The East Midlands in 2006 – Evidence Base for the East Midlands Regional Economic Strategy 2006-2020: Demography

A report prepared by emda

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One

The demography of the East Midlands

The demography of the East Midlands

1. Introduction¹

This section of the Evidence Base provides a portrait of the demographic characteristics of the East Midlands region. It comments on population structure in terms of age, gender and ethnicity, and analyses historic trends and forecast population growth. The comparative size of transitory and migrant population groups is also discussed. This section also includes commentary on the projected population increase associated with the Milton Keynes South Midlands Growth Area and concludes with a summary analysis of health, disability and physical activity.

The East Midlands consists of six counties: Derbyshire, Leicestershire, Nottinghamshire, Northamptonshire, Lincolnshire and Rutland. The region's main population centres are the cities of Derby, Nottingham, Leicester and Lincoln, and the town of Northampton. The East Midlands is the fourth largest region in terms of area, covering 15,607 sq km, but is the second smallest in England in terms of population, with 4.3 million residents, which is 8% of the total. The East Midlands also has the second lowest population density, with 274 people per square km.²

The East Midlands has the second smallest population of the English regions

2. Population structure

Population estimates are produced by the Office for National Statistics, which compiles annual (mid-year) population estimates for England and Wales. These are based on the latest Census of Population, with allowances for under-enumeration, and updated to reflect subsequent births, deaths, migration and ageing. The latest Mid-Year Estimates (MYE) are for 2004.

2.1 Gender

- The East Midlands resident population of 4,279,700 comprises slightly more women than men, at 51% compared to 49% (see Table 1). This reflects the longer life expectancy of women. Women in the East Midlands have a life expectancy at birth of 80.5 years compared to 76.1 years for men (which is very similar to the English average);³
- Women outnumber men in all age groups over 30, whilst there are more men than women in all age groups under 30;
- The percentage of women is relatively stable at just over 50% between the ages of 30 and 65 but increases steadily thereafter, to reach just over 70% amongst residents aged 85 and over;
- A similar pattern is seen in England as a whole and across all regions. Only London differs with more men than women in the 30 to 39 age group.

¹The first draft of this section published in the East Midlands Regional Economic Strategy Interim Evidence Base: The East Midlands in 2005 included contribututions from the East Midlands Public Health Observatory.

²ONS Crown Copyright, *Mid-Year Population Estimates, 2004*, from NOMIS, 28th November 2005.

Department for Environment, Food and Rural Affairs, H6 – Health: Life Expectancy at birth for males and females, 2000-2002, Sustainable Development: Regional Indicators, December 2005. Life expectancy at birth for an area is an estimate of the average number of years a new-born baby would survive if he or she experienced the particular area's age-specific mortality rates throughout his or her life.

TABLE 1

East Midlands population by age and gender, mid 2004 (thousands)

Age	Male	Female	Total	% Male	% Female
Aged under 1 year	24,700	23,200	47,900	51.6	48.4
Aged 1 – 4 years	95,500	90,400	185,800	51.4	48.7
Aged 5 – 9 years	131,400	124,100	255,500	51.4	48.6
Aged 10 – 14 years	145,000	136,400	281,400	51.5	48.5
Aged 15 – 19 years	145,700	137,400	283,100	51.5	48.5
Aged 20 – 24 years	138,900	132,000	271,000	51.3	48.7
Aged 25 – 29 years	117,700	117,100	234,800	50.1	49.9
Aged 30 – 34 years	144,400	148,400	292,700	49.3	50.7
Aged 35 – 39 years	165,100	168,200	333,300	49.5	50.5
Aged 40 – 44 years	160,800	162,000	322,800	49.8	50.2
Aged 45 – 49 years	141,100	141,700	282,800	49.9	50.1
Aged 50 – 54 years	136,400	136,800	273,200	49.9	50.1
Aged 55 – 59 years	146,100	146,800	292,900	49.9	50.1
Aged 60 - 64 years	112,300	114,400	226,700	49.5	50.5
Aged 65 – 69 years	95,600	100,600	196,200	48.7	51.3
Aged 70 - 74 years	79,800	90,200	170,000	46.9	53.1
Aged 75 – 79 years	62,400	79,800	142,200	43.9	56.1
Aged 80 – 84 years	42,700	66,400	109,100	39.1	60.9
Aged 85 and over	23,300	55,000	78,300	29.8	70.2
Total	2,108,900	2,170,800	4,279,700	49.3	50.7

Source: ONS Crown Copyright, 'Mid-Year Population Estimates, 2004', from NOMIS, 28th November, 2005 Note: Totals do not agree due to rounding

2.2 Age

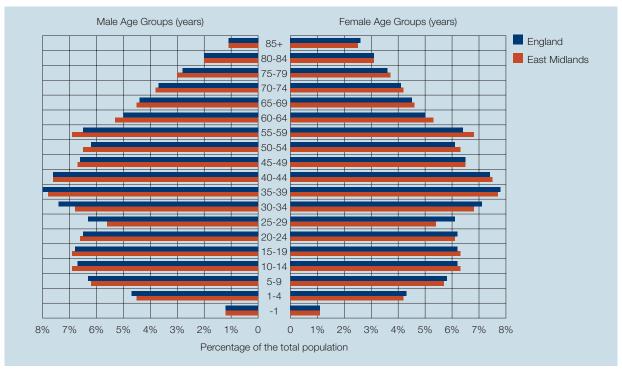
The age structure of males and females in the East Midlands is very similar to that of England as a whole, with the exception of the 25-29 years age group, which is slightly under represented in the East Midlands compared to England (as illustrated in Chart 1). In broad terms, the age structure of the region's population can be described as follows:⁴

- Eighteen percent of the East Midlands population are in the school age group, 63.1% are of working age and 18.9% are of pensionable age. These are similar to the national proportions;
- The majority of the other regions have a similar population age structure to the East Midlands. The exceptions are London, which has a younger population, with 67.8% of its population in the working age group; and the South West, which has an older population, with 21.7% being of pensionable age.

⁴Population age is often described in terms of three broad categories: school age (aged 15 and under); working age (aged between 16 and 59 for women and 64 for men); and pensionable age (aged 60 and over for women and 65 and over for men).

CHART 1

Age structure for the East Midlands and England, 2004 (%)



Source: ONS Crown Copyright, 'Mid-Year Population Estimates, 2004', from NOMIS, 8th February, 2006

Sub-regionally, most areas have a similar age structure. However there are some notable differences:

■ The proportion of the total resident population in the working age group exceeds the regional average in both Nottingham City and Leicester City, at 67.9% and 65.5% respectively;

Nottingham City
has the largest
proportion of working
age people in the
region, whilst
Lincolnshire has the
largest proportion of
pensionable age

- The pensionable age group accounts for larger proportions of residents in Lincolnshire, at 22.5%, and Rutland, at 20.5%;
- Leicester City, Northamptonshire and Derby City have larger proportions in the school age group than the regional average, at 19.7%, 19.3% and 19% respectively.

2.2.1 School age

Map 1 presents those of school age as a percentage of the total resident population in each of the region's forty Local Authority Districts (LADs) and Unitary Authorities (UAs). From this we can see that:

- The proportion of school age is fairly even across much of the East Midlands, with larger shares of this age group distributed around the south of the region, mainly in Northamptonshire;
- Corby in Northamptonshire stands out with a particularly high proportion in the school age group, at 21.4% – the largest in the East Midlands;
- Map 1 also clearly shows the particularly low proportion in the school age group in East Lindsey on the Lincolnshire cost, at 16.7% of the resident population.

2.2.2 Working age

Map 2 shows the working age group as a proportion of the resident population:

■ Like the school age group in Map 1, Map 2 shows that proportions of the working age group are generally higher in the south of the region, especially in districts in Northamptonshire, making up 64% of the resident population in Northampton, and 62.3% in both Daventry and South Northamptonshire. However, Map 2 also shows that Nottingham City has the highest proportion of working age in the region (as described earlier in this section) and proportions are also high in and adjacent to Leicester City;

■ The working age group accounts for a lower proportion of the resident population across Lincolnshire, with the exceptions of Lincoln, the largest urban area in Lincolnshire, and South Kesteven, covering part of the A1 corridor. Map 2 very clearly illustrates that East Lindsey and South Holland, on the Lincolnshire coast, have significantly lower proportions of the working age group, at 56.5% and 56.8% respectively.

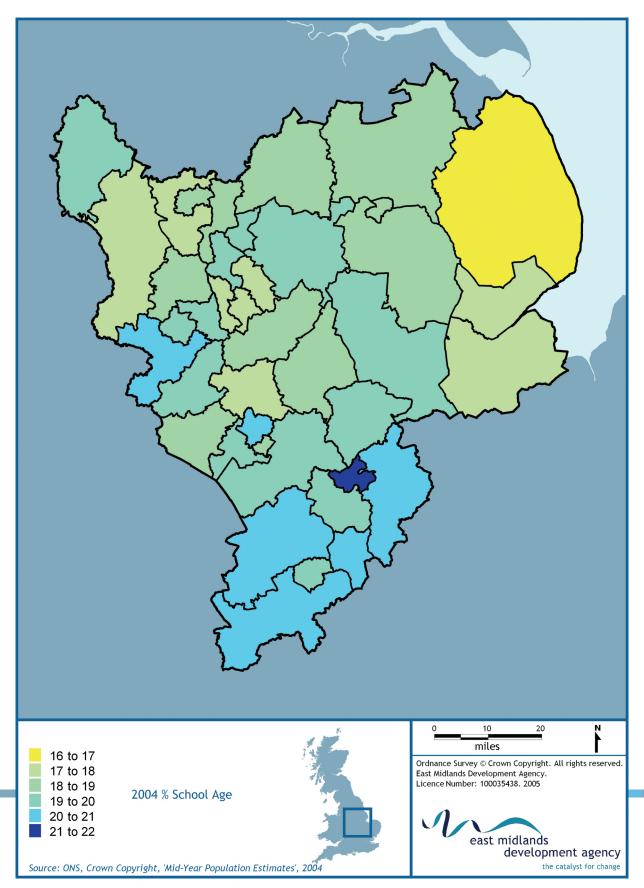
2.2.3 Pensionable age

Finally, Map 3 illustrates local variations in the pensionable age group as a proportion of the resident population:

- This shows that the pensionable age group varies more significantly across the region than the other two age groups. Unsurprisingly the general picture is the converse of Maps 1 and 2, with the greatest proportions of the population in the pensionable age group in Lincolnshire, Rutland and the Derbyshire Dales;
- The pensionable age group accounts for over a quarter of the resident population in both East Lindsey and South Holland on the Lincolnshire coast, at 26.8% and 25.4% respectively;
- The pensionable age group accounts for the lowest share of the resident population in the main cities and towns, especially Nottingham and Leicester, and also to the south of the region. The pensionable age group accounts for only 16% of residents in Northampton, and 16.6% in both Daventry and South Northamptonshire around 10 percentage points lower than parts of Lincolnshire.

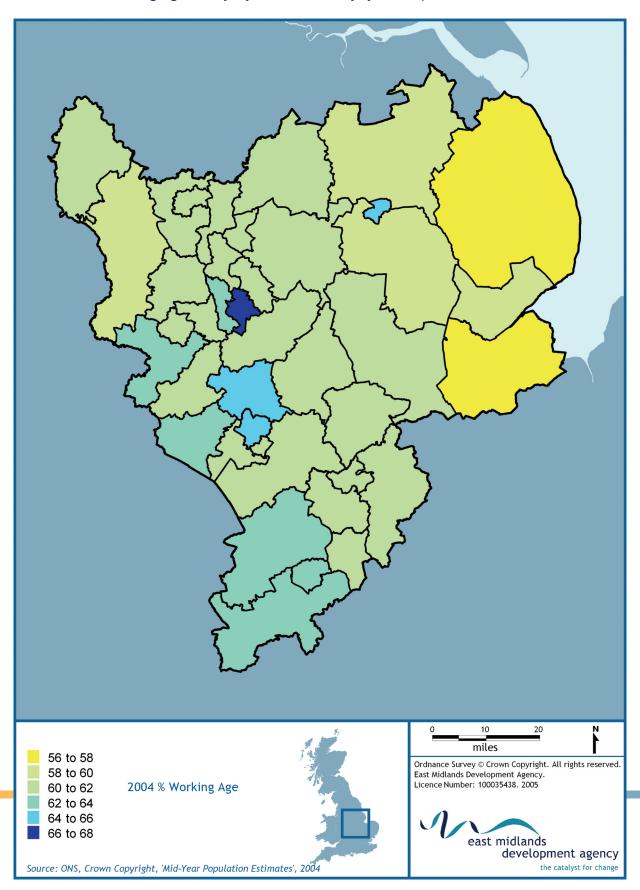
MAP 1

Residents of school age as a proportion of total population, 2004



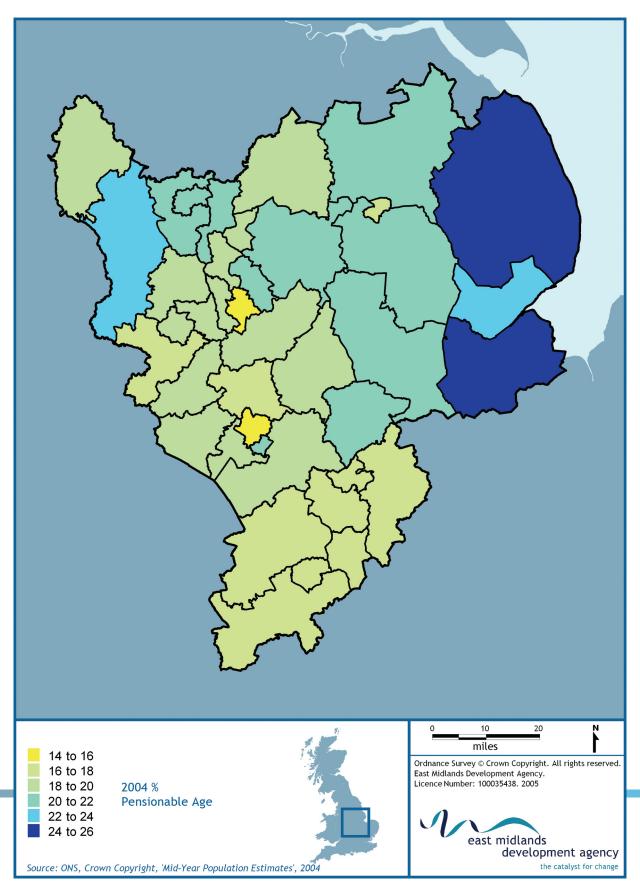
MAP 2

Residents of working age as a proportion of total population, 2004



МАР 3

Residents of pensionable age as a proportion of total population, 2004



2.3 Ethnicity

Ethnicity data are sourced from the 2001 Census. Respondents were asked to state what they considered their ethnic grouping to be. The question asked in 2001 was more extensive than that asked in 1991, and included a 'Mixed' category for the first time:

- In the East Midlands 364,442 people, or 9% of the population, classified themselves as coming from an ethnic minority background in 2001 (Table 2);⁵
- This proportion is below the English average of 13%, but is very similar to the South East, the East of England and the North West, where between 8% and 9% of the population in each case classified themselves as belonging to an ethnic minority group;
- London has a much larger proportion, with 40% of its population classified as other than White British. The West Midlands also has a larger proportion, at 14%. Both the North East and the South West have smaller proportions, with 4% and 5% of their respective populations consisting of minority ethnic groups;
- Residents of Indian origin make up the single largest ethnic minority group in the East Midlands, accounting for almost 3% of the total population, compared to 2% in England, followed by people of 'other White' background and 'White Irish'. Most other ethnic minority groups account for a smaller proportion than in England as a whole, with the Bangladeshi population accounting for a smaller proportion than in all regions except the South West.

TABLE 2

Population by ethnic group: April 2001, number and percentages

			ands	England
		Number	%	%
White	White British	3,807,731	91.3	87.0
	White Irish	35,478	0.9	1.3
	Other White	57,171	1.4	2.7
Mixed	White & Black Caribbean	20,658	0.5	0.5
	White & Black African	3,426	0.1	0.2
	White & Asian	11,176	0.3	0.4
	Other Mixed	7,879	0.2	0.3
Asian	Indian	122,346	2.9	2.1
	Pakistani	27,829	0.7	1.4
	Bangladeshi	6,922	0.2	0.6
	Other Asian	11,815	0.3	0.5
Black	Black Caribbean	26,684	0.6	1.1
	Black African	9,167	0.2	1.0
	Other Black	3,628	0.1	0.2
Chinese		12,910	0.3	0.5
Other Ethnic Group		7,353	0.2	0.4
Total for all minority	Total for all minority ethnic groups		8.7	13.0

Source: ONS Crown Copyright, '2001 Census', from NOMIS, 10th February, 2006

⁶The term 'ethnic minority background' is used in this section in order to be consistent with the terminology of the 2001 Census, and to clearly indicate that the population group in question includes 'White Irish' and 'Other White'.

There is wide variation across the region in the size of the ethnic minority population as a proportion of the total population:

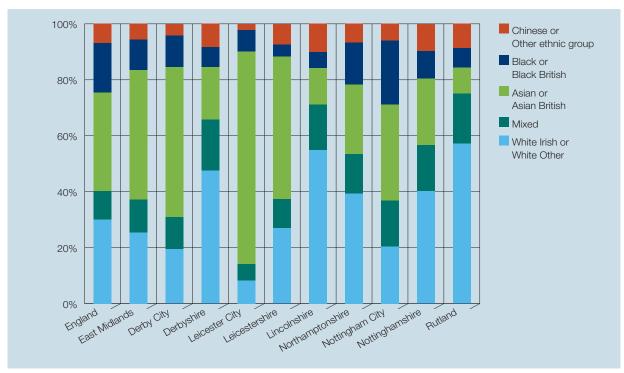
- This ranges from 39% of the total population of Leicester City to just 3% of the total population of Derbyshire. Leicester City accounts for 30% of the region's ethnic minority population;
- At a small area level, variations are even more extreme, ranging from just 1% of the population in Stickney ward in East Lindsey LAD to almost 85% of the population of Spinney Hills ward in Leicester City.

People from an ethnic minority background make up 39% of the population of Leicester City, but just 3% of the population of Derbyshire There is also considerable sub-regional variation in the composition of ethnic minority populations within the East Midlands (Chart 2)⁶:

- Those of Indian origin form the largest proportion of the ethnic minority population in both Leicestershire and Leicester City;
- Conversely, only 5% of the Rutland ethnic minority population is comprised of those from the Indian ethnic group;
- The Black Caribbean group accounts for 18.2% of the ethnic minority population of Nottingham City, compared to 7.3% of the ethnic minority population in the East Midlands overall;
- For most of the other Counties and UAs, the 'Other White group' forms the largest proportion of the ethnic minority population. It is also worth noting that both Derby City and Nottingham City have a large proportion of people of Pakistani origin compared to other areas in the region.

CHART 2

Sub-regional comparison of minority ethnic population (%)



Source: ONS Crown Copyright, '2001 Census', from NOMIS, 31st August, 2005

eln the interests of clarity, Chart 2 uses broader aggregations of ethnic minority groups than those described in the accompanying text.

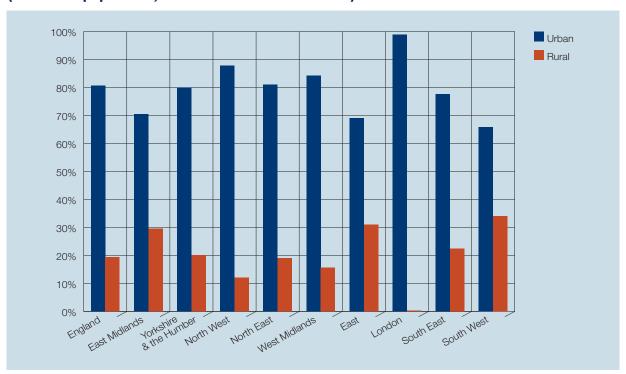
3. Population living in urban and rural areas

In 2004, a consortium led by Birkbeck College was commissioned to develop the Rural and Urban Area Classification. This calculates the total population at a small area level⁷ against a range of settlement classifications based on population density. These detailed classifications can be aggregated to represent the proportion living in 'rural' or 'urban' areas of a given region (see Chart 3).8 From 2001 Census data we can observe the following:

- The East Midlands is the third most rural region in England, with 29.5% of the total population resident in rural settlements over 10 percentage points higher than the English average of 19.4%;
- The South West is the most rural region, with 34% of the population living in rural settlements, followed by the East of England, with 31% of the population living in rural settlements;
- The least rural region is London, with 0.2% of the population living in settlements classed as 'rural', whilst the North West also has a comparatively low proportion, at 12.1%.

CHART 3

Regional resident population by the 2004 rural and urban area classification, (% of total population, based on 2001 Census data)



Source: ONS Crown Copyright, 'Key Statistics for the rural and urban area classification 2004', March 2005

⁷This is calculated at the level of Census Output Areas (OAs), the stable geography for small area statistics developed for use in the 2001 Census. For more information refer to the Office for National Statistics guide to statistical geographies: http://www.statistics.gov.uk/geography/soa.asp

⁸For more information on the 2004 Rural and Urban Area Classification, refer to: Countryside Agency, Department for Environment, Food and Rural Affairs (DEFRA), Office of the Deputy Prime Minister (ODPM), Office for National Statistics (ONS), and the Welsh Assembly, Rural and Urban Area Classification, 2004: An Introductory Guide, March 2005.

There is considerable variation at a sub-regional level. Map 4 shows this in detail at an Output Area (OA) level.⁹ The following summary comparisons can be drawn at a county and UA level:

- Rutland is the most rural sub-region in the East Midlands, with 100% of its population living in settlements classed as rural;
- Lincolnshire is the next most rural, with almost half (48.6%) of its population of 646,645 living in areas classified as rural at the time of the 2001 Census;
- Nottingham City is the least rural, with 100% of its population of 266,988 living in areas classified as urban at the time of the 2001 Census.

Map 4 illustrates the more detailed tier of this classification system, which further defines settlements according to their 'sparsity'. From Map 4 it is clear that the only settlements defined as 'sparse' are along the Lincolnshire Coast, predominantly in the district of East Lindsey, whilst the most densely populated areas are in the region's major towns and cities. Charts 4 and 5 compare the East Midlands and England on the respective proportions of the population at this more detailed level of classification:

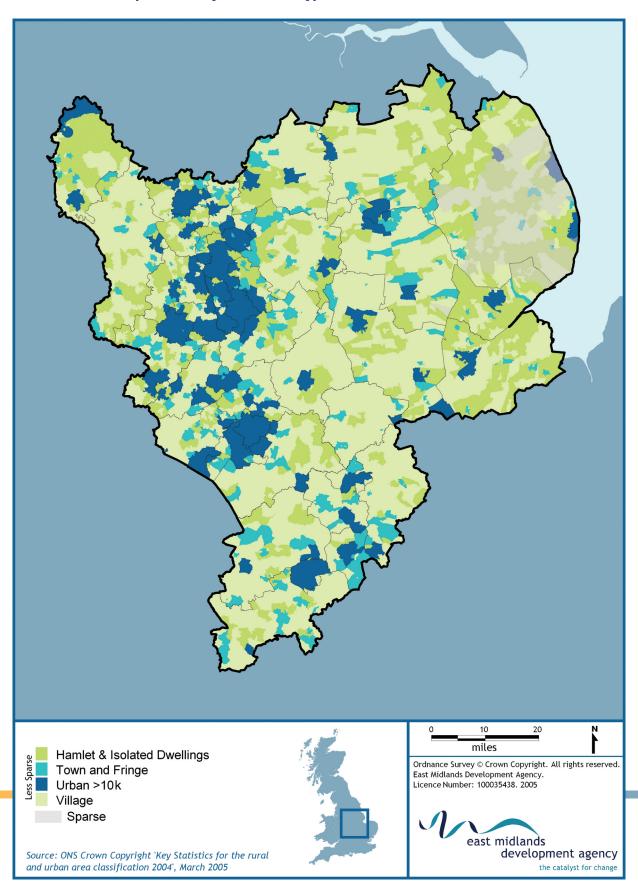
■ The largest share of the population both regionally and nationally live in the most densely populated Urban Output Areas with an excess of 10,000 people (the 'Urban >10k – Less Sparse' classification). In the East Midlands, 69.8% of the population live in areas of this kind, compared to 80.4% in the UK. Therefore, although a significant majority of the East Midlands population lives in the most densely populated settlement classification, this is 10.6 percentage points lower than the English average;

- Larger proportions of the East Midlands population live in 'Town and Fringe' areas, which describes smaller towns and adjacent areas. Like urban areas, they are densely populated but cover a relatively small proportion of the region's land area. 15.3% of the East Midlands population live in these areas, compared to 8.6% in England;
- 'Villages' also account for a greater proportion of the population than nationally. In terms of land, they cover almost half of the East Midlands, and account for 10.8% of the population, compared to 6.7% in England;
- Very small proportions of the total population live in the most sparsely populated areas in both the East Midlands and England. There is little difference between the region and the national average in the proportion of the population living in areas classed as 'Hamlet and Isolated Dwelling' (both sparse and less sparse), 'Town and Fringe – Sparse', and 'Village – Sparse.'

The East Midlands is the third most rural region in England

MAP 4

East Midlands output areas by settlement type



It is important to make a clear distinction between the issues facing 'non-sparse' rural areas - principally the region's towns and villages - and the isolated 'sparse' rural areas, concentrated in Lincolnshire (and also evident in parts of Derbyshire, even if they are not classed as 'sparse'). The region's towns and villages are, for the most part, relatively prosperous, with higher levels of economic activity, qualifications, and earnings. 10 Where deprivation is evident, it affects relatively small groups who face exclusion related to their individual circumstances. However, 'sparse' hamlets and isolated dwellings, although accounting for relatively small numbers of people, have quite different characteristics and often face acute challenges related to their remoteness, reliance on agriculture and associated activities, with limited employment opportunities in other sectors.11

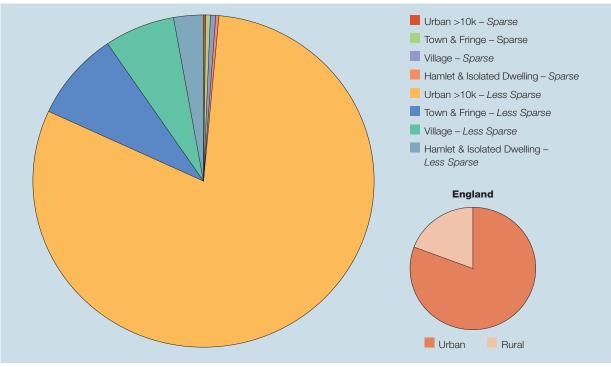
CHART 4 FIGURES

England population by detailed rural and urban classification (%)

Percentage of	Total
Urban >10k - Sparse	0.21
Town & Fringe – Sparse	0.44
Village – Sparse	0.50
Hamlet & Isolated Dwelling - Sparse	0.30
Urban >10k - Less Sparse	80.44
Town & Fringe – Less Sparse	8.61
Village – Less Sparse	6.69
Hamlet & Isolated Dwelling - Less Sparse	2.81

CHART 4

England population by detailed rural and urban classification (%)



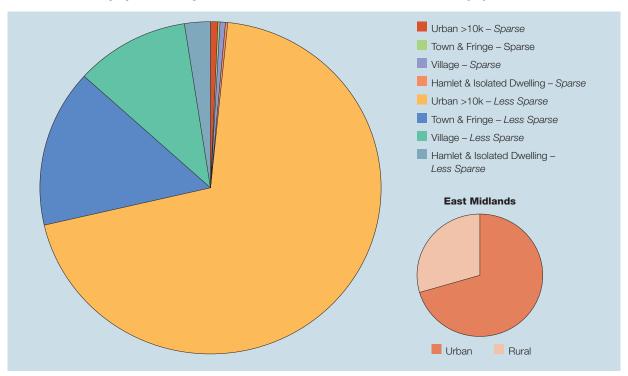
Source: ONS Crown Copyright, 'Key Statistics for the rural and urban area classification 2004', March 2005

¹⁰ For further discussion of this, see Section 3 of The East Midlands in 2006 on the East Midlands labour market.

¹¹ Glyn Owen, Change in the Countryside: raising economic wellbeing through targeted intervention, emda RES Evidence Commission, August 2005.

CHART 5

East Midlands population by detailed rural and urban classification (%)



Source: ONS Crown Copyright, 'Key Statistics for the rural and urban area classification 2004', March 2005

CHART 5 FIGURES

East Midlands population by detailed rural and urban classification (%)

Percentage of	Total
Urban >10k - Sparse	0.70
Town & Fringe – Sparse	0.19
Village – Sparse	0.51
Hamlet & Isolated Dwelling - Sparse	0.22
Urban >10k - Less Sparse	69.77
Town & Fringe – Less Sparse	15.33
Village – Less Sparse	10.83
Hamlet & Isolated Dwelling - Less Sparse	2.46

4. Population trends

This sub-section analyses historical and forecast data to comment on demographic trends. Recent population changes are discussed by comparing the 1994 and 2004 Mid-Year Population Estimates. Following this, an analysis of future developments is based on population projections produced by the ONS for England, the Government Office Regions and counties/UAs. The latest projections available are based on the 2003 MYE, and go up to 2028. In a later part of this section we will comment on population projections for the Milton Keynes and South Midlands Growth Area. This is due to the fact that the Hedra consortium's projections take the additional growth planned for this part of the region into consideration. ¹²

4.1 Recent population trends

- The East Midlands population grew at a greater rate than England as a whole between 1994 and 2004, with the resident population increasing by a total of 208,000 in this period. This represents a 5.1% increase compared to a 3.9% increase in England during the same period;
- Population growth in the West Midlands and Yorkshire and the Humber was more modest, at 1.6% in both cases, whilst the North East and North West experienced a decline in overall population size;
- London recorded the greatest population growth within this period, growing by 8.1%, whilst the East of England grew at a rate of 6.1%. The populations of the South East and South West also grew at rates significantly above the English average, at 5.2% and 5.9% respectively;
- This would suggest that in terms of overall regional population trends, the East Midlands has experienced growth rates more comparable to the regions in the Greater South East than other regions in the north and midlands.

When population change is analysed by age group, it is clear that the strong increase in the pensionable age group contributed significantly to the overall population growth in the East Midlands, although the working age group also increased at a greater rate than in England as a whole. Chart 6 shows that:

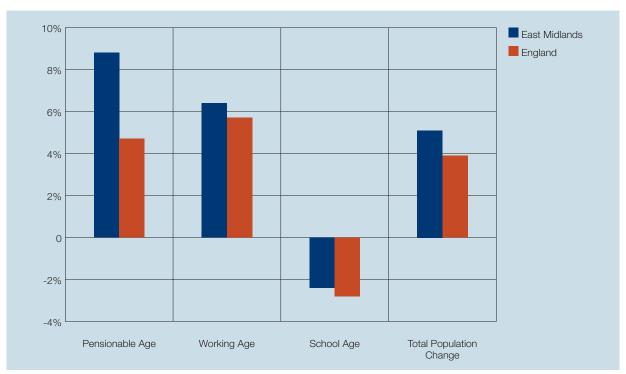
- The pensionable age population in the East Midlands grew at a greater rate than the working age population between 1994 and 2004. The pensionable age group grew by 8.8% in the East Midlands, almost twice the rate for that age group in England as a whole and 3.7 percentage points higher than the total population growth rate in the region;
- The working age population in the East Midlands also grew at a greater rate than the English average, at 6.4% compared to 5.7%;
- Along with the East Midlands, the East of England, the South East and the South West also experienced significant growth in their working age populations;
- The population of school age declined at a similar rate in both the East Midlands and England as a whole, at a rate of -2.4% and -2.8% respectively;
- The growth rate for the pensionable age population in the East Midlands was the largest of all the regions apart from the East of England, which had an increase of 11.3%;
- All regions experienced a growth in the pensionable age population except for London, where it declined by 5.2%, offset by a strong increase in the working age population of 13.2%.

The East Midlands population grew faster than the English average between 1994 and 2004

¹²Hedra were the consultants that led a consortium project on health, social care, and labour supply impacts of the MKSM Growth Area commissioned by the NHS MKSM Social Care Project, *Health and Social Care Services Provision for the Future*, 2005.

CHART 6

Population growth by age group (%), 1994-2004



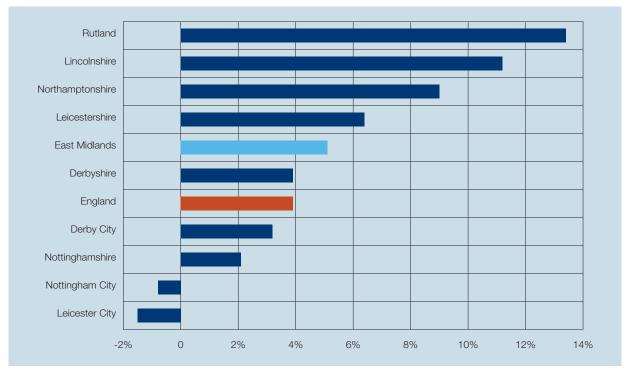
Source: ONS Crown Copyright, 'Mid-Year Population Estimates, 1994 and 2004', from NOMIS, 28th November, 2005

Chart 7 presents total population growth rates by county and UA. From this we can see that:

- Rutland experienced the largest growth in its total population, increasing by 13.4% between 1994 and 2004, with growth rates in all three age groups significantly exceeding the regional average. However, the increase in the pensionable age group is by far the largest, with a total growth of 29.3% over the ten year period. This caused the pensionable age group to increase from 18% to 20.5% of the total resident population in Rutland. The school age group in Rutland increased by 10.2%, over double that of Lincolnshire, the area with the next highest growth rate in this age group;
- Lincolnshire also experienced population growth significantly in excess of the regional average, at 11.2% between 1994 and 2004. The pensionable age group grew by 17.9%, whilst the working age population also increased significantly, by 11.2%;
- Nottingham and Leicester Cities experienced overall decline in this period, with their resident populations decreasing by 0.8% and 1.5% respectively. In both cases the school age and pensionable age groups decreased significantly, whilst the working age group increased. In Nottingham the working age group grew in excess of the regional average at 8.3%, whilst in Leicester the rate was below average, at 4.7%.

CHART 7

Sub-regional variations in population growth (%), 1994-2004



Source: ONS Crown Copyright, 'Mid-Year Population Estimates, 1994 and 2004', from NOMIS, 28th November, 2005

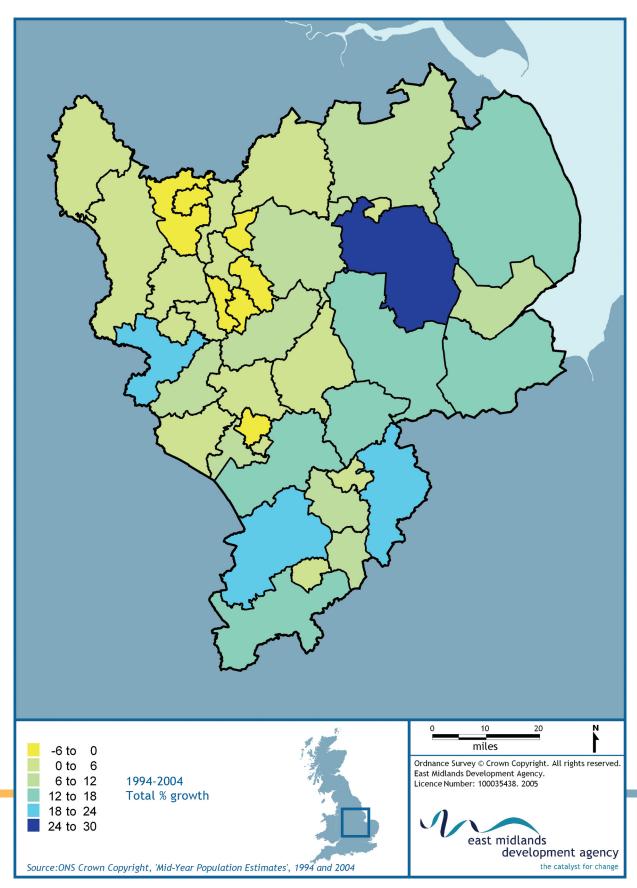
Map 5 illustrates more detailed local variations, presenting total population growth between 1994 and 2004 by Local Authority District. From this we can see that:

- The strongest growth has been in the south and east of the region, principally in districts that border the East of England, the South East, and the West Midlands. However, the district with the largest growth between 1994 and 2004 was North Kesteven in Lincolnshire which grew by 22.7%. This growth was more evenly spread across the age groups than in the East Midlands as a whole, with the school age group increasing by 27.7%, the working age group by 19.2%, and the pensionable age group by 27%;
- This pattern of significant and consistent population growth across age groups was also seen in the districts of South Northamptonshire, South Derbyshire and Daventry;
- The areas of most significant population decline occurred in Nottingham and Leicester Cities and much of the coalfields area to the north of the region. Mansfield experienced the largest percentage decline of 2.7%, whilst Leicester City had the largest absolute decline with 4,400 fewer residents. The decrease in the Mansfield population was concentrated in the younger age groups, with the population of those in the pensionable age group increasing by 4.4%.

The strongest population growth has been in the south and east of the region

MAP 5

Total population growth (%), 1994-2004



4.2 Population projections

The ONS produce population projections, based on the Mid-Year Estimates. The latest available are based on the 2003 MYE, and go up to 2028. Chart 8 shows total projected population growth rates from 2003 to 2028 for the English regions, whilst Table 3 compares the projected populations of England and the East Midlands in absolute figures (thousands). From these we can see that:

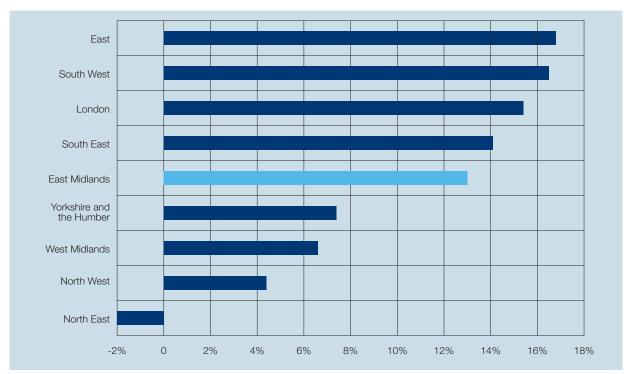
- The East Midlands population is projected to reach 4.8 million by 2028, 8.7% of the England total, a slight increase on the region's current share;
- This is because the region's population is projected to continue growing at a greater rate than the English average, increasing by 13% between 2003 and 2028, compared to 11% in England as a whole;

- The Eastern region is projected to be the fastest growing region with an increase of 16.8%;
- However, the North East population is predicted to decrease by 2% by 2028;
- As in the case of growth between 1994 and 2004, population projections to 2028 suggest that the East Midlands will grow at a rate closer to regions in the Greater South East, rather than other regions in the north and midlands.

The region's population is forecast to continue growing at an above average rate

CHART 8

Total population growth rates by region, 2003-2028



Source: ONS Crown Copyright, '2003 based sub-national projections', 2005

TABLE 3

Population estimates and projections: 2003 to 2028 (thousands)

	2003	2008	2013	2018	2023	2028
East Midlands	4,252.3	4,365.7	4,478.5	4,593.9	4,706.3	4,803.5
England	49,855.8	50,922.6	52,058.7	53,249.4	54,402.5	55,396.7

Source: ONS Crown Copyright, '2003 based sub-national projections', 2005

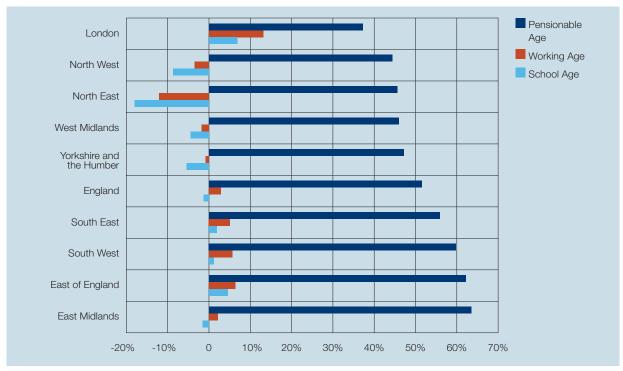
The 2003 based projections also provide estimates of population change by age band, which are illustrated in Chart 9:

- The process of demographic ageing is projected to continue across England. However, the East Midlands is projected to experience the greatest growth in the pensionable age group of all regions, increasing by 63.4% between 2003 and 2028, compared to 51.5% in England;
- The East Midlands is the only region of the northern and midlands regions that is forecast to experience growth in the working age group, which is projected to grow by 2.1% by 2028, close to the English average of 2.9%. All other regions in the north and midlands are projected to experience a decline in their working age populations;
- The school age population is projected to decrease by 1.5%, slightly more than in England overall, which is forecast to experience a decrease of 1.3%. The school age group in the North East and North West is projected to decrease significantly, by 18% and 8.7% respectively;
- London is projected to experience a considerably greater increase in the working age population, at 13.1% between 2003 and 2028, which is more than 4 times that of the English average.

The East Midlands is projected to experience the greatest growth in the pensionable age group of all English regions

CHART 9

Population growth rates by age group, 2003-2028



Source: ONS Crown Copyright, '2003 based sub-national projections', 2005

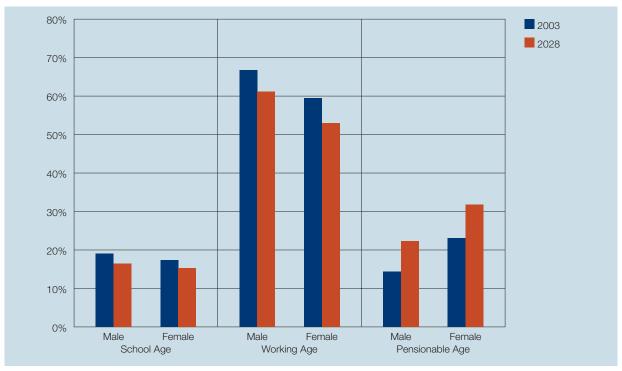
The 2003 based projections suggest that the age structure of the population is due to change dramatically. This older population structure will have great implications for health care and labour market participation. The implications of this will be considered in more detail in a subsequent discussion of dependency ratios.

Chart 10 compares 2003 and 2028 percentages of the total population in each age band for males and females. This illustrates the very significant increase in the

pensionable age group, from a current share of the total population of less than 19% to just over 27% by 2028, and a decrease in the working age group, from 63% to just under 57% by 2028. The pensionable age group will make up a larger share of the East Midlands population than the English average (25%), meaning that the age profile of the East Midlands population will move away from that of England with greater representation of older age groups. Chart 10 also shows that the proportion of women in the pensionable age group will increase to make up almost a third of all women by 2028.

CHART 10

Age structure of the East Midlands 2003-2028 (%)



Source: ONS Crown Copyright, '2003 based sub-national projections', 2005

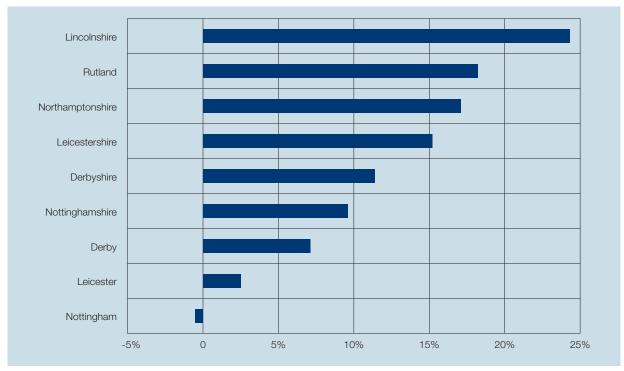
The 2003 based projections are also published for counties and UAs, enabling us to discuss sub-regional differences in projected population growth:

- Chart 11 shows that Lincolnshire will be the fastest growing area within the region, with the population expected to increase at a rate more than twice that of England as a whole (24%) by 2028;
- The populations of Rutland and Northamptonshire are also expected to increase significantly, by 18% and 17% respectively between 2003 and 2028;
- Growth is expected to be weaker in the north of the region and in the city UAs. Nottingham City is projected to decrease by 0.5%, whilst Leicester and Derby Cities are projected to grow by 2.5% and 7% respectively.

Lincolnshire will be the fastest growing area in the region

CHART 11

Total population growth rates by sub-region, 2003-2028



Source: ONS Crown Copyright, '2003 based sub-national projections', 2005

There is considerable sub-regional variation in the projected population change by age group:

- Most areas have a projected decrease in the school age population. However both Rutland and Northamptonshire have a significant projected increase in this age group, at 4.7% and 3.1% respectively between 2003 and 2028. Nottingham and Leicester Cities are projected to experience significant declines in the school age group, of -4.9% and -4.8% respectively;
- Variations in the growth of the working age population are less extreme, with most subregions showing either a small decrease or a small increase. Nottingham and Leicester Cities, and Nottinghamshire and Derbyshire are all projected
- to experience slight declines in this age group. Only Lincolnshire has a large projected increase in the working age group, an increase of 8.9% by 2028, whilst Northamptonshire and Leicestershire to the south of the region are projected to experience increases of 4.9% and 3.2%;¹³
- All counties and UAs have a projected increase for the pensionable age group. Nottingham City stands out as having the smallest increase of only 7.3%, whilst all other areas are projected to experience growth in excess of 25%. Lincolnshire is projected to experience the largest growth in the pensionable age group, at 85.2%. Northamptonshire and Rutland are also projected to experience very significant increases, at 79.9% and 76.4% respectively.

¹³Note: these projections do not take account of the potential impact of the Milton Keynes South Midlands Growth Area, which is discussed later in this section.

4.3 Economic dependency

Dependency ratios provide a useful means of discussing the impact of demographic ageing. A dependency ratio expresses the population who can work, and thus generate income to support others, against those who are either too young or too old to work. Using the three broad age groups referred to throughout this section, three standard dependency ratios are calculated as follows:

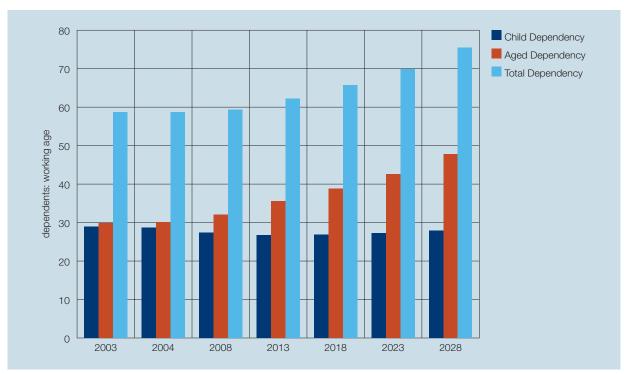
 'Child dependency', which presents the school age group against the working age group (school age/working age x 100);

- 'Aged dependency', which presents the pensionable age group against the working age group (pensionable age/working age x 100), and;
- 'Total dependency', which presents the sum of the 'dependent' age groups against the working age group ((school age + pensionable age)/working age x 100).¹⁴

Chart 12 presents child, aged and total dependency ratios calculated from the 2003-based population projections, illustrating the impact of the ageing population between 2003 and 2028:

CHART 12

Dependency ratios in the East Midlands, 2003 to 2028



Source: ONS Crown Copyright, '2003 based sub-national projections', 2005

¹⁴This method of calculating dependency ratios is utilised by the ONS in *Population Trends*, winter 2005. Effectively this presents school age, pensionable age and the sum of the two as a percentage proportion of the working age group. Therefore, a lower dependency ratio is 'good' because more people support a smaller inactive group while a higher dependency ratio is 'bad' as a larger group of the inactive are supported by a smaller number of active.

- In 2003, child and aged dependency ratios were very similar in the East Midlands, at 28.9 and 29.8 respectively. The total dependency ratio in 2003 was 58.7, very close to the English average of 58.2; 15
- Due to the projected decline in the school age group and the modest growth in the working age group, the child dependency ratio will decrease slightly to 27.9 by 2028;
- However, the projected increase in the pensionable age group will result in aged dependency ratios increasing steadily to 47.7 by 2028, almost double the child dependency ratio;
- The total dependency ratio will increase to 75.5, meaning that the 'dependent' population groups will increase to three quarters the number of working age people by 2028. This will exceed the total dependency ratio for England in 2028 of 70.7.

Since the growth in the pensionable age group is the main driver of the increases in total dependency ratios, Chart 13 looks at the changes in aged dependency ratios between 2003 and 2028 at a sub-regional level:

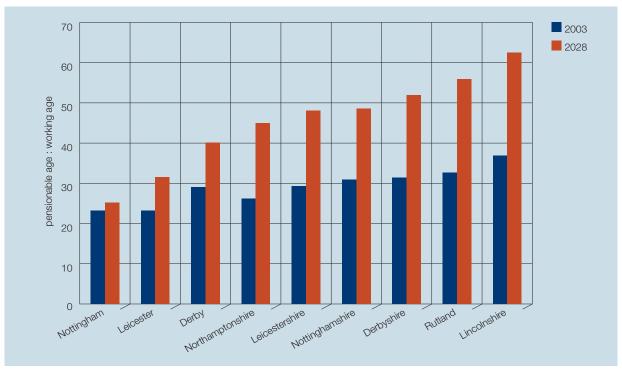
- Nottingham City, which has the largest proportion of residents in the working age group, has the lowest aged dependency ratio, and this will change the least between 2003 and 2028, from 23.2 to 25.2;
- In all other parts of the region the increase will be more significant. In Leicester City, aged dependency is projected to increase from 23.2 (level with Nottingham) in 2003 to 31.5 in 2028;
- Although Northamptonshire and Leicestershire are both projected to experience relatively strong growth rates in the working age group, the aged dependency ratio in both counties is projected to increase significantly: from 26.2 to 44.9 in Northamptonshire, and from 29.3 to 48.1 in Leicestershire;
- This increase will be greatest in Lincolnshire, the subregion which currently has the highest proportion of its population in the pensionable age group. Although the county is projected to experience the strongest growth in the working age group in the region, the increase in the pensionable age group will still cause the aged dependency ratio to increase from 36.8 in 2003 to 62.5 in 2028.

The aged dependency ratio will increase to almost double the child dependency ratio by 2028

¹⁵ Most developed countries have a total dependency ratio ranging between 50 and 70.

CHART 13

Aged dependency ratios by sub-region, 2003 and 2028 compared



Source: ONS Crown Copyright, '2003 based sub-national projections', 2005

5. Components of population change

Population change is determined by the balance between births, deaths and migration. Between 1997 and 2003, 84% of the population growth seen in the East Midlands was due to net in-migration (Table 4). This is much higher than the England figure of 56%. Only in the South West was a larger proportion of population increase due to net in-migration.

5.1 Births and fertility

The ONS produces *Birth Statistics: Births and Patterns of Family Building in England and Wales (FM1)* annually. This publication includes birth counts and birth rates tabulated by area of residence and age of mothers. During 2003 there were 46,916 live births to mothers usually resident in the East Midlands (Chart 14). This represents an overall fall from the 1997 level, despite the number of women of child bearing age increasing during this period.

¹⁶This section presents headline regional data on the components of population change. It is recognised that a more detailed analysis on inter and intra regional population movements, especially by age group, would add to our understanding of the drivers of past and projected population growth. This is an area of future research that *emda* hope to explore in 2006/2007.

TABLE 4

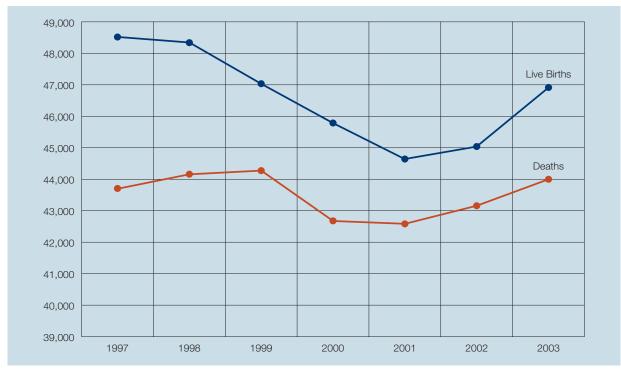
Components of population change 1997-2003, thousands

	Resident population mid 1997	Births	Deaths change	Net natural changes	Migration and other	Resident population mid 2003
East Midlands	4,120.3	326.3	378.1	21.7	110.3	4,252.3
England	48,664.8	4,091.9	3,562.6	529.3	661.6	49,855.7

Source: derived from ONS Crown Copyright 'Mid-Year Population Estimates', 1997, 'Birth Statistics: Births and Patterns of Family Building in England and Wales (FM1) for 1997-2003, and 'Compendium of Clinical and Health Indicators' April 2005.

CHART 14

Live births and deaths: 1997 to 2003, number of East Midlands residents



Source: ONS Crown Copyright, 'Annual Births Statistics 1997-2003', and, 'Compendium of Clinical and Health Indicators', April 2005

Table 5 compares the East Midlands to England in age specific birth rates per 1,000 women of each age group¹⁷ and Total Fertility Rates.¹⁸ In the East Midlands, women aged under 30 are more likely to have children than their equivalents in England, whereas those over 30 are less likely. The comparison with 1997 rates also shows that women are choosing to have children later, as the birth rate per 1,000 women under 30 fell from 1997 to 2003, whilst the rate for women over 30 increased. The East Midlands recorded a slight increase in Total Fertility Rates, with an average of 1.67 in 1997 increasing to 1.7 in 2003, whilst the England average has remained at 1.73.

East Midlands women aged under 30 are more likely to have children than their equivalents in England

TABLE 5 Age specific birth rates per 1,000 women and total fertility rates

	East M	idlands	England		
Age Group	1997	2003	1997	2003	
Under 20	31.2	26.6	29.8	26.6	
20-24	75.6	71.5	75.7	70.9	
25-29	106	103.0	104.2	96.0	
30-34	83.7	91.0	89.1	95.2	
35-40	32.8	40.2	39.2	46.9	
40 and over	6.0	7.6	7.7	9.9	
Birth rates for all ages	57.3	54.5	59.7	56.9	
Total Fertility Rate	1.67	1.70	1.73	1.73	

Source: ONS Crown Copyright, 'Annual Births Statistics 1997-2003', 2005

5.2 Deaths

Death counts were sourced from the Compendium of Clinical and Health Indicators/Clinical and Health Outcomes Knowledge Base. The latest release is April 2005. There were 44,000 deaths in the East Midlands during 2003. The number of deaths has remained fairly stable between 1997 and 2003 despite a rise in the elderly population.

¹⁷ This is expressed as the number of births divided by 1,000 population head of women in each age group, with a total for all age groups.

¹⁸ The Total Fertility Rate expresses the average number of children per woman, if the current pattern of fertility was maintained through an individual's child bearing years.

5.3 Migration

Migration data are based on tables from the 2001 Census which provides data on respondents who had changed their address in the 12 months prior to the Census. The vast majority of the East Midlands resident population had not moved during the year prior to the Census. Of those who had moved, most had moved within the region (see Table 6). The percentage of East Midlands residents who had moved in the last 12 months was similar to the England average (12%). Within the region, the percentage of inward migrants in Nottingham City (19%) was more than double that in Derbyshire (9%).

Migration from other regions has been the principal driver of recent population change in the East Midlands

TABLE 6

Migration within the East Midlands: April 2001, number of residents

	No. of Residents
Lived at the same address	3,669,592
Lived at a different address one year ago but within the region	352,959
No usual address	28,844
Inflow	120,779
Of which lived elsewhere one year ago within the UK	102,109
Of which lived elsewhere one year ago outside the UK	18,670
Total population at time of the census	4,172,174
Outflow	86,051
Net migration within the UK	16,058

Source: ONS Crown Copyright, '2001 Census', NOMIS, 26th August, 2005

Members of ethnic minority groups throughout England were more likely to have migrated. In the East Midlands, 16% of the ethnic minority population had migrated in the 12 months before the Census. Both the North East and South West had larger percentages of migrants in their ethnic minority groups (22% and 24%) whereas both London and the West Midlands had lower levels of migration in these groups (15% and 14%).

6. Milton Keynes South Midlands

The Government has designated the Milton Keynes South Midlands (MKSM) sub-region as a major growth area over the next 25 years. The MKSM Growth Area, which comprises areas around the towns of Luton, Dunstable, Aylesbury, Bedford, Milton Keynes, Northampton, Wellingborough, Kettering and Corby, will become a major economic driver within the region. As MKSM will affect much of the county of Northamptonshire, the implications of this expected growth need to be considered alongside regional population projections:

■ The scale of the intended growth is significant. Between 2001 and 2021 it is proposed that 169,800 new homes will be constructed across the entire MKSM Growth Area. This is in addition to housing development already planned in the affected regions. 19 In the East Midlands this will include a total of 34,100 new homes in the Corby, Kettering and Wellingborough areas and 30,000 new homes around Northampton. Additional development is proposed between 2021 and 2031, with a further 28,000 new homes in the Corby, Kettering and Wellingborough areas and 17,500 new homes around Northampton;²⁰

A development of this scale is expected to have a significant impact on both public health and the level of demand for health and social care services. Population projections taking this expected growth into consideration have been developed by the Hedra Consortium. When Hedra projections for Northamptonshire are compared with the ONS 2003 based projections (Table 7), it suggests that official statistics are underestimating the potential extent of population growth expected in this area by over 100,000 people by 2026.²¹

The MKSM development could add an additional 100,000 people to the region's population by 2026

TABLE 7

Comparison of ONS and Hedra population projections for Northamptonshire (thousands)

Area Name	Age Group	2003		2011		2026	
		Hedra	ONS	Hedra	ONS	Hedra	ONS
Northamptonshire	Age 0-14	124.0	125	125.0	124.3	144.9	128.3
	Age 15-74	470.6	473.7	526.4	507	637.9	536.8
	Age 75+	43.3	43.7	48.9	48.5	81.5	80.2
	Total	637.8	642.4	700.2	679.8	864.3	745.3

Source: Hedra Consortium 2004 and ONS Crown Copyright, '2003 based sub-national projections', 2005 Note: Totals do not agree due to rounding

¹⁹The MKSM development has already been incorporated in the revised Regional Spatial Strategy for the East Midlands, but the figures produced in the MKSM Sub-Regional Strategy amend housing targets in planning guidance published by the East of England and the South East.

²⁰ Government Offices for the South East, the East Midlands and the East of England, Milton Keynes and South Midlands Sub-Regional Strategy: Alteration to Regional Spatial Strategies covering the East of England, East Midlands and the South East of England, March 2005.

²¹MKSM Health and Social Care Project, Health and Social Care Services Provision for the Future, 2005.

7. Transitory and migrant population groups

The following sub-section looks at population groups described as 'transitory' (groups that may not remain in the region for long periods of time), and also looks at the comparative size of immigrant communities in the region (those who have come from other countries to live on a long-term or permanent basis). These groups are extremely difficult to describe from existing data sources – principally because these sources tend to underrepresent the most mobile segments of the population. It is therefore only possible to make a broad assessment of the scale of these groups in the East Midlands.

The only official source of information for traveller data is the twice-yearly 'Caravan Count', coordinated by the Office of the Deputy Prime Minister (ODPM) in England. The count is based only on the number of caravans and does not include travelling individuals and families resident in houses.

Data on migrant labour comes from a number of ad hoc research projects undertaken by the Home Office and the Department for Work and Pensions (DWP) along with a number of specific research projects undertaken within the East Midlands, such as work undertaken by the Food and Drink Forum on language needs of migrant workers.

Estimates of the scale of migrant communities are based on country of birth data from the Annual Population Survey.²²

7.1 The traveller population in the East Midlands

There were 1,123 caravans in the East Midlands at the last published count in July 2005, which is equivalent to 2.6 caravans per 10,000 people. This is down from the last published count for January 2005 of 1,307 caravans, or 3.1 per 10,000 people.²³ The January 2005 count per 10,000 people in the East Midlands was level with the English average whilst the July 2005 count falls below the English average, which has remained at 3.1 per 10,000 people.

The East of England has the highest number of caravans with 3,983 or 7.3 per 10,000 and London has the smallest with just 1.1 caravans per 10,000 people. The North East has the next smallest number with just 1.8 caravans per 10,000 people.

There are large variations in the number of caravans across the region (Table 8). Leicestershire, Lincolnshire, Northamptonshire and Nottinghamshire all have significantly greater caravan counts per 10,000 population than the regional average, whilst all three city UAs have counts well below the regional average.

TABLE 8
Caravan count in the East Midlands, July 2005

Caravans							
	Number	per 10,000					
Derby City	20	0.9					
Derbyshire	88	1.2					
Leicester City	43	1.5					
Leicestershire	285	4.6					
Lincolnshire	204	3.0					
Northamptonshire	202	3.1					
Nottingham City	10	0.4					
Nottinghamshire	249	3.3					
Rutland	22	6.0					
East Midlands	1,123	2.6					

Source: Office of the Deputy Prime Minister (ODPM), 'Gypsy Caravan Count', July 2005

²²The Annual Population Survey (APS) is a new survey introduced by the ONS in 2004 as part of its modernisation programme of major surveys. It includes all the main variables previously provided by the Labour Force Survey (LFS), and is published on both a rolling quarterly and annualised basis. The 2004 annualised APS updates the 2003 annualised LFS. For the purposes of clarity in the RES Evidence Base, data from 1999 to 2003 is sourced to the LFS, whilst annual data for 2004 and quarterly data for 2005 is sourced to the APS, although the variables analysed from the APS are entirely consistent with the 1999 to 2003 LFS data.

²³ Note: the January 2005 figure for Northamptonshire has been revised from 349 to 291, causing the regional total to be revised from 1,365, as published in September 2005 in the Interim Evidence Base, to 1,307.

Between July 2003 and July 2005 the East Midlands saw a decline of 9.7% in the count of caravans, compared to an increase of 6.9% in England. Significant variation can be observed at an LAD level within the East Midlands. Districts

Migrant labour addresses skills shortages at either extreme of the labour market: for highly skilled and for elementary occupations

within Northamptonshire experienced the largest decreases in caravan count between July 2003 and July 2005. In Daventry the caravan count fell by 52, in Northampton by 43, and South Northamptonshire by 42. Conversely, districts in Leicestershire and Nottinghamshire experienced the largest increases: the caravan count in North West Leicestershire increased by 43. The count also increased in Bassetlaw and Newark and Sherwood, by 30 and 23 respectively.

Such large changes are to be expected, given the highly transitory nature of the traveller community, and changes between regions and local areas can also reflect the pattern of local enforcement activity in relation to unauthorised encampments.

7.2 Migrant labour in the East Midlands

Government policy seeks to facilitate and manage economic migration in order to meet shortfalls in the domestic supply of certain skills. There is evidence to suggest that economic migration yields substantial benefits to the economy, especially to those industries and sectors where there are particular labour or skill shortages.²⁴ Interestingly, migrant labour tends to address shortages at either extreme of the labour market. Skilled migrants fill vacancies for doctors, IT specialists, teachers and other professional occupations, whilst lower skilled economic migrants play an important role in addressing shortages in unskilled, temporary and casual employment (in the elementary occupations)²⁵ in the agriculture and hospitality sectors.

Regional data on migrant labour is limited. Much of the following discussion is necessarily based on national figures. The Home Office and the DWP produce a number of data publications at a national level. From these we can make a number of general observations on trends in migrant labour for the UK as a whole.

The migrant worker population is extremely diverse, encompassing skilled migrants from other European Union (EU) countries, the USA and Australasia, and economic migrants, transient seasonal workers, refugees and asylum seekers.²⁶

The main mechanism for managing labour immigration in the UK is the work permits system, which has expanded considerably in recent years with the introduction of a number of new schemes. Detailed analysis has been carried out on work permit data. However, this is limited to migrants from outside the European Economic Area (EEA), as EEA nationals do not require a work permit. This is because a key element of EEA membership is the right to work, study or retire in all other member states (the ONS estimates that there are around three-quarters of a million Britons living elsewhere in the EEA). Nonetheless, work permit data does provide insight into trends in migration, and the key sectors and occupations which have greatest demand for migrant labour:²⁷

- Over the period 1995 to 2002 total applications for new permits and extensions for existing permits to work in the UK rose steadily. The largest annual increase was between 1999 and 2000, when applications increased by almost 42%. These increases were largely driven by an increased demand for occupations related to ICT as well as skill shortages in the medical and health sectors;
- In 2002, the number of work permits approved totalled 129,041. This is expected to grow in subsequent years. The work permit system has been extended to incorporate the existing Seasonal Agricultural Workers Scheme and the new Sectors Based Scheme and Highly Skilled Migrants Programme;
- The industries for which the greatest numbers of work permits were issued were the health and medical sectors (24% of work permits issued between 2000 and 2002), computer services (17%), and

The greatest numbers of work permits are issued for the health, computer and business services sectors

business services (13%). Trend analysis suggests that there has been a shift from the traditional domination of commercial orientated services to the health and computer services sector, in response to skills shortages in the UK in recent years;

²⁴ Home Office, *Migration: An Economic and Social Analysis*, RDS Occasional Paper No. 67, 2001.

 $^{^{\}rm 25}\mbox{For definitions}$ of Occupational Groups, see Section 3 on the Labour Market.

²⁶ Portes and French, Department for Work and Pensions (DWP), The impact of free movement of workers from central and eastern Europe on the UK labour market: early evidence, DWP Working Paper No.18, 2005.

²⁷ James Clarke and John Salt, Migration Research Unit, University College London, Work Permits and Foreign Labour in the UK: A Statistical Review, in, ONS Crown Copyright, Labour Market Trends, November 2003.

- By 2002, the largest proportion of work permits approved were for individuals from India (21%), whilst significant proportions of permit holders originated from the USA and South Africa;
- Inter-company transfers made up between 20% and 40% of the main scheme work permit issues between 2000 and 2002;
- Applications to the new Highly Skilled Migrant Programme (HSMP) and the Sectors Based Scheme have been relatively low. The HSMP was novel as it allowed permit approval without a prior offer of employment if the applicant could demonstrate a certain level of educational qualification, work experience, past earnings and achievements in a given profession;
- The Seasonal Agricultural Workers Scheme (SAWS) originated immediately after the Second World War to facilitate the movement of labour across Europe to work in the agricultural sector in various peak seasons. The scheme now allows a quota of non-EEA nationals to enter the UK and work in the agricultural sector to meet its demand for seasonal labour. In 2003 the quota was increased to 25,000 places. According to data available at the time of the ONS analysis, which predated the last round of EU Accession, Polish workers accounted for 25% of those working under the SAWS, whilst 18% came from the three Baltic States (Lithuania, Latvia and Estonia). In total, this was equal to just over 10,000 workers, almost half of the quota. Following Accession in May 2004, workers from these states now have free movement into the UK. The authors in the ONS publication note that this could have a number of consequences. At one extreme, workers from those Accession countries could continue to come in comparable numbers, leaving the SAWS quota to be filled by workers from non-EEA states, thus increasing the migrant seasonal workforce to as much as 35,000. At the other extreme, the seasonal workforce available to farmers could reduce, as those workers coming from these new member states may more easily be able to find work in other sectors, whilst there is no guarantee that comparable numbers of individuals from other non-EEA states will fill the gap in the quota.28

Research indicates that key problems faced by organisations in employing migrants include: gaining work documentation; lack of willingness to deal with legal requirements; a negative public image of migrant workers; and a lack of familiarity and comparability of qualifications and work experience.²⁹

Two local studies were recently commissioned by *emda* to examine the migrant labour market in South Lincolnshire, where it is particularly significant in providing seasonal labour in the food, agricultural and horticultural industries:

- A study commissioned by *emda* in 2004 determined that the strategic importance of migrant workers to local employers is crucial to the region's prosperity and that the demand for these workers in South Lincolnshire is likely to increase. The study estimated that the peak labour demand for casual and temporary workers in South Holland and Boston Local Authority Districts is about 3,200 individuals. In Lincolnshire the figure is 7,800 and in the East Midlands the figure is around 19,000;²⁰
- The study undertaken by the East Midlands Food and Drink Forum assessed the extent to which language barriers exist within the food processing industry workforce in South Lincolnshire and identified ways of overcoming this problem. It was estimated that more than 30 languages were spoken,

with most migrant workers speaking English to some basic extent. There was evidence among this workforce of a desire to improve written and spoken English and the main motivation for this

Research has indicated that skills held by migrant workers are often under utilised by employers

was said to be self-improvement and stability. The study identified that migrant workers brought with them skills that were currently unused. These skills included those associated with Craft & Semi-Skilled and Professional/Skilled occupations. The study identified strong evidence of a commitment by the food processing industry to up-skill the migrant workforce for long-term benefit, and suggested that the identification of preferred agencies and labour providers seems to be the route forward for greater communication and co-ordination of the up-skilling process.³¹

²⁸ Ibid 27.

²⁹ Home Office, Migrants in the UK: Their Characteristics and Labour Market Outcomes and Impacts, RDS Occasional Paper No. 82, 2002.

³⁰ DTZ Pieda Consulting, on behalf of emda, Seasonal and Casual Working in South Lincolnshire: Investigating the Dynamics of the Migrant Labour Market. April 2004.

³¹ Taylor, Burch et al, Food and Drink Forum, Use of Language in the South Lincolnshire Food Production Sector, May 2004.

7.3 Immigrant communities in the East Midlands

To discuss the comparative size and labour market importance of immigrant communities in the East Midlands, we will use a method employed by the Institute of Public Policy Research (IPPR) in their recent publication, Beyond Black and White: Mapping new immigrant communities.32 This is a proxy measure which uses the country of birth variable in the Annual Population Survey, enabling estimates for the proportion of UK born against non-UK born residents. It is recognised that this is an imperfect measure, as 'non-UK born' can include British nationals born outside the UK and, more significantly, it does not account for how long an individual has been resident in the UK. It therefore includes those who have been UK nationals for a long period of time and would not reasonably be considered as 'immigrants'. However, this is a far more meaningful means of estimation than using British Citizenship as an identifier, due to the very variable take-up of British Citizenship amongst foreign born people in the UK.

> A larger proportion of non-UK born residents are in the working age group than in the population as a whole

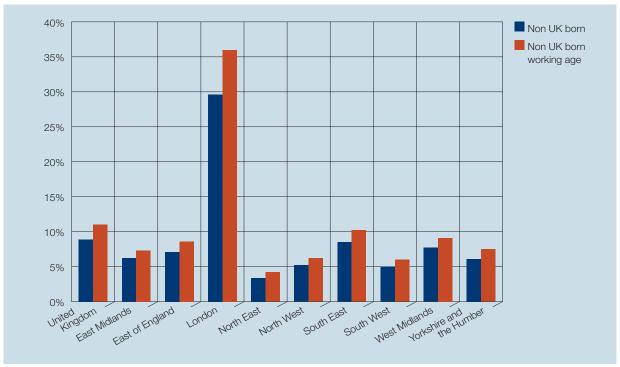
The APS provides estimates for the non-UK born population. Chart 15 illustrates the variation in scale of these communities in the UK and the nine English regions:

- People who were not born in the UK make up a smaller proportion of the total population of the East Midlands than the UK average, at 6.2% compared to 8.9%;
- However, Chart 15 clearly illustrates the extent to which London is an outlier, where people who were not born in the UK make up 29.6% of the total population. Therefore the East Midlands is fairly typical for a region outside London, where the South East has the largest proportion, at 8.5%, whilst the North East has the lowest, at 3.4%;
- Chart 15 shows that immigrant communities make up a larger share of the working age population than the total population across the UK. In the East Midlands, those of working age not born in the UK account for 7.3% of the total working age population, 1.1 percentage points more than the share of the population overall. This difference is somewhat less than in the UK overall, where again London makes a significant impact: people of working age who were not born in the UK make up 36% of London's working age population, 6.4 percentage points more than the share of the total population;
- Therefore the immigrant population is somewhat more important to the labour force than its share of the total population would suggest in all regions in the UK.

³² Sarah Kyambi, Institute of Public Policy Research (IPPR), Beyond Black and White: Mapping new immigrant communities, 2005.

CHART 15

Non-UK born residents as a % of total resident and working age populations, spring 2005



Source: ONS Crown Copyright, 'Annual Population Survey', April 2004-March 2005, from NOMIS, 22nd November 2005

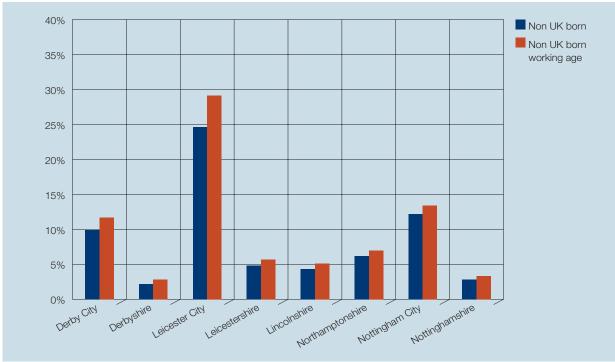
Chart 16 looks at sub-regional variations:

Consistent with its large share of the region's ethnic minority population, Leicester City has by far the largest proportion of people who were not born in the UK, at 24.6% of the total resident population. The non-UK born population makes up an even more significant share of Leicester City's working age population, at 29.1%;

- Nottingham City has the next largest proportion of residents who were not born in the UK, although there is a far smaller difference in the share of the working age population interesting given the large numbers of international students at the University of Nottingham. The APS includes students in halls of residence, privately rented accommodation, and in NHS accommodation, which IPPR identify as constituting a significant share of the migrant population, especially in cities with large universities;³³
- Derbyshire has the smallest proportion of non-UK born residents as a proportion of the total population and its working age population, at 2.2% and 2.8% respectively.

CHART 16

Non-UK born residents as a % of total resident and working age populations by sub-region, spring 2005



Source: ONS Crown Copyright, 'Annual Population Survey', April 2004-March 2005, from NOMIS, 22nd November 2005

8. Health, disability and physical exercise

8.1 Poor health

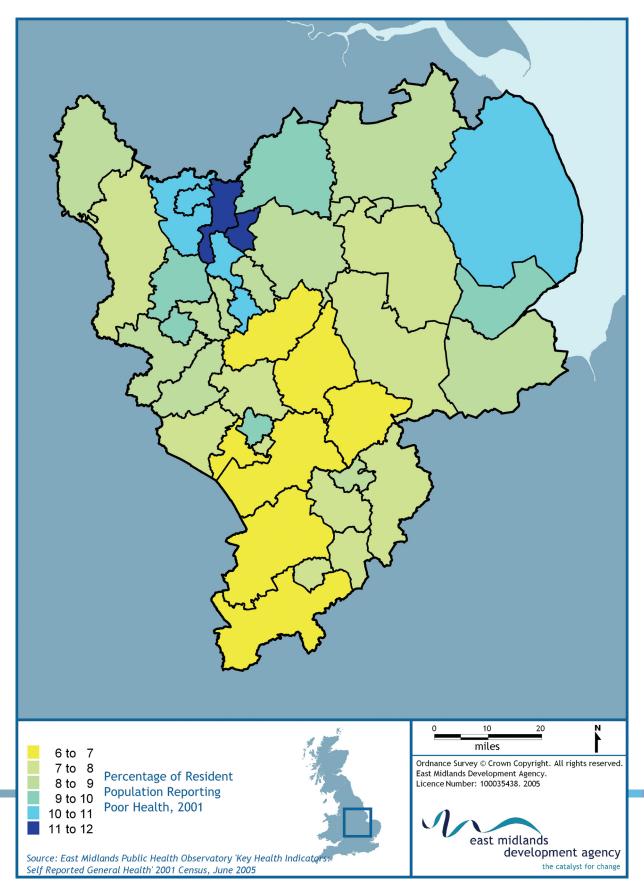
There are a number of self-reported questions on health in the 2001 Census. These include asking people to rate their general health or whether they are suffering from a limiting long-term illness:

■ East Midlands residents have slightly worse health than average, with 68% reporting themselves as having good health compared to 69% in England overall;

Map 6 shows that there is a clear north-south divide in residents who described their health as 'not good', with the highest proportions in districts in the coalfields and very low proportions in the south of the region. Bolsover in Derbyshire had the highest proportion of residents who reported poor health, at 13.7%, in contrast to just 5.8% in South Northamptonshire. East Lindsey and Boston also stand out from the rest of Lincolnshire, with 11.5% and 9.7% respectively of residents reporting poor health, compared to an average for the county of 9.1%;

MAP 6

Percentage of resident population reporting poor health, 2001



- The proportion of residents with a limiting long term illness is also higher in the East Midlands, at 18.4% compared to 17.9% in England. Bolsover again stands out with just over a quarter of its residents (25.6%) reported to have a limiting long term illness;
- High incidences of health difficulties, especially amongst older males, can be associated with the legacy of employment in coal mining and other heavy industry in the north of the region. This is most evident in the coalfield areas, where large numbers of incapacity benefit claimants make up the largest proportion of the 'hidden unemployed';³⁴
- In recent years, average life expectancy in England has been around 75 years for men and 80 years for women. The life expectancy for residents in the East Midlands is similar to the English average for both men and women. Within the East Midlands there is a difference of more than 6 years between the areas with the longest and shortest life expectancy. In the case of boys, those born in Rutland UA are expected to live 79.2 years, whilst those born in Nottingham City are only expected to live for 72.9 years. There is a similar story for girls, with those born in Rutland expected to live 5.2 years longer than those born in Nottingham City.

Poor health is most evident in deprived areas, such as parts of the coalfields

8.2 Disability

The Government has placed considerable emphasis on the ongoing implementation of the Disability Discrimination Act (DDA) and the application of the welfare reform principle of "work for those who can; security for those who cannot."35 Those with disabilities make up a substantial proportion of the working age population, and can face barriers to labour market participation relating specifically to different types of impairment, particularly mental health problems or locomotion impairments. The differing experiences of those with disabilities compared to those without are investigated in Section 4, Deprivation and Economic Inclusion in the East Midlands. The following points provide a contextual overview of the proportions of the population who are classed as 'disabled', 'work limiting disabled', 'DDA disabled', and 'both DDA and work limiting' from the 2004 Annual Population Survey:36

- In the East Midlands in 2004, 19.8% of people of working age described themselves as being disabled to some degree, one percentage point higher than the UK average;
- A higher proportion of men than women were disabled in the East Midlands, at 20.2% compared to 19.3% in the UK:
- Lincolnshire had the highest proportion of disabled working age residents, at 23.3%. Nottingham City, Nottinghamshire and Derbyshire also exceed the regional average. Rutland has the lowest proportion of disabled residents in the region, at 14.8%;
- Those who were classed as being disabled according to both the DDA and work limiting definitions make up 11.6% of working age residents in both the East Midlands and the UK;
- Those who were classed as disabled according to the DDA definition alone make up 4.4% of working age residents in the East Midlands, compared to 3.9% in the UK. Those who were classed as disabled according to the work limiting definition alone make up 3.8% of the working age population in the East Midlands, compared to 3.3% in the UK.³⁷

³⁴ Christina Beatty and Stephen Fothergill, Centre for Regional Economic and Social Research (CRESR), Sheffield Hallam University, Hidden Unemployment and its Relevance to Labour Market Policy in the East Midlands, July 2004. More information on benefit claimants is provided in Section 4 of The East Midlands in 2006, Deprivation and Economic Inclusion.

³⁵ Joseph Rowntree Foundation, Findings - Enduring economic exclusion: disabled people, income and work, October 2000.

³⁶ Estimates of the proportion of the population who can be described as disabled are derived from the Labour Force Survey component of the Annual Population Survey. This splits those with disabilities into two groups: 'work limiting disabled', which includes people who have a long-term disability which affects the kind of work or amount of work they might do; and 'Disability Discrimination Act (DDA) disabled', which includes people who have a long-term disability which substantially limits their day-to-day activities. Estimates of people covered by both or one category alone can be aggregated to a total estimate of those with disabilities.

³⁷ ONS Crown Copyright, *Annual Population Survey*, January 2004-December 2004, from NOMIS, 7th February, 2006.

8.3 Obesity

The growing prevalence of obesity has gained increasing importance in public health policy. In his 2002 annual report, the Chief Medical Officer described the growth in the proportion of the population who are overweight or obese as a "health time bomb with the potential to explode over the next three decades into thousands of extra cases of heart disease, certain cancers, arthritis, diabetes and many other problems." Prior to this statement, a National Audit Office report stated that, along with the human cost in the onset of disease and premature mortality, growth in obesity poses serious financial consequences for both the NHS and the wider economy.³⁸

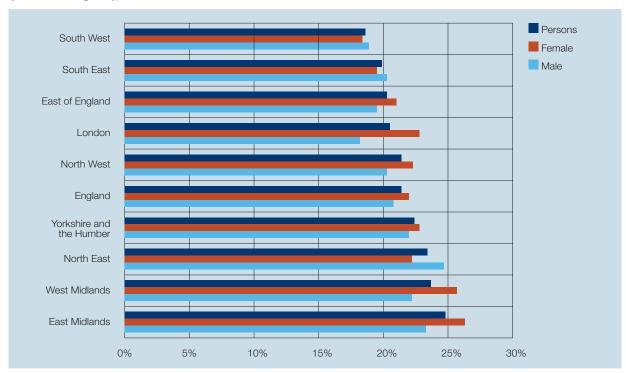
An adult is considered obese when their Body Mass Index (BMI)³⁹ exceeds 30 kg/m². Regional estimates of obesity are available from the Health Survey for England (HSE). To provide sufficiently robust estimates at a regional level, data from three HSEs is combined. The latest data relates to the 2000, 2001 and 2002 HSEs which can be compared to data going back to 1994.

Obesity is a particularly significant health issue for the East Midlands, as illustrated by Chart 17:

- The proportion of the total adult population classified as obese in the East Midlands is the highest of all English regions, at 24.8% compared to 21.4% in England according to the combined 2000-2002 HSE;
- The proportion of women classified as obese is also highest in the East Midlands, at 26.3% compared to 22% in England as a whole;
- The proportion of men classified as obese in the East Midlands exceeds the English average, at 23.3% compared to 20.8%, but is lower than the rate for the North East, at 24.7%;
- Regions in the south of England generally have lower rates of obesity, with only 18.6% of adults classed as obese in the South West, over 6 percentage points lower than the East Midlands rate.

CHART 17

Age standardized proportion of adult population classed as obese (BMI >30 kg/m²), 2000-02 HSE combined



Source: National Centre for Social Research, on behalf of the Department of Health, 'Health Survey for England', 2000-2002, February 2004

³⁸ East Midlands Public Health Observatory, *Profile of Obesity in the East Midlands*, December 2004.

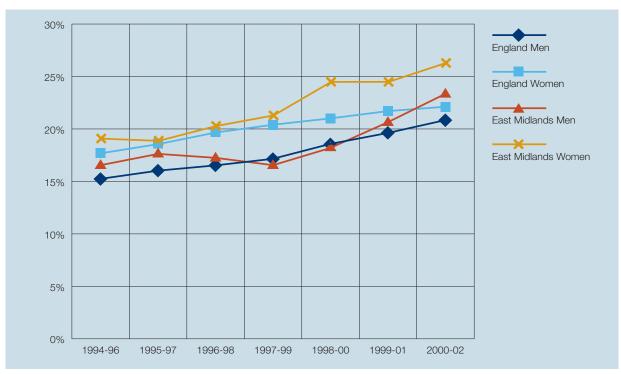
³⁹ BMI is an individual's mass (Kg) over their height² (m²), and is expressed in kg/m².

Chart 18 shows change over time, comparing combined data in three year bands of the HSE from 1994:

- Rates of obesity have been increasing steadily in England as a whole. According to the 1994-96 HSE, 16.5% of people in England were classified as obese. This had increased by 4.9 percentage points by 2000-02;
- The East Midlands has consistently had higher rates of obesity than the English average. Obesity rates have also increased more quickly in the East Midlands than in England overall. The proportion of adults classed as obese increased in the East Midlands by 7 percentage points from 17.8% to 24.8% from the 1994-96 to the 2000-02 combined HSE estimates;
- This increase has been particularly acute for women in the East Midlands. The proportion of women classed as obese in the region increased from 19.1% to 26.3%, an increase of 7.2 percentage points compared to a 4.4 percentage point increase nationally;
- The growth in obesity rates for men has been lower, at 16.5% to 23.3% in the East Midlands, an increase of 6.8 percentage points compared to 5.6 percentage points in England.

CHART 18

Adult population classed as obese in England and the East Midlands by gender (%), 1994-1996 to 2000-02



Source: National Centre for Social Research, on behalf of the Department of Health, 'Health Survey for England', 1994-2002, February 2004

8.4 Participation in sports and physical activity

The Government's strategy for increasing physical activity⁴⁰ sets targets to encourage participation at a level of intensity and duration sufficient to derive a health benefit, estimated to be 30 minutes of moderate physical activity at least five times a week. National estimates suggest that just over 30% of people meet this target, two thirds through the nature of their occupation. Of the remainder, almost twice as many meet the target through housework than through participation in sport.⁴¹

Sport England and the Department for Culture, Media and Sport (DCMS) are developing surveys to measure progress towards increasing the proportion of the population participating in moderate physical activity at least five times a week - data from the Taking Part and Active People Surveys will be available from summer 2006. Currently regional data on physical activity is available from the General Household Survey, produced by the ONS - which has included questions on health. education, work and leisure. The latest data relates to 2002, with comparable questions from 1996. Respondents were asked whether they took part in at least one physical activity over the previous 4 weeks. To enable comparability between 1996 and 2002, walking is excluded from this. The data does not directly relate to the Government's definition of 'moderate physical activity', as it specifically focuses on participation in sports, games, or other conscious physical exercise, such as swimming, running, aerobics or cycling. Therefore it does not include incidental physical activity, where exercise or enjoyment is not the principal aim such as DIY or housework. However, the General Household Survey is useful for highlighting regional differences and change over time, and raises a number of issues relevant to policy makers concerned with increasing participation:

- Nationally there has been an overall decline in participation between 1996 and 2002. The proportion of adults who had participated in at least one sport or physical activity, excluding walking, in the four weeks prior to interview in England fell by almost 3 percentage points from 45.6% to 43.2%;
- The decline in participation has been greater for men, falling by 3 percentage points compared to a 2 percentage point decrease for women;
- This has been driven primarily by a decrease in participation in two sports cycling and cue sports (which both saw 8 percentage point declines). Decline has also been significant amongst the younger age groups, 16-19 year olds and 20-24 year olds, with the decline in men's participation concentrated most in these age groups, whilst women's participation declined more evenly;
- In the East Midlands, the proportion of adults participating in sport at least once in the four weeks prior to interview fell from 43.7% in 1996 to 41.9% in 2002;
- Participation was highest in the South West in 2002, at 49.6%. The South West was also the only region in England where participation increased from 1996 (when the figure was 46.3%). Participation was lowest in the North East, at 37.1% in 2002.⁴²

Since 1996 participation in sports has declined in the East Midlands

⁴⁰ Department for Culture, Media and Sport, Game Plan: A strategy for delivering Government's sport and physical activity objectives, 2002.

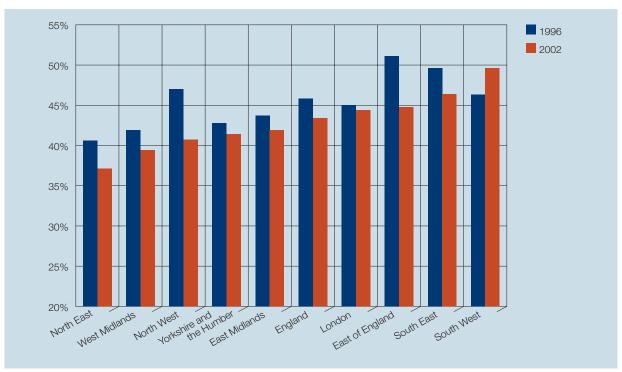
⁴¹ Sport England, A Framework for Sport in England – Making England an Active and Successful Sporting Nation: A Vision for 2020, 2004.

⁴² Sport England, *Participation in Sport in Great Britain: Trends 1987 to 2002*, September 2005.

Chart 19 shows that the East Midlands rate exceeds the North East, the North West, Yorkshire and the Humber and the West Midlands, but falls considerably below the leading regions.

CHART 19

Adults participating in sports (% population over 16), 1996 and 2002



Source: ONS, 'General Household Survey', 1996 and 2002, published in Sport England, 'Participation in Sport in Great Britain: Trends 1987 to 2002', September 2005

8.5 The impact of health and ageing on employment and lifestyles

Secondary analysis conducted on a longitudinal study, the *English Longitudinal Study of Ageing* (2002), carried out by the National Centre for Social Research (NatCen) provides some useful insights into the impact of health levels and age on employment and lifestyle. The study looked at people aged 50 and over, and aimed to investigate the implications of age and varying health levels amongst different groups of the population:

- A slightly lower proportion of people over 50 rated their health as 'good' or 'very good' in the East Midlands than in England, at 65% compared to 69%. However, more people rated their health as 'fair' in the East Midlands, at 27% compared to 24% in England;
- In the East Midlands, a higher proportion of people over 50 (17%), felt that their health often impinged upon their life compared to 14% in England. In both the East Midlands and England 10% of people felt that their age often prevented them from doing what they would like to do;
- A smaller proportion of men but a larger proportion of women in the East Midlands felt that there was a high probability that their health would limit their ability to work prior to usual retirement age. In the East Midlands, 23% of men and 33% of women felt that there was a probability greater than 5 out of 10 that their health would limit their ability to work before they reached 65. In England, 26% of men and 30% of women felt that there was a significant probability that their health would affect employment.

8.6 Mortality

Mortality rates from circulatory disease, accidents, cancer and suicide are commonly used as indicators of the health of a population. They have the advantage of providing generally unambiguous measures of health status and are collected on a consistent basis. However, it should be remembered that they give an incomplete view of health as in many situations ill health does not lead to premature death. Direct age-standardised mortality rates (DASRs), expressed as a rate per 100,000 population, are used here to compare the mortality experience of different populations: firstly because they facilitate more meaningful comparisons between populations differing in terms of age/sex structure, and secondly because they facilitate monitoring of changes over time in the same population:

- For three of these indicators: circulatory disease in those under 75, accidents for all ages and suicide for all ages, the East Midlands had a higher DASR than the English average during 2001-2003;
- For premature death from cancer, however, the East Midlands had a lower DASR than the national rate, at 121 compared to 124 in England.

Mortality rates from circulatory diseases and accidents are higher in the East Midlands

Summary

1. Introduction

This section of the Evidence Base provides a portrait of the demographic characteristics of the East Midlands region. It comments on population structure in terms of age, gender and ethnicity, and analyses historic trends and forecast population growth.

2. Population structure

The population of the East Midlands, totalling 4.3 million people, is fairly similar in structure to the English average. Women make up just over 50% of the population, and this share increases over the age of 65. If the population is split into three broad age groups, 18% of East Midlands residents are in the school age group, 63.1% are in the working age group and 18.9% are of pensionable age.

There are distinct differences within the region. Generally speaking, the south of the region (particularly Northamptonshire) and the main towns and cities (particularly Nottingham and Leicester) have higher proportions of the population in the working age group, whilst the more rural parts of the region along the east coast and parts of the north of the region have higher proportions in the pensionable age group. The pensionable age group make up over a quarter of the population in both East Lindsey and South Holland in Lincolnshire.

The proportion of people who identified themselves as belonging to an ethnic minority group in the 2001 Census was somewhat lower in the East Midlands than the English average, at 9% compared to 13%. However, those of Indian origin make up a larger share of the population in the East Midlands than in England overall. Leicester City accounts for 30% of all people from an ethnic minority background resident in the region.

3. Population living in urban and rural areas

The East Midlands is the third most rural region in England, with 29.5% of the total population resident in rural settlements, over 10 percentage points higher than the English average of 19.4%.

There are considerable sub-regional variations. Rutland is the most rural sub-region in the East Midlands, with 100% of its population living in rural settlements, and Lincolnshire is the next most rural, with almost half of its population living in rural settlements. Nottingham City is the least rural, with 100% of its population in areas classified as urban.

Looking at more detailed classifications, almost 70% of people in the East Midlands live in settlements of greater than 10,000 people, the most densely populated banding. However, this is lower than the English average as a greater share of the region's population live in settlements classed as 'Town and Fringe' and 'Villages'. A very small proportion of the population live in the most sparsely populated settlements, and this differs very little from the English average.

4. Population trends

Between 1994 and 2004, the East Midlands population grew at a greater rate than the English average, increasing by 5.1% compared to 3.9%. This growth significantly exceeded that of the other northern and midlands regions, but was less than the growth in London, the South East, the South West and the East of England.

The 8.8% growth in the pensionable age group in the East Midlands was the second largest of all regions, behind the East of England. The working age group in the region also grew at an above average rate, at 6.4% compared to 5.7% in England as a whole.

Rutland experienced the largest population growth in this period, increasing by 13.4%, with by far the largest growth in the pensionable age population in the region. Lincolnshire also experienced significant growth in both the pensionable age and working age groups, whilst both Nottingham and Leicester Cities experienced overall population decline.

Projections based on the 2003 Mid-Year Population Estimates suggest that the East Midlands population will reach 4.8 million by 2028, and will continue to grow at a greater rate than the English average, increasing by 13%, compared to 11% in England.

The East Midlands is projected to experience the greatest increase in the pensionable age group of all English regions, a growth of 63.4% between 2003 and 2028. The working age group is expected to grow far more modestly, at 2.1%. The East Midlands is the only region of the northern and midlands regions projected to experience growth in its working age group.

These population projections suggest that the age profile of the East Midlands will move away from the English average towards an older population profile. The pensionable age group is projected to increase from its current share of under 19% of the total population to over 27% by 2028.

The growth in the pensionable age group will drive a considerable increase in total dependency ratios, which will increase from close to the English average in 2003 to significantly above the average in 2028.

This will have a considerable impact on the labour markets in parts of the East Midlands. In the case of Lincolnshire, which is projected to experience the strongest overall population growth of all sub-regions, including strong growth in the working age group, the very significant increase in the pensionable age group (a projected increase of 85.2% between 2003 and 2028) will mean that the aged dependency ratio will increase from 36.8 to 62.5.

5. Components of population change

Between 1997 and 2003, 84% of the population growth seen in the East Midlands was due to migration, compared to an English average of 56%. Only in the South West did migration make a greater contribution to population growth.

However, in the twelve months prior to the 2001 Census, only 12% of East Midlands residents had moved, most of whom had moved within the region.

The total number of live births to mothers resident in the East Midlands in 2003 fell from the 1997 level, despite the number of women of child bearing age increasing during this period.

Women aged under 30 in the East Midlands are more likely to have children than the English average. However, a comparison with 1997 data suggests that women in the region are choosing to have children later.

The number of deaths has remained stable between 1997 and 2003, despite a rise in the population of pensionable age.

6. Milton Keynes South Midlands

Large scale housing developments associated with the MKSM Growth Area are expected to have a considerable impact on the East Midlands population, especially in Northamptonshire, over and above current ONS projections.

By 2021, it is proposed that some 169,800 new homes will have been built in the Growth Area in addition to housing development already planned in affected regions.

This means that the 2003-2028 projections discussed earlier in this section could be underestimating the growth in the region's population by as many as 100,000 people.

7. Transitory and migrant populations

According to the last published caravan count, for July 2005, there were 1,123 traveller caravans in the East Midlands, or 2.6 caravans per 10,000 people, which is below the English average of 3.1 caravans per 10,000 people. This has fallen from the last published caravan count, for January 2005, when the East Midlands was level with the English average. There is considerable variation within the region, with Leicestershire, Lincolnshire, Northamptonshire and Nottinghamshire all recording sifnificantly higher caravan counts than the regional average, whilst Derby, Leicester and Nottingham Cities all recorded counts well below the regional average. Particularly large changes over time can be observed at a Local Authority District level. Daventry and South Northamptonshire recorded significant falls in caravan counts between 2003 and 2005, whilst districts in Leicestershire and Nottinghamshire recorded large increases. These large local variations and changes over time are to be expected, given the highly transitory nature of the traveller community, and also reflect the pattern of variations in local enforcement activity in relation to unauthorised encampments.

Regional data on migrant labour is very limited and national data on work permits does not include migrants from EEA member states. However, trends in work permits for migrants from non-EEA countries suggest that there has been an increasing demand for migrant labour in recent years. Applications for work permits increased by 42% between 1999 and 2000. The greatest numbers of permits issued were in the health and medical sectors, computer services, and business services.

Prior to Accession in May 2004, workers from Poland, the Ukraine and the Baltic States made up the majority of migrant workers working in the UK through the Seasonal Agricultural Workers Scheme.

Evidence suggests that migrants fill shortages at either end of the occupational spectrum. Skilled migrants fill vacancies in health, computer services and education, whilst lower skilled economic migrants play an important role in addressing shortages in unskilled, temporary and casual employment in the agricultural and hospitality sectors.

People who were not born in the UK, which includes students, economic migrants, and long term or permanent residents, make up 6.2% of the population in the East Midlands, compared to 8.9% in the UK. However, the non-UK born population makes up a larger proportion of the working age population, at 7.3%.

Leicester City accounts for the largest proportion of the East Midlands population who were not born in the UK, whilst Derbyshire has the lowest proportion.

8. Health, disability and physical exercise

East Midlands residents have slightly poorer health than average, with 68% reporting themselves as having good health compared to 69% in England.

There is a clear north-south divide in the population who reported their health as 'not good', with higher levels in the coalfields and the Lincolnshire coast, and lower levels in the south of the region.

The proportion of residents with a limiting long term illness is also higher in the East Midlands, at 18.4% compared to 17.9% in England.

The East Midlands has the highest proportion of adults classed as obese of all English regions, at 24.8% compared to an English average of 21.4%. This is particularly high for women, at 26.3%. Obesity rates have also increased more significantly in the East Midlands than in England overall.

In the East Midlands, the proportion of adults participating in sport at least once in the four weeks prior to interview fell from 43.7% in 1996 to 41.9% in 2002 compared to 45.6% and 43.2% in England.

More people over 50 in the East Midlands than in England felt that their health often impinged upon their life, at 17% compared to 14%.

The East Midlands has higher levels of mortality due to circulatory diseases, accidents and suicides than the English average, but levels of mortality due to cancer are lower than average.