The Yorkshire & Humber Assembly

Analysis of Migration Trends
- an update -

edge analytics

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EXECUTIVE SUMMARY

This report was commissioned by the Yorkshire and Humber Assembly (YHA). Its contents, including any opinions and/or conclusions expressed, are those of the author alone and do not necessarily reflect YHA policy.

RSS review

The Yorkshire and Humber Assembly (YHA) is in the midst of a review of its Regional Spatial Strategy (RSS) with a specific focus on housing development. A *Spatial Options* document has been produced (YHA, 2008) which considers the overall scale of housing provision, the distribution of housing across the YH Region and 'Opportunity Areas' where housing growth could be accommodated.

Consultation on *Spatial Options* with regional stakeholders has raised serious concerns over the pivotal role which population and household projections play in the regional planning process and the risks associated with the development of a long-term plan that is based on demographic trends from the last 5 years.

Latest population and household projections

The latest, 2006-based population projections for local authority areas in the YH Region were released in 2008 (ONS, 2008a). They have subsequently been used as constraints in the generation of 2006-based household projections (Experian, 2009).

Robust population and household estimates and projections are critical to the development of the Region's housing strategy. Robustness depends on the accurate estimation of the three key components of population change :

1. Natural change (births and deaths)
2. Net internal migration (the balance of in-migration and out-migration)
3. Net international migration (the balance of immigration and emigration)

The 2006-based population projections estimate a regional population of 6.1 million in 2026 - 8% higher than that calculated by the 2004-based projections. This hides significant local variation with the populations of Leeds and Hull 15% higher in the 2006-based projections and Sheffield 11% higher.

The 2006-based household projections estimate that the number of households in the region will reach 2.8 million by 2026; 164,000 more than were estimated in the 2004-based projections. To achieve the 2.8 million total, the region's households would need to increase by approximately 32,000 per year between 2008-2026.

Immigration estimates

There is strong evidence to suggest that the Office of National Statistics (ONS) methodology for estimating international migration at a sub-national level has significant shortcomings. These shortcomings manifest themselves in estimates for the YH Region that are inflated, specifically for immigration, leading to net-immigration flows that are almost certainly too high.

Research at the University of Leeds has indicated that the over-estimation of immigration flows to the Region may be as high as 21% (Boden & Rees, 2009). As the economic and population hub, this over-estimation has the biggest impact upon Leeds.

Economic recession

The global economic recession has introduced considerable uncertainty into the likelihood that the recent levels of immigration will continue, a key assumption of the 2006, trend-based projections. Evidence suggests that the number of migrant workers coming to the YH Region from Accession countries has peaked although non-Accession inflows remain relatively stable.

At the same time, the Home Office has implemented its new Points Based System (PBS), providing levers of control on future non-EU migrant streams. It has also confirmed its intention to retain restrictions on migrant inflows from Bulgaria and Romania for the foreseeable future.

Student inflows and historical migrant streams will continue to bolster international migration flows but it is likely that the high levels of net immigration to the UK, experienced over the last few years will be reduced.

The 'low variant' migration scenario presented by ONS in its 2006-based national population projections may be a more realistic view of the longer-term impact of net immigration streams, although more evidence is required to confirm this assumption.

Four alternative scenarios
This report presents four alternative scenarios to illustrate how the current 2006-based population and household projections would be affected by 'corrections' to the Region's immigration component and by a general reduction in the importance of net immigration in the process of population change.

These are not definitive statistics. They are crude estimates based upon a collection of evidence, research and intuition. However, given the importance of demographic projections to strategic planning in the YH Region, it is recommended that these crude estimates are given due consideration in the ongoing RSS review process.

It is recommended that scenario 2 is viewed as a 'high' scenario as it corrects the error in existing estimates and it assumes that high levels of net immigration persist. Scenario 2 estimates annual household growth of 26,400 per year between 2008-2026.

Scenario 3 and, more likely, scenario 4 provide estimates against which future housing development should be benchmarked. Scenario 4 assumes a reduced level of net immigration and a reduced impact of natural change. It estimates household growth of 22,200 per year – a figure that is consistent with the new dwelling estimates in the RSS 2009 update.

Scenario 4 predicts 177,000 fewer households in the YH Region in 2026 compared to scenario 1. Without more robust projection analysis it is not possible to produce scenarios for individual local authorities but it is crudely estimated that up to 70% of the reduction in household numbers could be focused on the Leeds City Region, and up to 40% in Leeds itself.

For further confirmation of these scenario estimates a more detailed review of local demographic evidence is recommended involving collaboration between key regional stakeholders.

Future uncertain
The future is certainly not what it used to be. The depth and severity of the economic recession is, as yet, unknown but there is no doubt that the failure of the UK's banking system will have a significant impact upon economic growth in the region.

Recovery from the recession is likely to require economic restructuring in the region to compensate for its dependence on financial services and the pattern of migration will change as a result. But how and when remains unclear.

Monitoring the changing scale and distribution of migration flows into and out of the region will remain imperative in order that intelligence on population and household change is robust and reliable at a time of unprecedented economic and demographic uncertainty.

Alternative population and household projections, YH Region, 2008-26

Scenario	Population (000) 2008	Population (000) 2026	Population (000) % incr	Households (000) 2008	Households (000) 2026	Households (000) % incr	Hhds per year 2008-26
1 Base	5,231	6,110	17%	2,235	2,811	26%	32.0
2 Base corrected	5,231	5,890	13%	2,235	2,710	21%	26.4
3 Base corrected, low migrant variant	5,231	5,804	11%	2,235	2,670	19%	24.2
4 Base corrected, low migrant variant, lower natural change	5,231	5,726	9%	2,235	2,634	18%	22.2

Scenario Definitions:

1. <u>Base</u>: 2006-based population and household trend-based projections (ONS, 2008a; Experian, 2009)

2: <u>Base corrected</u>: 2006-based population and household projections with a re-scaled net migration component based on an alternative distribution of immigration which reduces the YH regional immigration total by 21%. No change is made to the 'natural change' (births and deaths) component, although in reality this will be partially dependent upon levels of net immigration. No change is made to the net internal migration component.

3: <u>Base corrected, low migrant variant</u>: 2006-based population and household projections with a re-scaled net migration component as above but using the ONS 'low variant' migration assumption for its national projection, which reduces net immigration by 35%. Again no change is made to the 'natural change' (births and deaths) component, although in reality this would change with reduced net immigration. No change is made to the net internal migration component.

4: <u>Base corrected, low migrant variant, lower natural change</u>: As Scenario 3 but with a 20% reduction in the net impact of natural change (births minus deaths).

Scenario Notes:

The projections have been derived using simple manipulation of the three components of population change (natural change, net internal migration and net international migration). They have not been derived through the application of a cohort component model which would provide a more accurate illustration of the impact of the scenarios, particularly the effect of reduced net immigration upon natural change.

Household numbers for 2026 have been derived through the crude application of an average population per household for each local authority (derived from the base, scenario 1 statistics).

1 INTRODUCTION

Background

The Yorkshire and Humber Assembly (YHA) is in the midst of a review of its Regional Spatial Strategy (RSS 2009 Update). The review has a specific focus on housing issues but is also evaluating related issues on infrastructure, climate change and flood risk.

A *Spatial Options* document has been produced (YHA, 2008) which considers the overall scale of housing provision, the distribution of housing across the Region and 'Opportunity Areas' where housing growth could be accommodated.

Consultation on *Spatial Options* with regional stakeholders has raised serious concerns over the pivotal role which population and household projections play in the regional planning process. Specifically, there is increasing concern over the risks associated with the development of a long-term plan for the Region that is based on demographic trends from the last 5 years.

In December 2007, prior to the start of the RSS 2009 Update, Edge Analytics produced a study of migration in the Region. Using 2004-based projections the study evaluated changes in migration trends, the drivers behind these changes and potential future scenarios for migration patterns and household numbers. Analysis was undertaken for the Region as a whole, for each of the 21 local authority areas, the four administrative sub-regions and the functional Leeds City Region. The study helped to inform and provide evidence for the YHA's response to the Secretary of State's Proposed Changes to the current adopted (May 2008) RSS.

Requirements

The YHA has commissioned a refresh of the work undertaken by Edge Analytics to provide an updated view of migration trends in the region based on the ONS 2006-based population projection and preliminary estimates of the forthcoming 2006-based household projections (Experian, 2009).

Specific objectives

The refreshed analysis encompasses the following:

- How migration trends and assumptions have informed the ONS 2006 based population projections and are informing the forthcoming 2006-based household projections
- Methodological shortcomings in the estimation of the international migration components of the official sub-national population projections (SNPP)
- The potential impact of the developing economic conditions upon international migration to and from the UK and the associated changes in national policy on immigration.
- Scenarios for possible future migration levels and a view on the certainty that can be attached to these scenarios.

Format

The study provides analysis on the Region as a whole and on each of the Local Authorities and associated macro areas.

Section 2 reviews the latest evidence from the 2006-based population projections and the preliminary release of the 2006-based household projections, provided to the YHA.

Section 3 reviews how the estimation of international migration to and from the Region is driving population projections and examines the robustness of the methodology that has produced these estimates.

Section 4 illustrates the most recent evidence on migrant worker inflows to the YH Region using data from the National Insurance Number (NINo) registration database, giving an indication of the impact of prevailing economic conditions upon migration to the UK.

Section 5 provides a summary of the sensitivity of the population projections to variations in the estimation of international migration illustrating the potential variance using a number of alternative scenarios.

A projection horizon of 2008-2026 has been used throughout the analysis to maintain consistency with data from the RSS on new dwelling targets and from the latest household projections on estimated household numbers.

Appendix 1 to this report provides a summary of the key population and household projection statistics for the Region. Appendix 2 and 3 provide references and a glossary to the report.

An Area Profile for each geographical area, summarising the evidence available on migration and the components of demographic change which underpin the 2006-based projections, is provided in Appendix 4.

2 NEW EVIDENCE – POPULATION AND HOUSEHOLD PROJECTIONS

National Population Projections

The most recent long-term projection of the population of England and Wales was released in 2007. This projection has a 2006 base-year and included important changes in the assumptions for fertility, mortality and migration compared to the previous 2004-based statistics.

Long term fertility assumptions were raised from a total fertility rate (TFR) of 1.74 in the 2004-based projections to 1.84 children per woman in the 2006-based projections (ONS 2007b). Mortality rates were adjusted to produce a shift upwards in life expectancy in 2031 of 1.3 years for men and 0.8 years for women. The long term assumption for migration was a net gain of 190 thousand per year for the UK, compared with 145 thousand in the 2004 based projections.

2006-based sub-national projections

In 2008, these national projections were used as the constraints on the production of 2006-based sub-national population projections (SNPP) for local authority districts and unitary authorities (LADUA) in England.

Summary tables illustrating the projected population change for each of the LADUA in the YH Region are provided in Appendix 1 (both 2004-based and 2006-based projections).

There are significant differences between the 2004-based and 2006-based projections. The population of the Region is projected to increase to approximately 6.1 million by 2026, an increase of 437 thousand on the 2004-based projections (Figure 1).

Figure 1: Projected population in 2026 (2004- and 2006-based projections)

Population in 2026 (000s)

Area Name	SNPP 2004-base	SNPP 2006-base	Difference	
Barnsley	242	255	14	6%
Doncaster	304	316	12	4%
Rotherham	272	284	12	4%
Sheffield	540	597	57	11%
Bradford	576	626	50	9%
Calderdale	220	239	19	9%
Kirklees	443	458	15	3%
Leeds	812	934	122	15%
Wakefield	352	364	12	3%
Kingston upon Hull, City of	259	299	40	15%
East Riding of Yorkshire	401	412	12	3%
North East Lincolnshire	165	175	10	6%
North Lincolnshire	181	192	11	6%
York	222	239	17	8%
Craven	62	67	5	8%
Hambleton	96	99	3	3%
Harrogate	179	194	15	9%
Richmondshire	65	65	-	0%
Ryedale	60	64	4	6%
Scarborough	120	126	6	5%
Selby	93	97	4	4%
South Yorkshire	1,358	1,452	94	7%
West Yorkshire	2,403	2,621	217	9%
Humber	1,006	1,077	72	7%
North Yorkshire	898	952	54	6%
Leeds City Region	3,201	3,473	272	9%
Yorkshire & Humber	**5,664**	**6,101**	**437**	**8%**

Source: ONS, 2007a; ONS 2008a

Leeds, Hull and Sheffield are subject to the largest change as a result of the 2006-based projections. Leeds, for example, is now projected to increase its population from 770 thousand in 2008 to 934 thousand in 2006 – a 21% increase over the next 18 years and an uplift of 122 thousand from the original 2004-based projection.

A revised set of household projections has been commissioned by the Department for Communities and Local Government (CLG) retaining the methodology used for the 2004-based household projections. Household projections are constrained both to the national and the sub-national population projections produced by ONS and are therefore equally sensitive to the assumptions on natural change and migration used in the population projection process.

The revised projections are due for publication during early Spring 2009. A preliminary set of results for the YH Region has been provided to the YHA and they are reproduced here with its permission (Experian, 2009). Appendix 1 contains summary tables for both 2004-based and the 2006-based household projections.

Household numbers in the YH Region are expected to rise to over 2.8 million in 2026 – a 6% uplift on the 2004-based projections (Figure 2).

Figure 2: Projected household numbers in 2026 (2004- and 2006-based projections)

Households in 2026 (000s)

Area Name	HHLD 2004-base	HHLD 2006-base	Difference	
Barnsley	116	120	4	3%
Doncaster	143	145	2	2%
Rotherham	128	129	1	1%
Sheffield	262	282	20	8%
Bradford	245	255	10	4%
Calderdale	102	111	9	9%
Kirklees	204	205	1	1%
Leeds	381	443	62	16%
Wakefield	171	172	1	0%
Kingston upon Hull, City of	123	144	21	17%
East Riding of Yorkshire	189	193	4	2%
North East Lincolnshire	78	82	4	5%
North Lincolnshire	86	89	3	3%
York	102	111	9	9%
Craven	29	32	3	10%
Hambleton	45	46	1	2%
Harrogate	86	91	5	6%
Richmondshire	29	28	(1)	-5%
Ryedale	28	29	1	4%
Scarborough	59	61	2	4%
Selby	41	43	2	6%
South Yorkshire	649	676	27	4%
West Yorkshire	1,103	1,186	83	8%
Humber	476	507	31	7%
North Yorkshire	419	442	23	5%
Leeds City Region	1,477	1,584	107	7%
Yorkshire & Humber	**2,647**	**2,811**	**164**	**6%**

Source: CLG, 2007a; Experian, 2009

This total of 2.8 million represents an increase of 26% in household numbers between 2008-2026, compared to a projected population increase of 17%. A reducing average household size is driving this difference, with population per household projected to reduce from 2.34 in 2008 to 2.17 by 2026.

Household projections have provided key empirical evidence to both national and local government in their analyses of the requirement for new housing development. Using 2004-based household projections as a primary input, the YH Region's RSS includes ambitious targets for new dwelling construction, originally designed to redress the imbalances in demand and supply and to solve the acute affordability crisis in the housing market. In a number of local authorities (Harrogate and East Riding, for example) policy decisions were taken to constrain planned new housing development despite household projections suggesting growth would be higher.

The interim 2006-based household projections suggest that the RSS new dwelling targets may not be sufficient to meet the projected increase in household numbers between 2008-2026 (Figure 3).

Figure 3: Households vs New Dwellings, YH, 2008-2026

	Households per year 2008-26		New dwellings per year 2008-26	
Area Name	**HHLD 04**	**HHLD 06**	**Regional Spatial Strategy (RSS)**	**RSS vs HHLD 06**
Barnsley	1,000	1,172	1,015	87%
Doncaster	1,000	1,144	1,230	107%
Rotherham	1,000	1,144	1,160	101%
Sheffield	1,856	2,728	1,425	52%
Bradford	2,656	3,300	2,700	82%
Calderdale	856	1,306	670	51%
Kirklees	1,856	2,011	1,700	85%
Leeds	3,267	5,933	4,300	72%
Wakefield	1,544	1,717	1,600	93%
Kingston upon Hull, City of	633	1,644	880	54%
East Riding of Yorkshire	2,322	2,650	1,150	43%
North East Lincolnshire	489	711	510	72%
North Lincolnshire	889	1,083	750	69%
York	1,000	1,450	850	59%
Craven	256	400	250	63%
Hambleton	433	489	280	57%
Harrogate	944	1,228	390	32%
Richmondshire	400	378	200	53%
Ryedale	256	350	200	57%
Scarborough	511	656	560	85%
Selby	433	528	440	83%
South Yorkshire	4,856	6,189	4,830	78%
West Yorkshire	10,178	14,267	10,970	77%
Humber	4,333	6,089	3,290	54%
North Yorkshire	4,233	5,478	3,170	58%
Leeds City Region	13,811	19,044	13,915	73%
Yorkshire & Humber	**23,600**	**32,022**	**22,260**	**70%**

Source: CLG, 2007a; Experian, 2009; YHA,2008

An increase in household numbers in the Region to 2.8 million in 2026 equates to an annual increase of over 32 thousand households per year (compared to 23.6 thousand in the 2004-based household projections). The current RSS has set a target of 22,260 new dwellings per year but this is only 70% of the projected increase in households suggested by the 2006-based projections.

To achieve an annual increase in households of over 30,000 per year over the next 18 years would require house building on a very large scale, beginning in a period where economic uncertainty has led to complete stagnation in the housing market and an increasingly bleak outlook for the construction industry.

Is the empirical evidence that supports these new projections sufficiently robust to enable policy makers and planners to use the statistics with confidence? Or does the current economic situation require a complete re-think on the demographic influences that are likely to shape the Region's population over the next 25 years?

3 INTERNATIONAL MIGRATION ESTIMATION

Migration measurement

Since the turn of the century, and particularly since 2004 with the unprecedented expansion of the European Union (EU), international migration has become a dominant driver of demographic change in the UK.

There are few parts of the UK and its economy that remain unaffected by the impact of international migration. Employers, local communities, schools, housing, health and social services, emergency services, retail and financial services providers, unions and advice agencies; all have been affected but all are constrained by an incomplete knowledge of the true scale, distribution and profile of migration – from national to local level.

Despite its importance in driving population change, the systems for measuring and recording the movement of people into and out-of the UK remain inadequate. In the absence of a population register and at a point between successive censuses, the UK is dependent upon a mixture of data sources to provide statistics on international migration.

During 2007 and 2008 a large number of 'local' studies have been produced analysing the economic and social impact of new migrants and guidelines have been published for those wishing to make the most of available statistics (Rees & Boden, 2006; Green *et al*, 2008). The previous report produced by Edge Analytics for the YHA provided more detail on available datasets and some of the conceptual and measurement issues involved in using them.

The 'length of stay' of migrants is a key issue when interpreting migration statistics. National Statistics on population only measure the impact of 'long-term' migrants – those who come to or leave the UK for more than 12 months. Since 2004, with the huge number of A8 migrants coming to the UK, short-term migrants have become an important feature of the demographic landscape, but the shortcomings of the UK's measurement systems make it impossible to accurately quantify the relative importance of short-term versus long-term migrants.

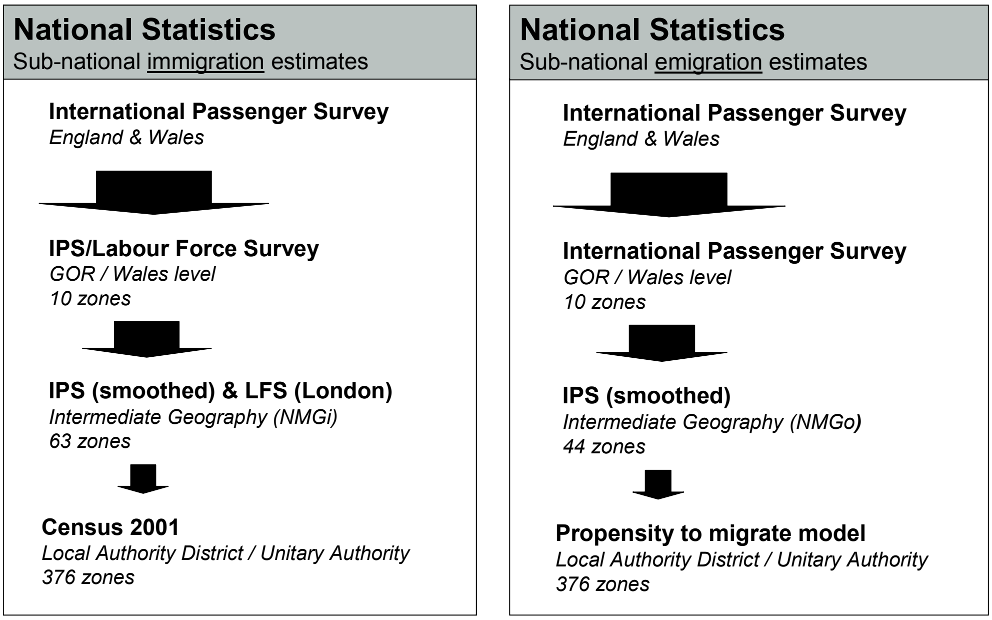
Total International Migration

National Statistics on immigration and emigration – Total International Migration (TIM) - are primarily based on sample data derived from the question asked in the International Passenger Survey (IPS) on migrants 'intentions' to stay or leave the UK for more than twelve months. This data is supplemented with information from the Home Office on asylum seekers and their dependents and from the Irish Central Statistical Office with data on migration to and from the Irish Republic. Additional adjustments are incorporated to account for those who change there original intentions - visitor switchers and migrant switchers.

Given the small size of the IPS sample, ONS has sought to use alternative data sources to improve the estimation of migration flows sub-nationally (Figure 4). The estimation process works at four different levels: national, regional, intermediate geography and local authority area. The intermediate geography or 'New Migrant Geography' (NMG) groups local authority areas outside London based upon their contiguity and economic association. Within London, boroughs are grouped based on similarities in historical migration profiles. There is a different set of these geographies for both immigration and emigration (ONS 2007c; 2007d).

For immigration estimation the LFS is used to allocate gross national IPS flows to the ten Government Office Regions (GOR). LFS statistics on 'long-term' migrants calibrate the proportional distribution of flows to each region. IPS data, smoothed over an extended time-series, is used to allocate immigration flows to the NMGi outside London, with the LFS sample size believed to be sufficiently robust to enable it to be used for estimation for the London NMGi areas. The final stage of immigration estimation involves the proportional allocation of flows to local authority areas using the migrant distributions evident from 2001 Census data.

Figure 4: Total International Migration – sub-national estimation



Source: ONS (2008b)

The emigration estimation process has a similar hierarchical structure but does not have the luxury of additional data from either the LFS or the Census. As an alternative, it incorporates a 'migration propensity' model to estimate the distribution of flows at a local authority level. A more complete description of the TIM estimation methodology is provided in ONS supplementary documentation (ONS 2008b).

At present, the TIM sub-national estimation process does not incorporate additional intelligence from administrative sources, although initial analysis and investigation has been completed to compare the Workers Registration Scheme (WRS), NINO and GP registration statistics with those derived from the TIM estimation process (ONS, 2007e).

TIM estimates for YH

The components of immigration and emigration which underpin the 2004-based and 2006-based population projections for the YH Region are summarised in Figures 5 and 6. The tables present average immigration and emigration flows per year over the 2008-2026 projection period.

Immigration estimates for the 2006-based projections have risen by an average of 38% from the original 2004-based statistics. Total immigration to the Region is projected to average 60,679 per year between 2008-2026.

The largest absolute differences between the 2004- and 2006-based statistics are evident in Leeds, Sheffield, Hull, Bradford and York, with Leeds estimated to experience immigration flows of over 16,000 per year between 2008-2026.

Emigration estimates have also increased from the 2004-base but to a smaller degree. Emigration is expected to average just under 35,000 per year between 2008-2026, a 21% rise on the 2004-based total.

The largest absolute differences are again in the major urban areas of the Region but on a smaller scale to those evident for immigration.

These summary tables indicate that demographic evidence for the period prior to 2006 has resulted in significantly increased assumptions on international migration to the Region, particularly immigration. How have these changes impacted population projections?

Figure 5: International and cross-border migration <u>into</u> Area, 2008-26

Area Name	2004-based	2006-based	Difference	%
	Average per year 2008-2026			
Barnsley	800	700	-100	-13%
Doncaster	1,200	1,400	200	17%
Rotherham	800	1,000	200	25%
Sheffield	5,400	7,900	2,500	46%
Bradford	6,500	7,895	1,395	21%
Calderdale	1,300	1,800	500	38%
Kirklees	2,300	3,095	795	35%
Leeds	10,500	16,489	5,989	57%
Wakefield	900	1,300	400	44%
Kingston upon Hull, City of	2,700	4,200	1,500	56%
East Riding of Yorkshire	1,700	2,200	500	29%
North East Lincolnshire	800	900	100	13%
North Lincolnshire	700	900	200	29%
York	2,800	4,000	1,200	43%
Craven	400	600	200	50%
Hambleton	700	700	0	0%
Harrogate	1,900	2,700	800	42%
Richmondshire	1,100	900	-200	-18%
Ryedale	400	600	200	50%
Scarborough	700	1,000	300	43%
Selby	400	400	0	0%
South Yorkshire	8,200	11,000	2,800	34%
West Yorkshire	21,500	30,579	9,079	42%
Humber	5,900	8,200	2,300	39%
North Yorkshire	8,400	10,900	2,500	30%
Leeds City Region	27,800	38,979	11,179	40%
Yorkshire & Humber	**44,000**	**60,679**	**16,679**	**38%**

Source: ONS, 2007a; ONS, 2008a

Figure 6: International and cross-border migration <u>out of</u> Area, 2008-26

Area Name	2004-based	2006-based	Difference	%
	Average per year 2008-2026			
Barnsley	600	800	200	33%
Doncaster	1,100	1,200	100	9%
Rotherham	700	900	200	29%
Sheffield	3,800	4,632	832	22%
Bradford	2,900	3,547	647	22%
Calderdale	900	1,284	384	43%
Kirklees	1,700	2,447	747	44%
Leeds	6,700	7,942	1,242	19%
Wakefield	900	1,289	389	43%
Kingston upon Hull, City of	1,300	1,558	258	20%
East Riding of Yorkshire	1,500	1,758	258	17%
North East Lincolnshire	600	495	-105	-18%
North Lincolnshire	600	600	0	0%
York	1,500	2,053	553	37%
Craven	400	400	0	0%
Hambleton	600	600	0	0%
Harrogate	1,200	1,489	289	24%
Richmondshire	600	558	-42	-7%
Ryedale	300	300	0	0%
Scarborough	600	700	100	17%
Selby	300	300	0	0%
South Yorkshire	6,200	7,532	1,332	21%
West Yorkshire	13,100	16,511	3,411	26%
Humber	4,000	4,411	411	10%
North Yorkshire	5,500	6,400	900	16%
Leeds City Region	17,100	21,553	4,453	26%
Yorkshire & Humber	**28,800**	**34,853**	**6,053**	**21%**

Source: ONS, 2008a; ONS, 2008a

Components of population change YH

The effect of these changes to the components of immigration and emigration is a substantial rise in the impact of 'net immigration' upon projected population change.

The components of population change that drive the 2004-based and 2006-based population projections are illustrated in Figure 7 and Figure 8. These tables illustrate the average annual impact of the three components of population change in the YH Region – natural change, net internal migration and net international migration.

Net internal migration to the Region has remained fairly stable between the 2004- and 2006-based projections, averaging 1,184 per year in the former and 1,311 per year in the latter.

The net international migration component has increased substantially, however, as has the natural change component. Natural change will be influenced by the projected increase in TFRs over the next 20 years but also by the projected impact of net immigration.

The 2006-based projections suggest that the YH Region will experience average net immigration of 25,826 per year between 2008-26, comprising approximately 50% of total population change.

A large part of this net immigration is concentrated in the Leeds City Region, with an average of 17,426 per year projected to account for 57% of population growth to 2026.

The projected impact of net immigration upon individual local authorities is even more significant. In Leeds, Sheffield and York, net immigration is projected to account for 80-90% of population growth between 2008-26.

Net immigration to Leeds averages 8,547 per year with total change at 9,363 per year. Any changes in the levels of immigration and emigration could have a significant impact upon the projected population of the city, where natural change and net internal migration result in only a small net increase to the population each year. In addition, a reduction in net immigration would also contribute to a reduction in natural change.

In Hull, net immigration per year exceeds the expected annual growth in population due to the impact of an annual loss due to net internal migration. Projection totals are again very sensitive to any changes in the immigration and emigration components of change.

Figure 7: Components of change, 2008-26, 2004-based projections

2004-base	Average per year 2008-2026			
		Net Migration		
Area Name	**Natural Change**	**Internal**	**International**	**Total Change**
Barnsley	37	763	200	1,000
Doncaster	195	395	100	689
Rotherham	295	489	100	884
Sheffield	1,405	-2,005	1,600	1,000
Bradford	3,895	-3,189	3,600	4,305
Calderdale	595	158	400	1,153
Kirklees	1,479	158	600	2,237
Leeds	3,221	-3,353	3,800	3,668
Wakefield	295	1,205	0	1,500
Kingston upon Hull, City of	779	-1,942	1,400	237
East Riding of Yorkshire	-968	4,174	200	3,405
North East Lincolnshire	42	5	200	247
North Lincolnshire	-58	1,095	100	1,137
York	389	-58	1,300	1,632
Craven	-216	553	0	337
Hambleton	-116	442	100	426
Harrogate	-158	568	700	1,111
Richmondshire	184	-21	500	663
Ryedale	-200	411	100	311
Scarborough	-416	811	100	495
Selby	0	526	100	626
South Yorkshire	1,932	-358	2,000	3,574
West Yorkshire	9,484	-5,021	8,400	12,863
Humber	-205	3,332	1,900	5,026
North Yorkshire	-532	3,232	2,900	5,600
Leeds City Region	9,537	-2,668	10,700	17,568
Yorkshire & Humber	**10,679**	**1,184**	**15,200**	**27,063**

Source: ONS, 2007a

Figure 8: Components of change, 2008-26, 2006-based projections

2006-base	Average per year 2008-2026			
		Net Migration		
Area Name	**Natural Change**	**Internal**	**International**	**Total Change**
Barnsley	495	1,216	-100	1,611
Doncaster	800	242	200	1,242
Rotherham	705	779	100	1,584
Sheffield	2,489	-2,153	3,268	3,605
Bradford	5,247	-2,721	4,347	6,874
Calderdale	937	558	516	2,011
Kirklees	2,342	47	647	3,037
Leeds	5,184	-4,368	8,547	9,363
Wakefield	758	1,416	11	2,184
Kingston upon Hull, City of	1,442	-1,921	2,642	2,163
East Riding of Yorkshire	-395	4,000	442	4,047
North East Lincolnshire	447	-58	405	795
North Lincolnshire	284	1,084	300	1,668
York	779	-326	1,947	2,400
Craven	-105	521	200	616
Hambleton	-5	558	100	653
Harrogate	189	432	1,211	1,832
Richmondshire	189	216	342	747
Ryedale	-100	384	300	584
Scarborough	-205	789	300	884
Selby	189	616	100	905
South Yorkshire	4,489	84	3,468	8,042
West Yorkshire	14,468	-5,068	14,068	23,468
Humber	1,779	3,105	3,789	8,674
North Yorkshire	932	3,189	4,500	8,621
Leeds City Region	16,016	-2,611	17,426	30,832
Yorkshire & Humber	**21,668**	**1,311**	**25,826**	**48,805.3**

Source: ONS, 2008a

Are these Regional statistics robust?

There is strong evidence to suggest that the ONS methodology for estimating sub-national immigration has significant shortcomings. These shortcomings manifest themselves in estimates for the YH Region that are inflated, specifically for immigration, leading to net-immigration flows that are almost certainly too high.

Given the importance of 'net immigration' to the population change equation, the potential 'error' in the YH estimates has a very significant impact upon population projections.

The ONS TIM methodology relies on a combination of survey and census sources to estimate sub-national immigration flows. The IPS and the LFS have a relatively small sample size so are subject to error as data is disaggregated sub-nationally. In addition, the use of the 2001 Census for distributing flows to local authority areas is flawed because of the huge changes in the dynamics of international migration that have occurred in the years since the last census.

Figure 9 illustrates the immigration and emigration components of the SNPP 06 expressed as 'rates per thousand population' in each GOR. So, for example, the average immigration rate to the YH Region over the 2007-11 projection period is estimated to be 11.3 per 1000 resident population. Average emigration rate is 6.4 per 1000, with a resulting 'net' rate of 4.9 per 1000. In other words, in each year of the 2007-11 projection period the YH Region has a net population gain of 4.9 per 1000 head of resident population due to international migration.

What is very striking is the significant differences that exist between the YH Region and other parts of the UK. Is the rate of net immigration to the YH Region really going to be 2-3 times higher than to the North West, North East and the West Midlands?

Figure 9: Immigration and emigration rates, 2007-2011

	Average 2007-2011		
	Immigration Rate	Emigration Rate	Net Rate
	Rate per 1000 population in 'receiving' Region		
London	27.9	18.1	9.8
Yorkshire and The Humber	11.3	6.4	4.9
East Midlands	10.0	6.0	4.0
East	10.9	7.9	3.0
South West	11.8	9.6	2.2
South East	12.3	10.2	2.1
West Midlands	9.1	7.2	1.9
North West	9.3	7.9	1.4
North East	7.7	6.4	1.2

Source: ONS 2008a

Research carried out at the University of Leeds has used the New Migrant Databank, a unique database of statistics on international migration, to compare migrant data from administrative datasets with the estimates of immigration produced by ONS in its sub-national projections (Boden and Rees, 2009).

The analysis compares TIM immigration statistics and GP registration statistics for each Region for 2005-2007. At a national level the research shows that there is reasonable consistency between the level and trend in GP registration statistics and the TIM estimates. At a sub-national level, however, there is evidence of significant variation. TIM estimates are shown to be over 16% higher than corresponding GP registrations in the YH region, whereas in the West Midlands they are 34% lower and in the North West 12% lower.

The research has used three alternative administrative datasets (GP registrations, National Insurance Number registrations and statistics on foreign students taken from the Higher Education Statistical Agency) to produce an alternative distribution of TIM national immigration estimates. This alternative model results in a significant 'redistribution' of immigrant flows, with a reduction in the inflow to the YH region of 21%.

The research analysis has so far only examined the 'immigration' component of international migration but if the 21% reduction is applied to the immigration rate for the YH Region in Figure 9 it would produce a revised rate of approximately 9 per 1000 and a net immigration rate of 2.6 per 1000, rather than 4.9 per 1000.

This reduction in the YH Region's net immigration rate could reduce population growth due to international migration by approximately 12,000 per year, or 216,000 between 2008-2026. Assuming a crude average household size of 2.2 people per household, this is equivalent to a reduction of approximately 5,400 households per year or 96,000 over the 2008-2026 projection period.

The implications of this potential 'error' in the immigration estimation methodology are examined further in the concluding section of this report using a number of crude alternative projection scenarios.

4 RECENT EVIDENCE AND ECONOMIC UNCERTAINTY

Reason profiles

International migration is a multi-dimensional phenomenon, which makes its accurate measurement all the more difficult. Migrants leave and come to the UK for a variety of different reasons and for different durations of stay.

TIM statistics on long-term immigration, estimate that approximately 25% of all migrants coming to the UK are students coming to take up formal study. A further 40% are migrants with a definite job or are looking for employment. Approximately 17% of migrants come to the UK to accompany or join friends or family, with a further 17% estimated to arrive for a variety of other reasons.

In addition to these long-term flows, there are a large number of short-term flows (where duration of stay is typically less than 12 months) particularly of young economic migrants. The Accession migrants who have come to the UK since 2004 have been a mixture of short-term and long-term migrants, although precisely how many fit into each category is difficult to estimate with any degree of accuracy.

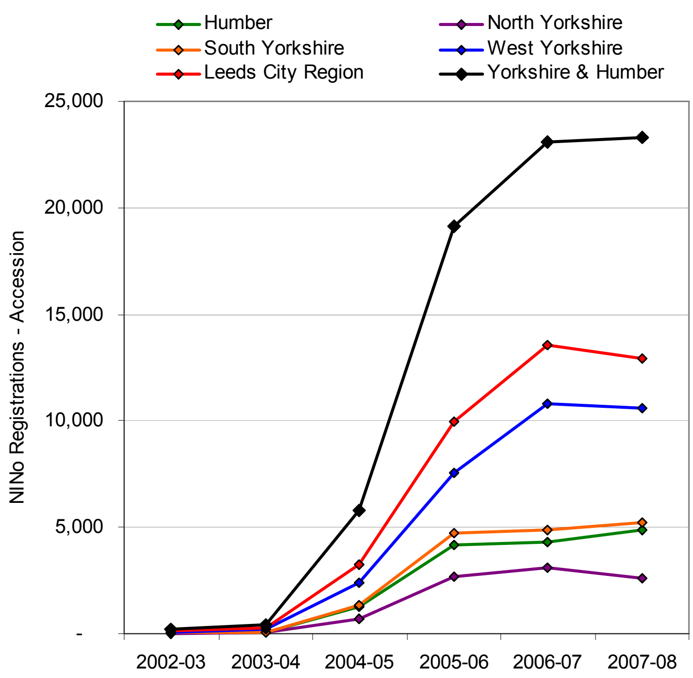
The duration of stay of economic migrants is ultimately driven by a range of economic and social circumstances which affect an individual's propensity to remain or return. Economic opportunism and immigration restrictions imposed by other EU countries were key drivers of the influx of new migrants to the UK from Accession countries.

The economic climate has now changed quite dramatically and as unemployment in the UK approaches 2 million, opportunities are likely to be less forthcoming especially in an industries such as construction which has become a major employer of migrant labour.

Recent evidence

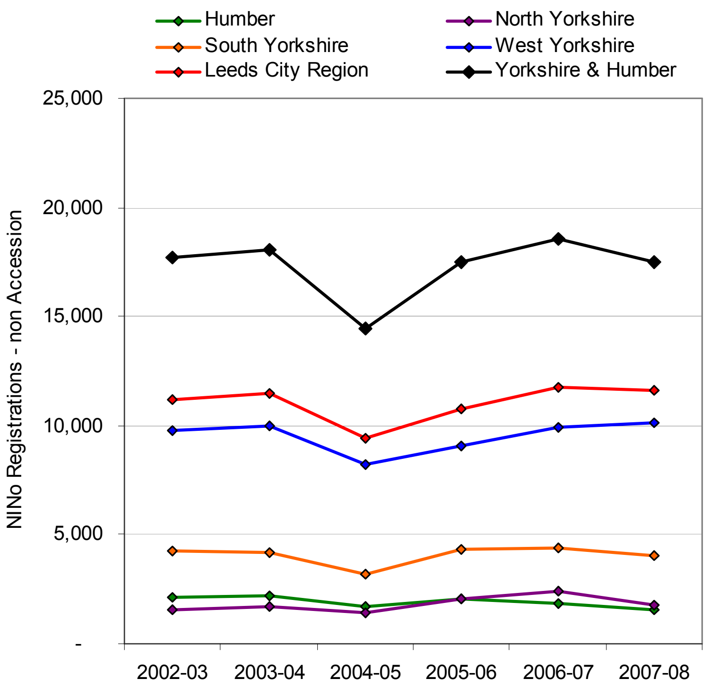
The trend in NINo registrations to foreign nationals provides an alternative view on immigration to the YH Region and gives an indication that recent trends are beginning to change.

Figure 10: NINo <u>Accession</u> Migrant Worker registrations, 2002-2008



Source: DWP NIRS, 2008

Figure 11: NINo Non-Accession Migrant Worker registrations, 2002-2008



Source: DWP NIRS, 2008

Figure 10 and Figure 11 split the NINo registration statistics into 'Accession' and 'non-Accession' recognising that there is likely to have been a larger percentage of 'short-term flows in the former than in the latter. The trend in NINo registrations to the YH Region and to the five alternative macro-areas is illustrated for the period 2002-2008.

The trend in Accession migrant registrations indicates explosive growth in the number of new migrants after 2004. New registrations reached a high-point of approximately 23,000 new registrations in 2006-07, with the number remaining fairly consistent in 2007-08. The peak in Accession registrations appears to have been reached as global economic conditions have altered so dramatically.

The most recent evidence for North Yorkshire and West Yorkshire suggests a reduction in the rate of registration in 2007-08 whereas South Yorkshire and the Humber have experienced a consistent number of registrations in the last two years.

The time-series picture for non-Accession migrant registrations is very different. With the exception of the fall in registrations in 2004-05, the number of NINo registrations to non-Accession workers has remained quite stable at approximately 17-18,000 per year. These levels are similar both pre- and post-Accession and suggest that the established 'historical' flows of migrants to the Region have been maintained and, it could be argued, are more likely to be associated with longer-term residence than short-term employment.

The total number of new registrations in the YH Region in 2007-08 was just short of 41,000, with 42% associated with non-Accession migrants and 58% with migrants from the Accession countries (including Bulgaria and Romania).

Short-term migrants

It is very difficult to put a precise figure on the balance of 'long-term' migrants (recorded in population estimates and projections) and 'short-term' migrants (excluded from population estimates and projections) that have come to the Region. However, allowing for a 20% undercount on NINo statistics due to non-registration and illegal migration, it is crudely estimated that 20-30,000 short term migrants per year have come to the Region during the peak years (2005-2008) following expansion of the EU. Assuming an average length of stay of six months, this equates to an average short-term migrant 'stock' of approximately 10-15,000. Maintenance of this stock is dependent upon continuous waves of new migrants coming to the Region.

Points Based System

To facilitate more control over immigration to the UK, the Home Office has begun to implement its new Points Based System (PBS) (Home Office, 2006). The Migration Impact Forum (MIF) and the Migration Advisory Committee (MAC) provide an independent, advisory structure to enable labour market trends to be monitored and to provide recommendations as to how future immigration can meet specific industry and/or occupation shortfalls. The PBS levers of control extend to non-EU migrants only, although the Home Office has confirmed its intention to retain restrictions on migrant inflows from Bulgaria and Romania for the foreseeable future.

The operation of the PBS is likely to be subject to considerable scrutiny as UK unemployment continues to rise and controls will only become more restrictive as the current economic conditions persist.

Low variant scenario

Student inflows and historical migrant streams are likely to continue to bolster international migration flows but it is likely (but not certain) that the high levels of net immigration to the UK, experienced over the last few years will be reduced.

The 2006-based population and household projections adopt the 'principal' assumptions used in the national projection statistics. To illustrate the sensitivity of these assumptions a number of alternative, 'variant' national projections were produced. These variants estimate the migration assumptions as follows:

Figure 12: Assumptions for migration variants, England

	Annual, long-term, net migration England	UK
High Variant	+231,500	+250,000
Principal Projection	+171,500	+190,000
Low Variant	+111,500	+130,000

Source: GAD, 2007

Given the current economic situation in the UK and in the wider global economy, the 'low variant' migration scenario presented by ONS in its 2006-based national population projections may now be a more realistic view of the longer-term impact of net immigration streams. However, this is very difficult to predict and there are, as yet, few available statistics to confirm the short-term impact that the economic recession has had on migration flows.

The concluding section of this report examines the potential impact of reduced migration flows to the YH region using a number of crude alternative projection scenarios.

5 ALTERNATIVE SCENARIOS

So how sensitive are population and household projections to variations in the international migration component of change? This section concludes the report with a comparison of four alternative scenarios for the YH Region.

These scenarios do not provide a definitive view on future population and household totals. They have not been derived through implementation of a full cohort-component population projection model. Rather, they have experimented with the three components of change (natural change, net internal migration and net international migration) to assess the sensitivity of the 2006-based statistics.

This sensitivity is associated with:

1. Possible error in the base immigration assumptions for the YH Region

2. A likely fall in the level of net immigration to the UK

The four scenarios presented here are defined as follows:

Scenario 1: Base

- 2006-based population and household projections (ONS, 2008a; Experian, 2009)

Scenario 2: Base corrected

- 2006-based population and household projections with a re-scaled net migration component based on an alternative distribution of immigration which reduces the YH regional immigration total by 21%

- No change is made to the 'natural change' (births and deaths) component, although in reality this will be partially dependent upon levels of net immigration

- No change is made to the net internal migration component.

Scenario 3: Base corrected, low migrant variant

- 2006-based population and household projections with a re-scaled net migration component as above but using the ONS 'low variant' migration assumption for its national projection, which reduces net immigration by 35%

- Again no change is made to the 'natural change' component.

- No change is made to the net internal migration component.

Scenario 4: Base corrected, low migrant variant, lower natural change

- As Scenario 3 but with a crude 20% reduction in the net impact of natural change (births minus deaths). The application of a cohort component model is required to enable a more thorough and robust examination of the implications of reduced net immigration upon levels of natural change in the YH Region.

In each of Scenarios 2-4, household totals for 2026 are derived through the application of an average population per household for each local authority area (derived from the base, Scenario 1 statistics).

Figure 13: Alternative Scenarios: Population Change

Scenario	Population		Population Change 2008-2026		
	2008	2026	Total	%	per year
1 Base	5,231	6,110	878	17%	48.8
2 Base corrected	5,231	5,890	658	13%	36.6
3 Base corrected, low migrant variant	5,231	5,804	573	11%	31.8
4 Base corrected, low migrant variant, lower natural change	5,231	5,726	495	9%	27.5

Figure 14: Alternative Scenarios: Household Change

Scenario	Households		Household Change 2008-2026		
	2008	2026	Total	%	per year
1 Base	2,235	2,811	576	26%	32.0
2 Base corrected	2,235	2,710	476	21%	26.4
3 Base corrected, low migrant variant	2,235	2,670	436	19%	24.2
4 Base corrected, low migrant variant, lower natural change	2,235	2,634	400	18%	22.2

The estimated 'correction' that is applied to immigration flows in Scenario 2 has the effect of reducing projected population growth to 13%, compared to 17% in the Base projection. This is a reduction of 220,000 population over the period 2008-2026. In household terms, this is equivalent to 100,000 fewer households than in the Base projection.

The research at the University of Leeds demonstrated that the 'correction' factors would vary between local authority areas, with an estimated 36% reduction in immigration flows for Leeds. Given that net immigration is expected to account for over 90% of Leeds' population change in the Base projection (see Figure 8) a reduction of 36% in the immigration estimate has a significant impact on future growth. The expected population in 2026 would reduce to approximately 830,000 in 2026, over 100,000 less than that estimated in the Base projection. This takes no account of a reduction in natural change that would result from reduced net immigration.

Although these are only experimental scenarios, the sensitivity of the projections to the immigration component of change is clear.

In Scenario 3, the 'corrected' immigration flows are combined with a reduction in the importance of international migration flows (-35%) that is consistent with the 'low variant' projection produced by ONS. Again, no account is taken of any reduction in natural change that would invariably result from reduced net immigration.

A projected population for the YH region of just over 5.8 million in 2026 is 300,000 less than that estimated in the Base projection. Household growth would reduce to 436,000 over the 2008-2026 time period, equivalent to 24,200 new households per year, compared to 32,000 per year in the Base scenario.

The manipulation of the international migration component of the projection model in this way is a very crude attempt to illustrate the impact of alternative projection scenarios. Reduced international migration would inevitably have an impact upon the number of births and deaths in the YH Region and therefore on the importance of natural change in the population growth equation but no attempt has been made to model this in Scenarios 2 and 3.

Robust population projections require the application of cohort component methods to adequately model the age-specific implications of alternative fertility, mortality and migration scenarios. This facility has not been available to the analysis presented in this report.

As an alternative, Scenario 4 presents results based upon the migration assumptions of Scenario 3 but with the application of a nominal 20% reduction in the effect of natural change, to provide a crude illustration of the population totals that would result.

Population growth reduces to just 9% over the 2008-2026 projection period, almost 400,000 fewer than the Base scenario. Household growth would reduce to 400,000, equivalent to 22,200 new households per year, compared to 32,000 per year in the Base scenario.

Appendix 1 – Population Tables

Table 1: Sub-national population projections, 2004-based

Area Name	2008	2014	2020	2026	Change 2008-2026	
Barnsley	225	230	237	242	17	8%
Doncaster	291	295	300	304	12	4%
Rotherham	255	261	267	272	16	6%
Sheffield	521	527	533	540	19	4%
Bradford	501	527	553	576	75	15%
Calderdale	199	206	213	220	21	10%
Kirklees	403	416	430	443	40	10%
Leeds	746	768	790	812	66	9%
Wakefield	325	334	343	352	28	9%
Kingston upon Hull, City of	253	254	256	259	5	2%
East Riding of Yorkshire	342	363	383	401	59	17%
North East Lincolnshire	160	161	163	165	5	3%
North Lincolnshire	162	169	176	181	19	12%
York	195	205	214	222	27	14%
Craven	56	58	60	62	7	12%
Hambleton	88	90	93	96	9	10%
Harrogate	159	165	172	179	20	12%
Richmondshire	54	59	62	65	11	21%
Ryedale	54	56	58	60	7	12%
Scarborough	110	113	117	120	10	9%
Selby	81	85	89	93	12	15%
South Yorkshire	1,292	1,313	1,336	1,358	65	5%
West Yorkshire	2,174	2,251	2,330	2,403	229	11%
Humber	917	947	978	1,006	89	10%
North Yorkshire	796	831	866	898	102	13%
Leeds City Region	2,889	2,995	3,102	3,201	312	11%
Yorkshire & Humber	**5,179**	**5,341**	**5,509**	**5,664**	**485**	**9%**

Source: ONS (2007a)

Table 2: Sub-national population projections, 2006-based

Area Name	2008	2014	2020	2026	Change 2008-2026	
Barnsley	226	236	246	255	29	13%
Doncaster	292	299	308	316	23	8%
Rotherham	256	265	275	284	28	11%
Sheffield	533	555	575	597	65	12%
Bradford	506	548	589	626	120	24%
Calderdale	202	214	227	239	37	18%
Kirklees	403	421	440	458	55	14%
Leeds	770	828	882	934	164	21%
Wakefield	324	336	350	364	40	12%
Kingston upon Hull, City of	260	274	287	299	39	15%
East Riding of Yorkshire	338	362	387	412	74	22%
North East Lincolnshire	160	164	170	175	15	9%
North Lincolnshire	162	172	182	192	30	18%
York	197	213	226	239	42	21%
Craven	57	60	63	67	11	19%
Hambleton	87	91	95	99	12	14%
Harrogate	161	172	183	194	33	20%
Richmondshire	53	58	62	65	13	24%
Ryedale	54	57	60	64	10	19%
Scarborough	110	115	120	126	16	15%
Selby	81	86	92	97	16	20%
South Yorkshire	1,307	1,354	1,403	1,452	145	11%
West Yorkshire	2,205	2,347	2,488	2,621	416	19%
Humber	920	972	1,026	1,077	157	17%
North Yorkshire	800	850	902	952	152	19%
Leeds City Region	2,927	3,113	3,298	3,473	546	19%
Yorkshire & Humber	**5,231**	**5,523**	**5,818**	**6,101**	**870**	**17%**

Source: ONS (2008a)

Table 3: Household projections, 2004-based

Area Name	2008	2014	2020	2026	Change 2008-2026	
Barnsley	98	104	110	116	18	18%
Doncaster	125	132	138	143	18	14%
Rotherham	110	117	123	128	18	16%
Sheffield	229	241	252	262	33	15%
Bradford	197	213	229	245	48	24%
Calderdale	87	92	97	102	15	18%
Kirklees	171	182	194	204	33	20%
Leeds	322	344	364	381	59	18%
Wakefield	143	153	162	171	28	19%
Kingston upon Hull, City of	112	116	120	123	11	10%
East Riding of Yorkshire	147	162	176	189	42	28%
North East Lincolnshire	69	73	76	78	9	13%
North Lincolnshire	70	76	81	86	16	23%
York	84	91	97	102	18	21%
Craven	24	26	28	29	5	19%
Hambleton	37	40	43	45	8	21%
Harrogate	69	75	81	86	17	25%
Richmondshire	22	24	27	29	7	33%
Ryedale	23	25	26	28	5	20%
Scarborough	50	53	56	59	9	18%
Selby	33	36	39	41	8	23%
South Yorkshire	562	593	623	649	87	16%
West Yorkshire	920	984	1,047	1,103	183	20%
Humber	398	427	453	476	78	20%
North Yorkshire	343	369	395	419	76	22%
Leeds City Region	1,228	1,315	1,401	1,477	249	20%
Yorkshire & Humber	**2,222**	**2,373**	**2,518**	**2,647**	**425**	**19%**

Source: CLG (2007a)

Table 4: Household projections, 2006-based

Area Name	2008	2014	2020	2026	Change 2008-2026	
Barnsley	98	106	113	120	21	21%
Doncaster	125	132	139	145	21	17%
Rotherham	108	115	123	129	21	19%
Sheffield	233	250	267	282	49	21%
Bradford	196	215	236	255	59	30%
Calderdale	87	95	103	111	24	27%
Kirklees	169	181	193	205	36	21%
Leeds	337	376	412	443	107	32%
Wakefield	141	151	162	172	31	22%
Kingston upon Hull, City of	114	125	135	144	30	26%
East Riding of Yorkshire	145	160	177	193	48	33%
North East Lincolnshire	69	74	79	82	13	18%
North Lincolnshire	70	76	83	89	20	28%
York	85	95	104	111	26	31%
Craven	25	27	29	32	7	29%
Hambleton	37	40	43	46	9	24%
Harrogate	69	77	84	91	22	32%
Richmondshire	21	23	26	28	7	33%
Ryedale	23	25	27	29	6	28%
Scarborough	50	53	57	61	12	24%
Selby	34	37	41	43	10	28%
South Yorkshire	564	603	641	676	111	20%
West Yorkshire	929	1,018	1,106	1,186	257	28%
Humber	398	436	474	507	110	28%
North Yorkshire	343	377	410	442	99	29%
Leeds City Region	1,241	1,359	1,476	1,584	343	28%
Yorkshire & Humber	**2,235**	**2,433**	**2,631**	**2,811**	**576**	**26%**

Source: Experian (2009)

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Appendix 3 – Glossary

Acronym	Definition
Accession	Countries in Central Europe that joined EU in 2004-2006: Estonia, Hungary, Latvia, Lithuania, Poland, Czech Republic, Slovak Republic, Slovenia, Bulgaria and Romania
CSO	Central Statistical Office
CLG	Department for Communities and Local Government
DWP	Department of Work and Pensions
EU	European Union
GAD	Government Actuary's Department
GLA	Greater London Authority
GOR	Government Office Region
GP	General Practitioner
IPS	International Passenger Survey
LADUA	Local Authority District and Unitary Authority
LFS	Labour Force Survey
MIF	Migrant Impact Forum
MAC	Migrant Advisory Committee
MYE	Mid-year estimates
NINo	National Insurance Number
NIRS	National Insurance Recording System
NMD	New Migrant Databank
NMG	New Migrant Geography
ONS	Office for National Statistics
PBS	Points Based System
PRDS	Patient Register Data System
RSS	Regional Spatial Strategy
SNPP	Sub-national population projections
TFR	Total Fertility Rate
TIM	Total International Migration
WRS	Workers Registration Scheme
YHA	Yorkshire and The Humber Assembly