6 Demography and local housing systems

Introduction

Demographic patterns, along with changing patterns of housing aspiration and choice, are central to understanding demand and need for housing. This chapter provides guidance on how to build an understanding about the inter-relationship between demographic patterns, aspiration and choice, and housing demand and need. Specifically, this chapter:

- Explains the different definitions of household used in estimates/projection work, and how demographic analysis can inform understanding of how local housing systems operate
- Identifies the questions to pose when considering demographic trends from a housing perspective
- Explains the different ways in which household socio-economic circumstances, aspirations and choices shape the location, tenure and type of housing sought and consumed
- Indicates the data sources that can be used to investigate demographic patterns and
- Discusses the use of scenario development and commissioning research where available information is not robust or where very little is known about certain household groups.

The primary purpose of this element of LHSA work is to produce a 'demographic audit', complementary to the 'economic audit' that results from chapter 5, that will underpin the more detailed analysis to follow. This chapter therefore sets the scene for much of the more detailed analysis to be discussed in subsequent chapters.

Population and household estimates and projections

Population and household change determine changes in the number of households seeking housing in an area. Anticipated trends in household growth (or decline) are central to the local land planning process in identifying the overall requirement for land for new housing. Thus household projections and forecasts are taken as a key input for estimating the level of new housing construction required. They are also an important input into housing needs models, including the ODPM model discussed in chapter 12.

Defining population and households

What 'population' means in most analytical work is quite straightforward and intuitively obvious. However, in estimates and projection work the term 'household' can mean different things, and it is always important to be clear about the definition of household being used. According to the Census and other Central Government data sources a household comprises one person living alone, or a group of people (not necessarily related) living at the same address who either share at least one meal a day or share living accommodation (that is a living or sitting room). The occupant(s) of a bed-sit who do not share a sitting or living room with anyone else comprise a single household. Most, but not all, addresses contain just one private household. Central Government statistical surveys seek to elicit information about the basic living arrangements of individuals at an address in order to identify whether there is more than one household living at an address.

In many housing needs surveys, the term 'hidden homeless' is often used to cover households without their own permanent accommodation. However this can produce misleading results. For instance young adults living with their parents are often counted as being in hidden need. However, often no adjustment is made for the fact that these households are likely to emerge at some future point as an independent household and therefore are effectively counted in the Scottish Executive's household projections (chapter 12 considers the issue of double counting in needs assessment in more detail).

Wherever possible with respect to household estimates and projections, it is preferable to differentiate between concealed households, potential single households and involuntary sharers.

A 'concealed household' is an individual or group of individuals subsumed into a larger household and unable to establish a separate household of their own due to a lack of access to housing. A concealed household will fall into one of the following categories:

- A married couple family (either with or without dependent children) living within a household where another person is the household reference person.

- A cohabiting couple family (either with or without dependent children) living within a household where another person is the household reference person.

- A lone parent family with dependent children living within a household where another person is the household reference person.

The term 'potential single household' is used to describe single people living with relatives or in someone else's household because they cannot or choose not to secure access to suitable separate accommodation. There is considerable debate as to whether potential single households should be regarded as being in housing need. Most single people are able to meet their housing requirements by staying in their parental home. Even where single people wish for separate accommodation, this wish may not be acted upon for some time. Holmans (1995) found that most single people leave their parental home by the age of 30 years but the actual age at which they do so changes rapidly in response to employment and educational prospects.

The term 'involuntary sharer' refers to single adults and couples living in shared accommodation because of the lack of self contained accommodation. An involuntary sharer differs from a concealed household or a potential single household in that no one household living in a property can be identified as the main occupiers of it. Again there is considerable controversy as to whether involuntary sharers are in housing need.

Although concealed households are usually felt to be in need, there is therefore no consensus regarding potential households and involuntary sharers. In making a local judgement, analysts may find it useful to consider the level of priority accorded to such households in allocation policies and the volume of such households applying for social rented housing. These issues are discussed further in chapter 8.

The geography of demographic analysis

Chapter 4 made the point that a local housing system is generally the smallest unit for which it is appropriate to attempt to estimate, project or forecast demographic trends, including migration flows. This is because, at spatial levels below this, population movements will tend simply to reflect the availability of housing. However, most demographic projection is undertaken at local authority level. This needs to be borne in mind when undertaking LHSA.

Moreover, chapters 8, 9 and 10 in particular make it clear that housing tenures are not spread uniformly across the area of a local housing system - and neither will the socio-economic profile of households living within the system. Below we discuss the importance of aspirations and choice in influencing demand and need for housing, and these factors can have important small area effects. In practice analysing these effects often has to rely on Census geography. The Census remains the only readily accessible dataset available to explore the socio-economic circumstances of households and migration flows for all households at housing system and other non-standardised areas such as towns, villages and neighbourhoods. Again, it is important to be aware of the potential consequences of data imposed limitations on LHSA work in such situations.

Population and Household Structure and Patterns of Housing Demand and Need

Population and household structure have important implications for the profile of housing need and demand. In particular it is important to consider the age, gender and ethnic structure of the population in a local housing system (see table 1), as well as household type structure.

Table 1 Population change, East Midlands

Population Change

The East Midlands regions combine characteristics of the south and the north of England, but in terms of population growth the East Midlands overall is closer to the south of England with projected growth in population of 9.2% over the 1996-2021 period, compared to only 1.8% for the West Midlands. Only the East, South East and South West, with projected growth rates of around 12-13%, exceed this level. Projections at sub-regional level (see table 8) show a clear pattern with projected growth strongest in the Eastern and Southern sub-regions, somewhat less growth in the Cities sub-region, and a virtually static position in the Northern (Coalfields) and the Peak.

Projections at local authority level within the region reveal much larger variations, with some districts projected to increase in population significantly and others declining. There are only four districts out of 40 in the region with negative rates of projected growth over the 1996-2021 period (Corby, Gedling, Mansfield and Newark), and four others with very low positive rates (Bolsover, Broxtowe, Derbyshire Dales, Erewash). With the exception of Corby, these are concentrated in the north of the region, mainly but not exclusively in the Northern sub-region. At the other end of the spectrum, a group of authorities in the south and east of the region (South Kesteven, South Holland, North Kesteven, Rutland, East Northamptonshire, South Northamptonshire, Daventry, Melton and Northampton) are expected to grow by 15% or more over the 1996-2021 period. This illustrates the north-south contrast within the region clearly.

Since these projections were produced, population estimates from the 2001 Census have been published. Table 1 compares the estimated rate of change of population by local authority over the 1991-2001 period with the 1996-2021 projection estimates. For the East Midlands as a whole the actual population was 62,000 or 1.5% less than had been projected for 2001, but 137,000 or 3.4% more than in 1991. Within the region, change over the 1991-2001 period broadly corresponds to the projected pattern of growth in the south and east and a relatively static picture elsewhere. The Eastern sub-region has shown the strongest growth, whilst the Coalfields sub-region has remained virtually static in population terms. Only the Eastern sub-region has grown more quickly than projected. At district level 33 authorities out of 40 increased in population over the 1991-2001. The seven which experienced decline or limited growth were mainly in the Northern sub-region but also included the cities of Nottingham, Derby and Leicester, together with Corby.

There are some divergences between actual and projected 2001 population at local authority level. Twenty authorities – mainly in the southern part of the region, grew more quickly than expected. Harborough, South Northamptonshire, South Holland, South Derbyshire, North Kesteven, East Northamptonshire and East Lindsey stand out in this group with growth rates in excess of 10% over the 1991-2001 period. Seven authorities – Rutland, Charnwood, South Kesteven, Rushcliffe, Northampton, Kettering, Melton, High Peak and Hinckley and Bosworth - grew in population, but more slowly than expected. This group falls between the two extremes of growth and decline within the region. Five other authorities – Bassetlaw, Derbyshire Dales, Amber Valley, North West Leicestershire and Lincoln – grew slightly – but in line with expectations. Corby declined in population, but less rapidly than expected. Finally seven authorities – Nottingham, Leicester, Derby, Broxtowe, North East Derbyshire, Chesterfield and Mansfield declined more sharply than expected.

Projected Changes In Population By Age Group
Looking at projected changes in population by age group over the 1996-2021 period, the region as a whole is projected to show increases of 30% or more for all age groups of 45 and over. The 64-74 age group is projected to grow by 37%, with a 39% increase in numbers aged 75-84 and a 9% increase in those aged 85 or more. However there are projected declines or a static position for younger age groups. The projected decline is steepest for the 25-44 age group (8% decline). At local authority level, there is a strong correlation between those authorities which are projected to contract most in the under 45 age groups and those projected to lose most population overall.

Ethnic group
In England as a whole, 91% of the population was white, 5% Asian, 2% Black and 2% from other ethnic groups in 2001. The East Midlands as a whole had a higher proportion of white people (94%). The largest minority ethnic group was Asian (4%), followed by people of mixed ethnic group (1%) and Black (1%). However there were substantial variations by district. Some 30% of Leicester's population and 15% of people from Oadby and Wigston (15%) were Asian. Derby, Charnwood, Nottingham and Northampton also had a larger Asian population than the national average. The Asian population is therefore strongly concentrated in a relatively small number of areas. Leicester (3%) and Nottingham (4%) had the highest proportions of Black people in the region, but the Black population was less concentrated than the Asian population.

Table 1 Projected population by district, East Midlands, 1996-2021

	Projected population (000s)				Actual population (000s)			
	1996	2001	2021	% change 96-21	1991 mid-year estimate	2001 Census	% change 1991-2001	% diff actual from projected 2001
Amber Valley	115.2	116.1	119.0	3.3	112.8	116.5	3.3	0.3
Ashfield	108.6	110.2	113.8	4.8	109.7	111.5	1.6	1.2
Bassetlaw	106.3	107.7	109.8	3.3	105.3	107.7	2.3	0.0
Blaby	85.6	87.6	93.4	9.1	83.4	90.3	8.3	3.1
Bolsover	70.9	71.0	71.1	0.3	71.3	71.8	0.7	1.1
Boston	54.2	54.3	54.9	1.3	53.6	55.7	3.9	2.6
Broxtowe	111.4	111.5	112.3	0.8	108.8	107.6	-1.1	-3.5
Charnwood	155.7	161.9	178.8	14.8	147.6	153.5	4.0	-5.2
Chesterfield	100.7	101.9	105.6	4.9	100.3	98.9	-1.4	-2.9
Corby	52.1	52.0	50.9	-2.3	53.6	53.2	-0.7	2.3
Daventry	65.3	68.7	77.8	19.1	63.0	71.8	14.0	4.5
Derby	233.7	238.6	257	10.0	225.4	221.7	-1.6	-7.1
Derbyshire Dales	69.6	69.5	70.0	0.6	68.1	69.5	2.1	0.0
East Lindsey	123.1	125.2	131.0	6.4	118.0	130.5	10.6	4.2
E Nhants	70.8	73.9	84.8	19.8	68.6	76.5	11.5	3.5
Erewash	106.8	106.9	107.0	0.2	107.5	110.1	2.4	3.0
Gedling	112.2	109.2	104.0	-7.3	111.2	111.8	0.5	2.4
Harborough	73.7	76.2	83.5	13.3	68.2	76.6	12.3	0.5
High Peak	88.2	89.7	93.0	5.4	86.1	89.4	3.8	-0.3
Hinckley/Bos	97.8	100.2	107.7	10.1	97.2	100.1	3.0	-0.1
Kettering	80.8	82.8	89.8	11.1	77.0	81.8	6.2	-1.2
Leicester	294.8	302.0	331.5	12.4	284.7	279.9	-1.7	-7.3
Lincoln	83.5	84.8	89.1	6.7	84.8	85.6	0.9	0.9
Mansfield	101.4	99.7	94.6	-6.7	101.6	98.1	-3.4	-1.6
Melton	46.5	48.5	54.2	16.6	45.5	47.9	5.3	-1.2
Newark/Sher	104.5	103.8	101.8	-2.6	103.7	106.3	2.5	2.4
N E Derbyshire	99.0	100.1	103.3	4.3	98.8	96.9	-1.9	-3.2
North Kesteven	86.6	92.3	105.9	22.3	80.1	94.0	17.4	1.8
N W Leics	84.3	85.0	89.4	6.0	81.4	85.5	5.0	0.6
Northampton	192.4	198.3	221.8	15.3	184.6	194.5	5.4	-1.9
Nottingham	284	291.5	313.5	10.4	280.9	267.0	-4.9	-8.4
Oadby/Wigston	53.5	55.2	58.9	10.1	53.1	55.8	5.1	1.1
Rushcliffe	103.5	107.9	117.0	13.0	99.0	105.6	6.7	-2.1
Rutland	35.3	37.8	43.0	21.8	33.2	34.6	4.2	-8.5
S Derbyshire	77.8	80.3	87.9	13.0	72.9	81.6	11.9	1.6
South Holland	71.4	75.7	90.8	27.2	67.8	76.5	12.8	1.1
South Kesteven	120	129.8	159.0	32.5	110.1	124.8	13.4	-3.9
S Nhants	75.0	78.6	89.7	19.6	71.1	79.3	11.5	0.9
Wellingborough	67.9	69.2	74.2	9.3	68.6	72.5	5.7	4.8
West Lindsey	77.2	78.6	82.2	6.5	76.7	79.5	3.7	1.1
Peak	218.2	218.4	219.3	0.5	216.3	217.7	0.6	-0.3
Coalfields	557.5	560	564.9	1.3	556.3	557.5	0.2	-0.4
Cities	1601.5	1638.2	1754.6	9.6	1563.4	1591.7	1.8	-2.8
Eastern	915.5	944.6	1034.5	13.0	886.3	948.4	7.0	0.4
Southern	848.6	873	949.7	11.9	813	857.1	5.4	-1.8
East Midlands	4141.3	4234.2	4523	9.2	4,035.4	4,172.2	3.4	-1.5

Source: CURS (2003) Background information on the housing market in the East Midlands

(a) Age structure

The age structure of the population influences migration propensities and household formation within a local housing system. Age is also an important factor when assessing the mix of housing required. For example, it is often used as a basis for estimating the likely prevalence of vulnerable groups with potential needs for care and support in particular areas (this approach is discussed in chapter 11). There are also important age 'cohort' effects in relation to tenure preference and housing demand. Holmans (2001) points out "owner-occupiers tend to take their tenure with them as they get older".

It is important to identify the proportion of the population in different age cohorts and which of these age cohorts are expected to grow or decline over time and space. Age cohorts typically used to examine housing demand patterns are:

- *Young adults (16 to 24 years):* Housing demand amongst these groups tends to be fluid as young adults alternate between living with parents and other living arrangements and locations depending on educational and economic circumstances and opportunities.

- *Those aged in their mid 20s to mid 40s.* During this period many invest in their housing and family careers. Those age 25 to 34 years are often entering owner occupation for the first time; those aged 35 to 45 are often trading up to larger properties or improving their existing property.

- *Mature householders in their late 40s and 50s*: these households tend to have fewer dependents and be at the peak of their earning power. This group tends to have a major impact on demand patterns as result of the ageing of the baby boomer generation.

- *Older people*: Not only are numbers of older persons' increasing as life expectancy in the UK continues to rise, but also, the housing demands of older people are changing as their active lifespan expands. The continued growth in the number of older people is of particular interest to analysts engaged in Community Care Planning as discussed in chapter 11. In terms of assessing potential demands and needs to assist older people remain in their home or community, it is useful to separate out the most elderly (e.g. over 75 or 80 plus years) from other older persons and to look at aging alongside indicators of morbidity.

(b) Gender and ethnicity

Gender and ethnicity also have a strong influence on the mix and location of housing consumed or sought:

- Different ethnic groups have different age structures, household formation and fertility rates, different tenure and locational preferences to other groups, all of which have implications for housing requirements.

- Male and female-headed households tend to have different homeownership rates and women also tend to be over-represented in older age cohorts (albeit to a lesser extent than was previously the case).

The ethnic and gender-sensitivity of housing policy requires a similar sensitivity when analysing housing system trends.

(c) Type

Relative numbers of different household types have potential implications for the type of housing being sought. For instance, an important indicator of affordability and demand for home ownership is the proportion of couple households and households with two parents that have two earners. By contrast lone parent households have only one potential earner, who must also fill the role of parent. It is therefore important to investigate different household types and, where possible, separately identify the household types, where possible within each of the broad age groupings detailed above.

Analysing demographic trends

The following paragraphs provide a set of questions that should be posed when building a picture of evolving demographic trends at the housing system and (where possible) smaller area level. As each local housing system is unique, the specific issues that should be analysed will largely depend on local circumstances. It is therefore possible that not all the following questions will be equally relevant in all areas. (Note also that as households as opposed to individuals are the basic unit of housing consumption, there is less need to undertake detailed analysis of population statistics where comprehensive household estimates and projections exist).

(a) Population trends

In terms of changes in population size, composition and density over time and space, questions to ask are:

- Has the population been declining or growing over the last decade and are past rates of growth or decline expected to continue at the same pace, to slow down or increase?

- Is population change primarily a result of natural change or migration patterns? How significant is long distance or inter housing market migration?

- Is the spatial distribution of the population within the housing system changing? Are parts of the housing system experiencing population decline or growth and to what extent is this associated with migration and residential movement?

- Which age cohorts are growing or declining in the housing market as a whole? Is the spatial distribution of the different age cohorts groups across the housing market area changing? Are there distinctive differences in the migration patterns of different age cohorts? Are younger households moving into city or town centres or more suburban localities? Is this likely to impact in a significant way (in housing terms) on the age profile of different areas?

- How is the ethnic and gender composition of the population changing through time?

(b) Household trends

In terms of the number, structure, socio-economic and spatial distributions of households, important questions to consider are:

- At what rate have household numbers been growing or contracting over the past decade and is this rate expected to continue or change?

- What is the current household structure profile (type of household as well as age, gender and ethnic origin of household head) and how is this changing over time?

- Is the spatial distribution of households within the housing market changing? Is there evidence of increasing spatial segregation between different household groups (e.g. rich and poor, young and old) across the local housing system?

- Do areas experiencing high levels of in or out migration have distinctive features (such as mono tenure and high levels of deprivation) that require more detailed investigation?

- Are there areas experiencing high levels of churn or highly localised moves and, if so, do they have distinctive features (such as mono tenure etc) that warrant more detailed investigation?

In analysing available demographic data, it is useful to compare housing system trends with those for Scotland as a whole. It is also valuable to compare trends between different localities and small areas within the local housing system if possible. This will help discern which areas are experiencing relatively high and/or low levels of housing demand from households as a whole or from particular household groups or segments of the population (investigation of the causes of such

trends is taken up in chapters 8, 9 and 13). Table 2 provides an example of basic analysis of household trends and projections at the local authority level.

Table 2 Household trends and projections, North Lanarkshire

Total Number Of Households

With over 138,000 households, North Lanarkshire accounts for over 6% of Scotland's total. Between 2003-2008 and again 2008-2013, North Lanarkshire's number of households will increase at a faster rate than that of Scotland as a whole. Table 4 shows increases will be 4.8% and 4.2% respectively over the 2 sets of five year periods. This will have a significant impact on the demand for housing. An increase in demand of 9% will occur between 2003 and 2008.

Table 4: Estimated Numbers Of Households 2003-2013

Area	Year			% change	
	2003	2008	2013	2003-2008	2008-2012
North Lanarkshire	138,030	144,610	150,690	4.8%	4.2%
Scotland	2,257,310	2,351,940	2,444,700	4.2%	3.9%

Source: GRO 2002 based projections

Household Composition

Table 5 shows the total number of households and the proportion of each household type. The higher numbers of households are to be found in the localities of Cumbernauld, Airdrie, Coatbridge, Wishaw and Motherwell. Above average levels of one person households are found in Motherwell, Coatbridge and Wishaw. Much lower levels are visible in Cumbernauld and Viewpark.

Table 5: Percentage of Household Type

Area	Household Type					
	1 Person	1 adult + 1 or more children	2 adults no children	2 + adults and children	3 or more adults no children	All Households
Airdrie	27.6%	6.9%	27.2%	23.8%	14.5%	22040
Bellshill	29.9%	7.0%	26.4%	24.0%	12.8%	14093
Coatbridge	32.1%	7.2%	25.8%	21.5%	13.3%	18839
Cumbernauld	24.9%	6.4%	29.0%	25.4%	14.4%	20450
Kilsyth	29.8%	7.5%	28.4%	20.9%	13.4%	5164
Moodiesburn	26.7%	6.1%	29.3%	24.4%	13.5%	7285
Motherwell	34.6%	6.7%	27.8%	19.2%	11.7%	16136
Shotts	30.4%	6.9%	28.3%	21.6%	12.9%	5710
Viewpark	25.3%	7.5%	25.9%	26.4%	14.9%	5937
Wishaw	32.1%	6.7%	27.8%	21.0%	12.4%	16965
North Lanarkshire	29.5%	6.8%	27.5%	22.8%	13.4%	132619
Scotland	32.9%	5.6%	29.9%	20.4%	11.2%	2192246

Source: 2001 Census

Households containing one adult with children are more commonly found on average in the Kilsyth, Viewpark, Coatbridge and Bellshill areas. Low levels are found in Cumbernauld and Moodiesburn. Over a quarter of households (27.5%) in North Lanarkshire were found to be two adults with no children. Above average levels were found in Cumbernauld, Kilsyth, Moodiesburn and Shotts. Low levels were noticeable in Coatbridge and Viewpark. 'Traditional' family type households accounted for 22% of all households. Higher levels were found in Bellshill, Cumbernauld, Moodiesburn and Viewpark. Below average levels exist in Coatbridge, Kilsyth, Motherwell and Wishaw.

Households with three or more adults with children and no children accounted for just over 13% of the North Lanarkshire total. All areas have a similar proportion.

North Lanarkshire differs from the national picture in the balance between household types. For example, North Lanarkshire has slightly lower proportions of one person households and two adults with no children. Conversely, it has slightly higher proportions of one adult with children, two adults with children and three or more adults with no children.

Over the next ten years, the numbers of single person households will increase substantially in North Lanarkshire. Increases will amount to 12.3% between 2003 and 2008 and 11.4% in the following five years. These levels will be above national averages. There will also be noticeable increases in one adult with children households again at levels above the national average.

However there will be sizeable reductions in the number of households containing two or more adults with children between both 2003-2008 and 2008-2013 of 12.3% and 15.3% respectively. These reduction rates are slightly below the anticipated national trends. Increases in the household numbers with two or more adults and no children will be more modest and below national average increases.

The decline in numbers of 'traditional' family household type may have an impact on demand for larger sized properties. However, as aspirations increase, demand from both sets of households may increasingly sway towards larger sized properties.

Table 6: Percentage Changes In North Lanarkshire and Scotland Household Type

Household Type	Year				
	2003	2008	2013	2003-2008	2008-2013
North Lanarkshire					
1 adult	40,250	45,190	50,340	12.3%	11.4%
1 adult with children	10,660	11,850	12,910	11.2%	8.9%
2 or more adults with children	29,900	26,220	22,140	-12.3%	-15.5%
2 or more adults	57,220	61,350	65,310	7.2%	6.5%
Total	138,030	144,610	150,700	4.8%	4.2%
Scotland					
1 adult	780,350	864,940	952,390	10.8%	10.1%
1 adult with children	160,180	176,590	191,820	10.2%	8.6%
2 or more adults with children	403,810	345,230	287,470	-14.5%	-16.7
2 or more adults	912,980	965,180	1,013,030	5.7%	4.9%
Total	2,257,320	2,351,940	2,444,710	4.2%	3.9%

Source: GRO 2002 based projections

Substantial increases in one person households may impact on demand for smaller sized properties in the social rented sector and lower market properties in private rented and over occupied sectors. This may increase the existing imbalance in demand and supply for smaller sized properties.

Household Size

With a stable population but an increasing number of households, the average household size is anticipated to reduce between 2003 and 2013. Average household sizes are likely to remain above the Scottish average given the higher proportion of households with children.

Table 7 reveals that the average household size in North Lanarkshire is higher than the Scottish average. This is particularly so in the Airdrie, Cumbernauld, Moodiesburn, Shotts, Viewpark and Wishaw areas. Only in Motherwell does the average household size drop below the national average.

Table 7: Average Households Size, 2001

Area	Average Household Size
Airdrie	2.48
Bellshill	2.42
Coatbridge	2.39
Cumbernauld	2.51
Kilsyth	2.38
Moodiesburn	2.46
Motherwell	2.26
Shotts	2.50
Viewpark	2.55
Wishaw	2.47
North Lanarkshire	2.42
Scotland	2.31

Source: 2001 Census

As with the Scottish trends, Table 8 shows that the North Lanarkshire average household size is estimated to reduce from 2.42 in 2001 to 2.15 in 2013 but will remain above the Scottish average.

Table 8: Average Household Size, 2000-2013

Area	Year			
	2000	2003	2008	2013
North Lanarkshire	2.42	2.35	2.24	2.15
Scotland	2.27	2.21	2.11	2.01

Source: GRO 2002 based projections

Summary

North Lanarkshire's total number of households will increase at a faster rate than that of Scotland as a whole. Between 2003 and 2013, an increase in the number of households of 9% will occur. North Lanarkshire differs from the national picture in the balance between household types. For example, North Lanarkshire has slightly lower proportions of one person households and two adults with no children. Conversely it has slightly higher proportions of one adult with children, two adults with children and three or more adults with no children. With a stable population but an increasing number of households, the average household size is anticipated to reduce between 2003 and 2013. Average household sizes are likely to remain above the Scottish average given the higher proportion of households with children.

Over the next ten years, the numbers of single person households will increase above national averages. There will also be noticeable increases in one adult with children households again at levels above the national average. However there will be sizeable reductions in the number of households containing two or more adults with children. Increases in the household numbers with two or more adults and no children will be more modest and below national average increases.

The decline in numbers of 'traditional' family household type may have an impact on demand for larger sized properties. However, as aspirations increase, demand from both sets of households may increasingly sway towards larger sized properties.

Tenure propensities over time

A few attempts have been made to project and forecast tenure demand based on demographic projections. For instance, the Glasgow and Clyde Valley Structure Planning Team have developed a model to forecast demand for new private housing. But in general, the range of assumptions that need to be made, coupled with data limitations, means that forecasting tenure demand in this way is not really a feasible option.

A more straightforward method known as the "tenure propensities" approach was devised for the JRF Foundation (Holmans, 1995) and has been used in several studies in England and Wales. Tenure propensity is simply the chance that a person of a given age and gender will be in a particular tenure at a particular point in time. The usual approach is to make use of the observed tenure structure for different age cohorts over the last 5 or 10 years and project these forward. A worked example is provided in table 3 from a study funded by the Council for Mortgage Lenders[1]. It uses tenure propensities for specific household reference persons grouped by age, gender and household type.

[1] http://www.cml.org.uk/servlet/dycon/zt-cml/cml/live/en/cml/pdf_pub_resreps_36full.pdf

Table 3 Projections of tenure using 'constant' 1996 tenure propensities

The summary estimates of owner-occupation by household composition and by age and gender of household representative (e.g. household reference person) for 1996 are also shown in Table 20 along with alternative projections for 2021. The figures from the 1991 Labour Force Housing Trailer are presented for comparison purposes only. The 'constant propensities' results in Table 20 show the outcome of applying the 1996- based propensities to the projected composition of households at 2021. As a result, the projected 3.8 million net increase in households between 1996 and 2021 is divided into 2.0 million owner-occupiers, 0.5 million private tenants and 1.3 million social tenants.

Table 20: Tenure Of Households 1996-2021, England, Millions

	1991	1996		2021		1996-2021		1991-2011
	LFS1 m	SEH2 m	CML study m	Constant propensities m	Cohort effects m	Constant propensities m	Cohort effects m	Holmans3 m
Owner occupiers	13.05	13.61	13.57	15.52	16.46	1.96	2.89	2.70
Private Tenants	1.82	2.05	2.09	2.64	2.49	0.54	0.39	0.12
Social Tenants	4.44	4.49	4.52	2.09	2.64	2.49	0.54	0.73
All Households	19.31	20.15	20.18	24.00	24.00	3.81	3.82	3.55

Sources: 1 Labour Force Survey Housing Trailer 1991

2 Survey of English Housing 1996/7 (survey dates: April 1996-March 1997)

3 Holmans A. (1995a)

Source: CML (2001) Changing Households, Changing Housing Markets, edited by D King

Whilst tenure propensity based projections can be regarded as a best guess, they suffer from the same limitations as other household projection based approaches in that they assume the future will be like the past. However, changes in propensities can quickly occur, as demonstrated by a steep increase in owner occupation amongst mature and retired age cohorts following the introduction of Right to Buy.

Socio-economic characteristics, aspirations, and housing requirements

Profiling households

More generally, it is important to allow for a broader range of factors when considering the likely housing requirements of a given population over time, including tenure requirements. Over the last 25 years significant social, cultural and economic changes have reshaped the material wealth and housing aspirations of most Scottish households. With most now looking to the market to satisfy their housing requirements, aspirations and choices are now more important than household size and structure in influencing housing demand.

Analysing the socio-economic circumstances of households in conjunction with their housing aspirations and choices is therefore critical in assessing the likely future mix and tenure of housing required across the housing system.

This makes it difficult to draw conclusions about the sorts of housing required simply by looking at household estimates and projections. For instance, fewer single people are living in small properties and far fewer older people are seeking sheltered housing than in the past. It therefore cannot be assumed that growth in the number of single person or older person households will increase demand for smaller housing.

To assist analysis it may be sensible to categorise the population or households within a local housing system into a small number of groups, based on some combination of household type, income, and other relevant socioeconomic factors in order to assess likely future tenure trends, as well as demand for particular types of property in particular locations. The idea of 'consumer groups' discussed in Annex 2 is one way to approach this, as is the use of the broad households socio-economic types typically employed in commercial 'geo-demographic analysis' (discussed below).

While there is no definitive approach to recommend here, the following factors should be included in deciding what categorisation to use wherever possible.

Household economic and material circumstances

As highlighted in chapter 5 and discussed further in chapter 12, household earnings and income affect the ability of households to secure suitable housing in the open market. Equally, analysis of the material circumstances of households is critical to understanding the inter and intra tenure household flows discussed in chapters 8,9,10, and 13. As there is very little earnings and income data at local authority level, analysts may find it useful to examine a range of indicators such as household educational achievement, employment status, social class and occupation. These are often used to infer the material circumstances of households.

Household composition

As already indicated above, gender and ethnicity influence the sorts of housing and locations households seek. Likewise, the mix of different types of households shape housing demand patterns. For instance, households with 2 children may be concerned to secure at least a 3 or 4-bedroom house with a garden that is located in close proximity to a "good" school.

Information on household housing preferences and migration propensities

About 10 per cent of the population move every year, although the rate is much higher for young adults and much lower for middle-aged and older people. The majority of moves are over quite a short distance (Tables 4, 5) and these tend to be motivated by housing and family considerations. Longer distance moves are more often associated with changes in employment or education, and with young people leaving (or returning) home.

Table 4 Origin of movers analysis, Edinburgh

The Sasines data also allow analysis of the origins of purchasers who originated outwith Edinburgh. Table 1 summarises the results of this analysis. The largest single category of in-movers is those from outwith Scotland. This group accounted for 33% of in-movers in 1996 and by 1998 the proportion had increased to 39%.

In-movers from within Scotland are classified by the local authority from which they moved and the local authorities accounting for the highest proportion of in-movers are the neighbouring authorities of West Lothian, Midlothian, East Lothian and Fife. Between 1996 and 1998, the proportion of in-movers originating from these neighbouring authorities fell (corresponding to the increase in those from outside Scotland), while the proportion originating elsewhere within Scotland remained steady.

Table 1: Origins of In-movers Source: LVIU Sasines data

	1996	1997	1998
Outside Scotland*	33%	36%	39%
West Lothian	12%	10%	10%
Midlothian	10%	9%	8%
East Lothian	9%	9%	7%
Fife	7%	7%	7%
Borders	4%	4%	4%
Glasgow	4%	4%	4%
Elsewhere in Scotland	21%	21%	21%
Total Sales	2943	3491	2846

Note: * 'Outside Scotland' consists of two categories: 'outwith Scotland' and 'origin unknown'.

Since purchasers from outside Scotland represent a third of in-migrants, it is useful to examine this group's purchases on a sub-area basis to try to establish whether and how it influences wider trends within the City. These results are summarised in Table 2, the key points of which are:

Sales to purchasers from outside Scotland as a proportion of all in-movers varies substantially between areas, from a high of 52% in Central to 24% in Rural West (1998 data).

The increase in the proportion of sales to purchasers from outside Scotland in four areas, Central, Rural West, South East and South West, is substantially higher than the city-wide increase.
Despite the overall increase between 1996 and 1998, in two areas – North East and North West – the proportion of in-movers coming from outside Scotland has actually fallen.

Table 2: Sub-area destination of in-movers from outside Scotland In-movers of non-Scottish origin as % of all in-movers

	1996	1997	1998
Central	39	43	52
North East	27	24	27
North West	29	21	25
Outer Central	35	40	39
Rural West	15	21	24
South East	21	28	34
South West	23	30	36
Waterfront	37	34	40
Total Sales	33	36	39

Source: LVIU Sasines data

Flows in and out of Edinburgh to neighbouring local authorities

A significant proportion of in-movers from elsewhere in Scotland move from the neighbouring local authorities. The flows of purchasers *from* Edinburgh to these authorities and *to* Edinburgh from these authorities allow a greater understanding of the relationship between the Edinburgh housing market and neighbouring areas. For the purpose of this analysis the flows to and from the three Lothian authorities (East, Mid and West), Fife and Borders have been examined.

As Table 3 demonstrates, there has been net out-migration to each neighbouring local authority area in each of the three years; in other words, the level of migration *from* Edinburgh to neighbouring authorities is greater than migration *to* Edinburgh from neighbouring authorities. Taking the neighbouring local authorities together, the scale of net out-migration increased substantially between 1996 and 1998. In 1996, sales in neighbouring authorities to purchasers from Edinburgh represented 134% of sales in Edinburgh to purchasers from neighbouring authorities (1641 sales from Edinburgh to neighbouring authorities compared with 1226 moving in the other direction). However, by 1998 this figure had increased to 199% (2060 compared with 1035 sales). The bulk of this increase occurred between 1997 and 1998. Between 1996 and 1997 there was a slight decline in out-migration.

As Table 3 also illustrates, the growth in net out-migration was produced by two factors:
- An absolute reduction in the number of sales of Edinburgh properties to purchasers from neighbouring authorities (down from 1,226 in 1996 to 1,035 in 1998), and
- An increase in the sales of properties in neighbouring authorities to Edinburgh purchasers (up to 2,060 in 1998 from 1,641 in 1996).

As has been noted, there was net out-migration to each of the five neighbouring authorities in each year examined. The scale of net out-migration to each area also increased between 1996 and 1998. By 1998, out-migration to East Lothian was highest (2.5 moves from Edinburgh to East Lothian for every move from East Lothian to Edinburgh) and West Lothian (2.2). Out-migration was lowest to the Borders although even here there were 1.5 moves out of Edinburgh for each move into Edinburgh.

Table 3: Flows between Edinburgh and neighbouring local authorities: Property transactions causing movement into or out of Edinburgh (% over 100 represents net outflow)

	1996			1997			1998		
	To Edin	From Edin	%	To Edin	From Edin	%	To Edin	From Edin	%
Fife	196	263	134	246	267	109	195	337	173
East Lothian	260	439	169	315	462	147	214	530	248
West Lothian	347	475	137	345	525	152	281	620	221
Midlothian	302	309	102	305	324	106	234	410	175
Borders	121	155	128	141	173	123	111	163	147
Total	1,226	1,641	134	1,352	1,751	130	1,035	2,060	199

Source: LVIU Sasines data

Source: DTZ Pieda Consulting 2000, Edinburgh Housing Needs and Market Analysis, Final Report

Table 5 Movement of purchasers from Edinburgh to West Lothian during 1990s.

Table 2.4 identifies the main origin locations of buyers in each of the 8 postcode districts in 2000. The analysis indicates that there are significant intra- authority differences in the migration sources of buyers in different local areas:

Areas in the west of the district (including Whitburn, Bathgate and West Calder) show much higher proportions of internal movement than those in the east, north or in the main Livingston conurbation.
Correspondingly, eastern areas, particularly Broxburn, Winchburgh, and East and Mid Calder attract higher proportions of Edinburgh buyers and are significantly connected to those areas.
Kirknewton appears to have much stronger connections with Edinburgh than with West Lothian.

Table 2.4 Buyer origins by postcode district, 2000

		Percent originating in:			
Postcode district	**Area**	**West Lothian**	**Edinburgh**	**Strathclyde**	**Central/ Fife**
EH27	Kirknewton	17.6	76.5	-	-
EH47	Whitburn, Stoneyburn, Fauldhouse, Blackburn	80.4	5.8	7.6	1.0
EH48	Bathgate, Armadale	73.8	8.6	9.0	3.3
EH49	Linlithgow	55.8	20.0	7.4	8.7
EH52	Broxburn, Uphall, Winchburgh	47.9	36.3	4.4	1.4
EH53	Mid/East Calder	56.3	32.2	3.5	1.0
EH54	Livingston	59.1	20.3	6.6	2.6
EH55	West Calder, Polbeth	73.9	15.9	5.7	2.2
All areas		61.5	20.2	6.8	2.9

Source: Glasgow University And Newhaven (2003) West Lothian Housing Market: Choices, Changes And Affordability

Ideally, information on the socio-economic circumstances of different household or consumer groups should be analysed alongside information about their movement propensities and the types of property and locations these groups find most and least acceptable.

One method that is often used to explore household housing preferences is to include questions on housing histories and future housing intentions in housing needs and other surveys. Survey responses can then be used to gain some insight into the factors that trigger households to move home and preferred property and location attributes. For instance, table 6 shows how findings from a housing needs survey have been used to explore inter-tenure flows over the past 10 years.

Table 6 Tenure relationships in Edinburgh

The relationship between the tenures is shown in Table 1. This shows that over a ten-year period there has been very little movement between tenures through house moves. Among owner-occupiers who had moved in the ten years prior to the survey, only 5% had previously been in social renting.

In comparison with the Right to Buy, where 37% of Council stock has transferred to the owner-occupied sector, movement from social renting to owner occupation through house moves is not as significant. Comparing the two, the sale of Council houses has created 22,000 owner occupiers since 1980 (an average annual rate of about 1,100 per year). Moves from social renting into owner occupation (when the survey data is grossed to the household population) have created approximately 9,900 owner-occupiers over the ten-year period (or an average annual rate of 990 per year).

The table shows that moves in the other direction – from owner occupation to social renting and from private renting to social renting are much more common, with each accounting for 15% of social renters who had moved in the ten years prior to the survey.

The transitional nature of the private rented sector is also clear, with 26% of owner occupiers and 15% of social rented tenants previously in private renting.

Table 1 Tenure change through house moves in Edinburgh (% of current tenure group previously in other tenures among those who have moved in the last ten years)

Current tenure → Previous tenure ↓	Owner occupier	Social renter	Private renter
Owner		15	6
Social renter	5		7
Private renter	26	15	
Bases:	828	350	231

Source: Edinburgh Housing Needs Survey, 2000

Table 2 Tenure change on most recent move (col %), based on the most recent move of all respondents who had moved in the 10 years prior to the survey

Current tenure → Previous tenure ↓	Owned outright	Buying – loan or mortgage	Rent from Council	Rent from HA/Co-op	Privately rented	Other
Owner householder	71	54	10	12	5	12
Owner non-householder	1	1	2	0	0	0
Private renter householder	10	15	5	9	50	15
Private renter non-householder	2	6	2	4	13	6
Social renter householder	4	3	51	47	5	6
Social renter non-householder	0	1	8	8	1	6
Lived with parents	6	14	10	10	11	9
Other	5	6	11	10	15	47
Don't know/ not stated	1	0	0	0	0	0
Base	114	714	282	68	231	33

Source: Edinburgh Housing Needs Survey, 2000.

A more detailed, although less complete picture of the relationship between the tenures is shown in Table 2, which shows the extent to which households changed tenure at the time of their most recent move. Again, this shows that there is very little movement between owner-occupation and social renting and that what flow there is between social renting and owner-occupation is mainly towards the social rented sector. The number of cases involved is, however, very small.
Another way of looking at this, rather than looking at the proportion of people in each tenure who previously had a different tenure, is to consider what proportion of people previously in each tenure are now in each tenure. This is shown in Table 3, where it can be seen that of the people whose most recent move was out of a social rented property, 80% moved to another social rented property while 11% moved into owner-occupation. Similarly, most owner-occupiers who moved stayed within the owner-occupied sector, with only 7% moving from owner-occupation to social renting.

The destinations of people in the private rented sector are also clear from the table, with the most recent move of people who had been in the private rented sector leading to another private let or owner-occupation.

Emerging households – those who had been living with their parents – tend to separate between the sectors broadly in proportion to the overall size of each sector, although the private rented sector again appears to act as an intermediary stage between living with parents and eventual owner-occupation.

Table 3 Movement between tenures - destimations of movers previously in each tenure (row %), based on the most recent move of all respondents who moved in the 10 years prior to the survey

Current tenure → Previous tenure ↓	Owned outright	Buying - loan or mortgage	Rent from Council	Rent from HA/Co-op	Privately rented	Other	Base
Owner householder	15	74	5	2	3	1	570
Owner non-householder	7	50	36	0	7	0	14
Private renter householder	4	36	4	2	52	2	239
Private renter non-householder	2	44	5	3	43	2	60
Social renter householder	2	9	63	17	7	1	224
Social renter non-householder	0	19	52	14	10	5	40
Lived with parents	4	57	15	4	18	2	156

Source: Edinburgh Housing Needs Survey, 2000.

The main conclusion from this is that it is reasonable to look at the owner-occupied housing market and the social rented system as functionally separate sectors, with very little interaction between the two. The lack of interaction between the tenures is, to some extent, simply a reflection of the preferences expressed by households. Of all the owner-occupiers who had moved in the previous five years, the survey found that only 5% had had their name on any list to rent housing from either the Council or a social landlord and, of these, 85% had wanted to rent from the Council.

Most of the households who had not considered renting from a social landlord gave no particular reason for this except that they had only wanted to buy or rent privately. A small but significant proportion (11%) had not considered Council housing because they thought they were not eligible to apply.

Source: DTZ Pieda Consulting 2000, Edinburgh Housing Needs and Market Analysis, Final Report

Accessing and appraising existing data sources

Population and household estimates and projections

The General Register Office for Scotland (GRO) produces annual mid year population estimates that are published in the following year. Population projections are based on the mid year estimates and are usually published every two years. Both are available at GROS - Demographic Statistics[2]. Population estimates and projections are calculated on a similar basis. Essentially, indigenous population change (projected utilising female fertility rates and long run mortality rates) and future net migration projections (now derived from the Community Health Index[3]) are combined to produce projected population totals, subdivided by age and gender down to local authority level. Only 5 year age bands are published, but GRO supply a complete age distribution (0 years to 90 plus years) or alternative age bands on request.

Scottish Executive household estimates and projections[4] are produced every two years or so by the Scottish Executive at national and local authority area. Given the central role of household estimates and projections in assessing housing needs and demands, it is important to have a clear understanding of the methods used to produce them.

Household estimates provide a count of private households and exclude those living in communal establishments such as educational establishments and nursing homes. As Table 7 illustrates, these are largely based on the number of dwellings that the Scottish Executive calculates exist in each local authority area. Estimates of the numbers of non-Council vacant and non-effective stock

[2] http://www.gro-scotland.gov.uk/grosweb/grosweb.nsf/pages/demstats
[3] http://www.show.scot.nhs.uk/csags/Meeting Papers/CSAGS 2000-04.PDF
[4] http://www.scotland.gov.uk/stats/bulletins/00179-24.asp

are based on Census data. Estimates of Council owned vacant and non-effective stock are based on local authority returns. Prior to publication, local authorities are invited to comment on the figures and amendments are made where appropriate. Scottish Executive household estimates do not provide any breakdown by household type but household projections do.

Table 7 Scottish Executive household estimates calculation
A – B + C = HOUSEHOLD ESTIMATES where: A is the estimated number of dwellings B is the LA owned vacant stock and other non effective stock plus non LA vacant and non effective stock (mainly second and holiday homes) C An allowance for dwellings accommodating more than one household (i.e. concealed or sharing households)

The Scottish Executive employs a widely used and comparatively simple method known as the 'headship rate'[5] to generate household projections. In essence it involves establishing the headship rate for different sections of the population on the basis of household formation observed between two Census periods. These headship rates are then applied to the projected population (minus an allowance for people living in communal establishments) to obtain a projection of private households. Higher headship rates generate more households whilst lower headship rates generate fewer households for a given population.

Projections assume that factors influencing demographic change remain stable and indicate what might happen if past trends continue. Changes that affect household formation and migration decisions such as rising consumer incomes and aspirations and land release and other policies that impinge on a housing system are not taken into account. Projections have other acknowledged limitations that need to be taken into consideration in assessing their usefulness in any given context. Analysts may therefore find it useful to compare and contrast two or more sources of household projections and forecasts.

Other potential sources of population and household projections are those produced in-house by some local authorities. Glasgow and the Clyde Valley Joint Structure Planning Team[6] prepares demographic estimates and projections for 8 local authorities. These take into account population and residence estimates derived from a Voluntary Population Survey[7] (VPS), an annual survey, carried out by Electoral and Registration Officers on behalf of several local authorities. The Structure Planning Team for Aberdeen and Aberdeenshire use projections produced by the Essex University Chalmers model, which is used by many English local authorities.

It is possible to purchase population and household forecasts from independent consultancies but these are expensive. Generally, these forecasts look at possible changes in the short to medium term (i.e. 3 to 5 years). They tend to be based on GRO calculations of indigenous population change, which are not perceived to be contentious (at least for areas with large populations such as local authorities). Different assumptions about migration flows and different headship rates are used to reflect anticipated economic and policy circumstances. Headship rates are often derived from large-scale Central Government surveys (such as the Labour Force Survey) although more sophisticated approaches model the effects of anticipated economic change on headship rates and hence household formation. For instance, if earnings are anticipated to grow quickly, more households may be forecast to form.

The quality of forecasts depends on the reliability of income and house price data and on how well consumers' response to these changes in terms of migration and household formation has been measured. If either is wrong they may well be of more limited value than projections.

[5] http://www.scotland.gov.uk/stats/bulletins/00179-24.asp
[6] http://www.gcvcore.gov.uk/GCVJSP_2000/plan_2000.htm
[7] http://www.northlan.gov.uk/your+council/facts+and+figures/population/voluntary+population+survey.html

Assessing the limitations of population and household projections and forecasts

It is always sensible to consult local and structure planners, and where possible local demographers and economists working in other organisations when deciding which available household projections - and possibly forecasts - should be used, and for which purposes. Policies based on inappropriate household projections could inadvertently exacerbate imbalances in the local housing system. Under estimating household formation can lead to housing shortages resulting in escalating house prices. Over estimating housing demand can lead to surplus housing resulting in stagnating prices, more difficult to let stock and, in extreme instances, areas with high numbers of abandoned properties. The impact of under or over estimating future aggregate demand is likely to fall on households with the fewest housing choices and resources available (Bramley et al 2001).

The variation in underlying economic conditions, demographic patterns and policies operating in different local contexts means that it is impossible to provide a comprehensive checklist for appraising household projections and forecasts. However, in assessing whether or not population and household estimates and projections are 'fit for purpose' in a local context, close attention should be paid to both 'technical' and 'contextual' considerations as summarised in table 8.

Table 8 Potential limitations of household projections and forecasts

Criteria For Assessing Household Projections and Forecasts

Technical

The underlying structure of the population: There are marked differences in household formation, fertility and life expectancy amongst different ethnic communities. For instance, young Asian families have a higher tendency to reside with parents or parents-in-law than other ethnic groups, although the percentage tends to decrease as household heads near their mid 30s. GRO does not produce population projections by ethnic group, although ONS – at the time of writing – were undertaking experimental research to develop and test a method for estimating and projecting ethnic population and household change.

Migration assumptions: The NHS patient registers and Community Health Index are felt to provide the best proxy for internal migration within Scotland and the UK but are known to miss some persons. In particular, young men are less likely to register with a GP when or after they move.

Length of time elapsed since the Census used to derive estimates and projection: As the Scottish Executive has acknowledged the process of change is cumulative so the reliability of projections decreases over time.

Definition of Private households: household estimates and projections largely disregard concealed households and tend to be based on out of date information on the size of the institutional population. The Scottish Executive occasionally undertakes work in consultation with local authorities to estimate the number of people living in communal establishments. Estimates of the institutional population were last updated in 2000 and prior to this 1994. The base year proportions are assumed to remain constant over each of the projection years. Local hospital discharge and other policies can invalidate this assumption (see chapter 11).

Projected household type: No one definition of household type meets the needs of all users and consequently household type definitions vary. As table 5 shows, the definitions of household types used in the main non-Census housing datasets are not directly comparable with those used in the Scottish Executive household projections. Some local authorities, such as Falkirk Council, have found it useful to use household projections based on an alternative combination of age and household type structures. For instance, household projections for households headed by someone aged over 60 years and over 75 years may be more useful in assessing potential demand for older people housing related services than officially published projections which have no age breakdown. Those interested in alternative age-based or household type projections should contact the Scottish Executive who can supply alternative headship rates on request.

Contextual

Wider housing market conditions and the local land planning framework: For local authorities that are located within wider housing markets extending beyond their boundaries, high residential mobility rates within the urban housing market area will make underlying migration assumptions less dependable. This is because the availability and choice of housing available in neighbouring local authorities will influence where households seek housing. For instance, new residential construction in West Lothian has tended to lead to substantial numbers of households relocating from Edinburgh as highlighted in table 5.

Local economic and labour market conditions: improved local economic prospects and employment opportunities can increase inward migration to an area from other elsewhere, effectively increasing its 'catchment area'. By contrast, a stagnating local economy or a substantial fall in employment could have the opposite effect, increasing emigration to areas where employment prospects are better. Consistency between migration assumptions and the latest employment estimates and forecasts should be discussed with structure planning officers and local economic agencies.

Household Formation and migration patterns amongst younger adults: Whereas the housing career patterns of those over 34 years have largely stabilised, those of younger adults and especially those under 24 years are still in the process of evolving and are much more likely to be influenced by local employment and housing opportunities. Household formation amongst younger adults is therefore more variable than for older adults. Research by Ermisch and Di Salvo (1995) shows that high house prices can encourage younger people to remain at home and delay forming a separate household.

Environmental factors: Moves to more rural areas appears to be on the increase as households nearing or reaching retirement seek to move to areas and localities that seem to offer a high quality of life.

Developing alternative future household and tenure scenarios

Evidence from current structure planning and local housing strategy documents suggests that for many, Central Government population and household statistics are the only realistic or cost effective data sources available. It is good practice in this situation to explicitly examine the sensitivity of available projections or forecasts of population or household formation to possible changes in local economic conditions and ongoing policy initiatives. In short, rather than simply rely on a single set of figures alternative demographic scenarios should be considered in instances where alterative projections and forecasts are not available.

Sensitivity testing through developing alternative scenarios essentially involves exploring the impact of changes to the underlying assumptions built into projections. The intention is to explore the uncertainties in projections rather than produce full-blown alternative forecasts. In other words, scenarios provide a basis for reflecting on the possible future range within which the number and structure of households might eventuate, and the possible impacts of this on a housing system.

Table 9 summarises how a group of Welsh local authorities developed alternative scenarios. A more simple approach would be assessing the potential impact of possible alternative future developments in household trends by selecting three possible alternatives:

- A core or baseline scenario, which could be Scottish Executive projections or locally produced projections.
- A second, for example possibly representing the impact of potential improvement in local economic prospects through a small percentage increase in net migration and/or a small percentage increase in household formation amongst households headed by someone less than 24 years old.
- A third, perhaps reflecting a more difficult local economic set of circumstances.

Table 9 Conwy County Borough Council population and household alternative forecasts

Projections And Forecasts

1.1 Population and household projections aim to identify what future population figures and demographic characteristics will be if current trends continue. Forecasts aim to find the same type of data, but look at future population as related to policy initiatives (i.e. what will the population be if current policies are successful).

1.2 Planning is about ways of proceeding into the future and projections provide basic information about the whole population which is important in order to estimate, project and categorise future social, economic and land use needs.

Approach Adopted

3.9 Problems with the extant projections model CPHM and the dispersion of in-house expertise following local government reform led to an agreement that the use of consultants could provide a quick and semi-independent solution to the short term problem of producing up-to-date, consistent and agreed projections for each of the six Unitary Authorities in North Wales.

3.10 In November 1999 the London Research Centre (LRC) was appointed to produce a set of population, household and economic activity rates for North Wales. A set of projections was output for the six North Wales Authorities from 1996 to 2016. For Conwy this data was for the whole of the Unitary Authority area including those parts of the Snowdonia National Park within County Borough boundaries.

3.11 Five principal projections were prepared, looking at recent migration and dwelling led trends:

- Incorporating no migration after 1998 (equivalent to a natural change scenario).
- Completions Led – local forecast growth of dwellings, based on average dwelling completions for 1991-96, which examines how recent building trends would affect dwelling need if continued into the future.
- Permissions Led – based on the average annual number of planning permissions granted for dwellings between 1996 and 1999. This examines how recent trends in granting planning permissions for residential development would be extrapolated into the future.
- Migration Trend – based on the continuation of net migration trends for 1994-98 as derived from Mid Year Estimate population.
- Welsh Office Migration – using the net migration assumptions of the aborted 1996-based Welsh projections.

3.12 Two versions of each projection were prepared using alternative sets of household representative or household reference person (i.e. headship) rates. Tables 4, 5 and 6 show the resulting projections for population and households and dwellings.

Table 4 LRC Population Projections

Version 1	No Migration	Completions	Permissions	Mig Trend	WO Mig.
1996	110,595	110,595	110,595	110,595	110,595
2001	110,366	116,704	110,954	112,872	113,878
2006	107,460	119,421	110,107	114,067	116,589
2011	104,885	123,800	110,327	115,291	119,155
2016	102,972	126,470	109,461	116,706	121,749
Change 1996-2011	-5,710	13,205	-268	4,696	8,560
	-5.2%	11.9%	-0.2%	4.2%	7.7%
Version 2	**No Migration**	**Completions**	**Permissions**	**Mig Trend**	**WO Mig.**
1996	110,595	110,595	110,595	110,595	110,595
2001	110,366	117,381	111,411	112,872	113,878
2006	107,460	121,571	111,810	114,067	116,589
2011	104,885	127,081	112,838	115,291	119,155
2016	102,972	131,302	113,127	116,706	121,749
Change 1996-2011	-5,710	16,486	2,243	4,696	8,560
	-5.2%	14.9%	2.0%	4.2%	7.7%

3.15 A wide range of scenarios for population growth between 1996 and 2011 (roughly contiguous with plan period) are presented by these projections. In particular it is worth noting that the completions led projections offer growth levels far beyond those expected if current growth rates were extrapolated into the future (actual growth in population has been 3.2% between 1991 and 1999).

Table 5 LRC Household Projections

Version 1	**No Migration**	**Completions**	**Permissions**	**Mig Trend**	**WO Mig.**
1996	47,652	47,652	47,652	47,652	47,652
2001	48,273	50,088	48,313	49,129	49,513
2006	47,912	52,512	48,976	50,491	51,487
2011	47,316	54,946	49,635	51,813	53,393
2016	47,409	57,374	50,296	53,420	55,567
Change 1996-2011	-336	7,294	1,983	4,161	5,741
	-0.7%	15.3%	4.2%	8.7%	12.0%
Version 2	**No Migration**	**Completions**	**Permissions**	**Mig Trend**	**WO Mig.**
1996	47,569	47,569	47,569	47,569	47,569
2001	48,079	49,995	48,226	48,891	49,265
2006	47,360	52,423	48,887	49,787	50,742
2011	46,492	54,853	49,550	50,709	52,203
2016	46,152	57,285	50,216	51,800	53,805
Change 1996-2011	-1,077	7,284	1,981	3,140	4,634
	-2.3%	15.3%	4.2%	6.6%	9.7%

3.16 Household numbers are likely to grow at a faster rate than population totals over the period due to a trend towards a reduction in household size.

Table 6 LRC Dwelling Projections

Version 1	No Migration	Completions	Permissions	Mig Trend	WO Mig.
1996	50,966	50,966	50,966	50,966	50,966
2001	51,661	53,598	51,702	52,571	52,981
2006	51,301	56,231	52,440	54,069	55,137
2011	50,695	58,867	53,178	55,512	57,208
2016	50,822	61,506	53,919	57,269	59,565
Change 1996-2011	-271	7,901	2,212	4,546	6,242
	-0.5%	15.5%	4.3%	8.9%	12.2%
Version 2	No Migration	Completions	Permissions	Mig Trend	WO Mig.
1996	50,870	50,870	50,870	50,870	50,870
2001	51,448	53,502	51,606	52,321	52,718
2006	50,715	56,135	52,348	53,313	54,332
2011	49,814	58,771	53,088	54,328	55,930
2016	49,478	61,409	53,831	55,531	57,679
Change 1996-2011	-1,056	7,901	2,218	3,458	5,060
	-2.1%	15.5%	4.4%	6.8%	9.9%

3.17 On the basis of these figures, Conwy's preferred projection for inclusion in the Regional Strategic Planning Guidance document was Migration Trend, Version 1 as this projection most closely fitted the capacity based approach adopted by Conwy in 1998.

3.18 However the NWPOG as a whole favoured the Welsh Office Migration, Version 1 projections as a benchmark for North Wales. It was felt that as a benchmark the projections should be based on the best statistical representation of recent trends. This was the set recommended by LRC as the most statistically viable. The Welsh Office migration data was felt to be the most robust, and the household representative rates used in version 1 projections provided more detail and more closely approximated patterns of change in North Wales than the more limited all Wales rates.

3.19 The dwelling projection for the County Borough produced by this method at 6,242 dwellings is, however, significantly higher than the figure for the UDP Plan area agreed by members.

3.20 The projections have not been considered by Members in all authorities. The NWPOG consider that the projections, like all such projections, provide only a starting point for policy formulation (our emphasis).

Source: Conwy County Borough Council – Draft Unitary Development Plan – April 2001

As well as using scenarios for considering population/household numbers in future, this approach lends itself to consideration of future tenure splits. The earlier discussion established that there is no overall robust method available for producing such information, and that the socio-economic factors on which this rests are highly complex. The use of scenarios provides a more discursive basis on which to base estimates and secure the views of other interested parties.

Socio-economic circumstances and migration flows data

Table 10 highlights the wide range of datasets and other information sources that analysts should consider using in analysing socio-economic circumstances of households, migration flows, and tenure trends. Further details about most of these existing datasets can be found in Annex 3.

Table 10 Population and household data sources

Topic	Possible sources
Population Estimates	• Census • GRO: Estimates and Census • LA/ Structure Plan Own Calculations • Experian Business Strategies • Voluntary Population Surveys
Projections and/or Forecasts	• GRO • LA /Structure Plan Own Calculations • Experian Business Strategies
Households Estimates	• Census • Scottish Executive: Housing Statistics • Scottish Household Survey • Scottish / Local House Condition Survey • Local Housing Needs Studies/ other specially commissioned studies • Voluntary Population Surveys
Projections and/or Forecasts	• Scottish Executive: Housing Statistics • LA/ Structure Plan Own Calculations • Experian Business Strategies
Socio economic circumstances, housing histories and intentions	• Census • Scottish Household Survey • Scottish / Local House Condition Survey • Local Housing Needs Studies/ other specially commissioned studies • British Household Panel (for City -Region based HMA only) • CACI ACORN • Experian MOSAIC • Scottish Neighbourhood Statistics Income Estimates (once available)
Migration and Residential Moves.	• Census • GRO(s) Population estimates & projections • Community Health Index • Independent forecasters such as Experian BSL • Registers of Scotland Land Register/ Sasines (homeowners only)

The Scottish Census[8] contains the most complete and comprehensive information available about the composition and living arrangements of people and households, from national to neighbourhood and even smaller spatial levels. Census findings are also used to produce derived datasets, such as indices of deprivation (see below for further discussion). The Census can also be used to investigate patterns of migration and travel-to-work. As the Census is a vital source of data, further information on it is set out in Annex 5.

[8] http://www.scrol.gov.uk/scrol/common/home.jsp

Both the Scottish Household Survey (SHS)[9] and the Scottish House Condition Survey (SHCS)[10] cover topics such as household composition, tenure, health, household income and housing costs, housing change, tenure change, neighbourhood problems, and employment. Moreover, questions from the SHCS on household composition, income and employment questions are common to the SHS.

The British Household Panel Survey (BHPS)[11] is a longitudinal study that was recently extended to achieve a target sample of 1500 households in Scotland. Relevant topics include household formation and change, housing, health, income and financial commitments. For the two large urban housing markets centred on Scotland's two biggest cities the BHPS provides a readily accessible data source for longitudinal analysis of the impact of social and economic change on housing demand patterns. In due course it should facilitate analysis of how long people remain on low incomes, which is fundamental to understanding long term demand for social housing.

Both the Scottish Executive and UK Government Departments such as the Department of Works and Pensions produce a wide range of statistics associated with household composition and socio-economic status. These are summarised in Annex 3. Much of this data is gradually becoming accessible through the ONS Neighbourhood Statistics[12] and Scottish Neighbourhood Statistics[13] websites that are described in more detail in Annex 3.

Local authorities hold various population and household related data, although the quality of and ease of access to this data is highly variable. The potential advantages of using this data are that it should be relatively cheap to access and use, it can facilitate small area analysis and can provide regularly up dated information on individuals and households. Amongst the most useful data is:

- Data associated with the administration of Housing Benefit and Council Tax Benefit, covering the numbers and characteristics of Housing Benefit and Council Tax Benefit claimants and their dependants.

- Take up of free school meals data, collected by local authorities and often used as a proxy measure of social disadvantage and the extent to which children from low-income households are concentrated in particular schools and hence certain localities.

Analysing non-standardised geographic areas

As noted earlier, the Census remains the only readily accessible data to explore the socio-economic circumstances of households and migration flows for all households at housing market area and other non-standardised areas such as towns, villages and neighbourhoods.

Looking further ahead Scottish Neighbourhood Statistics should lead to improvements in the range of small area data available. One earlier output has been GRO postcode sector level population estimates (but not projections). These can be used as building blocks to create population estimates for housing market and other non-standardised areas. However, Scottish Executive intentions regarding the provision of household estimates and projections at a similar geographical scale have yet to be clarified.

Most analysts assessing future changes in the overall number and structure of households in the system will probably have to rely on local authority household projections or forecasts, adjusted pro-rata to reflect both the distribution of the population at the time of the Census and planned changes in the supply of housing. This is similar to the approach adopted by some local authorities, including North Ayrshire, as illustrated in table 11.

[9] http://www.scotland.gov.uk/about/SR/CRU-SocInc/00016002/SHShome.aspx
[10] http://www.shcs.gov.uk/
[11] http://www.data-archive.ac.uk/findingData/bhpsTitles.asp
[12] http://neighbourhood.statistics.gov.uk/default.asp?nsid=false&CE=True&SE=True
[13] http://www.sns.gov.uk/

Table 11 North Ayrshire Council household projections 2000-07 and 2012

Household Estimates and Projections Methodology

The small area population projections, which form the basis for the household projections, were produced by the Development and Promotion Section's R & I Team. This involved applying a technique commonly referred to as 'ratio apportionment' to the population figures for North Ayrshire provided by the General Register Office for Scotland (GRO(S)). Final household projections are controlled to the Scottish Executive figures for North Ayrshire as a whole to ensure compatibility between authorities for Structure Planning purposes.

Further details of this methodology are contained in the NADIR report "North Ayrshire Council Population Projections 2000-07 & 2012" which was released on 16 February 2001. In simple terms this involves disaggregating the GRO's latest mid-year population estimate to local community areas in five year age bands split by gender using ratios derived from the Voluntary Population Survey (VPS) for the corresponding year. These estimates are then rolled forward to the base year, in this case the year 2000, by applying age/gender specific migration figures drawn from an analysis of VPS data trends. Overall population estimates and projections and migration trends are controlled to the latest population figures available from the GRO(S). It was formally agreed with the Ayrshire Joint Structure Plan Team that total population estimates and projections in each of the three Ayrshire authorities should be realigned to GRO population figures to ensure that there is some measure of consistency where strategic planning policy decisions are concerned.

Household estimates and projections are then produced by applying projected headship rates for household categories and specific age groups to the population in each community area. These headship rates are supplied by the Housing Statistics Unit of the Scottish Executive Development Department. A comprehensive breakdown of estimated and projected households by type and age of head for each of the community areas and North Ayrshire is shown below.

Household Projections Summary

					%		%
			Change		Change	Change	Change
Community Areas	2000	2007	2012	2000-07	2000-07	2000-12	2000-12
Irvine/Kilwinning	24913	27050	28768	2137	8.6	3855	15.5
Three Towns	13846	14478	14827	632	4.6	981	7.1
Garnock Valley	9551	10053	10358	502	5.3	807	8.4
North Coast	9186	9766	10167	580	6.3	981	10.7
Arran	2000	2158	2277	158	7.9	277	13.9
	59496	63505	66397	4009	6.7	6901	11.6

Figures are controlled to SEDD 1998-based Household Projections

Population Projections Summary

					%		%
			Change		Change	Change	Change
Community Areas	2000	2007	2012	2000-07	2000-07	2000-12	2000-12
Irvine/Kilwinning	57801	58217	58315	416	0.7	514	0.9
Three Towns	32827	32652	32493	-175	-0.5	-334	-1
Garnock Valley	22146	22059	21949	-87	-0.4	-197	-0.9
North Coast	22044	21697	21630	-347	-1.6	-414	-1.9
Arran	4788	5017	5117	229	4.8	329	6.9
	139606	139642	139504	36	0	-102	-0.1

Figures are controlled to GRO(S) 1998-based Population Projections

Household Estimates 2000 in Irvine/Kilwinning: household type by Age of household Head

	16-24	25-29	30-34	35-44	45-54	55-59	60-64	65-74	75-84	85+	Sub-total
1 person male	244	305	301	497	450	233	248	410	279	125	3093
1 person female	178	161	186	261	379	242	375	1040	1029	437	4289
2 person all adult	255	515	436	756	1412	964	873	1300	617	93	7221
1 adult, 1 child	324	210	174	275	75	20	8	6	2	4	1098
3+ person all adult	13	26	38	432	1207	410	224	226	48	9	2633
1 adult 2+ children	145	281	335	283	23	1	3	1	1	0	1074
2+ adult 1+ children	182	511	1089	2611	908	115	48	31	7	1	5505
Non-heads	5595	2015	2109	3913	3312	1214	993	1269	463	110	20993
All Heads											24913

Source: North Ayrshire Council

One of the weaknesses with this method is that household growth is unlikely to be spread evenly across a unitary authority area. In using household projections for non-standardised areas some attempt should be made to cross-reference the outputs with the known size and structure of local households and recent migration patterns (using local surveys or the Community Health Index).

Linking demographic profiles and migration flows to area classifications

In small communities, richer households often live beside poorer households. But in urban conurbations, more affluent households tend to live in areas the poorest cannot access because of high house prices or lack of social rented opportunities.

It is useful to determine if there is an association between different housing tenures and spatial clusters of advantage or disadvantage. Although it is easy to assume that there is a strong link, in fact the spatial distribution of deprivation and its relationship with housing tenure varies considerably in urban areas. One option is to explore the inter-relationship between Scottish Deprivation Index[14] ward rankings and the dominant housing tenure in each ward according to the Census. Deprivation Indices combine a range of measures of social and economic conditions and are becoming increasingly important policy tools. GIS software can be used to map dominant housing tenure profiles and deprivation scores in order to assess the relationship between the two.

Deprivation indices have limitations as detailed in table 14. In the present context the main limitation is that ward-level deprivation scores can mask significant concentrations of deprivation in small areas and in more rural areas due to the 'averaging' effect arising from their proximity to more affluent areas. The revised 2004 Scottish Index of Deprivation is scheduled for publication in spring 2004 and will report results at "data zone" level (see Annex 6 for further information on data zones). This will reduce the impact of "averaging" and improve the identification of small areas with high concentrations of deprivation.

[14] http://www.sns.gov.uk/

Table 14 Limitations of deprivation indices
Measures are based on aggregate data for geographic areas and not the individual circumstances of households, and, "not all deprived people live in deprived Wards, just as not everybody in a Ward ranked as deprived are themselves deprived" (Townsend et al 1988). It is important to remember that deprivation scores are relative measures. Irrespective of the statistical technique used, the basic intention is to score and rank all the areas included in the calculation. In a nutshell, a deprivation index provides a summary measure of how deprived an area (such as a ward or data zone) is relative to all other areas included in the calculation. A deprivation index does not generally measure absolute deprivation or the degree of inequality between areas. Strategies intended to assist disadvantaged people should use a combination of place and people based measures if they are to minimise the risk that large numbers of social excluded households are missed out in the targeting of policies and actions. For further discussion of possible people based measures see Measuring Deprivation in Scotland: Developing a Long-Term Strategy[15].

An alternative option would be to look at residential moves into or out of “groupings of areas” that are believed to cater for households with similar lifestyles and habits. This could be achieved through using either of the following area based geo-demographic classifications discussed further in Annex 3:

- *ACORN* - (A Classification of Residential Neighbourhoods) developed by the market analysis company CACI and built entirely using Census data.
- *MOSAIC* - a classification system that uses a combination of Census, electoral roll, housing and financial data to classify households into 12 lifestyle groups.

Assessing scope for market research

As discussed earlier, information on consumer aspirations, preferences and choices are generally not available from existing data sources. One way to address this information gap might be to commission market research to measure a population's characteristics, behaviour, attitudes, and potential needs. Market research can be divided into quantitative and qualitative research:

- *Quantitative research* involves surveying a representative sample of the population of interest. This data is then used to estimate the characteristics of the entire population.
- *Qualitative research* involves interviewing small numbers of people either individually or through group discussions in order to explore a specific topic in depth and uncover underlying attitudes and motivations. Due to small sample sizes and methods of selecting participants, definitive conclusions cannot be drawn from qualitative research.

As research is both time consuming and costly, it is important to give careful consideration to the design, purpose and coverage. More detailed advice on the commissioning and project management of research, including surveys, can be found in Annex 7.

[15] http://www.scotland.gov.uk/library5/social/mdis.pdf

Hard to reach groups

Qualitative research is often the only cost effective means of gathering information on the attitudes, preferences and choices of small or hard to reach groups (see table 15 for a list of hard to reach groups). This is partly due to the methodological challenges associated with surveying such groups, although black and minority ethnic communities[16] appear to prefer focus groups and other qualitative approaches (Blake Stevenson, 2003).

Table15 Definition of 'hard to reach' groups

There is no standard or agreed definition of hard to reach groups, although they tend to have one or more of the following defining characteristics:

- Small absolute numbers such as different ethnic minority groups in most Scottish Local Authorities.
- Relatively wide dispersal.
- Highly mobility such as young adults.
- Invisibility such as those at risk or experiencing homelessness that do not present themselves to local authorities.
- Distinctive service needs such as those with mental health or learning difficulties.
- Those with language barriers.

The main challenge is finding a representative sample of hard to reach groups. Whilst the electoral roll and Council Tax Register have been used to draw a sample of black and minority ethnic households, this is of limited value for sampling those that cannot be identified by surname. Consequently, hard to reach group surveys are targeted at those using community services. As a result, there is a tendency for research into hard to reach groups to tell us more about those that use services than the hard to reach population group as a whole.

Those researching into black and ethnic minority communities (including refugees) should consult the Ahmed Iqbal Ullah Race Relations Archive[17] based in Manchester. This database was established with assistance from the Housing Corporation. It is a valuable resource for those interested in the diverse housing and social care needs of black and minority ethnic communities.

[16] http://www.scotland.gov.uk/library5/society/fgwmec-00.asp
[17] http://les1.man.ac.uk/rrarchive/home.htm

Summary of outputs

It is not sensible to attempt to work mechanically through all of the issues set out in this chapter, not least because some issues are not equally relevant in all places. However, in general it is anticipated that the main outputs from an analysis of demographic trends and influences on the housing system will be a demographic audit covering:

- The relative strengths and limitations of available datasets available, noting particular issues that need to be borne in mind in using them for more detailed analysis of tenure trends and needs assessments.

- A broad assessment of the extent to which available Scottish Executive household projections are in or out of alignment with current or future economic prospects and policy actions – and where necessary possible alternative demographic scenarios in light of likely local economic and policy developments.

- A series of tables and accompanying text detailing how population and household numbers and socio-economic composition are expected to change over time and space and associated migration or residential mobility patterns. These tables (where relevant) should be broken down by tenure and prepared at housing system, local authority and other selected settlement or neighbourhood levels.

- The likely consequences of socio-demographic changes for overall or aggregate housing requirements and possible implications for tenure propensities at the housing system and local authority level as well as for any major settlements.

- Identification of areas which, on the basis of migration patterns (and if available consumer preferences and choices) appear to be experiencing or are at risk of changing demand.

- Finally, in light of the review of the comprehensiveness and quality of existing data a forward programme for addressing key information gaps should be prepared.

As noted earlier, the outputs of this chapter form the basis for more detailed LHSA work described in subsequent chapters.