



Irish National Survey of Housing Quality

2001-2002

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Quality

Executive Summary

Background

The Economic and Social Research Institute was commissioned by the Department of the Environment, Heritage and Local Government to carry out the Irish National Survey of Housing Quality (NSHQ) in 2001-2002. The survey obtained detailed information from a representative sample of over 40,000 householders on characteristics and problems of the dwelling, and on the household members. Information was collected on:

- the basic type of dwelling, its age and location
- the number of rooms of different types available to the household
- rent and mortgage payments, and other indicators of affordability
- services such as water, sewage, electricity and gas
- main method of heating the dwelling and fuel used
- presence of insulation and other energy-saving measures
- problems with the accommodation and major works carried out in the last five years
- household characteristics – household type and age structure, economic status of household members and household income.

The information is relevant in the areas of house planning, regional development and energy policy. The large sample size allows detailed tables to be provided to Local Authorities for planning purposes. The present report provides an overview of the situation with regard to housing quality at a national level.

Comparability to the 1981 and 1991 Surveys

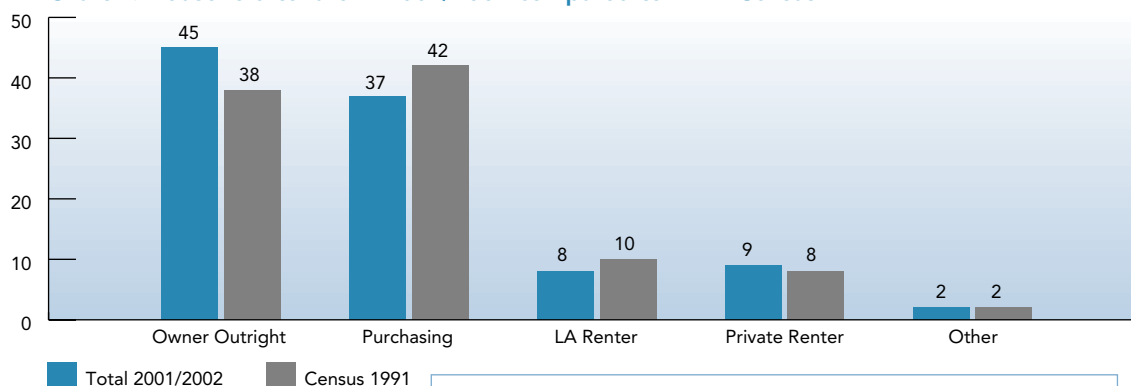
The NSHQ is different from the national house condition surveys undertaken in 1981 and 1991 in a number of important respects. Firstly, the earlier surveys were conducted separately by the Local Authorities with the results having been co-ordinated after the surveys were completed. In contrast, the methodology and procedures for the present survey have been completely centralised, ensuring a harmonised set of data across Local Authority areas. Secondly, the earlier surveys were of a technical nature, using the judgements of survey staff regarding the general condition of the accommodation. In the present 2001-2002 survey, the residents themselves make judgements regarding the extent and nature of problems with the dwelling. In a large number of areas, the NSHQ provides information that is comparable to that collected in 1981 and 1991, such as on the dwelling structure, number of rooms, dwelling age, number of persons of different ages in the dwelling, housing costs and so on. However, the comparability of the results is not as strong when it comes to judgements as to the extent and nature of problems in the dwelling.

A major strength of the present design, in addition to the assurance that harmonised protocols were used throughout the country, is the detailed information it collected in a number of new areas: on residents' satisfaction with aspects of their dwelling; on problems in the area where the dwelling is located; and on issues related to the affordability of the dwelling.

Key Findings

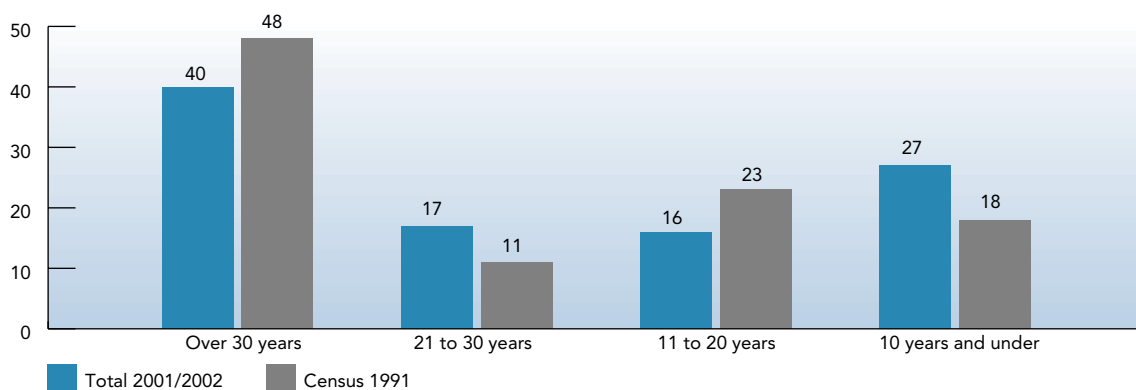
Dwelling type, location and age

Chart 1: Household tenure in 2001/2002 compared to 1991 Census



The age-profile of the Irish housing stock is relatively favourable by international standards, with 17 per cent of the stock having been built since 1996. The continuing dominance of home ownership accounts for the high proportion of households who have been at their address for 20 years or more. Despite the high rate of building of semi-detached housing in large urban areas in recent years, housing in Ireland continues to be dominated by detached housing. Close to one-third of the stock is made up of one-off housing, that is, detached housing in open countryside.

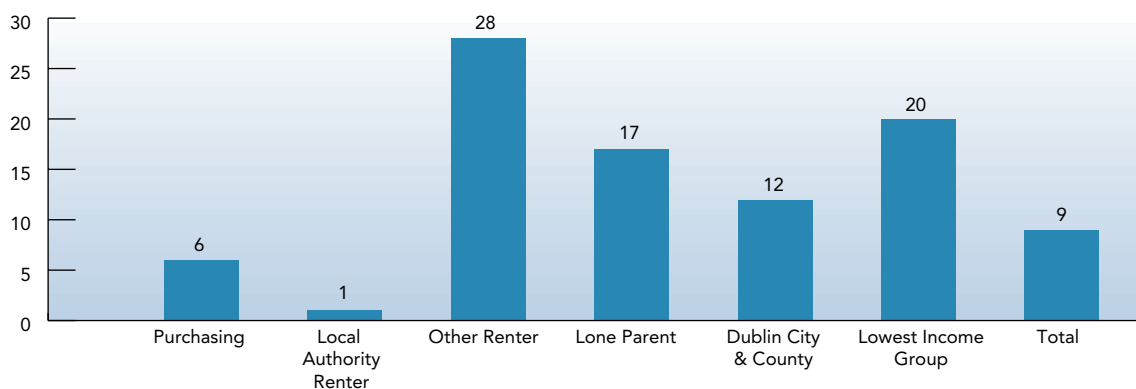
Chart 2: Dwelling age in 2001/2002 compared to 1991 Census



Housing Costs and Affordability

High rents relative to income are mainly a problem for those renting in the private sector, over one-quarter of whom spend more than a third of household income on rent. The problem of high mortgage repayments relative to income is not as prevalent among purchasers: overall about one in twenty spends more than a third of household income on mortgage payments, but this increases to about one in ten for recent purchasers. In terms of rent levels relative to income, Local Authority renters are in a much more favourable position: only 1 per cent of this group pay more than a third of household income on rent.

Chart 3: Per cent households spending more than one-third of income on rent or mortgage

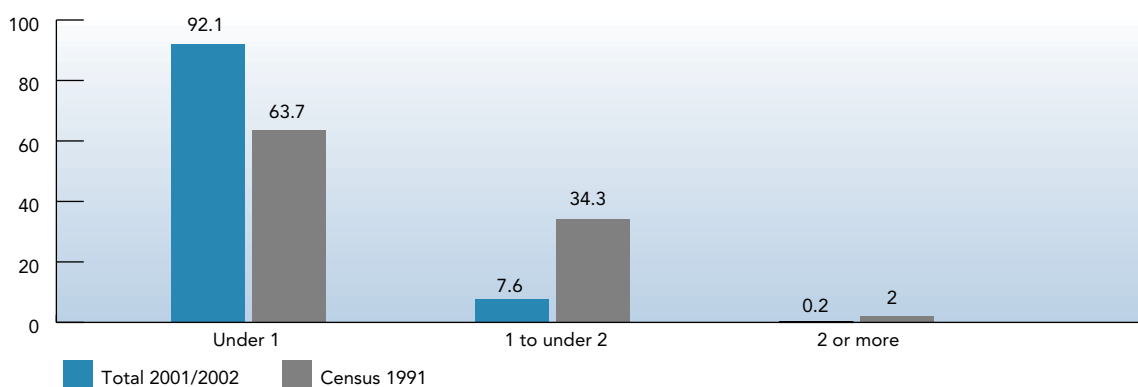


However, Local Authority renters emerged as most likely to experience problems on indicators of financial strain. They were more likely than other groups to lack household appliances or other goods and services because they could not afford them. One-third found housing costs a heavy burden; one-quarter had been in arrears in housing or utility bills and one-fifth had “great difficulty” in making ends meet. Other groups experiencing substantial problems in terms of housing affordability and financial strain were lone parents and households in the lowest income category.

Rooms Available

Compared to other European Union Member States, the average household size in Ireland is high at 3 persons. In the other European countries the figure ranges from a low of 2.1 in Germany to 2.8 in Greece and Portugal, with the UK and France both at about 2.4 persons (*Housing Statistics in the European Union, 2002*). There has been a considerable reduction in density of occupation since 1991. The number of persons per room (of any kind) has fallen from 0.6 to 0.5, and the percentage of households with less than one person per room has increased from 64 to 92 per cent. Moreover, 43 per cent of households have 2 or more bedrooms over the number needed given the household size and composition.

Chart 4: Number of persons per room in 1991 & 2001/2002



There is a clear association between housing tenure and the number of rooms available to the household. House purchasers are in the most favourable position and renters are the least advantaged, while those who own the dwelling outright occupy an intermediate position. However, since households who own the accommodation outright tend to have fewer persons, this group has the lowest number of persons per room and is most likely to have more bedrooms than are needed for the household size and composition. Local Authority renters still have the greatest number of persons per room and are most likely to have insufficient bedrooms. While private sector renters have the same average number of persons per room (of any kind) as house purchasers, they are more likely to have fewer bedrooms than are needed given household size and composition.

The relationship between household income and the number of rooms available is a mixed one. Lower-income households generally have fewer rooms available in the dwelling. However, because many of the households in the lowest income category are older people living alone, they are no more likely than average to have fewer bedrooms than are needed and are slightly more likely than average to view their accommodation as “too big” for their needs.

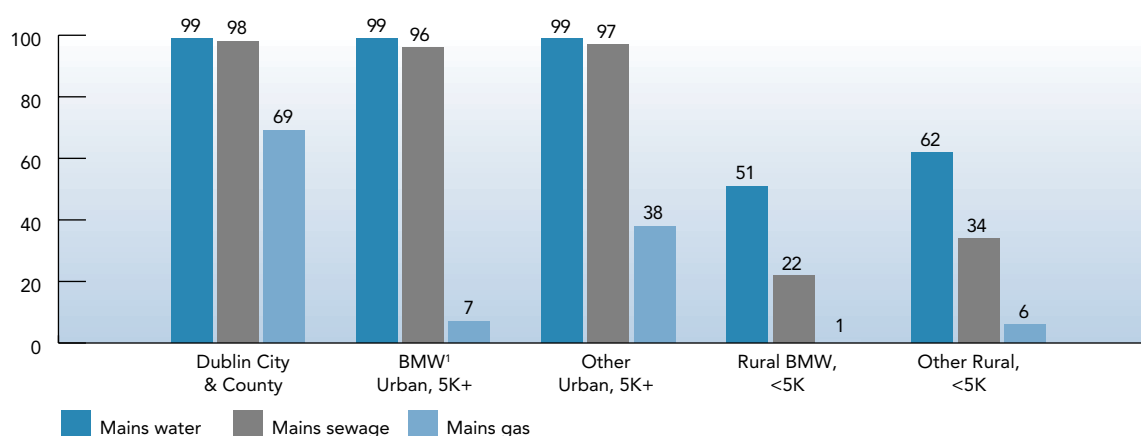
Services

Ireland's settlement pattern – with a relatively high proportion of households in rural one-off housing – has implications for the provision of services. A high proportion of households rely on a septic tank for sewage disposal and, to a lesser extent, on private water sources. Connection to mains gas is also concentrated in urban areas, particularly in the Dublin region. Connection to mains electricity, on the other hand, is virtually universal.

There are high levels of satisfaction with the reliability of the electricity supply and with the adequacy of the number of electrical sockets available. Satisfaction levels with water pressure, water quality and the reliability of the supply were highest among those with a private well, followed by those with a public mains connection. Those connected to a group scheme tended to be less satisfied, particularly with water quality.

Almost all households have hot running water in the kitchen and main bathroom. Those most likely to lack any hot running water in the accommodation were older adults living alone, residents of pre-1940 dwellings and those in the lowest income group, where about 5-6 per cent have no hot running water. It is clear that even among these groups the large majority of households have this facility in the dwelling.

Chart 5: Per cent with mains water, sewage disposal & gas by location



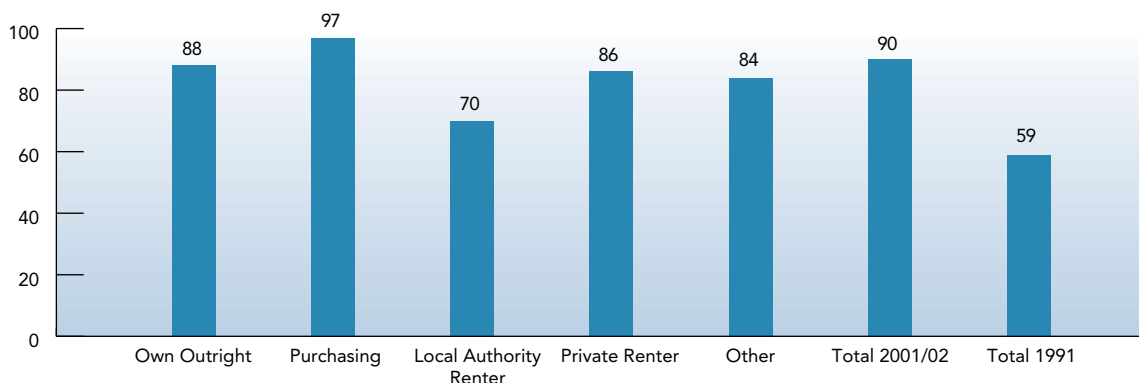
The dominant method of heating water was through the central heating system. Only a small number of households relied on a separate water heating boiler or immersion heater as the main method of heating water. Automatic time and temperature controls have the potential to increase the energy efficiency of water heating by reducing the extent to which water is heated at times when it is not being used and by ensuring that the temperature is appropriate to the household's needs. Over two-thirds of households had some automatic time control for water heating, but this was most often based on the same timer as the central heating. Nearly two-thirds of households had no convenient means of automatically controlling water temperature.

Heating

Since 1991, there has been a substantial increase in the proportion of households with central heating, increasing from 59 to 90 per cent. There has also been a shift in the fuel used for central heating away from solid fuel and towards oil and natural gas. Oil remains the dominant heating fuel: 38 per cent of households have oil central heating and a further 12 per cent have dual systems, most of which involve an oil boiler in combination with another heating source. Mains gas central heating is now found in over a quarter of households, rising to 62 per cent in the Dublin area. This move away from solid fuel, especially the use of open fires, is to be welcomed as it represents an improvement in the efficiency of heating systems.

¹ Border, Midlands and Western Region.

Chart 6: Per cent with central heating in 2001/2002 by tenure and in 1991



There are substantial differences between households in prevalence of central heating, with the lowest figures found for Local Authority renters (70 per cent), older householders living alone (75 per cent), dwellings built before 1941 (76 per cent) and households in the lowest income group (74 per cent). In contrast, over nine out of ten households in Dublin and dwellings built after 1970 have central heating.

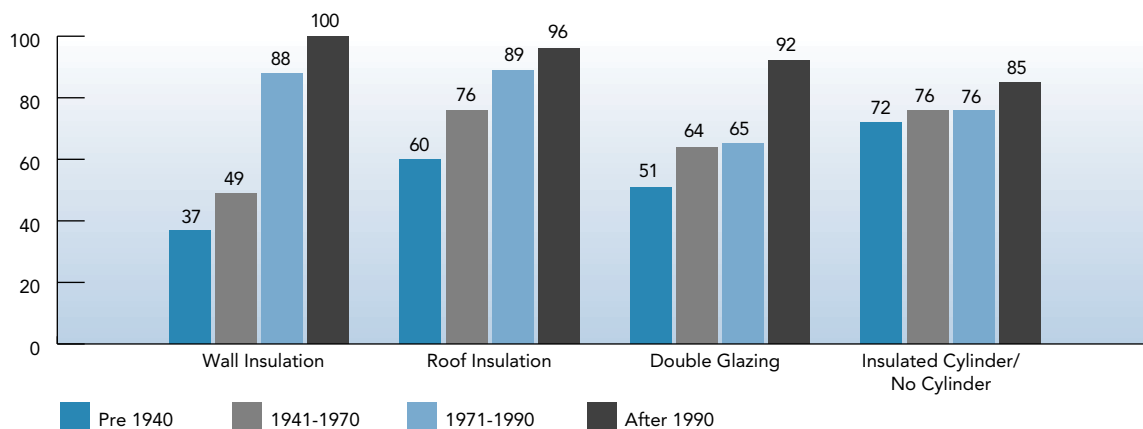
The majority of households with central heating (88 per cent) have an automatic time control on the system, but only 27 per cent have an automatic thermostat to control room temperatures. These controls are important in allowing householders to use their heating systems more efficiently.

As we might expect, households with central heating are more likely than those without it to be very satisfied with the type, ease of use, amount of heat available, control over the level of heat and running cost of the system. Those relying on an open fire or on stand-alone heaters are least likely to be very satisfied with these aspects of their heating system. Among those with central heating, levels of satisfaction are highest among those with heating based on mains gas.

Energy Efficiency and Energy Use

The energy efficiency of dwellings is strongly affected by dwelling age. In dwellings built before 1940, 63 per cent had no wall insulation compared to 24 per cent overall. Roof insulation was present in 82 per cent of dwellings overall, but in only 60 per cent of those built before 1940. Double glazing was also less likely to be present in pre-1940 dwellings, but the gap was narrower (51 per cent compared to 69 per cent overall).

Chart 7: Per cent with energy saving measures by dwelling age



There is evidence of a high level of energy-related home improvements in recent years. Among households who have been at their address for five years or more, 35 per cent have undertaken improvements in this area, with the most common being the replacement of windows (22 per cent) or external doors (19 per cent) or adding/replacing a central heating boiler (15 per cent). Only 2-3 per cent of households added wall insulation, however, and 7 per cent added roof insulation. The rate of improvement to Local Authority rented dwellings was somewhat higher than for households overall, but improvements to the pre-1940 dwellings, which are less energy-efficient, was not any greater than the rate across all households.

Chapter 7 also examines aspects of the dwelling related to increased energy use, such as having more bedrooms than are needed, presence of a bath but not a shower, electrical appliances such as a power shower, clothes dryer or dishwasher and heating based on an open fire. In general, the energy use items fell into two groups. Reliance on an open fire, having a bath but not a shower tended to characterise poorer households, older dwellings and older householders. The other indicators of energy use tended to be higher for higher-income households, younger householders and newer dwellings. More work is clearly needed in order to assess the net environmental impact of these energy-using items to the energy-savings associated with insulation and double glazing. This analysis will be needed in order to evaluate the distributional impact of carbon taxation and other measures designed to protect the environment.

It was clear from the analyses of home heating and energy efficiency that low-income households frequently live in poorly insulated, inefficiently and inadequately heated housing. The National Climate Change Strategy, in introducing measures to reduce greenhouse gas emissions, is committed to assessing the extent to which these measures will have an impact on such low-income households. In particular, schemes to upgrade the stock of Local Authority housing "will address energy efficiency and have a focus on alleviating fuel poverty where appropriate" (NCCS, 2000, p. 4).

Problems and Repairs

This report explores problems found in dwellings based on self-reports of the householders, and also major works and upgrades carried out in the last five years. Overall, Local Authority renters were most likely to report problems with the dwelling, but the incidence of major repairs in the last five years (not including conversions and extensions) was similar to the incidence for house purchasers.

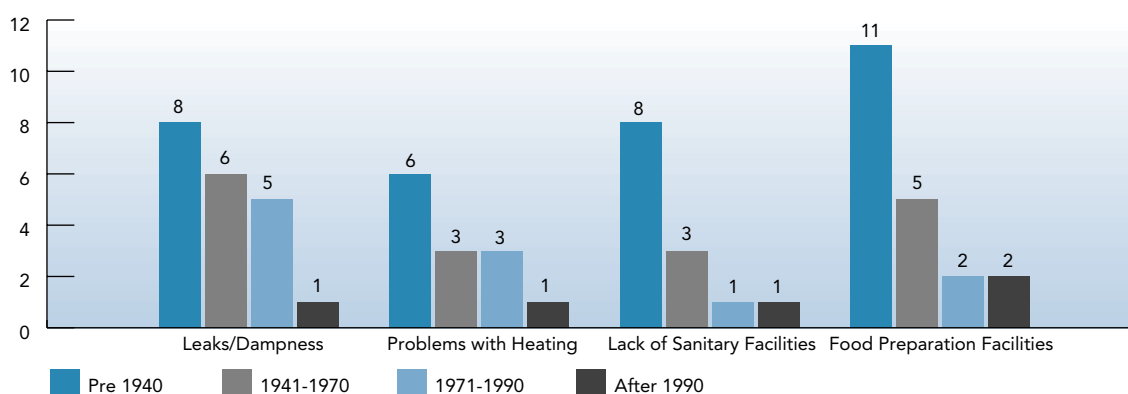
The final chapter of this report examines the overall condition of the dwelling under a number of broad headings. In this context, problems related to water ingress or dampness were most common: 5 per cent of households reported a major problem with a leaking roof, rising damp, water ingress through walls or doors/windows, condensation dampness or general dampness of unknown source. Four per cent of households lacked food preparation facilities (kitchen sink, cooking facilities, food storage, or worktop). Three per cent reported major problems in heating the accommodation; 3 per cent lacked sanitary facilities (internal water supply, waste treatment, WC); and 3 per cent had problems with ventilation (major problem with windows that do not open/close; bathroom lacks both opening window and extractor fan). About one household in eight reported at least one of these problems.

There were substantial variations in the levels of problems reported according to tenure, age of the dwelling and household income. Local Authority renters reported the highest incidence of problems (33 per cent), particularly those related to dampness (16 per cent). One-quarter of households in the lowest income group and in dwellings built before 1940 reported one of these problems with the accommodation.

Respondents were also asked how common a number of disorder problems were in their area or neighbourhood: graffiti, rubbish or litter lying about, homes and gardens in bad condition, vandalism and public drunkenness. Between 6 and 15 per cent of households overall reported these problems as being "fairly

common” or “very common”, with the higher figure for “rubbish and litter lying about”. The incidence of these neighbourhood problems was substantially higher for Local Authority residents than for other groups.

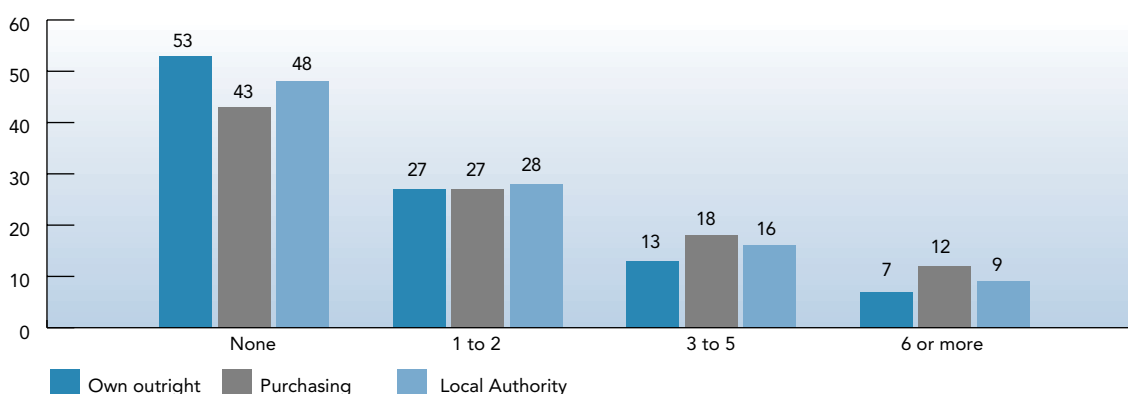
Chart 8: Per cent with reported problems with condition of dwelling by dwelling age



Major works and upgrades carried out in the last five years were examined for households who had resided at their address for five years or more. Repairs and upgrades were carried out in about half of these dwellings, with the most common being replacing windows (22 per cent), adding or refitting a kitchen (19 per cent) or bathroom (15 per cent) and replacing doors/adding a porch (18 per cent). It is significant that major works and upgrades were carried out about as often in Local Authority rented dwellings as in those being purchased on a mortgage.

Among owner-occupiers, the vast majority of repairs, upgrades and improvements were funded or carried out privately, by the householder or their family or friends. Among Local Authority renters, 62 per cent of improvements were funded by the householder, 46 per cent were funded or carried out by the Local Authority, and 6 per cent were funded by a grant¹.

Chart 9: Number of different types of upgrade in last 5 years by tenure



¹ Note that more than one funding source is possible.

Overall Housing Quality and Satisfaction

The final chapter of the report has drawn together the results of the more detailed analyses in earlier chapters to provide a broad overview of housing quality in Ireland. The household and dwelling characteristics which emerged as being most strongly related to housing quality were dwelling age, tenure and location. The key findings are summarised in the following paragraphs under each of these three headings.

Dwelling age

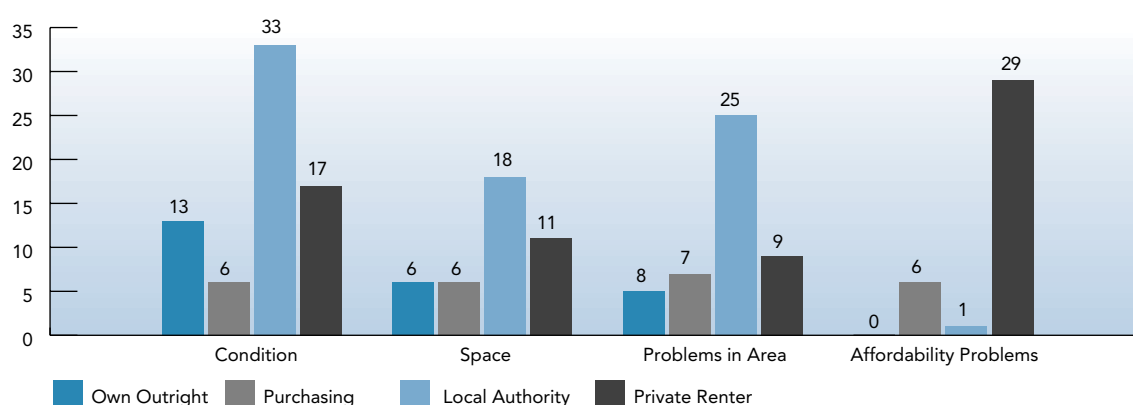
The link between dwelling age and problems with the accommodation is due in part to the fact that newer dwellings were built at a time of higher building standards in terms of insulation, damp-proofing and so on, and in part to the fact that poor maintenance in earlier years may have led to a deterioration in the dwelling fabric. To some extent, the problems are also linked to the fact that older dwellings are more often occupied by older householders on fixed incomes who are less able to afford repairs and upgrades.

Dwellings built before 1940 had a higher incidence of major problems with the condition of the accommodation, as reported by the householder. One-quarter had problems with the condition of the dwelling according to any of the five criteria examined: problems with leaks or dampness, heating, sanitary facilities, food preparation facilities and ventilation. Almost one-quarter lacked central heating and the dwellings are less likely to have wall or roof insulation than more modern buildings.

Local Authority tenure

One finding which has emerged clearly from the survey is that, across most measures of housing quality, Local Authority renters are in a less favourable position than other tenures. Two exceptions worth noting are direct housing costs and recent repairs and upgrades to the dwelling. Because of the differential rents system operated by Local Authorities, whereby rent levels are related to household income, and because Local Authority renters tend to have low incomes, Local Authority rents are low. The second respect in which Local Authority renters are not at a disadvantage is in terms of repairs and upgrades to the dwelling in recent years. In this respect, as discussed in Chapter 8, Local Authority renters fare at least as well as the other tenures.

Chart 10: Per cent with different dwelling quality problems by tenure



The reliance of the survey on judgements regarding the seriousness of problems in the accommodation is likely to affect comparisons across tenures. Renters have more of an incentive to emphasise the seriousness of the problem, in the hope of bringing about an improvement in their situation.

On the other hand, there are real reasons why we would expect to find differences in the distribution of problems across tenure types. Owners will generally have higher incomes (especially when compared to Local Authority renters) and be better able to afford to rectify problems which they regard as serious. Moreover,

maintenance, repairs and upgrades are their responsibility and they have an incentive to carry them out to reduce the risk of further deterioration to the dwelling. Renters are generally not responsible for major repairs and their incentive is very limited when it comes to costly upgrades that will enhance the value of the dwelling to the owner. Local Authority renters, in particular, are not in a strong position when it comes to problems with the dwelling. Almost by definition, they are resource-poor. With the exception of Local Authority apartments in Dublin and other cities, which have not been made available for sale by the Local Authorities, Local Authority renters whose income situation improves have traditionally purchased their accommodation and moved out of that tenure category. Moreover, they have a much more difficult time than private sector renters in “voting with their feet”: a move to the private rental sector would entail a large increase in rent paid, while there are typically long delays associated with applications to transfer to Local Authority dwellings that are considered more desirable.

Urban and rural location

The National Survey of Housing Quality, with over 40,000 cases, was designed to allow the results to be produced at the level of the Local Authority. Although this report has focused on the national situation and on broad regional patterns detailed tables are available at the Local Authority level as well. In terms of the broad regional issues, there were a number of areas where important differences were found with respect to overall house quality. Some of these will be due, in part, to the different distribution of tenures across regions. For example, Local Authority renters and private renters account for a higher proportion of all households in Dublin than in other parts of the country.

In most respects, at the national level, it was the urban or rural location of the dwelling rather than its regional location that emerged as being important. This is due to the fact that rural dwellings share common features: they tend to be detached and rural residents are more likely to own the dwelling outright and to have been at their address for longer periods than their urban counterparts.

A number of important differences between dwellings in rural and urban areas arise with respect to access to services. It was very clear, for example, that reliance on private methods of sewage disposal was almost exclusively a feature of households in the open countryside (see Chapter 5). While a greater proportion of households in the countryside had access to mains water supply, private wells and group schemes were the main source of internal water supply for over half of them. While connection to the mains electricity supply is virtually universal across both urban and rural areas, connection to the natural gas network is mainly confined to Dublin and, to a lesser extent, urban areas outside the Border, Midlands and Western region (BMW).

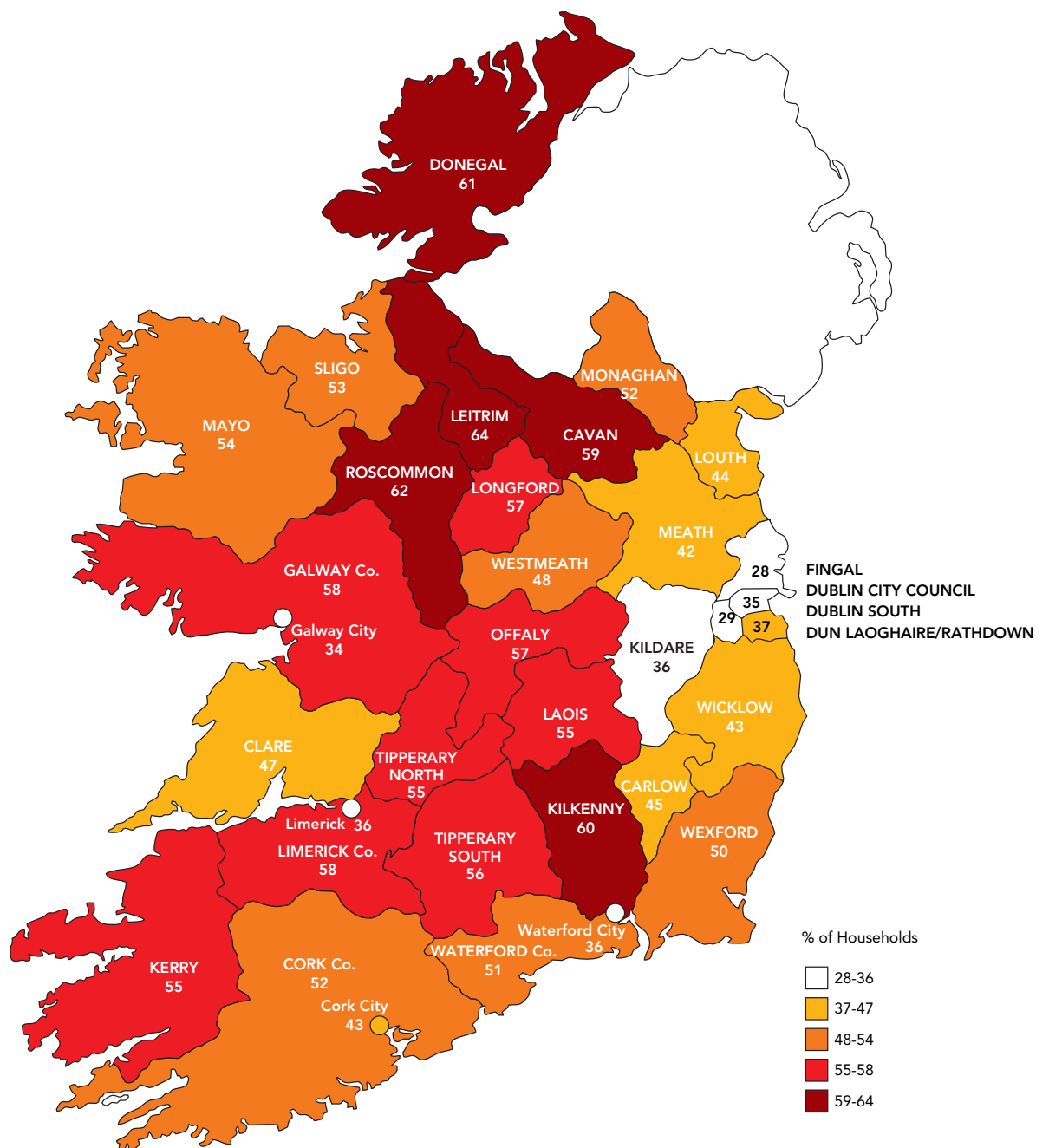
Differences between urban and rural areas in terms of the condition of the accommodation were relatively minor, largely because newer dwellings are found in both types of area: the rate of new house building in the open countryside has not declined substantially in the last decade. Nevertheless, rural dwellings are somewhat less likely than urban ones to have central heating and, where they do have central heating, to rely on solid fuel rather than gas or oil.

Differences in housing costs are evident in that the proportion of households paying more than one third of their income on rent or mortgage payments tends to be higher in urban than in rural areas. To some extent, this is also reflected in the fact that a higher proportion of rural dwellings has more than two bedrooms over the number required given the age and sex composition of the household.

Maps

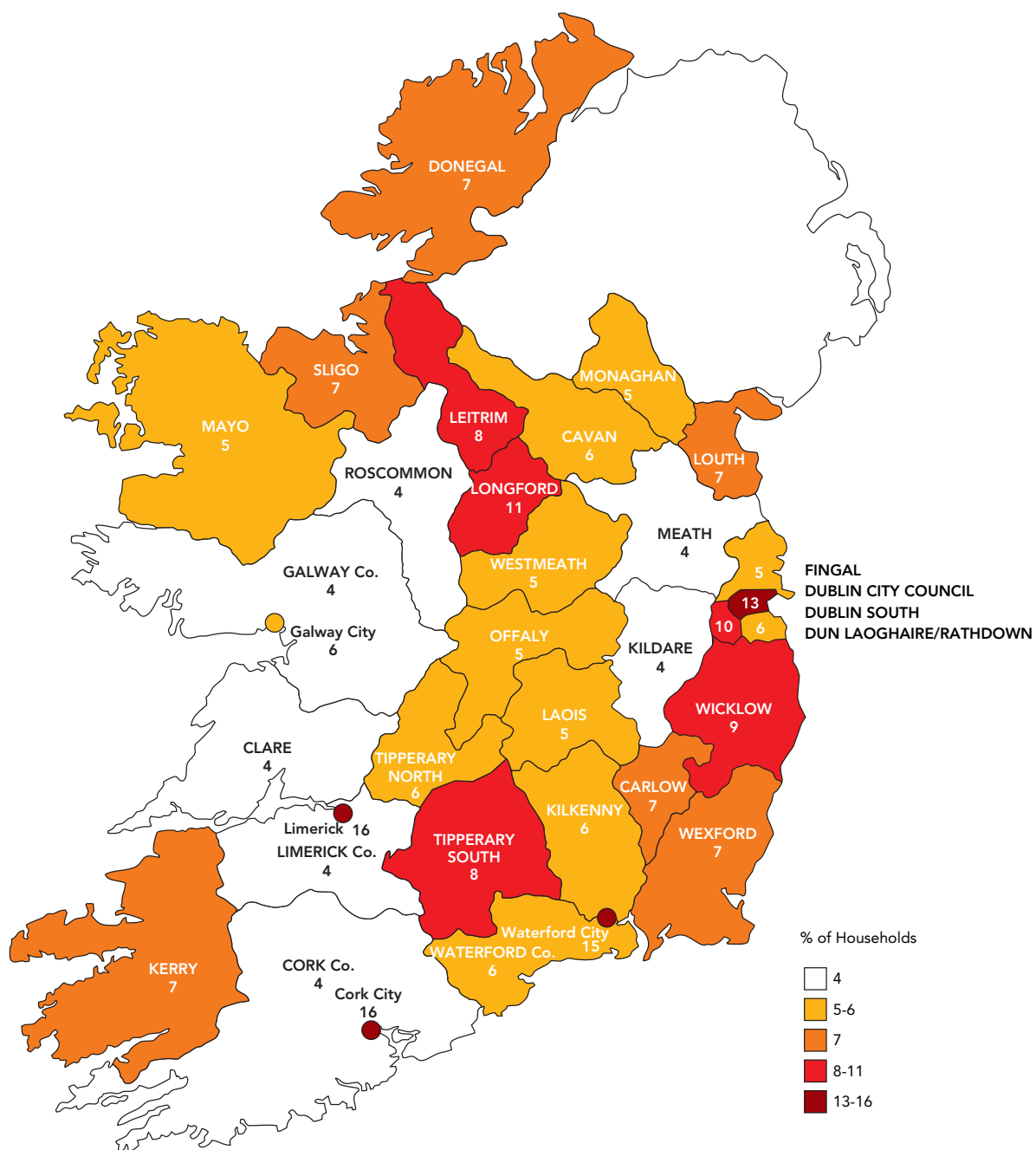
The following maps display some of the key measures discussed in this report at the level of the Local Authority.

Map 1: Percentage of households who own the dwelling outright



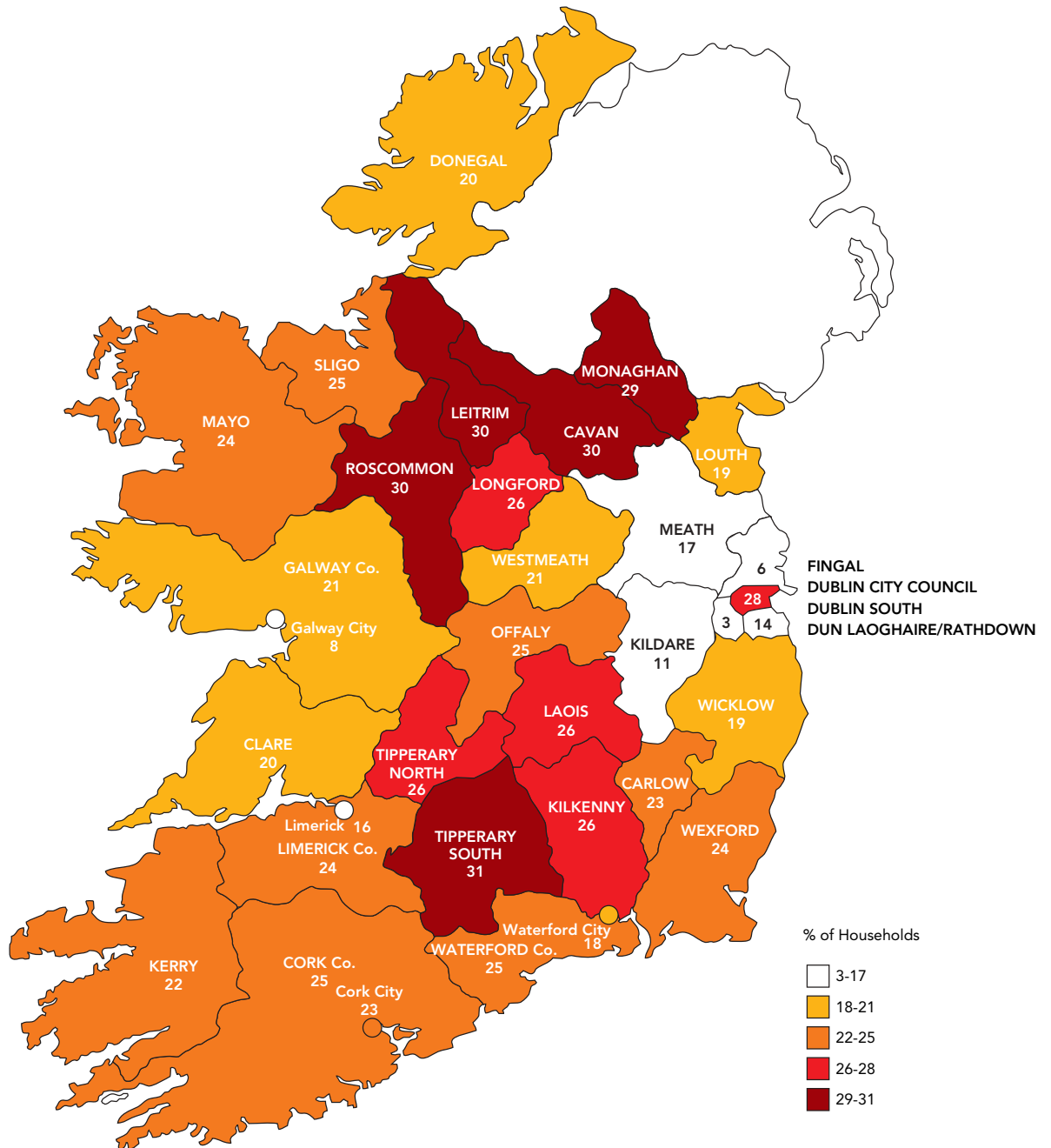
As shown in Map 1, owning the dwelling outright tends to be most common in the Border counties (apart from Louth), and is least common in the Greater Dublin Area. Local Authority renting, on the other hand, tends to be higher in the Greater Dublin Area and in Cork, Waterford and Limerick Cities. This can be seen in Map 2.

Map 2: Percentage of households renting from the Local Authority



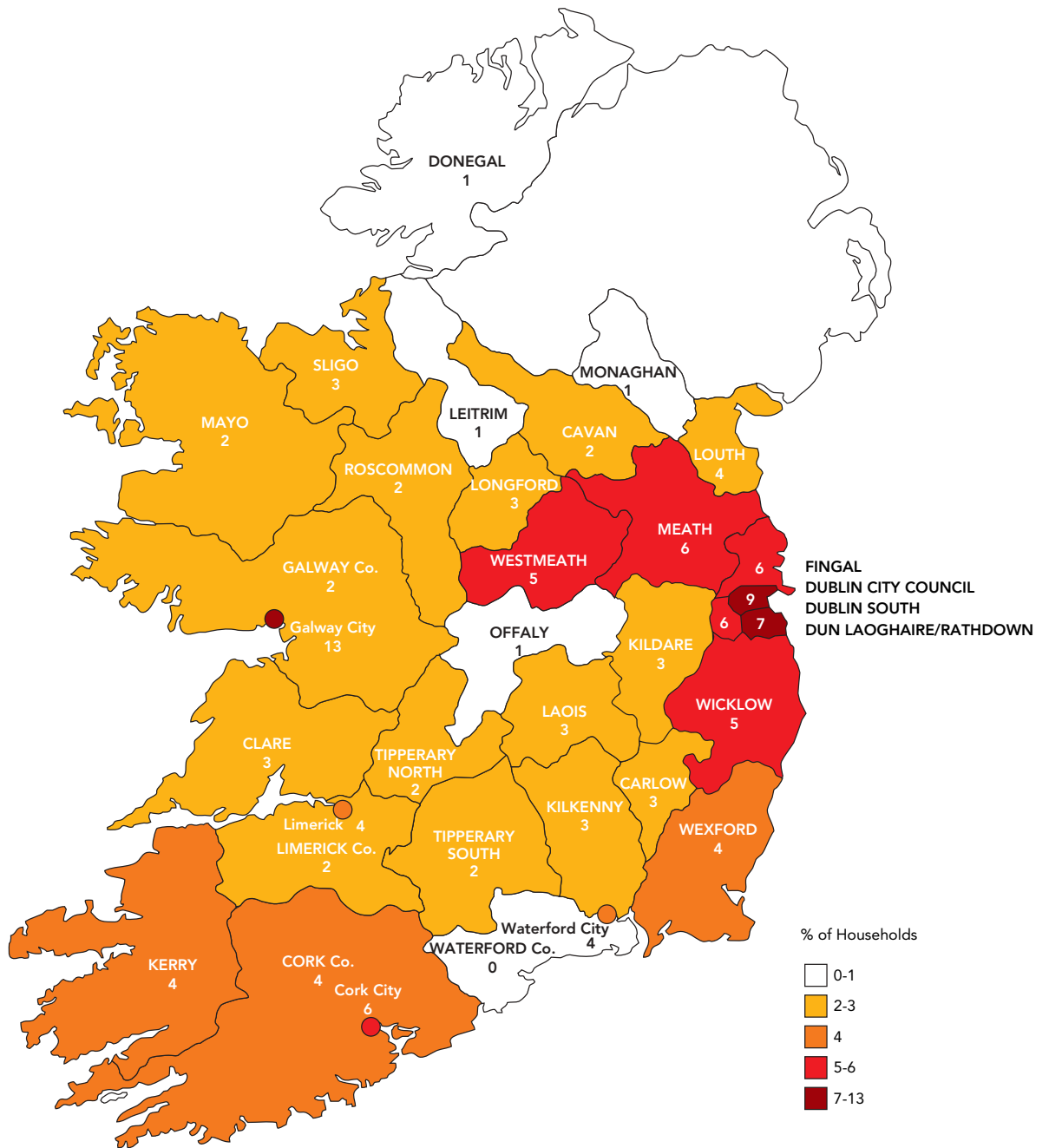
From Map 2, it is clear that the percentage of households renting from the Local Authority is greatest in Dublin, Cork, Limerick and Waterford Cities.

Map 3: Percentage of dwellings built before 1941



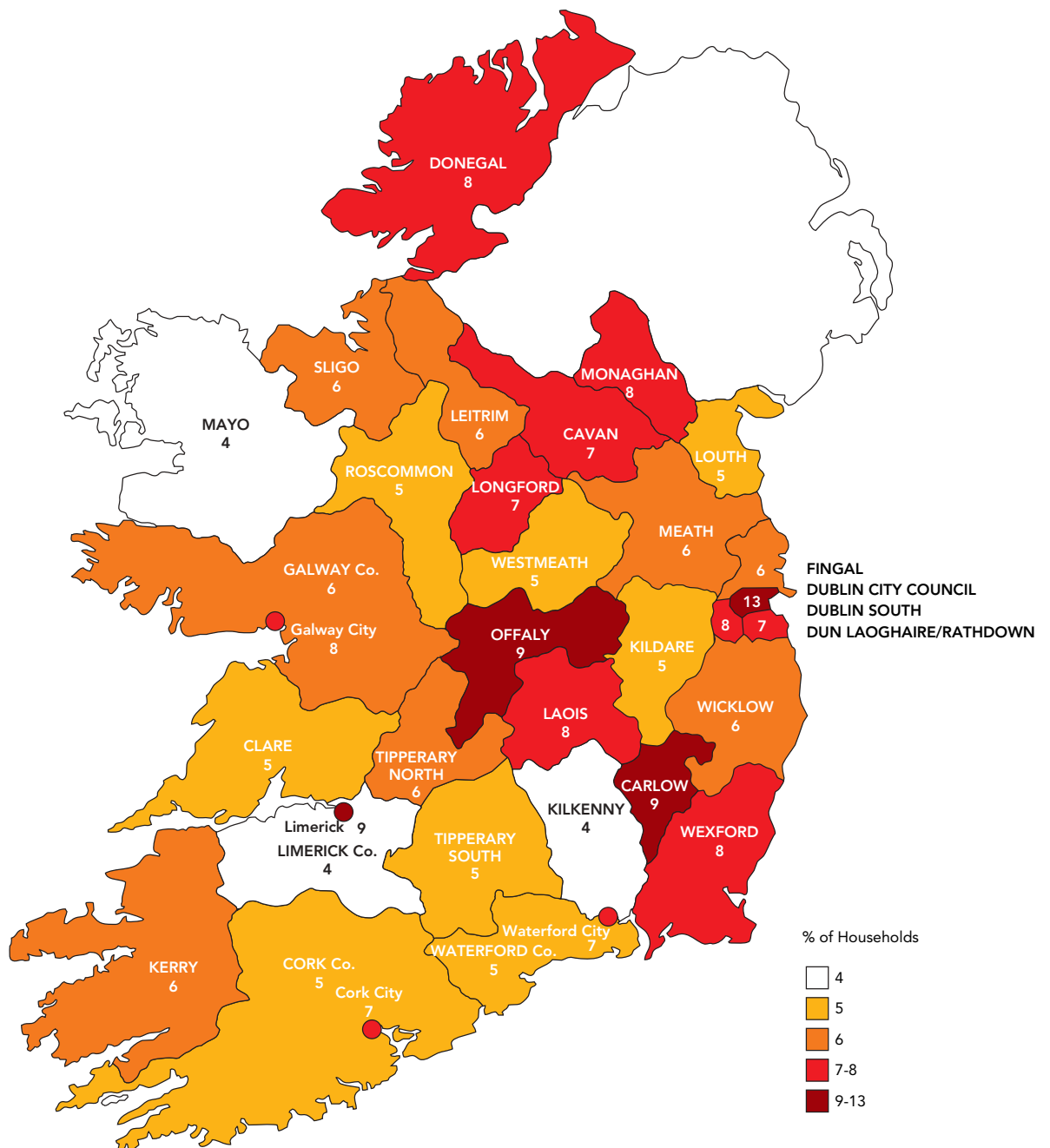
Map 3 shows that pre-1941 dwellings tend to be most common in the group of counties comprising Leitrim, Cavan, Monaghan and Roscommon, but also in Tipperary South. Apart from Dublin City itself, dwellings of this age are less common than elsewhere in the Greater Dublin Area.

Map 4: Percentage of households spending more than one-third of net income on rent or mortgage



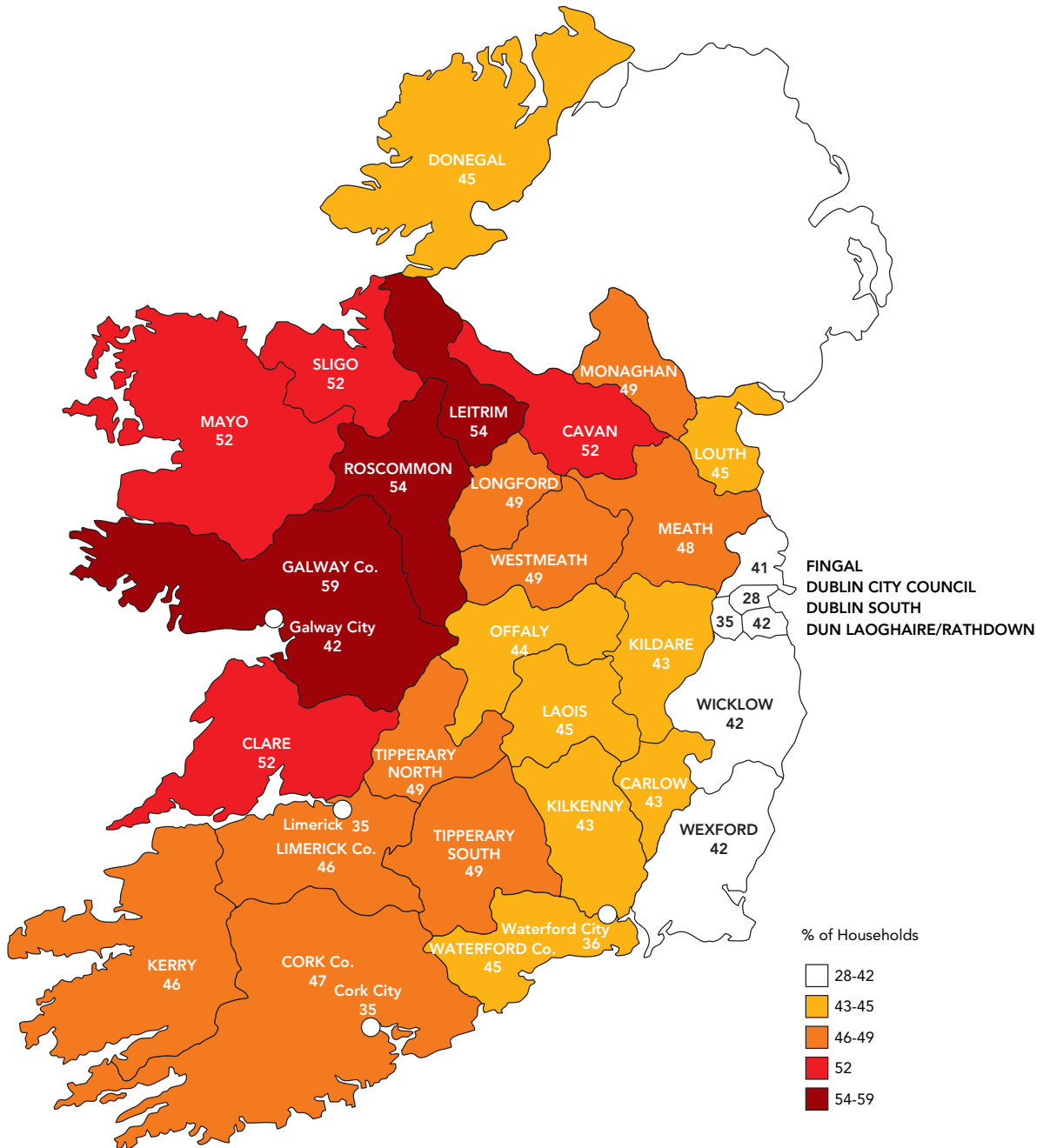
Dublin and Galway Cities stand out as having the greatest difficulties in terms of housing affordability among renters and purchasers, as can be seen from Map 4.

Map 5: Percentage of households below the “Bedroom Standard”



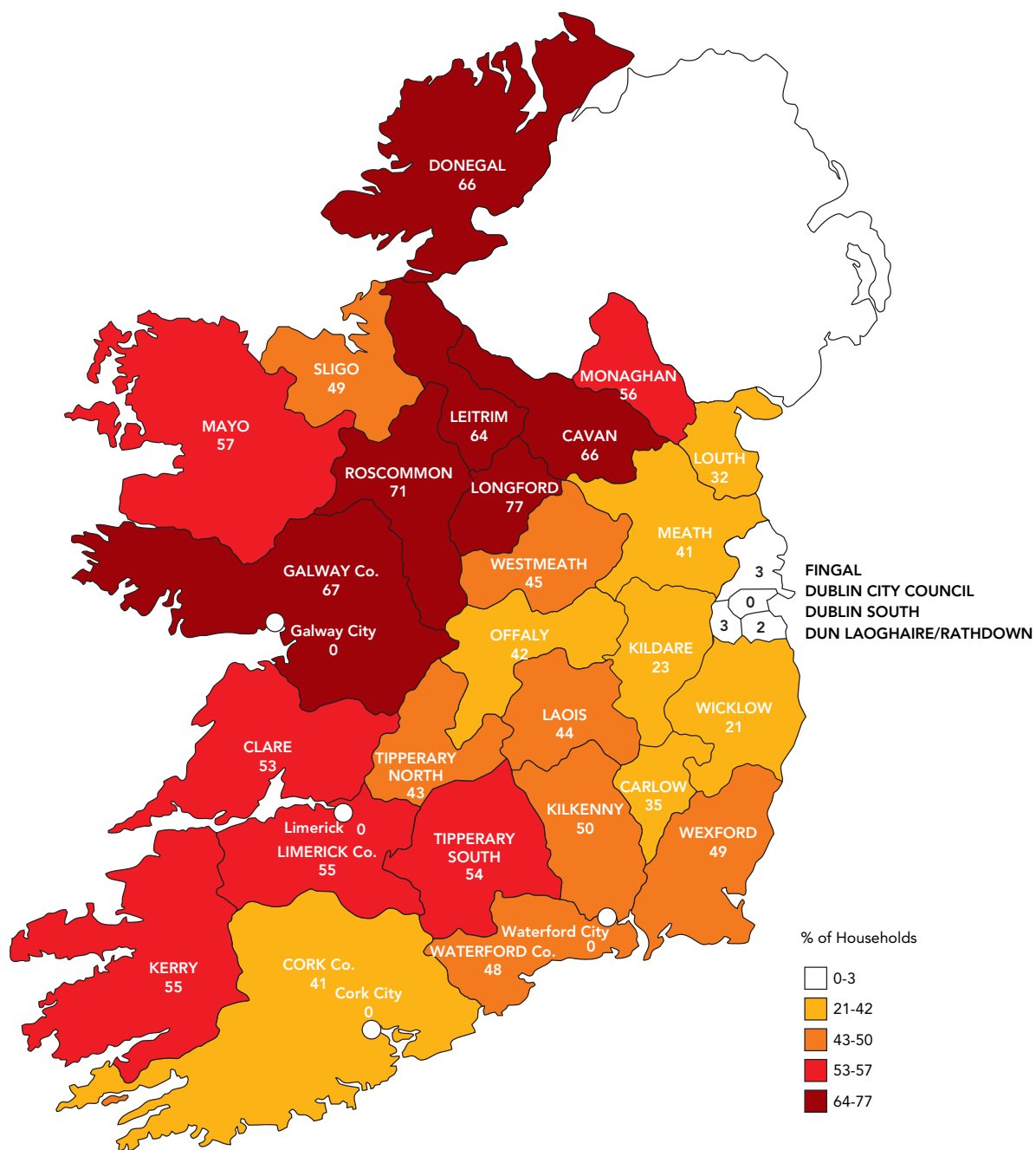
Map 5 shows that the proportion of households where the number of bedrooms is below what is needed for a household of that size and composition (see Chapter 4) is highest in Dublin City. Outside of this area, the range of variation by county in this measure is quite narrow, however.

Map 6: Percentage of households with "excess bedrooms"



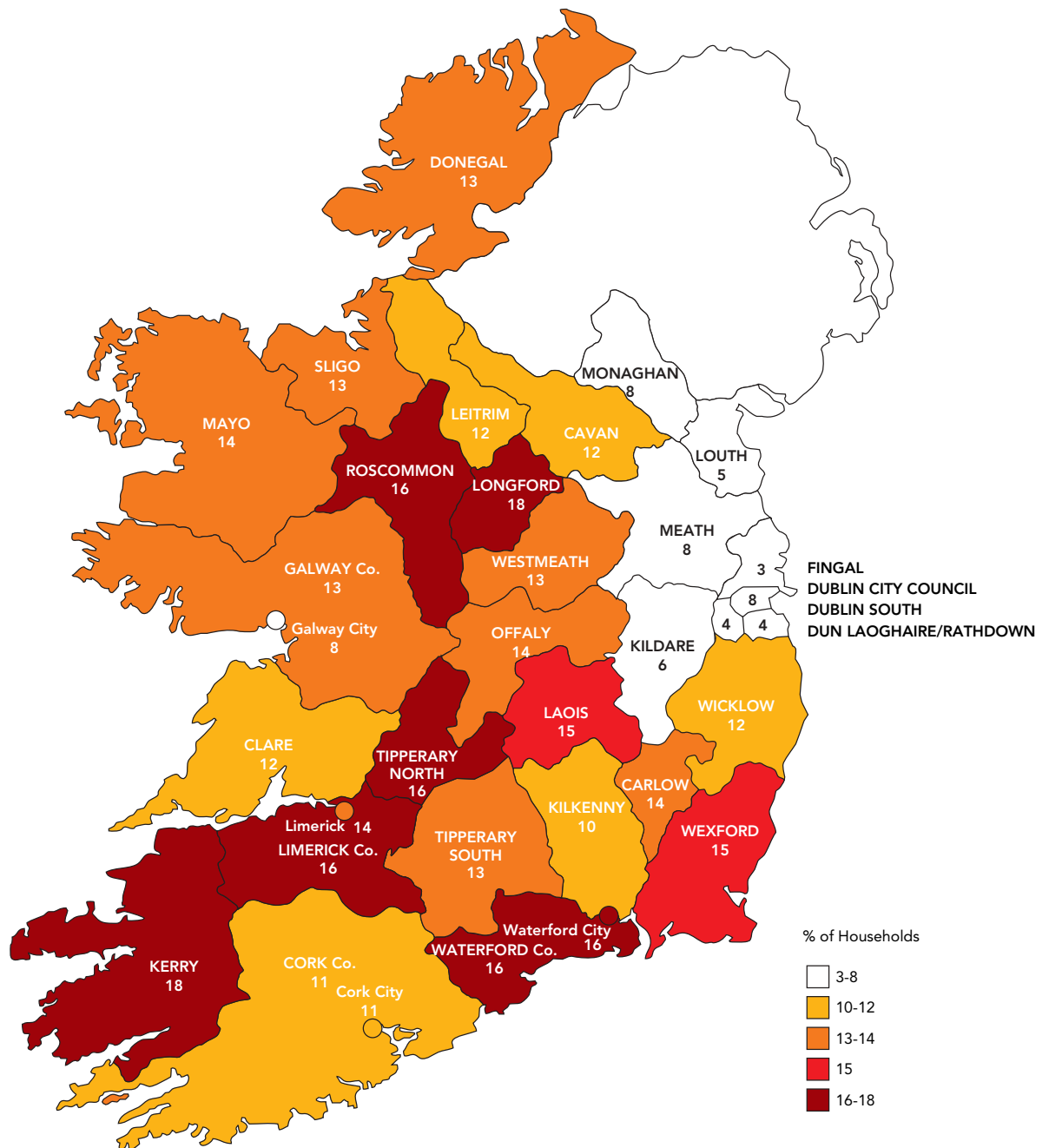
There is more variability in terms of households with "excess bedrooms": two or more bedrooms above what is needed for a household of that size and composition (see Chapter 4), as shown in Map 6. Apart from Donegal, over half of households in the counties in the North-western quarter of the country have excess bedrooms.

Map 7: Percentage of dwellings that are detached and in open countryside



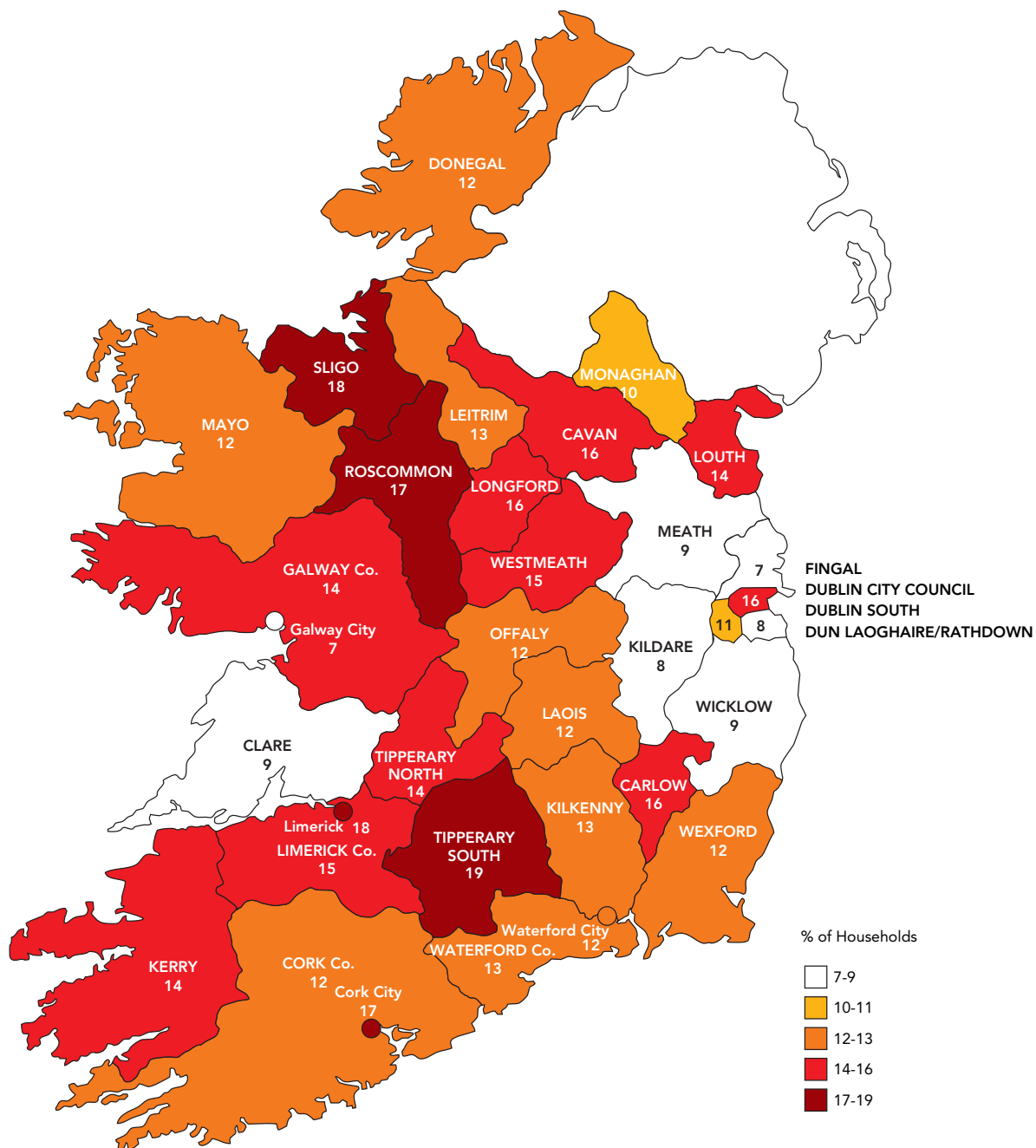
Rural one-off houses, as shown in Map 7, account for two-thirds or more of the stock in Donegal, Cavan, Longford, Roscommon and Galway County. This type of housing is much less common in the counties surrounding the Dublin Region and in County Cork.

Map 8: Percentage of households with no central heating



Map 8 shows that apart from the favourable position of the Greater Dublin Area (apart from Wicklow) and of Louth and Monaghan, there is no clear regional pattern to an absence of central heating.

Map 9: Percentage of dwellings where there are reported problems with dwelling condition
 (See Figure 9.2 for details)



The absence of a clear link between region and condition of the accommodation can be seen from Map 9, which shows the percentage of households in each Local Authority area where there are problems with the condition of the dwelling according to the criteria discussed in Chapter 9. The highest concentration of problems is found in a mixture of rural (Sligo, Roscommon and Tipperary South) and urban (Cork and Limerick Cities) Local Authorities. The counties surrounding the Dublin region (Meath, Kildare and Wicklow) tend to fare better than average because of the high proportion of newer housing in these counties.

Acknowledgements

Research is always a communal endeavour, and we are very conscious that this report would not have been possible without the contributions of a number of people, to whom we would like to express our thanks. The steering group at the Department of the Environment, Heritage and Local Government provided valuable advice and insights throughout the process, from the design of the questionnaire through to the drafting of the final report.

Special thanks are due to over 40,000 respondents all around the country who willingly gave of their time in providing the information on which the report is based, and to the team of interviewers who collected the data. Thanks also to Fergal Rhatigan, Michelle Donnelly, Kathleen Hyland, Ann Rafter, Eileen Kelleher and Cathy Gleeson who co-ordinated the fieldwork from the ESRI.

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The results presented here, their interpretation, and any remaining errors or omissions, are the responsibility of the authors.

1

CHAPTER

Introduction

Background

The Economic and Social Research Institute was commissioned by the Department of the Environment, Heritage and Local Government to carry out the Irish National Survey of Housing Quality (NSHQ) in 2001-2002. The purpose of the survey was to record very detailed information on the condition of the national housing stock. This information provides a database for the Department that will permit an assessment of the condition of the Irish housing stock and to identify housing-related problems among groups of families and households throughout the country. Planners and policy-makers can use this detailed information to help them to develop housing policies that will directly address problems and areas of need that have been identified. The key output of the survey is a database with a large enough sample to permit analyses at the level of the Local Authority. The present report provides an overview of the results of the survey at national level.

Relevance of the Data

The data collected in the NSHQ is relevant to planners and policy makers in a wide range of areas. The first, and most obvious, area is that of house planning. The information collected on housing quality and affordability is an essential resource for the Department of the Environment, Heritage and Local Government (DEHLG) and for Local Authorities. It provides information on the regional distribution of dwellings with particular problems in terms of quality and affordability, and also on the characteristics of the households who experience these problems so that policies can be targeted appropriately. In this respect, the data will be important in implementing elements of the National Development Plan (NDP) concerned with promoting social inclusion. Under the NDP, significant resources are being made available for affordable housing to Local Authorities for the redevelopment and refurbishment of their existing housing stock (National Development Plan, pp.189-190).

The second broad area where information collected in the NSHQ can be used is in the domain of regional planning. As will be discussed further below, the large sample size permits the results to be disaggregated to the level of the Local Authority. The results can also identify whether dwellings are located in urban or rural areas within the Local Authority region. Information on the distribution of dwellings across these areas, and their problems and characteristics, is needed for the implementation of the National Spatial Strategy (NSS). The NSS has as one of its central concerns the development of sustainable urban and rural settlement "to reduce distance from employment, services and leisure facilities and to make better use of existing and future investments in public services, including public transport" (National Spatial Strategy, Section 1.3).

The third broad area where the data from the NSHQ will be important is that of energy policy. Detailed information was collected on heating methods, supply of natural gas and use of other fuels. This material will be useful as a benchmark for progress in implementing the National Climate Change Strategy (DELG, 2000), an important element of which is to increase the use of less carbon-intensive fuels such as natural gas and renewable energy sources. Greenhouse gas emissions from the residential sector are primarily from energy used in the home for space and water heating.

Comparability to Earlier Surveys

Similar surveys were undertaken in 1981 and 1991, but were conducted by the Local Authorities themselves. This is the first time that the methodology, administration and protocols for the survey have been completely centralised, ensuring a harmonised set of data across Local Authority areas. In a large number of areas, the surveys provide information of a comparable nature, such as on the dwelling structure, number of rooms, dwelling age, number of persons of different ages in the dwelling and housing costs.

However, because of differences in the way the 1991 survey and the present survey were conducted, there are a number of points where the comparability of the results is not as strong. This is most notable when it comes to judgements as to the extent and nature of problems in the dwelling. In the 1981 and 1991 surveys, this assessment was made by survey staff. In the present 2001-2002 survey, the residents themselves were asked to assess the extent and nature of problems with the dwelling.

A second important difference between the present survey and earlier surveys is that fitness of the dwelling is not explicitly measured here. The 1981 and 1991 surveys explicitly assessed the fitness of the dwelling for human habitation. The present survey focuses instead on a number of indicators of housing quality.

A further issue arises with respect to the measurement of overcrowding. This has an objective definition in the Housing Acts that takes account of the amount of airspace in the sleeping areas (Housing Act, 1966, Section 63). This information would not have been readily available to residents so it was not included in the present survey. Instead, we use a measure based on the number of bedrooms given the ages and relationships of household members.

A major strength of the present design, in addition to the assurance that harmonised protocols were used throughout the country, is the detailed information it collected on residents' satisfaction with aspects of their dwelling, such as costs, heating system and water supply; on problems in the area where the dwelling is located; and on problems with the affordability of the dwelling itself, with heating the dwelling or with home appliances and furnishings.

Methodology

The sample

One of the requirements of the survey was to provide a database to the Department with a large enough sample to yield separate breakdowns at Local Authority level. The NSHQ completed sample size was over 40,000 households throughout the country. This is an extremely large sample by the standards of other sample surveys which have been previously carried out in Ireland. The sample of addresses was selected using the ESRI's RANSAM programme, which uses a multi-stage randomised design based on the electoral register.

The survey

The survey is similar in its content to the English House Conditions Survey, 1996 (ODPM, 1998) (DTLR, 2001), since it is based on a questionnaire interview of a household respondent. This differs from a technical survey of the dwelling fabric of the kind incorporated, at least to some degree, into earlier House Condition Surveys in Ireland and also in the English House Conditions Survey, 1996. In each household, the person responsible for the accommodation (the owner, purchaser or tenant) was to be interviewed.

A pilot test of the questionnaire was conducted in August 2001, and the main survey went into the field in September. The fieldwork for the main survey extended from September 2001 to Summer 2002. The questionnaire had an average completion time of 30 minutes.

Data Quality

Response rates

The overall response rate was 75 per cent (see Table 1.1). The highest rate was in County Longford where response levels of 87 per cent were reached. Rates in Dublin ranged from 66 per cent in the City area to 69 per cent in Dun Laoghaire/Rathdown.

By the standards of statistical probability surveys currently undertaken in Ireland these response levels are extremely high. An aggregate response rate of 60-62 per cent would be considered acceptable in most statistical surveys currently being undertaken. The higher than usual response level in the NSHQ can be attributed to intensive interviewer training and sustained call-backs on the part of the interviewers.

Item non-response

In general, the quality of the data in terms of item non-response (missing information for particular questions) was very good. There were a small number of exceptions, however, with missing information for more than 5 per cent of households. These included background information such as income (12.3 per cent missing),

education of all household members (20 per cent of households had missing information on education for at least one member) and age of all household members (6 per cent). Certain variables related to characteristics of the dwelling also had relatively high levels of item non-response, such as floor area (75 per cent) and presence of wall insulation (18 per cent).

For key background variables that were to be used in all of the tables, any missing information was imputed based on other data on the household. This was done to ensure that all figures in a table were based on the same set of cases. Imputation was also conducted for the variables used to construct the weights. A more detailed discussion of the imputation procedure is included in Appendix 2.

Table 1.1: Response rates in National Survey of Housing Quality, 2001-2002

Local Authority	Completed	Refused	Could not locate (Row Percentages)	Never available	Other reason	Number analysed (N cases)
Carlow	82	6	2	5	2	999
Cavan	83	6	4	5	2	1,257
Clare	70	10	3	13	3	988
Cork City	75	9	3	9	1	1,443
Cork County	75	8	4	9	3	1,393
Donegal	84	5	2	6	1	1,083
Dublin City Council	66	13	2	15	2	2,804
Dublin Fingal	68	14	3	13	1	1,389
Dublin South	68	13	1	15	1	1,411
Dun Laoghaire/Rathdown	69	15	3	9	2	1,465
Galway City	69	11	4	13	1	1,355
Galway County	79	6	5	8	1	1,067
Kerry	80	5	3	8	3	1,030
Kildare	73	10	4	10	2	990
Kilkenny	75	8	4	9	2	1,024
Laois	80	7	2	7	4	971
Leitrim	84	4	3	7	2	1,171
Limerick City	66	12	2	15	2	1,171
Limerick County	73	7	5	10	5	987
Longford	87	4	3	4	1	1,160
Louth	75	8	3	11	2	1,006
Mayo	81	4	2	6	5	1,098
Meath	78	5	5	9	2	1,090
Monaghan	78	6	3	10	1	1,011
Offaly	81	6	2	8	1	1,204
Roscommon	83	4	2	8	2	1,186
Sligo	85	6	2	5	2	1,176
Tipperary North	79	9	3	7	2	1,081
Tipperary South	76	5	5	10	1	994
Waterford City	70	6	2	19	1	1,162
Waterford County	75	7	4	9	3	1,048
Westmeath	77	10	3	7	2	1,174
Wexford	74	10	4	10	2	1,112
Wicklow	67	10	10	10	3	986
Total	75	10	3	10	2	40,486

Note: a small number (less than 1 per cent) of completed questionnaires were not analysed because of data quality problems. These are excluded from the total above.

Income

Income in the House Conditions Survey is measured by a single item, which asks for the approximate level of net household income and records the answer into one of 16 categories. The wording is as follows:

Finally, a few questions about how you are able to manage financially. Could I ask about the approximate level of net household income? This means the total income, after tax and PRSI, of ALL MEMBERS of the household. It includes ALL TYPES of income: income from employment, social welfare payments, child benefit, rents, interest, pensions etc. We would just like to know into which broad group the total income of your household falls. I'd like to assure you once again that all information you give me is entirely confidential.

Respondents were first of all presented with a card showing four broad income categories. Then, they were presented with a second card that broke down each of these four broad categories into four more detailed categories. The result was a 16-category variable for total household income. This item had a reasonably good response rate, with 87.7 per cent of respondents providing information on the initial four-category breakdown, and 85.3 per cent providing information on the more detailed 16-category breakdown. Income category was imputed for the 12.3 per cent of households for whom the information was missing using information on household size, number of persons at work, social class, Local Authority area and sample cluster.

The NSHQ single-item measure of income will tend to understate total household income, particularly in larger households. That was the case in the Living in Ireland Survey (LIS), a survey specifically designed to measure household income and associated components of living standards. The understatement arises for a number of reasons: incomplete information on the part of the householder regarding earnings and income of other people in the household and a tendency to forget some components (such as Child Benefit and irregular payments) when responding to a single question.

Data from the 2000 Living in Ireland Survey were used to develop a correction for the NSHQ single-item income measure. Details of how this was done are provided in Appendix 2.

The corrected measure of income is used throughout this report, as a major classifying variable in the tables and in examining the relationship between housing costs and income.

Equivalised Income

Equivalised income is a way to take account of the number of persons who depend on a household's income. Equivalised household income – that is, income per adult-equivalent – takes account of economies of scale and the lower cost of meeting the needs of children relative to adults. The scale adopted for “equivalisation” was the widely-used modified-OECD scale. This scale allows a “weight” of 1 for the first adult in the household, 0.5 for each subsequent person aged 15 or over, and 0.3 for each child aged 14 or under. This means, for instance, that a household with two adults and two children would have an equivalisation factor of 2.1.

Equivalised income is calculated by dividing the actual household income by the equivalisation factor. In effect, a household with two adults and two children would need an income of €21,000 to be “equivalently well off” to a person living alone with an income of €10,000.

Sample Weights

Sample weights are constructed to ensure that the sample is representative of the population along a number of key dimensions, such as region, household size, labour force participation, age of dwelling and so on. These weights adjust the sample for any lack of overall representativeness arising from sample design, the sampling frame available and patterns of non-response. The sample design would have over-represented rural areas. This arose because of the requirement, noted above, for a sample of sufficient size to provide Local Authority

level tables. This meant that smaller Local Authority areas were over-represented in the sample, compared to their populations. The sampling frame, based on the Electoral Register, tends to over-represent households with a larger number of persons aged 18 and over. Differences in response rates are typically found between urban and rural areas, with higher response rates in the latter.

The sample weights were constructed by adjusting the sample proportions to population figures based on the most up-to-date information available. More complete details are given in Appendix 2. All of the tables in Chapters 2 to 9 are based on weighted data.

Coverage

Given the nature of this survey, being based on interviews with householders, it was only possible to carry it out at addresses where someone was currently resident. We have no information on vacant dwellings or on holiday homes that are used for only part of the year.

Some estimates are available of the extent of the undercount based on information on second homes collected from households in the sample. There are an estimated 29,400 houses, 2,000 apartments and 3,400 mobile homes or caravans owned by private householders that are unlikely to be captured by the survey because they are either vacant or occupied for less than 6 months of the year. These account for a relatively small proportion (2.3-2.4 per cent) of the total housing stock.

These figures on coverage are only a rough guide, since a private company rather than a household may own vacant dwellings. It is likely, however, that most of the stock of vacant dwellings and unoccupied dwellings are owned by private households rather than by companies, as the latter would be motivated by economic considerations to ensure that the dwelling is rented out for most or all of the year. Appendix 2 gives further details on additional dwellings owned by private householders.

Outline of the Report

Chapter 2 of the report examines key characteristics of households and dwellings: tenure, dwelling age and type, age of householder and household type.

Chapter 3 turns to the issue of housing costs and affordability.

In **Chapter 4**, the space available to the household is considered, including the number and types of room and the number of bedrooms is assessed in relation to the size and composition of the household.

Chapter 5 examines variations in the nature and type of services available to the household, including water supply, electricity, mains gas and water heating.

We next turn to a consideration of home heating in **Chapter 6**, covering central heating, and the main type of fuel used by the household for heating and their overall satisfaction with the heating system.

Chapter 7 examines other aspects of energy use by households by exploring issues such as presence of insulation and energy-draining appliances.

Chapter 8 focuses on problems with the dwelling structure and repairs and maintenance carried out in the last five years.

Finally, in **Chapter 9**, the different dimensions of housing quality are drawn together to construct an overall index of housing quality. This chapter also explores the household's level of satisfaction with the accommodation.

CHAPTER

2

Key Characteristics of Households and Dwellings

This chapter provides an overview of the key characteristics of households and dwellings in Ireland, including housing tenure, dwelling type, dwelling age and the length of time the household has lived at the address. These key characteristics of the household and the dwelling provide the background against which the more detailed house conditions will be assessed in the following chapters.

Figure 2.1 provides, for reference, an outline of the central measures used in tables in this chapter and throughout the report. The measurements will be discussed below as they are introduced in the tables.

Tenure, Household Type, Location and Income

Table 2.1 provides a profile of the households in the sample according to housing tenure. The final rows of Table 2.1 clearly show the dominance of home-ownership in Ireland. Forty-five per cent of households own their accommodation outright, and a further 37 per cent are purchasing the accommodation. Local Authority renters account for only 8 per cent of households, while those renting from a private landlord or property company account for 9 per cent. The small group in the “other” category includes those who occupy the dwelling rent-free and those renting from voluntary agencies such as Respond.

The dominance of owner occupation has persisted since 1991. The 1991 Census (Table 10) indicated that 80 per cent of dwellings were owner-occupied, compared to 82 per cent in the NSHQ. The proportion of dwellings rented from the Local Authority has decreased slightly from 10 per cent to 8 per cent, while the proportion of other renters has remained relatively stable.

As we might expect, there is a strong association between tenure and household type, particularly age of householder or stage in the family cycle. Older householders, particularly those over age 65 living alone or in all-adult households, are highly likely to own their homes outright (81-87 per cent). Couples with dependent children are most likely to be in the process of purchasing their accommodation (61 per cent), and only 28 per cent own the dwelling outright. Other households with children, the majority of whom are lone parents, are least likely to own their homes outright (20 per cent) and are more likely than other groups to be renting from the Local Authority (32 per cent).

Non-elderly all-adult households are more likely than others to be private sector renters, but even here the proportion renting in the private sector is only 26 per cent. Non-elderly people living alone (18 per cent) and other households with children (15 per cent) are more likely than other households to rent in the private sector.

There is also a clear association between location and tenure, which partly reflects the older age profile of rural residents and partly reflects differences in the availability of rental accommodation in urban and rural areas. Rural areas are defined here to include small towns and villages with a population of under 5,000 (excluding Dublin County) as well as open country. Nearly 60 per cent of those living in rural areas own their accommodation outright, with the figure slightly higher in the Border, Midlands and West (BMW) regions than in other regions. Residents in urban areas outside of Dublin are more evenly divided between those purchasing and those who own outright, but there is also a greater degree of private renting than in rural areas, especially in BMW towns. This may partly reflect the dominance of a small number of large towns (Dundalk, Drogheda, Sligo and Galway City) among the BMW urban areas, whereas urban areas in the Mid-East, Mid-West, Southeast and Southwest would have a relatively greater proportion of smaller towns (population 5,000 – 10,000). Purchasing on a mortgage is the most common tenure in Dublin City and Counties, accounting for 43 per cent of households.

Figure 2.1: Key characteristics of households and dwellings used in the tables

Characteristic	Description
Tenure	<p>The circumstances under which the household occupies the dwelling:</p> <ul style="list-style-type: none"> • Owns outright (no mortgage), • Purchasing (on a Local Authority mortgage, a Local Authority tenant purchase scheme, or a mortgage with a lending institution such as a bank or building society), • Renting from the Local Authority, • Private renter (renting from a private sector landlord/property agency), • Other (includes those occupying the accommodation rent-free and renting in the voluntary and co-operative sector).
Household Type	<ul style="list-style-type: none"> • One person, under 65 years • One person, over 65 years • Couple, dependent children – couple with at least one child under age 18; there may be other relatives or non-relatives in the household as well, such as grown-up children of the couple, a grandparent, uncle, son or daughter-in-law etc. • Others with children – other households with at least one child under age 18; The large majority (97 per cent) of these are lone parent households. Grandparents and grandchildren, an aunt or uncle and children would also be included here. • Parent(s), grown children – a parent or both parents with children all aged 18 or over; there may be other people in the household as well, such as a son or daughter-in-law, but no children under age 18. • Other all-adult households, under 65 years – other households with 2 or more members, no children under 18 and no person aged 65 or over. These include couples with no children, unrelated adults, and relatives such as brothers and sisters. • Other all-adult households, 65+ years – other households with 2 or more members, no child under 18 and at least one member aged 65 or over.
Location	<p>The region and urban/rural characteristics of the place where the dwelling is located. Region is based on information from the sampling frame and size of place is based on information recorded by the interviewer.</p> <ul style="list-style-type: none"> • Dublin City and County, • BMW Urban 5k+ - towns with a population of 5,000 or more in the Border, Midlands or West planning regions, • Other Urban 5k+ - towns with a population of 5,000 or more in the Mid-East, Mid-West, Southeast or Southwest planning regions, • Rural BMW, <5k – small towns (population under 5,000) or rural areas in the Border, Midlands or West planning regions, • Other Rural, <5k – small towns (population under 5,000) or rural areas in the Mid-East, Mid-West, Southeast or Southwest regions.
Household Income	<p>Equivalent income is the net income per “adult-equivalent” in the household per week in €uro. It considers all sources of income in the household and takes account of economies of scale and of the lower costs of children compared to adults. The modified-OECD scale allows a weight of 1 for the first adult in the household, 0.5 for each subsequent person aged 15 or over, and 0.3 for each child aged 14 or under. The categories divide households into quintiles or fifths of the population in terms of their ranking on equivalised income.</p>
Dwelling Age	<p>The year the accommodation was built.</p>

Table 2.1: Housing tenure by household type, location and income category

	Tenure (Row percentages)					Total (Column %)
	Own outright (Column %)	Purchasing	Local Authority renter	Private renter	Other tenures	
Household type						
One person under 65	39	32	7	18	4	12
One person 65 or over	81	4	9	2	4	10
Couple, dep. child(ren)	28	61	7	3	1	33
Others with children	20	32	32	15	1	7
Parent(s), grown child(ren)	63	29	5	2	1	14
Other all-adult, under 65	34	36	3	26	1	15
Other all-adult, 65+	87	6	4	1	2	9
Location						
Dublin City and County	33	43	10	12	1	30
BMW Urban, 5k+	38	33	8	20	2	7
Other Urban, 5k+	37	38	10	13	2	18
Rural BMW, <5k	59	31	5	3	2	20
Other Rural, <5k	57	33	5	4	2	26
Household income (Equiv.)						
Under €171 per week	62	10	19	7	3	20
€171- €266 per week	51	32	10	5	1	20
€267- €355 per week	45	42	6	6	2	20
€356 - €476 per week	39	49	2	9	1	20
Over €476 per week	30	50	1	18	1	20
Total 2001/2002	45	37	8	9	2	100
Number households (000s)	591.1	478.6	99.1	115.9	21.9	1306.6
Per cent in 1991*	38	42	10	8	2	100

* From the Census 91, Volume 10, Housing, Table 11C.

The association between household income and tenure is not as strong as we might expect. This reflects a number of characteristics of the Irish housing market. The first is the historical dominance of home ownership and the associated scarcity of rental accommodation. The second is the very large impact that the Local Authority tenant purchase schemes have had in enabling lower income households to purchase their homes. Fahey and Watson (1995) estimate that of the 300,000 dwellings built by the local authorities between the foundation of the State and the early 1990s, over 200,000 of these have been sold to tenants.

As a result, owning outright is more prevalent among low-income households than purchasing on a mortgage, while the reverse is true of higher-income households. Of course, the combination of mortgage interest tax relief and low real interest rates has historically provided an incentive for higher-income households to remain in the mortgage-purchasing group, even when it might be possible for them to purchase outright. The rapid increase in house prices in recent years has also provided an incentive for households to “trade up” in the hope of building up valuable equity.

The association between the two main rental tenures and household income is clearer, with renting from the Local Authority more common among lower-income households and renting in the private sector more common among higher-income households. Almost one fifth of those in the bottom income quintile rent from the Local Authority, and one tenth of those in the second lowest quintile do so. At the other end of the income distribution, households in the top income quintile are more than twice as likely as those in the bottom income groups to rent in the private sector.

Dwelling Type

Table 2.2 examines dwelling type: detached, semi-detached, terraced, purpose-built apartment or converted apartment. The figures in the final rows show that the Irish housing stock is dominated by detached houses (46 per cent), with semi-detached houses accounting for 27 per cent of the stock and terraced houses accounting for 20 per cent. Apartments make up only 6 per cent of dwellings. Among apartments, those in purpose-built blocks are far more common than those in converted houses.

Compared to *Survey of the Housing Stock in Ireland, 1990* (Department of the Environment, 1992), there has been a drop in the proportion of detached dwellings (from 54 to 46 per cent), an increase in semi-detached dwellings (from 19 to 27 per cent) and a drop (from 23 to 20 per cent) in terraced houses. There has been a slight fall in the number of temporary dwellings (from 1 per cent to 0.4 per cent), and an increase in the number of apartments (from 3 to 6 per cent).

Table 2.2: Dwelling type by tenure, household type, location and income category

	Dwelling type (row percentages)						Total %
	Detached	Semi-detached	Terraced	Purpose built apt	Converted apt	Other	
Tenure							
Own outright	59	21	18	1	0	1	45.2
Purchasing	45	36	17	2	0	0	36.6
Local Authority renter	12	22	45	19	1	1	7.6
Private renter	15	28	22	19	15	0	8.9
Other tenures	39	16	16	21	7	1	1.7
Household type							
One person under 65	33	26	21	12	8	1	11.9
One person 65 or over	44	20	26	7	2	1	9.9
Couple, dep. child(ren)	54	29	15	1	0	0	32.8
Others with children	24	34	32	8	2	1	7.0
Parent(s), grown child(ren)	51	26	21	2	0	0	14.1
Other all-adult, under 65	41	31	17	8	3	0	15.2
Other all-adult, 65+	56	21	20	2	0	0	9.0
Location							
Dublin City and County	12	41	32	11	3	0	29.5
BMW Urban, 5k+	29	38	26	5	2	0	6.7
Other Urban, 5k+	26	39	30	3	2	0	18.4
Rural BMW, <5k	83	10	6	1	1	1	19.5
Other Rural, <5k	76	13	8	1	1	1	25.8
Household income (Equiv.)							
Under €171 per week	43	18	29	6	2	1	19.7
€171- €266 per week	50	25	21	3	1	0	20.3
€267- €355 per week	51	26	17	4	1	0	19.8
€356- €476 per week	48	31	17	3	2	0	20.0
Over €476 per week	38	36	15	8	3	0	20.2
Total (per cent)	46.1	27.2	19.8	4.6	1.8	0.4	100
Total (N households, 000s)	603.0	355.9	259.3	59.8	23.6	5.0	1,306.6
Per cent in 1990*	54.2	18.7	23.3	2.8	1.0	100	

* From Department of the Environment, 1992, Table 1. Figure for apartments in both surveys include living "over shop".

There is a strong association between tenure and dwelling type, with a clear dominance of detached houses among those who own their homes outright (59 per cent) and, to a lesser extent (45 per cent), among those purchasing their home. Local Authority renters, on the other hand, are more likely to live in the higher-density terraced houses (45 per cent), while one in five lives in an apartment. The dwelling type in the private rental sector is quite diverse, but has more apartments (34 per cent) than the other tenures. In this sector 28 per cent of dwellings are semi-detached houses, nearly one-quarter are terraced houses, and 15 per cent are detached houses. About one in seven privately rented dwellings is an apartment in a converted house, a much greater proportion than for any other tenure group.

A clear association appears to pertain between household type and dwelling type. Couples with children (whether grown-up or dependent) and older all-adult households are more likely than average to live in detached houses. Non-elderly adults living alone, in contrast, are more likely than other groups to live in apartments (20 per cent)

As we might expect, detached housing is much more common in rural areas, accounting for over four-fifths of the stock in rural areas in the BMW regions, and three-quarters of rural housing elsewhere in Ireland. Nonetheless, more than a quarter of urban dwellings outside of Dublin are detached, and a further 38-39 per cent are semi-detached. Even in Dublin City and County, more than half of the dwellings are semi-detached or detached. Apartments account for a minority of dwellings in all areas, with the highest figure recorded in Dublin City and County at 14 per cent.

Because of the dominance of urban-rural location in influencing the distribution of dwellings by type, the association between income and dwelling type is less strong. However, in contrast to terraced housing, detached and semi-detached housing combined are more prevalent among higher income households. The link between apartment living and income is not a linear one, because of the different patterns pertaining in the Local Authority and private rental sectors. Eight per cent of those in the lowest-income households live in apartments, while 11 per cent of those in the highest-income households do so, but the figure is 4-5 per cent for the three middle income groups.

Duration of Tenure

A striking feature of Table 2.3 is the proportion of households who have been at the current address for 20 years or longer. The figure is 39 per cent overall, rising to 67 per cent of those who own their home outright and 72-75 per cent of those where the householder is aged 65 or over. Nearly one fifth of households has been at the present address for 10 to 19 years; one in eight has been at the same address for 5 to 9 years; about one in six for 2 to 4 years and only about one household in eight has been at the present address for less than two years.

These figures indicate considerably less residential mobility in Ireland than in England. The 2000 survey of housing in England (DTLR, 2001) indicated that in that country 24 per cent of householders had been at their present address for 20 years or more, and 38 per cent had been at the address for less than five years (DTLR, 2001, Table A2.1).

The contrast in residential mobility by tenure is also very striking: over one-half of private sector renters have been at the address for less than two years, and fewer than one in ten has been at the address for ten years or more. The pattern for Local Authority renters and private sector purchasers is somewhere in between, but with only 11-12 per cent at the present address less than two years. Purchasers eventually become owners and, as noted above, many Local Authority renters have the opportunity to purchase their dwelling if their circumstances improve, so that they too become owners.

Table 2.3: Length of time at address by tenure, household type, location and income category

	Years at address					Average Years
	< 2 yrs	2-4 yrs	5-9 yrs	10-19 yrs	20+ yrs	
	Row Percentages					
Tenure						
Own outright	3	7	7	16	67	29
Purchasing	11	25	21	26	17	11
Local Authority renter	12	26	17	24	20	12
Private renter	57	28	8	3	3	3
Other tenures	22	28	15	14	21	12
Household type						
One person under 65	21	20	15	15	29	15
One person 65 or over	2	8	7	10	72	35
Couple, dep. child(ren)	9	22	19	28	20	12
Others with children	17	22	19	25	18	11
Parent(s), grown child(ren)	2	6	6	19	67	26
Other all-adult, under 65	27	25	9	11	27	12
Other all-adult, 65+	2	6	7	10	75	35
Location						
Dublin City and County	13	17	15	20	35	16
BMW Urban, 5k+	21	18	14	16	31	15
Other Urban, 5k+	15	22	14	19	30	15
Rural BMW, <5k	7	15	11	19	48	23
Other Rural, <5k	9	16	12	19	45	21
Household income (Equiv.)						
Under €171 per week	8	12	9	14	56	27
€171- €266 per week	8	13	13	22	44	21
€267- €355 per week	8	16	15	24	37	18
€356 - €476 per week	13	20	14	19	34	16
Over €476 per week	21	25	14	16	23	12
Total	12	17	13	19	39	19

The pattern by age group and household type is as we would expect, with younger households and households with young children tending to have been at their present address for a shorter time. There is also an association between region and length of tenure, partly reflecting differences in the age profile of the regions and partly reflecting the different tenure patterns by location, as described in Table 2.1.

The final panel of Table 2.3 suggests that higher-income households may be more residentially mobile, although further analyses would be needed to see whether this is a function of location, tenure or age group: those in the highest income category are likely to be younger, purchasing their accommodation, and are over-represented in Dublin City and County. One-fifth of those in the highest income group have been at their present address for less than two years, and only 23 per cent have been there for over twenty years.

Age of Dwelling

Table 2.4 shows the year in which the accommodation was built. About one dwelling in ten was built before 1900, 8-11 per cent built from 1900 to 1940, between 1941 and 1960 and between 1961 and 1970. Seventeen per cent of the stock dates to the 1970s, and 16 per cent to the 1980s. The high rate of building from the late 1990s until 2001/2002 can be seen in that 17 per cent of the stock was built in that period.

Overall, there has been a moderate increase in the proportion of total housing stock accounted for by newer dwellings since 1990. The proportion of the stock that was over 30 years old has dropped from 48 to 40 per cent and the proportion that is ten years old or less has increased from 18 to 27 per cent (Census 91, Volume 10-Housing, Table 10). The 1990 survey of housing stock suggested that 38.5 per cent of the stock was 20 years old or less, compared to a figure of about 43 per cent in 2001/2002. The large proportion of the stock that was built in the 1970s (17 per cent of the 2001/2002 total) was less than 20 years old in 1990 but more than 20 years old in 2001/2002. This was compensated for by the high rate of building since the late 1990s, however. In addition, pre-1900 dwellings have declined from 17 to 10 per cent of the stock.

Compared to other European countries, the Irish housing stock tends to be newer. Forty three per cent was built since 1980, compared to 13 per cent in the UK, 21 per cent in France, 29 per cent in the Netherlands, 12 per cent in Sweden and 11 per cent in Germany (Housing Statistics in the European Union, 2002).

In general, the association between tenure, age and the year the dwelling was built is as we would expect: older dwellings are more common among those who own outright and among older residents. The impact over time of the sale of Local Authority dwellings to tenants can be seen in that very few of the Local Authority rented dwellings were built before 1940. Privately rented housing tends to be either very old or very new: 27 per cent of the stock was built before 1940, but just over 55 per cent was built since 1980.

Differences by location are slight. Dublin is broadly similar to the country as a whole in terms of the distribution of the housing stock by age, but with a smaller proportion built since 1996. Outside of Dublin, rural housing tends to be older, on average, than urban housing.

There is a tendency for higher-income households to occupy newer dwellings, with 55 per cent of those in the top income quintile in housing built since 1980 compared to 27 per cent of those in the lowest income group.

Table 2.4: Dwelling age by tenure, household type, location and equivalised income

	Year dwelling built (row percentages)							
	Pre 1900	1900-1940	1941-1960	1961-1970	1971-1980	1981-1990	1991-1996	After 1996
Tenure								
Own outright	15	17	15	11	19	12	4	6
Purchasing	4	4	6	6	17	20	15	27
Local Authority renter	1	5	11	8	21	20	10	24
Private renter	17	10	4	4	9	16	13	26
Other tenures	18	12	6	5	11	12	16	20
Household type								
One person under 65	15	13	10	6	10	15	11	18
One person 65 or over	21	20	22	9	9	10	5	5
Couple, dep. child(ren)	5	6	7	5	19	22	14	24
Others with children	4	7	9	9	20	22	12	17
Parent(s), grown child(ren)	11	12	12	14	28	13	4	6
Other all-adult, under 65	8	8	7	8	15	14	12	27
Other all-adult, 65+	18	19	18	15	13	8	3	5
Location								
Dublin City and County	8	10	15	12	18	15	11	12
BMW Urban, 5k+	5	7	11	9	16	17	12	22
Other Urban, 5k+	7	9	9	9	17	17	11	21
Rural BMW, <5k	12	14	9	6	15	17	8	19
Other Rural, <5k	15	12	8	6	17	16	8	18
Household income (Equiv.)								
Under €171 per week	16	17	16	9	14	11	6	10
€171- €266 per week	9	12	12	9	17	19	8	14
€267- €355 per week	9	9	9	9	20	18	10	16
€356- €476 per week	8	9	9	8	19	17	10	20
Over €476 per week	8	7	7	7	16	16	14	25
Total	10	11	11	8	17	16	10	17

Type of Dwelling by Year Built and Urban-Rural Location

Table 2.5 shows the relationship between type of dwelling and dwelling age by urban/rural location. The importance of detached one-off dwellings in open countryside is very clear in this table. This dwelling type accounts for 96 per cent of the stock in open country areas, with little variation based on the age of the dwelling. It is too early at this stage to assess whether the *Residential Density Guidelines* (Department of the Environment and Local Government, 1999), promoting higher density building in appropriate settings, will have an impact on this pattern. The final column of the table shows that one-third of the housing stock is made up of dwellings in open country. The proportion is slightly lower for newer dwellings.

In the period from 1941 to 1980, nearly twice as many dwellings were built in larger towns and cities as in rural areas. After 1980, the gap between the number of buildings in rural areas and in large towns narrowed, but the numbers built remained higher in the larger towns. After 1996, 28 per cent of all dwellings were built in open country.

Dwellings in smaller towns and villages account for about one-fifth of the stock. The number of terraced dwellings built in these towns has declined over time, while the number of detached and semi-detached dwellings has increased. Among dwellings built since 1996, detached houses are the most common (43 per cent), closely followed by semi-detached dwellings (38 per cent). Apartment building has become more common in smaller towns since 1990. Apartments account for only 3 per cent of dwellings in smaller towns, but make up 6 per cent of those built since 1996. The final two columns of the table indicate that since 1980 the gap between the number of dwellings built in small towns and open country has narrowed.

Dwellings in larger towns and cities (population over 10,000) account for 46 per cent of all dwellings. Detached houses are much rarer in these towns (17 per cent) than in smaller towns and rural areas, but the proportion of detached houses has tended to increase over time. Semi-detached houses are the dominant dwelling type (43 per cent), accounting for nearly half of the dwellings built since 1996. Terraced houses make up nearly one-third of the stock, but the proportion has declined sharply over time, from 62 per cent of dwellings built before 1940 to only 15 per cent of those built since 1996. The proportion of apartments, on the other hand, has been increasing steadily from about one dwelling in twenty prior to 1980 to about one in seven after 1996.

Age and Economic Status of Householder

Tables 2.6 and 2.7 show the relationship between tenure and the age group and economic status (self defined) of the householder¹. The final column of Table 2.6 shows the distribution of each tenure across the broad age groups. It is clear that private renters are concentrated in the under 40 age group (72 per cent); those who own outright have the highest representation among householders aged 40-64 years (50 per cent); householders purchasing the dwelling are unlikely to be over 65 (only 4 per cent) and both Local Authority renters and the "other tenures" (rent free and voluntary or co-operative housing) tend to be more evenly distributed across the age groups.

¹ The householder is the person responsible for the accommodation or the older of several persons who are equally responsible.

Table 2.5: Dwelling type by urban-rural location and dwelling age

	Dwelling type (row percentages)				Total	
	Detached	Semi-Detached	Terraced	Purpose built Apt.	Number	Column Per cent
Open country						
Before 1941	95	4	0	0	113,148	9
1941-1980	95	3	1	0	121,782	10
1981-1990	98	1	0	0	68,799	6
1991-1996	96	3	0	0	30,410	2
After 1996	96	2	0	1	64,878	5
Total Open Country	96	3	1	0	403,325	33
Town or village, < 10,000						
Before 1941	36	20	43	1	47,207	4
1941-1980	35	34	29	1	88,409	7
1981-1990	42	37	20	1	38,694	3
1991-1996	44	41	10	5	26,591	2
After 1996	43	38	13	6	56,707	5
Total Town/Village <10,000	39	33	25	3	261,772	21
Town/city over 10,000						
Before 1941	12	21	62	5	79,513	6
1941-1980	14	46	35	5	233,721	19
1981-1990	18	47	25	10	91,446	7
1991-1996	21	48	14	16	61,443	5
After 1996	22	49	15	14	82,563	7
Total town/city over 10,000	17	43	32	9	563,339	46

Table does not include converted apartments, mobile homes, caravans.

Table 2.6: Age of householder by economic status and by tenure

		Percentage of householders in each economic status						Age group
		At work	Un-employed	Retired	Home duties	Student	Other	Column per cent
Tenure	Age Group							
Own outright	Under 40	91	3	1	3	2	1	8
	40-64	83	3	8	5	0	1	50
	65 and over	13	1	60	26	0	1	42
	All Ages	54	2	29	14	0	1	100
Purchasing	Under 40	98	1	0	1	0	0	42
	40-64	95	1	2	2	0	0	54
	65 and over	19	4	59	18	0	0	4
	All Ages	93	1	3	2	0	0	100
Local Authority renter	Under 40	64	9	0	23	1	2	35
	40-64	63	15	5	13	0	4	45
	65 and over	5	4	57	33	0	0	20
	All Ages	52	11	14	21	0	3	100
Private renter	Under 40	83	5	0	3	8	0	72
	40-64	80	6	3	4	1	6	23
	65 and over	3	4	59	34	0	0	5
	All Ages	79	5	4	5	6	2	100
Other tenures	Under 40	83	8	0	4	0	5	37
	40-64	82	12	2	4	0	1	29
	65 and over	18	1	56	24	0	1	33
	All Ages	61	7	19	11	0	2	100

The age profile of the different tenures will have an impact on the economic status of the householders. About half of those who own outright and Local Authority renters are at work, compared to over nine out of ten purchasers, almost eight out of ten private renters and 61 per cent of those in the other tenure group.

The detailed breakdown in Table 2.6 highlights the difference between the two homeowner tenures (owns outright and purchasing) and the other tenure groups in terms of the likelihood that the householder will be at work, controlling for age. Homeowners under age 40 are much more likely (over 90 per cent) than other tenures to be at work. The corresponding figure for Local Authority renters is 64 per cent. Nine per cent of Local Authority renters under age 40 are unemployed and 23 per cent are engaged in home duties. Among private renters under age 40, 5 per cent are unemployed and 8 per cent are students.

For the 40 to 64 age group, the proportions at work decline for all tenures, while the proportions unemployed or engaged in home duties, apart from Local Authority renters, tend to increase. Among those householders aged 65 and over, most are retired. For the small group of householders in this age group who are purchasing their accommodation, about one-fifth are still at work.

Table 2.7: Profile of households by tenure: Percentage of householders of a given age and household type within each tenure

Tenure	Household Type	Age of householder		
		Under 40	40-64	65 and over
Own outright	One person	2	9	18
	Couple, dep. child(ren)	3	16	1
	Others with children	1	2	0
	Parent(s), grown child(ren)	1	13	6
	Other all-adult households	0	0	17
	Other all-adult, under 65 years	2	10	0
Purchasing	One person	6	5	1
	Couple, dep. child(ren)	24	31	0
	Others with children	3	3	0
	Parent(s), grown child(ren)	1	9	1
	Other all-adult households	0	0	2
	Other all-adult, under 65 years	9	5	0
Local Authority renter	One person	2	8	11
	Couple, dep. child(ren)	12	15	1
	Others with children	18	10	1
	Parent(s), grown child(ren)	1	6	2
	Other all-adult households	0	0	4
	Other all-adult, under 65 years	1	5	0
Private renter	One person	17	8	3
	Couple, dep. child(ren)	8	4	0
	Others with children	8	3	0
	Parent(s), grown child(ren)	1	2	0
	Other all-adult households	0	0	1
	Other all-adult, under 65 years	39	6	0
Other tenures	One person	17	12	24
	Couple, dep. child(ren)	9	6	0
	Others with children	4	1	0
	Parent(s), grown child(ren)	2	3	1
	Other all-adult households	0	0	9
	Other all-adult, under 65 years	6	7	0
All tenures	One person	5	7	10
	Couple, dep. child(ren)	12	20	1
	Others with children	3	3	0
	Parent(s), grown child(ren)	1	10	3
	Other all-adult households	0	0	9
	Other all-adult, under 65 years	8	7	0

Table 2.7 shows the distribution of households within each tenure by age group and household type. We can see, for instance, that only 2 per cent of those who own outright are people living alone under age 40, but 18 per cent are people living alone over age 65. Other sizeable groups among those who own outright are couples aged 40-64 with dependent children (16 per cent) or with grown-up children (13 per cent).

The dominant household type and age grouping among those purchasing their accommodation is couples age 40-64 with dependent children (31 per cent), followed by couples under age 40 with dependent children (24 per cent).

Among Local Authority renters, households with dependent children account for the the largest proportion, but the largest group by a small margin is lone parent households (comprising the majority of the category "others with children") under age 40 (18 per cent). Taking all age groups into account, couples with dependent children account for 28 per cent of Local Authority renters, while lone parent households account for 29 per cent. Eleven per cent of Local Authority renters are people over 65 living alone.

Private renters are concentrated in the under 40 age group, with all-adult households under age 40 being the dominant group (39 per cent), followed by those under age 40 living alone (17 per cent). Those in the "other tenure" category, including people living in the accommodation rent-free and those in the voluntary and co-operative housing sector, tend to be people living alone. One-quarter of this group is made up of adults over age 65 living alone.

Summary

Despite the high rate of building of semi-detached housing in large urban areas in recent years, housing in Ireland continues to be dominated by detached housing and close to one-third of the stock is made up of one-off housing (detached housing in open countryside). The age-profile of the Irish housing stock is relatively favourable by international standards, with 27 per cent of the stock built since 1990. The continuing dominance of home ownership accounts for the high proportion of households who have been at their address for 20 years or more.

Housing Costs and Affordability

In this chapter we turn to the direct costs of the housing, that is, the rent or mortgage payments made by the households who are renting or purchasing on a mortgage, as well as other indicators of affordability. Other expenses, such as heating, electricity and other services and Local Authority charges could also be considered an element of a broader definition of housing costs but this information was not gathered in the survey because of difficulty in its collection and the heavy respondent burden involved.² The tables in this chapter dealing with direct housing costs, therefore, include only the rent or mortgage repayments, and include only those households who are renting or purchasing – 53 per cent of all households, or roughly 694,000 of the total estimated 1,307,000 households in the country. The tables dealing with other non-monetary indicators of affordability and financial strain refer to all households.

Mortgage Payments

We focus initially on the 37 per cent of all households who are purchasing their accommodation on a mortgage. Of these, about 16 per cent, or roughly 75,000 households in the State, are purchasing through the Local Authority, either with a Local Authority mortgage or through a Local Authority tenant purchase scheme. The remainder are purchasing with a private mortgage, such as through a bank or building society.

Local Authority mortgages and tenant purchasers

Local Authority tenant purchase schemes typically involve the sale of the dwelling at a discounted price. The discount granted is based on the length of time for which the household had been renting the dwelling, subject to a maximum of 30 per cent. As a result, the price at the point of sale can be well below the market price. The market price of Local Authority dwellings is typically lower than that of privately built dwellings in any case. Local Authority dwellings tend to be smaller in size; in urban areas they are likely to be terraced rather than semi-detached, and they are sometimes located in what are considered less desirable areas, since Local Authority estates would typically have a higher proportion of rented dwellings than private estates. Local Authority mortgages can be longer, on average, than the typical mortgage through a bank or building society. Up to 1987 such mortgages were for 30 years, but since then can range from 20 to 25 years. This means that the monthly repayments on a given loan will tend to be lower, but also that the stock of Local Authority mortgage holders will include a greater proportion of households with older, and lower, mortgage repayments.

Table 3.1 shows the monthly mortgage payments made by those purchasing their accommodation through a Local Authority mortgage or on a Local Authority tenant purchase scheme. The figure includes the mortgage itself and any other loans for repairs, renovations or extensions. Overall, the median monthly mortgage payment for this group is €140. One-fifth of Local Authority purchasers pay under €60 per month; while, at the other extreme, 10 per cent pay over €500 per month. The higher figure is likely to include households that have an additional shorter-term loan for repairs or upgrades.

² The Household Budget Survey is a useful source of data on these other dimensions of housing costs.

Table 3.1: Monthly Local Authority mortgage repayments by household type, location, dwelling age and equivalised income

	Monthly mortgage (row percentages)					Median (€)
	Under €60	€60-€99	€100-€199	€200-€499	€500 and over	
Household type						
One person under 65	---	---	---	---	---	---
One person 65 or over	---	---	---	---	---	---
Couple, dep child(ren)	11	10	35	32	12	178
Others with children	7	5	37	42	9	203
Parent(s), grown child(ren)	29	24	28	17	2	89
Other all-adult, under 65	26	9	26	25	15	145
Other all-adult, 65+	54	25	17	5	0	56
Location						
Dublin City and County	26	12	24	24	14	127
BMW Urban, 5k+	21	9	25	29	16	154
Other Urban, 5k+	14	14	29	34	9	178
Rural BMW, <5k	14	18	34	31	3	146
Other Rural, <5k	21	9	38	24	9	130
Year accommodation built						
Pre-1940	21	12	20	34	13	165
1941-1970	39	15	17	23	5	76
1971-1990	16	13	39	26	5	130
After 1990	2	2	18	38	40	381
Household income (Equiv.)						
Under €171 per week	28	24	36	11	1	91
€171- €266 per week	20	11	32	30	6	137
€267- €355 per week	15	10	32	31	12	178
€356 - €476 per week	19	13	24	32	12	165
Over €476 per week	25	7	21	23	24	163
Length of ownership						
Up to 5 years	1	0	18	36	44	430
6-10 years	5	17	26	44	7	203
11-20 years	7	13	48	31	1	152
Over 20 years	52	17	20	10	1	57
Total	20	12	30	27	10	140

Note: "---" indicates that there are too few cases in the sample to provide a reliable estimate.

There is also a clear association between the mortgage repayments and the age of the oldest person in the household, with lower repayments for older households. The association between repayments and household type is largely a function of the age of the mortgage, being substantially lower, for instance, for households consisting of parents with grown children.

Local Authority mortgages in Dublin City and County tend to be lower with a median of €127 per month. This may reflect the fact that Dublin Local Authority mortgages are older and tend to be on terraced rather than detached or semi-detached dwellings.

Outside of Dublin, rural Local Authority mortgage repayments tend to be lower than their urban counterparts. The association between Local Authority mortgage repayments and household income is rather weak. The association is most evident for higher mortgage repayments: one quarter of Local Authority mortgage holders in the highest income group pay over €500 per month, compared to fewer than one in ten of those in the bottom two income groups. Differences in the mortgage amount paid can reflect differences in the purchase price, differences in the length of the repayment period, or the presence of an additional housing-related loan for upgrades.

The final panel of Table 3.1 shows a clear relationship between the duration of ownership and the amount of mortgage repayments, with the median ranging from €57 per month for householders who purchased over 20 years ago to €430 for those purchasing within the last five years.

Mortgages with a lending institution

Table 3.2 shows details of mortgage repayments for those purchasing with a loan from a private sector lending institution such as a bank or building society. The median mortgage repayment is considerably higher than for Local Authority purchasers, at €457 per month. Variations in mortgage repayments largely reflect differences in the price of dwellings (being highest in the Dublin region), and the age of the mortgage.

The median repayment for those who purchased in the last five years is €611 per month, compared to €254 for those who purchased over 20 years ago.³ Note that this group does not consist only of first-time buyers since it would also include people who have sold one mortgaged house and bought another. We would expect the latter to be in a generally more favourable position since they would be transferring some equity from their previous dwelling to the new one, so that the size of the mortgage relative to the cost of the dwelling would be lower.

³ Duration of ownership is not exactly the same as the age of the mortgage, since some households may have re-mortgaged the dwelling at some time since the original purchase date. The two are, however, likely to be strongly correlated.

Table 3.2 : Monthly other (non-Local Authority) mortgage repayments by household type, location, dwelling age and equivalised income

	Mortgage per month (row percentages)					Median (€)
	Under €250	€250- €499	€500- €749	€750- €999	€1000 and over	
Household type						
One person under 65	11	40	22	18	9	457
One person 65 or over	---	---	---	---	---	---
Couple, dep child(ren)	13	41	29	10	6	455
Others with children	17	46	28	6	3	444
Parent(s), grown child(ren)	32	41	19	5	4	343
Other all-adult, Under 65	8	28	35	19	11	584
Other all-adult, 65+	39	45	10	5	0	254
Location						
Dublin City and County	10	33	30	16	10	508
BMW Urban, 5k+	11	47	28	11	4	444
Other Urban, 5k+	12	38	32	11	7	499
Rural BMW, <5k	20	48	24	5	2	381
Other Rural, <5k	19	42	25	9	5	413
Year accommodation built						
Pre-1940	20	36	26	8	9	444
1941-1970	22	43	19	9	7	381
1971-1990	23	45	21	7	4	375
After 1990	5	35	36	16	8	508
Household income (Equiv.)						
Under €171 per week	37	43	17	3	0	279
€171- €266 per week	19	49	23	5	4	381
€267- €355 per week	19	44	25	8	3	406
€356 - €476 per week	12	41	30	11	6	457
Over €476 per week	8	29	32	18	12	571
Length of ownership						
Up to 5 years	4	28	37	20	12	611
6-10 years	11	52	28	7	3	419
11-20 years	25	53	17	4	2	324
Over 20 years	45	35	13	3	3	254
Total	14	39	28	12	7	457

Note: "---" indicates that there are too few cases in the sample to provide a reliable estimate.

The association between repayment amount and length of ownership means that repayments tend to be higher for younger householders, such as many households with dependent children.

The link between mortgage repayments and the age of the dwelling shows that the highest mortgages are found for the oldest and newest dwellings. This largely reflects the age of the mortgage. The original residents of dwellings built before 1941 are likely to have sold them on in recent years, so that those being purchased on a mortgage now are likely to involve relatively new mortgages. This will also be true of a certain proportion of those dwellings built more recently.

There is a strong association between household income and the mortgage repayments, with a median of €279 per month for the bottom income quintile and of €571 per month for the top income fifth. Twelve per cent of those in the top income category pay more than €1,000 per month.

Rent Payments

Tables 3.3 and 3.4 shows the monthly rent payments made by the minority of households who rent their accommodation. From Table 2.1 we saw that 8 per cent of households rent their accommodation from the Local Authority (about 99,000 households in the State) and 9 per cent rent privately (about 116,000 households). In these tables, private renters and the small proportion of households (less than half a per cent of the total) who rent in the voluntary and co-operative sector are included with "Non-Local Authority renters".

The difference in monthly rent between Local Authority renters and private sector renters is dramatic, with a median of €107 per month for the former and €609 per month for the latter.⁴ Local Authorities operate a "Differential Rents" scheme, whereby the rent payable is based on the income circumstances of the household. Traditionally, as the income of a household renting from the Local Authority increased, with a consequent rent increase, the household would opt to purchase the accommodation. This means that those renting from the Local Authority tend to be a select group of low-income households.⁵

⁴ Incidentally, the figure for rent is the total rent payable in the case of households who receive rent supplement. The amount of rent supplement received is not subtracted.

⁵ Those renting apartments, rather than houses, would be an exception to this pattern. Apartments have not been sold onto tenants, due to the level of service charge that would be required, the cost of public liability insurance and the future saleability of purchased flats (Department of the Environment and Local Government, May 1995). The bulk of Local Authority apartments are located in Dublin and Cork cities.

Table 3.3: Monthly Local Authority rent by household type, location, dwelling age and equivalised income

	Monthly rent (row percentages)				Median (€)
	Under €60	€60-€99	€100-€199	€200 and over	
Household type					
One person under 65	48	15	25	12	61
One person 65 or over	52	29	15	4	57
Couple, dep child(ren)	11	9	41	39	160
Others with children	20	32	31	17	95
Parent(s), grown child(ren)	14	12	37	37	152
Other all-adult, under 65	19	17	26	38	127
Other all-adult, 65+	18	35	38	9	89
Location					
Dublin City and County	19	17	30	34	130
BMW Urban, 5k+	27	22	33	18	102
Other Urban, 5k+	26	26	30	18	91
Rural BMW, <5k	19	19	44	17	112
Other Rural, <5k	30	19	32	19	102
Year accommodation built					
Pre-1940	23	17	29	31	123
1941-1970	20	25	35	20	102
1971-1990	24	20	31	25	108
After 1990	23	18	33	25	112
Household income (Equiv.)					
Under €171 per week	32	29	30	8	79
€171- €266 per week	16	15	38	31	140
€267- €355 per week	13	9	31	47	191
€356 - €476 per week	14	8	24	55	203
Over €476 per week	---	---	---	---	---
Total	23	20	32	24	107

Note: "---" indicates that there are too few cases in the sample to provide a reliable estimate.

Among Local Authority renters, just under one-quarter pay less than €60 per month and the same proportion pay €200 or more. Local Authority rents tend to be higher in Dublin, where the median is €130 per month. A strong relationship between rent levels and household income is evident in Table 3.3, with the median Local Authority rent ranging from €79 per month for those in the lowest income group to €203 per month for the second-highest income group.⁶

⁶ There were too few cases in the highest income category to provide reliable estimates.

Table 3.4: Monthly other (non-Local Authority) rent by household type, location, dwelling age and equivalised income

	Monthly rent (row percentages)				Median (€)
	Under €200	€200-€499	€500-€999	€1,000 and over	
Household type					
One person under 65	15	38	39	8	457
One person 65 or over	79	8	10	3	103
Couple, dep. child(ren)	12	16	48	23	667
Others with children	21	19	51	8	571
Parent(s), grown child(ren)	12	18	58	12	635
Other all-adult, under 65	7	18	42	34	825
Other all-adult, 65+	---	---	---	---	---
Location					
Dublin City and County	8	13	36	43	889
BMW Urban, 5k+	19	25	51	5	559
Other Urban, 5k+	16	24	52	8	601
Rural BMW, <5k	27	44	29	0	305
Other Rural, <5k	25	33	33	9	381
Year accommodation built					
Pre-1940	24	39	28	8	381
1941-1970	20	27	31	21	508
1971-1990	9	19	43	30	762
After 1990	13	11	53	23	698
Household income (Equiv.)					
Under €171 per week	36	22	34	8	356
€171- €266 per week	22	24	48	6	508
€267- €355 per week	17	29	39	15	508
€356- €476 per week	11	28	41	20	571
Over €476 per week	5	17	45	34	889
Total	15	22	42	21	609

Note: "—" indicates that there are too few cases in the sample to provide a reliable estimate.

Rents are considerably higher outside the Local Authority sector (Table 3.4). Only 15 per cent of non-Local Authority renters pay less than €200 per month, while one-fifth pay €1,000 or more. Some of the variation in rents seen in Table 3.4 is due to the fact that the figures include housing provided by the voluntary and co-operative sector. While this sector accounts for only a small proportion of all dwellings (less than 2 per cent), it makes up the majority of non-Local Authority rented accommodation occupied by elderly householders. As a result, the median monthly rent for older people living alone (€103) is well below the overall median rent in the private sector.

However, there are also very large variations in rents in the private sector by region and household income. The median rent in Dublin is €889 with a similar figure for the highest income group. Rents in the rural BMW region are much lower, with a median of €305. Those in the lowest income group also pay lower rents, with a median of €351 per month in households with an equivalised weekly income under €171.⁷

Rents are also higher for newer dwellings: the median is €698 for those built after 1990, compared to €381 per month for those built before 1940.

Other Charges Paid by Renters

Table 3.5 shows the percentage of renters who make additional payments for repairs, heating and so on, by type of renting and location. In general, Local Authority renters are more likely than other renters to pay these additional costs.

Table 3.5: Per cent of renters making additional payments by type of rental and location

	Repairs	Heating	ESB/ Gas	Water	Sewage	Rubbish	Other charges
Household type							
Local Authority Renters in...							
Dublin City and County	26	90	92	8	2	20	2
BMW Urban, 5k+	40	94	93	38	10	82	5
Other Urban, 5k+	31	91	91	30	9	70	5
Rural BMW, <5k	30	93	87	32	13	84	9
Other Rural, <5k	32	92	90	27	12	66	3
All Local Authority Renters	30	91	91	22	8	53	4
Non-Local Authority Renters in...							
Dublin City and County	12	84	88	10	5	20	6
BMW Urban, 5k+	10	87	85	10	4	41	7
Other Urban, 5k+	15	90	89	19	7	56	8
Rural BMW, <5k	16	89	91	27	10	76	5
Other Rural, <5k	15	87	82	24	9	54	8
All Non-Local Authority Renters	13	87	87	15	6	41	7

The gap is most noticeable for repairs and maintenance with 30 per cent of Local Authority renters paying for this, compared to 13 per cent of other renters. It is likely that many of the repairs paid for by the tenants themselves are of a minor nature. Chapter 8 examines the situation with regard to major repairs.

Rural renters in the private sector are somewhat more likely to pay additional charges than those in urban areas. At the time of the survey (2001 to early 2002), only a fifth of Dublin renters paid charges for rubbish removal, compared to considerably higher figures in other regions.

Type of lease

Table 3.6 shows the percentage of private sector renters who report having a formal lease and the length of the lease. Overall 61 per cent of renters have a lease. The association between having a formal lease and other characteristics of the household is generally weak, but a lease is slightly more common among younger households, Dublin households and those in rural areas outside the BMW region.

⁷ Note that the figure refers to the rent payable on the dwelling, before subtracting any rent supplement that the household may receive.

Table 3.6: Type of lease for non-Local Authority renters by household type, location, dwelling age and equivalised income (row percentages)

	Do you have a formal lease/rent book			Length of lease, where applicable		
	Yes	No	Don't know	Annual	Other term	DK
Household type						
One person under 65	60	38	2	39	60	1
One person 65 or over	---	---	---	---	---	---
Couple, dep child(ren)	64	33	3	46	47	6
Others with children	65	33	2	33	67	0
Parent(s), grown child(ren)	50	42	7	40	55	4
Other all-adult, under 65	62	37	1	52	47	1
Other all-adult, 65+	---	---	---	---	---	---
Location						
Dublin City and County	66	31	2	51	48	1
BMW Urban, 5k+	57	43	0	26	69	5
Other Urban, 5k+	55	42	4	43	57	0
Rural BMW, <5k	51	47	2	42	53	5
Other Rural, <5k	66	33	1	39	60	1
Year accommodation built						
Pre-1940	60	38	3	32	66	2
1941-1970	57	39	4	40	56	4
1971-1990	65	34	1	52	46	2
After 1990	61	37	2	46	53	1
Household income (Equiv.)						
Under €171 per week	56	38	5	21	75	4
€171- €266 per week	63	35	2	33	63	4
€267- €355 per week	60	36	4	36	62	2
€356 - €476 per week	59	40	1	48	52	0
Over €476 per week	63	36	1	56	44	0
Total	61	37	2	43	55	2

Note: "----" indicates that there are too few cases in the sample to provide a reliable estimate.

The figures on length of lease suggest that there may have been some confusion among respondents between the length of the lease term itself and the frequency with which rent is paid. While 43 per cent of those with a lease have an annual lease, the majority reported shorter lease terms such as one month or even one week.

It may seem surprising that over one-third of those in the highest income group do not have a formal lease. It may be that high-income households who rent their accommodation place a high premium on the flexibility associated with a short (or no) lease. For this group, the flexibility of renting could well provide a convenient form of transitional housing.

Rent Supplement and Mortgage Interest Supplement

The Rent Supplement and Mortgage Interest Supplement schemes are administered by the Health Boards through the Community Welfare Officers to provide support to private sector renters and mortgage holders who have difficulty in making their payments. Those dependent on social welfare income are eligible, and there are guidelines based on local rental rates and based on means to determine the amount payable. The rent supplement is only available to those renting in the private sector, since the rents of Local Authority tenants would normally be adjusted downwards should their income fall. Mortgage interest supplement is generally payable for a limited period to a household dependent on social welfare and covers the interest portion of mortgage repayments.

Table 3.7 suggests that 13 per cent of private sector renters, or about 15,300 households, receive a rent supplement and 1 per cent of purchasers, or about 5,000 households, receive a mortgage supplement. The figures for rent supplement are somewhat lower than we would expect from Department of Social, Community and Family Affairs figures on the number of recipients of this payment. The Department figures for 2001 indicate that 45,028 recipients received rent supplement at any time during the year (Department of Social, Community and Family Affairs, 2002, Tables H9 and H10). Some of the difference is due to the fact that many households receive the payment for a short period, so that the numbers in receipt at any given time – the figure that would be captured in the present survey – would be expected to be considerably lower. Nevertheless, the Department figures indicate that there were 24,110 recipients receiving the payment for one year or more, with a further 8,800 receiving the payment for between 6 months and a year.

A second reason for the difference is that the present sample is unlikely to include many recent arrivals in Ireland, since the sample is based upon addresses drawn from the electoral register. The Department figures include almost 5,000 asylum seekers.

A third possible reason is that the Department figures are based on individual recipients. It may be that there is more than one recipient in households comprising unrelated adults. These households form 30 per cent of those renting in the private sector.

Finally, the receipt of rent supplement may be understated in the present survey. This is a definite possibility where there are several unrelated adults sharing the accommodation or in cases where the supplement is paid directly to the landlord or property owner.

Table 3.7: Whether renters are receiving a rent supplement and whether purchasers are receiving mortgage supplement by household type, location and equivalised income (row percentages)

	Receiving rent supplement?		Receiving mortgage supplement?	
	No	Yes	No	Yes
Household type				
One person under 65	90	10	100	0
One person 65 or over	---	---	100	0
Couple, dep child(ren)	83	17	99	1
Others with children	57	43	95	5
Parent(s), grown child(ren)	88	12	98	2
Other all-adult, Under 65	94	6	99	1
Other all-adult, 65+	---	---	100	0
Location				
Dublin City and County	87	13	99	1
BMW Urban, 5k+	86	14	98	2
Other Urban, 5k+	86	14	99	1
Rural BMW, <5k	88	12	99	1
Other Rural, <5k	87	13	99	1
Household income (Equiv.)				
Under €171 per week	51	49	94	6
€171- €266 per week	76	24	99	1
€267- €355 per week	94	6	99	1
€356- €476 per week	96	4	99	0
Over €476 per week	96	4	99	0
Total	87	13	99	1

Note: Table includes private sector renters (for rent supplement) and house purchasers (for mortgage supplement) only.

Table 3.7 suggests that the households most likely to be receiving rent supplement are lone parents with dependent children (who make up the bulk of the “other households with children” category), and those in the lowest household income category, with figures of 43 per cent and 49 per cent, respectively. The tiny proportion of higher-income households receiving rent supplement are likely to consist of unrelated adults where one person, who may be unemployed, for instance, receives the payment.

Among households who are purchasing the dwelling, lone parent households (5 per cent) and households in the lowest income category (6 per cent) are most likely to be receiving a mortgage interest supplement. Even for these groups, however, receipt of mortgage supplements is very rare.

Affordability: Housing Costs Relative to Income

In this section we turn to a key indicator of the affordability of housing: whether the household spends more than one-third of its total net income on rent or mortgage payments. This is an approximate, but widely used, indicator of housing affordability. Lending institutions, for instance, often check whether mortgage repayments would exceed roughly one-third of net household income.

The focus in the following tables is on those who are paying rent or mortgage, so households who own the dwelling outright or live in it rent-free are not included.

The income variable, as noted in Chapter 1, was collected as a category variable (with 16 categories), and using a single item. As described in Chapter 1, a “correction factor” was applied to this income category to compensate for the tendency of the single-item measure to understate income.

Table 3.8 indicates whether the total rent or mortgage payable is in excess of one-third of the household’s total net income, for those households paying rent or mortgage.⁸ Over 90 per cent of households who are purchasing or renting spend less than one-third of their household income on rent or mortgage, with only 9 per cent spending more than one-third of their income on these payments.

As we might expect, given the levels of rent and mortgage payments examined earlier in this chapter, households renting privately are most at risk of high housing costs, with 28 per cent of them spending more than one-third of their net household income on rent. Six per cent of mortgage purchasers spend over one-third of the total household income on mortgage repayments, while only 1 per cent of Local Authority renters do so. Given the Differential Rents System operated by Local Authorities, whereby rent levels take household income into account, this 1 per cent probably reflects transitional situations where income has fallen but the rent adjustment has not yet been made.

The risk of high housing costs is somewhat greater for non-elderly (25 per cent) and elderly (14 per cent) householders living alone, and lone parents with dependent children (17 per cent), than for other types of household. It is also higher in Dublin (12 per cent) and in BMW urban areas (14 per cent), and for households in the lowest income categories. One-fifth of households in the lowest income group pay more than one-third of their incomes for rent or mortgage. Among house purchasers, as shown in the final panel of the table, the risk is also considerably higher for those who purchased in the last five years (11 per cent) than for those who purchased earlier.

⁸ Rent and mortgage payments refer to the total amount payable: any rent or mortgage supplement received is not subtracted, but any such receipts would be included in total household income.

Table 3.8: Whether rent/mortgage accounts for more than one-third of net household income by tenure, household type, dwelling age, location and equivalised income

	Proportion of total net household income spent on rent/mortgage (row percentages)	
	Less than one-third	More than one-third
Tenure		
Purchasing	94	6
Local Authority renter	99	1
Other renting	72	28
Household type		
One person under 65	75	25
One person 65 or over	86	14
Couple, dep child(ren)	95	5
Others with children	83	17
Parent(s), grown child(ren)	98	2
Other all-adult, under 65	92	8
Other all-adult, 65+	96	4
Location		
Dublin City and County	88	12
BMW Urban, 5k+	86	14
Other Urban, 5k+	91	9
Rural BMW, <5k	96	4
Other Rural, <5k	93	7
Year accommodation built		
Pre-1940	85	15
1941-1970	95	5
1971-1990	94	6
After 1990	89	11
Household income (Equiv.)		
Under €171 per week	80	20
€171- €266 per week	89	11
€267- €355 per week	92	8
€356 - €476 per week	93	7
Over €476 per week	95	5
Length of Ownership (purchasers)		
Up to 5 years	89	11
6-10 years	97	3
11-20 years	99	1
Over 20 years	98	2
Total	91	9

Note: Excludes households who own the home outright or occupy it rent-free.

Table 3.9 shows that of those households spending more than one-third of their total household income on rent or mortgage, only 18 per cent receive rent or mortgage supplement. This undoubtedly reflects the eligibility criteria for these payments: full-time students and those at work are generally not eligible.

Table 3.9: Whether receiving rent/mortgage supplement by proportion of household income spent on rent/mortgage

	Receive rent/mortgage supplement? (row percentages)	
	No	Yes
Proportion of total HH income spent on rent/mortgage		
Less than one-third total HH income	98	2
More than one-third total HH income	82	18
Total	97	3

Note: Excludes households who own the home outright or occupy it rent-free.

Other Indicators of Affordability

In this section we turn to other non-monetary indicators of affordability. The indicators in Table 3.10 are based on possession of household appliances, while those in Table 3.11 are based mainly on items not related to housing. Nevertheless, they are relevant to the general issue of affordability since some households must devote so much of their income to meeting housing costs that their standard of living or lifestyle suffers in other ways. Table 3.12 examines a number of measures of financial strain.

Table 3.10 shows the percentage of households experiencing an “enforced lack” of certain household appliances. “Enforced lack” of the item means that the household does not possess it and would like to have it but cannot afford it. Both non-possession and affordability are included as criteria to take account of the fact that some households may lack an appliance because of choice or preference. The household was first asked whether they had the appliance. If they did not, they were then asked whether this was something they would like to have but could not afford. Only those households who responded that they would like to have the item but could not afford it are regarded as experiencing an “enforced lack” of the item.⁹

⁹ This form of questioning has been used extensively in the analyses based on the Living in Ireland Survey, which forms the basis of the measures of deprivation adopted for the National Anti-Poverty Monitoring Strategy (NAPS).

Table 3.10: Percentage of households experiencing an “enforced lack” of household appliances and mean number of items lacking by tenure, household type, location, dwelling age and equivalised income

	Freezer	Micro-wave	Dish-washer	Washing machine	Clothes dryer	Video recorder	Home computer	Mean number lacking
Tenure								
Own outright	4	4	11	2	9	3	10	0.4
Purchasing	4	2	12	0	7	1	14	0.4
Local Authority renter	15	10	38	5	28	8	30	1.3
Private renter	11	11	27	4	19	7	23	1.0
Other tenures	6	8	12	6	9	5	15	0.6
Household type								
One person under 65	7	7	14	5	13	5	17	0.7
One person 65 or over	6	7	12	5	14	7	6	0.5
Couple, dep child(ren)	4	2	14	0	8	1	15	0.4
Others with children	9	7	32	1	21	4	27	1.0
Parent(s), grown child(ren)	4	3	12	1	9	2	11	0.4
Other all-adult, under 65	6	4	16	1	11	3	15	0.5
Other all-adult, 65+	5	5	10	3	11	4	8	0.4
Location								
Dublin City and County	4	3	13	2	10	2	12	0.4
BMW Urban, 5k+	8	5	20	2	13	3	16	0.7
Other Urban, 5k+	5	4	15	1	10	3	15	0.5
Rural BMW, <5k	7	6	15	2	12	4	15	0.6
Other Rural,<5k	6	4	15	2	10	3	15	0.5
Year accommodation built								
Pre-1940	7	7	14	4	13	5	12	0.6
1941-1970	5	3	14	2	11	3	13	0.5
1971-1990	5	3	15	1	10	2	14	0.5
After 1990	5	4	14	1	9	2	16	0.5
Household income (Equiv.)								
Under €171 per week	10	10	22	5	20	9	16	0.9
€171- €266 per week	6	4	18	2	12	2	18	0.6
€267- €355 per week	5	3	14	1	9	2	15	0.5
€356 - €476 per week	4	2	10	0	6	1	12	0.3
Over €476 per week	3	2	9	1	7	1	10	0.3
Total	5	4	15	2	11	3	14	0.5

Note: “Enforced lack” means household does not possess an item, would like to have it but cannot afford it. Final column also includes colour television, refrigerator and telephone.

Table 3.10 indicates that 5 per cent of households experience an “enforced lack” of a freezer or deep freeze, with the proportions being 4 per cent for a microwave oven, 15 per cent for a dishwasher, 2 per cent for a washing machine, 11 per cent for a clothes dryer, 3 per cent for a video recorder and 14 per cent for a home computer. The average number of items lacking because of affordability is 0.5.

The highest level of deprivation on these items is found among Local Authority renters, who lack an average of 1.3 of the items. The level is also high for lone parents (1.0 on average), and private sector renters (1.0), and those in the lowest equivalised household income category (0.9). Households in the highest income category have the lowest level of deprivation on these items (0.3, on average). In high-income households, the income may not always be distributed equally among all members. This is likely to be the case in particular where the household consists of unrelated persons.

Table 3.11 shows a number of other measures of deprivation, some of which are unrelated to housing. Respondents were presented with this list of items and asked whether this was something they could afford to have or do, if they wanted to.

The figures at the bottom of the table show that households have the greatest difficulty in affording a week’s annual holiday away from home (31 per cent), replacing worn out furniture (27 per cent), getting together with family or friends for a meal or drink once a month (24 per cent), and having a car or van for private use (22 per cent). Between 8 and 9 per cent of households cannot afford to keep the home adequately warm in winter, buy presents for family or friends once a year or buy new rather than second-hand clothes. Finally, 4 per cent of households cannot afford a meal with meat, chicken or fish every second day.

On average, households cannot afford 1.3 of these items. The greatest difficulty is experienced by Local Authority renters (cannot afford 3.5, on average), those in the lowest income category (3.1), people over age 65 living alone (2.5) and lone parents (2.6). In contrast, the average number of items that households in the highest income category cannot afford is 0.3.

Table 3.11: Percentage of households who cannot afford certain goods and services by tenure, household type, location, dwelling age and equivalised income

	Replacing worn furniture	Adequate heating	Week holiday per year	Meal with meat etc	New clothes	Presents once a year	Socialising once a month	Car or van	Mean number cannot afford
Tenure									
Own outright	25	7	32	4	7	9	26	22	1.3
Purchasing	20	4	21	2	4	3	15	10	0.8
Local Authority renter	64	24	73	16	28	27	58	61	3.5
Private renter	39	12	31	7	12	12	24	39	1.7
Other tenures	39	13	38	5	11	12	33	42	1.9
Household type									
One person under 65	30	11	31	7	11	13	25	29	1.6
One person 65 or over	42	14	51	8	15	22	46	58	2.5
Couple, dep child(ren)	22	5	26	3	5	4	18	9	0.9
Others with children	52	17	58	10	19	17	43	42	2.6
Parent(s), grown child(ren)	23	6	28	3	6	6	23	18	1.1
Other all-adult, under 65	20	5	18	3	5	5	14	15	0.8
Other all-adult, 65+	28	8	36	4	7	9	26	24	1.4
Location									
Dublin City and County	26	6	22	4	8	6	16	25	1.1
BMW Urban, 5k+	32	11	34	6	8	11	28	30	1.6
Other Urban, 5k+	27	7	29	3	8	7	22	23	1.3
Rural BMW, <5k	31	9	42	7	10	14	35	21	1.7
Other Rural, <5k	25	9	34	4	7	9	26	17	1.3
Year accommodation built									
Pre-1940	33	12	40	6	11	14	32	32	1.8
1941-1970	30	8	34	4	8	10	28	29	1.5
1971-1990	25	7	29	4	7	7	22	17	1.2
After 1990	23	5	24	4	7	6	18	15	1.0
Household income (Equiv.)									
Under €171 per week	56	20	65	12	22	26	54	56	3.1
€171- €266 per week	33	8	42	5	9	10	31	23	1.6
€267- €355 per week	23	6	27	2	5	5	20	14	1.0
€356 - €476 per week	15	4	16	1	3	2	11	10	0.6
Over €476 per week	10	2	7	1	1	1	5	7	0.3
Total	27	8	31	4	8	9	24	22	1.3

Table 3.12 shows a number of other measures of financial strain. Fourteen per cent of households find housing costs a heavy financial burden; 9 per cent were in arrears at some time in the last 12 months on rent, mortgage or utility bills, and 5 per cent experience "great difficulty" in making ends meet. Again, the financial strain according to all measures is greatest for Local Authority renters, lone parents and those in the lowest household income category.

Table 3.12: Percentage of households experiencing financial strain by tenure, household type, location, dwelling age and equivalised income

	Housing costs a heavy burden	Arrears on housing or utility bills	"Great difficulty" in making ends meet
Tenure			
Own outright	11	6	4
Purchasing	13	8	3
Local Authority renter	33	24	18
Private renter	20	13	8
Other tenures	11	5	5
Household type			
One person under 65	15	11	6
One person 65 or over	13	6	5
Couple, dep child(ren)	15	8	5
Others with children	35	22	17
Parent(s), grown child(ren)	12	7	4
Other all-adult, under 65	9	8	3
Other all-adult, 65+	10	6	4
Location			
Dublin City and County	14	8	5
BMW Urban, 5k+	15	10	5
Other Urban, 5k+	15	13	5
Rural BMW, <5k	15	9	6
Other Rural, <5k	14	7	5
Year accommodation built			
Pre - 1940	15	8	6
1941-1970	14	8	5
1971-1990	15	10	6
After 1990	13	9	4
Household income (Equiv.)			
Under €171 per week	27	12	14
€171- €266 per week	18	10	6
€267- €355 per week	11	8	3
€356 - €476 per week	9	8	2
Over €476 per week	6	7	1
Total	14	9	5

Table 3.13 provides a summary of the indicators of housing costs discussed in this chapter showing the pattern for those households who emerged as being particularly disadvantaged. On all of the measures, except the proportion of income spent on rent or mortgage, Local Authority tenants emerge as being among the most disadvantaged. They are likely to lack a greater number of the household appliances and other goods and services than the other “disadvantaged” groups shown in the table, and they are more likely to have experienced arrears on housing costs or utility bills and to have great difficulty in making ends meet. Only lone parents are more likely to find housing costs a heavy burden. So, despite the fact that their rents are much lower than those in the private sector, Local Authority renters still experience difficulty in paying their housing and other expenses.

Table 3.13: Mean number of items lacking and percentage of households experiencing financial strain by selected household characteristics (row percentages)

	More than one-third of income on housing costs (renters and purchasers)	Mean number appliances lacking (Table 3.10)	Mean number cannot afford (Table 3.11)	Housing costs a heavy burden	Arrears on housing or utility bills	“Great difficulty” in making ends meet
Local Authority renter	1	1.3	3.5	33	24	18
Lone parent with dependent children	17	1.0	2.6	35	22	17
Household equiv. income Under €171 pw.	20	0.9	3.1	27	12	14
Private renter	28	1.0	1.7	20	13	8
More than one-third income on rent/mortgage	---	0.9	2.2	31	18	12
First time buyer*	11	0.4	0.6	11	7	3
Total for All Households	9	0.5	1.3	14	9	5

Figures for per cent of household income spent on rent/mortgage exclude those who own the home outright or occupy it rent free.

* First time buyers are householders purchasing with a mortgage from a lending institution in the last five years, and age 35 or younger. See text for details.

Among the other groups shown in the table, lone parents with dependent children are the most likely (35 per cent) to find housing costs a heavy burden and a relatively high proportion of this group (17 per cent) spends more than a third of household income on direct housing costs. Private sector renters are most likely (28 per cent) to spend more than a third of household income on rent or mortgage and one-fifth of them find housing costs a heavy burden. Households in the lowest income group are also more likely than average to face high housing costs relative to income and to experience the kind of deprivation and financial strain captured by the other indicators in the table.

The table also shows the relationship between high housing costs and the other non-monetary indicators of affordability. There is a marked association between the two types of measures. Those who spend more than a third of household income on rent or mortgage payments are more likely than households generally to lack

household appliances and to be unable to afford things like replacing worn furniture, a holiday or socialising with friends. They are also, as we might expect, more than twice as likely as households generally to find housing costs a heavy burden, twice as likely as all households to have faced arrears on housing or utility bills and more than twice as likely to have "great difficulty" in making ends meet.

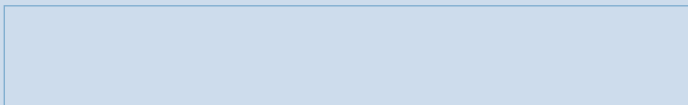
The final row of the table attempts to explore the situation of first time buyers. It was not possible to identify this group precisely with the data collected in the survey since we do not have information on whether the present accommodation is the first house or apartment owned by the household. However, an estimate was calculated by identifying those purchasing with a mortgage from a lending institution (excluding Local Authority tenant purchasers), who originally purchased the present dwelling in the last five years and who are age 35 or under. It is unlikely that many householders in this age group would be purchasing their second dwelling.

The figures in the table suggest that these young and recent purchasers are more likely than all purchasing and renting households to pay more than one-third of their incomes on the mortgage. However, in this respect, they fare considerably better than private sector renters. On all of the other measures in the table, this group is better off than average. Recent purchasers are less likely than average to lack household appliances that they would like to have or to have problems affording other goods and services; they are less likely to have faced arrears, to find housing costs a heavy burden and to have "great difficulty" in making ends meet.

Summary

High rents and mortgage payments relative to income are mainly a problem for those renting in the private sector, over one-quarter of whom spend more than a third of household income on rent. The problem is not as prevalent among purchasers: overall about one in twenty spends more than a third of household income on mortgage payments, but this increases to about one in ten for recent purchasers. In terms of rent levels relative to income, Local Authority renters are in a much more favourable position: only 1 per cent pay more than a third of household income on rent.

On the other indicators of affordability and financial strain, however, Local Authority renters emerged as most likely to experience problems. They were more likely than other groups to lack household appliances and to have to do without other goods and services because they could not afford them. One-third found housing costs a heavy burden; one quarter had been in arrears in housing or utility bills and almost one-fifth had "great difficulty" in making ends meet. Other groups experiencing substantial problems in terms of housing affordability and financial strain were lone parents and households in the lowest income category.



4

CHAPTER

Dwelling Size and Rooms Available

This chapter covers the number and types of rooms available to the household and the adequacy of the space available in the accommodation relative to the size and composition of the household.

Types of Room Available

Table 4.1 shows the number of different kinds of room available to the household. Nearly all households have at least one bedroom and a kitchen and 93 per cent have a living room. Just over two-fifths of households have a utility room or scullery and nearly one-third have a dining room. Slightly less than one household in ten has a study and a similar proportion has a family room. A smaller proportion of households have a play room (3 per cent), or conservatory (6 per cent). In general, living room, study, playroom and family room could all be designated as the same type of room, used for different functions depending on the family cycle stage of the household. The number of different types of room tends to be greatest in higher-income households, among those purchasing on a mortgage, and in couple households with children.

This can be clearly seen in Table 4.2, which shows the average number of bedrooms, living rooms and total rooms available to the household. "Living room", here, includes a living room, dining room, study, family room, playroom and conservatory. Bathrooms, store rooms and cloakrooms are not counted in the total, nor are hallways, landings and rooms used solely for business purposes.

The average household has 1.6 living rooms, 3.3 bedrooms and 6.3 rooms in total available for domestic use. This rises to an average of 1.8 living rooms and 6.6 rooms in total in the highest income households, although it is households in the second and third highest income category who have the greatest average number of bedrooms at 3.5.

Dwellings that are being purchased on a mortgage tend to be somewhat larger than those owned outright (6.8 vs. 6.6 rooms, on average), and a good deal larger than those rented privately (4.9 rooms) and those rented from the Local Authority (4.6 rooms). Table 2.2 in Chapter 2 indicated that rented accommodation tended to have a greater proportion of apartments, which have fewer rooms than houses.

Households consisting of a couple with dependent children have 7 rooms on average and 3.7 bedrooms. There is also an association between location and dwelling size, with rural dwellings tending to be larger (6.7 rooms) than urban dwellings (6.2-6.3 rooms outside Dublin, and 5.9 in Dublin).

Newer dwellings tend to have a larger number of rooms. Dwellings built after 1970 have 6.5 rooms on average, compared to 6.1-6.2 for those built in 1970 or earlier.

Table 4.1: Percentage of households with each type of room by tenure, household type, location, dwelling age and equivalised household income

	Bed-room	Kitchen	Utility	Living room	Dining room	Study room	Family	Play room	Conser-vatory	Other type
Tenure										
Own outright	100	99	47	94	37	8	8	2	7	2
Purchasing	100	100	48	97	36	11	11	6	7	1
Local Authority renter	99	98	14	85	3	0	1	0	0	0
Private renter	96	95	23	87	20	3	2	1	1	1
Other tenures	98	98	36	82	19	8	4	1	4	2
Household type										
One person under 65	97	96	32	87	25	5	3	0	3	1
One person 65 or over	99	98	35	87	28	3	3	1	4	2
Couple, dep child(ren)	100	100	52	97	33	12	13	8	8	2
Others with children	100	99	26	95	18	4	5	3	2	1
Parent(s), grown child(ren)	100	99	44	95	38	8	9	2	7	1
Other all-adult, under 65	100	99	42	94	35	8	6	1	5	2
Other all-adult, 65+	100	100	46	92	40	8	8	1	7	3
Location										
Dublin City and County	99	98	24	94	39	8	7	3	7	2
BMW Urban, 5k+	100	99	44	94	29	8	5	2	3	1
Other Urban, 5k+	100	99	38	94	32	9	9	4	6	2
Rural BMW, <5k	100	100	60	92	28	7	7	3	4	1
Other Rural, <5k	100	99	55	93	28	9	9	4	7	2
Year accommodation built										
Pre-1940	99	98	43	89	31	6	6	2	4	2
1941-1970	100	99	36	95	37	6	8	2	6	2
1971-1990	100	100	39	96	32	9	9	3	6	1
After 1990	100	99	54	93	31	10	9	6	7	1
Household income (Equiv.)										
Under €171 per week	99	98	33	88	20	2	4	1	3	1
€171- €266 per week	100	99	43	94	30	6	7	3	5	2
€267- €355 per week	99	99	45	94	33	8	9	4	6	2
€356- €476 per week	100	99	49	95	37	11	11	5	7	1
Over €476 per week	100	99	45	95	42	13	9	4	8	2
Total	99	99	43	93	32	8	8	3	6	2

Note: Bedsitting room or studio apartment is counted as one living room.

Table 4.2: Average number of bedrooms, living rooms and total rooms by tenure, household type, location, dwelling age and equivalised household income

	Number living rooms	Number bedrooms	All domestic rooms
Tenure			
Own outright	1.7	3.5	6.6
Purchasing	1.8	3.5	6.8
Local Authority renter	1.0	2.6	4.6
Private renter	1.3	2.7	4.9
Other	1.4	2.7	5.4
Household type			
One person under 65	1.4	2.8	5.2
One person 65 or over	1.4	2.8	5.5
Couple, dep child(ren)	1.8	3.7	7.0
Others with children	1.4	3.2	5.7
Parent(s), grown child(ren)	1.7	3.6	6.7
Other all-adult, under 65	1.6	3.3	6.2
Other all-adult, 65+	1.7	3.3	6.5
Location			
Dublin City and County	1.7	3.1	5.9
BMW Urban, 5k+	1.5	3.3	6.2
Other Urban, 5k+	1.7	3.3	6.3
Rural BMW, <5k	1.6	3.6	6.7
Other Rural, <5k	1.6	3.5	6.7
Year accommodation built			
Pre-1940	1.6	3.2	6.1
1941-1970	1.6	3.3	6.3
1971-1990	1.7	3.5	6.5
After 1990	1.7	3.3	6.5
Household income (Equiv.)			
Under €171 per week	1.3	3.0	5.5
€171- €266 per week	1.6	3.4	6.4
€267- €355 per week	1.7	3.5	6.5
€356- €476 per week	1.8	3.5	6.7
Over €476 per week	1.8	3.4	6.6
Total	1.6	3.3	6.3

Note: Bedsitting room or studio apartment is counted as one living room. Bathrooms excluded.

Table 4.3 shows that 55 per cent of households have one living room; 31 per cent have two and 14 per cent have three or more. Number of living rooms is most strongly associated with Local Authority tenure: virtually all Local Authority renters (96 per cent) have just one living room. There is also a strong association with income. One-fifth of households in the highest income category have 3 or more living rooms, compared to 5 per cent of households in the lowest income category.

Table 4.3: Number of living rooms and bedrooms by tenure, household type, location, dwelling age and equivalised household income (row percentages)

	Number Living Rooms			Number bedrooms				
	1	2	3 or more	1	2	3	4	5 or more
Tenure								
Own outright	50	36	15	1	11	44	32	11
Purchasing	47	35	19	1	5	48	36	10
Local Authority renter	96	3	0	11	24	58	6	1
Private renter	78	19	3	16	23	39	17	3
Other tenures	71	20	9	22	25	31	15	6
Household type								
One person under 65	69	24	6	14	22	45	15	4
One person 65 or over	66	27	7	9	24	48	15	4
Couple, dep child(ren)	47	34	20	0	3	42	41	13
Others with children	73	21	6	2	14	58	21	6
Parent(s), grown child(ren)	49	34	16	0	8	45	34	12
Other all-adult, under 65	55	33	12	3	13	47	29	7
Other all-adult, 65+	48	36	16	1	14	48	28	9
Location								
Dublin City and County	51	33	15	6	15	50	23	5
BMW Urban, 5k+	63	27	10	3	9	51	28	9
Other Urban, 5k+	54	31	15	3	10	53	27	7
Rural BMW, <5k	58	30	11	3	10	37	37	14
Other Rural, <5k	55	31	14	1	9	42	35	12
Year accommodation built								
Pre-1940	59	29	12	6	20	40	23	12
1941-1970	52	35	13	1	12	54	25	8
1971-1990	53	33	14	2	6	49	33	10
After 1990	54	30	16	4	11	41	35	8
Household income (Equiv.)								
Under €171 per week	73	22	5	6	21	51	16	5
€171- €266 per week	58	33	10	2	10	49	30	10
€267- €355 per week	52	33	15	2	9	44	35	10
€356- €476 per week	47	34	19	3	7	45	35	10
Over €476 per week	45	34	21	4	10	42	32	11
Total	55	31	14	3	11	46	30	9

Note: Living rooms include living room, dining room, family room, study, playroom, conservatory, bedsitting room.

One-bedroom accommodation is relatively rare, accounting for only 3 per cent of dwellings overall, rising to 11 per cent of Local Authority rented accommodation, 16 per cent of privately rented accommodation and 22 per cent of accommodation that is rent-free or rented from a voluntary agency. People living alone are also more likely than average to have one-bedroom dwellings.

Two-bedroom accommodation accounts for just 11 per cent of the total, increasing to 23-24 per cent of rented accommodation, and 22-24 per cent of the accommodation of people living alone. Dwellings built before 1941 are also more likely to have just 2 bedrooms (20 per cent).

Three-bedroom accommodation is the most common category, accounting for 46 per cent of the total and for 58 per cent of Local Authority rental dwellings.

Thirty per cent of all accommodation has four bedrooms and 9 per cent has five or more bedrooms. These larger dwellings, in terms of the number of bedrooms, are more common among higher-income households and account for over half of the accommodation occupied by couples with dependent children.

Number of Rooms Relative to Household Size

Table 4.4 shows the number of persons per room and the average size of households. The average household size in Ireland is high by European standards at 3 persons. In the other EU Member States the figure ranges from a low of 2.1 in Germany to 2.8 in Greece and Portugal, with the UK and France both at about 2.4 persons (*Housing Statistics in the European Union, 2002*).

Households who are purchasing their accommodation (3.5) and Local Authority renters (3.3) tend to be larger than other household types. Households in Dublin and in BMW urban areas tend to be somewhat smaller than those in other parts of the country (2.8-2.9 persons). The relationship between household size and adult-equivalent household income is curvilinear, with larger households towards the middle of the distribution.

Variations in the number of persons per room largely parallel those for household size. Over half of households have fewer than 0.5 persons per room, rising to over 90 per cent of one person households and 86 per cent of all-adult households where the householder is over 65 years of age.

The average number of persons per room is 0.5, with higher figures for Local Authority renters (0.7), couples with dependent children (0.7) and lone parent households (0.6).

Compared to the situation in 1991 there has been a considerable reduction in density of occupation. The 1991 Census showed an average of 0.6 persons per room and only 64 per cent of households with fewer than one person per room, compared to 0.5 and 93 per cent, respectively in 2001-2002 (*Census 91, Volume 8: Housing, Table B and Table 10*).

Table 4.4: Number of persons per room and average household size by tenure, household type, location, dwelling age and equivalised household income

	Persons per room (row percentages)					Average persons per room	Average household size
	Under 0.5	0.5 to under 1	1 to under 1.5	1.5 to under 2	2 or more		
Tenure							
Own outright	67	28	5	0	0	0.4	2.7
Purchasing	42	50	7	0	0	0.5	3.5
Local Authority renter	28	48	20	2	1	0.7	3.3
Private renter	40	50	9	1	1	0.5	2.5
Other tenures	58	35	5	2	0	0.4	2.1
Household type							
One person under 65	92	5	3	0	0	0.2	1.0
One person 65 or over	96	4	1	0	0	0.2	1.0
Couple, dep child(ren)	15	68	15	1	0	0.7	4.7
Others with children	28	59	12	1	0	0.6	3.5
Parent(s), grown child(ren)	43	52	5	1	0	0.5	3.3
Other all-adult, under 65	73	24	2	0	0	0.4	2.3
Other all-adult, 65+	86	13	1	0	0	0.3	2.1
Location							
Dublin City and County	47	44	9	1	0	0.5	2.9
BMW Urban, 5k+	56	37	6	1	0	0.5	2.8
Other Urban, 5k+	53	41	6	0	0	0.5	3.0
Rural BMW, <5k	57	35	7	1	0	0.5	3.1
Other Rural, <5k	55	38	6	0	0	0.5	3.1
Year accommodation built							
Pre-1940	64	29	6	1	0	0.4	2.5
1941-1970	62	32	6	1	0	0.4	2.7
1971-1990	44	46	10	1	0	0.6	3.4
After 1990	49	45	5	0	0	0.5	3.1
Household income (Equiv.)							
Under €171 per week	66	24	8	1	1	0.4	2.2
€171- €266 per week	43	45	11	1	0	0.6	3.5
€267- €355 per week	40	50	9	1	0	0.5	3.5
€356 - €476 per week	50	44	5	0	0	0.5	3.2
Over €476 per week	64	33	2	0	0	0.4	2.6
Total	53	40	7	1	0	0.5	3.0

Table 4.5: Number of bedrooms compared to bedroom standard by tenure, household type, location, dwelling age and equivalised household income

	Bedroom standard (row percentages)				
	Below bedroom standard	At bedroom standard	One room over standard	Two rooms over standard	Three or more rooms over standard
Tenure					
Own outright	6	13	27	34	20
Purchasing	6	19	35	30	11
Local Authority renter	18	41	32	9	1
Private renter	11	42	28	16	3
Other tenures	5	35	29	20	12
Household type					
One person under 65	0	14	22	45	19
One person 65 or over	0	9	24	48	19
Couple, dep child(ren)	11	25	40	20	5
Others with children	18	40	31	9	2
Parent(s), grown child(ren)	10	24	38	20	7
Other all-adult, under 65	5	17	18	35	26
Other all-adult, 65+	1	6	18	42	33
Location					
Dublin City and County	10	26	31	25	9
BMW Urban, 5k+	6	20	28	30	15
Other Urban, 5k+	6	22	33	30	10
Rural BMW, <5k	7	15	27	31	20
Other Rural, <5k	6	16	30	31	17
Year accommodation built					
Pre - 1940	7	18	28	30	17
1941-1970	8	16	26	35	15
1971-1990	10	23	31	25	12
After 1990	3	20	34	30	13
Household income (Equiv.)					
Under €171 per week	7	20	27	35	12
€171- €266 per week	8	22	32	26	12
€267- €355 per week	9	23	33	24	11
€356 - €476 per week	7	18	32	29	14
Over €476 per week	5	18	27	32	18
Total	7	20	30	29	14

Number of Bedrooms and Bedroom Standard

The “bedroom standard” is a concept used in the English House Condition Survey (ODPM, 1998) and refers to the number of bedrooms that a household of a given size and composition would need.¹⁰ Under this concept, one bedroom is allowed for each cohabiting couple in the household and for each unattached adult over age 21. Those age 10 – 21 (unless they are part of a couple) may share with one other person in this age group of the same gender, or with a child under 10 of the same gender. Children under 10 years of age may share a room with another child under 10 of either gender. A separate room is allowed for unpaired children or other persons under age 21.

For the purposes of applying some objective measure of space available to Irish households, this concept was used for analysing the results of the survey and the “bedroom standard” was calculated for each household in the sample based on information on household composition and the relationships between household members. It should be emphasised that falling below the standard is only indicative of having less space available than other comparable households, but does not necessarily imply that the household is overcrowded, according to the legal definition in the Housing Acts. Table 4.5 shows the number of bedrooms available to the household in relation to the bedroom standard.¹¹

Overall, 7 per cent of households fall below the bedroom standard, 20 per cent are at the bedroom standard, 30 per cent have one bedroom above the bedroom standard, 29 per cent have two bedrooms more than the bedroom standard and 14 per cent have three or more bedrooms above the bedroom standard. This suggests both a greater degree of crowding, on one hand, and a greater degree of under-occupation, on the other, than in England. The 1996 English House Condition Survey (DTLR (2000), ODPM (1998) found 2.3 per cent of households below the bedroom standard, 27.9 per cent at the standard, 37.4 per cent with one room above the standard, and 32.4 per cent with two or more rooms above the standard (ODPM, 1998, Table A3.1). The proportion of households below the bedroom standard in Ireland (7 per cent) and two or more rooms above it (43 per cent) is considerably higher.

Local Authority renters (18 per cent) and lone parents (18 per cent) are most likely to fall below the bedroom standard. The percentage of households with insufficient bedrooms is also above average for couples with dependent children (11 per cent) and for parents with grown children living at home (10 per cent). The proportion of Local Authority and private sector rental accommodation falling below the bedroom standard is considerably higher than that found in the 1996 English House Condition Survey DTLR (2000) and ODPM (1998), where insufficient bedrooms were a problem for 4.3 per cent of Local Authority and private tenants. Excess bedrooms are a feature of one-person households and all-adult households where over 60 per cent have two or more bedrooms above the bedroom standard. Half or more of those who own their homes outright, and of those in the highest income category have two or more bedrooms above the standard. Roughly half of rural households have two or more bedrooms above the standard, compared to just over one-third of Dublin households, 45 per cent of urban households in the BMW region and 40 per cent of other urban households.

Household’s Assessment of Adequacy of Accommodation Size

Table 4.6 shows the household’s own assessment of the adequacy of the accommodation size, whether it is “too big”, “about right”, or “too small” relative to the household’s needs.

Overall 9 per cent of households believe their accommodation is “too big”, 77 per cent perceive it as “about right”, and 13 per cent see it as “too small”. Older householders living alone are most likely to see their accommodation as “too big” (21 per cent), but a relatively high percentage of those who own the accommodation outright (14 per cent) also regard the dwelling as too big for their needs.

¹⁰Note that this differs from the definition of overcrowding in the Irish Housing Acts, which takes account of the cubic feet of air space available in “sleeping compartments”.

¹¹Only rooms designated as bedrooms by the household are counted as bedrooms.

Table 4.6: Perceived adequacy of accommodation size by tenure, household type, location, dwelling age and equivalised household income (row percentages)

	Relative to needs, accommodation is ...		
	"Too big"	"About right"	"Too small"
Tenure			
Own outright	14	78	8
Purchasing	6	79	15
Local Authority renter	2	66	31
Private renter	6	75	19
Other tenures	6	82	12
Household type			
One person under 65	12	78	10
One person 65 or over	21	76	3
Couple, dep child(ren)	3	76	21
Others with children	6	65	28
Parent(s), grown child(ren)	10	80	10
Other all-adult, under 65	10	82	9
Other all-adult, 65+	16	81	3
Location			
Dublin City and County	8	75	17
BMW Urban, 5k+	8	79	13
Other Urban, 5k+	9	77	14
Rural BMW, <5k	10	78	12
Other Rural, <5k	10	79	11
Year accommodation built			
Pre -1940	13	75	11
1941-1970	12	76	11
1971-1990	8	76	16
After 1990	5	81	14
Household income (Equiv.)			
Under €171 per week	12	74	14
€171- €266 per week	8	76	16
€267- €355 per week	8	78	15
€356- €476 per week	8	79	13
Over €476 per week	9	80	11
Total	9	77	13

Local Authority renters are most likely to see their accommodation as “too small” for their needs (31 per cent), followed by lone parent households (28 per cent) and couples with dependent children (21 per cent).

There is no clear association between household income and perception of the adequacy of the dwelling size. Households in the lowest income category are most likely (12 per cent) to see their accommodation as “too big” for their needs, but apart from the lowest income category the proportion who see the dwelling as “too small” for their needs tends to fall as income rises.

Tables 4.7 and 4.8 combine the objective measures of persons per living room and the bedroom standard with the subjective measure of perceived adequacy of the accommodation size. To some extent, the subjective measure may capture unmeasured aspects of the size of the accommodation, such as the floor area. It proved impossible to collect this information in the survey since only about one-quarter of respondents could provide a figure on the floor area of the dwelling. However, it is also the case that some groups have more of an incentive to emphasise the inadequacy of their accommodation, in the hope of prompting a policy change that would bring about an improvement. Local Authority tenants, in particular, who are not satisfied with their accommodation, have little alternative. The cost of renting privately or of purchasing are generally so much greater than the rents they pay, and the waiting lists for larger accommodation are likely to entail a lengthy wait, so that it is only through an influx of resources into the system that their situation can be improved.

Table 4.7 shows the percentage of households in each tenure and each category of persons per living room who perceive their accommodation as “too big”, “about right” or “too small”.

At low densities (under two persons per living room), Local Authority renters are least likely to view their accommodation as “too big” (3 per cent compared to 15 per cent overall), and most likely to view their accommodation as “too small” (19 per cent compared to 6 per cent overall). In terms of judging their accommodation as “too small”, however, they are not that different from private renters (19 per cent and 16 per cent respectively).

At intermediate densities (2 to under 3 persons per living room), Local Authority renters are very similar to other groups in terms of the proportion who regard their accommodation as “too big” (5 per cent compared to 6 per cent overall), but considerably more likely to deem their accommodation “too small” (25 per cent compared to 12 per cent overall). A similar pattern pertains at higher densities (three or more persons per living room): 39 per cent of Local Authority renters regard their accommodation as “too small”, compared to 27 per cent overall.

At a given density in terms of persons per living room, those who own their homes outright are least likely to find the accommodation “too small”.

Table 4.7: Perceived adequacy of accommodation size by number of persons per living room and tenure: percentage in each size category who perceive accommodation as “too big”, “about right” or “too small” (row percentages)

		Relative to needs, accommodation is...		
		“Too big”	“About right”	“Too small”
Persons per living room Under two	Tenure			
	Own outright	20	77	3
	Purchasing	11	83	7
	Local Authority renter	3	79	19
	Private renter	8	76	16
	Other	9	84	7
	Total	15	79	6
Two to under three	Tenure			
	Own outright	8	85	7
	Purchasing	3	83	14
	Local Authority renter	5	70	25
	Private renter	6	75	19
	Other	2	86	12
	Total	6	82	12
Three or more	Tenure			
	Own outright	3	75	22
	Purchasing	2	70	28
	Local Authority renter	1	60	39
	Private renter	2	75	23
	Other	1	69	30
	Total	2	71	27

Table 4.8 compares the subjective measure of adequacy of the accommodation size to the objective bedroom standard. The table shows the percentage of households in each tenure and each category in relation to the bedroom standard who perceive their accommodation as “too big”, “about right” or “too small”.

Among households below the bedroom standard, Local Authority renters are considerably more likely to rate their accommodation too small (66 per cent compared to 48 per cent overall).¹²

The pattern also holds among households at the bedroom standard, but is less marked: 36 per cent of Local Authority renters regard their accommodation as “too small” compared to 24 per cent overall.

¹²It is not the case that Local Authority renters below the bedroom standard are farther below that standard than other groups: among households below the bedroom standard, about the same proportion of Local Authority renters as other groups are one room below, two rooms below etc.

Table 4.8: Perceived adequacy of accommodation size by bedroom standard and tenure: percentage in each size category who perceive accommodation as “too big”, “about right” or “too small” (row percentages)

		Relative to needs, accommodation is...		
		“Too big”	“About right”	“Too small”
Bedroom Standard	Tenure			
	Below bedroom standard			
	Own outright	2	60	38
	Purchasing	0	53	47
	Local Authority renter	1	33	66
	Private renter	0	49	51
	Other	0	61	39
	Total	1	52	48
At bedroom standard	Tenure			
	Own outright	1	81	18
	Purchasing	1	71	28
	Local Authority renter	1	64	36
	Private renter	2	82	16
	Other	0	78	22
		Total	1	75
One room over standard	Tenure			
	Own outright	5	87	8
	Purchasing	3	82	15
	Local Authority renter	4	81	15
	Private renter	6	80	13
	Other	1	92	8
		Total	4	84
2+ rooms over standard	Tenure			
	Own outright	22	76	2
	Purchasing	11	83	5
	Local Authority renter	10	84	6
	Private renter	18	74	8
	Other	19	80	1
		Total	18	78

The pattern disappears, however, for households above the bedroom standard. Local Authority renters no longer stand out as the group most likely to judge their accommodation as too small. Fifteen per cent of Local Authority renters in accommodation with one bedroom more than the bedroom standard regard the accommodation as “too small”, compared to 12 per cent overall but compared also to 15 per cent of those purchasing their accommodation. At two or more rooms above the bedroom standard, 6 per cent of Local Authority renters judge their accommodation as “too small”, compared to 4 per cent overall, but the figures are 5 per cent for those purchasing their accommodation and 8 per cent for private renters.

In general, at a given density of occupation, Local Authority renters are more likely than other tenures to regard their accommodation as “too small”. This could be due to unmeasured aspects of occupation density (such as the size of the rooms), to a more critical attitude on the part of Local Authority renters or to some combination of the two.

Summary

There is a clear association between housing tenure and the number of rooms available to the household, with house purchasers in the most favourable position and renters the least advantaged, while those who own the dwelling outright occupy an intermediate position. When it comes to density of occupation, however, differences in household size by tenure also have an impact. Those who own their homes outright have the lowest number of persons per room and are most likely to have more bedrooms than are needed for the household size and composition. Local Authority renters still have the greatest number of persons per room and are most likely to have less bedrooms for a given household composition than the concept of bedroom standard might suggest is required. While private sector renters have the same average number of persons per room as house purchasers, again using this concept, they are more likely to have fewer bedrooms than are needed.

Overall, there is a strong association between the perceived adequacy of the accommodation and whether the household is below, at or above the bedroom standard. The association is stronger for Local Authority renters than for other households. Local Authority renters are more likely to perceive the accommodation size as inadequate when the accommodation is below or at the bedroom standard, although they no longer stand out when the accommodation is above the bedroom standard. This may reflect the fact that the rooms themselves are likely to be smaller. But it is also likely to reflect a greater propensity to express dissatisfaction, perhaps in the hope that some benefit may be achieved.

The relationship between household income and the number of rooms available is a mixed one. Lower-income households clearly have fewer rooms available. However, because many of the households in the lowest income category are older people living alone, they are no more likely than average to have fewer bedrooms than are needed and are slightly more likely than average to view their accommodation as “too big” for their needs.

CHAPTER

5

Services and Utilities

In this chapter we consider the services and utilities available to dwellings. Two main areas are examined. First we discuss electricity, gas supply and telephone service. We then move on to sewage and water. Included in our consideration of the latter is the source of water supply, satisfaction with supply and method of heating water.

Electricity and Gas Supply

Table 5.1 provides details on electricity supply in dwellings classified according to the set of characteristic variables used throughout the report. The table shows that universal coverage by the mains electricity supply has been achieved throughout the country.

The extent to which households have other sources of supply are also outlined in the table. For example, 8 per cent of dwellings record having mains off-peak electricity; and 2 per cent record having a separate private generator.

Off-peak electricity appears to be principally characterised as being found in Dublin or the BMW urban areas, in the private rental sector and among households renting in the voluntary and co-operative sector (included among "other tenures" in the table). Off-peak electricity is also more common in households in the highest income category.

Private generators are largely a phenomenon of rural areas. In general, they seem to be most common on farms as a back up for the mains supply.

In Table 5.2 we turn to consider the reliability of the electricity supply. Questions were asked in respect of reliability of supply (a) in the respondent's own home and (b) in their locality or neighbourhood. By focusing on both aspects of reliability, one issue which we were attempting to explore was the extent to which the supply in a neighbourhood could be reliable but, perhaps in light of the condition of the wiring within the accommodation, the reliability of the internal supply within the dwelling could be suspect.

From Table 5.2 one can see that 97 per cent of respondents at a national level record that the supply in their accommodation is reliable while 97 per cent also say the supply in their locality is reliable. There is really no variation according to the household characteristics outlined in the table. These figures would unambiguously suggest that the electricity supply in Ireland (both internally within the dwelling and externally in the locality or neighbourhood) is felt to be reliable by almost all households.

Table 5.1: Electricity supply by tenure, household type, location, dwelling age and income category

	Percentage of households with each service		
	Mains supply	Mains off-peak	Private generator
Tenure			
Own outright	100	8	1
Purchasing	100	8	1
Local Authority renter	100	4	0
Private renter	100	12	0
Other tenures	99	15	1
Household type			
One person under 65	100	8	1
One person 65 or over	100	8	1
Couple, dep. child(ren)	100	7	1
Others with children	100	6	0
Parent(s), grown child(ren)	100	7	1
Other all-adult, under 65	100	11	1
Other all-adult, 65+	100	8	1
Location			
Dublin City and County	100	12	0
BMW Urban, 5k+	100	11	0
Other Urban, 5k+	100	7	0
Rural BMW, <5k	99	4	1
Other Rural, <5k	100	6	1
Year accommodation built			
Pre-1940	100	8	1
1941-1970	100	9	1
1971-1990	100	7	1
After 1990	100	8	1
Household income (Equiv.)			
Under €171 per week	100	8	1
€171- €266 per week	100	7	1
€267- €355 per week	100	7	1
€356 - €476 per week	100	7	1
Over €476 per week	100	11	1
Total	100	8	1

Table 5.2: Perceived reliability of electricity supply in accommodation and neighbourhood

	Per cent perceiving supply as reliable ...	
	in accommodation	in neighbourhood
Tenure		
Own outright	97	97
Purchasing	97	96
Local Authority renter	98	97
Private renter	98	99
Other tenures	98	98
Household type		
One person under 65	97	98
One person 65 or over	98	98
Couple, dep. child(ren)	97	96
Others with children	98	97
Parent(s), grown child(ren)	97	96
Other all-adult, under 65	97	97
Other all-adult, 65+	98	97
Location		
Dublin City and County	98	97
BMW Urban, 5k+	99	98
Other Urban, 5k+	99	99
Rural BMW, <5k	96	96
Other Rural, <5k	96	95
Year accommodation built		
Pre-1940	98	97
1941-1970	97	97
1971-1990	97	96
After 1990	97	97
Household income (Equiv.)		
Under €171 per week	97	97
€171- €266 per week	97	96
€267- €355 per week	97	97
€356- €476 per week	97	97
Over €476 per week	97	97
Total	97	97

Notwithstanding the almost universally held view that the supply is reliable, households may have misgivings about the adequacy of electrical sockets, given their needs. To address this issue we asked respondents to record whether or not they felt that, given their needs, they had an adequate number of electrical sockets in (i) their: kitchen; (ii) their living room(s) and (iii) their bedroom(s). The results are summarised in Table 5.3.

From the table one can see that approximately 88-89 per cent of households feel they have adequate supplies in the rooms in question. Some variations according to household characteristics are apparent from the table. As one might expect, the highest level of satisfaction with the supply of sockets is found among home owners (who are, of course, responsible for ensuring that the supply is adequate).

Table 5.3: Perceived adequacy of electric sockets in accommodation by tenure, household type, location, dwelling age and income category

	Per cent perceiving number of sockets as adequate ...		
	in kitchen	in living room	in bedrooms
Tenure			
Own outright	91	91	91
Purchasing	88	88	86
Local Authority renter	79	79	80
Private renter	88	87	85
Other tenures	93	91	89
Household type			
One person under 65	89	88	87
One person 65 or over	92	92	92
Couple, dep. child(ren)	88	87	86
Others with children	81	81	79
Parent(s), grown child(ren)	90	90	89
Other all-adult, under 65	91	90	89
Other all-adult, 65+	93	93	93
Location			
Dublin City and County	86	85	84
BMW Urban, 5k+	88	88	86
Other Urban, 5k+	90	89	87
Rural BMW, <5k	91	91	91
Other Rural, <5k	91	91	90
Year accommodation built			
Pre-1940	91	90	90
1941-1970	89	89	88
1971-1990	86	86	84
After 1990	92	92	91
Household income (Equiv.)			
Under €171 per week	89	89	89
€171- €266 per week	89	89	88
€267- €355 per week	88	88	86
€356 - €476 per week	89	89	88
Over €476 per week	90	89	88
Total	89	89	88

Lower levels of satisfaction are expressed in the Local Authority rental sector. A total of 79-80 per cent of households in this sector record that they are satisfied with the supply of sockets. This is 10 percentage points below other categories of household, apart from private sector renters where the figure is 85-88 per cent, depending on the room considered. Other household types to display marginally higher than average levels of inadequate supply included those with dependent children (especially lone parent households).¹³

Table 5.4: Gas supply in accommodation by tenure, age group, household type, location, dwelling age and income category

	Per cent with gas supply	Of these, per cent with mains gas	Overall per cent with mains gas
Tenure			
Own outright	34	58	20
Purchasing	47	81	38
Local Authority renter	45	84	38
Private renter	37	89	33
Other tenures	29	68	20
Household type			
One person under 65	38	78	30
One person 65 or over	39	63	25
Couple, dep. child(ren)	40	72	29
Others with children	39	77	31
Parent(s), grown child(ren)	39	70	28
Other all-adult, under 65	43	80	34
Other all-adult, 65+	38	67	26
Location			
Dublin City and County	71	98	69
BMW Urban, 5k+	15	44	7
Other Urban, 5k+	44	86	38
Rural BMW, <5k	24	3	1
Other Rural, <5k	20	25	6
Year accommodation built			
Pre -1940	37	62	23
1941-1970	46	81	38
1971-1990	35	68	24
After 1990	43	78	34
Household income (Equiv.)			
Under €171 per week	35	60	21
€171- €266 per week	38	65	25
€267- €355 per week	38	69	27
€356 - €476 per week	39	77	30
Over €476 per week	49	88	43
Total	40	73	29

¹³The reader is reminded of the strong link between the Local Authority rental sector and lone parent households.

Gas supply is considered in Table 5.4. This shows that 40 per cent of households in the country record having gas in their accommodation. The incidence is highest in the Dublin region (71 per cent) and, as one might expect, is lowest in rural areas (22 per cent).

The second column in Table 5.4 indicates the percentage of those households with a supply which record that their supply is mains gas (in contrast to bottled or LPG etc.). A total of 73 per cent of these households indicate that their supply is mains gas, so that 29 per cent of households overall are connected to the mains gas supply. The principal variation in regard to this item is in respect of location. One can see from the table that dwellings in rural areas (which have a much lower incidence of gas supply in the first instance) rely to a much greater degree on bottled gas or LPG.

The final column in the table shows the percentage of households with mains gas supply. In Dublin City and County, 69 per cent of households have a mains gas supply. The percentage is also higher than average, at 38 per cent, in urban areas outside the BMW. Less than one household in ten in the BMW region has a mains gas supply.

Telephone Service

Table 5.5 shows the distribution of telephone service across households. No distinction is made between mobile telephones and landline connections. Overall 94 per cent of households have either a mobile telephone, landline connection, or both.

There are small differences by income category, rising from 88 per cent in the lowest income category to 96 per cent in the highest. Local Authority renters are least likely to have a telephone service (81 per cent). Among elderly householders living alone 91 per cent have a telephone service, but the figure reaches 97 per cent for other elderly all-adult households. Differences by location tend to be small in magnitude.

Sewage Disposal

In this section we turn to a consideration of the type of waste treatment available in households. Table 5.6 summarises the sewage system used in accommodation in Ireland. A total of 6 pre-coded categories were presented to respondents as follows:

- Public main sewer
- Private septic tank/other private system
- Group scheme (septic tank or other system)
- Piped disposal with NO treatment
- None
- Don't know

Table 5.5: Presence of telephone (landline or mobile) by tenure, age group, household type, location, dwelling age and income category

	Per cent with telephone
Tenure	
Own outright	95
Purchasing	98
Local Authority renter	81
Private renter	83
Other tenures	84
Household type	
One person under 65	85
One person 65 or over	91
Couple, dep. child(ren)	97
Others with children	88
Parent(s), grown child(ren)	97
Other all-adult, under 65	93
Other all-adult, 65+	97
Location	
Dublin City and County	95
BMW Urban, 5k+	92
Other Urban, 5k+	95
Rural BMW, <5k	93
Other Rural, <5k	93
Year accommodation built	
Pre-1940	92
1941-1970	94
1971-1990	96
After 1990	93
Household income (Equiv.)	
Under €171 per week	88
€171- €266 per week	94
€267- €355 per week	95
€356 - €476 per week	96
Over €476 per week	96
Total	94

From Table 5.6 one can see that two-thirds of households in the country are linked to the public main sewer. This represents a small increase since 1991, when the figure was 63 per cent (*Census 91, Volume 8, Housing, Table 9*). The main difference in incidence of sewage type is according to location. In Dublin and the larger urban areas the public mains is the most frequently occurring (almost universal) type of disposal system. Private septic tank systems are clearly of much greater relative importance in rural areas. The higher incidence of the use of public mains in the rental sector, both private and public, reflects the much higher concentration of such dwellings in the larger urban areas.

Table 5.6: Sewage system in accommodation by tenure, age group, household type, location, dwelling age and income category

	Type-sewage disposal/waste treatment (row percentages)					
	Public main sewer	Private system (septic tank or other)	Group system (septic tank or other)	Piped disposal, no treatment	None	Don't know
Tenure						
Own outright	53	45	1	0	1	0
Purchasing	71	28	1	0	0	0
Local Authority renter	91	8	1	0	0	0
Private renter	94	5	1	0	0	1
Other tenures	68	28	2	0	1	1
Household type						
One person under 65	75	24	1	0	1	0
One person 65 or over	63	33	2	0	1	0
Couple, dep. child(ren)	61	38	1	0	0	0
Others with children	83	15	1	0	0	0
Parent(s), grown child(ren)	63	36	1	0	0	0
Other all-adult, under 65	72	27	1	0	0	0
Other all-adult, 65+	60	38	1	0	1	0
Location						
Dublin City and County	98	2	0	0	0	0
BMW Urban, 5k+	96	4	0	0	0	0
Other Urban, 5k+	97	3	0	0	0	0
Rural BMW, <5k	22	75	2	0	1	0
Other Rural, <5k	34	63	2	0	1	0
Year accommodation built						
Pre - 1940	54	43	1	0	1	0
1941-1970	75	24	1	0	0	0
1971-1990	66	33	1	0	0	0
After 1990	70	29	1	0	0	0
Household income (Equiv.)						
Under €171 per week	63	34	1	0	1	0
€171- €266 per week	61	37	1	0	0	0
€267- €355 per week	61	38	1	0	0	0
€356 - €476 per week	67	32	1	0	0	0
Over €476 per week	80	19	1	0	0	0
Total	66	32	1	0	0	0

The table shows that the incidence of group schemes is low – 1 per cent nationally. Piped disposal with no treatment and no disposal system are both recorded only on a very infrequent basis. In aggregate terms less than 0.5 per cent of dwellings throughout the country have no sewage disposal system.

Table 5.7 shows more clearly the variation by type of area (urban or rural) in the type of sewage disposal system in the dwelling. The contrast between dwellings in open country and other areas is very marked, with private septic tank or other private waste treatment systems being dominant in these areas (89-92 per cent of households). In these rural areas, there is some small increase in the proportion of dwellings connected to a main sewer among those built after 1970. Dwellings in large towns (population over 10,000) and cities are almost universally connected to the public main sewer (98-99 per cent). In smaller towns and villages, the rate of connection to the public main sewer is also high (84-91 per cent), with the highest figure for dwellings built since 1990.

Table 5.7: Type of sewage system by urban/rural location and age of dwelling

		Type-sewage disposal/waste treatment (row percentages)				
		Public main sewer	Private system (septic tank or other)	Group system (septic tank or other)	Piped disposal, no treatment	None
Open country	Pre-1940	4	91	2	0	3
	1941-1970	8	89	3	0	1
	1971-1990	7	92	1	0	0
	After 1990	7	91	1	0	1
Town /village, < 10,000	Pre-1940	84	15	1	0	0
	1941-1970	88	11	1	0	0
	1971-1990	85	13	2	0	0
	After 1990	91	8	1	0	0
Town/city over 10,000	Pre-1940	98	1	0	1	0
	1941-1970	99	1	0	0	0
	1971-1990	99	1	0	0	0
	After 1990	99	1	0	0	0

Note: Excludes households where type of system not known.

Water supply

Table 5.8 considers the main source of internal water supply. Six pre-coded options were put to respondents in the questionnaire. These were as follows:

- Public main
- Well
- Group scheme
- Rainwater tank
- Other source
- None

The figures indicate that 80 per cent of all households in the country are on the public main, representing a substantial increase on the figure of 73 per cent recorded in the 1991 Census (*Census 91*, Volume 8, Housing, Table 9). This is highest in Dublin and other urban areas (99 per cent). Again, the higher than average connection to the public main as their main source of water supply is clearly related to the relative concentration of both public and private rental accommodation in the larger centres of population.

Table 5.8 Main Source of Internal Water Supply in Accommodation by tenure, age group, household type, location, dwelling age and income category

	Type of internal water supply in accommodation (row percentages)					
	Public main	Well	Group scheme	Rainwater tank	Other source	None
Tenure						
Own outright	72	16	11	0	1	0
Purchasing	83	9	7	0	0	0
Local Authority renter	95	2	2	0	0	0
Private renter	96	2	2	0	0	0
Other tenures	80	10	9	0	0	0
Household type						
One person under 65	85	8	6	0	0	1
One person 65 or over	76	13	10	0	1	1
Couple, dep. child(ren)	77	14	9	0	0	0
Others with children	91	4	4	0	0	0
Parent(s), grown child(ren)	79	12	8	0	0	0
Other all-adult, under 65	85	9	6	0	0	0
Other all-adult, 65+	76	15	9	0	1	0
Location						
Dublin City and County	99	1	0	0	0	0
BMW Urban, 5k+	99	1	1	0	0	0
Other Urban, 5k+	99	1	0	0	0	0
Rural BMW, <5k	51	20	27	1	1	0
Other Rural, <5k	62	27	10	0	0	0
Year accommodation built						
Pre-1940	70	18	11	0	1	1
1941-1970	85	8	6	0	0	0
1971-1990	81	11	8	0	0	0
After 1990	83	10	7	0	0	0
Household income (Equiv.)						
Under €171 per week	77	12	10	0	0	0
€171- €266 per week	77	13	9	0	0	0
€267- €355 per week	77	14	8	0	0	0
€356- €476 per week	80	11	8	0	0	0
Over €476 per week	89	7	4	0	0	0
Total 2001/2002	80	11	8	0	0	0

A private well was indicated as the main source of supply by 11 per cent of the population – and is highest in rural areas (20-27 per cent).

Group schemes were recorded by 8 per cent of the population nationally. As is the case with private wells, these are most frequently found in rural areas.

The figures in the table indicate that only very small proportions of households rely on a rainwater tank or other source (less than 0.5 per cent of all households) while virtually no household in the country is now without an internal water supply.

Table 5.9 clearly shows the association between the source of water and the urban-rural character of the location. Almost all households in large (over 10,000) towns and cities are connected to the public main, as are the large majority of those in smaller towns and villages (92-96 per cent). In open country areas, 36-45 per cent of households are connected to a public main water supply, with the lower figure for dwellings built before 1940. About one-third of dwellings in open countryside use water from a private well, while over one-fifth are connected to a group scheme.

Table 5.9: Main source of internal water supply by dwelling age and urban/rural location

		Main source of internal water (row percentages)					
		Public main	Well	Group scheme	Rainwater tank	Other source	None
Open country	Pre-1940	36	39	21	1	1	1
	1941-1970	45	29	24	1	1	0
	1971-1990	45	32	22	0	1	0
	After 1990	45	31	22	0	0	1
Town or village, <10,000	Pre-1940	92	2	5	0	1	0
	1941-1970	95	2	2	0	0	0
	1971-1990	94	2	4	0	0	0
	After 1990	96	1	2	0	0	0
Town/city over 10,000	Pre-1940	99	1	0	0	0	0
	1941-1970	99	1	0	0	0	0
	1971-1990	99	0	0	0	0	0
	After 1990	99	1	0	0	0	0

Table 5.10 focuses on satisfaction with three aspects of water supply viz.

- Water pressure
- Water quality
- Reliability of supply

Overall, 87 per cent of all households in the country are satisfied with their water pressure. There is some evidence to suggest lower levels of satisfaction with water pressure in Dublin than elsewhere in the country. The last panel of the table, which breaks down levels of satisfaction by source of supply, shows that satisfaction with water pressure is highest among those with a private well (95 per cent), compared to figures of 85-86 per cent among those connected to a public main or a group scheme.

Table 5.10: Per cent satisfied with pressure, perceived quality and reliability of water supply by tenure, age group, household type, location, dwelling age and income category

	Satisfied with water pressure	Satisfied with water quality	Satisfied with reliability of water supply
Tenure			
Own outright	87	76	93
Purchasing	85	71	92
Local Authority renter	88	75	91
Private renter	87	77	94
Other tenures	91	77	93
Household type			
One person under 65	87	76	93
One person 65 or over	90	81	95
Couple, dep. child(ren)	86	71	92
Others with children	85	73	90
Parent(s), grown child(ren)	87	76	93
Other all-adult, under 65	86	75	94
Other all-adult, 65+	88	78	93
Location			
Dublin City and County	83	81	94
BMW Urban, 5k+	89	60	93
Other Urban, 5k+	88	75	95
Rural BMW, <5k	87	68	89
Other Rural, <5k	89	76	92
Year accommodation built			
Pre-1940	87	78	92
1941-1970	85	78	93
1971-1990	87	73	92
After 1990	87	71	93
Household income (Equiv.)			
Under €171 per week	89	78	93
€171- €266 per week	87	73	92
€267- €355 per week	86	74	92
€356 - €476 per week	86	73	92
Over €476 per week	86	75	93
Type of internal water supply			
Public Main	86	73	93
Well	95	89	95
Group Scheme	85	66	84
Other source	71	69	74
Total	87	75	93

Indeed, this variation by source of supply is the most significant point to emerge from Table 5.10. From the table it would appear that the households with lowest levels of satisfaction with their water pressure are in Dublin.

In terms of satisfaction with water quality one can see that three-quarters of households express themselves to be satisfied. Satisfaction levels are highest among those with a private well (89 per cent), but are also above average in the Dublin region (81 per cent). Apart from these variations by region and urban-rural location, there would appear to be little systematic variation with any of the household characteristics in the table.

Finally, 93 per cent of households are satisfied with the reliability of their supply, with higher figures among those connected to a public main or with a private well (93-95 per cent). There is really no systematic variation in satisfaction with reliability across any of the other variables shown in the table.

Hot Running Water

In Table 5.11 we consider the incidence of hot running water in the accommodation and in which rooms it is available. The bottom row of the table shows that only 2 per cent of households in the country lack hot running water. These can be characterised as older households in rural areas with elderly single persons who fall into the lowest income category.

A total of 98 per cent of households have hot running water in their kitchens. The incidence of hot water in kitchens is very high across all types of accommodation being relatively lower (93-94 per cent) among single persons, elderly, low income households. A very similar incidence pattern is also apparent in respect of hot running water in the main bathroom. Incidence rates are, however, substantially lower in other rooms such as other bathrooms/en-suites etc. and "other" rooms generally (34 per cent and 15 per cent respectively). The presence of hot running water in secondary bathrooms or "other" rooms is strongly related to household income. Incidence levels are, as one might expect, much higher in more recently built accommodation, related to the presence of a downstairs WC or en-suite shower room. In contrast, rates are particularly low in the Local Authority rental sector.

Table 5.11: Whether accommodation has hot water and in which rooms by tenure, household type, location, dwelling age and equivalised income

	Per cent households with hot water in ...				
	No hot water	Kitchen	Main bathroom	Other bathroom	Other room
Tenure					
Own outright	3	97	95	28	15
Purchasing	0	100	98	50	18
Local Authority renter	3	97	94	4	2
Private renter	2	96	93	27	6
Other tenures	3	96	90	24	14
Household type					
One person under 65	3	95	92	24	10
One person 65 or over	6	93	89	14	7
Couple, dep. child(ren)	0	99	98	48	19
Others with children	1	99	97	21	7
Parent(s), grown child(ren)	1	99	97	29	16
Other all-adult, under 65	1	99	97	42	14
Other all-adult, 65+	2	97	94	26	15
Location					
Dublin City and County	1	99	94	31	10
BMW Urban, 5k+	1	98	97	36	13
Other Urban, 5k+	1	98	97	39	14
Rural BMW, <5k	2	97	96	34	19
Other Rural, <5k	3	97	96	34	18
Year accommodation built					
Pre-1940	5	94	91	18	11
1941-1970	1	98	95	20	11
1971-1990	1	99	98	33	14
After 1990	0	99	97	60	20
Household income (Equiv.)					
Under €171 per week	5	94	91	13	8
€171- €266 per week	1	98	96	29	13
€267- €355 per week	1	99	97	35	15
€356 - €476 per week	1	99	97	43	18
Over €476 per week	0	99	96	51	18
Total	2	98	96	34	15

Note: Percentages need not add to 100 as hot water may be present in more than one room.

Table 5.12 outlines details on the type of water heating system and main method of heating used for the water. In the course of the survey respondents were asked to indicate whether or not the accommodation heated their water using:

- The central heating system
- A separate boiler
- Immersion heater
- Instantaneous water heater

The reader should note that the percentages in the first four columns in table 5.12 will add to more than 100 per cent as households may have more than one water heating system in the accommodation. The second four columns, however, sum to 100 since they show the main method of water heating. One can see that the most important forms of water heating are the central heating system (recorded by 85 per cent of dwellings) and an immersion heater (76 per cent). Both are recorded more frequently by home purchasers. The main relationship between these two forms of water heating is with income. The incidence of both types of heating increases directly and strongly with income category. In contrast, the separate water boiler is relatively more important for lower income households and, in particular, the Local Authority rental sector (28-29 per cent).¹⁴

The figures in the right hand side of the table present details on the main method of water heating used by dwellings. By “main method” respondents were asked to consider which type of heating system was used to heat most of their hot water throughout the year as a whole – notwithstanding short-term seasonal fluctuations. The clear message from the table is the overwhelming relative importance of central heating as the main method for heating water (cited by 82 per cent of households). The other two methods of any significance (separate water boiler and immersion heater) each account for only approximately 7-10 per cent of all households in the country. Although 18 per cent of households report having a separate instantaneous¹⁵ water heater, it is very rarely the main method of water heating.

The final table in this chapter (5.13) focuses on the extent and type of automatic time and temperature controls used for the main water heating system. These controls have the potential to contribute to the energy efficiency of water heating, since they allow householders to avoid heating water when it is not likely to be used and to maintain temperature at an appropriate level.

One can see that 28 per cent of households have no automatic time control, 49 per cent have it on the same timer as the central heating and the remaining 22 per cent have a separate timer. The presence of automatic time controls is clearly related to income. A total of 45 per cent of households in the lowest income category record that they have no such control. This falls progressively with income level to stand at only 17 per cent among households in the highest income category.

In terms of automatic temperature control one can see that just under one-quarter of all households in the country (22 per cent) have no automatic temperature control. Just over two-fifths (43 per cent) have a boiler thermostat only. This is not generally a convenient way to control the temperature of hot water, not only in terms of accessibility but also because it may not be separate from the temperature control for the central heating system generally, leading to inefficiencies. Only 35 per cent of households have what could be properly considered a convenient means of controlling the temperature of hot water.

¹⁴This reflects the policy of installing a back-boiler for water heating only in Local Authority housing.

¹⁵Some respondents may have included here an electric shower which heats water on demand.

Table 5.12: Type of water heating system and main water heating method by tenure, household type, location, dwelling age and equivalised income

	Per cent with each type of water heating				Main way, heat running water in accommodation (row per cent)			
	Central heating system	Separate boiler	Immersion heater	Instantaneous heater	Central heating system	Separate boiler	Immersion heater	Instantaneous heater
Tenure								
Own outright	85	23	70	17	81	8	11	0
Purchasing	92	18	81	19	86	5	9	0
Local Authority renter	71	29	68	11	68	19	14	0
Private renter	70	14	84	18	72	14	11	3
Other tenures	70	25	75	24	96	4	0	0
Household type								
One person under 65	77	21	75	17	71	11	16	2
One person 65 or over	74	25	68	12	72	11	17	0
Couple, dep. child(ren)	92	19	78	19	83	8	9	0
Others with children	81	21	78	16	89	3	7	0
Parent(s), grown child(ren)	88	23	75	17	81	9	10	0
Other all-adult, under 65	85	18	79	20	91	3	7	0
Other all-adult, 65+	82	23	70	16	81	5	9	5
Location								
Dublin City and County	87	16	85	12	86	4	10	1
BMW Urban, 5k+	84	24	82	20	78	7	16	0
Other Urban, 5k+	85	16	83	23	88	0	11	0
Rural BMW, <5k	86	28	57	17	78	13	9	0
Other Rural, <5k	83	23	71	20	68	21	11	0
Year accommodation built								
Pre-1940	74	25	65	16	67	15	15	2
1941-1970	87	23	72	16	84	8	8	0
1971-1990	88	20	79	17	84	5	11	0
After 1990	90	17	81	21	89	5	6	0
Household income (Equiv.)								
Under €171 per week	74	28	65	15	68	15	17	0
€171- €266 per week	85	23	72	18	87	6	6	2
€267- €355 per week	88	21	75	18	77	11	11	0
€356 - €476 per week	91	18	80	20	87	4	9	0
Over €476 per week	88	15	85	18	89	2	8	1
Total	85	21	76	18	82	7	10	0

Percentages need not add to 100 as households may have more than one water heating system.

Table 5.13: Type of automatic time and temperature control for water heating system by tenure, household type, location, dwelling age and equivalised income

	Per cent with each type of auto. time control (row %)			Per cent with each type of auto. temp. control (row %)		
	No automatic time control	Same timer as CH	Separate timer	No automatic temp. control	Boiler thermostat only	Other thermostat
Tenure						
Own outright	31	49	20	23	43	34
Purchasing	19	54	27	16	48	37
Local Authority renter	53	33	14	47	29	24
Private renter	31	45	24	28	35	37
Other tenures	38	39	23	30	35	35
Household type						
One person under 65	31	45	24	25	40	35
One person 65 or over	39	45	16	33	37	30
Couple, dep. child(ren)	23	52	25	18	45	37
Others with children	37	44	19	29	41	30
Parent(s), grown child(ren)	31	48	22	22	44	35
Other all-adult, under 65	22	54	24	20	43	37
Other all-adult, 65+	33	47	19	26	41	34
Location						
Dublin City and County	21	51	27	21	40	39
BMW Urban, 5k+	29	49	22	23	47	29
Other Urban, 5k+	27	51	22	19	45	36
Rural BMW, <5k	37	46	16	25	46	29
Other Rural, <5k	31	48	22	24	40	35
Year accommodation built						
Pre-1940	40	41	19	31	37	31
1941-1970	30	49	20	26	44	30
1971-1990	28	51	21	21	45	35
After 1990	18	54	28	16	44	41
Household income (Equiv.)						
Under €171 per week	45	40	15	36	36	28
€171- €266 per week	32	49	19	23	45	32
€267- €355 per week	27	49	24	21	43	36
€356 - €476 per week	23	52	25	18	45	37
Over €476 per week	17	55	28	16	44	40
Total	28	49	22	22	43	35

Note: Includes only households with hot water.

Summary

The tables in this chapter point to almost universal connection to mains electricity and high levels of satisfaction with the reliability of the supply and with the adequacy of the number of electrical sockets available. Connection to a gas supply is lower, at 40 per cent with 29 per cent of households connected to mains gas. The figure for mains gas rises to 69 per cent in Dublin City and County. In terms of sewage and water services, there were distinct differences according to the urban-rural character of the area, with mains service connection almost universal in larger towns and cities. Private sewage disposal systems (septic tanks or other waste treatment systems) dominate in the open countryside. The situation in terms of water supply is less differentiated by urban-rural location, since over two-fifths of households in open country areas are connected to a mains water source. However, roughly half of households in this type of area obtain water from a private well or group scheme, and these sources are extremely rare in urban areas.

Satisfaction levels with water pressure, water quality and the reliability of the supply were highest among those with a private well, followed by those with a connection to the public main. Those connected to a group scheme tended to be less satisfied, particularly with water quality.

Almost all households have hot running water in the kitchen and main bathroom. Those most likely to lack any hot running water in the accommodation were older adults living alone, residents of pre-1940 dwellings and those in the lowest income group, where about 5-6 per cent have no hot running water. It is clear that even among these groups the large majority of households have this facility in the dwelling.

The dominant method of heating water was through the central heating system. Only a small number of households relied on a separate water heating boiler or immersion heater as the main method of heating water. Automatic time and temperature controls have the potential to increase the energy efficiency of water heating by reducing the extent to which water is heated at times when it is not being used and by ensuring that the temperature is appropriate to the household's needs. Over two-thirds of households had some automatic time control for water heating, but this was most often based on the same timer as the central heating. Nearly two-thirds of households had no convenient means of automatically controlling water temperature independently of central heating temperature.

Heating the Accommodation

This chapter focuses on the methods used to heat the accommodation in winter and the satisfaction of households with their heating system. As well as being relevant to the comfort of the household, heating has major implications for a household's energy use. We will return to this aspect of heating in Chapter 7, and focus in this chapter on the nature of the heating system and the household's level of satisfaction with it. The material in this chapter on heating methods for the accommodation and types of fuel used is useful as a benchmark for progress in the implementation of numerous measures in the National Climate Change Strategy, including those aimed at changing the fuel mix towards less carbon intensive fuels such as natural gas and renewable fuel sources. The information is also significant given that emissions of greenhouse gases from the housing sector are dominated by energy use consumed domestically for space and water heating.

This chapter also goes into some detail on the type of fuel used for heating. There are a number of concerns when it comes to the environmental impact of heating fuels. The first concern is with the emission of CO₂ that accompanies the burning of any hydrocarbon fuel (gas, oil, coal, wood, turf and so on). When fossil fuels such as gas, coal and oil are burned, carbon that has been buried in the earth is being released into the atmosphere. Wood, although it too releases CO₂ when it is burned, is preferable from this perspective. Wood is a renewable energy source that absorbs carbon dioxide while growing, and would have released carbon dioxide in any case if it were allowed to decay naturally. These differences are reflected in the carbon dioxide emission factors for different types of heating fuel. The figures in kilograms of CO₂ per GJ of energy are 55 for natural gas, 64 for LPG, 76 for heating oil, 90 for coal, 108 for peat. (Figures provided by Department of the Environment, Heritage and Local Government).

The second concern is with other by-products that are released when fuel is burned, particularly nitrous oxides (NO_x) and sulphur dioxide (SO₂), both of which have been linked to acid rain. From this perspective, and also because it is the least carbon-intensive of the fossil fuels available for home heating, natural gas is considered a "clean" fuel. Particulate matter is a third concern, primarily linked to the burning of solid fuels. Burning natural gas results in very low levels of emission of sulphur dioxide and other particulate matter (smoke). Oil does not burn as cleanly as natural gas, but the use of efficient boilers substantially reduces the emission of particulate matter. Wood contains only a small quantity of sulphur. Bituminous coal, with a high smoke and high sulphur dioxide content, is banned in several urban centres in Ireland, including Dublin, Cork, Drogheda, Dundalk, Limerick, Wexford, Arklow, Celbridge, Galway, Leixlip, Naas and Waterford. The ban is to be extended in the future to Bray, Kilkenny, Sligo and Tralee. A voluntary agreement was reached in 2002 between the Department of the Environment, Heritage and Local Government and the Solid Fuel Trade Group to reduce the sulphur content of bituminous coal and peatcoke.

Apart from properties of the fuel itself, the relationship between CO₂ or other emissions and heating fuels also depends on the efficiency of the method used to produce the heat. An indication of the relative efficiency of heating systems can be obtained from the Standard Assessment Protocol (SAP) Energy Rating system for dwellings, which is widely used in the UK. Figure 6.1 shows the "default"¹⁶ figures for the seasonal efficiency of different heating systems (Tables 4a and 4b, SAP, 2001).

¹⁶These are the figures to be used when detailed information on the make and model of boiler is not available.

Figure 6.1: Illustrative seasonal efficiency of different forms of space heating from SAP energy rating manual

Boiler or heater type	Seasonal Efficiency (%)
Decorative fuel-effect gas fire, open to chimney	20
Open fire in grate (no back boiler)	32
Open fire with back boiler to radiators:	55
Closed solid fuel fire with back boiler to radiators (in heated space):	60
Oil boiler, standard, pre-1985	65
Oil boiler, 1985-97	70
Oil boiler, 1998 or later	79
Condensing oil boiler	83
Gas boiler, pre-1998, with fan-assisted flue	68
Gas boiler (incl. LPG), 1998 or later, with permanent pilot light	69
Gas boiler (including LPG), 1998 or later, non-condensing, auto ignition	73
Gas boiler, 1998 or later, condensing, automatic ignition	83
Electric storage heaters (at point of use)	100

Source: *SAP Energy Rating Manual* (2001), Tables 4a and 4b.

It is clear from these figures that there can be substantial variations in efficiency even within a given type of fuel, based on the efficiency of the boiler used.

However, the above figures do not take account of energy used in transporting or distributing the fuels involved. Gas is more efficient than electricity for home heating, since a modern gas boiler operates at 70-80 per cent efficiency, while an electrical system will operate at a maximum of 45 per cent efficiency if losses in generation, transmission and distribution are taken into account (Department of Public Enterprise, 1999, Chapter 5).

A related aspect of the efficiency of heating systems is the extent to which the household can control the timing and temperature at which the heating system operates. The SAP Energy Rating manual subtracts 5 per cent from the seasonal efficiency figure for a boiler if there is no thermostatic control of room temperature (SAP, 2001).

This chapter examines the methods used by Irish households to heat the home in the winter, the main fuels used, and the degree to which automatic controls of the heating system are present. An assessment of the technical aspects of the environmental impact of different forms of heating is beyond the scope of the present report, but the survey data provide a useful basis from which future priorities for further study can be identified.

Central Heating

Table 6.1 shows that the majority of households now have central heating. Central heating is defined as any heating system whereby more than one room is heated from a single source. It includes electric central heating, even though this may involve separate heating elements in different parts of the accommodation. Nine out of ten households have central heating. This represents a very substantial increase on the figure of 59 per cent in the 1991 census (*Census 91*, Volume 8–Housing, Table 15). It is also somewhat higher than the 87.6 per cent of households in the 1996 *English House Condition Survey* with central or programmable heating (ODPM, 1998, Table A4.11).

Central heating based on oil is most common (38 per cent of households). Since over 80 per cent of the dual systems also involve oil, the total with oil central heating would be close to one-half of all households. Over one-quarter of households have central heating based on mains gas. Central heating systems based solely on an open fire (4 per cent), solid fuel stove (6 per cent), or electricity (4 per cent) are much less common. Dual systems, as noted above, most often involve the use of oil in combination with solid fuel. Compared to 1991, there has been a very substantial increase in the use of both oil and mains gas for central heating and a fall in the use of solid fuel systems.

The pattern of fuel use is very different from that found in the *English House Condition Survey* (1996), where mains gas heating is dominant (64 per cent); oil accounts for only 3.1 per cent of central and programmable heating systems (ODPM, 1998). This reflects differences in settlement patterns and the coverage of the natural gas network, since a much higher proportion of Irish dwellings are in open country and are outside the natural gas network.

Local Authority renters are most likely to lack central heating (30 per cent). About one-quarter of householders over age 65 living alone, households in the lowest income category and dwellings built before 1941 also lack central heating. At the other end of the scale, over nine out of ten households in Dublin, dwellings built after 1970, householders who are purchasing their accommodation, young all-adult households, couples with dependent children, parents with grown children and households in the three highest income categories have central heating.

Oil central heating generally predominates, with a few exceptions. Local Authority renters are unlikely to have oil central heating (only 5 per cent), and more likely to have mains gas central heating (35 per cent). They are also more likely than average to have central heating based on a solid fuel open fire or solid fuel stove (both 12 per cent). Mains gas central heating is dominant in Dublin (62 per cent), and also accounts for the heating of a substantial proportion of households in other urban areas in the Mideast, Midwest, Southwest and Southeast (34 per cent).

Although oil or dual central heating predominates in rural areas (68 per cent), central heating based solely on solid fuel is also common, particularly in rural areas in the BMW region (15 per cent).

Electric central heating tends to be based on electric storage heaters (80 per cent of electric systems) and is found in close to one privately rented dwelling in five, but in fewer than one in twenty households overall. Central heating based on bottled gas (less than 1 per cent of households overall) or on solar panels or a heat pump (0.3 per cent of households) is also rare.

The importance of the link between central heating and age of dwelling can be seen further in Table 6.2. The table shows how the lack of central heating varies by dwelling age for each category of tenure. Apart from Local Authority rented dwellings and the small number in the "other tenure" category (rent free and voluntary/co-operative sector), virtually all dwellings built since 1990 have central heating. Even among Local Authority renters, only 12 per cent of the dwellings built since 1990 lack central heating. This is also true across income categories, apart from the bottom income group, where one in ten of dwellings built since 1990 lack central heating. In the Local Authority sector, the programme of installation of central heating in older dwellings is evident in that those built between 1971 and 1990 are more likely to lack central heating (43 per cent) than those built before 1970 (32 per cent).

Table 6.1: Percentage of households with no central heating and each type of central heating by tenure, household type, location, dwelling age and equivalised income

	Type of central heating fuel (row percentages)						
	No central heating	Oil	Mains gas	Open fire	Solid fuel stove	Electric	Dual system and other
Tenure							
Own outright	12	43	17	3	7	3	14
Purchasing	3	42	35	2	3	2	13
Local Authority renter	30	5	36	12	12	2	3
Private renter	14	27	30	2	1	18	7
Other tenures	16	41	15	8	1	12	7
Household type							
One person under 65	17	31	27	3	4	9	9
One person 65 or over	25	30	19	5	5	5	11
Couple, dep. child(ren)	4	44	27	3	7	1	14
Others with children	14	29	30	7	7	3	10
Parent(s), grown child(ren)	9	43	23	4	6	2	13
Other all-adult, under 65	6	39	31	2	3	8	11
Other all-adult, 65+	15	39	21	3	7	4	11
Location							
Dublin City and County	6	18	62	1	0	7	6
BMW Urban, 5k+	10	52	7	5	5	5	16
Other Urban, 5k+	10	37	34	6	2	4	8
Rural BMW, <5k	13	46	0	2	15	1	22
Other Rural, <5k	14	53	4	5	7	2	14
Year accommodation built							
Pre-1940	24	32	18	4	8	5	10
1941-1970	11	36	32	4	5	2	11
1971-1990	8	42	22	4	6	2	15
After 1990	2	41	31	3	4	7	12
Household income (Equiv.)							
Under €171 per week	26	27	17	7	8	4	10
€171- €266 per week	11	39	22	4	9	2	14
€267- €355 per week	8	43	24	3	6	3	13
€356 - €476 per week	5	44	27	2	4	3	13
Over €476 per week	3	38	39	1	1	8	10
Total	10	38	26	4	6	4	12
Total 1991*	41	18	10	15	10	3	4

* Figures for 1991 come from *Census 91 Volume 8 – Housing*, Table 15 and refer to the principal means of heating the accommodation in winter.

Table 6.2: Percentage of households with no central heating by tenure, household income and age of dwelling

	Year accommodation built				Total
	Pre-1940	1941-1970	1971-1990	After 1990	
Tenure					
Own outright	24	11	4	3	12
Purchasing	5	4	5	0	3
Local Authority renter	32	32	43	12	30
Private renter	41	13	5	2	14
Other tenures	31	16	9	6	16
Household income (Equiv.)					
Under €171 per week	39	21	22	10	26
€171- €266 per week	21	10	9	2	11
€267- €355 per week	19	8	7	2	8
€356 - €476 per week	15	4	5	1	5
Over €476 per week	12	4	1	1	3

Automatic Time and Temperature Controls

Automatic time and temperature controls for a central heating system can substantially increase its efficiency. Heating can be switched on or off at predetermined times according to the needs of the household, leading to reduced wastage. Temperature controls serve a similar purpose, increasing comfort levels and the efficient use of heating resources. Separate timers and thermostats for the living and sleeping areas provide additional benefits in terms of fine-tuning the system.

Table 6.3 shows the distribution of automatic time and temperature controls according to the type of central heating fuel. In this table, households with dual systems (such as central heating which can be run from either solid fuel or oil, or two separate systems) are classified according to the system most likely to have the automatic controls. For example, a household with a central heating system which can be run from an oil boiler or from a solid fuel source is classified as having oil-fired central heating.

The majority of households with central heating have some form of automatic time control (88 per cent) to switch the heating on or off at specified times. The automatic time control is typically a single timer that controls the heating throughout the accommodation: only one household in ten has separate time controls for different parts of the accommodation.

The distribution of automatic time controls varies by the type of heating system. Such controls are likely to be absent from central heating systems run from a solid fuel open fire or solid fuel stove. Since the fire or stove has to be lit manually in any case, the time control is only "automatic" insofar as it controls the pump or fan that sends the heated water to radiators or distributes the heated air. On the other hand, such controls are absent from fewer than one in ten heating systems based on oil, mains gas or bottled gas.

Table 6.3: Percentage of households with each type of automatic time and temperature control for central heating system by type of central heating

	Type automatic time control (row %)			Type automatic temperature control (row %)			
	No automatic time control	Central time control	More than one time control	No automatic temp. control	Single room thermostat control	More than one room thermostat control	Thermostat on radiators
Main type of central heating							
Oil	5	84	11	78	12	4	10
Mains gas	3	88	9	58	27	6	17
Bottled gas	5	82	13	79	10	7	10
Open fire only	75	23	3	94	2	1	3
Solid fuel stove only	73	25	2	95	2	1	3
Electric storage heating	13	60	28	47	17	15	30
Other electric	29	37	34	62	10	21	25
Total	12	77	10	73	15	5	12

Note: Includes only households with central heating. Households may have both a room thermostat and radiator thermostats. Solid fuel thermostat can be on the pipe or pump to pump water around system and prevent overheating.

Automatic temperature controls are far less common. Nearly three-quarters of households with central heating have no form of automatic temperature control. Most of these do have a boiler thermostat, but this is a safety feature rather than one which allows the household to easily control the heat output of the system.

Automatic temperature control is most common with mains gas (42 per cent) and electric storage heating (53 per cent). It is virtually absent from systems run on solid fuel. The only form of automatic temperature control in solid fuel systems is one that controls the pump or fan, or radiator thermostats that automatically switch on or off the flow of heated water to specific radiators.

The most common form of automatic temperature control is a single room thermostat (15 per cent of households with central heating) or radiator thermostats (12 per cent of households). A single room thermostat is typically located in either the hall or living room and switches on the heating when the temperature in this room drops below a certain level, or switches off the heating when the temperature in the room rises to the set level. Controls which use more than one room thermostat are more advanced since they allow different temperature levels to be set for different parts of the accommodation. Only 5 per cent of households with central heating have more than one room thermostat, although individual radiator thermostats can serve the same function in allowing different temperature levels to be set in different rooms. Systems based on electricity are more likely to have more than one room thermostat (15 per cent of electric storage heating systems and 21 per cent of other electric central heating systems). Electric systems are also the most likely to have radiator thermostats (25-30 per cent), although 17 per cent of mains gas central heating systems are also equipped with them.

Table 6.4 shows the distribution of automatic time and temperature controls by characteristics of the household and dwelling. Note that the table only includes households with central heating. Most households in all categories have some form of automatic time control for the system, but one-third of Local Authority renters with central heating have no such controls and households in the lowest income category (23 per cent) and rural households in the BMW region (21 per cent) are also more likely than average to lack automatic time controls. On the other hand, most households across all categories do *not* have automatic temperature control on the central heating system. Those most likely to have automatic temperature controls are residents of the Dublin region (almost half), where both a single room thermostat (29 per cent) and radiator thermostats (21 per cent) are more commonly found than elsewhere. It is perhaps surprising that 60 per cent of households in the highest income category have no automatic temperature controls on their central heating systems. Local Authority renters with central heating do not stand out as being less likely than other groups to have some form of automatic temperature control, probably because of their concentration in the Dublin region and greater dependence on mains gas central heating which is more likely than the other major systems to have some form of automatic temperature control. Automatic temperature controls are least common in central heating systems in the BMW region (85 per cent of urban households and 88 per cent of rural households have no such controls).

The absence of automatic temperature controls is of concern from an energy-efficiency perspective since the ability to easily control temperatures is a potentially important element in the reduction of CO₂- emissions from domestic heating systems.

Table 6.4: Percentage of households with each type of automatic time and temperature control for central heating system by tenure, household type, location, dwelling age and equivalised income

	Type automatic time control (row %)			Type automatic temperature control (row %)			
	No automatic time control	Central time control	More than one time control	No automatic temp. control	Single room thermostat control	More than one room thermostat control	Thermostat on radiators
Tenure							
Own outright	15	76	9	76	13	4	10
Purchasing	7	81	12	69	18	6	14
Local Authority renter	33	61	6	75	13	2	12
Private renter	9	78	13	69	17	8	12
Other tenures	18	76	6	78	8	5	12
Household type							
One person under 65	12	75	13	69	17	6	14
One person 65 or over	17	77	6	79	12	3	9
Couple, dep. child(ren)	11	78	11	73	14	5	13
Others with children	18	76	6	77	14	3	10
Parent(s), grown child(ren)	13	76	10	72	17	4	12
Other all-adult, under 65	8	80	12	68	18	7	12
Other all-adult, 65+	16	76	8	74	15	5	11
Location							
Dublin City and County	6	83	11	51	29	7	21
BMW Urban, 5k+	11	80	10	85	9	3	5
Other Urban, 5k+	11	82	7	75	14	4	11
Rural BMW, <5k	21	68	11	88	6	3	5
Other Rural, <5k	16	73	11	81	8	5	10
Year accommodation built							
Pre-1940	19	72	8	79	9	4	12
1941-1970	13	79	8	70	18	4	13
1971-1990	12	80	8	74	16	4	10
After 1990	8	76	16	69	16	8	13
Household income (Equiv.)							
Under €171 per week	23	71	6	82	10	3	8
€171- €266 per week	15	76	9	77	12	4	11
€267- €355 per week	12	79	9	75	13	5	12
€356 - €476 per week	9	78	13	71	17	6	12
Over €476 per week	5	82	13	60	23	7	16
Total	12	77	10	73	15	5	12

Note: Includes only households with central heating. Households may have more than one automatic temperature control system.

Stand-alone Heaters

In contrast to central heating which is usually designed to heat the whole dwelling, stand-alone heaters are intended to heat a single room. Their advantage is that they are cheaper to buy and can be quite efficient in heating a relatively small space quickly. On the other hand, they are generally inefficient as a means of heating the whole dwelling.

Table 6.5 examines the types of stand-alone central heating system by whether the household has central heating and by other characteristics of the household and dwelling. Since many households will have more than one type of stand-alone heater, the percentages in the table need not sum to 100. Heaters which run the central heating system are not included here, although some of them (such as a stove or open fire) could also be used as stand-alone heaters.

Almost eight out of ten households have some form of stand-alone heater, rising to 97 per cent of households without central heating. The open fire (53 per cent of households) is most common,¹⁷ and a mains gas fire, solid fuel stove, oil-filled electric radiator, electric fan heater, other portable electric heater or a portable paraffin or gas heater is each found in over 10 per cent of households. Fixed bottled gas or oil heaters are found in 6 per cent of households.

Households without central heating are more likely than other households to have stand-alone heaters based on solid fuel (67 per cent have an open fire and 36 per cent have a solid fuel stove), electricity (24 per cent have oil-filled electric radiators, for instance, and 23 per cent have portable electric fires), and portable paraffin or gas heaters (21 per cent).

Mains gas fires are most common in Dublin (24 per cent), and are almost completely absent from rural areas since these are generally outside the natural gas network. Both open fires and solid fuel stoves are more common in rural areas than in urban areas, particularly in the BMW region where 27 per cent of rural households have a solid fuel stove.

Among households without central heating, mains gas fires and other fixed gas or oil heaters are rare, but an open fire is found in two-thirds of these households overall, rising to 75 per cent of rural households outside the BMW region. Solid fuel stoves are also common, being found in over one-third of these households overall, but in 63 per cent of households in the rural BMW region. Nearly one-quarter of households without central heating have at least one oil-filled electric radiator, rising to 30 per cent of privately rented households.

¹⁷This figure refers to open fires actually used for heating on a regular basis rather than to the installation of open fireplaces.

Table 6.5: Types of stand-alone heating system by presence of central heating, tenure, household type, location, dwelling age and equivalised income

	Type of stand-alone heater (row percentage)									
	None	Mains gas	Other fixed gas/oil	Open fire	Solid fuel stove	Oil-filled elec radiators	Elec. fan heater	Other fixed elec.	Other portable elec.	Portable paraffin /gas
Has central heating?										
Yes	21	11	6	51	9	10	10	8	11	9
No	3	2	4	67	36	24	15	16	23	21
Tenure										
Own outright	15	8	5	58	16	15	12	11	17	14
Purchasing	22	13	8	51	8	9	9	6	7	8
Local Authority renter	26	10	4	47	15	8	7	7	9	10
Private renter	27	12	5	38	3	11	14	9	10	6
Other tenures	20	6	5	46	11	17	9	13	15	10
Household type										
One person under 65	21	10	6	44	9	13	12	10	12	9
One person 65 or over	13	10	5	51	16	19	13	15	23	15
Couple, dep. child(ren)	19	10	7	57	11	10	9	6	7	9
Others with children	28	10	5	49	10	9	8	6	6	8
Parent(s), grown child(ren)	18	9	6	55	13	12	11	10	13	13
Other all-adult, under 65	24	12	6	49	7	9	11	7	9	9
Other all-adult, 65+	13	9	6	56	16	16	12	13	22	15
Location										
Dublin City and County	29	24	8	30	1	9	10	9	11	5
BMW Urban, 5k+	20	2	5	56	11	11	11	11	12	7
Other Urban, 5k+	21	13	7	51	4	12	11	10	10	9
Rural BMW, <5k	12	1	5	67	27	13	9	7	13	17
Other Rural, <5k	12	1	5	69	16	14	12	8	14	14
Year accommodation built										
Pre-1940	14	7	5	56	18	18	13	11	20	16
1941-1970	19	13	6	52	11	13	11	11	14	10
1971-1990	19	9	6	56	11	11	11	8	10	11
After 1990	23	12	8	48	7	7	8	5	6	7
Household income (Equiv.)										
Under €171 per week	18	7	4	54	17	14	9	11	17	15
€171- €266 per week	17	9	6	55	14	12	10	9	13	12
€267- €355 per week	19	9	6	55	12	12	11	8	11	11
€356- €476 per week	20	10	7	54	9	11	11	9	10	10
Over €476 per week	23	15	7	46	5	10	12	7	9	6
Total	19	10	6	53	11	12	11	9	12	11

Note: Percentages need not add to 100 as more than one type of heater may be used.

Table 6.6 shows the distribution of different types of stand-alone heater among households without central heating. These households must rely on stand-alone heaters for all their heating needs.

Table 6.6: Type of stand-alone heating system in households without central heating by tenure, household type, location, dwelling age and equivalised income

	Type of Stand-alone heater (row percentage)									
	None	Mains Gas	Other fixed gas/oil	Open fire	Solid fuel stove	Oil-filled elec Radiators	Elec. fan heater	Other fixed elec.	Other portable elec	Portable paraffin /gas
Tenure										
Own outright	2	3	5	69	43	26	17	15	26	23
Purchasing	2	2	5	79	39	29	10	16	18	24
Local Authority renter	6	1	3	69	31	16	11	8	17	17
Private renter	4	2	1	45	8	30	22	35	28	17
Other tenures	7	4	8	56	29	22	9	15	18	14
Household type										
One person under 65	2	2	2	57	24	26	17	19	21	19
One person 65 or over	4	5	5	60	34	25	13	20	27	20
Couple, dep. child(ren)	4	1	4	78	46	27	13	10	18	22
Others with children	6	1	4	75	27	19	14	9	10	15
Parent(s), grown child(ren)	4	1	5	73	42	21	16	15	23	23
Other all-adult, under 65	3	1	3	66	35	22	16	19	23	27
Other all-adult, 65+	2	2	6	70	44	26	19	13	36	25
Location										
Dublin City and County	5	10	11	50	3	24	17	25	20	19
BMW Urban, 5k+	4	0	1	64	38	20	12	22	26	11
Other Urban, 5k+	5	3	3	71	14	24	15	16	23	17
Rural BMW, <5k	3	0	3	63	63	24	14	10	24	25
Other Rural, <5k	2	0	4	75	41	26	16	14	24	23
Year accommodation built										
Pre-1940	3	2	4	64	35	26	16	18	30	21
1941-1970	4	5	6	73	32	23	14	17	18	23
1971-1990	4	0	3	75	42	22	13	10	18	21
After 1990	1	1	4	46	32	24	16	21	14	23
Household income (Equiv.)										
Under €171 per week	4	2	4	64	33	21	12	17	22	21
€171- €266 per week	3	2	7	67	44	27	19	13	26	22
€267- €355 per week	2	1	3	71	41	28	18	13	22	23
€356- €476 per week	1	2	4	73	31	26	20	17	22	23
Over €476 per week	6	3	2	69	21	25	14	22	26	14
Total	3	2	4	67	36	24	15	16	23	21

Note: Percentages need not add to 100 as more than one type of heater may be used.

Table 6.7: Main method of heating accommodation in winter by presence of central heating, tenure, household type, location, dwelling age and equivalised income

	Main way accommodation is heated in winter (row per cent)					
	Central heating	Open fire	Solid fuel stove	Other stand-alone heater	Open fire & other stand-alone	Solid fuel stove & other stand-alone
Has central heating?						
Yes	94	2	2	0	0	0
No	0	34	26	15	15	9
Tenure						
Own outright	82	6	6	2	2	2
Purchasing	94	2	2	0	1	0
Local Authority renter	61	18	12	3	5	2
Private renter	82	6	1	8	3	1
Other tenures	80	8	3	4	4	1
Household type						
One person under 65	79	7	5	5	3	2
One person 65 or over	70	10	8	5	5	3
Couple, dep. child(ren)	91	3	3	0	1	1
Others with children	80	10	6	1	3	1
Parent(s), grown child(ren)	86	5	5	1	2	1
Other all-adult, under 65	90	4	2	1	1	1
Other all-adult, 65+	80	7	7	2	2	2
Location						
Dublin City and County	93	3	0	3	1	0
BMW Urban, 5k+	85	5	5	2	2	1
Other Urban, 5k+	87	7	2	2	2	0
Rural BMW, <5k	79	4	11	1	2	4
Other Rural, <5k	79	9	6	2	3	2
Year accommodation built						
Pre-1940	70	10	8	5	4	3
1941-1970	85	5	4	2	3	1
1971-1990	87	5	4	1	1	1
After 1990	93	2	2	1	1	0
Household income (Equiv.)						
Under €171 per week	67	13	9	4	4	3
€171- €266 per week	83	6	5	2	2	2
€267- €355 per week	87	4	5	1	2	1
€356- €476 per week	91	3	2	1	1	1
Over €476 per week	95	2	1	1	1	0
Total	85	5	4	2	2	1

Main Heating Method

Table 6.7 shows the main method of heating the accommodation in winter. As we might expect, the vast majority of households with central heating (94 per cent) use this as the main source of heating in winter. Among households without central heating, about one-third rely on an open fire, just over one-quarter rely on a solid fuel stove, a further quarter use either an open fire or solid fuel stove in combination with another type of stand-alone heater, and just under one in six relies on another stand-alone heater used alone.

Local Authority renters are least likely to use central heating as the main source (61 per cent), and are most likely to rely on an open fire (18 per cent) or solid fuel stove (12 per cent).

Older householders living alone, those living in pre-1940 dwellings, and households in the lowest income group are less likely (67-70 per cent) to use central heating than other households, and solid fuel open fires or stoves are more often than average used by these groups.

Solid Fuel Heating

Table 6.8 shows the percentage of households using each type of solid fuel, as the main solid fuel, for heating the accommodation. Just over one-third of households do not use any solid fuel for heating, with substantially higher figures for private renters (56 per cent use no solid fuel) and Dublin residents (over two-thirds use no solid fuel). Those most likely to use some type of solid fuel are households living in rural areas: 89 per cent of households in rural households in the BMW region, and 87 per cent of other rural householders use solid fuel for heating.

The most commonly-used type of solid fuel is coal. Twenty-nine per cent of all households use coal, rising to 37 per cent of those with solid fuel central heating, 41 per cent of those whose main heat source is an open fire or solid fuel stove, and 49 per cent of other households who use solid fuel as a secondary source of heat. A further 14 per cent of households use a combination of fuels, most often (77 per cent of these cases) a combination of coal with another fuel, such as turf or wood.

Following coal, loose turf is the second most popular type of solid fuel. It is burned by 11 per cent of households overall, by 29 per cent of households with solid fuel central heating and by 23 per cent of households whose main source of heat is an open fire or solid fuel stove. Loose turf is most often burned in the Rural BMW region, where 38 per cent of households burn this type of fuel. Burning loose turf is rare in Dublin (1 per cent) and in urban areas outside the BMW region (also 1 per cent).

According to comparison tables from Sustainable Energy Ireland (formerly the Irish Energy Centre), peat burning will yield less heat per tonne than coal. However, because loose turf costs so much less, the cost per unit of heat is substantially lower. This is not true of baled briquettes, however, which work out more expensive than coal (Irish Energy Centre, 2002).

Table 6.8: Main solid fuel used for heating by presence of solid fuel central heating, tenure, household type, location, dwelling age and equivalised income

	Main Solid Fuel (row per cent)						
	Solid fuel not used	Coal	Anthracite	Loose turf	Turf briquettes	Wood	Other/ combination
Solid Fuel Use							
Solid fuel Central Heating	0	37	3	29	7	3	21
Solid fuel is main heat source (not CH)	0	41	2	23	7	3	24
Other solid fuel user	0	49	1	11	14	6	19
Tenure							
Own outright	26	30	1	16	7	4	16
Purchasing	39	29	1	8	7	3	12
Local Authority renter	34	37	2	7	5	1	14
Private renter	56	22	0	3	9	2	7
Other tenures	45	25	1	8	6	3	12
Household type							
One person under 65	44	25	1	8	7	3	12
One person 65 or over	32	27	1	14	8	2	16
Couple, dep. child(ren)	31	32	1	13	7	3	14
Others with children	36	35	1	6	6	1	14
Parent(s), grown child(ren)	31	30	2	11	7	4	15
Other all-adult, under 65	42	26	1	8	8	4	12
Other all-adult, 65+	29	30	1	16	6	5	14
Location							
Dublin City and County	69	15	1	1	7	1	6
BMW Urban, 5k+	25	43	2	6	13	1	10
Other Urban, 5k+	40	39	1	1	5	1	13
Rural BMW, <5k	11	25	1	38	8	3	14
Other Rural, <5k	13	37	1	11	6	7	24
Year accommodation built							
Pre-1940	26	27	1	16	7	6	17
1941-1970	38	27	1	10	7	3	13
1971-1990	32	33	2	11	7	2	13
After 1990	41	28	1	8	7	3	13
Household income (Equiv.)							
Under €171 per week	27	32	1	15	5	3	16
€171- €266 per week	30	30	1	15	6	3	14
€267- €355 per week	32	30	1	12	7	4	14
€356- €476 per week	35	29	1	9	8	3	14
Over €476 per week	47	25	1	4	9	3	11
Total	34	29	1	11	7	3	14

Note: 77 per cent of the "combination" cases involve coal, 60 per cent wood and 47 per cent turf briquettes.

Turf briquettes, blocks of compressed dry peat, are burned as the main solid fuel by 7 per cent of households. The highest use of briquettes as the main solid fuel is found among urban households in the BMW region (13 per cent).

Anthracite (1 per cent) and wood (3 per cent) are used less often as the main solid fuel for heating. Both these fuels are used by only 3 per cent of households with solid fuel central heating.

Satisfaction with Heating System

Tables 6.9 to 6.12 explore the level of satisfaction with the heating system. Table 6.9 shows the percentage of households who are “satisfied” or “very satisfied” with the type of heating in the accommodation, the running costs, the amount of heat available, the level of control over the amount of heat and the ease of use of the system, broken down by the main type of heating used.

Table 6.9: Satisfaction with aspects of the heating system (per cent “satisfied”) by main type of heating

	Per cent “satisfied”				
	Type of heating	Running cost	Amount of heat	Control level over heat	Ease of use
Main way accommodation is heated in winter					
Central heating	95	80	93	92	95
Open fire	63	57	61	60	63
Solid fuel stove	76	70	76	72	73
Other stand-alone heater	55	50	66	70	76
Open fire and other stand-alone heater	64	57	60	64	60
Solid fuel stove and other stand-alone heater	74	70	73	71	71
Total	91	77	89	88	91

The majority of householders are satisfied with each of these aspects of the heating system. Overall, 88-91 per cent of households are satisfied with the type of heating, the amount of heat, the control over the level of heat and the ease of use of the system. Householders are less likely to be satisfied (77 per cent) with the running costs of the heating system. Levels of satisfaction tend to be considerably higher among those with central heating than those relying on stand-alone heaters, and lowest among those relying on an open fire or some other type of stand-alone heating. Households using a solid fuel stove for heating tend to have substantially higher levels of satisfaction than those relying on an open fire.

Table 6.10: Satisfaction with aspects of the heating system (per cent "satisfied") by main type of CENTRAL heating

	Per cent "satisfied"				
	Type of heating	Running cost	Amount of heat	Control level over heat	Ease of use
Type of Central Heating Fuel					
Oil	96	77	94	94	97
Mains Gas	96	86	94	92	97
Bottled Gas	92	73	93	90	95
Open fire	88	71	88	84	86
Solid fuel stove	92	79	91	87	87
Electric Storage	83	71	83	81	86
Other Electric	91	83	91	89	92
Total	95	80	93	92	95

Note: Includes households with central heating only.

Table 6.10 focuses on the level of satisfaction with heating among households with central heating, broken down by the main type of central heating fuel. Levels of satisfaction tend to be highest among those with mains gas central heating, particularly in terms of the running cost. Those with oil central heating are also more likely than those with solid fuel or electric central heating to be satisfied. Households with open fire central heating or electric storage heating are least likely to be satisfied, particularly with the running costs (71 per cent "satisfied") of the system.

Table 6.11 shows how levels of satisfaction with the heating system vary by household characteristics. These patterns will largely reflect differences between these groups in the type of heating system they rely on. Local Authority renters, private renters and low-income households are less likely than other groups to be satisfied with their heating system. Only 65-68 per cent of these groups are satisfied with the running costs involved. Residents of newer dwellings and households in higher income groups tend to be more satisfied than residents of older dwellings and lower-income households with all aspects of the heating system.

Table 6.11: Satisfaction with aspects of the heating system (per cent “satisfied”) by tenure, household type, location, dwelling age and equivalised income

	Per cent “satisfied”				
	Type of heating	Running cost	Amount of heat	Control over heat level	Ease of use
Tenure					
Own outright	92	78	91	90	92
Purchasing	94	80	93	91	95
Local Authority renter	74	65	72	71	74
Private renter	82	68	80	80	85
Other tenures	88	73	89	81	88
Household type					
One person under 65	85	76	85	85	88
One person 65 or over	87	71	85	84	86
Couple, dep. child(ren)	93	79	92	90	94
Others with children	83	67	82	81	84
Parent(s), grown child(ren)	92	77	90	90	93
Other all-adult, under 65	92	80	91	89	92
Other all-adult, 65+	93	77	91	91	92
Location					
Dublin City and County	91	78	89	87	92
BMW Urban, 5k+	89	74	88	87	90
Other Urban, 5k+	90	78	89	88	91
Rural BMW, <5k	90	74	89	89	90
Other Rural, <5k	91	77	90	89	91
Year accommodation built					
Pre-1940	87	72	86	84	87
1941-1970	90	76	89	88	90
1971-1990	91	77	90	89	92
After 1990	93	81	92	91	94
Household income (Equiv.)					
Under €171 per week	83	67	82	81	84
€171- €266 per week	92	76	91	90	92
€267- €355 per week	91	78	90	89	92
€356- €476 per week	93	81	92	90	93
Over €476 per week	94	82	91	90	94
Total	91	77	89	88	91

These variations are largely attributable to differences between households in the proportions with central heating and in the type of central heating. This can be seen clearly in Table 6.12. Among households with oil or gas central heating, Local Authority renters are about as likely as the other tenure groups to be satisfied. Among those with no central heating or with other types of central heating, however, both Local Authority renters and private sector renters are less likely than home owners and purchasers to be satisfied.

Table 6.12: Satisfaction with aspects of the heating system (per cent “very satisfied”) by broad type of heating and tenure

	Per cent “very satisfied” with ...				
	Type of heating	Running cost	Amount of heat	Control level over heat	Ease of use
No central heating					
Own outright	69	64	69	68	68
Purchasing	60	60	58	58	62
Local Authority renter	39	40	40	42	47
Private renter	45	46	55	60	65
Other tenures	64	65	69	70	70
Oil or gas central heating					
Own outright	97	80	96	96	98
Purchasing	97	82	94	93	98
Local Authority renter	95	84	92	92	95
Private renter	91	73	87	85	92
Other tenures	96	74	94	89	95
Other central heating					
Own outright	91	79	91	89	90
Purchasing	91	76	91	86	90
Local Authority renter	79	62	79	73	74
Private renter	81	66	78	78	82
Other tenures	84	74	89	74	84

Summary

Since 1991, there has been a very substantial increase in the proportion of households with central heating, increasing from 59 to 90 per cent. There has also been a shift in the fuel used for central heating away from solid fuel and towards oil and natural gas. Oil remains the dominant heating fuel: 38 per cent of households have oil central heating and a further 12 per cent have dual systems, most of which involve an oil boiler in combination with another heating source. Mains gas central heating is now found in over a quarter of households, rising to 62 per cent in the Dublin area. This move away from solid fuel, especially use of open fires, is to be welcomed as it represents an improvement in the efficiency of heating systems.

There are substantial differences between households in the prevalence of central heating, with the lowest figures found among Local Authority renters (70 per cent), older householders living alone (75 per cent), dwellings built before 1941 (76 per cent) and households in the lowest income group (74 per cent). In contrast, over nine out of ten households in Dublin and dwellings built after 1970 have central heating.

The majority of households with central heating (88 per cent) have an automatic time control on the system, but only 27 per cent have an automatic thermostat to control room temperatures. These controls are important in allowing householders to use their heating systems more efficiently.

As we might expect, households with central heating are more likely than those without it to be satisfied with the type, ease of use, amount of heat available, control over the level of heat and running cost of the system. Those relying on an open fire or on stand-alone heaters are least likely to be satisfied with these aspects of their heating system. Among those with central heating, levels of satisfaction are highest among those with heating based on mains gas or oil.

The analyses in this chapter have important implications not only for the comfort and health of households, but also for the energy use and energy efficiency of dwellings. We will return to this issue in the next chapter where we turn to other aspects of energy use in the home.

Energy Use in the Home

This chapter focuses on energy use in the home, both in terms of features of the accommodation which reduce energy use, such as insulation, and aspects associated with higher energy use, such as the presence of high-wattage appliances.

The residential sector is a significant source of CO₂ emissions in Ireland. In 1998, residential energy use contributed 10.89 million tonnes of CO₂ emissions, accounting for 29 per cent of the total (Dept. of Public Enterprise, 1999, Chapter 2). This was predicted to increase to 12.27 million tonnes by 2010 (26 per cent of the projected total).

Energy use throughout the economy is a pressing issue because of the concerns regarding the world-wide growth in greenhouse gas emissions that led to the adoption of the Kyoto Protocol. The Kyoto Protocol is an agreement reached by the parties to the United Nations Framework Convention on Climate Change to achieve a reduction in greenhouse gas emissions in the period from 2008 to 2012. Ireland, and the EU as a whole, are committed to achieving an 8 per cent reduction, compared to 1990, in order to comply with the Protocol.

As part of the overall EU reduction target of 8 per cent, Ireland's target is to limit emissions of greenhouse gases to 13 per cent above 1990 levels by the first commitment period 2008-2012. The *National Climate Change Strategy* (NCCS), sets out the necessary measures to ensure Ireland meets its Kyoto target. This is a challenging target given that our emissions of greenhouse gases were 24 per cent above 1990 levels in 2000 and, without the measures set out in the Strategy emissions, are set to rise further. Therefore it is critical that all sectors, including the residential sector, achieve significant reductions in greenhouse gas emissions. The measures identified in the Strategy for the housing and residential sector include, improved energy and spatial planning, more efficient buildings, improved efficiency of appliances and changing the fuel mix. The information in this chapter, as well as the previous one, is valuable in identifying those areas of the domestic sector where improvements in energy efficiency are most needed.

The chapter begins by examining the prevalence of energy-saving measures in Irish homes, and then turns to an exploration of the incidence of lifestyle characteristics that increase energy use.

Energy Saving Measures

Wall insulation

Table 7.1 shows the situation in Irish households with respect to wall insulation. While survey interviews offer advantages in terms of wide population coverage and the ability to collect detailed information on household characteristics, one drawback is that respondents may have limited information on the structural features of their accommodation that are not readily visible. This is most evident in the case of wall insulation.

Nevertheless, as seen in Table 7.1, 82 per cent of respondents were able to provide this information. The percentage of respondents who could provide the information was considerably lower among Local Authority renters (76 per cent) and private sector renters (70 per cent). It was also lower in the Dublin region (70 per cent), than elsewhere. The lower figure in Dublin reflects the higher concentration of rental tenures in the region.

Among households who were able to provide the information, 24 per cent do not have wall insulation and 76 per cent have insulation. This could be cavity wall insulation or other types of insulation. Given the changes over time in building standards, the strongest association is with the age of the dwelling. Only about a third of dwellings built before 1941 have wall insulation, rising to virtually all dwellings built after 1990. A large increase in wall insulation is found in those built after 1941, and again after 1971.

Other patterns in Table 7.1 are largely driven by the association between household characteristics and dwelling age. We saw in Chapter 2 that older householders, those who own the home outright, and those in lower-income households were all more likely to live in older dwellings. These are the same groups that are less likely to have insulated walls in the dwelling. Almost half of those over age 65 and living alone do not have insulated walls, with figures of 37 per cent for those owning the dwelling outright and 40 per cent for those in the lowest income category. The association between presence of wall insulation and household income is consistent with earlier findings for energy-saving items generally (Scott, 1997).

The differences in terms of energy implications may well be even larger than those captured in the table, however, since the presence of wall insulation in itself gives only limited information on the depth of insulation. Pre-1980 housing stock is known to have poor insulation standards (Department of Public Enterprise, (1999), *Green Paper on Sustainable Energy*, Chapter 5).

Table 7.1: Presence of wall insulation in the dwelling by tenure, household type, location, dwelling age and equivalised income (row percentages)

	Whether have wall insulation		Per cent where known	
	No wall insulation	Have wall insulation	Not known	Known
Tenure				
Own outright	37	63	18	82
Purchasing	11	89	12	88
Local Authority renter	18	82	24	76
Private renter	17	83	30	70
Other tenures	22	78	22	78
Household type				
One person under 65	26	74	21	79
One person 65 or over	49	51	26	74
Couple, dep. child(ren)	12	88	11	89
Others with children	17	83	23	77
Parent(s), grown child(ren)	31	69	21	79
Other all-adult, under 65	18	82	16	84
Other all-adult, 65+	46	54	20	80
Location				
Dublin City and County	26	74	30	70
BMW Urban, 5k+	20	80	14	86
Other Urban, 5k+	21	79	17	83
Rural BMW, <5k	23	77	8	92
Other Rural, <5k	25	75	12	88
Year accommodation built				
Pre-1940	63	37	25	75
1941-1970	51	49	32	68
1971-1990	12	88	16	84
After 1990	0	100	0	100
Household income (Equiv.)				
Under €171 per week	40	60	23	77
€171- €266 per week	27	73	17	83
€267- €355 per week	20	80	16	84
€356 - €476 per week	19	81	15	85
Over €476 per week	14	86	16	84
Total	24	76	18	82

Note: Wall insulation includes cavity wall insulation and other forms of wall insulation.

Roof Insulation

Table 7.2 shows the percentage of households with attic or roof insulation. Again, this is a crude measure since information on the depth of insulation or its composition would not have been readily available from the householders. The problem of missing information is only slight in the case of roof insulation, however, as virtually all households (98.6 per cent) could provide information on whether or not the accommodation had roof insulation. However, it is likely that this item was not answered consistently by residents of apartments (6 per cent of all dwellings). Just over half of apartment residents in buildings constructed after 1980 claim to have roof or loft insulation, suggesting that a substantial proportion are not interpreting the item as referring to roof insulation in the building, but rather as referring to "ceiling" insulation in their own apartment. The item on roof insulation, therefore, is only considered for residents of houses.

Table 7.2: Presence of roof insulation by tenure, household type, location, dwelling age and equivalised income

	Roof insulation
Tenure	
Own outright	77
Purchasing	92
Local Authority renter	72
Private renter	73
Other tenures	72
Household type	
One person under 65	76
One person 65 or over	60
Couple, dep. child(ren)	91
Others with children	80
Parent(s), grown child(ren)	82
Other all-adult, under 65	87
Other all-adult, 65+	73
Location	
Dublin City and County	85
BMW Urban, 5k+	87
Other Urban, 5k+	84
Rural BMW, <5k	78
Other Rural, <5k	80
Year accommodation built	
Pre-1940	60
1941-1970	76
1971-1990	89
After 1990	96
Household income (Equiv.)	
Under €171 per week	64
€171- €266 per week	80
€267- €355 per week	86
€356- €476 per week	88
Over €476 per week	92
Total	82

Note: Table excludes apartments, mobile homes and caravans (7 per cent of all households).

Overall, 82 per cent of houses have roof insulation, a good deal higher than the 76 per cent with wall insulation. The age of the dwelling is again the dominant factor, with 96 per cent of dwellings built since 1990 having insulated roofs, compared to 60 per cent of those built before 1941. Nevertheless, the percentage of pre-1941 households with roof insulation is considerably higher than the percentage with wall insulation, reflecting the greater ease and lower cost associated with retro-fitting roof insulation.

Among the tenure groups, differences with respect to roof insulation parallel those found for wall insulation with respect to owners and purchasers. Those purchasing the accommodation are most likely to have attic or roof insulation (92 per cent), with lower figures for those owning the dwelling outright (77 per cent). However, Local Authority renters and private renters are less likely than owners to have roof insulation (72-73 per cent). This undoubtedly reflects the fact that renters have less incentive to make a capital investment in property they do not own; and landlords have little incentive to make improvements to energy efficiency when heating costs are almost always borne by the tenants.

Over nine out of ten households in the highest income category have an insulated roof in their accommodation, compared to six out of ten of those in the lowest income category.

Table 7.3 shows the presence of roof and wall insulation by dwelling structure, dwelling age and tenure. The table again focuses on houses, excluding apartments and mobile homes. It also distinguishes between detached houses and detached bungalows, defined here as any one-storey detached house. The latter account for about one-quarter of all housing stock,¹⁸ and are potentially less efficient in energy terms since they have a higher ratio of roof area to overall living area. It is in bungalows that the potential savings associated with roof insulation are likely to be greatest. Similarly, detached houses have a higher ratio of exterior wall area to living area than semi-detached houses, and both have a higher ratio than terraced houses.

Table 7.3 allows a comparison of different dwelling structures and household tenures within each category of dwelling age. We saw in the previous table that, because of improving building standards, newer dwellings were more likely to have both wall and roof insulation than older dwellings. Table 7.3 shows that there is little difference between detached houses and detached bungalows in terms of the proportion with wall insulation, and, after 1941, both these types of dwelling are slightly more likely than semi-detached dwellings to have wall insulation. Terraced houses are least likely to have wall insulation: only 30 per cent of those built before 1941 have some insulated walls, and even among dwellings built between 1971 and 1990 terraced houses lag behind the other dwelling types in this respect.

¹⁸Single storey detached houses account for only 10 per cent of the housing stock in England (ODPM, 1998, Table A1.5).

Table 7.3: Presence of wall insulation and roof insulation in houses by dwelling type, tenure, and age of dwelling

	Year accommodation built			
	Pre-1940	1941-1970	1971-1990	After 1990
Per cent with wall insulation				
Dwelling Type				
Detached bungalow	41	58	89	100
Detached house	40	61	92	100
Semi-detached house/bungalow	41	47	87	100
Terraced house (incl. end of tce)	30	37	83	100
Tenure				
Own outright	36	48	86	100
Purchasing	53	55	90	100
Local Authority renter	36	32	88	100
Private renter	19	59	96	100
Other tenures	31	57	95	100
Total	38	50	88	100
Per cent with roof insulation				
Dwelling Type				
Detached bungalow	51	71	90	97
Detached house	61	81	94	99
Semi-detached house/bungalow	72	87	91	96
Terraced house (incl. end of tce)	60	64	78	89
Tenure				
Own outright	58	76	91	95
Purchasing	78	79	92	98
Local Authority renter	37	52	68	88
Private renter	42	61	77	91
Other tenures	54	73	66	98
Total	60	75	89	96

Note: Excluding apartments, mobile homes and caravans.

It is surprising that detached bungalows are less likely to have roof insulation than detached houses, given the greater potential benefits of insulation. This is most marked among older dwellings: 51 per cent of detached bungalows built before 1941 have roof insulation compared to 61 per cent of detached houses built in this period. The gap had narrowed to only two percentage points among houses built after 1990, however.

Older semi-detached dwellings are more likely than detached dwellings to have roof insulation, but the difference disappears among dwellings built after 1971. Terraced houses again lag behind: those built before 1941 are close to average in terms of the per cent with roof insulation (60 per cent), but, although the percentage with roof insulation rises to 89 per cent for terraced houses built after 1990, the improvement is not as rapid as that seen in other types of dwelling structure.

We have already seen that houses that are being purchased are more likely to have roof and wall insulation than those that are owned outright. Much of this difference is due to the fact that a greater proportion of houses that are being purchased will have been built more recently (Chapter 2). However, the difference persists for houses built before 1970: dwellings of this era that are being purchased are more likely to be insulated than those that are owned outright. This probably reflects a number of factors. One is the greater probability that major improvements will be carried out at the point of dwelling transfer than when the householder is already living in it, both because of differences in the willingness to invest capital in the property and difference in the level of disruption to the household. A second factor is that those who own their homes outright may have fewer resources available for such improvements, particularly householders over age 65, where owning outright is by far the dominant tenure.

Rented houses, both Local Authority and private sector, are less likely to have either wall or roof insulation than those that are owned outright or being purchased. The gap has narrowed – considerably in the case of wall insulation – among dwellings built after 1990.

Other Energy-saving Measures

Table 7.4 shows the percentage of households with different characteristics who have other energy-saving measures in place. Double glazing reduces heat loss through windows, and draft stripping can be an inexpensive way of reducing heat loss through both doors and windows. The benefits of double-glazing in terms of energy-savings are greatest where the ratio of window-area to wall-area is higher. The benefits of draft-stripping are greater where windows or doors are poorly-fitting which can often occur as a dwelling ages. Low-energy light bulbs reduce the amount of electricity required by lighting and are most effective in living areas where lights are left on for long periods. An enclosed porch reduces heat loss through an external door.

Table 7.4: Presence of other energy-saving measures by tenure, household type, location, dwelling age and equivalised income (per cent with each item)

	Double glazing	Draft stripping-windows	Draft stripping-doors	Low energy light bulbs	Enclosed porch
Tenure					
Own outright	62	25	31	36	38
Purchasing	81	31	37	43	30
Local Authority renter	55	24	28	20	17
Private renter	60	26	26	21	14
Other tenures	63	25	31	31	18
Household type					
One person under 65	62	27	32	31	22
One person 65 or over	48	19	24	23	29
Couple, dep. child(ren)	78	30	36	42	32
Others with children	66	26	31	31	24
Parent(s), grown child(ren)	67	27	33	40	40
Other all-adult, under 65	73	29	33	33	26
Other all-adult, 65+	61	24	31	35	40
Location					
Dublin City and County	70	26	33	39	38
BMW Urban, 5k+	73	29	36	35	23
Other Urban, 5k+	73	26	31	36	24
Rural BMW, <5k	64	31	36	30	31
Other Rural,<5k	67	26	30	36	30
Year accommodation built					
Pre-1940	51	23	29	29	28
1941-1970	64	23	30	35	39
1971-1990	65	28	33	39	39
After 1990	92	33	37	38	17
Household income (Equiv.)					
Under €171 per week	51	22	27	23	25
€171- €266 per week	68	26	31	34	34
€267- €355 per week	71	27	33	39	34
€356- €476 per week	75	29	35	40	34
Over €476 per week	78	32	36	41	28
Total	69	27	33	36	31

Over two-thirds of households have double glazing on at least some of the windows in their accommodation, 27 per cent have draft-stripping on windows,¹⁹ 33 per cent have draft stripping on doors, 36 per cent use at least some low-energy light bulbs and 31 per cent have an enclosed porch.

Apart from an enclosed porch, all of these energy-saving measures are more common in newer dwellings than in older ones and are more often found in households with higher incomes than in households with lower incomes. The differences by income are most marked for double glazing and low-energy light bulbs. The difference with respect to double glazing probably reflects the capital cost of adding double-glazing to existing dwellings. While low-energy light bulbs are not expensive, they do cost more than ordinary light bulbs and in the absence of information on the energy-saving benefits associated with their use, low-income households may be reluctant to buy them. Use of low-energy light bulbs is lowest among Local Authority and private renters: only 20-21 per cent of these households have one or more low-energy light bulbs installed.

Differences by age of dwelling tend to be greatest for double glazing, which is typically installed in new dwellings as they are being built, but would have to be retro-fitted to older dwellings.

An enclosed porch is more common in dwellings built between 1941 and 1990 (39 per cent) than in either newer (17 per cent) or older (28 per cent) dwellings.

Housing tenure is also an important factor in accounting for differences in the distribution of these energy-saving items. In this respect, dwellings that are being purchased (which also tend to be newer) fare best, while rented dwellings fare worst. About half of Local Authority rental dwellings and 60 per cent private rented dwellings have double glazing, compared to 81 per cent of dwellings being purchased on a mortgage.

Recent Improvements to Energy Efficiency

In this section we examine improvements to energy efficiency introduced in the dwelling in the last five years. Only households that have been at their present address for five years or more (71 per cent of all households, but only 15 per cent of private renters) are included. The improvements could have been made by the household itself, or by another agency such as the Local Authority or landlord.

The impact on energy efficiency cannot be gauged with precision here, but all of the upgrades in Table 7.5 are likely to have improved efficiency to at least some extent. Replacing external doors will reduce draughts where the old door was poorly-fitting. The same is true of replacing windows, and if double-glazed windows are installed in place of single-glazed windows, the benefits in terms of improved insulation are increased further. Modern central heating boilers tend to be more efficient than older models. Although the installation of an initial central heating system in place of stand-alone heaters may increase overall energy consumption, depending on the intensity with which the stand-alone heaters were used, it is likely to lead to an improvement in efficiency, especially if it replaces heating based on an open fire. Finally, both roof and wall insulation reduce heat loss.

¹⁹This refers to draft-stripping that is separate from that built into modern double-glazed windows.

Table 7.5: Energy-related improvements in last five years by tenure, household type, location, dwelling age and equivalised income: per cent of households carrying out each type of upgrade

	Replace external door	Replace windows	Replace CH boiler/system	Roof insulation	Cavity wall insulation	Other wall insulation	Any of these
Tenure							
Own outright	16	20	13	7	2	2	32
Purchasing	23	26	20	9	3	3	40
Local Authority renter	23	27	19	6	2	1	41
Private renter	4	7	3	3	1	1	12
Other tenures	16	16	12	4	0	3	26
Household type							
One person under 65	16	18	12	5	2	3	29
One person 65 or over	12	17	8	4	1	1	26
Couple, dep. child(ren)	22	25	19	9	3	3	39
Others with children	22	26	22	11	3	2	43
Parent(s), grown child(ren)	21	26	16	7	3	3	39
Other all-adult, under 65	17	20	15	8	2	3	33
Other all-adult, 65+	13	17	11	5	1	2	29
Location							
Dublin City and County	24	27	21	9	2	3	43
BMW Urban, 5k+	21	24	14	9	2	2	37
Other Urban, 5k+	20	24	18	6	2	2	38
Rural BMW, <5k	15	19	10	6	2	3	29
Other Rural, <5k	14	18	12	6	3	3	29
Year accommodation built							
Pre -1940	17	21	14	9	3	4	33
1941-1970	21	25	18	9	3	4	40
1971-1990	22	26	18	6	2	2	40
After 1990	5	5	4	1	1	1	11
Household income (Equiv.)							
Under €171 per week	14	19	11	6	2	2	29
€171- €266 per week	18	22	16	7	2	2	34
€267- €355 per week	21	23	17	8	3	2	37
€356- €476 per week	21	24	16	8	3	3	38
Over €476 per week	20	23	18	8	3	4	37
Total	19	22	15	7	2	3	35

Excludes the 24 per cent of households living at present address for less than five years.

Table 7.5 indicates that of households who had been at the same address for at least five years, 35 per cent had at least one of these types of improvements made to the dwelling. The most common energy-related improvements involved the replacement of doors or windows. Nearly one-fifth had replaced external doors, and 22 per cent had replaced windows. Just under one in six had installed or replaced a central heating boiler or system. Seven per cent of dwellings had roof insulation added, 2 per cent added cavity wall insulation and 3 per cent added other wall insulation.

Those who are purchasing their dwelling and Local Authority renters were most likely (40-41 per cent) to have any of these improvements made. Similar proportions of these two tenure groups had replaced doors or windows or replaced or installed a new central heating boiler/system, but those purchasing the accommodation were more likely to have had roof insulation added (9 per cent) than were Local Authority renters (6 per cent). The minority of private renters who had been at their address for more than five years were least likely (12 per cent) to have had any of these improvements undertaken in recent years.²⁰

The pattern by household type suggests that younger householders were somewhat more likely to have undertaken any of these improvements, as were householders with children and parents with grown children, compared to older householders.

In terms of dwelling age, as we might expect, older dwellings were more likely than the very newest category to have had upgrades carried out. Replacement of doors or windows was more common among dwellings built between 1941 and 1990 than among either newer dwellings (over three-quarters of which already have double glazing) or older dwellings. The installation of a central heating system or a new central heating boiler was also more frequent among dwellings built between 1941 and 1990. The addition of roof and wall insulation, however, was more often undertaken in older dwellings where such insulation is more likely to have been absent or inadequate.

Overall Energy Use

Energy efficiency and energy intensity

Energy efficiency is concerned with minimising the amount of energy that is needed in order to accomplish a given level of "work", where work is understood broadly, as in the physical sciences, to include things like providing heat or light. Energy intensity, on the other hand, is concerned with the absolute amount of energy used per household. The two are not necessarily the same. Although increases in energy efficiency can lead to a reduction in overall energy use, there is also evidence that occupants of more energy-efficient houses tend to "take back" some of their energy savings by using more energy services and maintaining a higher average room temperature (see, for example, Boardman, 1991; Sheldrick, 1998; Stein, 1997). The installation of gas central heating, for example, is likely to increase the efficiency with which a given level of heat is obtained in the home, particularly if the older system was based on an open fire. However, it may well result in the household using more energy than it did previously, because the lower cost per unit of "warmth" and the convenience of central heating is likely to lead to it being used more intensively than was the case with an open-fire-based system. Given that a reduction in overall energy use is what is needed in order to comply with the Kyoto Protocol in terms of reducing CO₂ emissions, both energy efficiency and energy intensity are relevant.

²⁰ It is difficult to infer from these figures the extent of recent energy-related improvements to privately rented dwellings, since some improvements may have been made between tenancies.

In this section, some key aspects of the overall patterns with respect to both energy efficiency and overall energy use are considered. Included in the examination of energy use is a consideration of energy-using appliances. As in all analyses of this type, an element of caution is needed since the use of appliances cannot be directly inferred from their possession. We cannot assume that a household with a shower installed, for instance, uses it in place of a bath. Moreover, the nature of the present survey means that important variations in the quality and effectiveness of items such as roof and wall insulation have not been captured. The type of information available does not allow for the construction of an index akin to the Standard Assessment Procedure (SAP) Energy Rating²¹ of dwellings, as is done in the English House Condition Survey (DTLR, 2000). Nevertheless, the information from the survey does provide valuable pointers to areas where improvements are needed.

Figure 7.1: Energy Index Items

Energy-Saving Items	
Wall insulation	Accommodation has wall insulation (where information available)
Enclosed porch	Accommodation has an enclosed porch on (at least one) external door.
Roof insulation	Accommodation has loft or roof insulation present (houses only)
Double glazing	Double glazing present (may be partial)
Draft Stripping	Draft stripping on windows, doors or both
Low-energy light bulbs	Accommodation has at least one low energy light bulb
Insulated hot cylinder	Has insulated hot water cylinder (or no hot water cylinder)
Central heating controls	Accommodation has automatic time and temperature controls for central heating system, where central heating is present. Boiler thermostat on its own does not count as an automatic temperature control.
Separate Timer for Water Heating	Automatic time control for water heating that is separate from central heating timer (where water heating present)
Energy-Use Items	
Excess bedrooms	Has two or more bedrooms over bedroom standard (see Chapter 4) for household of this size and composition.
Bath only	Bath only: Accommodation has bath (or baths) but no shower
Power shower	Power shower: Accommodation has power shower
Dishwasher	Accommodation has dishwasher
Freezer	Accommodation has freezer
Clothes dryer	Accommodation has clothes dryer
Open fire heating	Accommodation relies on open fire, alone or in combination with other stand-alone heaters, for heating in the winter. (Includes central heating systems based on open-fire with back boiler).

²¹The SAP energy rating of dwellings takes account of thermal insulation of the building fabric, efficiency and control of the space and water heating systems, ventilation characteristics, solar gain characteristics and the price of fuels used in home heating.

Summary indices

This section attempts to provide a summary of the energy situation of households by using two types of measures. One is a measure of energy-saving features of the accommodation of the type discussed already in this chapter. The second measure is an index of the intensity of energy use, and is based on factors such as density of occupation, dwelling structure, and energy-using appliances of a kind that are not in widespread use. Figure 7.1 shows the items used in the energy indices.

These indices are purely summary measures, indicating the proportion of energy-saving or energy-using factors that are present in the dwelling, excluding those for which information is not available or not relevant. Where information is missing (such as for wall insulation), that item is not counted in the base. Where an item is not relevant to a household it is also excluded from the base. The information on roof insulation is considered not relevant, for instance, to households living in apartments because of the difficulties, noted earlier, in their interpretation of the survey item. Thus, for instance, the final column in Table 7.6 shows that, overall, households have 50 per cent of the energy saving items which are relevant to their circumstances. A more refined analysis might attempt to attach different weights to the items on the basis of their typical contribution to energy saving. This has not been done in the present tables, however. Given that the distribution of the different items in Table 7.6 follows a very similar pattern by household characteristics, attaching weights to the items would have little impact on the overall conclusions: households that lack one type of energy-saving item are also likely to lack the others.

From Table 7.6, it is clear that the energy-saving items least likely to be present in households are an enclosed porch, draft stripping (although this may be incorporated into double-glazed windows), energy-saving light bulbs, automatic controls for the central heating system and separate automatic controls for water heating. In terms of central heating system controls, it is most often the room thermostat rather than the timer that is lacking, as we saw in Chapter 6.

Overall, in terms of energy-saving items, those households that fare worst are older adults living alone, Local Authority renters, dwellings built before 1941, private sector renters, and households in the lowest income category. These households have only 38-41 per cent of the energy-saving items present. Households which fare best (55 per cent or more of the items present) are those who are purchasing the accommodation, couples with dependent children, households in the Dublin region, dwellings built after 1990 and households in the highest income category.

The association between low income, private renting and absence of energy-saving items is consistent with earlier work by Scott (1997), who identified lack of information on savings potential, inability to appropriate the benefits of investing in them (particularly affecting renters), lack of access to credit, low income and transaction costs (the time and disruption involved) as among the main predictors of non-ownership of these items.

Table 7.7 shows the items comprising the index of energy use. These energy-use characteristics vary a great deal in terms of the amount of energy use attributable to them, and lifestyle factors are likely to have a major impact as well. For instance, extra bedrooms may be unheated; a detached house may be very well insulated; and appliances will vary in terms of their efficiency. Nevertheless, since the pattern with respect to energy-using characteristics of the household differs from the pattern with respect to energy-saving items, the index provides an important correction to a focus solely on energy-saving measures.

Table 7.6: Index of energy-saving items by tenure, household type, location, dwelling age and equivalised income: per cent with each item and overall index

	Wall insulation	Enclosed porch	Roof insulation	Double glazing	Draft stripping	Energy saving light bulbs	Insulated cylinder/no cylinder	Automatic CH control	Sep timer for water	Energy-saving index
Tenure										
Own outright	63	38	77	62	33	36	74	25	20	47
Purchasing	89	30	92	81	39	43	83	32	27	57
Local Authority renter	82	17	72	55	30	20	69	24	14	41
Private renter	83	14	73	60	31	21	81	33	24	44
Other tenures	78	18	72	63	36	31	87	26	23	47
Household type										
One person under 65	74	22	75	62	35	31	75	33	24	46
One person 65+	51	29	60	48	26	23	73	23	16	38
Couple, dep. child(ren)	88	32	91	78	38	42	79	28	25	55
Others with children	83	24	79	66	34	31	75	23	20	47
Parent(s), grown family	69	40	82	67	35	40	76	29	22	51
Other all-adult, under 65	82	26	87	73	37	33	84	33	24	52
Other all-adult, 65+	54	40	73	61	33	35	76	27	19	46
Location										
Dublin City and County	74	38	85	70	36	39	89	49	28	55
BMW Urban, 5k+	80	23	87	73	38	35	80	17	23	50
Other Urban, 5k+	79	24	84	73	33	36	82	26	22	50
Rural BMW, <5k	77	31	77	64	38	30	62	13	16	45
Other Rural, <5k	75	30	80	67	33	36	74	20	22	48
Year accommodation built										
Pre -1940	37	28	60	51	32	29	72	23	19	39
1941-1970	49	39	76	64	33	35	76	31	21	47
1971-1990	88	39	89	65	36	39	76	27	22	53
After 1990	100	17	96	92	39	38	85	32	29	58
Household income (Equiv.)										
Under €171 pw.	60	25	64	51	29	23	69	19	15	39
€171- €266 pw.	73	34	80	68	34	34	74	24	19	48
€267- €355 pw.	80	34	86	71	35	39	77	26	25	52
€356 - €476 pw.	81	34	88	75	37	40	81	30	26	54
Over €476 pw.	86	28	92	78	40	41	87	40	28	57
Total	76	31	82	69	35	36	78	29	23	50

Table 7.7: Index of energy-using items by tenure, household type, location, dwelling age and equivalised income: per cent with each item and overall index

	Excess bed- rooms	De- tached house	Bath, no shower	Power shower	Freezer	Dish- washer	Clothes dryer	Open fire heating	Energy Use index
Tenure									
Own outright	55	59	16	24	72	42	58	10	42
Purchasing	41	45	5	36	83	63	75	5	44
Local Authority renter	9	12	38	12	55	16	44	30	27
Private renter	19	15	9	24	57	25	51	9	26
Other tenures	32	39	15	22	54	25	46	17	31
Household type									
One person under 65	64	33	14	24	55	28	45	11	34
One person 65 or over	67	44	31	14	49	16	31	18	34
Couple, dep. child(ren)	24	54	7	34	84	64	79	7	44
Others with children	11	24	19	23	73	38	61	18	34
Parent(s), grown child(ren)	27	51	11	29	79	50	68	10	40
Other all-adult, under 65	60	41	8	29	76	45	62	6	41
Other all-adult, 65+	75	56	19	20	68	34	49	11	42
Location									
Dublin City and County	34	12	9	31	77	49	60	5	35
BMW Urban, 5k+	45	29	11	30	66	40	61	11	37
Other Urban, 5k+	40	26	11	24	72	45	66	13	37
Rural BMW, <5k	51	83	19	24	70	42	61	7	45
Other Rural, <5k	48	76	16	28	72	46	63	15	45
Year accommodation built									
Pre-1940	47	52	20	20	61	30	48	16	37
1941-1970	50	36	17	25	70	39	57	11	38
1971-1990	37	48	11	28	78	51	67	9	41
After 1990	42	48	7	35	78	57	71	5	43
Household income (Equiv.)									
Under €171 per week	47	43	29	16	55	20	39	21	34
€171- €266 per week	38	50	16	24	73	41	61	11	39
€267- €355 per week	35	51	10	31	77	51	68	8	42
€356 - €476 per week	42	48	6	32	78	56	71	6	42
Over €476 per week	51	38	4	34	81	59	71	3	43
Total	43	46	13	28	73	46	62	10	40

“Excess bedrooms” is included in this table as a summary index of accommodation that is larger than the needs of the household.²² It identifies households with two or more bedrooms over the bedroom standard for a household of that size and composition. Overall, 43 per cent of households fall into this group, with higher figures for older householders living alone, all-adult households, and householders who own the accommodation outright.

²²The actual floor area of the dwelling was not available as only about one-quarter of respondents could provide this information.

Overall, households have 40 per cent of the energy-using items in the table. The figure is highest (45 per cent) for rural households, and higher than average figures are also found for newer dwellings (43 per cent) of those built after 1990, those in the highest income category (43 per cent), those who are purchasing their accommodation (44 per cent), and couples with dependent children (44 per cent). The figure is considerably lower for Local Authority and private sector renters (27 and 26 per cent, respectively).

Differences according to household characteristics are notable by the particular type of energy-using item that is emphasised. Energy-using appliances (power shower, freezer, dishwasher, clothes dryer) are more often found in higher-income households, those purchasing their accommodation, and households consisting of a couple with dependent children. Detached housing is largely a feature of rural rather than urban areas, while reliance on an open fire for heating (including central heating systems based on an open fire) is more common among Local Authority and low-income households.

Summary

The energy efficiency of dwellings is strongly affected by dwelling age. Overall, 76 per cent of dwellings had wall insulation. However, in dwellings built before 1940, only 37 per cent had wall insulation. Roof insulation was present in 82 per cent of dwellings overall, but in only 60 per cent of those built before 1940. Double-glazing was also less likely to be present in pre-1940 dwellings (51 per cent compared to 69 per cent overall), but the gap is not as wide as it is for wall insulation.

There is evidence of a high level of energy-related home improvements in recent years. Among households who have been at their address five years or more, 35 per cent have undertaken improvements in this area, with the most common being the replacement of windows (22 per cent) or external doors (19 per cent) or adding/replacing a central heating boiler (15 per cent). Only 2-3 per cent of households added wall insulation, however, and 7 per cent added roof insulation. It is worth noting that the rate of improvement to Local Authority rented dwellings was somewhat higher than for households overall. Improvements to the pre-1940 dwellings were not any greater than the rate across all households.

This chapter also examined aspects of the dwelling related to increased energy use, such as having more bedrooms than are needed, presence of a bath but not a shower, electrical appliances such as a power shower, clothes dryer or dishwasher and heating based on an open fire. In general, the energy use items fell into two groups. Reliance on an open fire, having a bath but not a shower tended to characterise poorer households, older dwellings and older householders. The other indicators of energy use tended to be higher for higher-income households, younger householders and newer dwellings. More work is clearly needed in order to assess the net environmental impact of these energy-using items to the energy-savings associated with insulation and double-glazing. This analysis will be needed in order to evaluate the distributional impact of carbon taxation and other measures designed to protect the environment.

This chapter, and the previous one, identified the extent to which low income-households live in poorly insulated, inefficiently and inadequately heated housing. These patterns, combined with spending a relatively high proportion of household income on fuel, are described as *fuel poverty*. The *National Climate Change Strategy* (NCCS) provides that in assessing measures to reduce greenhouse gas emissions, full regard will be given to the contribution of these measures towards achieving social justice and overcoming social exclusion. In particular, schemes to upgrade the stock of Local Authority housing "will address energy efficiency and have a focus on alleviating fuel poverty where appropriate" (NCCS, 2000, p. 4).

8

CHAPTER

Problems, Repairs and Upgrades

In this chapter we discuss the extent and nature of self-reported problems in dwellings as well as aspects of repairs, maintenance, upgrades and extensions. In addition to problems with the accommodation *per se*, we also consider the extent to which local neighbourhood problems were recorded in the course of the interview. The neighbourhood problems in question are those previously identified in other research as adversely impacting on quality of life. These include graffiti on the walls or buildings; rubbish and litter; homes and gardens in bad condition; vandalism and persons being drunk in public.

Type and Severity of Self-Reported Problems with Accommodation

Table 8.1 summarises details on the incidence, severity and duration of self-reported problems associated with respondents' accommodation. The 19 pre-coded categories outlined in the table were presented to respondents who were asked to record whether or not they had each of the problems in question. Those who indicated that they experienced the problem were further asked to indicate whether they felt it was minor, moderate or major and (if it was felt to be a moderate or major problem) how long the problem had persisted.

Two points should be noted in interpreting the figures in the table. First, the information is based on self-reporting by residents themselves. As noted in Chapter 1, there may be differences among respondents in their tendency to emphasise the seriousness of problems with the dwelling. In this regard, we might expect tenants to emphasise such problems to a greater extent than homeowners, because the resolution of the problem is generally outside of the control of the tenant. Further, in relation to problems associated with dampness, it is certainly the case that respondents may not have been clear as to the specific origin or source of the dampness in question. For example, although a household may know that it experiences problems from damp it may not be able to distinguish between damp resulting from ingress through walls or doors; rising damp or condensation dampness. From the list presented to the respondent those associated with damp are probably the only ones to be subject to this potential misclassification.

From Table 8.1 one can see that the most frequently cited problems are condensation dampness (14 per cent); leaking or draughty windows (9 per cent), difficulty in heating the accommodation (8 per cent) and badly fitting doors (8 per cent).

Some problems are clearly of greater significance than others. For example, badly fitting doors may be an extreme irritant but problems such as structural cracks in support walls, subsidence of the floors or rot in timbers other than windows/doors are obviously much more serious. One can see from the table that as many as 5 per cent of households self-report having structural cracks; 1 per cent subsidence of floors and 3 per cent having rot in timbers other than windows or doors.

Although the incidence of reported problems seems high it is, in most cases, largely recorded by the household as being only a "minor" problem. We noted above, for example, that the three most frequently recurring problems were condensation dampness; leaky or draughty windows and difficulties in heating the accommodation. Substantial proportions of households which cite these, however, indicate that they are (in the household's view) of only minor importance. For example, 14 per cent of households report problems with condensation dampness, but for 9 per cent it is considered a minor problem. Similarly, over half of those reporting problems with leaking or draughty windows see it as a minor problem. This appears to be something of an anomaly in that over half of those reporting problems with structural cracks, subsidence of floors or rot in structural timbers view them as minor problems. This may be because householders have limited information on the long-term consequences of these problems or on the likely cost of rectifying them.

Table 8.1: Type, severity and duration of self-reported problems: per cent of householders reporting problems and duration of problem if “moderate” or “major” (row percentages)

	Severity of problem					Duration, if moderate or major	
	None	Minor	Moderate	Major	Any severity	Less than 6 months	6 months or more
Moisture Ingress							
Leaking roof	94	3	1	2	6	15	85
Leaking/moisture ingress through walls	93	4	1	2	7	4	96
Leaks from water pipes etc.	97	2	0	1	3	24	76
Dampness/mould							
Rising damp	94	3	1	1	6	5	95
Condensation dampness	86	9	2	2	14	5	95
General dampness - unknown sources	94	3	1	1	6	3	97
Mould on walls/ceilings etc.	93	4	1	2	7	3	97
Problems with doors or windows							
Leaking/moisture ingress through door/window	94	3	1	1	6	6	94
Corrosion or rot around any external door	97	2	0	1	3	5	95
Badly fitting doors	92	5	2	2	8	3	97
Corrosion or rot around windows	96	2	1	1	4	5	95
Leaky or draughty windows	91	5	2	3	9	4	96
Windows that don't open/close properly	94	3	1	2	6	4	96
Structural problems and rot							
Rot in timbers other than windows/doors	97	1	1	1	3	4	96
Structural cracks in support walls	95	3	1	1	5	6	94
Subsidence of floors	99	1	0	0	1	6	94
Problems with noise and heating							
Noise from neighbouring houses	93	4	1	2	7	10	90
Difficulty in heating your accommodation	92	3	2	3	8	4	96
Other problems							
Other Problems	98	1	0	1	2	1	99

Note: The most common among the other problems involve problems in the area such as traffic noise, pollution, and public disorder.

In terms of duration of problems the most significant point to note is that the vast majority are recorded as being of six months' duration or more. Only in respect of a leaking roof and leaks from water pipes did a substantial proportion of households which experienced the problems in question record that they were of less than six months duration. This is very much in line with what one might expect as it would appear to be only in very extreme circumstances that one could afford to ignore problems associated either with a leaking roof or leaking pipes.²³

Table 8.2 groups the problems identified above into a smaller number of broad categories and examines the variation by household and dwelling characteristics. Only those problems that are considered "moderate" or "major" are included. Eighteen per cent of households experience moderate or major problems in one of these categories. Overall, problems related to doors and windows are most common, affecting 8 per cent of dwellings. Problems with dampness are reported in 6 per cent of households and problems with leaking roof, walls or pipes are found in 5 per cent of households. Seven per cent of households also experience problems related to difficulty in heating the accommodation or noise. Structural problems such as subsidence, structural cracks in support walls and rot in timbers or floors affect 3 per cent of households.

From the body of Table 8.2 one can see that the greatest variation in average number of problems is by tenure, age of accommodation and equivalised household income. It is clear that respondents in Local Authority rented accommodation had, by far, the highest incidence of reported problems (44 per cent), particularly with respect to doors and windows (27 per cent) and noise or heating (22 per cent). There is also a clear relationship with dwelling age: those built before 1940 are most likely to have problems (25 per cent), with the percentage declining steadily for newer dwellings. In dwellings built after 1990, problems are reported by only 12 per cent.

In terms of income, over one-quarter of households in the lowest income group experience problems, compared to one in seven households in the highest income group.

Overall, then, it would appear from the table that the most important drivers of number of self-reported problems include being in the Local Authority rental sector; the accommodation having been built before 1941 and being in the lowest household income quintile. There is relatively little systematic variation with the other classificatory variables or characteristics outlined in the table.

Table 8.3 presents details on problems and characteristics associated with the staircase in dwellings with a staircase. These questions on condition of the staircase were included in the survey to identify whether or not a disproportionately high percentage of elderly persons were living in accommodation in which there were problems with the staircases or in accommodation which had stair winders: steps which narrow to a point at a turn in the stairway. Winders at the top of the stairs can constitute a safety hazard, particularly for vulnerable people such as older persons.

²³ Perhaps the high proportion of long duration problems recorded in Table 8.1 reflects the fact that to be classified by the respondent as a moderate or major problem in the first instance requires that it has been on-going for some time.

Table 8.2: Per cent of households experiencing self-reported problems of each type by tenure, household type, dwelling age location, dwelling age and equivalised income

	Water ingress	Dampness/mould	Problems with doors/windows	Structural problems	Problems involving noise and heating	Other problems	All types
Tenure							
Own outright	5	6	6	2	5	2	15
Purchasing	4	4	5	2	5	3	14
Local Authority renter	13	17	27	10	22	10	44
Private renter	8	10	11	5	13	3	25
Other tenures	5	6	10	3	11	5	23
Household type							
One person under 65	5	7	8	4	8	3	19
One person 65 or over	7	9	9	4	9	4	21
Couple, dep. child(ren)	4	5	6	2	5	3	15
Others with children	11	12	19	7	16	7	34
Parent(s), grown child(ren)	6	6	7	3	7	3	18
Other all-adult, under 65	5	5	6	2	7	3	16
Other all-adult, 65+	5	6	6	2	6	2	15
Location							
Dublin City and County	6	7	9	3	7	5	22
BMW Urban, 5k+	5	6	7	3	9	2	18
Other Urban, 5k+	5	6	7	3	8	3	18
Rural BMW, <5k	5	7	7	3	5	2	15
Other Rural, <5k	5	7	7	4	7	2	16
Year accommodation built							
Pre-1940	10	13	10	5	11	4	25
1941-1970	6	8	7	3	7	3	20
1971-1990	5	5	8	2	6	3	17
After 1990	2	2	5	2	5	3	12
Household income (Equiv.)							
Under €171 per week	8	12	14	5	13	5	27
€171- €266 per week	6	8	8	3	7	4	20
€267- €355 per week	5	5	6	2	5	3	16
€356 - €476 per week	4	4	4	2	5	3	13
Over €476 per week	4	3	6	2	5	2	14
Total	5	6	8	3	7	3	18

Note: Includes only problems regarded as "moderate" or "major".

Table 8.3: Per cent of dwellings where each characteristics of, or problems with, staircase by tenure, household type, location, dwelling age and equivalised income

	Problem/characteristic of staircase			
	No problem	Loose/ broken handrail	Loose/ broken steps	Winders at top of stairs
Tenure				
Own outright	88	4	3	8
Purchasing	86	4	3	10
Local Authority renter	89	6	4	4
Private renter	84	5	4	10
Other tenures	86	8	7	6
Household type				
One person under 65	86	4	3	10
One person 65 or over	85	4	4	11
Couple, dep. child(ren)	87	4	3	9
Others with children	88	6	4	6
Parent(s), grown child(ren)	88	4	3	8
Other all-adult, under 65	87	3	3	9
Other all-adult, 65+	87	4	3	9
Location				
Dublin City and County	85	4	3	11
BMW Urban, 5k+	92	5	3	4
Other Urban, 5k+	87	4	3	10
Rural BMW, <5k	90	5	3	5
Other Rural, <5k	87	5	3	9
Year accommodation built				
Pre-1940	83	5	4	11
1941-1970	87	4	3	10
1971-1990	91	4	3	5
After 1990	85	4	2	11
Household income (Equiv.)				
Under €171 per week	85	6	5	9
€171- €266 per week	88	5	3	8
€267- €355 per week	87	4	3	9
€356- €476 per week	88	3	2	9
Over €476 per week	87	4	3	10
Total	87	4	3	9

Note: Includes only dwellings that have a staircase. Percentages need not sum to 100 as more than one characteristic or problem may be present.

The bottom row of Table 8.3 indicates that in 87 per cent of dwellings in Ireland there is no problem or potential safety hazard associated with the staircase. This rate does not seem to vary systematically with any of the variables in the table. In general, 4 per cent of households record having a loose or broken handrail while 3 per cent record having loose or broken steps. Finally, winders at the top of the staircase are a feature of 9 per cent of households at a national level. There is some evidence to suggest that they may be marginally more associated with the private rental sector; single person households; those in Dublin City and County and in older accommodation – especially that built before the 1940s. The evidence, however, is relatively weak. There does appear to have been an increase in the use of winders at the top of the staircase in dwellings built since 1990 compared to those built between 1971 and 1990. This is likely to reflect efforts to maximise the use of under-stairs space in newer dwellings.

Neighbourhood Problems

In Table 8.4 we shift the focus from problems with the accommodation *per se* to problems with the local area or neighbourhood. In the course of the questionnaire respondents were asked to record how common each of the following neighbourhood problems was:

- Graffiti on walls or buildings
- Rubbish and litter lying about
- Houses and gardens in bad condition
- Vandalism and deliberate damage to property
- People being drunk in public.

Each item was scored from “very common”; “fairly common”; “not very common” to “not at all common”. Table 8.4 shows the percentage of dwellings in which these neighbourhood problems were recorded as being “very” or “fairly” common.

From the table one can see that the reported incidence levels for graffiti, houses/gardens in bad conditions, vandalism and public drunkenness are each in the order of 6-8 per cent. In contrast, “rubbish and litter lying about” are cited as a problem by 15 per cent of households. This means that, on average, 1 household in every 6 to 7 throughout the country feels that rubbish and litter is a “very” or “fairly” common problem in their neighbourhood.

A number of clear trends emerge from the table. First, one can see that a substantially higher than average percentage of the Local Authority rental sector records that it experiences these neighbourhood problems than do other tenure categories. The contrast in the reported incidence of these neighbourhood problems between the Local Authority rental sector and all other categories is particularly striking. For example, in the public housing sector the incidence of problems with graffiti is over four times the national average (29 per cent compared with 7 per cent). The incidence of rubbish/litter is over twice the national average. The reported incidence of homes/gardens in bad conditions, of vandalism and public drunkenness is in each case 3-4 times the national average.

In terms of household type one can see that the “Others with children” category has a much higher recorded incidence of these neighbourhood problems than any other group. This category is largely made up of lone parents with dependent children. The above average incidence of recorded neighbourhood problems for this group is largely attributable to their quite substantial over-concentration in the Local Authority rental sector. Thirty-two per cent of these households are in the Local Authority rental sector (see Table 2.1). The higher incidence of the neighbourhood problems is, therefore, associated with the tenure status of the group in question.

Table 8.4: Percentage of dwellings where certain problems in area are “common” or “very common” by tenure, household type, location, dwelling age and equivalised income

	Graffiti	Rubbish /Litter	Homes/ gardens in bad condition	Vandalism	Public drunkenness
Tenure					
Own outright	4	11	3	5	5
Purchasing	6	14	5	7	7
Local Authority renter	29	37	22	24	23
Private renter	7	16	8	10	15
Other tenures	4	16	2	8	11
Household type					
One person under 65	7	15	7	8	10
One person 65 or over	5	12	5	8	7
Couple, dep. child(ren)	7	14	5	7	7
Others with children	17	27	14	16	17
Parent(s), grown child(ren)	7	12	4	6	6
Other all-adult, under 65	6	15	5	8	8
Other all-adult, 65+	5	13	4	7	5
Location					
Dublin City and County	16	24	9	16	15
BMW Urban, 5k+	6	15	9	8	9
Other Urban, 5k+	6	17	7	7	9
Rural BMW, <5k	1	7	2	2	3
Other Rural,<5k	2	8	3	4	4
Year accommodation built					
Pre-1940	6	15	5	9	10
1941-1970	10	16	7	9	8
1971-1990	8	15	6	8	8
After 1990	4	13	4	6	7
Household income (Equiv.)					
Under €171 per week	9	16	8	10	10
€171- €266 per week	7	15	6	8	8
€267- €355 per week	7	15	5	7	8
€356- €476 per week	7	14	4	7	7
Over €476 per week	5	13	4	7	8
Total	7	15	6	8	8

One can also see from Table 8.4 that there is an above average incidence of neighbourhood problems in Dublin City and County. As one might expect, the incidence of these problems in other urban areas outside the capital falls and is lowest in the rural areas. It is worth noting that as many as 7-8 per cent of households in rural areas with a population of less than 5,000 feel that they have a problem with rubbish/litter. Environmental pollution with litter is not, therefore, confined to large urban areas.

The relationship between neighbourhood problems and household income is also clear from the data with the incidence of all problems falling as household income increases. Once again the association between tenure and income is an important factor here: about 50 per cent of all Local Authority renters are in the lowest income quintile.

Major Repairs and Upgrades

Information on major work carried out in the five years preceding the survey is outlined in Table 8.5. This table is restricted to those households which were resident at their interview address for at least five years, (71 per cent of all households, but only 15 per cent of privately rented accommodation). In the following tables, the "other" tenure includes the small number of private renters at their address for five years or more, as well as renters in the voluntary and co-operative sector and those occupying the accommodation rent-free. The improvements could have been made by the household itself, or by another agency such as the Local Authority or landlord. It is worth noting that the incidence of major works in the private rented sector may not be accurately reflected in these figures. We saw in Chapter 2 that most private renters have been at their present address for less than five years. It is likely that major work would be undertaken between tenancies rather than during the tenure of a particular household. Chapter 7 presented results on upgrades related to energy efficiency. These figures are included again here so that they can be seen in the light of other types of repairs and upgrades.

The top row in the table shows that one-half (50 per cent) of all relevant households in the country had no major repairs or work carried out in the five years preceding the survey. This rate was highest among the "Other Tenure" category (73 per cent).

In aggregate terms, the most frequently cited type of repair or upgrade was the replacing of windows. This was undertaken by just under one-quarter (22 per cent) of all households in the country. Other frequently cited upgrades included the refitting or installation of a kitchen (19 per cent); replacing of external doors/adding of a porch (18 per cent); putting in new floors²⁴ (17 per cent) and refitting or installation of a bathroom (15 per cent). The "other" category mainly comprises minor interior repairs/refurbishments (37 per cent) and work on the garden/yard (driveway, patio, decking, and fencing 33 per cent).

²⁴It was emphasised to interviewers at briefing sessions for the survey that putting in new floors referred to the structural job of laying in a concrete or wooden floor. It does not, for example, refer to laying down parquet or woodblock flooring.

Table 8.5: Types of repairs and upgrades undertaken in the five years preceding the survey by tenure and age of dwelling: per cent of dwellings where each type of upgrade was carried out

	Tenure				Year accommodation built				Total
	Own outright	Purchasing	Local Authority renter	Other 1940	Pre-1970	1941-1990	1971-1990	After	
Repairs and Upgrades									
None	53	43	48	73	52	44	45	75	50
New floors	13	24	17	6	15	17	19	12	17
Structural repairs - walls/ chimneys/foundations	6	7	6	5	11	6	5	2	6
Insert/replace damp proof course	3	4	2	2	6	3	2	1	3
Replace external doors/add porch	16	23	22	8	16	21	22	5	18
Replace windows	20	25	27	10	21	25	25	5	22
Repointing/rendering/ replace gutters etc.	3	4	2	2	6	4	3	1	3
Internal plastering/ dry-lining	8	14	8	6	14	11	8	3	10
New roof or major roof repairs	8	8	3	5	14	9	5	2	8
Provide/refit kitchen	16	26	20	7	15	22	23	8	19
Provide/refit bathroom	12	20	14	9	13	18	16	4	15
Replace/upgrade electrical wiring	10	13	10	6	14	15	9	2	10
Install/replace central heating boiler	9	16	13	4	10	14	14	2	12
Install/replace central heating system	9	15	17	4	10	13	13	2	11
Insulate roof/attic	6	9	6	3	9	9	6	1	7
Insulate cavity wall	2	3	2	1	3	3	2	1	2
Other wall insulation	2	3	1	1	4	4	1	1	3
Modifications to meet disability needs	2	2	2	0	2	2	1	1	2
Other Repairs, upgrades	2	4	2	2	1	3	3	2	3
Conversions and Extensions									
None	92	81	97	98	93	88	86	89	89
Garage added	1	2	1	0	1	1	1	2	1
Garage conversion	2	4	0	0	0	3	3	2	2
Conservatory added	2	4	0	0	2	3	3	4	3
Attic/Loft Conversion	2	5	0	0	1	3	3	3	3
Flat conversion	0	1	0	0	1	0	0	0	0
Other re-arranging internal space	2	6	1	1	3	4	4	2	3
Other extension	1	4	1	1	2	2	3	2	2

Note: Table excludes households at the address for less than five years.

Possibly one of the most important points of note from Table 8.5 is the incidence of reported upgrades in the Local Authority rental sector. One can see that 52 per cent of such households report having had repairs and maintenance carried out in the preceding five years. The incidence is higher only among those purchasing with a loan (57 per cent). The incidence of almost all types of work among Local Authority renters is generally equal to or, in some cases, above the aggregate average level for all households.

As one might expect the incidence of conversions and extensions (shown in the lower panel of Table 8.5) is highest among private purchasers (with an outstanding loan) – 19 per cent of this group undertook some type of conversion or extension in the five years preceding the survey. Incidence levels are lowest in the Local Authority rental and “other tenure” sectors. Only 2-3 per cent of households in both these latter categories record conversions or extensions being carried out in the last five years.

Table 8.6 provides details on the distribution of accommodation according to the number of different types of upgrades undertaken in the five years preceding the survey. The bottom row of the table indicates, for example, half of all households undertook no such activity. A further 27 per cent carried out 1-2 different repairs or upgrades; 15 per cent carried out 3-5 while the remaining 9 per cent of households undertook 6 or more such repairs. A total of 1.7 different types of repair was carried out, on average, across all households in the country.

One can see from the table that, in terms of tenure, the intensity of repair and maintenance activity was highest among home owners with an outstanding loan. These households carried out, on average, 2.2 different types of repair and maintenance in the five years preceding the survey. The second highest level was among the Local Authority rental sector – an average of 1.8.

In terms of household types, the most intense repair and maintenance activity was among those with dependent children (an average of 2.2). Activity was clearly most intense in the Dublin City and County area (2.3 on average). As one might expect the intensity of repair and maintenance activity was lowest for houses built since 1990 and also increased progressively with household equivalised income.

Table 8.6: Number of different types of repairs undertaken in last five years by tenure, household type, location, dwelling age and equivalised income

	Number of different repairs (row per cent)				Mean
	None	1-2	3-5	6 or more	
Tenure					
Own outright	53	27	13	7	1.5
Purchasing	43	27	18	12	2.2
Local Authority renter	48	28	16	9	1.8
Other tenures	73	16	7	3	0.8
Household type					
One person under 65	60	21	12	7	1.4
One person 65 or over	62	25	10	3	1.0
Couple, dep. child(ren)	43	27	17	12	2.1
Others with children	41	29	18	12	2.2
Parent(s), grown child(ren)	45	28	18	9	1.9
Other all-adult, under 65	52	25	16	8	1.6
Other all-adult, 65+	55	31	10	4	1.1
Location					
Dublin City and County	38	29	20	13	2.3
BMW Urban, 5k+	50	24	19	7	1.6
Other Urban, 5k+	45	29	17	8	1.8
Rural BMW, <5k	58	26	10	6	1.3
Other Rural, <5k	58	24	11	6	1.3
Year accommodation built					
Pre-1940	52	25	13	10	1.8
1941-1970	44	29	17	11	2.0
1971-1990	45	29	17	9	1.8
After 1990	75	19	5	1	0.5
Household income (Equiv.)					
Under €171 per week	57	27	11	6	1.3
€171- €266 per week	51	27	14	8	1.6
€267- €355 per week	48	26	16	10	1.9
€356 - €476 per week	44	29	17	10	1.9
Over €476 per week	47	25	18	11	2.0
Total	50	27	15	9	1.7

Note: Table excludes households at the address for less than five years.

Table 8.7: Number of different types of extensions/conversions undertaken in last five years by tenure, household type, location, dwelling age and equivalised income

	Number of different conversions/extensions (row per cent)			
	None	1-2	3 or more	Mean
Tenure				
Own outright	92	8	0	0.10
Purchasing	81	18	1.2	0.26
Local Authority renter	97	3	0	0.03
All other tenures	98	2	0	0.03
Household type				
One person under 65	95	5	0	0.06
One person 65 or over	97	2	0	0.03
Couple, dep. child(ren)	80	19	1	0.27
Others with children	90	9	0	0.12
Parent(s), grown child(ren)	90	10	0	0.14
Other all-adult, under 65	90	9	0	0.12
Other all-adult, 65+	95	5	0	0.06
Location				
Dublin City and County	85	14	1	0.21
BMW Urban, 5k+	88	11	0	0.15
Other Urban, 5k+	88	12	1	0.16
Rural BMW, <5k	92	7	0	0.10
Other Rural, <5k	91	8	0	0.11
Year accommodation built				
Pre-1940	93	6	0	0.09
1941-1970	88	11	1	0.16
1971-1990	86	13	1	0.18
After 1990	89	11	0	0.14
Household income (Equiv.)				
Under €171 per week	96	4	0	0.05
€171- €266 per week	90	9	0	0.12
€267- €355 per week	87	13	1	0.17
€356 - €476 per week	85	14	1	0.21
Over €476 per week	84	16	1	0.21
Total	89	11	1	0.15

Note: Excluding households at the address less than five years.

Table 8.7 deals with the number of different types of extensions or conversions undertaken in the five years preceding the survey. Again, households that have been residing at the address for less than five years are excluded. This shows that 89 per cent of accommodation in Ireland did not have any extensions or conversions undertaken in the period in question. The bulk of the remainder carried out 1-2 conversions or extensions. It is clear that this type of work was most frequently found among home owners with an outstanding mortgage or loan as well as couples with dependent children. The activity in question was strongly linked to household income.

Table 8.8 asks who funded or undertook the major works or upgrades carried out in the accommodation. The table includes only households where major works or upgrades were carried out in the previous five years and is also restricted to households at their present address for five years or longer.

Table 8.8: Who funded repairs or refurbishments undertaken in last five years by tenure

	Who funded work (per cent with funding from each source)			
	Householder or family/ friends	Local Authority	Grant	Other person/ organisation
Tenure				
Own outright	98	2	5	1
Purchasing	99	1	2	1
Local Authority renter	62	46	6	1
All other tenures	62	6	2	36
Total	96	4	4	2

Note: Includes only households where major repairs/refurbishments undertaken who have been at the address at least five years. Percentages need not sum to 100 as more than one type of funding is possible. The 'other person/organisation' category mainly consists of insurance companies and private landlords.

Overall, the household itself or, less often, family or friends paid for or carried out the work in the vast majority of cases (96 per cent). This is true, though to a lesser extent, even among Local Authority renters, where the work was funded or carried out by the householder in 62 per cent of cases. However, in about half of the cases in Local Authority dwellings the work was either carried out by the Local Authority (46 per cent) or funded by a grant (6 per cent). In the case of "other tenures", which includes the private rental sector as well as those living rent-free and the voluntary and co-operative sector, over one-third was carried out or funded by the landlord or property owner.

Summary

This chapter examined the types of problems found in dwellings based on self-reports of the householders, and also major works and upgrades carried out in the last five years. Among those problems regarded as “moderate” or “major” by the householder, problems related to doors and windows were most common (8 per cent), followed by problems related to noise or heating (7 per cent) and dampness (6 per cent). Problems related to the structure of the dwelling (subsidence of floors, structural cracks in walls, rot in timbers other than doors or windows) were much less common (3 per cent).

There were substantial variations by tenure, age of the dwelling and household income. Local Authority renters reported the highest incidence of problems (44 per cent). Around one quarter of households in the lowest income group and in dwellings built before 1940 reported “moderate” or “major” problems with the accommodation.

Respondents were also asked how common a number of disorder problems were in their area or neighbourhood: graffiti, rubbish or litter lying about, homes and gardens in bad condition, vandalism and public drunkenness. Between 6 and 15 per cent of households overall reported these problems as being “fairly common” or “very common”, with the higher figure for “rubbish and litter lying about”. The incidence of these neighbourhood problems was substantially higher for Local Authority residents than for other groups.

Major works and upgrades carried out in the last five years were examined for households who had been at their address for five years or more. Repairs and upgrades were carried out in about half of these dwellings, with the most common being replacing windows (22 per cent), adding or refitting a kitchen (19 per cent) or bathroom (15 per cent), installing new floors (17 per cent) and replacing doors/adding a porch (18 per cent). It is significant that these kinds of major works and upgrades were carried out as often in Local Authority rented dwellings as in those being purchased on a mortgage.

In contrast to repairs and upgrades to the existing accommodation, conversions and extensions were less common (11 per cent) overall, and the rate was substantially higher among purchasers (19 per cent) than among other tenures.

Among owner-occupiers, the vast majority of repairs, upgrades and improvements were funded or carried out privately, by the householder or their family or friends. A substantial proportion of Local Authority renters (62 per cent) funded or carried out at least some of the upgrades in their accommodation, nearly half had upgrades carried out by the Local Authority, and 6 per cent had upgrades that were funded by a grant.

9

CHAPTER

Overall Quality of Accommodation

In this chapter, the different dimensions of housing quality covered in the report are drawn together to examine overall housing quality. We begin with a discussion of the quality of the dwelling itself, and then go on to take account of a wider range of factors, such as the adequacy of the dwelling size, reported problems with the area and affordability. The chapter also explores the characteristics of those on Local Authority housing lists. Finally, we examine the level of satisfaction of householders with the dwelling.

Quality of the Dwelling

The condition of the dwelling itself is examined by making use of the same categories as were used in previous House Condition Surveys in Ireland. There is a limit in the extent to which this is possible, however. Previous House Condition Surveys were explicitly designed to assess the fitness of the dwellings: the accommodation was examined by the survey staff who made a determination as to its fitness based on a number of criteria, including stability, resistance to moisture, presence of sanitary facilities and so on. In general, householders themselves would not be able to do this in a comparable fashion. Nevertheless, it is possible to use questionnaire items to examine the condition of the dwelling using similar headings. In common with previous measures, the quality index used here is designed to identify major problems with the accommodation rather than to capture the presence of amenities that may be important to householders but might not be considered basic necessities.

Another caveat relates to the fact that the seriousness of problems with the dwelling is self-assessed by the householder rather than an outside observer. Some householders may have an incentive to emphasise the severity of a problem, while others may have an incentive to minimise it. Renters in the private and Local Authority sectors might be expected to lay more stress on problems in the dwelling in the hope that this would lead to improvements being made by the landlord or Local Authority.

Table 9.1 looks at the overall quality of the dwelling under a number of different headings. The items are described in Figure 9.1.

Figure 9.1: Items included in the Dwelling Quality Index

Problems with leaks or dampness – major problem with any of the following: leaking roof, rising damp, water ingress through walls or doors/windows, condensation dampness or general dampness of unknown source.

Problems with heating – major difficulty in heating accommodation.

Sanitary facilities – accommodation lacks internal water supply or has rainwater tank only; accommodation lacks treatment of waste or waste disposal; or accommodation without WC.

Food preparation facilities – absence of one of the following: cold water in kitchen, presence of kitchen sink, cooking facilities, food storage, worktop (counted as present even if not adequate to needs).

Ventilation – major problem with windows that do not open/close; bathroom lacks both opening window and extractor fan.

Information on a number of areas covered in previous House Condition Surveys in Ireland is not available in the present survey, as they would have required a type of technical assessment that is not feasible in a household survey. These “missing” areas include stability, adequacy of lighting, air space in rooms (ceiling height), resistance to spread of fire; quality of water inside house; safety of common passages – sudden drops in level etc; and problems with woodworm.

The information in Table 9.1 indicates that, in the country as a whole, 5 per cent of dwellings experience some problems with leaks or dampness. Among the major tenure groups, this is most frequently reported by Local Authority renters (16 per cent), and is also more common than average among those in households comprising “Others with children” (largely lone parents – 11 per cent) and among households with the lowest levels of equivalised household incomes (10 per cent).

This same group of households (i.e. Local Authority renters, “others with children”, low income households, those in dwellings built before 1941) also report substantially higher than average levels of major problems with heating. For example, 13 per cent of Local Authority renters report major difficulty in heating the accommodation, compared with a national figure of 3 per cent. Dwellings built before 1941 are also more likely than average to experience these kinds of problems. In particular, they are more likely to lack basic food-preparation facilities (11 per cent).

These trends are, of course, reflected in the average number of reported problems. The average number of problems recorded nationally (0.2) is lower than each of the Local Authority rented sector (0.5), “others with children” (0.3), dwellings built before 1941 (0.4), and households in the lowest income quintile (0.4). Older people living alone (0.4) are also more likely than average to experience the kinds of problems covered in this table, and 13 per cent of these households lack basic food preparation facilities.

A Broader Look at Housing Quality

Housing quality can be examined in a broader perspective that goes beyond the condition of the dwelling itself. A broader view of housing quality may also include elements such as the adequacy of the space available to the needs of the household, general characteristics of the area where the accommodation is located, and affordability. Table 9.2 includes these items as well as the index of dwelling quality. The definition of the items in the table is shown in Figure 9.2.

Table 9.1: Reported problems with dwelling by tenure, household type, location, dwelling age and equivalised household income

	Per cent of households experiencing ...					Average number of problems
	Major problem with leaks/dampness	Major problem with heating	Sanitary facilities	Food preparation facilities	Ventilation	
Tenure						
Own outright	4	2	4	6	3	0.2
Purchasing	3	1	1	2	1	0.1
Local Authority renter	16	13	3	8	11	0.5
Private renter	6	6	3	5	5	0.2
Other tenures	3	4	5	9	4	0.2
Household type						
One person under 65	5	4	5	7	5	0.2
One person 65 or over	7	4	6	13	6	0.4
Couple, dep. child(ren)	4	2	1	2	2	0.1
Others with children	11	8	1	5	7	0.3
Parent(s), grown family	4	3	3	3	2	0.2
Other all-adult, under 65	4	2	2	3	2	0.1
Other all-adult, 65+	5	3	5	7	4	0.2
Location						
Dublin City and County	5	3	3	3	3	0.2
BMW Urban, 5k+	5	4	2	2	3	0.2
Other Urban, 5k+	5	3	2	3	3	0.2
Rural BMW, <5k	5	3	3	6	3	0.2
Other Rural, <5k	4	3	3	7	3	0.2
Year accommodation built						
Pre -1940	8	6	8	11	7	0.4
1941-1970	6	3	3	5	3	0.2
1971-1990	5	3	1	2	3	0.1
After 1990	1	1	1	2	1	0.1
Household income (Equiv.)						
Under €171 per week	10	7	6	10	8	0.4
€171- €266 per week	6	3	3	4	3	0.2
€267- €355 per week	4	2	2	4	2	0.1
€356 - €476 per week	2	2	2	2	2	0.1
Over €476 per week	2	1	1	2	2	0.1
Total	5	3	3	4	3	0.2

Note: See Figure 9.1 for a description of the items.

Figure 9.2: Items included in the Housing Quality Index

Reported problem with dwelling – presence of one or more of the problems covered in Table 9.1.

Problem with space available – number of bedrooms available is less than the number required for a household of this size and composition (might require by reference to the concept of “bedroom standard”. Note that this does not correspond with the definition in Irish law of overcrowding (see Chapter 4 for details).

Reported problems with the area – one or more of the following are very common in the area where the household lives: graffiti, rubbish and litter lying about, homes and gardens in bad condition, vandalism, public drunkenness.

Difficulty with housing costs – more than one-third of the household’s total net income is spent on rent or mortgage (see Chapter 3 for details). This is only relevant for those households paying rent or a mortgage and is coded as “not a problem” for households who own outright or are living rent-free in their accommodation.

Table 9.2 shows the percentage of households reporting problems with the condition of the dwelling, space, problems in the area, and housing costs. It also shows the percentage of households reporting any of these four types of problems and the average number of these problems for each category of household.

Overall, 27 per cent of households report problems in at least one of these four areas, with the proportion being highest (13 per cent) for the indicators of the condition of the dwelling itself.

As with the indicators in Table 9.1, renters, particularly Local Authority renters, fare less well overall. Over half of Local Authority renters and just under half of private sector renters report problems in at least one of the four areas. Private sector renters most frequently experience difficulties in terms of housing affordability, with 29 per cent spending more than one third of total net household income on rent, compared to 5 per cent across all households.

The group “other households with children”, most of whom are lone parents and many of whom are renters, also fare relatively poorly with 50 per cent reporting problems in at least one area and an average of 0.7 problems, compared to an average of 0.3 overall.

Table 9.2: Indicators of overall quality of housing and average number of these difficulties by tenure, household type, location, dwelling age and equivalised income

	Per cent of households reporting ...					
	Problem with condition	Problem with space	Problems in area	Affordability problems	Any of these problems	Number of problems
Tenure						
Own outright	13	6	5	0	22	0.2
Purchasing	6	6	7	6	21	0.2
Local Authority renter	33	18	25	1	54	0.8
Private renter	17	11	9	29	49	0.6
Other tenures	14	5	7	3	25	0.3
Household type						
One person under 65	17	0	8	14	33	0.4
One person 65 or over	22	0	7	2	29	0.3
Couple, dep. child(ren)	8	11	7	3	24	0.3
Others with children	22	18	16	14	50	0.7
Parent(s), grown child(ren)	11	10	6	0	25	0.3
Other all-adult, under 65	9	5	7	5	22	0.3
Other all-adult, 65+	16	1	7	0	22	0.2
Location						
Dublin City and County	12	10	14	8	34	0.4
BMW Urban, 5k+	11	6	6	8	25	0.3
Other Urban, 5k+	12	6	8	5	25	0.3
Rural BMW, <5k	14	7	3	1	23	0.2
Other Rural, <5k	14	6	4	3	22	0.3
Year accommodation built						
Pre -1940	25	7	9	4	37	0.4
1941-1970	14	8	9	2	27	0.3
1971-1990	10	10	8	3	25	0.3
After 1990	5	3	6	9	20	0.2
Household income (Equiv.)						
Under €171 per week	25	7	10	7	39	0.5
€171- €266 per week	13	8	8	5	28	0.3
€267- €355 per week	11	9	7	4	26	0.3
€356- €476 per week	8	7	6	4	22	0.2
Over €476 per week	6	5	7	4	19	0.2
Total	13	7	8	5	27	0.3

Note: See Figure 9.2 for a description of the items.

There are some clear differences between urban and rural areas in the types of problems reported. Dublin tends to fare less well than other areas overall, but is at about the average in terms of the proportion of households reporting problems with the condition of the dwelling itself. Part of this difference is undoubtedly due to the greater prevalence of rental tenures in the city and its environs. Outside of Dublin, reported problems with the condition of the dwelling tend to be more common in rural areas, while problems with the area and with affordability tend to be more common in urban areas.

In terms of dwelling age, as we would expect, problems with the condition of the accommodation are more often reported in older dwellings, while difficulties in affordability are more common in those built after 1990 – mainly because a greater proportion of these newer dwellings are still being purchased rather than owned outright.

There is also a clear pattern across the household income groups, particularly in terms of the contrast between the lowest income households and those in the other groups. Almost two out of five households at the bottom of the income distribution report at least one problem, with the highest figures for dwelling condition (25 per cent) and problems in the area (10 per cent).

Local Authority Housing Applicants

Households who cannot afford to provide adequate accommodation from their own means are entitled to apply to the Local Authorities for assistance, which can take the form of re-housing or assistance to purchase accommodation through schemes such as Shared Ownership. Table 9.3 shows that, overall, 2.2 per cent of households had at least one member who was on a Local Authority waiting list. This is made up of 0.8 per cent in which the whole household is on a waiting list as well as an additional 1.4 per cent in which at least one household member is on a housing list.

It is clear from Table 9.3 that, across tenure categories, the highest incidence of registration on a Local Authority list is in the private rental sector – 10 per cent of households in that sector have someone on a housing list. This represents an incidence level in the private rental sector that is about 4.6 times the national average identified in the survey.

Registration on a housing list by those currently in the Local Authority rental sector is also well above the national average – 6 per cent. It is also higher than the national figure among other households with children (11 per cent of this group is registered) and the lowest income quintile category (4 per cent of households in that category are registered).

Table 9.3: Percentage of households where someone is on Local Authority housing list by tenure, household type, location, dwelling age and equivalised income

	On Local Authority Housing List? (row per cent)		
	No	Whole household	Some household members
Tenure			
Own outright	99	0	1
Purchasing	99	0	1
Local Authority renter	93	2	4
Private renter	90	6	4
Other tenures	98	1	1
Household type			
One person under 65	98	0	1
One person 65 or over	100	0	0
Couple, dep. child(ren)	98	1	2
Others with children	89	6	5
Parent(s), grown child(ren)	99	0	1
Other all-adult, under 65	99	0	1
Other all-adult, 65+	100	0	0
Location			
Dublin City and County	97	1	2
BMW Urban, 5k+	96	2	2
Other Urban, 5k+	97	1	2
Rural BMW, <5k	99	0	1
Other Rural, <5k	99	0	1
Year accommodation built			
Pre-1940	98	1	1
1941-1970	97	1	2
1971-1990	97	1	2
After 1990	99	1	1
Household income (Equiv.)			
Under €171 per week	96	2	2
€171- €266 per week	98	1	2
€267- €355 per week	98	1	2
€356 - €476 per week	99	0	1
Over €476 per week	99	0	1
Total	97.8	0.8	1.4

Table 9.4 tabulates the quality issues discussed in Table 2 against whether someone in the household is on a Local Authority housing list. Local Authority housing applicants clearly fare worse on all dimensions than those who have not applied for Local Authority housing. Eighty-three per cent of households where the whole household is waiting to be rehoused and 72 per cent of households where some members are awaiting rehousing report problems in at least one area, compared to 26 per cent of non-applicant households. Where the whole household is on the Local Authority list, the dominant quality concerns are the condition of the accommodation (46 per cent) and affordability (39 per cent). Where some household members are awaiting rehousing the dominant concern is with the space available (47 per cent), followed by the condition of the accommodation (24 per cent).

Table 9.4: Indicators of overall quality of dwelling and average number of these problems by whether household is on Local Authority housing list (per cent with each quality problem by whether on housing list)

	On Local Authority Housing List?			Total
	No	Whole household	Some household members	
Problem with condition of dwelling	12	46	24	13
Problem with space available	6	29	47	7
Reported problems in area	7	24	17	8
Affordability difficulties	4	39	16	5
Any of these problems	26	83	72	27
Number of problems	0.3	1.4	1.0	0.3

See Figure 9.2 for full description of quality indicators.

Satisfaction with Housing

Table 9.5 outlines details on satisfaction with the general condition of the accommodation, the area in which it is located, the amount of privacy that the household has and the overall running cost of the accommodation. These four items were presented to respondents who were asked to record their level of satisfaction – from “very satisfied” to “very dissatisfied” – with each. The figures in the table relate to the percentage of persons who record themselves as being “very satisfied” or “satisfied” with each of the four items in question.

One can see that, in aggregate terms, 92 per cent of households are satisfied with the general condition of their accommodation; 95 per cent with area/neighbourhood and with the amount of privacy they have; and 86 per cent with running cost. Local Authority renters are least likely to be satisfied across all four items, although it is worth noting that the majority of this group is satisfied. Just under three-quarters are satisfied with the general condition of their accommodation and with running costs and 81 per cent are satisfied with their neighbourhood and with privacy.

Table 9.5: Percentage “satisfied” or “very satisfied” with general condition of accommodation, area where it is located, privacy, overall running cost by tenure, household type, location, dwelling age and equivalised income

	General condition	Area/ neighbourhood	Privacy	Running Cost
Tenure				
Own outright	93	97	97	87
Purchasing	96	96	95	89
Local Authority renter	74	81	81	73
Private renter	83	90	90	74
Other tenures	89	94	94	85
Household type				
One person under 65	87	93	93	84
One person 65 or over	88	96	97	83
Couple, dep. child(ren)	94	96	95	87
Others with children	81	86	86	76
Parent(s), grown child(ren)	93	96	97	87
Other all-adult, Under 65	93	95	95	88
Other all-adult, 65+	94	97	97	88
Location				
Dublin City and County	92	93	94	85
BMW Urban, 5k+	91	92	91	84
Other Urban, 5k+	93	94	93	88
Rural BMW, <5k	90	97	96	84
Other Rural,<5k	92	97	96	87
Year accommodation built				
Pre-1940	85	95	95	82
1941-1970	91	95	96	85
1971-1990	92	94	94	86
After 1990	97	96	94	89
Household income (Equiv.)				
Under €171 per week	84	92	93	78
€171- €266 per week	91	94	94	85
€267- €355 per week	93	96	95	87
€356- €476 per week	95	96	95	88
Over €476 per week	95	96	95	90
Total	92	95	95	86

As one might expect, in general, higher levels of satisfaction are expressed by those living in more modern accommodation – built after 1990 – and those from the higher income categories.

Table 9.6 examines satisfaction with the accommodation by the presence of the kinds of quality problems reported in Table 9.2, above. Table 9.6 shows the percentage of households dissatisfied (“dissatisfied” or “very dissatisfied”) with the different aspects of their accommodation, by the type of problem.

Table 9.6: Per cent of households dissatisfied with aspects of the accommodation by indicators of housing quality

Type of problem	Per cent dissatisfied with ...			
	General condition	Area/ neighbourhood	Privacy	Running cost
Problems with condition	22	6	7	18
Problem with space available	11	6	7	11
Reported problems in area	13	14	11	12
Affordability difficulties	7	3	4	14
Any of these problems	13	6	6	12
Per cent dissatisfied (all households)	5	2	3	5

See Figure 9.2 for full description of quality indicators.

Overall, between 2 and 5 per cent of households are dissatisfied with any of these aspects of their accommodation, with the higher figures (5 per cent) for the general condition of the accommodation and for running costs than for the neighbourhood and the amount of privacy available.

The percentage dissatisfied increases substantially with the presence of reported problems in the accommodation, and there is a broad relationship between the type of problem reported and the aspect of the accommodation with which the household is dissatisfied. Thus, 22 per cent of households in accommodation where there is a problem with the condition of the dwelling express dissatisfaction with the general condition of the accommodation. Fourteen per cent of those in areas characterised by disorder problems are dissatisfied with the area where the accommodation is located, and 14 per cent of those paying more than one-third of total household income on rent or mortgage are dissatisfied with the running cost of the accommodation.

Nevertheless, where any of the five types of problem is reported, dissatisfaction tends to be greater than average with all aspects of the dwelling. This reflects the fact that problems tend to be clustered: for instance, a dwelling in poor condition is more likely to be located in an area with problems of disorder. This can clearly be seen in the next table.

Table 9.7 shows the association between the five different quality dimensions with each of the other dimensions. The table shows the percentage of households reporting the type of problem at the top of the column that also report the type of problem listed in the row. Thus, for instance, in those households reporting problems with the condition of the dwelling itself, 11 per cent also report problems with the space available and 16 per cent report problems in the area or neighbourhood.

Table 9.7: Association between types of reported problems: per cent of households reporting the problem at top of column who also report the problem in each row

Per cent of householders reporting..	Problem reported with ...					Total
	Condition of dwelling	Space available	Area/ neighbourhood	Affordability	Any of these	
Problems with condition	100	20	26	14	47	13
Problem with space available	11	100	13	7	27	7
Problems in area	16	14	100	7	28	8
Affordability problems	5	4	5	100	17	5
Any of these problems	100	100	100	100	100	27

See Figure 9.2 for full description of quality indicators.

The extent to which the different types of problem are related can be gauged by comparing the figures in each row to the figure in the final column, which shows the percentage of all households reporting a problem. Thus, 7 per cent of all households report problems with space (insufficient bedrooms), but this rises to 11 per cent where there are problems with the condition of the dwelling and 13 per cent where there are disorder problems in the neighbourhood. In this particular example, we can see that problems with space are related to the condition of the accommodation, but even more strongly related to problems in the neighbourhood or area.

There is a marked association between problems with the condition of the dwelling and location in an area where public order problems are commonly reported: 26 per cent of households reporting problems of disorder also report problems with dwelling condition, compared to 13 per cent overall.

Affordability is not strongly related to any of the other types of problems. This may reflect the limited nature of this measure: it refers to direct housing costs (rent and mortgage payments) so that it is only measured for renters and mortgage-holders, themselves two very divergent groups in terms of income and general standard of living.

Although the different measures of housing quality are related, they are sufficiently independent to form the basis of different types of policy response. Dwelling condition, problems with the space available and affordability have all been core concerns in the traditional policy response to housing issues: the provision of subsidised Local Authority accommodation and subsidies for rent and mortgage interest through the Rent and Mortgage Supplement schemes. Problems of public disorder in the area often fall outside the remit of housing policy, requiring a multi-agency response that includes local resident groups and the Gardaí, although estate management in Local Authority estates also has a key role to play here.

Finally, Table 9.8 shows the association between length of time at the address and the indicators of satisfaction and of dwelling quality. It was noted in Chapter 2 that, partly because of the dominance of home ownership, a relatively high proportion of households has been at the same address for twenty years or more. In this context, it is worth asking whether longer duration of tenure is associated with high levels of satisfaction.

Table 9.8: Housing quality and satisfaction by length of time at address: per cent experiencing problems and per cent satisfied by duration of tenure

	Years at address					
	< 2 yrs.	2-4 yrs.	5-9 yrs.	10-19 yrs.	20-29 yrs.	30+
Reported Problems with Dwelling						
Problem with condition	12	9	11	9	11	21
Below bedroom standard	6	5	6	8	13	5
Problems in area	6	8	9	9	7	6
Affordability problems	21	9	4	1	0	0
Any of these problems	35	24	23	22	27	30
Per cent satisfied or very satisfied with ...						
General condition	90	94	92	93	92	89
Area/neighbourhood	94	94	95	94	96	97
Privacy	92	93	94	94	96	97
Running cost	81	87	88	87	87	84

See Figure 9.2 for full description of quality indicators.

The figures in Table 9.8 show that differences by duration of tenure are generally not large. On the one hand, reported problems with the condition of the dwelling are greatest among those with longer duration of tenure: 21 per cent of households at the address for 30 or more years have problems with the condition of the dwelling. On the other hand, difficulties relating to affordability are more prevalent among those who have been at their address for a short period. Private sector renters, for whom affordability issues are most pressing, are concentrated among those with the shortest tenures.

Satisfaction with the condition of the accommodation, with the area/neighbourhood, the level of privacy and with the running cost of the accommodation also tends to be lower at the extremes in terms of duration of tenure. While there is no evidence that long-term residents are living in particularly favourable circumstances, there is some weak support for the argument that long-term residents may be disadvantaged in terms of the condition of their accommodation. This pattern is most likely driven by the fact that the dwellings will tend to be older than average.

Summary

This final chapter of the report has drawn together the results of the more detailed analyses in earlier chapters to provide a broad overview of housing quality in Ireland. In a number of respects, it has gone beyond what was possible in the 1991 Survey of House Conditions. The new areas include material on housing costs relative to income, on a broad range of affordability indicators, on issues related to problems in the area where the accommodation is located, and on the satisfaction of householders with their accommodation. In other respects, however, it was unable to do some of what was possible in the 1991 Survey. In particular, the information in this survey was based on a questionnaire administered to the householder and did not attempt an assessment of the fitness of the accommodation. This limits us somewhat in that some potential problems with the dwelling could not be measured in the present survey, such as resistance to the spread of fire and the minimum airspace per person specified for a bedroom. We are also somewhat limited where similar items are covered in both surveys in that we cannot be confident that the householder's assessment will give the same

overall picture as that derived from a surveyor. This is particularly true in the area of problems with the accommodation, where we rely on the householder's judgement as to the seriousness of the problem.

The household and dwelling characteristics that emerged as being most strongly related to housing quality were dwelling age, tenure and location. The key findings will be summarised in the following paragraphs under each of these three headings.

Dwelling age

The link between dwelling age and problems with the accommodation is partly due to the fact that newer dwellings were built at a time of higher building standards in terms of insulation, damp-proofing and so on, and partly to the fact that poor maintenance in earlier years may have led to a deterioration in the dwelling fabric. To some extent, the problems are also linked to the fact that older dwellings are often occupied by older householders on fixed incomes who are less able to afford repairs and upgrades.

Dwellings built before 1940 had a higher incidence of reported problems with the condition of the accommodation. One-quarter reported problems with the condition of the dwelling according to any of the five criteria examined in this chapter: leaks or dampness, heating, sanitary facilities, food preparation facilities and ventilation. Almost one-quarter lack central heating (Chapter 6). The relatively poor insulation standard of older dwellings was very clear in Chapter 7: only 37 per cent of pre-1940 dwellings had wall insulation and 60 per cent had roof insulation, compared to virtually all dwellings built after 1990. Households in these older dwellings were also less likely to have an insulated cylinder or energy-saving light bulbs – items that are less expensive to add than wall or roof insulation.

Local Authority tenure

One finding which has emerged strongly from the present study is that in almost all respects, Local Authority renters are in a less favourable position than other tenures. Two exceptions worth noting are direct housing costs and recent repairs and upgrades to the dwelling. Because of the differential rents system operated by Local Authorities, whereby rent levels are related to household income, and because Local Authority renters tend to have low incomes, Local Authority rents are low. The second area in which Local Authority renters are not at a disadvantage is in terms of repairs and upgrades to the dwelling in recent years. In this respect, as discussed in Chapter 8, Local Authority renters fare at least as well as the other tenures.

As noted elsewhere in the text, the reliance of the survey on judgements regarding the seriousness of problems in the accommodation is likely to affect comparisons across tenures. Renters have a greater incentive to emphasise the seriousness of the problem in the hope of bringing about an improvement in their situation.

On the other hand, there are real reasons why we would expect to find differences in the distribution of problems across tenure types. Owners will generally have higher incomes (especially when compared to Local Authority renters), and be better able to afford to rectify problems which they regard as serious. Moreover, maintenance, repairs and upgrades are their responsibility and they have an incentive to carry them out to reduce the risk of further deterioration to the dwelling. Renters are generally not responsible for major repairs and their incentive is very limited when it comes to costly upgrades that will enhance the value of the dwelling to the owner. Local Authority renters, in particular, are not in a strong position when it comes to dissatisfaction with the dwelling. Almost by definition, they are resource-poor. They are a group selected into their tenure on the basis of low incomes. Further, with the exception of Local Authority apartments in Dublin and other cities, which have not been made available for sale by the Local Authorities, Local Authority renters whose income situation improves have traditionally purchased their accommodation and moved out of that tenure category. In addition, they have a much more difficult time than private sector renters in "voting with their

feet". A move to the private rental sector would entail a large increase in rent paid and there are typically long delays associated with applications to transfer to Local Authority dwellings that are considered more desirable. Given this context, higher levels of dissatisfaction might be expected.

Urban-Rural location

The house condition survey, with over 40,000 cases, was designed to allow the results to be produced at the level of the Local Authority. Detailed tables have been made available to Local Authorities and the database has been provided to the Department of the Environment, Heritage and Local Government for planning purposes. This report, however, has focused on the national situation and on broad regional patterns.

In terms of the broad regional issues, there were a number of areas where important differences were found with respect to overall house quality. Some of these will be due, in part, to the different distribution of tenures across regions. Local Authority renters and private renters account for a higher proportion of all households in Dublin than in other parts of the country.

In most respects, at the national level, it was the urban or rural location of the dwelling rather than its regional location that emerged as being important. Outside of Dublin, the BMW urban areas often had more in common with other urban areas, and BMW rural areas had more in common with other rural areas than urban and rural within each of these broad regions. This is due to the fact that rural dwellings share common features: they tend to be detached one-off houses, rural residents are more likely to own the dwelling outright and to have been at their address for longer periods than their urban counterparts.

A number of important differences between dwellings in rural and urban areas arise with respect to access to services. In Chapter 5, it was very clear that reliance on private methods of sewage disposal was almost exclusively a feature of households in the open countryside. While a greater proportion of households in the countryside had access to mains water supply, private wells and group schemes were the main source of internal water supply for over half of them. Further, connection to the mains electricity supply is virtually universal across both urban and rural areas but connection to the natural gas network is mainly confined to Dublin and, to a lesser extent, urban areas outside the BMW.

Differences between urban and rural areas in terms of the condition of the accommodation were relatively minor, largely because newer dwellings are found in both types of area: the rate of new house building in the open countryside has not declined substantially in the last decade. Nevertheless, rural dwellings are somewhat less likely than urban ones to have central heating and, where they have central heating, they are more likely than urban residents to use solid fuel central heating rather than systems using gas or oil.

Differences in housing costs are evident in that the proportion of households paying more than one-third of their income on rent or mortgage payments tends to be higher in urban than in rural areas. To some extent, this is also reflected in the greater space available to households in rural areas: rural dwellings are more likely than urban dwellings to have a greater number of bedrooms than are needed, given the household size and composition.

1

APPENDIX

Questionnaire



NATIONAL HOUSE CONDITION SURVEY, 2001/2002

Carried out on behalf of

The Department of the Environment and Local Government

Local Authority Number: Cluster H'hold Local Authority Name _____
Date Time Interview Began (24 Hour Clock)
Day Month Year

Interviewer use only: Size of location in which household is situated:

Open Country ₁ Town (1,500-2,999) ₃ Town (5,000 - 9,999) ₅
Village (200 - 1,499) ₂ Town (3,000 - 4,999) ₄ Town or city (10,000 or more) ₆

Interviewer: Estimated Value of the Accommodation if it were to be sold: £ _____

SECTION A: BACKGROUND ON ACCOMMODATION

Q.1 First, I'd like to record the general type of the dwelling.

Detached house/bungalow ₁ Caravan/Mobile Home ₆
Semi-detached house/bungalow ₂ Other/Specify ₇
Terraced house (incl. end of tce) ₃
Purpose built flat/apartment etc. ₄ ⇒ Q2 On what floor is your apartment located? _____
Flat/apartment in converted house etc. (incl. bed-sits) ₅ ⇒ [Interviewer: Enter Ground, 1st, 2nd, 3rd etc. as appropriate]

Q.3 Is the building in which your accommodation located shared with any form of commercial or business activity such as an office, shop or other business? Yes ... ₁ No ... ₂ ⇒ GO to Q.5

Q.4 Is anyone in your household involved in this business? Yes ₁ No ₂

Q.5 Since when have you lived at this address? Please specify month and year. _____ (month) _____ (yr)

Q.6 In what year was the accommodation built? Was it ...
Pre-1900 ₁ 1900-1940 ₂ 1941-1960 ₃ 1961-1970 ₄ 1971-1980 ₅ 1981-1990 ₆ 1991-1996 ₇ After 1996 ₈

Q.7 Does your household own this accommodation or are you a tenant or sub-tenant?
Owner (or purchasing) ₁ Rented ₂ Acc. Provided Rent Free ₃ ⇒ Go to Q.20

Q.8 Do you still have any outstanding loans or mortgages on the accommodation, including any repayments under a tenant purchase scheme as well as loans for repairs, renovations or extensions?
Yes ... ₁ No ₂ ⇒ Go to Q.9c

Q.9a What are your monthly repayments on the loan(s)?
IR£ _____ per month

Q.9b Are you purchasing from a local authority (such as local authority tenant purchase or with a local authority mortgage)? Yes ... ₁ No ... ₂
Go to Q.10

Q.9c Did you purchase the accommodation through a local authority tenant purchase scheme or with a local authority mortgage? Yes ... ₁ No ... ₂
[INT: Q.10 and Q.12 Price for residential accommodation only.]

Q.10 What was the purchase price of the accommodation when you bought it (or building costs if relevant)?
IR£ _____ N.A. ₉

Q.11 In what year did you purchase _____ N.A. ₉

Q.12 What price do you think you would be able to get for your accommodation if you were to sell it now?
IR£ _____

Q.13 Does anyone in the household receive a Social Welfare mortgage interest supplement in respect of this accommodation?
Yes ₁ ⇒ Go to Q.19
No ₂ ⇒ Go to Q.20, top of page 2

Q.14a From whom is the accommodation rented?
Local Authority ... ₁ Voluntary Body ... ₂ Private Landlord ... ₃

Q.14b What is the total monthly rent, including any charges you have to pay as part of your rent, such as heat, water electricity, gas etc.? Please include any amount recovered from rent supplement and also any rent supplement paid directly to the landlord.
Total Monthly rent IR£ _____ per mth.

Q.15 In addition to this payment (at Q.14b above), do you have to pay for any of the following. [Int. Tick yes or no for each]

	Yes	No	Yes	No
Repairs/maintenance	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	Sewage removal	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂
Heating	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	Rubbish collection	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂
Other electricity or gas	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	Other charges	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂
Water	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	(specify)	

Q.16 Do you have a formal lease or rent book? Yes... ₁ No... ₂

Q.17 Do you have
An annual lease ₁ A monthly lease ₃
A weekly lease ₂ Other (specify) ₄

Q.18 Does anyone living in this household currently receive a Social Welfare rent supplement (rent allowance) in respect of this accommodation? Please include any payments made directly to the landlord.
Yes ₁ ⇒ Go to Q.19
No ₂ ⇒ Go to Q.20, top of page 2

Q.19 How much does the household receive each MONTH in these payments? IR£ _____ per month

SECTION B: ELECTRICITY AND GAS SUPPLY

Q.20 Does your accommodation have [Int. Please tick yes or no in respect of each]
 Mains electricity supply Yes.....₁ No.....₂ Group supply scheme Yes.....₁ No.....₂
 Mains off peak electricity Yes.....₁ No.....₂ Separate private generator Yes.....₁ No.....₂

Q.21 Is your electricity supply in your accommodation reliable or does it often break down Reliable₁ Not reliable.....₂

Q.22 Is your elec. supply in your locality/neighbourhood reliable or does it often break down Reliable₁ Not reliable.....₂

Q.23 In general, do you feel that, given the needs of your household, you have an adequate number of electrical sockets

In the kitchen Yes.....₁ No.....₂
 In the living room(s) Yes.....₁ No.....₂
 In the bedrooms Yes.....₁ No.....₂

Q.24 Does your accommodation have a gas supply? Yes.....₁ No₂ ⇒ Go to Q.26

Q.25 Is this mains gas? Yes₁ No₂

SECTION C: SEWAGE AND WATER

Q.26 What sort of sewage disposal or waste treatment system do you have?

Public Main Sewer₁ Piped disposal, NO TREATMENT₄
 PRIVATE Septic Tank/Other PRIVATE system...₂ None₅
 GROUP system (septic tank or other)₃ Don't Know₆

Q.27 Do you have an internal water supply in your accommodation and, if so, what type of system do you have?

[INT: Tick ONE box only for the main source of water]

Public main ... ₁ Well ... ₂ Group Scheme ... ₃ Rainwater tank ... ₄ Other Source (specify) ... ₅ None ... ₆

Q.28 How satisfied are you with each of the following aspects of your water supply?

	Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied
Water pressure	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
The quality of the water	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅
The reliability of the water supply	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅

SECTION D: SPACE HEATING

Q.29 Does your accommodation have central heating? Yes.....₁ No.....₂ ⇒ Go to Q.36 (top of Page 3)

Q.30 Is your central heating system a communal or shared system that is where there is a central timer or temperature control outside your accommodation over which you have no control?

Shared/Communal system.....₁ Not shared system.....₂

Q.31 Shared with about how many others households? _____

Q.32 What type of fuel does the CENTRAL HEATING SYSTEM run on? [INT. If 'Solid Fuel' is ticked it must run the central heating – not just an open fire. You may tick more than one fuel type if dual system e.g. oil and solid fuel/open fire.]

Oil	Mains Gas	LPG or Bottled Gas	Solid Fuel Open Fire	Solid Fuel Stove/Cooker	Electricity	Solar /Heat Pump	Don't Know
<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₅	<input type="checkbox"/> ₆	<input type="checkbox"/> ₇	<input type="checkbox"/> ₈

Q.33 Which of the following heaters do you have? [INT: Tick all that apply]
 Storage heaters.....₁ Other electric (non storage) heaters (central heating)₂

Q.34 What sort of heating system do you have? Is it: [INT: Tick ALL that apply]
 Hot water radiators₁ Warm air system.....₂ Under-floor or ceiling system₃

Q.35 Do you have the following types of (a) automatic time controls and (b) automatic temperature controls on your central heating system? [INT. You must tick Yes or No in respect of all 8 controls below]

(a) AUTOMATIC TIME CONTROLS i.e. to switch the heating on or off at certain times	HAVE? Yes No	(b) AUTOMATIC TEMPERATURE CONTROLS	HAVE? Yes No DK
a. Central time control for whole accomm.	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂	a. Boiler Thermostat	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂ <input type="checkbox"/> ₃
b. Separate time controls for 2 or more areas (e.g. bedrooms & rest of accommodation)	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂	b. Room Thermostat -one single room thermostat in accommodation (e.g. in hall or living room)	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂
c. Other (specify) _____	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂	c. More than 1 room thermostat in accommodation	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂
		d. Thermostat on the radiators (Thermostatic radiator control or valve, TRV)	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂
		e. Other (specify)	<input type="checkbox"/> ₁ <input type="checkbox"/> ₂

INT. Make sure to tick Yes or No for each category under both time and temperature controls. DO NOT LEAVE ANY BLANK

Q.36 Do you have any of the following types of 'stand-alone' heating in the accommodation- i.e. HEATERS WHICH ARE NOT PART OF A CENTRAL HEATING SYSTEM?

	Yes	No		Yes	No		Yes	No
Mains Gas	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Oil filled electric radiators	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Portable Paraffin/ Bottled Gas	<input type="checkbox"/> 1	<input type="checkbox"/> 2
Other Fixed Gas	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Electric blow air heaters.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Other (specify).....	<input type="checkbox"/> 1	<input type="checkbox"/> 2
Solid Fuel Open Fire	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Other Fixed electric fires	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
Solid Fuel Stove/Space Heater ...	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Other Portable electric fires	<input type="checkbox"/> 1	<input type="checkbox"/> 2			

Q.37a What is the MAIN way in which you heat your accommodation in the winter? [INT. Tick ONE box only]

Central heating.....1 Portable heaters only.....3 Closed solid fuel appliance only.....5
 Open fire only.....2 Open fire and portable heaters4 Closed solid fuel appliance and portable heaters.....6
 Other (Specify).....7

Q.37b What is the MAIN type of SOLID FUEL you use to heat your accommodation? [Int. Tick one only]

Coal....1 Anthracite2 Turf (loose) ..3 Turf (briquettes)4 Wood5 Other.. 6 Solid fuel not used.....7

Q.38 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.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
The cost of running your heating system.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
The amount of heat that you can get.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
The control over the level of heat.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
The ease of use of the system.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

SECTION E: WATER HEATING

Q.39 Do you have hot running water in the accommodation? Yes.....1 No.....2 ⇒Go to Q.46

Q.40 Which rooms have hot running water? [Int: Tick all that apply]
 Kitchen ... 1 Main Bathroom ... 2 Other Bathroom/WC (incl. en-suite) ... 3 Other (e.g. bedroom, scullery) ... 4

Q.41 Does your accommodation have the following types of water heating facilities – even if you don't use them.
 [Int: If yes, be sure to code the TYPE OF SYSTEM in the second Column]

Water Heating Facilities	Yes	No	IF YES: TYPE OF SYSTEM	
Water heated by the central heating system	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Hot Tank/Cylinder... <input type="checkbox"/> 1	Combi..... <input type="checkbox"/> 2
Boiler for water only	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Gas..... <input type="checkbox"/> 1	Back boiler (open fire)..... <input type="checkbox"/> 3 Oil..... <input type="checkbox"/> 2 Other solid fuel boiler..... <input type="checkbox"/> 4
Immersion heater	<input type="checkbox"/> 1	<input type="checkbox"/> 2	On peak..... <input type="checkbox"/> 1	Off peak..... <input type="checkbox"/> 2
Separate instantaneous heater	<input type="checkbox"/> 1	<input type="checkbox"/> 2	Gas..... <input type="checkbox"/> 1	Electric..... <input type="checkbox"/> 2

Q.42 Which is the MAIN way in which you heat the running water in your accommodation?[INT Tick ONE only]
 Central Heating System 1 Boiler for Water Only 2 Back Boiler (water heater only) 3 Immersion Heater 4 Separate Instantaneous Heater 5

Q.43 I would like you to think about the controls which you have for this MAIN water heating system. Please tell me whether or not you have (a) these automatic time controls and (b) automatic temperature controls.
 [INT: Be sure to answer BOTH Column A and Column b).

(a) AUTOMATIC TIME CONTROLS i.e. to switch the water heating on or off at certain times	HAVE?		(b) AUTOMATIC TEMPERATURE CONTROLS	HAVE?		
	Yes	No		Yes	No	DK
a. On a single timer with the space heating system	<input type="checkbox"/> 1	<input type="checkbox"/> 2	a. Boiler Thermostat	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
b. Separate time controls for the hot water	<input type="checkbox"/> 1	<input type="checkbox"/> 2	b. Thermostat on storage cylinder / hot water tank	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
c. No automatic time control	<input type="checkbox"/> 1	<input type="checkbox"/> 2	c. Other (specify).....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	

Q.44 Do you have a hot water tank or cylinder (e.g. in the hot press) Yes.....1 No.....2 ⇒ Go to Q.46

Q.45 Is it insulated, e.g. with foam or a lagging jacket? Yes.....1 No.....2

SECTION F: ROOMS IN THE ACCOMMODATION

Q.46 Now I'd like to ask you about the rooms you have in the accommodation.
 First, I'd like to talk about the bathroom facilities. Does the accommodation have the following ... [INT: Show Card 2?]
 [INT: BE SURE TO COUNT EACH ROOM ONLY ONCE]

	Yes ... <input type="checkbox"/> 1 ⇒ How many? _____	No ... <input type="checkbox"/> 2
a. Family bathroom	Yes ... <input type="checkbox"/> 1 ⇒ How many? _____	No ... <input type="checkbox"/> 2
b. En suites off bedroom(s)	Yes ... <input type="checkbox"/> 1 ⇒ How many? _____	No ... <input type="checkbox"/> 2
c. Separate toilet/WC (no bath or shower)	Yes ... <input type="checkbox"/> 1 ⇒ How many? _____	No ... <input type="checkbox"/> 2
d. Other room with shower/bath (could also have toilet/WC)	Yes ... <input type="checkbox"/> 1 ⇒ How many? _____	No ... <input type="checkbox"/> 2

Q.47 Is the bathroom shared with any other households in this building? Yes.....1 No.....2

Q.48 Do you have: (a) an outside toilet.....Yes.....1 No.....2
 (b) a ground floor toilet or entry level toilet in the accommodation? ...Yes.....1 No.....2

Q.49 Could you tell me whether or not you have each of the following in (any of) the bathroom(s) in your accommodation?

	Yes, in main Family bathroom	Yes, in other bathroom /WC	No
a. Bath	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
b. Shower with separate instantaneous water heater (incl. over bath)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
c. 'Power' Shower (incl. over bath)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
d. Other Shower (incl. over bath)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
e. Wash-hand basin	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
f. Extractor fan	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
g. Toilet	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
h. Window or windows which can open	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

Q.50 Could you tell me whether you have each of the following types of rooms in the accommodation [INT: Show Card 3] Each room should be counted only once.

To be considered a separate room it must be capable of being closed off – i.e. have its own walls and a door. For example, a living-cum-dining room is counted as only one room unless they are separated by a wall and a door.

[INT: If rooms separated by a doorway or space the width of single doorway, without a door present, count as separate rooms]

INT. Be sure to tick Yes or No for each category (a) to (j) & record number of rooms if relevant.

DO NOT LEAVE ANY BLANK. COUNT EACH ROOM ONLY ONCE]

Separate types of room	HAVE?	If Yes, How Many	No, Do not have
a. Bedroom(s)	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
b. Kitchen (or kitchen-dining room)	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
c. Utility room / scullery / pantry	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
d. Living / Sitting room(s) / Parlour(s) (incl. bed-sitter)	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
e. Dining Room(s)	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
f. Study	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
g. Family Room	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
h. Play room	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
i. Conservatory	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	
j. Other domestic rooms (specify) Type: _____	Yes ... <input type="checkbox"/> ₁ ⇒ How many? _____	Do not have ... <input type="checkbox"/> ₂	

Q.51 So the total number of rooms in your accommodation is: Total Number _____

[Int. Do not count bathrooms and toilets here. Total should equal to sum of rooms at Q. 50. Amend if necessary]

Q.52a Relative to your present needs, would you say your accommodation is: Too big ... ₁ About right... ₂ Too small ... ₃

Q.52b Do you know the approximate size of your accommodation in square feet or square metres? Yes..... ₁ No ₂

Q52c What is the approximate size? _____ [Int: Tick one box:] Square feet ... ₁ square metres ... ₂

Q.53 How many external doors do you have on your accommodation? _____ [Int. Record no. of external doors]

Q.54 Do you have an enclosed porch on any of the external doors to your accommodation? Yes..... ₁ No ₂

Q.55 On how many of the external doors do you have an enclosed porch? _____

Q.56 Do you have a garage? Yes..... ₁ No..... ₂

Q.57 (In addition to the garage) do you have the facility for off street parking, even if you do not use it? Yes... ₁ No... ₂

SECTION G: KITCHEN FACILITIES

Q.58 Is your kitchen shared with any other household? Yes..... ₁ Not shared. ₂ Have no kitchen facilities... ₃ → Go to Q.61

Q.59 I am going to read out nine items which you could have in your kitchen. For each item, please tell me whether (i) you have the item and it is satisfactory and adequate to your needs; (ii) you have the item but it is not satisfactory or not adequate to your needs; or (iii) you do not have the item.

	Have, satisfactory and adequate to needs	Have, but NOT satisfactory or NOT adequate to needs	Do not have
A Cold Water	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
B Hot running water	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
C Sink	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
D Waste disposal unit	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
E Cooking facilities	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
F Facilities for storing food	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
G Other kitchen storage	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
H Worktop	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
I Extractor fan	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

Q.60 When were the kitchen facilities in your accommodation last refurbished, either by you or a previous occupant? I'm not referring to painting or decorating the kitchen. I'm talking about putting in new units, worktops etc.

Never ₁ Pre-1960 ₂ 1960's ₃ 1970's ₄ 1980's ₅ 1990's ₆ Since 2000 or currently ₇

SECTION H: HOUSEHOLD FACILITIES

Q.61 What sort of windows do you have in your accommodation? [Tick all that apply]

Timber frame... ₁ PVC... ₂ Steel... ₃ Aluminium... ₄ Other (specify) _____ ₅

Q.62 Do you have cavity walls – i.e. a space or cavity between the block and the outer wall?

Some of the accommodation... ₀ All of the accommodation... ₁ No... ₂ Don't Know... ₃

Q.63 Do you have cavity wall insulation? Some of the accom... ₀ All of the accom... ₁ No... ₂ Don't Know... ₃

Q.64 Do you have other internal wall insulation? Some of the accom... ₀ All of the accom... ₁ No.. ₂ Don't Know... ₃

Q.65 Which of the following do you have in your home? [INT: Tick Yes or No for all 9 items]

	Yes	No		Yes	No		Yes	No
a. Loft or roof insulation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	e. Any low energy light bulbs	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	g. Smoke alarm (battery)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
b. Double glazing	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	f. Lead water pipes	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	h. Smoke alarm (mains)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
c. Draft stripping on windows	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	dk ...	<input type="checkbox"/> ₃		i. Security/burglar alarm	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
d. Draft stripping on external doors	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	[INT. Be sure to tick Yes or No for each category (a) to (i) Do NOT Leave Any BLANK]					

Q.66 Could you tell me (a) whether you have any of the following problems in your accommodation [INT: Show Card 4]; if so, would you say these are a minor, moderate or major problem for the accommodation and (b) If problem is 'moderate' or 'major' for how long have you had this problem?

Do you have problems with:	(a) Whether Problem and Scale of Problem				(b) If Moderate or Major, How Long			
	No problem	Minor problem	Moderate problem	Major problem	Less than 1 month	1 to 3 months	3 to 6 months	6 months or over
A A leaking roof	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
B Leaking or moisture getting in through walls	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
C Leaking or moisture getting in at door or windows	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
D Leaks from water pipes	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
E Rising damp	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
F Condensation dampness	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
G General dampness from unknown sources	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
H Mould on walls/ceilings etc.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
I Corrosion or rot around any external door(s)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
J Badly fitting doors	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
K Corrosion or rot around any window(s)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
L Leaky or draughty windows	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
M Windows that don't open/close properly	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
N Rot in timbers other than windows/doors, such as rot in joists, floor boards etc.	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
O <u>Structural</u> cracks in internal or external SUPPORT walls	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
P Subsidence of floors	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Q Pests – rats, mice, cockroaches etc	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
R Noise from neighbouring houses	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
S Difficulty in heating your accommodation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
T Other Problems (specify)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

Q.67 Do you have a staircase in the accommodation? Yes... ₁ No... ₂ Go to Q.72 (top of page 6)

Q.68 Do you have a loose or broken handrail or banister Yes... ₁ No... ₂

Q.69 Do you have loose or broken steps on the stairs? Yes... ₁ No... ₂

Q.70 Does the stairs have 'winders', i.e. 3 or more successive tapering steps which are very narrow at one side and which form a turn in the stairs? Yes... ₁ No... ₂ Go to Q.72

Q.71 Is/are these winder(s) (i) at the bottom of the stairs Yes... ₁ No... ₂
 (ii) part way up the stairs Yes... ₁ No... ₂
 (iii) at the top of the stairs Yes... ₁ No... ₂

[Int. Tick Yes or No in respect of all 3 items]

Q.72 How common would you say each of the following is in your neighbourhood? For each of the 5 items I read out please tell me whether or not you think it is very common; fairly common; not very common; or not at all common .

	Very Common	Fairly Common	Not Very Common	Not At All Common
Graffiti on walls or buildings	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Rubbish and litter lying about	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Homes and gardens in bad condition	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
Vandalism and deliberate damage to property	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4
People being drunk in public	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4

Q.73 Here is a list of appliances which a household might have.

(a) Could you tell me which of the things listed your household has?

Of the things which you have, could you tell me whether it is adequate to your present needs?

(b) Of the things which you don't have, which would you like to have but must do without because of a lack of money?

[INT: Tick one box for each item in column A. If 'Do not have' tick one box in Column B.	A			B	
	Have, satisfactory & adequate to needs	Have, but NOT satisfactory or NOT adequate to needs	Do not have	If do not have, Would like but can't afford?	
				Yes	No
1 Refrigerator	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
2 Deep Freeze	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
3 Microwave	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
4 Dishwasher	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
5 Washing Machine	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
6 Clothes dryer (tumble dryer) or washer/dryer	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
7 Colour Television	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
8 Video Recorder	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
9 Telephone (whether fixed or mobile)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
10 Home Computer	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2
11 Access to Internet	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 1	<input type="checkbox"/> 2

SECTION I: REPAIRS AND MAINTENANCE

Q.74 Which of the following repairs and improvements (if any) have been carried out to your accommodation IN THE LAST 5 YEARS? [INT: Show Card 5. Tick Yes or No in respect of EACH item in both columns]

Repairs / Upgrades to existing accommodation	Yes	No	Extensions and conversions	Yes	No
A Putting in new floors	<input type="checkbox"/> 1	<input type="checkbox"/> 2	R Garage added	<input type="checkbox"/> 1	<input type="checkbox"/> 2
B Structural repairs to walls, chimneys, foundations	<input type="checkbox"/> 1	<input type="checkbox"/> 2	S Garage conversion	<input type="checkbox"/> 1	<input type="checkbox"/> 2
C inserting/replacing damp proof course	<input type="checkbox"/> 1	<input type="checkbox"/> 2	T Conservatory added	<input type="checkbox"/> 1	<input type="checkbox"/> 2
D Replacing <i>external</i> doors	<input type="checkbox"/> 1	<input type="checkbox"/> 2	U Attic or Loft Conversion	<input type="checkbox"/> 1	<input type="checkbox"/> 2
E Replacing windows	<input type="checkbox"/> 1	<input type="checkbox"/> 2	V Flat conversion	<input type="checkbox"/> 1	<input type="checkbox"/> 2
F Repointing/rendering	<input type="checkbox"/> 1	<input type="checkbox"/> 2	W Other re-arranging internal space / combining or dividing rooms	<input type="checkbox"/> 1	<input type="checkbox"/> 2
G Internal plastering	<input type="checkbox"/> 1	<input type="checkbox"/> 2	X Other Repairs, upgrades, extensions, conversions (specify)	<input type="checkbox"/> 1	<input type="checkbox"/> 2
H New roof or major roof repairs	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
I Providing or refitting kitchen	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
J Providing or refitting bathroom	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
K Replacing/upgrading electrical wiring	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
L Installing or replacing central heating boiler	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
M Installing or replacing central heating system	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
N Roof insulation	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
O Cavity wall insulation	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
P Other wall insulation	<input type="checkbox"/> 1	<input type="checkbox"/> 2			
Q Modifications to meet needs of person with disability	<input type="checkbox"/> 1	<input type="checkbox"/> 2			

INT: If 'No' to all items from A to X, Go to Q. 79.

Q.75 Could you tell me (a) approximately how much in total did this work cost (include VAT); (b) approximately how much in total did this work cost your household (i.e. your household's contribution to the overall cost)

Cost of repairs or maintenance	(a) Total Cost	(b) Household's Contribution
£0 (no cost)	<input type="checkbox"/> 1	<input type="checkbox"/> 1
Less than £500	<input type="checkbox"/> 2	<input type="checkbox"/> 2
£501-1,500	<input type="checkbox"/> 3	<input type="checkbox"/> 3
£1,501-2,500	<input type="checkbox"/> 4	<input type="checkbox"/> 4
£2,501-5,000	<input type="checkbox"/> 5	<input type="checkbox"/> 5
£5,001-10,000	<input type="checkbox"/> 6	<input type="checkbox"/> 6
£10,001-25,000	<input type="checkbox"/> 7	<input type="checkbox"/> 7
£25,001-50,000	<input type="checkbox"/> 8	<input type="checkbox"/> 8
£50,001 or more	<input type="checkbox"/> 9	<input type="checkbox"/> 9
Don't Know	<input type="checkbox"/> 10	<input type="checkbox"/> 10

[INT: Show Card 6

Make sure to tick ONE box for 'Total Cost'

AND

ONE box for 'Household's Contribution'.]

Q.76 Were these repairs and refurbishments funded or part-funded by : [Int. Tick Yes or No IN RESPECT OF EACH]

	Yes	No
a. The respondent	<input type="checkbox"/> 1	<input type="checkbox"/> 2
b. Work done directly by the Local Authority	<input type="checkbox"/> 1	<input type="checkbox"/> 2
c. Grant from Local Authority, Department of Environment, Health Board etc.	<input type="checkbox"/> 1	<input type="checkbox"/> 2

Q.77 (If yes to c) What was the approximate TOTAL value of all of these grants for work done in the last 5 years? IR£ _____

d. Other person / organisation outside the household(specify) 1 2 ⇒ **Q.78** (If Yes to d) Who? _____

Q.79 Overall, how satisfied are you with the following aspects of your accommodation:

		Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very Dissatisfied
A	The general condition of the accommodation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
B	The area in which it is located	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
C	The amount of privacy you (and your family) have in your accommodation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
D	The overall running cost of the accommodation	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Section J: HOUSEHOLD CHARACTERISTICS

Q.80 Do you have another house or other accommodation anywhere else in Ireland? Yes 1 No 2 ⇒ Q.88

Q.81 How many? _____

Q.82 Is this (are these): a house 1 Apartment/flat 2 Mobile home 3 Other (specify) 4

Q.83 In which county(ies)? _____

Q.84 How many months of the year do you, or anyone in this household, live in that second accomm? _____ mths

Q.85 Does anyone outside this household live in it? Yes.... 1 ⇒ GO TO Q.86 No 2 ⇒ GO TO Q.88

Q.86 Do they rent it from you or do they live there rent free? Pay rent..... 1 Rent free 2

Q.87 How many months per year? _____ months

Q.88 I would like you to think now of the other members of your household, could you please tell their (a) gender; (b) age last birthday; (c) their economic status; (d) highest level of education; and finally, their relationship to each other. Could I begin with the person responsible for the accommodation ... [Int: Person responsible for accomm. should be on line 1]

No.	Name/Initial	(A) Sex		(B) Age last birthday	(C) Principal Economic Status							(D) Level of Education			(E) Relationship of each member to each other member above them on list. Read ACROSS rows. Use Relationship Codes from yellow card.										
		M	F		At Work	Unemployed	Home Duties	Student / Education	Retired	Pre School	Other/Perm	Pre-Leaving Cert	Leaving Cert	Post leaving Cert	Person No.	1	2	3	4	5	6	7	8	9	
1	INT: Put person responsible for accom. on line 1	<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	1	///	///	///	///	///	///	///	///	///	///	///	///
2		<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	2		///	///	///	///	///	///	///	///	///	///	///
3		<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	3			///	///	///	///	///	///	///	///	///	///
4		<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	4				///	///	///	///	///	///	///	///	///
5		<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	5					///	///	///	///	///	///	///	///
6		<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	6						///	///	///	///	///	///	///
7		<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	7							///	///	///	///	///	///
8		<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	8								///	///	///	///	///
9		<input type="checkbox"/> 1 <input type="checkbox"/> 2			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	9										///	///	///

Q.89 Is anyone in the household currently on a Local Authority waiting list for accommodation? Yes ... 1 No ... 2

Q.90 Which household members ?
Whole household 97 or enter person number(s) from list above _____

Q.91 For how long have they been on a waiting list? Since _____ (month) _____ (year)

Q.92 What is/was the occupation of the Reference Person (person listed on line 1 above) in his/her most recent job or business? Please describe as fully as possible the type of work done. [Int. If farmer, record the acreage. If manager or supervisor record the numbers supervised and if relevant, record the rank or grade – e.g. rank in army or Gardaí, grade in Civil Service.]

Q.93 What is/was the occupation of the spouse of the Reference Person in his/her most recent job or business? Please describe as fully as possible the type of work done. [Int. If farmer, record the acreage. If manager or supervisor record the numbers supervised and if relevant, record the rank or grade – e.g. rank in army or Gardaí, grade in Civil Service.]

Finally, a few questions about how you are able to manage financially.

Q.94 Could I ask about the approximate level of net household income? This means the total income, after tax and PRSI, of ALL MEMBERS of the household. It includes ALL TYPES of income: income from employment, social welfare payments, child benefit, rents, interest, pensions etc. We would just like to know into which broad group the total income of your household falls. I'd like to assure you once again that all information you give me is entirely confidential. [INT: Show Card 7]

<i>Per week</i>	<i>Per Month</i>	<i>Per Year</i>	
A. Under £190	Under £825	Under £10,000 <input type="checkbox"/> ₁ ⇒ Go to Q.A below, Show Card A
B. £191 - £360	£826 - £1570	£10,001 - £19,000 <input type="checkbox"/> ₂ ⇒ Go to Q.B below, Show Card B
C. £361 - £570	£1571 - £2475	£19,001 - £30,000 <input type="checkbox"/> ₃ ⇒ Go to Q.C below, Show Card C
D. £571 or more	£2476 or more	£30,001 or more <input type="checkbox"/> ₄ ⇒ Go to Q.D below, Show Card D

[INT: Show Card A, B, C or D, as appropriate. Tick ONE Box only below]

A Would that be:	(per week)	Under £85 <input type="checkbox"/> ₁	£86-£110 <input type="checkbox"/> ₂	£111-£150 <input type="checkbox"/> ₃	£151-£190 <input type="checkbox"/> ₄
	(per month)	Under £370 <input type="checkbox"/> ₁	£371-£475 <input type="checkbox"/> ₂	£476-£650 <input type="checkbox"/> ₃	£651-£825 <input type="checkbox"/> ₄
	(per year)	Under £4500 <input type="checkbox"/> ₁	£4501-£5700 <input type="checkbox"/> ₂	£5701-£8000 <input type="checkbox"/> ₃	£8001-£10000 <input type="checkbox"/> ₄
B Would that be:	(per week)	£191-£220 <input type="checkbox"/> ₁	£221-£270 <input type="checkbox"/> ₂	£271-£320 <input type="checkbox"/> ₃	£321-£360 <input type="checkbox"/> ₄
	(per month)	£826-£950 <input type="checkbox"/> ₁	£951-£1150 <input type="checkbox"/> ₂	£1151-£1400 <input type="checkbox"/> ₃	£1401-£1570 <input type="checkbox"/> ₄
	(per year)	£10001-£11500 <input type="checkbox"/> ₁	£11501-£14000 <input type="checkbox"/> ₂	£14001-£16500 <input type="checkbox"/> ₃	£16501-£19000 <input type="checkbox"/> ₄
C Would that be:	(per week)	£361-£400 <input type="checkbox"/> ₁	£401-£450 <input type="checkbox"/> ₂	£451-£500 <input type="checkbox"/> ₃	£501-£570 <input type="checkbox"/> ₄
	(per month)	£1571-£1750 <input type="checkbox"/> ₁	£1751-£2000 <input type="checkbox"/> ₂	£2001-£2200 <input type="checkbox"/> ₃	£2201-£2475 <input type="checkbox"/> ₄
	(per year)	£19001-£21000 <input type="checkbox"/> ₁	£21001-£24000 <input type="checkbox"/> ₂	£24001-£26000 <input type="checkbox"/> ₃	£26001-£30000 <input type="checkbox"/> ₄
D Would that be:	(per week)	£571-£650 <input type="checkbox"/> ₁	£651-£750 <input type="checkbox"/> ₂	£751-£950 <input type="checkbox"/> ₃	£951 or more <input type="checkbox"/> ₄
	(per month)	£2476-£2800 <input type="checkbox"/> ₁	£2801-£3200 <input type="checkbox"/> ₂	£3201-£4100 <input type="checkbox"/> ₃	£4101 or more <input type="checkbox"/> ₄
	(per year)	£30001-£33500 <input type="checkbox"/> ₁	£33501-£38500 <input type="checkbox"/> ₂	£38501-£49000 <input type="checkbox"/> ₃	£49000 or more <input type="checkbox"/> ₄

Q.95 Please think of your total housing costs including mortgage or rent, repairs, heating, other electricity or gas, water, and other household charges. To what extent are these housing costs a financial burden to you? Are they ...
a heavy burden ₁ somewhat of a burden ₂ no burden at all ₃

Q.96 Has your household been in arrears at any time in the last 12 months, that is, unable to pay as scheduled, any of the following? [Int. Tick one box on each line]

	Yes	No	N.A.
Rent for accommodation	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Mortgage repayments.....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Utility bills (electricity, water, gas etc.).....	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

Q.97 Thinking now of your household's total income, from all sources and from all household members, would you say that your household is able to make ends meet ... [INT: Tick ONE box]

With great difficulty ₁ With difficulty ₂ With some difficulty ₃ Fairly Easily ₄ Easily ₅ Very Easily ₆

Q.98 There are some things that many people cannot afford, even if they would like them. Can I just check whether your household can afford these if you want them? Please answer yes (can afford if want) or no (cannot afford) for each item.

	Yes, can afford if want	No, cannot afford
1 Replacing any worn out furniture	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
2 Adequate heating for your home	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
3 Paying for a week's annual holiday away from home (not staying with relatives)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
4 A meal with meat, chicken or fish every second day if you wanted it	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
5 New, not second-hand, clothes	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
6 Presents for friends or family once a year	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
7 Having friends or family for a drink or meal at least once a month	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂
8 Car or Van for PRIVATE use	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂

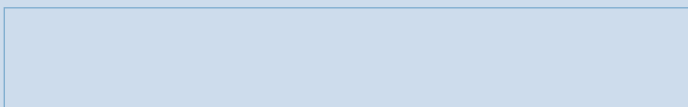
Q.99 In the event of having to check any of this information it would be very helpful to have your first name and phone number

First Name only _____ Phone Number _____

Q.100 INTERVIEWER: Record Time interview ended (24 hour clock) _____

Q.101 INTERVIEWER: Record person number from list on p. 7 of person providing most information for survey _____.

THANK-YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE



Methodology

Imputation of Missing Information

As noted in Chapter 1, missing information on key background variables that were to be used in all of the tables was imputed based on other data on the household. This was done to ensure that all figures in a table were based on the same set of cases. Imputation was also conducted for the variables used to construct the weights.

The variables where the level of missing information exceeded 5 per cent are shown in Figure A.1. The figure also shows the percentage of values imputed and the basis on which imputation was conducted.

Figure A.1: Level of missing information on key variables and imputation procedure

Variable	% imputed	Variables used to impute the value
Sex of household member	1.4	Household size, Local Authority area, cluster, sex of spouse (where applicable).
Age of household member (all members)	5.8	Age of spouse/parent/child (where applicable), economic status (retired), household size, Local Authority area, cluster.
Highest level of education achieved by each household member	19.8	Occupation, age, sex, household size, housing tenure, Local Authority area, cluster.
Economic status of household member	3.7	Age, sex, household size, Local Authority, cluster.
Occupational group of oldest person in the household, if at work	3.3	Housing tenure, age, education, Local Authority area, cluster.
Household income	12.3	Social class of householder, number persons at work, number adults, Local Authority area, cluster.
Housing tenure	2.2	Household size, Local Authority area, cluster.
Household type	1.3	Household size, age of reference person, age of other persons, Local Authority area, cluster.
Size of place	2.3	Local Authority area, cluster.
Age of dwelling	1.7	Local Authority area, cluster.
Floor area	75.0	No imputation.
Presence of wall insulation	18.0	No imputation.

The imputation involved matching the household with missing information to a similar household in terms of a set of related characteristics (typically, county, cluster, tenure, household size and other variables that are predictive of the variable to be imputed). The imputed value was taken from the household with the closest match in terms of these characteristics. This approach is preferable to imputing an average value since it preserves the variation of the variable being imputed.

Information on household members (age, sex, education, economic status, and occupation of oldest person) was needed for all households in order to correctly weight the sample. The small number of cases where no information was available on household membership were excluded from analyses.

For variables other than key background variables and those needed for weights, imputation was generally not conducted (unless it could be done with a high degree of confidence on the basis of a closely-related item on the questionnaire). Where the level of missing information exceeded 5 per cent, this is noted in the table in question.

Income Correction Factor

As noted in Chapter 1, measuring household income using a single item will tend to understate income compared to the figure obtained if all household members are asked about their income from different sources. This is known from the Living in Ireland Survey (LIS). The LIS makes use of both a single-item measure on the household questionnaire and a detailed set of questions on each income source posed to all adults in the household. The single-item measure understates total household income by 19 per cent (of the full measure) on average (or 24 per cent of the single-item measure). Table A.1 shows that the degree to which the single-item measure understates total income is greater for households with a large number of income sources (typically associated with a larger number of adults) and households where the main source of income is from self-employment or agriculture. The difference between the two measures is smallest for one-adult or two-adult households relying on pension or social welfare income.

The understatement is particularly marked where there is income from work, and where there is a large number of adults in the household.

A regression-based model was constructed to correct for this understatement using variables which are measured on both the 2001-2002 National Survey of Housing Quality (NSHQ) and the 2000 Living in Ireland Survey (LIS). The model was developed using the Living in Ireland Survey and then the coefficients for the model were used to "correct" the income measure on the NSHQ. The single-item measure of income in the LIS recorded income as a continuous amount, or into 10 categories if an exact amount could not be provided. Since the NSHQ used a categorical variable, the LIS incomes were recoded into a categorical format before running the model. This would enable us to simulate the relationship between the continuous distribution of income based on aggregating information collected in detail from all adults in the household and a categorical measure recorded by the householder.

Table A.1: Mean weekly household income (in IR£) using full measure and single-item measure by number of adults and number of persons at work, Living in Ireland Survey, 2000.

	Single item measure	Full measure	Difference	Difference as % of single-item measure	Difference as % of full measure
Number over 18	IR£	IR£	IR£	IR£	IR£
1	184	195	11	6	5
2	422	495	73	17	15
3	483	633	149	31	24
4 or more	621	932	311	50	33
Number at work					
0	170	169	-2	-1	-1
1	345	407	62	18	15
2 or more	569	748	179	31	24
Total	389	482	93	24	19

The coefficients from the model are shown in Table A.2. The r-squared for the model is .644, indicating that about 64 per cent of the variance in income is explained by the variables included in the model.²⁵

Table A.2: Model based on Living in Ireland Survey to correct for understatement of income when a single-item measure is used

Variables	Coefficient	Std. Error
Constant	-9.18	89.62
Number of adults over 18	55.42	5.03
Number of children under 18	2.73	3.45
Number of adults at work	96.44	5.73
Income: IR£50-£99	50.41	90.43
Income: IR£100-£149	67.34	90.55
Income: IR£150-£199	81.62	90.06
Income: IR£200-£149	110.00	90.48
Income: IR£250-£299	173.06	90.28
Income: IR£300-£399	215.77	89.98
Income: IR£400-£499	275.46	90.16
Income: IR£500-£699	374.17	90.45
Income: IR£600-£999	521.26	90.30
Income: over IR£1,000	888.55	92.44

Note: The omitted category for income is "under IR£50".

²⁵The r-square for the model with the income categories alone is .54.

The model used the income category (coded as a dichotomous variable with a value of 1 for each category), the number of adults in the household, the number of children in the household and the number of persons at work.²⁶ Table A.2 shows that incomes clearly bear a strong relationship to the income category. The category coefficients in Table A.1 are below the lower bound of the category itself because they are shown net of the effect of number of adults and number of persons at work. Each household will have at least one adult and, at higher levels of income, are likely to have at least one person at work. The number of adults and the number of adults at work also have strong coefficients. The effect of additional children is much weaker, and does not reach statistical significance. Nevertheless, it was included in the model because in a household survey such as the NSHQ, which does not have income as a central focus, it is likely that many householders did not include Child Benefit in their estimate of total income.

Table A.3: Income category midpoints and coefficients applied to the National Survey of House Quality

	Lower bound £	Upper bound £	Point estimate £	Lower bound Euro	Upper bound Euro	Point estimate Euro	Coefficients
Four category Measure (2.4 % of households)	0	190	132	0	241	167	0.54
	191	360	267	243	457	339	0.63
	361	570	454	458	724	576	0.61
	571	1000	787	725	1270	999	0.65
Sixteen Category Measure (85.3 % of households)	0	85	75	0	108	54	0.00
	86	110	98	109	140	124	0.63
	111	150	131	141	190	166	0.54
	151	190	171	192	241	216	0.47
	191	220	206	243	279	261	0.49
	221	270	246	281	343	312	0.63
	271	320	296	344	406	375	0.63
	321	360	341	408	457	432	0.62
	361	400	381	458	508	483	0.62
	401	450	426	509	571	540	0.61
	451	500	476	573	635	604	0.61
	501	570	536	636	724	680	0.68
	571	650	611	725	825	775	0.68
	651	750	701	827	952	889	0.65
	751	950	851	954	1,206	1,080	0.65
	951	Open	1,100	1,208	Open	1,333	0.81

In the NSHQ, there were 16 income categories, rather than 10, and the amounts were presented to the respondents either in Irish pounds or in Euro, depending on respondent preference, since the survey spanned the period of the Euro changeover. The midpoints of the NSHQ income categories were matched to the nearest category from the LIS so that the appropriate correction could be applied to the income category. The coefficients used were obtained by dividing the midpoint of each income category (shown in Table A.1) by the corresponding coefficient in the model. The coefficients applied to each category are shown in Table A.3.

²⁶A number of more complex models were tested, including variables such as tenure, region, education and age of householder, and dichotomous variables for number of adults and number at work, but no improvement in the predictive power of the model was achieved.

Table A.4: Mean “Corrected” income for each original income category in the NSHQ.

	Lower bound Euro	Upper bound Euro	Mean “corrected” income (Euro)	Implied “under- statement”
Four category measure (2.4 % of households)	0	241	292	43
	243	457	562	40
	458	724	759	24
	725	1,270	1,142	13
Sixteen category measure (85.3 % of households)	0	108	198	73
	109	140	219	43
	141	190	260	36
	192	241	333	35
	243	279	386	32
	281	343	491	37
	344	406	572	34
	408	457	633	32
	458	508	678	29
	509	571	723	25
	573	635	781	23
	636	724	899	24
	725	825	981	21
	827	952	1,050	15
954	1,206	1,193	9	
1,208	open	1,607	17	

Table A.4 shows the mean “corrected” income for each household income category. Overall, incomes are adjusted upwards by about 24 per cent (see Table A.5). In general, incomes in the lower categories tend to be adjusted upwards to a greater extent than incomes in the higher categories. The final column of Table A.4 shows the percentage by which the predicted income would have been understated if the midpoint of the categories based on the single item had been used instead of the “corrected income”. The biggest change is to the lowest category (0 to 108 Euro). For the lowest income category, taking the mid-point of the category as a point estimate would not have been a good choice in any case: the general shape of the income distribution, rising steeply towards the lower end, would indicate the choice of a point estimate towards the upper bound of this category rather than in the middle of it.

The corrected household income was used to construct the adult-equivalent household income, as described in Chapter 1. This measure is used in tables throughout the report. The corrected income is also used for the tables in Chapter 3 that examine the proportion of household income spent on rent or mortgage.

Table A.5: Average income before and after correction by number of adults and number at work in the National Survey of Housing Quality

	A Household income (uncorrected) Euro pw	B Household income (corrected), Euro pw	C Difference (B-A)	D Difference % (C/A)
Number adults (18+)				
1	316	316	0	0
2	559	643	84	15
3	601	815	214	36
4 or more	726	1,195	470	65
Number at work				
0	261	260	-2	-1
1	499	558	59	12
2 or more	719	983	263	37
Total	519	641	122	24

Table A.5 shows that the difference between the single-item measure and the “corrected income” is minimal where there is only one adult in the household or where there is nobody at work in the household. The difference is much larger where there are several adults in the household (the average increase is 65 per cent where there are four or more adults in the household) and where there are adults at work. The increase is 12 per cent where there is one person at work and 37 per cent, on average, where there are two or more people at work.

Sample Weights

As outlined in Chapter 1, sample weights are constructed to ensure that the sample is representative of the population along a number of key dimensions, such as region, household size, labour force participation, age of dwelling and so on. These weights adjust the sample for any lack of overall representativeness arising from sample design, the sampling frame available and patterns of non-response. The sample design would have over-represented rural areas. This arose because of the requirement, noted in Chapter 1, for a sample of sufficient size to provide Local Authority level tables. This meant that smaller Local Authority areas were over-represented in the sample, compared to their populations. In addition, the sampling frame is based on the Electoral Register and tends to over-represent households with a larger number of persons over age 18. Differences in response rates are typically found between urban and rural areas, with higher response rates in the latter.

The sample weights were constructed by adjusting the sample proportions to population figures based on the most up-to-date information available. The population figures drew on data from reliable external sources, such as the preliminary figures from the 2002 Census, from the Quarterly National Household Surveys, and from the 1996 Census with adjustments for population change.

There were a number of steps involved in constructing the weights. The first involved constructing a weight to control for the fact that the sampling frame (based on the Electoral Registers) will tend to over-represent households with a larger number of adults. The weight was:

$$Wt1 = 1/A$$

where A is the number of adults age 18 or over in the household.

The second weight grossed the number of sample cases in each Local Authority area up to the total number of private households in that Local Authority area, using preliminary figures provided by the Central Statistics Office based on the 2002 Census.

$$Wt2 = (Wt1 * PL) / SL$$

where PL refers to the total number of households in the Local Authority area, and SL refers to the number of sample households in that Local Authority area.

The next stage involved what is normally referred to as calibration (see, for example, Deville and Särndal, 1992): the second weight (Wt2) was adjusted so as to match the sample distribution of a given set of characteristics to the population distribution of these characteristics derived from external sources. The Gross programme was used to gross this second weight to Local Authority and region-level totals for a set of control variables.²⁷

The region-level totals were obtained from the Central Statistics Office who provided special tabulations from the QNHS (second Quarter, 2001). The Local Authority level totals were obtained from the 1996 Census (household size, number of persons at work) and the Department of the Environment and Local Government *Housing Statistics* (number of Local Authority rented dwellings, new dwellings built after 1991). The county-level figures from the 1996 census were updated to 2002 figures, using region-level information from the QNHS and preliminary county-level population and household totals from the 2002 Census.

At the time of constructing the weights, only the total males, total females and an estimate of the total number of households was available from the 2002 Census. These figures were used to adjust the total number of males, females and households for each Local Authority to the figures for 2002.

Figure A.2: Population checks for sample weighting

Population checks at county level

- Household size (number persons age 18 or over); from 1996 Census adjusted to 2002 figures using QNHS 2001 at region level and preliminary figures from 2002 Census of number of males, females and households by Local Authority area.
- Number of persons in household at work (3 categories: none, one, two or more; from 1996 Census adjusted to 2002 figures using QNHS at region level for Second Quarter 2001 and preliminary figures from 2002 Census)
- Number of Local Authority rented dwellings (from Department of the Environment and Local Government *Housing Statistics, September 2001*).
- Age of dwelling (from the 1991 Census of Population, updated using figures from the Department of the Environment *Housing Statistics, 2002*,²⁸ on new dwellings built since then.²⁹)

²⁷This programme, developed by Johanna Gomulka, uses a minimum distance algorithm to adjust an initial weight (in this case Wt2) so that the distribution of cases in the sample matches a set of control totals.

²⁸Special data run prepared by Department of the Environment and Local Government.

²⁹It was assumed that 0.6 per cent per annum of the 1991 housing stock was lost through demolition by 2002- a total of 64,471 dwellings. It was further assumed that older dwellings would be lost at a greater rate: 70 per cent from the pre-1919 stock; 20 per cent from the 1919-1940 stock and 10 per cent from the 1941-1960 stock. Of dwellings built since 1991, it was assumed that 1 per cent of the total built from 1991-1996 were for holiday use, rising to 1.5 per cent of the total built after 1996.

Population checks at level of Regional Authority	
•	Household size (6 categories, persons of all ages; from QNHS 2001)
•	Household type (5 categories; from QNHS 2001)
•	Tenure (owner occupied, renter, other tenure; from QNHS 2001)
•	Age by sex (10 age groups; from QNHS 2001)
•	Occupation of oldest person, if at work (ISCO88, 5 categories; from QNHS 2001)
•	Education by sex (3 categories of education; from QNHS 2001)
•	Economic status by sex (at work, unemployed, home duties, retired, student, other; from QNHS 2001)

Figure A.2 shows the population checks that were included and the level (county or region level). For some variables, recent information was only available at the level of Regional Authority (from the Quarterly National Household Survey).

Additional Dwellings and Implications for Sample Coverage

Given the nature of this survey, being based on interviews with householders, it was only possible to carry it out at addresses where someone was currently resident. We have no information on vacant dwellings or on holiday homes that are used for only part of the year. In an effort to get an indication of the extent to which private households own more than one dwelling, we asked householders for some information on other accommodation in Ireland that they owned. Table A.6 shows the type of accommodation owned by the number owned.

Table A.6: Whether householder owns other accommodation by number of other accommodations (table per cent)

Owns additional accommodation?	Number of other accommodations (Table percentage)				Total (col %)
	None	One	Two	3 or more	
No	94.9	0.0	0.0	0.0	94.9
Mobile home(s)/caravan(s) only	0.0	0.3	0.0	0.0	0.3
Apartment(s)	0.0	0.3	0.1	0.1	0.5
House(s)	0.0	3.4	0.5	0.3	4.1
House(s) and flat(s)	0.0	0.0	0.0	0.1	0.2
Total (row per cent)	94.9	4.1	0.6	0.4	100.0

Overall, 5 per cent of householders own one or more additional houses, flats or mobile homes somewhere in the country. In most cases (4.1 per cent of the total), the dwelling is a house, and only a small proportion (1 per cent), owns more than one additional dwelling.

A key question in terms of the coverage of the survey is the extent to which these additional dwellings are likely to be vacant. Table A.7 shows the occupancy status of the dwellings by dwelling type and by number of dwellings owned.

Overall, 16 per cent of the households with additional dwellings have vacant dwellings, that are used neither by household members nor by others on a regular basis. Over one quarter have what might be termed "holiday homes" – houses, mobile homes or apartments that are occupied for less than six months a year, on average. The biggest group, 56 per cent, have dwellings that are occupied for at least six months a year.

Among these additional dwellings owned by private householders, there are differences both by the type of the dwelling and by the number of dwellings owned. Mobile homes and caravans are most likely to be occupied on a seasonal basis (90 per cent), with just 8 per cent occupied year-round. Apartments are most likely to be occupied year-round (84 per cent), as are the dwellings owned by households with both additional apartments and houses (83 per cent). The vacancy rate is highest for houses (18.4 per cent).

Table A.7: Occupancy of additional dwellings by type and number of dwellings

Type	Vacant	Occupied <6 mo per year	Occupied 6+ mo per year	Total
Mobile home/caravan only	2.0	89.8	8.2	100.0
Apartment	6.9	9.6	83.6	100.0
House	18.4	25.6	55.9	100.0
House(s) and flat(s)	0.0	17.2	82.8	100.0
Number				
House(s) and flat(s)	18.1	31.9	50.0	100.0
One	7.4	15.3	77.2	100.0
Two	7.5	2.0	90.6	100.0
Total	16.0	27.6	56.4	100.0

In terms of the number of additional dwellings owned, households that own more than one additional dwelling are less likely to have that dwelling vacant (7-8 per cent, compared to 18 per cent of households that own a single dwelling), and more likely to have the dwellings rented year-round (77-91 per cent, compared to 50 per cent).

Table A.8 shows the estimated number of houses, apartments and mobile homes owned in addition to the main residence by Irish householders, by the occupancy status of these dwellings. The table also shows the number of sample households on which the estimates are based.

The greatest number of additional dwellings are houses (74,800, compared to 11,800 apartments and 4,000 mobile homes/caravans).

Of the estimated 74,800 houses owned as an additional residence, 45,400 are occupied for at least half the year, either by a household member or someone else on a rent-free basis (10,900), by a tenant paying rent (26,400), or by household members for part of the year and renters for part of the year (8,200). Of the remaining 29,400, 13,100 are vacant, 15,000 are holiday homes, occupied by household members for less than six months in the year, and 1,300 are rented out for less than six months in the year.

Apartments are more likely than houses to be occupied for at least six months of the year (9,800 of the estimated total of 11,800), with nearly 70 per cent occupied by rent-paying tenants for at least six months of the year.

Caravans and mobile homes are most likely to be occupied on a seasonal basis: 3,300 of the estimated total of 4,000 are occupied by household members for less than six months of the year.

Table A.8: Number of additional dwellings by occupancy and type

	Houses	Apartments /flats	Mobile Homes/ caravans	Households	Un-weighted Cases
	Number (000)	Number (000)	Number (000)	Number (000)	Number
Occupancy					
No additional dwelling	0.0	0.0	0.0	1,240.0	37,578
Vacant	13.1	1.1	0.1	11.7	432
Holiday home	15.0	0.6	3.3	16.9	517
Occupied rent-free year-round	10.9	0.5	0.3	10.3	382
Rented out <6 mo per year	1.3	0.2	0.0	1.5	52
Rented out, 6+ mo per year	26.4	8.1	0.2	21.5	734
Occupied >6 mo, HH and other	8.2	1.2	0.0	4.8	176
Total	74.8	11.8	4.0	1,306.6	39,871

Includes households with an additional dwelling only.

In terms of the coverage of the sample, there are an estimated 29,400 houses, 2,000 apartments and 3,400 mobile homes or caravans owned by private householders that are unlikely to be captured by the survey because they are either vacant or occupied for less than six months of the year.

A final caveat: these figures on coverage are only a rough guide, since a private company rather than a household may own vacant dwellings. It is likely, however, that most of the stock of vacant dwellings and dwellings that are unoccupied for much of the year are owned by private households rather than by companies, as the latter would be motivated by economic considerations to rent them or sell them as soon as possible.

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