel poverty in 2011. This compares with 39 per cent in 2009 (178,000 households). This change is probably within the sample error range.

¹²Scotland apply a more stringent interpretation of a satisfactory heating regime for pensioners, long-term sick and disabled households in that these groups are assumed to require a higher temperature to reach an adequate standard of warmth in their homes. Also, a slightly different approach is used in relation to under-occupancy and heating regimes. ¹³ This figure is for 2010 ¹⁴ This figure is for 2010

It is important to note that almost two-thirds (65%) of all households that were fuel poor lived in owner occupied dwellings. The proportion in 2009 was 59 per cent.

Figure 6.3 summarises the increase in fuel poverty by tenure over time.

Figure 6.3: Households in Fuel Poverty and Tenure, 2001-2011



Fuel Poverty and Dwelling Type (Table A6.7)

As in 2009, the rates of fuel poverty were highest in households living in single storey (51%) and terraced houses (46%) and lowest for households in semi-detached (40%) and detached (36%) houses.

Fuel Poverty and Dwelling Age (Table A6.8)

As with 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 previous findings.

- More than two-thirds (69%) of households living in dwellings built before 1919 were fuel poor. The figure for 2009 was 63 per cent.
- The rate of fuel poverty was lower for households living in dwellings built between 1919 and 1944 (54%; 59% in 2009).
- The rate of fuel poverty for households living in newer, post 1980 stock was only 27% (28 % in 2009).

However, of all households in fuel poverty approximately 27 per cent lived in dwellings constructed between 1965 and 1980 and 26 per cent lived in dwellings constructed post 1980.

Fuel Poverty and Dwelling Location (Table A6.9)

As in 2006 and 2009, there was some evidence of an urban/rural dichotomy in relation to fuel poor households, with rates at 41 per cent and 44 per cent (respectively). The highest rate of fuel poverty was found in households living in isolated rural areas (50%).

As noted in Chapter 1, the 2011 sample size does not permit the production of robust fuel poverty figures at Local Government District level. However, work will begin in 2013 to develop regression models using the 2011 Census to produce reasonably robust estimates.

Fuel Poverty and Fuel Source

There was considerable variation in the rate of fuel poverty by fuel used for heating. Households with solid fuel (59%) or electric (46%) central heating were more likely to be in fuel poverty than households with oil (44%) or mains gas (34%) central heating.

Fuel Poverty and Cavity Wall Insulation

Households living in dwellings with full cavity wall insulation (34%) were less likely to be in fuel poverty than households living in dwellings with partial (50%) or without any type of wall insulation (61%). Households living in dwellings with internal or external (68%) insulation had the highest rate of fuel poverty and were more common in isolated rural areas and in older dwellings.

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, demonstrating the difference that improved insulation can make. Almost two-thirds (64%) of households with less than 100mm of loft insulation were in fuel poverty, compared with around one-third (34%) of households with more

than 150mm of loft insulation. Four-fifths (80%) of households with no loft insulation were in fuel poverty.

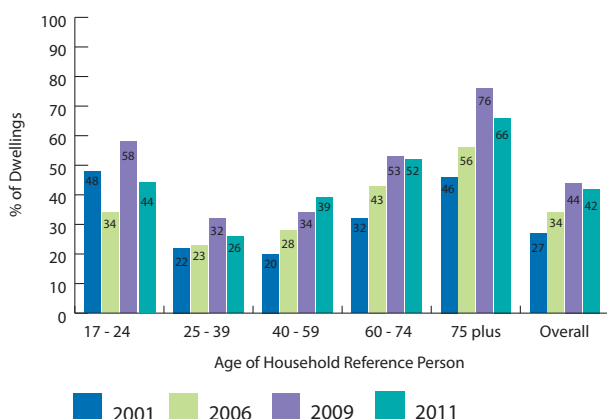
6.11 Fuel Poverty by Key Household Characteristics (Table A6.10)

Fuel Poverty and Age of Household Reference Person

Figure 6.4 shows households in fuel poverty by age of HRP. It shows how fuel poverty has increased over time for the different HRP age groups, and clearly confirms the trend that households headed by older people were much more likely to be living in fuel poverty.

- In 2011 household reference persons aged 75 plus (66%) and between 60 and 74 (52%) were more likely to be living in fuel poverty, compared with those aged between 40 and 59 (39%) and between 25 and 39 (26%).
- As in 2006 and 2009, approximately half (46%) 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, 2001-2011



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 (61%) of older households were in fuel poverty.

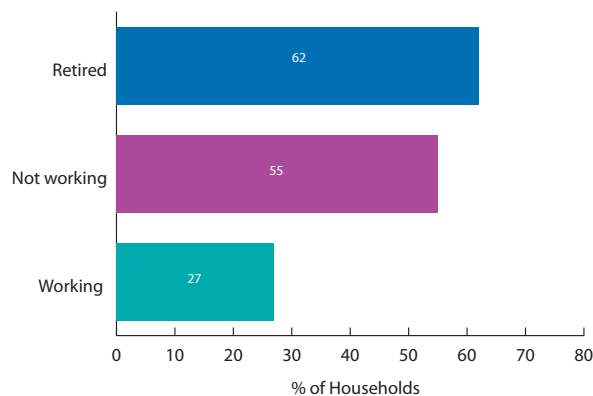
- Almost two-fifths (37%) of adult households were in fuel poverty.
- Households with children (32%) were least likely to be in fuel poverty.

Fuel Poverty and Employment of Household Reference Person

The rate of fuel poverty varied by employment type and was also consistent with findings by age.

- More than three-fifths (62%) of households headed by a retired person were living in fuel poverty in 2011.
- More than half of households with (55%) reference persons who were not working were living in fuel poverty.
- The lowest rate of fuel poverty was found in households headed by working persons (only 27%; 25% in 2009).

Figure 6.5: Households in Fuel Poverty and Employment Status of HRP, 2011



Fuel Poverty and Income

Table 6.8 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.

- In 2011, 79 per cent of households with an annual income of less than £10,000 per annum were in fuel poverty.

- 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 41 per cent, while only five per cent for those with an annual income of £30,000 or more were in fuel poverty

Table 6.8: Fuel Poverty and Annual (Gross) Household Income, 2006-2011

Annual Household Income	Percentage in Fuel Poverty 2011	Percentage in Fuel Poverty 2009	Percentage in Fuel Poverty 2006
Less than £10,000	79%	81%	66%
£10,000 - £14,999	64%	64%	41%
£15,000 - £19,999	41%	42%	26%
£20,000 - £29,999	19%	15%	8%
£30,000 or more	5%	3%	3%
Overall Rate	42%	44%	34%

- Consideration of all households in fuel poverty shows that 75 per cent had an annual household income of £14,999 or less.

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 who described themselves as Protestant (44%) and Catholic (42%) were in fuel poverty. The equivalent figures in 2009 were 46 per cent and 44 per cent.

6.12 Fuel Poverty - Summary

Analysis of households in fuel poverty in 2011 shows that:

- Considerable progress had been made in reducing fuel poverty in Northern Ireland between 2001 and 2004 (from 27% to 23%). By 2006 the rate of fuel poverty had increased to

34 per cent and then to 44 per cent in 2009. This was mainly due to very significant increases in the price of fuel and continued dependence on oil, electric and solid fuel for heating in Northern Ireland. The 2011 HCS shows some progress in reducing the proportion in fuel poverty despite rising fuel prices largely as a result of significant investment in new energy efficiency measures such as heating conversions, insulation and double glazing by the Housing Executive in its own stock and also by the Warm Homes Scheme in private homes.

- Low income continued to be a significant cause of fuel poverty in Northern Ireland in 2011; 79 per cent of households with an annual income of less than £10,000 were in fuel poverty. Indeed, 75 per cent of all households in fuel poverty had incomes of £14,999 per annum or less.

However, the HCS indicates that fuel poverty was also correlated to a number of other factors:

- Almost two-thirds (69%) of households living in older dwellings (pre 1919) were in fuel poverty;
- Half (50%) of households living in isolated rural areas were in fuel poverty;
- Almost two-thirds (66%) of households headed by an older person (75 plus) were in fuel poverty in 2011. Three-fifths (61%) of older households were fuel poor;
- Fuel poverty was higher in households with HRPs who were unemployed (55%) or retired (62%).

The 2011 HCS continues to indicate 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)

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. (For further information see Appendix G).

The 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 HHSRS is a relatively new measure and therefore reporting on changes over time should be treated with some caution, as it is a system which relies on reducing surveyor variability in the assessment of risks to a minimum. In the light of this, it was decided to change the quality control approach towards surveyor assessments in 2011. Therefore, caution should be exercised when any comparisons are being made with 2009. In addition, as highlighted in the 2009 HCS report, changes to the number of hazards and how some were assessed means that results in 2006 are not directly comparable with those from 2009.

6.15 Common Category 1 HHSRS Hazards, 2011

The most common risks in Northern Ireland in 2011 were excess cold and food safety. The most common risks in England in 2008 were excess cold and falls on the stairs. It should be noted that Category 1 excessive cold has been modelled using SAP09 which is not directly comparable with SAP05, which was used in the 2009 House Condition Survey.

More than half (57%) of dwellings identified with a Category 1 hazard had only one such hazard and 14 per cent had two hazards. At the other end of the scale, 16 per cent of dwellings had between six and fourteen hazards, the vast majority of these being vacant properties.

6.16 HHSRS in Northern Ireland in 2011

Overall one in ten (10%) dwellings in Northern Ireland were considered to have one or more Category 1 risk(s) in 2011. This equates to approximately 75,800 dwellings. At the time of this report, the latest figure for England was 18 per cent for 2010.

6.17 HHSRS by Key Dwelling Characteristics

HHSRS and Dwelling Tenure (Table A6.11)

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 (55%) than any other tenure.

Around seven per cent of both owner occupied and private rented sector dwellings had Category 1 hazards. Smaller proportions were found in the social sector.

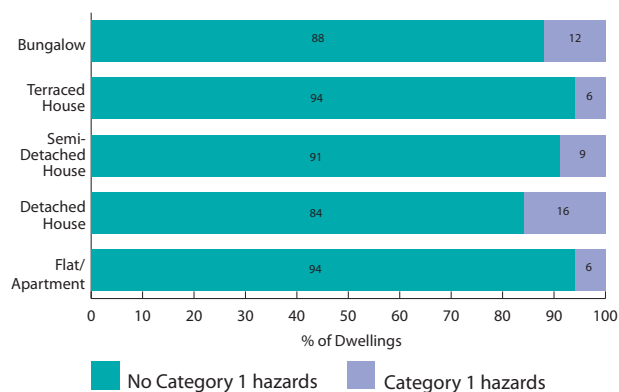
HHSRS and Dwelling Age (Table A6.12)

As in previous surveys, older dwellings were more likely to fail the HHSRS than newer dwellings. More than one-third (36%) of dwellings constructed before 1919 and 27 per cent of dwellings constructed between 1919 and 1944 had Category 1 hazards.

HHSRS and Dwelling Type (Table A6.13)

One-sixth (16%) of detached houses and 12 per cent of single storey dwellings had Category 1 hazards. Less than ten per cent of other dwelling types had Category 1 hazards.

Figure 6.6: Category 1 Hazards and Dwelling Type, 2011



HHSRS and Location (Table A6.14)

Dwellings in rural areas (18%) were more likely to fail the HHSRS than dwellings in urban areas (7%). Dwellings in isolated rural areas (27%) had the highest proportion of Category 1 hazards.

6.18 HHSRS and Key Household Characteristics (Table A6.15)

The apparent 2011 fall in the incidence of any Category 1 hazard is especially pronounced in the occupied stock, down from 18 per cent in 2009 to six per cent in 2011. Therefore, due to the small sample sizes for Category 1 hazards among the occupied stock, the following analysis is limited, although any trends are highlighted.

Age of Household Reference Person

As in 2009, 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 (9%).

Household Type

There was some variation by household type. Older (8%) households were most likely to have Category 1 hazards.

Table 6.9: Household Type and Category 1 Hazards, 2011

Household Type	Category 1 Hazards (%)
Adult	7
Households with children	3
Older	8
Overall	6

Employment Status of Household Reference Person

As in 2009, there was little variation by employment group. Households with retired HRPs were most likely to fail the HHSRS.

Household Income

Again, there was little variation by income groups.

Household Religion

Households failing the HHSRS showed some variation by religion. Catholic households (5%) were slightly less likely to live in dwellings with Category 1 Hazards compared with Protestant households (8%).

6.19 Summary and Conclusion

Overall, ten per cent of all dwellings in Northern Ireland had Category 1 hazards in 2011. The most common hazards in dwellings in Northern Ireland were excess cold and food safety.

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

- vacant properties (55%);
- older dwellings built before 1919 (36%) and between 1919 and 1944 (27%);
- located in isolated rural areas (27%);
- occupied by households with older HRPs (9%; 75 plus);

This section has provided a measure of Northern Ireland's dwelling stock in terms of the HHSRS, which allows comparisons with England. In England, the HHSRS has already replaced unfit as the first element of the Decent Homes Standard. Although the HHSRS has not yet been accepted as an enforceable standard in Northern Ireland, it provides a useful indicator of the relatively high standard of Northern Ireland's housing stock generally, compared with England's.



Table 7.1: Central Heating – Key Figures

	CH Gas		CH Oil		CH Solid Fuel/ Electric/Dual Fuel/Other		Total Central Heating		Total Non Central Heating		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Owner Occupied	60,930	13.0	356,970	76.1	50,620	10.8	468,520	99.9	*	0.1	469,070	100.0
%	48.0		69.3		47.3		62.5		5.2		61.7	
Private Rented and Others	21,560	17.2	85,940	68.5	16,880	13.5	124,380	99.2	*	0.8	125,440	100.0
%	17.0		16.7		15.8		16.6		10.0		16.5	
Social Housing	37,170	33.6	51,940	46.9	21,650	19.5	110,760	100.0	*	0.0	110,760	100.0
%	29.3		10.1		20.2		14.8		0.0		14.6	
Vacant	*	13.3	20,620	37.7	17,900	32.7	45,810	83.7	*	16.3	54,730	100.0
%	5.7		4.0		16.7		6.1		84.7		7.2	
Total	126,950	16.7	515,470	67.8	107,050	14.1	749,470	98.6	10,530	1.4	760,000	100.0
%	100.0		100.0		100.0		100.0		100.0		100.0	

Due to rounding figures may not add to totals shown

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, type and location, and the household characteristics of the occupants.

7.2 Central Heating

Central heating is traditionally seen as a key indicator of the standard of housing. The 2011 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 2011, a total of 749,500 (99%) dwellings were recorded as having central heating. Approximately 10,500 properties in Northern Ireland did not have central heating; the majority (85%) of these were vacant properties.

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.

Figure 7.1: Central Heating and Tenure, 2006-2011



Central Heating – Dwelling Tenure (Table A7.1)

- Figure 7.1 shows that in 2011 the proportion of occupied dwellings with central heating was at least 99 per cent.
- There was a decrease in the proportion of vacant dwellings with central heating in 2011 (84%; 91% in 2009). This reflects the number of older, poorer quality properties which are increasingly being left vacant.

Central Heating – Dwelling Age (Table A7.2)

There remains little variation by dwelling age although lack of central heating is much more likely to be associated with dwellings built before 1919.

- Almost all dwellings built after 1919 had central heating (houses built after 1980 recorded as having no central heating (0.6%) were either still in the process of construction or refurbishment).
- The proportion of dwellings built before 1919 that had central heating was 95 per cent (97% in 2009). Furthermore, 42 per cent of all dwellings with no central heating had been built before 1919 (45% in 2009).

Central Heating – Dwelling Type (Table A7.3)

As in 2009, 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)

A similar proportion of urban and rural dwellings had central heating in 2011 (99% for urban and 97% for rural).

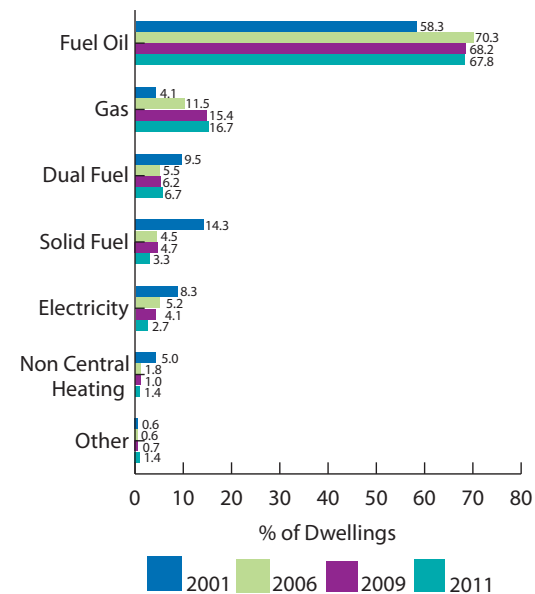
Central Heating – Household Characteristics (Table A7.5)

Overall, 99.8 per cent of occupied dwellings had central heating in 2011. In terms of individual household characteristics, there was little variation between groups. At least 99 per cent of occupied dwellings grouped in terms of age of household reference person, household type, employment status, annual income and household religion had central heating.

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, 2001-2011



The great majority of dwellings (85%; 84% in 2009) had either oil fired or mains gas central heating systems.

- Consistent with 2009, oil remains the predominant fuel source for domestic heating in

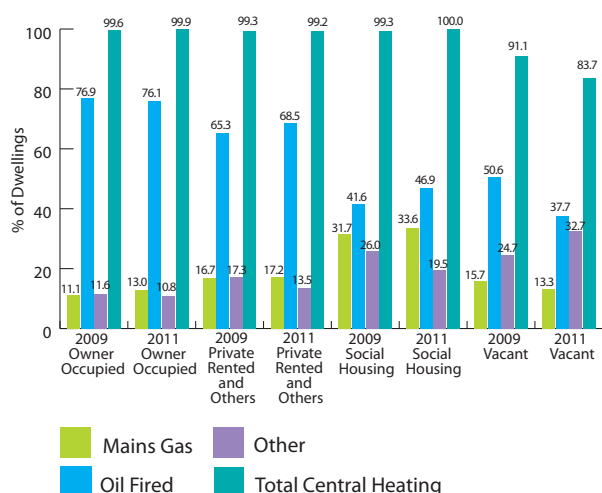
Northern Ireland. More than two-thirds (515,500, 68%; 68% in 2009) of all dwellings had oil central heating systems in 2011. It should be noted that a further seven per cent of dwellings had dual fuel central heating; where this is the case, oil is by far the most common primary fuel source.

- The increasing use of gas for central heating continues. In 2009, 113,600 dwellings (15%) were heated by mains gas; by 2011 this has increased to 127,000 dwellings (17%).
- The use of dual fuel (7%; 6% in 2009), solid fuel (3%; 4% in 2009) and electricity (3%; 4% in 2009) for central heating remained broadly similar in 2011 and together accounted for only 14 per cent of the housing stock (15% in 2009).

Central Heating Fuel Source – Dwelling Tenure (A7.1)

- In 2011, 68 per cent of all dwellings had oil fired central heating. This increased to 76 per cent for owner occupied dwellings (77% in 2009).
- Consistent with 2009, social housing sector dwellings were more likely to have gas central heating than any other tenure (34%; 17% overall).
- Vacant dwellings had the highest proportion (33%) of central heating systems with a fuel source other than mains gas or oil.

Figure 7.3: Central Heating Fuel and Tenure, 2009-2011



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

- Consistent with 2009 findings, dwellings built between 1965 and 1980 and post 1980 were most likely to have oil fired central heating (72% and 70% respectively; 68% overall)
- Dwellings built before 1919 were most likely to have central heating systems other than mains gas or oil fired (25%; 14% overall) and were least likely to have oil fired central heating (56%; 68% overall).
- Dwellings built between 1945 and 1964 had the highest proportion of mains gas central heating (25%; 17% 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 continues to be variation in the proportions of dwellings with oil fired central heating across dwelling types. In 2011, bungalows and detached houses were most likely to have oil fired central heating (76% for both; 68% overall) and least likely to have mains gas central heating (5% and 9% respectively; 17% overall).
- Conversely, flats/apartments remain least likely to have oil fired central heating (12%; 9% in 2009) and most likely to have mains gas central heating (47%; 42% in 2009).
- Flats/apartments also had the highest proportion of central heating systems other than mains gas or oil fired 38%; 14% overall).
- Notably, there was an increase in the proportion of detached dwellings with mains gas central heating (9%; 3% in 2009). At the same time there has been a decrease in the proportion of detached dwellings with oil fired central heating (76%; 87% in 2009).

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

As in previous years, the use of mains gas was predominantly located in the Belfast Metropolitan Area (BMA).

- Almost two fifths (101,890; 38%) of all dwellings in the BMA had mains gas central heating, with the vast majority of gas-heated dwellings located in urban areas (98%; 98% in 2009); reflecting the extent of the gas network.
- Whilst there was a shift in the use of gas central heating to include more dwellings situated in district towns in 2009, this was not the case in 2011. The proportion of gas central heated dwellings located in urban towns remained broadly similar to 2009 findings (18%; 17% in 2009), with the majority still located in the BMA (80%; 81% in 2009).
- There was a decrease in the proportion of rural dwellings with oil fired central heating, from 82 per cent in 2009 to 76 per cent in 2011. This was most notable for dwellings located in isolated rural areas, where the proportion of properties with oil fired central heating decreased from 82 per cent in 2009 to 73 per cent in 2011. This reflects the higher vacancy rate found in isolated rural areas in 2011 (see Chapter 3) where older, poorer quality properties are increasingly being left vacant.

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

In 2011, 17 per cent of occupied dwellings had gas central heating and 70 per cent had oil fired central heating. This section gives an overview of central heating fuel sources by key household characteristics.

Age of Household Reference Person

- Analysis by oil fired central heating indicates some variation by age of household reference person (HRP) with findings ranging from 67 per cent of those HRPs aged 75 or more living in dwellings with oiled fired central heating to 74 per cent for those aged 25 to 39.

- Those households with a household reference person aged 60 to 74 were least likely (13%; 17% overall) to live in dwellings with mains gas central heating and most likely (17%; 13% overall) to have a central heating system other than mains gas or oil fired.

Household Type

- There was little variation between overall figures and those found by household type for oil fired (70% overall) and mains gas (17% overall) central heating.
- However, 'households with children' were most likely (74%) to live in dwellings with oil fired central heating and least likely (10%) to live in dwellings with a central heating system other than mains gas or oil fired.
- When compared to 'adult households' (13%), a higher proportion (16%) of 'older households' lived in dwellings which had a central heating system other than mains gas or oil fired.

Employment Status

- Households categorised as not working were more likely (26%; 17% overall) to live in dwellings with mains gas than those households either working (15%) or retired (16%).
- Compared to those households with household reference persons retired (16%) or not working (17%), a smaller proportion (10%) of households categorised as 'working' lived in dwellings with a central heating system other than mains gas or oil fired.

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:

- Among households with an annual income of £30,000 or more, 80 per cent had oil fired central heating whereas for households with less than £10,000 and between £10,000 and £14,999 the corresponding figures were 63 per cent and 62 per cent respectively.
- Conversely, households with the lowest income (less than £10,000) were more likely (16%) to live

in dwellings with a fuel source other than mains gas or oil.

7.4 Dwelling Insulation

The proportion of the stock with full cavity wall insulation remained broadly similar to 2009 findings. In 2011, 503,120 dwellings had full cavity wall insulation which accounted for two thirds (66%) of the total housing stock (65% on 2009).

There was also little change in the proportion of dwellings with no wall insulation; almost one-quarter (173,600 dwellings, 23%; 21% in 2009) of the total housing stock had no wall insulation. 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.

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. Partial cavity wall and internal/external insulation figures are presented together for 2011.

No Wall Insulation

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

Recording Cavity Wall Insulation in 2011

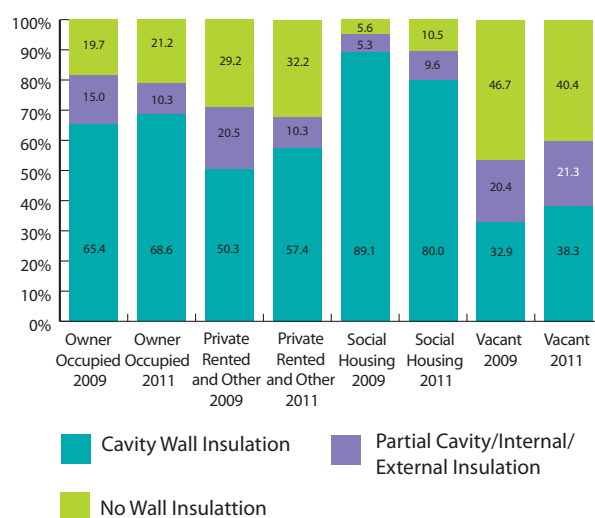
Changes made to the 2011 House Condition Survey surveyors' form included adjustments to the recording of cavity wall insulation. As such, careful consideration was given to the identification and recording of cavity wall insulation during the surveyors' briefing prior to fieldwork.

Consequently, findings for cavity wall insulation for 2011 were subject to design effect and as such fluctuation between surveys findings was expected. Furthermore, while trends remained broadly similar in 2011, differences between 2009 and 2011, in many cases, were within sample error. The subsequent analysis, therefore, focuses on 2011 figures with few comparisons made between 2009 and 2011.

Wall Insulation – Dwelling Tenure (Table A7.6)

- The highest rate of full cavity wall insulation, in 2011, was found in social housing (80%). This compares with 89 per cent in 2009 when assumptions based on operational records proved somewhat inaccurate.
- Conversely, the lowest proportion of full cavity wall insulation was found in vacant dwellings (38%).
- Furthermore, vacant dwellings were most likely to have no cavity wall insulation (40%) followed by privately rented dwellings (32%; 23% overall).
- Further analysis of all dwellings with no wall insulation shows that the majority were in the private sector (57% owner occupied; 23% privately rented).

Figure 7.4: Cavity Wall Insulation and Tenure, 2009 – 2011



Wall Insulation – Dwelling Age (Table A7.7)

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

- All dwellings built after 1980 (100%; 98% in 2009) had full cavity wall insulation. The proportion declined steadily by age band to less than one per cent of pre-1919 dwellings (1% in 2009), reflecting the solid wall construction that predominated during this period.
- Similarly, pre-1919 dwellings were most likely to have no cavity wall insulation (63%). The proportion of dwellings with no cavity wall insulation declined steadily as dwelling age declined, with 22 per cent of dwellings built between 1965 and 1980 having no cavity wall insulation.

Wall Insulation – Dwelling Type (Table A7.8)

Consistent with 2009, terraced houses had the lowest rate of full cavity wall insulation (58%; 66% overall) and the highest rate of no wall insulation (30%; 23% overall). Single storey dwellings and flats/apartments were most likely to have full cavity wall insulation (73% for both) with single storey dwellings least likely to have no wall insulation (13%).

Wall Insulation – Dwelling Location (Table A7.9)

- There was little variation in the rate of full cavity wall insulation by location. The proportion of all urban dwellings with full cavity wall insulation (67%) was slightly higher than the proportion of all rural dwellings (65%).
- However, there was some variation within urban locations; dwellings located in the BMA (60%) were less likely to have full cavity wall insulation than those located in district towns and other urban settlements (74%).
- Furthermore, the rate of full cavity wall insulation was significantly higher among dwellings located in small rural settlements (80%) than those located in isolated rural areas (49%). This is consistent with the previous three surveys.

Wall Insulation – Household Characteristics (Table A7.10)

This section examines wall insulation by key household variables. Overall, 69 per cent of occupied dwellings had full cavity wall insulation.

Age of Household Reference Person

As in 2009, dwellings with household reference persons aged 75 or older (62%) were less likely to have full cavity wall insulation and most likely to have none (24%).

Household Type

Households with children were far more likely (78%) to live in dwellings with full cavity wall insulation than adult households (65%) or older households (64%) and least likely to live in dwellings with no wall insulation (14%).

Employment Status

There was little variation in the proportions of dwellings without any cavity wall insulation by employment status, ranging from 20 per cent for households categorised as working to 23 per cent for households categorised as retired. Households categorised as working lived in dwellings with a higher rate of full cavity wall insulation (71%) than those dwellings occupied by households categorised as not working or retired (69% and 65% respectively).

Annual Income

There was some variation by annual household income. Only approximately three-fifths (59%) of households with an annual income less than £10,000 lived in dwellings with full cavity wall insulation compared with 81 per cent of dwellings occupied by households with an income of £30,000 or more.

Religion

As in 2009, there was some difference by religion. Almost two thirds of Protestants (65%; 66% in 2009) but nearly three-quarters (72%; 72% in 2009) of Catholic households lived in dwellings with full

cavity wall insulation. Conversely, one-quarter (25%; 20% in 2009) of Protestants and 17 per cent (16% in 2009) of Catholics were without any cavity wall insulation in their homes.

7.5 Loft Insulation

The 2011 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. Consistent with previous years, there has been little change in the overall proportion of dwellings with loft insulation. However, the proportion of dwellings found to have the highest standard of insulation in terms of thickness (more than 150mm) continues to increase.

The 2011 Survey estimated that 723,700 (95%) dwellings had lofts. Of these around 84,700 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 639,000 dwellings (84% of the total stock) where there was potential for loft insulation:

- Of these, 96 per cent (613,000 dwellings) had loft insulation; consistent with 2009 (96%).
- The proportion of dwellings with insulation less than 100mm decreased from 20 per cent in 2009 to 13 per cent in 2011.
- There was a slight increase in the proportion of properties with loft insulation of between 100 and 150mm thickness to 46 per cent (44% in 2009).
- More than one-third (35%) of dwellings had loft insulation more than 150mm; an increase from 30 per cent in 2009.
- Four per cent (26,000) of dwellings had no loft insulation; comparable to figures collected in 2009 (5%).

Loft Insulation – Dwelling Tenure (Table A7.11)

- All (100%) social dwellings had loft insulation in 2011 (99% in 2009).
- Private dwellings were found to have the biggest increases in the highest standard of insulation in

terms of thickness. Almost one-third (32%; 23% in 2009) of private rented and two-fifths (40%; 33% in 2009) of owner occupied dwellings had loft insulation more than 150mm in thickness in 2011.

- There was a 22 percentage point increase in the proportion of vacant dwellings found to have no loft insulation, from 15 per cent in 2009 to 37 per cent in 2011. Again, this reflects an increase in the number of older, poorer quality properties which are being left vacant.

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 (23% for pre-1919 dwellings and 11% for 1919 to 1944 dwellings; 4% overall).
- Almost all (99%) dwellings built since 1945 had loft insulation. Moreover, dwellings built after 1980 were most likely (54%; 35% overall) to have loft insulation more than 150mm in thickness.

Loft Insulation - Dwelling Type (Table A7.13)

- Consistent with 2009 findings, detached dwellings were most likely to have no loft insulation (7% compared to 4% overall).
- There continues to be a shift towards more loft insulation within all dwelling types. For example, the proportion of detached dwellings with loft insulation thickness of between 100 and 150mm increased from 31 per cent in 2009 to 41 per cent in 2011.
- However, the highest standard of loft insulation in terms of thickness (more than 150mm) was mostly found in flats/apartments 49 per cent; a substantial increase from 19 per cent in 2009.

Loft Insulation – Dwelling Location (Table A7.14)

- Comparable to 2009 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 3% respectively; 4% overall). The proportion rose to 12 per cent for dwellings located in isolated rural areas.

- Whilst there has been an increase in both rural and urban areas, in the proportion of dwellings that have the highest standard of insulation in terms of thickness (more than 150mm) this is most notable for dwellings located in district towns (44%; 28% in 2009).
- Although both urban (35%) and rural (37%) dwellings overall had a similar proportion of dwellings with loft insulation to a depth of 150mm or more, dwellings located in Belfast Metropolitan Area remained least likely to have loft insulation more than 150mm thick (25%; 35% for total urban).

Loft Insulation – Household Characteristics (Table A7.15)

In 2011, 98 per cent of occupied dwellings with lofts had loft insulation (96% in 2009).

Age of Household Reference Person

- Household reference persons aged 75 or more remained most likely to live in dwellings with no loft insulation (5%; 2% overall) in 2011, although this was a decrease from 2009, when 9 per cent of persons aged 75 or more lived in dwellings without loft insulation.
- Whilst there was an improvement overall in the proportion of households with the highest standard of loft insulation (more than 150mm in thickness), households with a reference person aged 25 to 39 (51%; 34% in 2009) remained most likely to live in dwellings with the highest standard of loft insulation.
- Household reference persons aged 40-59 years were least likely to live in dwellings with the highest standard of loft insulation (32%; 32% in 2009; 37% overall).

Household Type

Households were categorised into three broad types in 2011: 'adult households', 'households with children' and 'older households'. Older households were most likely live in dwellings with loft insulation less than 100mm in thickness (17%; 13% overall). Households with children were most likely to live in dwellings

with loft insulation 150mm or more in thickness (45%).

Employment Status

Households with retired household reference persons were more likely to live in dwellings with loft insulation less than 100mm (15%; 13% overall). Dwellings with household reference persons working were most likely to have loft insulation of 150mm or more (40%; 37% overall).

Annual Income

Households with an income of £30,000 or more (47%) were more likely to live in dwellings with the highest standard of loft insulation (more than 150mm) and least likely to live in dwellings with loft insulation less than 100mm (7%). Conversely, households with an income between £10,000 and £14,000 were least likely to have loft insulation more than 150mm (30%) and most likely to have loft insulation less than 100mm (18%).

Religion

Consistent with previous years, there was some variation by religion, largely due to the differing age profiles and the tendency for Catholics to live in newer housing. Protestant households (33%; 26% in 2009) remained less likely to live in dwellings with the highest standard of loft insulation (more than 150mm in thickness) compared to Catholic households (41%; 35% in 2009).

7.6 Double Glazing

The 2011 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 2009, an estimated two-thirds (77%; 566,700) of all dwellings had full double glazing. By 2011 this proportion had increased to 81 per cent (611,700 dwellings).
- The proportion of dwellings with partial glazing declined from 15 per cent to 12 per cent between 2009 and 2011 and the proportion of dwellings without double glazing decreased from nine per cent to seven per cent over the same period.

Figure 7.5: Full Double Glazing and Tenure, 2006-2011



Double Glazing - Dwelling Tenure (Table A7.16)

Figure 7.7 shows that between 2006 and 2011, with the exception of vacant properties, improvement has been made in the proportions of dwellings with full double glazing, in both the private and social sectors.

- There was a significant increase in the proportion of private rented sector dwellings with full double glazing from 70 per cent in 2009 to 84 per cent in 2011.
- Moreover, both owner occupied and private rented sector dwellings were most likely to have full double glazing (84%; 81% overall).
- There was also an increase in the proportion of social sector dwellings with full double glazing (78%; 72% in 2009). This was coupled with a decline in the proportion of social sector dwellings with no double glazing; a decrease from 17per cent in 2009 to 10 per cent in 2011.
- There was a decrease in the proportion of vacant dwellings with full double glazing from 67 per cent in 2009 to 51 per cent in 2011. This is consistent with findings in earlier sections, where older, poorer quality properties are increasingly being left vacant.

Double Glazing – Dwelling Age (Table A7.17)

There remains a correlation between dwelling age and the presence of full double glazing:

- Consistent with 2009 findings, the vast majority of dwellings built after 1980 (94%; 90% in 2009) had full double glazing and this steadily declined by age of dwelling to 55 per cent (59% in 2009) for dwellings built before 1919.
- There has been a 10 percentage point increase in the proportion of dwellings built before 1919 with no double glazing, which at least partly reflects the higher rate of vacant properties found in this age band (see Chapter 3).

Double Glazing - Dwelling Type (Table A 7.18)

- Analysis of full double glazing indicates some variation by dwelling type. Findings ranged from 88 per cent for flats/apartments to 76 per cent for bungalows (81% overall).
- There was a notable increase in the number of terraced houses with full double glazing (81%; 72% in 2009).
- Whilst flats/apartments were most likely to have full double glazing (88%; 81% overall) semi-detached dwellings were least likely to have no double glazing (4%; 7% overall).

Double Glazing - Dwelling Location (Table A7.19)

- While full double glazing figures show an increase for urban dwellings from 77 per cent 2009 to 83 per cent in 2011, figures for dwellings located in rural areas remain broadly similar to 2009.
- Further analysis of urban figures shows there was an increase in the proportion of dwellings located in the Belfast Metropolitan Area with full double glazing (80%; 73% in 2009).
- Conversely there has been a decrease in the proportion of dwellings located in the BMA with no double glazing (5%; 10% in 2009).

Double Glazing – Household Characteristics (Table A7.20)

The proportion of occupied dwellings with full double glazing in 2011 was 83 per cent, an increase from 77 per cent in 2009. Six per cent of occupied dwellings had no double glazing in 2011 (8% in 2009).

Age of Household Reference Person

Households with household reference persons aged 25 to 39 were more likely to live in dwellings with full double glazing (89%) compared to 69 per cent of those aged 75 or more, who were least likely to live in a fully double glazed dwelling in 2011. Conversely, household reference persons aged 75 or more were more likely to live in dwellings without double glazing (10%; 6% overall). These patterns are consistent with previous surveys.

Household Type

Older households were less likely to live in dwellings with full double glazing (74%) than households with children (88%) or adult households (85%; 83% overall).

Employment Status

Households with household reference persons working were most likely to live in dwellings with full double glazing (87%; 83% overall). Consistent with the age of household reference person and household type, households with retired household reference persons were least likely to live in a dwelling with full double glazing (75%).

Annual Income

There remains an association between household annual income and double glazing. Those dwellings with an income of less than £10,000 were least likely to have full double glazing (74%) compared to those with an income of £30,000 or more (91%; 83% overall).

Household Religion

There was a small variation for dwellings with full double glazing by household religion (Protestant, 81% and Catholic, 85%). However, a broadly similar proportion of Protestant and Catholic households lived in dwellings with no double glazing (6% and 5% respectively).

7.7 SAP Rating

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 developed the current and previous models on behalf of Government.

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. SAP05 was used to analyse the data from the 2006 and 2009 House Condition Surveys, with 2001 figures recalculated to provide a consistent time series.

The SAP model has since been updated to SAP09 and this new methodology (SAP09) has been used to derive the energy efficiency rating for 2011 data. For comparison purposes, data from 2009 has also been recalculated using SAP09.

The SAP takes into account a range of factors that contribute to energy efficiency such as materials used for construction, the efficiency and control of heating systems and fuel used for space and water heating. Revisions made to the SAP09 methodology include a move from annual calculations of space and water heating and boiler efficiency to monthly calculations. This provides a more accurate assessment of energy use and boiler efficiency in terms of seasonal changes throughout the year. Other modifications to the methodology included weather data updates, internal heat gains and the cost of energy in the light of rising fuel prices.

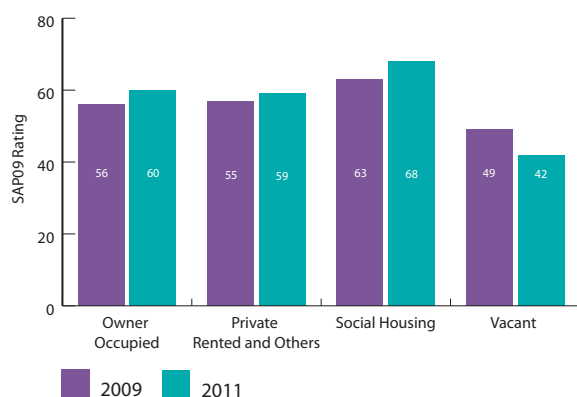
The SAP rating itself is on a logarithmic scale and provides a comparative measure of the energy efficiency of dwellings. The lower the score the lower the energy efficiency and the higher the

score (up to a maximum of 100) the higher the efficiency. Appendix H provides further information on the updated SAP09 model and how SAP was calculated for Northern Ireland.

Using SAP09, Northern Ireland's dwelling stock had an average SAP rating of 56.7 in 2009. By 2011 this had increased to 59.6. The estimated average for England calculated using SAP09 in 2010 was 55.0.

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

Figure 7.6: SAP09 Rating and Tenure, 2009-2011



SAP Rating – Dwelling Tenure (Table A7.21)

With the exception of vacant dwellings, the SAP09 rating had increased for all tenures between 2009 and 2011.

- There was a four SAP point increase for owner-occupied dwellings, from 56 in 2009 to 60 in 2011.
- Social housing remained the sector with the highest SAP rating, with an average SAP rating of 68, an increase of five SAP points from 63 in 2009.
- In vacant dwellings, SAP decreased by seven points from 49 in 2009 to 42 in 2011.

SAP Rating – Dwelling Age (Table A7.22)

With the exception of pre-1919 dwellings, improvements were made across dwelling age bands in 2011. Furthermore, there remained a clear inverse relationship between average SAP rating

and dwelling age, in that as dwelling age decreased SAP rating increased. In pre-1919 dwellings the average SAP was 42. For dwellings built after 1980 the average SAP had increased to 68. The two-point decrease noted in the average SAP rating for pre-1919 dwelling reflects the higher rate of vacant properties found in this age band (see Chapter 3).

SAP Rating – Dwelling Type (Table A7.23)

As in 2009, there was some variation in the SAP rating by dwelling type. In 2011 single storey dwellings had the lowest SAP rating (54; 52 in 2009) and flats/apartments the highest SAP rating (69; 65 in 2009), compared to 60 SAP points for the housing stock as a whole.

SAP Rating – Dwelling Location (Table A7.24)

Urban dwellings (62; 58 in 2009) remain more energy efficient than rural dwellings (55; 54 in 2009). As in 2009, dwellings in isolated rural areas (49; 50 in 2009) continued to have the lowest average SAP rating compared to other locations.

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 61, an increase from 57 in 2009.

Age of Household Reference Person

Whilst there was some association between age of the household reference person and the energy efficiency of dwellings, significant improvements were found in dwellings occupied by older household reference persons.

- While older household reference persons remained most likely to be living in dwellings that were less energy efficient, the average SAP rating for dwellings with reference persons aged 75 or older had increased by four points from 54 in 2009 to 58 in 2011. This improvement was reflected in the decrease in the proportion of these households living in fuel poverty by 10 percentage points in 2011 (see Chapter 6).

Household Type

Households with children lived in dwellings with the highest average SAP rating of 64. Older households were more likely to live in dwellings that were less efficient (average SAP rating 59) than adult households (average SAP rating 61).

Employment Status

Consistent with 2009, household reference persons who were retired were more likely to live in the least energy efficient dwellings (average SAP rating 59,) reflecting the higher proportion of these households living in the oldest stock (See Chapter 4). Little variation was noted for those dwellings with a household reference person either working or not working (average SAP rating of 62 and 63 respectively).

Annual Income

There was a positive relationship between average SAP rating and annual household income, in that households with the lowest annual incomes (less than £10,000) were more likely to live in the least energy efficient dwellings (average SAP 59), whereas households with the highest annual incomes (£30,000 or more) were more likely to live in the most energy efficient dwellings (average SAP 63).

Religion

There was a small difference in the average energy efficiency of dwellings occupied by Protestant (average SAP 60; 56 in 2009) and Catholic (average SAP 62; 59 in 2009) households.

7.8 Summary

The 2011 House Condition Survey shows that the progress made in achieving higher levels of energy efficiency between 2006 and 2009 had been sustained:

- Overall 99 per cent of all dwellings had central heating (99% in 2009).
- The majority of dwellings (85%) had either oil fired (68%; 68% in 2009), or mains gas central heating (17%; 15% in 2009).

Small improvements were also noted for loft insulation and double glazing:

- There was an increase in the use of the highest standard of loft insulation (more than 150mm) from 30 per cent in 2009 to 35 per cent in 2011.
- Improvement was also achieved with the proportion of dwellings with full double glazing increasing from 77 per cent in 2009 to 81 per cent in 2011; this was most notable in the private rented sector where there was an increase in the proportion of dwellings with full double glazing from 70 per cent in 2009 to 84 per cent in 2011.

The progress sustained and small improvements made was reflected in an increase in the overall SAP rating, which rose from 56.7 to 59.6 (SAP09) between 2009 and 2011.

Energy efficiency for households also improved as the average SAP rating for all occupied dwellings increased from 57 in 2009 to 61 2011; this was most notable in dwellings with household reference persons aged 75 or older where there was a four point increase in SAP rating from 54 to 58 (SAP09).

However, whilst progress had been sustained across most sectors of the housing market there was a notable decline in some of the key energy-related features found in vacant dwellings. This reflects the number of older, poorer quality properties that are increasingly being left vacant.

Moreover, households living in dwellings with lower energy efficiency ratings remain 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 2011 House Condition Survey (HCS), all of whom had worked on the 2006 and 2009 surveys. Surveyors employed were Environmental Health Officers, chartered surveyors or architects.

Four experienced supervisors were re-appointed, all having carried out this role for the 2006 and 2009 surveys. Each supervisor was responsible for advising surveyors and ensuring their work was of a consistent and satisfactory quality.

All surveyors attended a two and a half day pre-briefing session in May 2011. The purpose of the training was to introduce updates to the e-form and website software and to discuss changes to the form since 2009. The training also included a review of the more complex aspects of the form such as the Housing Health and Safety Rating System and energy sections and also a refresher on interviewing techniques.

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

The training was in two stages. After the main session of updates and reviews of the survey form, surveyors were asked to complete three surveys of dwellings on their tablet over the period of a week. After this a further one-day training session covered any problems encountered by the surveyors with the e-form or the website.

Fieldwork

Fieldwork began in June and was completed by October 2011.

Each surveyor was responsible for between 20 and 215 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 2011 (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 of the survey form 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.





Northern Ireland House Condition Survey 2011

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	

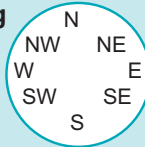
Survey Outcome

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
---	---

HMO form

1	2
---	---

Photos taken

1	2
---	---

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 Supervisor					

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	Housing Executive 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	2001-2011 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 Month Year

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

Does room exist?

Living room Kitchen Bedroom Bathroom Circulation

Y	N	Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N	Y	N
i		i		i		i		i	
i		i		i					
i		i							

Ceilings (answer in tenths)

Faults?

Y N Y N Y N Y N Y N

Take down and renew

--	--	--	--	--	--	--	--	--	--

Isolated repair, fill cracks

--	--	--	--	--	--	--	--	--	--

Leave

--	--	--	--	--	--	--	--	--	--

Floors (answer in tenths)

Solid floors?

Y N Y N Y N Y N Y N

Faults?

Y N Y N Y N Y N Y N

Replace structure

--	--	--	--	--	--	--	--	--	--

Replace only boards or screed

--	--	--	--	--	--	--	--	--	--

Leave

--	--	--	--	--	--	--	--	--	--

Walls (answer in tenths)

Faults?

Y N Y N Y N Y N Y N

Rebuild partition wall

--	--	--	--	--	--	--	--	--	--

Hack-off, replaster

--	--	--	--	--	--	--	--	--	--

Isolated repair, fill cracks

--	--	--	--	--	--	--	--	--	--

Leave

--	--	--	--	--	--	--	--	--	--

Dry lining present?

Y N Y N Y N Y N Y N

Internal insulation

Y N Y N Y N Y N Y N

Doors (answer in numbers)

Faults?

Y N Y N Y N Y N Y N

Renew

--	--	--	--	--	--	--	--	--	--

Repair/rehang

--	--	--	--	--	--	--	--	--	--

Windows/Frames

Faults?

Y N Y N Y N Y N Y N

Means of escape?

Y N Y N Y N Y N Y N

Secondary glazing for sound insulation?

Y N Y N Y N Y N Y N

Heating & Services

CH/prog. appliance?

Y N Y N Y N Y N Y N

Fixed other heater?

Y N Y N Y N Y N Y N

Fluorescent/low energy lighting?

Y N Y N Y N Y N Y N

Defects

Rising (ground level) damp

Living room Kitchen Bedroom Bathroom Circulation Other rooms

Y Y Y Y Y Y

Penetrating (higher level) damp

Y Y Y Y Y Y

Serious condensation/mould growth

Y Y Y Y Y Y

Inadequate natural light

Y Y Y Y Y Y

Inadequate artificial light

Y Y Y Y Y Y

Inadequate room ventilation

Y Y Y Y Y Y

Inadequate appliance ventilation

Y Y Y Y Y Y

Wood boring insect attack

Y Y Y Y Y Y

Dry/wet rot

Y Y Y Y Y Y

Evidence of mice

Y Y Y Y Y Y

Evidence of rats

Y Y Y Y Y Y

Integral garage Integral balcony Extra room 1 Extra room 2 Extra room 3 Extra room 4 Extra room 5 Extra room 6 Extra room 7 Habitable rooms (specify No.)

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	Y	N

Separable units? Y N

Stairs within dwelling

Present?

Y N

Open Plan?

Y N

Faults?

Y N

Replace structure

Y

Replace treads

Y

Replace balustrades

Y

Repair/refix treads/balustrades

Y

Bedrooms (specify no.)

Y N

Security of dwelling

Main entrance door

High	Fairly high	Fairly low	Low	Very low	Not Applic
1	2	3	4	5	

Other external doors

1	2	3	4	5	8
---	---	---	---	---	---

Accessible windows

1	2	3	4	5	8
---	---	---	---	---	---

Burglar alarm present?

Y N

Door viewer present?

Y N

Smoke detector(s)

Y N

Carbon monoxide detector

Y N

Accessibility

Flush threshold <15mm?

Y N

Room on entrance level suitable for bedroom?

Y N

Bathroom at entrance level?

Y N

WC at entrance level?

Y N

Wheelchair accessible WC at entrance level?

Y N

Change in floor level/trip steps at entrance level?

Y N

Doorsets and circulation meet part R?

Y N

Straight stairs with landings >900mm?

Y N

Adaptations for disabled people

Ramps?

Y N

Grab rails?

Y N

Stair lift/through floor lift?

Y N

Hoists?

Y N

Electrical modifications?

Y N

HHSRS

Falling on stairs etc

Significantly lower risk than average Average risk Significantly higher risk than average

1 2 3

Falling on level surfaces

1 2 3

Falling between levels

1 2 3

Fire

1 2 3

Flames, hot surfaces, etc

1 2 3

Damp and mould growth

2 3

Entry by intruders

1 2 3

Noise

1 2 3

Collisions and entrapment

1 2 3

If '3', score HHSRS in Section 22

Excess heat

Significantly lower risk than average Average risk Significantly higher risk than average Extreme risk

1 2 3 4

Lighting

1 2 3 4

Domestic hygiene, pests and refuse

1 2 3 4

Describe 'extreme risk' in Section 22

Rats and Mice

Type of evidence

Traps seen?

Y N

Chemicals seen?

Y N

Other visual evidence?

Y N

Told about it?

Y N

5. Interior – amenities

Kitchen amenities

	Present		Working		Action				
	Y	N	Y	N	None	Minor repair	Major repair	Replace	Install
Cold water drinking supply?	Y	N	Y	N	1	2	3	4	5
Hot water?	Y	N	Y	N	1	2	3	4	5
Sink?	Y	N	Y	N	1	2		4	5
Fixed waste?	Y	N	Y	N	1	2		4	5
Cooking provision?	Y	N	Y	N	1	2	3	4	5
Cupboards?	Y	N	Y	N	1	2	3	4	5
Worktop	Y	N	Y	N	1	2	3	4	5
Extractor fan?	Y	N	Y	N					
Washing Machine?	Y	N	Y	N					
Tumble Dryer?	Y	N	Y	N					
Refrigerator?	Y	N	Y	N					

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		

Main cooker fuel type

Electric	Oil	Solid Fuel	Mains gas	LPG / bottled gas	Other
1	2	3	4	5	6
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
- Layout Y N
- Cleanability Y N

Kitchen adapted for disabled use? Y N

Actual date of kitchen refurbishment (if known)

--	--	--	--	--	--	--	--	--

	Original	Pre 1960	1960's	1970's	1980's	1990's	2000's	2010's	In progress
Kitchen amenities last refurbished	9	1	2	3	4	5	6	7	8

Bathroom amenities

	Present		Working		Hot & cold water		Action					Floor Specify	Badly located?	No. of external surfaces	
	Y	N	Y	N	Y	N	None	Minor repair	Major repair	Replace	Install				Basement
Bath/shower?	Y	N	Y	N	Y	N	1	2		4	5	BB	GG		
Wash hand basin?	Y	N	Y	N	Y	N	1	2		4	5	BB	GG		
W.C.?	Y	N	Y	N			1	2	3	4	5	BB	GG		
Extractor fan in bathroom?	Y	N	Y	N											

Are there significant problems with:

- Space Y N
- Layout Y N
- Cleanability Y N
- Location Y N

Is any bathroom adapted for disabled use? Y N

Is any bathroom wheelchair accessible? Y N

Actual date of bath/shower refurbishment (if known)

--	--	--	--	--	--	--	--	--

	Original	Pre 1960	1960's	1970's	1980's	1990's	2000's	2010's	In progress
Bath/shower last refurbished	9	1	2	3	4	5	6	7	8

Secondary amenities

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

Internal? Y N

HHSRS - hazards relating 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

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

Location of system

Individual 1	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
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Distribution type

Radiators 1	Underfloor 2
----------------	-----------------

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	15	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
Timer	Y	N	U
Manual override on timer	Y	N	U
Room thermostat	Y	N	U
Radiator controls (manual)	Y	N	U
TRVs / appliance thermostat	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		LPG	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		Replace 4
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?

If cylinder seen:

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

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
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Cylinder insulation

Foam Factory insulated 1	Jacket Loose jacket 2	Other 3	None 4
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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	<div style="border: 1px solid black; height: 40px; width: 100%;"></div>												

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	Go to Q2
Don't know	9	Go to Q3

Q2 Is this accommodation

Your household's main residence

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

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

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

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

A home used by a student of a university or college

Don't know

1

2

3

4

5

6

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

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

Q5c When did you (or your family) buy this dwelling? Go to Q7

Year

--	--	--	--

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)

Q6a When did you (or your family) first rent this dwelling? Year

--	--	--	--

I would now like to ask you some questions about the rent you pay for this home.

Q6b How often is the rent paid for this accommodation?

One week	1
Two weeks	2
Four weeks	3
Calendar month	4
Don't know	77

(Interviewer check HB is not paid)

Live rent free 5 Go to Q7

Q6c How much is the weekly, fortnightly, monthly rent for this accommodation? Amount to nearest £.

Amount (£)		Go to Q7
Refused	88	Go to Q7
Don't know	77	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)

Q9a 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 Q9b
No	2	Go To Q14a

(ASK IF YES)

Q9b If no Housing Executive grants were available, would you consider taking a low/no interest or equity release loan in order to carry out work to your home?

Yes	1
No	2
Don't know	9

(ASK IF YES to 9a)

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 Q14a

(ASK IF YES)

Q11 When did you apply? Year

Q12 What was the outcome?

Still awaiting outcome	1	All go to Q14a
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	
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	All go to Q14a
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
 Weekday morning
 Weekday lunchtime
 Weekday afternoon

1	2
1	2
1	2
1	2

Weekday evenings
 Weekend daytimes
 Weekend evenings
 Don't know

1	2
1	2
1	2
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 Female	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2	1 2
Relationship to Household Reference Person	HRP Partner (married) Partner (cohabiting) Partner (civil partnership) Child Parent Other Relative Lodger Other non-relative	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9	1 2 3 4 5 6 7 8 9
Marital Status	Single (never married) Married Civil Partnership Separated / Divorced Widowed (not legally remarried)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	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 Working Full Time Working Part Time Not working - seeking work Not working - not seeking work Retired from work - excludes looking after family home Student (Further/Higher Education) Perm Sick/Disabled Looking after family/home Other (including schoolchild)	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 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 Train Bus, minibus or coach (public or private) Motorcycle, scooter or moped Driving a car or van Passenger in car or van (Include sharing driving) Bicycle On foot Other Not applicable (does not work)	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10	01 02 03 04 05 06 07 08 09 10
Are your day-to-day activities limited because of a health problem or disability which has lasted, or is expected to last, at least 12 months' (Include problems related to old age)										
	Yes, limited a lot Yes, limited a little No	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
Do you have any of the following conditions which have lasted, or are expected to last, at least 12 months?										
	Deafness / Blindness or partial hearing / sight loss A mobility or dexterity difficulty (a limitation of 1 or more basic physical activity) Frequent periods of confusion or memory loss Other condition No condition	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
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 Stick Crutches Zimmer Frame Self-propelled wheel chair Wheel chair pushed by another person Battery powered scooter Adapted vehicle Confined to bed	01 02 03 04 05 06 07 08 09	01 02 03 04 05 06 07 08 09	01 02 03 04 05 06 07 08 09	01 02 03 04 05 06 07 08 09	01 02 03 04 05 06 07 08 09	01 02 03 04 05 06 07 08 09	01 02 03 04 05 06 07 08 09	01 02 03 04 05 06 07 08 09	01 02 03 04 05 06 07 08 09
To which of these ethnic groups does the person belong?										
	White Chinese Irish Traveller Indian Pakistani Bangladeshi Black Caribbean Black African Black Other Mixed ethnic group (please specify) Any other ethnic group (please specify)	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11
What does each person consider their nationality/citizenship to be?										
	British Irish Northern Irish British / Irish Scottish Portugese Latvian Lithuanian Polish Nigerian Other (please specify)	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 11	01 02 03 04 05 06 07 08 09 10 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	
Employment & Support allowance	1	2	7	9	1	2	7	0	9	
Housing Benefit	1	2	7	9	1	2	7	0	9	(if yes, complete Q19b)
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	(if yes, complete Q19e)
Any others	1	2	7	9	1	2	7	0	9	

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 Does the Housing benefit you receive cover all the rent

Y N

Q19d How much is the shortfall you have to pay per week / month between housing benefit and full rent?

	Per Week	£	Per Month	£
Don't Know	77		77	
Refused	88		88	

Q19e 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

Q19f Did anyone in the Household receive the Winter fuel Payment between October and December 2010?

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"/>

Q24 Has this accommodation been designed or adapted for wheelchair useage?

Y	N	D/K
---	---	-----

Q25 Overall how satisfied or dissatisfied are you with your home? (Ring one only)

Very Satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
1	2	3	4	5

Q26 Overall how satisfied or dissatisfied are you with this neighbourhood as a place to live? (Ring one only)

Very Satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied
1	2	3	4	5

Q28 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 Q29
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

Q29 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

Q30 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

Q31 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
---	---	-------------------------

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		Refuse chutes	
Y	N	Y	N
Y	N	Y	N
Y	N	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

Door entry system	Present?		Working?		In module?	
	Y	N	Y	N	Y	N

Floors/ treads (answer in m²)

Faults?	Y	N	Y	N	Y	N
Modify structure						
Renew surface						
Repair surface						

Walls (answer in m²)

Faults?	Y	N	Y	N	Y	N
Modify structure						
Renew surface						
Repair surface						
Repaint surface						

Ceilings/soffits (answer in m²)

Faults?	Y	N	Y	N	Y	N
Modify structure						
Renew surface						
Repair surface						
Repaint surface						

Access doors/screens (answer in numbers)

Faults?	Y	N	Y	N	Y	N
Replace						
Repair/rehang						
Repaint						

Accessway windows (answer in numbers)

Faults?	Y	N	Y	N	Y	N
Replace						
Repair						
Repaint						

Accessway lighting (answer in numbers)

Faults?	Y	N	Y	N	Y	N
Replace light fittings						
Replace light switches						

Balustrades (answer in metre lengths)

Faults?	Y	N	Y	N	Y	N
Replace						
Repair						

Defects

Ventilation	Y	Y	Y
Artificial lighting	Y	Y	Y

Rats and Mice

Evidence of mice	Y	Y	Y	Y
Evidence of rats	Y	Y	Y	Y

Fire safety of flat surveyed

Flat is final exit	Through another flat	Through another flat and common areas	Through common areas
1	2	3	4

Fire precautions

Present	Action			
	None	Minor	Major	Renew
Protection to stairs/lobbies?	Y N 1	2	3	4
Self closing fire doors?	Y N 1	2	3	4
Fire extinguishers?	Y N 1	2	3	4
Emergency lighting?	Y N 1	2	3	4
Sign posting?	Y N 1			4
Safe practices?	Y N			
Alternative route?	Y N			
Alarm system?	Y N 1	2	3	4

Contribution to problems (within 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

HHSRS - common areas (affecting flat 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
Fire	1	2	3
Flames, hot surfaces, etc	1	2	3
Damp and mould growth		2	3
Entry by intruders	1	2	3
Noise	1	2	3
Collisions/entrapment	1	2	3

If '3', score HHSRS in Section 22

Other location

Type of evidence: Traps seen?	Y	N	Chemicals seen?	Y	N
Other visual evidence?	Y	N	Told about it?	Y	N

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 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 type="text"/>	Unknown 9
---------------	-------------------	-------------------------------	--------------

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
--------------------	----------------------------	--------------------	-----------------------------------	---------------------------	------------------------	------------

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
------------------	--------------------	----------------------------	--------------------	-----------------------------------	---------------------------	------------------------	------------

Non residential use

If any non residential use, % total floor area of module in non residential use

No non residential 88		Specify % <input 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
--	-------------------------------------	-------------------------	-------------------------	-----------------------------------	-----------------------------------	--------------

Approximate number of vacant flats in module

Survey flat is only one in module 888	Specify <input 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

HHSRS - 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 type="checkbox"/>	Unknown 9															

13. External dimensions of house/module

	No. of floors	Level (B, G, 1, 2 etc)	Width (metres)	Depth (metres)					
Main structure	<input type="text"/>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Basement BB</td> <td>Ground GG</td> <td><input type="text"/></td> </tr> </table>	Basement BB	Ground GG	<input type="text"/>	<input type="text"/> • <input type="text"/>	<input type="text"/> • <input type="text"/>		
Basement BB	Ground GG	<input type="text"/>							
		<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 type="text"/></td> </tr> </table>	None exists NN	Basement BB	Ground GG	<input type="text"/>	Same as above SSS <input type="text"/> • <input type="text"/>	Same as above SSS <input type="text"/> • <input type="text"/>	
None exists NN	Basement BB	Ground GG	<input type="text"/>						
	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 type="text"/></td> </tr> </table>	None exists NN	Basement BB	Ground GG	<input type="text"/>	Same as above SSS <input type="text"/> • <input type="text"/>	Same as above SSS <input type="text"/> • <input type="text"/>	
None exists NN	Basement BB	Ground GG	<input type="text"/>						
Additional part	None exists NN	<input type="text"/>	<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 type="text"/></td> </tr> </table>	None exists NN	Basement BB	Ground GG	<input type="text"/>	<input type="text"/> • <input type="text"/>	<input type="text"/> • <input type="text"/>
	None exists NN	Basement BB	Ground GG	<input type="text"/>					
			<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 type="text"/></td> </tr> </table>	None exists NN	Basement BB	Ground GG	<input type="text"/>	Same as above SSS <input type="text"/> • <input type="text"/>	Same as above SSS <input type="text"/> • <input type="text"/>
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None exists NN	Basement BB	Ground GG	<input 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-present	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		
						Evidence of Cavity wall insulation?			Y N			Y N		
						External insulation?			Y N			Y N		
window void wall			window void wall			window void wall			window void wall			window void wall		
						Fenestration (<i>tenths</i>)								

Must add up to 10

Must add up to 10

Is there any evidence from the air bricks of cavity wall insulation? Y N

Wind turbine present? Y N

Roof Pitch (deg.)

flat - 5	6 - 20	21 - 35	36 - 49	50+
1	2	3	4	5

17. Specification of views

				Back view B	10/10 attached A	Not seen N					
				Tenths attached							
				PV							
				BACK FACE							
				MAIN PART							
				FRONT FACE							
				Front view F	Back view B	10/10 attached A	Not seen N				
				Tenths attached							
				PV							
				LEFT FACE							
				RIGHT FACE							
				Front view F	Back view B	10/10 attached A	Not seen N				
				Tenths attached							
				PV							

18. Exterior – of house/module

FRONT VIEW

Masonry		Other	
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

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

Roof structure (Tenths of area)

Tenths of area

Age

Faults?

Replace

Strengthen

Leave

Urgent?

Replacement period

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

Roof covering (Tenths of area)

Tenths of area

Age

Faults?

Renew

Isolated repairs

Leave

Urgent?

Replacement period

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

Roof features and drainage (Tenths of length)

Present?

Faults?

Replace

Repair

Leave

Urgent?

Replacement period

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											
Standard Masonry cavity	Narrow Masonry cavity	Masonry single leaf	9" solid	>9" solid	In situ concrete	Concrete panels	Wood/metal/plastic panels				
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											
Standard Masonry cavity	Narrow Masonry cavity	Masonry single leaf	9" solid	>9" solid	In situ concrete	Concrete panels	Wood/metal/plastic panels				
Y	N	Y	N	Y	N	Y	N	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	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N	Y	N	Y	N

Wall finish (Tenths of area)

- Net tenths of area
- Age
- Faults?
- Render
- Renew/repoint
- Isolated repairs
- Paint
- Leave
- Urgent?
- Replacement period

Masonry pointing	Non-masonry natural	Rendered	Shiplap timber	Tile hung	Slip/tile faced	Wood/metal/plastic panels					
Y	N	Y	N	Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N	Y	N	Y	N

Bays		Dormers		Porches		Conservatories		Balconies					
Single storey	Multi storey	Standard	Roof extension			(Survey dwelling)		(Survey dwelling)					
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	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N

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		Balconies					
Single storey	Multi storey	Standard	Roof extension			(Survey dwelling)		(Survey dwelling)					
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	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N

Damp proof course (Tenths of length)					
Physical barrier	Injection DPC	None			
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N

- Tenths of length
- Faults?
- Replace/install
- Leave
- Urgent?
- Replacement period

Damp proof course (Tenths of length)					
Physical barrier	Injection DPC	None			
Y	N	Y	N	Y	N
Y	N	Y	N	Y	N

For all conservatories	
Closable door between conservatory and dwelling	Y N
Footprint of conservatory (Sq m) in whole numbers	
Conservatory window type	SG DG
Conservatory roof	Glass Poly
Fixed radiator or other fixed heater present?	Y N

18. Exterior – of survey dwelling

FRONT VIEW

Single-glazed				Double-glazed			
Wood casement	Wood sash	UPVC	Metal	Wood	UPVC	Metal	
Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N

Windows/frames to survey dwelling
(Number)

Number _____
 Age _____
 Faults? _____
 Replace _____
 Repair/replace sash/member _____
 Ease sashes etc/reglaze _____
 Repaint/reputty _____
 Leave _____
 Urgent? _____
 Replacement period _____

BACK VIEW

Single-glazed				Double-glazed			
Wood casement	Wood sash	UPVC	Metal	Wood	UPVC	Metal	
Y	N	Y	N	Y	N	Y	N
Y	N	Y	N	Y	N	Y	N

Wood	UPVC	Metal
Y	N	Y
Y	N	Y

Doors/frames to survey dwelling
(Number)

Number _____
 Age _____
 Faults? _____
 Replace _____
 Repair/glaze _____
 Ease/replace/adjust ironmongery _____
 Paint _____
 Leave _____
 Urgent? _____
 Replacement period _____

Wood	UPVC	Metal
Y	N	Y
Y	N	Y

18. Exterior – plot of survey dwelling (Not shared plots)

Private plot exists Complete all this section	No private or shared plot Complete accessibility + HHSRS	Shared plot / facilities only Complete section 11 only
1	2	3

Accessibility
 Number of steps from gate/pavement to entrance
 note: entrance may be in either view

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?	Y	N
Is path at least 900mm wide?	Y	N
Is gradient less than 1:12?	Y	N
Is entrance adequately lit?	Y	N
Is entrance covered?	Y	N

Front plot
 Exists Y N
 Depth (m) _____

 Y N
 Y
 Y

 Y N

Width of plot
 Width (m) _____ Same as module
 88
 Tenths hard _____
 Tenths soft _____
 Faults? _____
 Bridged DPC _____
 Inadequate/reverse falls _____
 Excavation (m³) _____
 Internal tanking (m²) _____
 Repair/renew paving (m²) _____
 Repair/renew retaining wall (m) _____
 Repair/renew steps (no.) _____
 Install gully? _____

Rear plot
 Exists Y N
 Depth (m) _____

 Y N
 Y
 Y

 Y N

HHSRS - of plot
 note: include front and rear plots

	Significantly lower risk than average	Average risk	Significantly higher risk than average
Falling on stairs etc	1	2	3
Falling on level	1	2	3
Falling between levels	1	2	3
Damp and mould growth	1	2	3
Entry by intruders	1	2	3
Collision and entrapment	1	2	3

If '3', score HHSRS in Section 22

Wall (high)	Wall (low)	Fence (wood)	Fence (metal)	Hedge
Y	N	Y	N	Y
Y	N	Y	N	Y
Y	N	Y	N	Y

Boundary walls

Present? _____
 Faults? _____
 Replace (m) _____
 Repair (m) _____
 Demolish (m) _____
 Urgent? _____
 Replacement period _____

Wall (high)	Wall (low)	Fence (wood)	Fence (metal)	Hedge
Y	N	Y	N	Y
Y	N	Y	N	Y
Y	N	Y	N	Y

19. Around the house/module

Underground drainage

Drainage system	Mains 1	Septic tank 2	Cess pool 3	Private sewage system 4	Unknown 9
Faults?	Y N				
Blockage	Y				
Other (specify)	Y				
					HHSRS Personal hygiene sanitation and drainage Describe 'extreme risk' in Section 22
					Significantly lower risk than average 1
					Average risk 2
					Significantly higher risk than average 3
					Extreme risk 4

Rats and mice outside house/module

Evidence of mice?	Y N	Type of evidence:	Traps seen?	Y N	Chemicals?	Y N	Other visual evidence?	Y N	Told about it?	Y N	
Evidence of rats?	Y N										
Pets/livestock kept outside?	Y N										
Litter/rubbish around house/module	None 1	Minor 2	Major 3								
											HHSRS Domestic hygiene pests and refuse Describe 'extreme risk' in Section 22
											Significantly lower risk than average 1
											Average risk 2
											Significantly higher risk than average 3
											Extreme risk 4

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 1		Inadequate 2		None 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)	} Is there clear evidence that cavity wall insulation is present in the majority of the cavity walls? Y N
	Y N	Loft space (P7)	
	Y N	Occupant response (P8)	
	Y N	Elevation features (P14)	
	Y N	Air bricks (P14)	

Exposure

Is the dwelling in an exposed position?	Not exposed 1	Slightly exposed 2	Exposed 3	Very exposed 4
What is the average level of overshadowing of the dwelling windows?	None or very little 1	Modest 2	Significant 3	Heavy 4
What is the level of overshadowing to the module roof?	None or very little 1	Modest 2	Significant 3	Heavy 4

20. Block

Number of houses/modules in block	Detached house/module 01	Specify number <input type="text"/>	More than 50 75			
Approximate number of houses/modules in disrepair in block	Specify number <input type="text"/>					
Situation of block	Major trunk road 1	Main road 2	Side road 3	Cul de sac/crescent 4	Private road 5	Unmade/no road 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 29 - 33. 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 Fitness outcome section on page 34.

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, 18, 20, 25	1	2	3
Falling on level surfaces	Check flags on pages 3, 18, 20, 25	1	2	3
Falling between levels	Check flags on pages 3, 18, 20, 25	1	2	3
Falls associated with baths etc	Check flag on page 4	1	2	3
Fire	Check flags on pages 3, 18	1	2	3
Flames, hot surfaces, etc	Check flags on pages 3, 18	1	2	3
Damp and mould growth	Check flags on pages 3, 18, 25		2	3
Entry by intruders	Check flags on pages 3, 18, 20, 25	1	2	3
Noise	Check flags on pages 3, 18	1	2	3
Collision and entrapment	Check flags on pages 3, 18, 20, 25	1	2	3

Are any hazards significantly higher than average (code 3)?
If **Yes**, describe below and score hazard on pages 29-33

Y	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, 26	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, 26	Y
Structural collapse and falling elements	Check flag on page 27	Y

If **Yes**, to any of the above, describe extreme risk below

Falling on stairs etc.

Significantly higher than average

Y N

Average Average Pre 1919

Likelihood of a person over 60 having a fall leading to harm

		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
0.5%							E	E	D	C	B
1.0%							E	E+	D	C	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	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	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	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.

Significantly higher than average

Y N

Average

Likelihood of a person over 60 having a fall leading to harm

			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-	E	D+	C	A-
0.5%						E	D	D	C	A
1.0%						E	D	D	B	A
2.2%						E	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	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	E	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	E	D	B	A	
1.0%							G	F-	F	E	D	C	B	A
2.2%					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:
Y	Repair/replace or reposition heater (S5)	Y	Number:
Y	Relocate cooker	N	Number:
Y	Re-fit, extend, re-site kitchen (S5)	Y	Number:
Y	Repair/Install precautions to common areas (S9)	Y	Sq m:
Y	Replace non fire resistant/smoke permeable structure/poly. tiles	Y	Sq m:
Y	Upgrade stairway to protected route	Y	Flights:
Y	Replace inadequate heating system	N	
Y	Provide fire stop wall to loft space	N	Number:
Y	Provide self-closing doors	Y	Number:
Y	Install smoke detection measures	Y	Number:
Y	Provide suitable openable windows/doors for MOE (S5, S9)	N	Number:
Y	Provide fire escape	N	Flights:
Y	Remove obstacle	N	Number:

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	E	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:
Y	Relocate cooker	N	Number:
Y	Re-fit, extend, re-site kitchen (S5)	Y	Number:
Y	Remove obstacle	N	Number:

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
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%			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	Treat rising damp (S5, S18)	Y			
Y	Treat penetrating damp, leaking pipes and services (S5, S18)	Y	N	Number:	
Y	Condensation - extractor fans to install/repair (S5)		N	Number:	
Y	Condensation - repair/provide opening window (S9, S18)	Y	N	Number:	
Y	Repair/replace/improve heating system (S5)	Y	N	Number:	
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
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%								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:	
Y	Make windows to dwelling secure (S5, S18)	Y	N	Number:	
Y	Provide additional (security) lighting		N	Number:	
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:	
Y	Neighbourhood problems which require measures other than improvements to dwelling security				

Noise

Significantly higher than average Y N

		Average													
Likelihood of a person being affected					1000	560	320	180	100	56	32	18	6	2	
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	} Must not add up to >100.2%		
	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			

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:
Y	Provide mechanical ventilation		N	Number:

Collision and entrapment

Significantly higher than average Y N

		Average low headroom													
		Average													
Likelihood of a child under 5 being injured								180	100	56	32	18	6	2	
Likely outcome if a child under 5 is injured	Class 1 Extreme %	<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%		
	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			

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	D	B-	A
2.2%								E	D	B	A
4.6%								E	D	B	A
10.0%								D	C-	B	A
21.5%								C	B-	B	A
31.6%								C	B	A	A
46.4%								B	B+	A	A
100%								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 whether the dwelling is fit for habitation

Unfit	Defective	Acceptable	Satisfactory
1	2	3	4

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	
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

Notes:

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 were measured and entered in the survey form in metres.
 - 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 for 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:
 - Proportion of 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.

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 and 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 2009 – 2011

The surveyors collecting the data were all briefed in the same manner in 2009 and 2011. 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 2011 Northern Ireland House Condition Survey was based on a random sample of 2,030 dwellings completed in two stages. The sampling method chosen was one considered to permit a better matching with the 2011 Census for the purpose of regression modelling.
 - The first stage was a random sample of 1,000 properties across Northern Ireland. This was checked for distribution and was considered to be a reasonable representation of District Council areas.
 - The second stage was a further random sample of 1,030 properties selected by District Council Area to ensure that each district total added to 70. In Belfast District Council Area, a total of 280 households were selected (70 in North, East, South and West Belfast).
2. The sample frame in 2011 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.

Weighting and Grossing

3. 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 2011 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 (district council area by tenure).
4. 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.

5. 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.

Sample Error

6. 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%.

7. Taking an example of a sample size of 100 and where the percentage in question is 10

Sample error =

$$\pm 1.96 \sqrt{\frac{10 \times 90}{99}} = \pm 5.91\%$$

Thus the percentage (10%) should be read as 10% \pm 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 \pm 9.85% i.e. the range would be from 41.15% to 59.85%.

8. The table of sample errors below has been calculated for an approximate achieved sample, after allowance for non response.

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 or 50
	100	4.3	5.9	7.0	7.9	8.5	9.0	9.4	9.7	9.8	9.8
Vacant	110	4.1	5.6	6.7	7.5	8.1	8.6	9.0	9.2	9.3	9.4
Private Rented	240	2.8	3.8	4.5	5.1	5.5	5.8	6.0	6.2	6.3	6.3
Social Housing	230	2.8	3.9	4.6	5.2	5.6	5.9	6.2	6.3	6.4	6.5
Owner Occupied	850	1.5	2.0	2.4	2.7	2.9	3.1	3.2	3.3	3.3	3.4
Occupied	1300	1.2	1.6	1.9	2.2	2.4	2.5	2.6	2.7	2.7	2.7
Northern Ireland	1400	1.1	1.6	1.9	2.1	2.3	2.4	2.5	2.6	2.6	2.6

9. 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.

10. The sample issued consisted of the following components.

First Fresh Random Sample	1000
Second Stage Sample	1030
Total Sample	2030

Response Rate

1. The following table summarises the Survey outcome.

Table 2: Survey outcome 2011

	Number	%
Full Survey	1434	71
No contact made	171	8
Access refused to Surveyor	254	13
Access refused at NIHE	114	6
Address untraceable	7	<1
Dwelling derelict	10	1
Dwelling demolished	9	<1
No longer usable as a dwelling	7	<1
Other (includes 17 out of scope)	24	1
Total	2030	100

2. Of the 2,030 addresses issued to surveyors, full surveys were completed for 1,434 properties giving a gross response rate of 71%. However, the potential response was 1,987 (excluding not traced, derelict, demolished and out of scope addresses on sample frame e.g. building sites), giving a response rate for the physical survey of 72% (1,434 out of 1,987).

3. The response rate for the household survey was higher. Overall, 1,322 inspected dwellings were occupied and of these 1,314 household interviews were achieved, a response rate of 99%.

4. The number of vacant dwellings visited during the Survey was 112. Therefore the total number of dwellings in which a household interview would have been possible was 1,987-112=1,875. This gives a social survey response rate of 70% (1,314 interviews out of 1,875).

The following table summarises the response rates:

Table 3: Response rates 2011

Full surveys as a % of sample	71%
Full physical surveys as a % of existing dwellings	72%
Full social surveys as a % of inspected occupied dwellings	99%
Full social surveys as a % of existing dwellings	70%

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%.

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

Due to the smaller sample in 2011 Household Types were recoded into three groups as follows:

Adult Households

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).

Large Adult

Three or more adults, related or unrelated, and no dependent children aged under 16.

Households with Children

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.

Older Households

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 (£/m²) 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 £/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 2011 House Condition Survey were used in previous surveys. 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 2011 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	Derry	Omagh	Portrush
Armagh	Downpatrick	Strabane	Portstewart
Ballycastle	Dungannon	Randalstown	Newcastle
Ballymena	Enniskillen	Comber	Ballynahinch
Ballymoney	Larne	Donaghadee	Coalisland
Banbridge	Limavady	Tandragee	Dungiven
Coleraine	Magherafelt	Dromore	Kilkeel
Cookstown	Newtownards	Rathfriland	Warrenpoint
Craigavon (including Lurgan and Portadown)	Newry	Carryduff	

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:

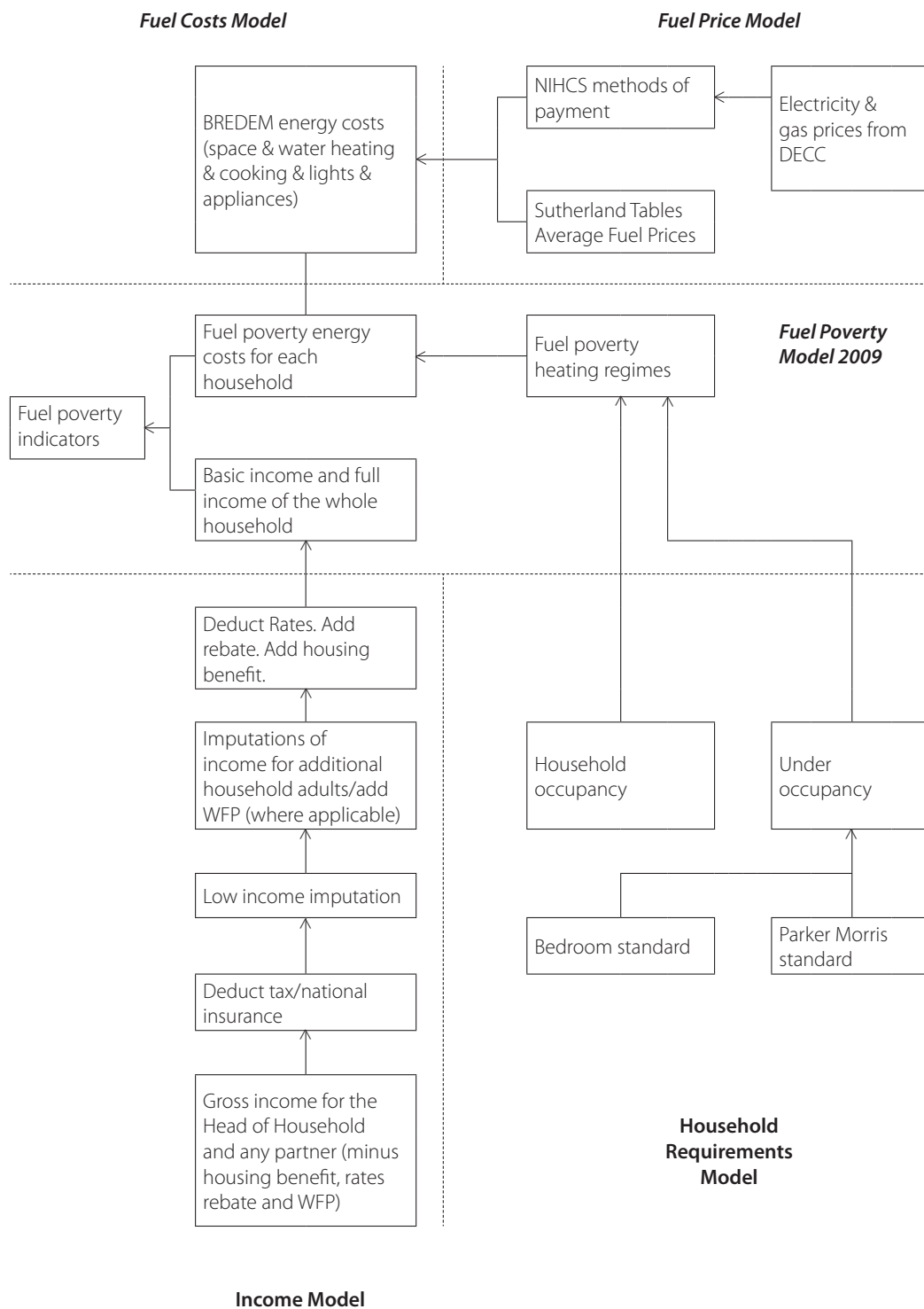
- Satisfactory means that there are NO or very, very insignificant faults in relation to each heading.
- Acceptable means that there are some faults of a minor nature that do not significantly impact on the overall condition or fitness judgements.
- Defective indicates quite serious faults that are bringing 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.

APPENDIX F

Schematic diagram of the 2011 Northern Ireland Fuel poverty Model



Northern Ireland Income Calculation summary

Gross annual income is collected for the Household Reference Person (HRP) and Partner (where present) in each household. Housing benefit, rates rebate and Winter Fuel Payment (WFP) are subtracted from the total gross income and income Tax and National Insurance are deducted where applicable. Where a household on certain benefits has a net 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 2010 English Housing Survey, adjusted to reflect Northern Ireland wages and 2011 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 (where applicable) are 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 & 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:

- a) there are one or more extra bedrooms than required for homes without dependent children (children under 18 years)
- or
- b) 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:

$$A_{\text{heated}} \approx 0.5A$$

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. Different heating period lengths and timings are applied to households based on their working status.

For households indicating they are working, a standard heating regime is applied, assuming that the occupants are not occupying the dwelling during normal working hours. In this case it is assumed that the occupant heats the dwelling for two hours first thing in the morning and then for seven hours from late afternoon. During the weekend it is assumed that the property is heated throughout the day for 16 hours.

For those households where there are non working members, all day heating is assumed throughout the week (defined below as a full heating regime).

In dwellings that are under occupied, it is assumed that some of the rooms in the dwelling are not heated and a “half-house” partial heating regime is applied. For example, where a single person occupies a four bedroom house, it would be assumed that some of the bedrooms are not heated.

A summary of these regimes is shown below:

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	Weightings
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			Likelihood1 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 Score	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. DCLG 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 and 2011 surveys and in line with the English Housing Survey the Northern Ireland HCS measured ten hazards directly

- Falls on stairs etc.
- Falls on level surfaces
- Falls between levels
- Falls associated with baths etc
- 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 products
- 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 15
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 this 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	The methodology for modelling excess cold was changed in 2011 following changes to the SAP methodology (from SAP05 to SAP09). A specific value of SAP05 does not equate to a specific value of SAP09 so it was no longer appropriate to use the SAP05 threshold value of 31.49 to model excess cold using SAP09. Instead a new 'equivalent' value of SAP09 was derived that ensured that the number and % of dwellings failing on excess cold would be the same on both SAP05 and SAP09 for the data. This new equivalent threshold value under SAP09 is 35.79 and all dwellings with a SAP09 rating less than this are categorised as posing a Category 1 excess cold hazard.
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.
Overcrowding	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 2011

Hazard	2011
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 2011 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 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 (SAP09)

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 2009, effective from March 2010. 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 SAP09 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. Negative values are set to 1 following conventions used in practice when issuing SAP ratings.

Calculation of SAP Ratings from NIHCS Data.

A computerised version of the SAP 2009 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 rating 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 2009 calculation, it is necessary to ensure that:

$$\text{Ecf}(96) \times \text{Total Cost of energy for SAP 96 prices} = \text{Ecf}(09) \times \text{Total Cost of energy for SAP 09 prices}$$

Where

$$\text{Total Cost of energy for SAP 96 prices} = Q_p \text{ £p}(96) + Q_s \text{ £s}(96) + Q_w \text{ £w}(96) + Q_e \text{ £e}(96)$$

$$\text{Total Cost of energy for SAP 09 prices} = Q_p \text{ £p}(09) + Q_s \text{ £s}(09) + Q_w \text{ £w}(09) + Q_e \text{ £e}(09)$$

and

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;

$E_{cf}(09)$ is the energy-cost-deflator for SAP2009;

$£p(96)$ is the SAP price of the primary fuel in 1996 (p/kWh);

$£p(09)$ is the SAP price of the primary fuel in 2009 (p/kWh);

$£s(96)$ is the SAP price of the secondary fuel in 1996 (p/kWh);

$£s(09)$ is the SAP price of the secondary fuel in 2009 (p/kWh);

$£w(96)$ is the SAP price of the water-heating fuel in 1996 (p/kWh);

$£w(09)$ is the SAP price of the water-heating fuel in 2009 (p/kWh);

$£e(96)$ is the SAP price of the electricity in 1996 (p/kWh);

$£e(09)$ is the SAP price of the electricity in 2009 (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 2009 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 2009 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 SAP09 ratings, a new deflator with a value of 0.39 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 2009 SAP prices.

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