

# Derby HMA Housing Requirements Study

Derby City Council, Amber Valley  
Borough Council & South Derbyshire  
District Council

Final Report

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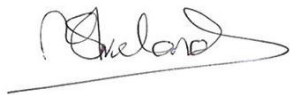
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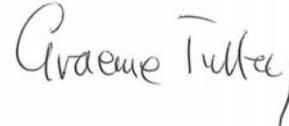
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## **EXECUTIVE SUMMARY**

### **CONTEXT**

The Derby HMA Housing Requirements Study has been commissioned by Derby City Council, South Derbyshire District Council, South Derbyshire District Council and Derbyshire County Council. The local authorities are working together to align planning policies for housing provision across the Derby Housing Market Area (HMA) which covers the three authorities.

The three authorities consulted on *Options for Housing Growth* in Summer 2011. The Housing Requirements Study aims to help the Councils to consider in further detail how much housing should be planned for over the 2008-28 period. It will inform the Councils' future planning policies, alongside other technical evidence and the views from the public consultation undertaken.

The Councils' policies must be consistent with national planning policy. The National Planning Policy Framework (NPPF)<sup>1</sup> sets out that Local Plans should meet objectively assessed development needs unless there are sound reasons why it is not sustainable to do. It sets out that they authorities' should work together at a housing market area level to assess their full housing needs. This should be based on meeting household and population projections, taking account of migration and demographic change, and catering for housing demand and the scale of housing supply necessary to meet this demand. The report is commissioned in this light.

The *Options for Housing Growth* consultation was based on analysis of data on population dynamics up to 2008. Since 2008 housing market and economic dynamics have changed dramatically with the onset of the credit crunch and continuing restrictions on access to mortgage finance; together with a deep and sustained 'double dip' economic recession.

This report has therefore on considering more recent information of demographic trends, including the 2010 Office for National Statistics (ONS) Sub-National Population Projections. It also seeks to consider how future trends may differ from those in the past to forecast population growth, taking account of the potential impact which economic and housing market conditions might have on demographic dynamics. This is intended to provide an up-to-date and informed basis for considering future housing requirements.

### **BIRTHS AND DEATHS IN THE DERBY HMA**

The population of an area is influenced by the balance between births and deaths and between the numbers of people moving into and out of it.

Birth rates (fertility) have increased in all three authorities in the Derby HMA between 2003 and 2010. The latest ONS 2010-based Sub-National Population Projections take this into account, and indicate a further moderate increase in fertility in the short-term, but with fertility then declining over the longer-term.

The report concludes that the trends and projections in each of the three authorities are consistent with national trends and projections. It concludes that there is not any strong evidence to suggest that fertility trends will differ from those set out in the Sub-National Population Projections and therefore that the assumptions on future fertility trends within these projections should continue to be applied.

Assumptions on fertility will in any case have a relatively minor impact on forecasts of housing requirements as very few of those born between 2008-28 will be expected to form independent households in this period. Death rates (mortality) are influenced by changes to life expectancy. Life expectancy continues to improve: between 1993 and 2010 average life expectancy for men in the Derby HMA rose from 73.1 to 78.7 and for

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<sup>1</sup> CLG (March 2012) *National Planning Policy Framework*

women from 78.6 to 82.0. While life expectancy for women is still higher, the difference between men and women is narrowing. Moving forward, the ONS 2010-based projections indicate that these trends will continue. As with fertility, both the trends and projections for the Derby HMA are quite consistent with those nationally. The report concludes that this is reasonable given expected improvements in health and lifestyle as well as medical advances and the assumptions in the ONS 2010-based projections again should continue to be applied.

### **MOVEMENT OF PEOPLE TO, FROM AND WITHIN THE HMA**

The movement of people in and out of each area (migration) is more difficult to predict. Between 2000 and 2010 net in-migration to Amber Valley has varied between 200 – 900 persons a year. Since 2001 there has also been a net in-migration each year to Derby, but again with significant year-on-year variation. Net in-migration to Derby fell from 1,200 people a year in 2004-5 to 160 in 2007-8 but has since increased with the latest information for 2009-10 indicating net in-migration of 1,450 persons. In South Derbyshire there is again a net in-migration of people to the district, varying over the 2000-10 decade between 800 and 1700 people a year.

The ONS 2010-based Sub-National Population Projections indicate high international net-migration to Derby, with international in-migration at a level very close to the highest seen in any year in the past; and low levels of out-migration compared to past trend data. They project increasing levels of net out-migration to other local authorities in England leading overall to a downward trend in net migration to the City over the course of the next decade.

The ONS projections indicate growing levels of net in-migration to Amber Valley, rising from around 600 people a year to 900 people a year over the period to 2028. In contrast in South Derbyshire net migration is projected to remain relatively stable to 2021 at around 940 people a year, declining slightly thereafter. To consider how reasonable the ONS assumptions on future migration trends are, the report has considered both past migration trends, including the components of migration; how economic performance could influence movement between different areas; and other potential influences, such as growth in the student population in Derby.

The study has included assessment of migration trends alongside projected migration levels contained in the ONS 2010-based Sub-National Population Projections (SNPP). A particular characteristic of migration is the high level of international migrants coming to (and moving from) Derby with international migration not really being a feature in the other two local authority areas.

Looking specifically at international migration to/from Derby it was clear that the SNPP figures (for net migration) were very high when compared with past trends. Given that much of the in-migration to the City is driven by people seeking or taking up work it was felt that the levels in the SNPP were not realistic with a more likely profile of international migrant numbers being based on past trends over the last five years for which data is available.

The other key component of migration is internal migration (people moving to/from other parts of England). In Derby there is some logic to the SNPP assumptions which suggested that levels of both in- and out-migration would increase in the future – this makes sense given overall population growth (both in Derby and a wider area (to include the rest of the country)). However, study of past trends suggested that the start point of the SNPP projections (for 2010/11) for both in- and out-migration did not fit with the past trend data. The report therefore recommends, in projecting future migration levels that the ONS projections are broadly followed but with a slightly amended start position for 2010/11.

In Amber Valley and South Derbyshire levels of international migration are negligible when compared with figures for internal migrants. Migration patterns for all types of migrants were thus considered together. In looking at the SNPP the study again found that levels of both in- and out-migration were expected to increase in the future (as would be expected). Again however there were some discrepancies between the start point (for 2010/11) between past trends and the SNPP (this particularly affected Amber Valley). The

report therefore suggested that an appropriate approach in projecting forward would be to broadly follow SNPP assumptions but with slightly different in- and out-migration levels being assumed for 2010/11. The suggested assumptions for the modelling of future population growth have been set out (along with full justification) in the main study report.

## **ECONOMIC PERFORMANCE**

It is important to consider how the interaction between the housing market and economic performance as levels of job creation can influence migration patterns (both people moving to and from the area to access job opportunities). The balance between housing and job growth may also influence future changes to commuting patterns. The relationship between economic and population dynamics is however quite complex and there are a range of wider factors at play.

The Derby HMA is a £7.7 billion economy. Within the HMA, Derby is the economic driver and is a hub for highly skilled and specialised jobs particularly in advanced manufacturing. 50% of employment is in knowledge-intensive industries. As a result, earnings of those working in the City are the highest of any UK city outside London and the South East<sup>2</sup>. In many respects this is a real success story.

The HMA as a whole has a strong manufacturing base, which is a very important contributor to value-added and wealth creation in the local economy. It accounts for a fifth of all employment but has also seen a significant loss of employment in recent years. The ability to support employment growth moving forward is likely to be influenced by both the pace of job losses in manufacturing, and the degree to which this is offset by employment growth in other sectors.

Over the 2000-10 decade job losses in manufacturing have been offset principally by growth in employment in the public sector, and in professional and other private services. The challenge is that public sector employment moving forward is likely to be influenced by public spending restraints. Derby and Amber Valley are particularly vulnerable with 1 in 5 jobs in the public sector. Growth potential in some professional service activities is influenced by the proximity of Nottingham.

The reliance on a selected number of sectors and key employers, including key catalyst businesses such as Rolls Royce, Bombardier and Toyota, also brings a degree of risk or exposure to economic dynamics in these sectors and investment decisions of these businesses. This said both Rolls Royce and Toyota are currently investing in the Derby HMA.

Across the HMA total employment increased by 16,700 over the 1998-2008 decade, representing growth of 7.8% (although much of this growth took place between 2003 and 2005 with particularly strong growth in employment in South Derbyshire). However employment has declined between 2007 and 2009, with the recession having a particular impact on employment in Derby.

Economic forecasts purchased from Experian indicate net growth in jobs moving forward of 1,600 in Amber Valley, 5,900 in Derby and 1,200 in South Derbyshire between 2012 and 2028. Job growth is driven by professional and other private services and public services, health and education. Manufacturing is expected to continue to shed jobs (particularly in lower value-added activities).

The report evaluates the Experian forecasts. It concludes that the economy could potentially support stronger employment growth than forecast, not least given opportunities to embed the base of skills/ companies in advanced manufacturing and engineering through the development of local supply chains innovation and spin offs; as well as cross sectoral exchanges. Key sectors including construction; tourism, culture and leisure; and transport/ logistics could also potentially perform more strongly than forecast.

However there are also downside risks, particularly associated with macro-economic performance. These include the risk of a Eurozone country defaulting and withdrawing from the Euro, which could have wider

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<sup>2</sup> Centre for Cities (2010) *Shifting Gears: Safeguarding Derby's Economic Growth*

impacts on exports, business confidence and financial markets; the potential for sustained fiscal austerity measures beyond 2017; and inflationary pressures impacting on consumer spending.

Overall the report concludes that the economic projections need to be treated with caution given the significant uncertainty regarding economic performance in the next economic cycle and beyond (including the nature and pace of job creation) which affects the accuracy of any forecasts. This needs to be reflected in the weight attached to the economic evidence in forecasting demographic trends and considering future housing requirements.

Moreover there are a range of factors which influence the inter-relationship between economic performance and population, including the degree to which jobs are taken up by existing unemployed residents or people moving or commuting in to the area, and uncertainty regarding how economic and labour market inter-relationships between areas (including with the Nottingham HMA) have been and will evolve.

With these caveats, the economic evidence does clearly suggest that future net in-migration to the Derby HMA could be more moderate than projected in the ONS 2010-based Sub-National Population Projections.

## **HOUSING MARKET DYNAMICS & HOW HOUSEHOLDS OCCUPY HOMES**

Housing market dynamics affect housing needs in a number of ways. They affect household formation rates and how households occupy homes as well as turnover of households within the housing stock and levels of movement between different areas. The report has therefore considered current housing market dynamics. The housing market is influenced by macro-economic performance and households' ability to secure mortgage finance and service debt. The onset of the credit crunch in late 2007 has resulted in a significant and sustained change in bank lending practices, with a tightening of lending criteria. In particular households now require a 20% deposit in most cases to secure competitive mortgage deals. The UK has also endured the deepest and longest recession for more than a generation.

House prices have fallen from the peak of the market. Interest rates since early 2009 have persisted at historically low levels. Together these have resulted in an improvement in the 'affordability' of market housing to buy. However this has had a limited impact on housing market activity, reflecting a number of factors. High inflation over the last few years has inhibited households' ability to save and thus raise a deposit; whilst the wider economic climate which has affected market sentiment and investment in housing.

The impact has been significant both at the national and local levels. Nationally mortgage advances have fallen to 50% below the long-term trend. House prices in the Derby HMA have fallen by 6% in Amber Valley and South Derbyshire and by 9% in Derby between 2007 and 2011 (and have continued to fall in real terms in 2010 and 2011). Sales volumes, which are indicative of 'effective demand' for market homes have also fallen to historically low levels. Sales in 2011 were half (-50%) the long-term average in Derby, -48% down in Amber Valley and -51% down in South Derbyshire. The flattened market, for which the demand profile is focused more towards first-time buyer and investment purchases, has been particularly affected.

This does not mean that there is not demand for new homes. To some degree, demand is displaced towards rented housing in the private and affordable sector. Private renting has been the key growth sector in the region over the last decade, and has gone from accommodating 8.4% of households in the East Midlands in 2000 to 15.6% in 2010. Within the Derby HMA, local letting agents have confirmed that the rental market is buoyant with demand outstripping supply, driving rental growth. 'Would-be' first-time buyers are now renting for longer. The long-term trend in local authority waiting lists for affordable housing has also been upwards. The evidence however suggests that market conditions have affected how intensely households occupy homes. The demographic modelling which informed the 2011 *Options for Housing Growth Consultation* projected continued reductions in household sizes in line with long-term trends across the three authorities. While this appears to have occurred in Amber Valley, household sizes over the last decade appear to have actually moderately increased in both Derby and South Derbyshire.

Looking forward, housing market activity in 2012 is expected to remain 'flat' with a slow correction forecast in the medium-term. Sales volumes are currently not expected to return to near long-term averages before 2016. There are notable downside risks to this particularly should a Eurozone currency collapse, which could

trigger a further 'credit crunch' in the banking system; or should interest rates need to rise to moderate inflation. However it seems prudent to take a more optimistic view for strategic planning purposes, to ensure that land supply does not constrain economic or housing market recovery and is able to respond to any rapid recovery in the housing market.

While household sizes have been fairly static (or possibly even grown slightly) in both Derby and South Derbyshire over the last decade, it does thus seem realistic to assume that they may fall moving forwards, particularly as the population ages. However with housing market conditions subdued for at least the first quarter of the 2008-28 plan period, and potentially for longer still, the assumptions in previous projections now appear unrealistic.

In assessing what might be a realistic set of headship rate assumptions moving forward we looked at changes in average household sizes back to 2001 (for each local authority) and compared these with the assumptions in the 2008-based CLG household projections (the latest available at the time of writing). All figures were also compared with regional trends. The data suggested that over the past ten years there has been no overall change in household sizes in either Derby or South Derbyshire (albeit with year-on-year differences) whilst in Amber Valley household sizes appear to have fallen but at a slightly slower rate than was projected by CLG. The regional data suggested falling household sizes that were almost exactly at the midpoint between 'no change' and the CLG projected figures.

On the basis of the information studied it would not be realistic to suggest that household sizes will return to the long-term trends embedded in the CLG household projections. However, as the population ages we might expect to see some decrease in household sizes but at a lesser rate to that projected by CLG in 2008. Given the trends seen over the past ten years we suggest that in Derby and South Derbyshire that it would be reasonable to project that headship rates follow a trend that is somewhere between 'no change' and the regional average with Amber Valley falling in the gap between the regional average and long-term trends. Full details and justification for this is provided in the main study report.

## **TOWARDS POLICIES FOR HOUSING PROVISION**

The NPPF sets out that local planning authorities should seek to meet identified development needs at an HMA level, with sufficient flexibility to respond to rapid shifts in demand, taking account of household and population projections. The Housing Requirements Study has considered demographic dynamics and recommends appropriate assumptions to inform development of demographic forecasts for population and households.

The Study concludes that the assumptions on fertility and mortality within the ONS 2010-based Sub-National Population Projections can be considered reasonable based on the evidence available. For migration patterns it is also felt that the SNPP figures are broadly realistic for Amber Valley, South Derbyshire and for internal migration to/from Derby City – albeit with slightly different start points in 2010/11 based on past trends. SNPP data for international migration to/from Derby City did not however look to be realistic when compared with past trends (and potential future economic performance) and we suggest would be at a more moderate level which is consistent with the last five years.

The final assumption to be considered in developing household (and hence housing) projections is around headship rates. Data suggests in all areas (particularly Derby and South Derbyshire) that these rates have departed notably from those in the CLGs 2008-based household projections and therefore moving forward a different set of assumptions would be appropriate. We suggest that an appropriate approach will be to consider changes in average household size in each area along with the changes experienced in the East Midlands region and expecting some convergence between the two over time.

Demographic dynamics could potentially be influenced by changes in student numbers, particularly in Derby City. Student numbers have increased by two-thirds over the last decade with an increase in 5,600 students at the University of Derby between 2001 and 2011. However half of this growth has been in part-time students. International students make up just 7% of the student population. Moving forward, growth in student numbers could be significantly impacted by the introduction of higher tuition fees. This makes it

difficult to predict trends moving forward. The Study thus recommends that the Councils should monitor the situation.

The Government has also introduced a number of welfare reforms which particularly affect the affordable and private rented sectors. These are expected to impact primarily on different sectors of the housing market rather than overall housing requirements. The Study concludes that it is difficult to predict the long-term impacts and recommends that the Councils monitor the situation and amend housing policies as necessary should evidence emerge of a clear impact on the demand for housing in the HMA.

In developing planning policies, the Councils will need to demonstrate that their plans are deliverable in order to meet national policy 'tests.' Housing delivery across the HMA averaged 1.0% growth per annum in the housing stock before the onset of the credit crunch (consistent with the East Midlands average), but has fallen to an average of 0.6% growth per annum since (2007-11). The reduction in delivery is consistent with the overall sales/ effective demand seen. Stakeholder consultation undertaken as part of the Study identified that a recovery in housebuilding will need to be supported by stronger economic conditions and would most likely take place over 3-4 years (i.e. over the period to 2016). On this basis it seems realistic to assume that housing delivery over the 2008-28 plan period as a whole is unlikely to exceed more than 1% growth a year in the housing stock across the HMA as a whole.

Demographic evidence is one of a number of different strands of technical information which will need to inform decisions regarding what levels of housing provision to plan for, alongside community and stakeholder consultation. Planning for housing provision is being undertaken collaboratively across the HMA. In light of the 'duty to cooperate' introduced through the Localism Act it will also be important that the three authorities liaise with adjacent authorities outside the HMA.

Given the range of factors which can influence future population and demographic trends, housing need and demand, it will be important that policies for housing provision are kept under review in line with a plan, monitor, manage approach.

## 1 INTRODUCTION

- 1.1 The Derby Housing Market Area (the 'HMA') covers the districts of Amber Valley, Derby and South Derbyshire. Amber Valley Borough Council, Derby City Council and South Derbyshire District Council are working together and with Derbyshire County Council to develop aligned strategies for housing provision in their respective Local Development Framework ('LDF') Core Strategies.
- 1.2 The three authorities consulted in Summer 2011 on *Options for Housing Growth* in the Derby HMA. This consultation identified a number of scenarios for housing growth in the Derby HMA over the period between 2008-28. These scenarios were as follows:
- Balanced Migration: 30,000 homes (1500 per year)
  - Current Building Trends: 32,260 homes (1613 per year)
  - Regional Plan Targets: 36,600 homes (1,830 per year)
  - Government Projections: 47,900 homes (2,395 per year)
- 1.3 Four strategic options were also set out for how housing provision might be distributed across the HMA. These considered varying options for how much development might go where, from concentrating most development in and adjoining Derby; a greater role for other towns; or for rural settlements; or development of a new settlement within the HMA.
- 1.4 The focus of this report is to consider in further detail how much housing should be planned for over the 2008-28 plan period. It is intended to help refine the range of range of options consulted on in 2011.
- 1.5 The Government has set out that it expects local authorities to prepare plans on the basis that objectively-assessed development needs should be met, unless it is not feasible to do so. It has set out in the new National Planning Policy Framework ('NPPF') this 'presumption in favour of sustainable development' and outlined that where it is feasible, local authorities should plan to meet household and population projections, taking account of migration and demographic change; catering for housing demand and the scale of housing supply necessary to meet this demand. The report is commissioned in this light.
- 1.6 The 'Government projections' considered in the *Options for Housing Growth* consultation are based on the 2008-based projections for population, produced by the Office for National Statistics ('ONS') and for households, produced by Communities and Local Government ('CLG'). A range of alternative projections were also developed as part of a demographic modelling project undertaken jointly by local authorities across Nottinghamshire and Derbyshire with consultants Edge Analytics ('Edge'). These informed the consultation options.

- 1.7 The NPPF sets out that in identifying the scale of housing that is likely to be required, local authorities need to meet household and population projections, taking account of migration and demographic change. However the 2008-based projections for population and households are particularly influenced by trends up to this point, and particularly in the previous five year period (2003-8).
- 1.8 Since 2008 housing market and economic dynamics and trends have changed dramatically with the onset of the credit crunch and continuing restrictions on access to mortgage finance; together with a deep economic recession which at the time of writing the UK economy is struggling to shrug off.
- 1.9 This report is therefore focused on considering more recent information on key demographic variables, including the recent 2010 ONS Sub-National Population Projections. It examines trends in births, deaths and migration, and how households of different ages occupy homes. It considers what impact current and projected economic and market conditions might have on these factors. This is intended to provide an up-to-date and informed basis for developing forecasts for future population and household growth and considering future housing requirements.
- 1.10 The report has been prepared by GL Hearn, a national planning and property consultancy, supported by demographer Justin Gardner, from Justin Gardner Consulting.
- 1.11 The remainder of the report is structured as follows:
- Section 2: Housing market performance;
  - Section 3: Economic performance;
  - Section 4: Demographic Drivers of Population and Household Change; and
  - Section 5: Recommended Assumptions for Modelling.



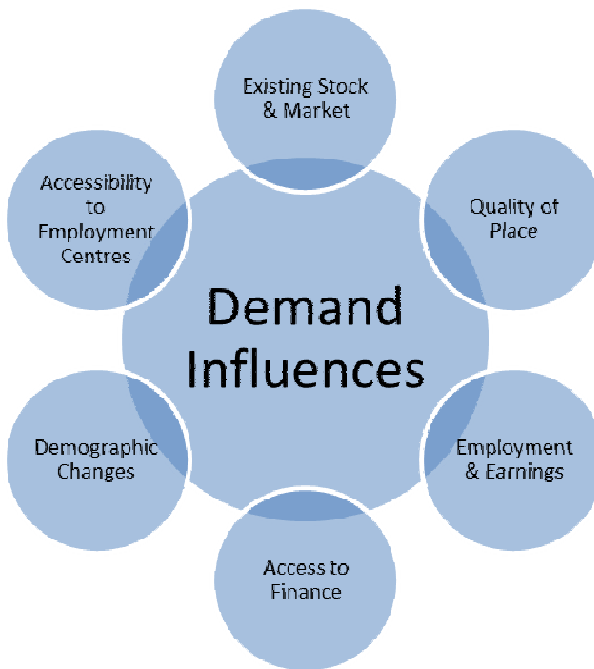
## 2 HOUSING MARKET PERFORMANCE

2.1 The section explores housing market dynamics, and considers key influenced on housing demand. It considers both macro-economic factors, as well as local dynamics; and draws on interrogation of market indicators such as price and sales rates as well as qualitative evidence from local estate and letting agents. The analysis is then drawn together to consider prospects for the housing market and how this might influence future housing requirements.

### Conceptual Framework

2.2 It is important to understand that the housing market is influenced by macro-economic factors, as well as the housing market conditions at a regional and local level. There are a number of key influences on housing demand, which are set out in the chart below (Figure 1).

**Figure 1: Understanding Housing Demand**



Source: GL Hearn

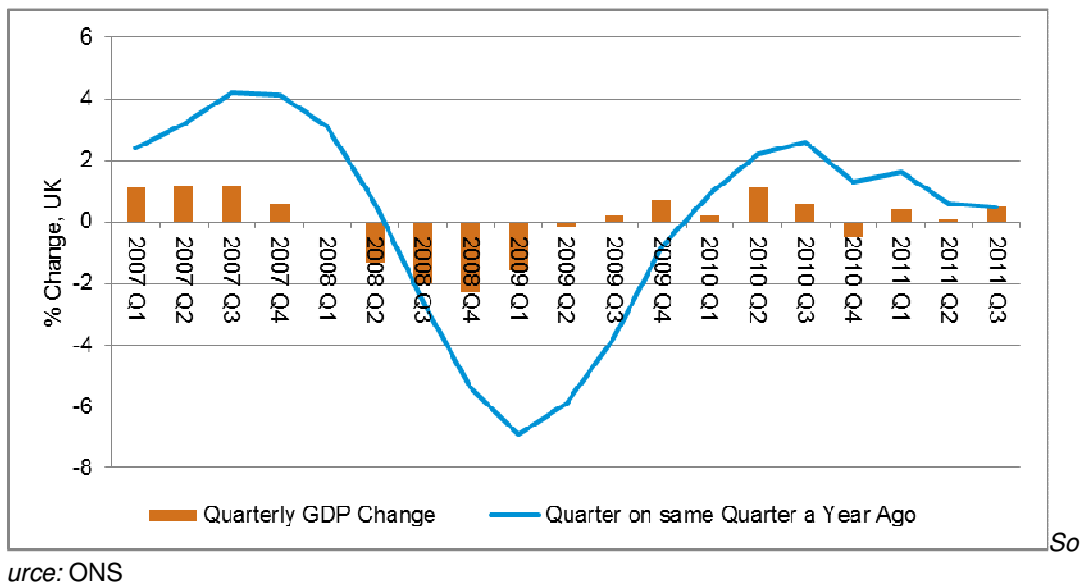
- 2.3 The housing market is complex. It is influenced by the economy at both a macro-economic level, in terms of interest rates and mortgage availability, as well as market sentiment (which is influenced by economic performance and prospects at the macro-level).
- 2.4 It is also influenced by the economy at both regional and local levels, recognising that employment trends will influence migration patterns (as people move to and from areas to access jobs), and that the nature of employment growth and labour demand will influence changes in earnings (which influences affordability). These issues are considered in the next section.
- 2.5 Housing demand over the longer-term is particularly influenced by population and economic trends. Changes in the size and structure of the population directly influence housing need and demand, and the nature of demand for different housing products. Economic performance influences migration between different areas and household wealth.
- 2.6 There are then a number of factors which play out at a more local level, within a functional housing market such as the Derby HMA, and influence demand in different locations. These include quality of place, school performance and the catchments of good schools, the accessibility of areas including to employment centres (with transport links being an important component of this), and the existing housing market and local market conditions. These factors influence the demand profile and pricing, against a context in which households compete within the market for housing.
- 2.7 At a local level, this means that the housing market (in terms of the profile of buyers) tends to influence by and reinforce to some degree around the existing stock. However regenerative investment or delivery of new transport infrastructure can influence the profile of housing demand in a location, by affecting its attractiveness to different households.
- 2.8 Local housing markets or sub-markets are also influenced by dynamics in surrounding areas, in regard to the relative balance between supply and demand in different markets; and the relative pricing of housing within them. The Derby and Nottingham Core HMAs for instance interact. Understanding relative pricing and price trends is thus important.

### **Understanding the Macro-Level Dynamics**

- 2.9 Much has been written over the last few years about economic performance and outlook. The UK economy, as well as a number of the major global economies, experienced an economic recession which lasted six quarters from Q3 2008 until the end of 2009. The economy began to recover in 2010 however the recovery has been much weaker than the previous four UK recessions.

2.10 Since late 2010 any growth in the economy (at the macro-level) has been from exports and government spending; with trends in consumer spending and investment negative. Inflation has been running at significant above long-term trends. In essence, economic recovery since the end of the recession has been relative weak – we have seen both a deep recession and weak recovery since 2008.

**Figure 2: UK Economic Growth, 2007-2011**



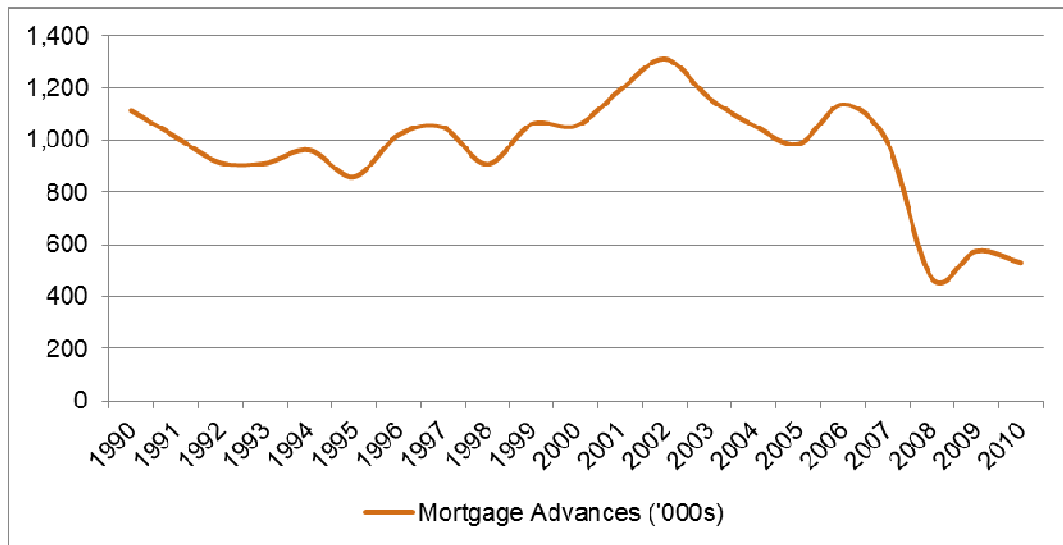
2.11 One of the key triggers to the recent economic difficulties on an international level was the ‘credit crunch.’ The downturn in the world economy was led by the sub-prime lending crisis in the United States. This resulted in a fundamental shift in the way banks lend money between themselves, through wholesale money markets, and to their customers (including home purchasers, landlords and developers).

2.12 From the second half of 2007, banks began to increase the inter-bank lending rate (LIBOR) and sought to adjust their exposure to risk by adopting much more cautious lending practices. The net effect of this was to reduce liquidity in the financial markets and credit available (resulting in a ‘credit crunch’) and in tightening lending criteria for current and prospective homeowners. This tightening of lending criteria increased ‘barriers’ to entry for marginal mortgage applicants by reducing loan to value ratios (LTVs), increasing costs associated with obtaining mortgages and reducing the income multiples accepted.

2.13 The tight lending criteria initiated by the ‘credit crunch’ are very much still with us in 2012 and are restricting housing market activity (as we will come onto).

2.14 The impact of tightening lending criteria had a significant and sharp impact on the ability to secure mortgage finance, with the most noticeably affected being would-be 'first-time buyers' (FTBs) and buy-to-let (BTL) investors who were particularly reliant on more flexible lending criteria. The level of both has dropped dramatically. As a result 'effective' demand for market housing and market activity have also decreased significantly. This is shown in Figure 3 which charts long-term trends in mortgage advances.

**Figure 3: Mortgage Advances, UK**



Source: Bank of England Regulated Mortgage Survey

2.15 The analysis clearly indicates that levels of mortgage advances were strong in a historical context between 2001-3 and in 2006; but have fallen since the credit crunch to levels less than half those achieved at the peak of the market and almost 50% below the long-term trend.

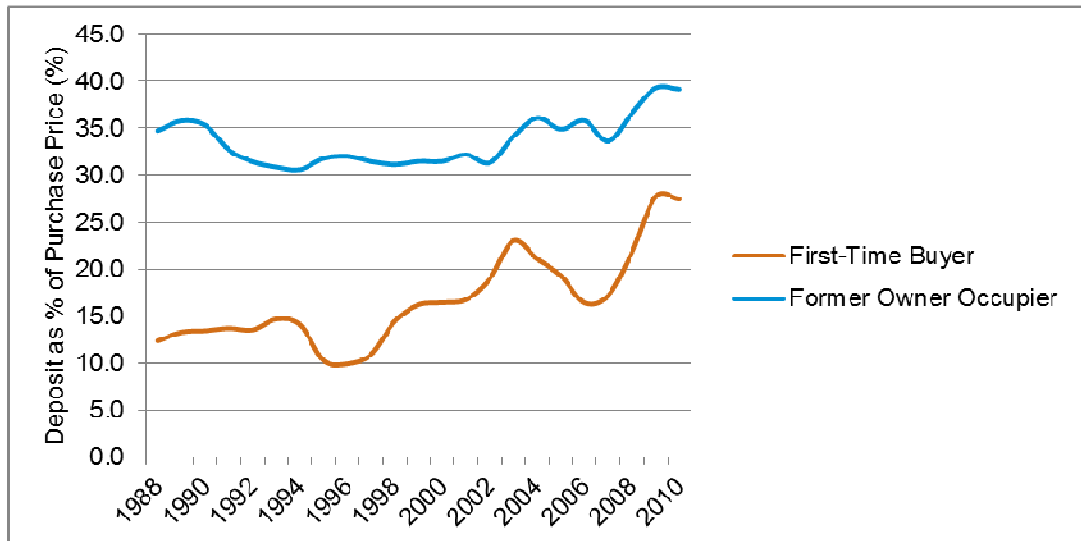
2.16 Key issues affecting the ability of households and investors to secure mortgage finance are:

- Savings and Capital: the ability to raise a deposit;
- Earnings and Interest Rates: affecting the ability to afford repayments;
- Lending Criteria: key criteria which have to be met to secure finance.

2.17 Since the credit crunch, the level of capital required to secure a mortgage has been a significant constraint on the housing market. Figure 4 shows deposit requirements for first-time buyers and existing owner occupiers.

2.18

**Figure 4: Average Deposit as Percentage of Purchase Price**



Source: CML Regulated Mortgage Survey

2.19 As the availability of mortgage finance increased between 2003-6, the average deposit paid by a first-time buyer fell from 23.1% to 16.4% nationally, improving the affordability of and access to home ownership and support strong effective demand for market housing. However since the onset of the credit crunch in 2007, deposit requirements have grown significantly; and stood on average at 27.5% in 2010 for first-time buyers.

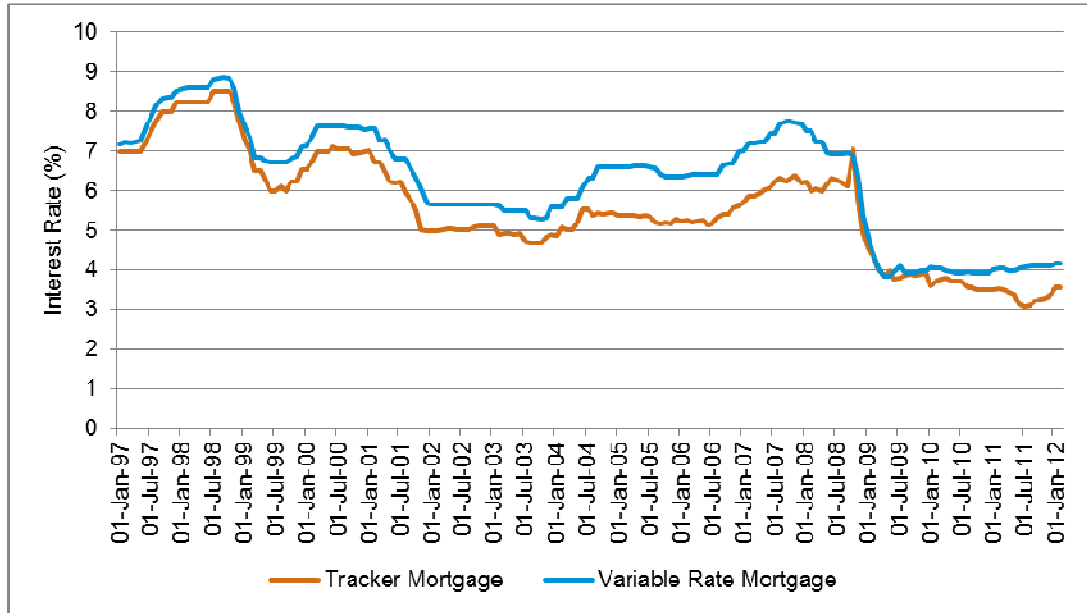
2.20 The latest data from the Council for Mortgage Lenders indicates that the average first time buyer deposit nationally in January 2012 was 20% (unchanged from 2011 levels). The indication is that there has been some improvement in the availability of mortgage products in 2011 but many households will still not meet the combination of lending criteria for mortgages and have sufficient deposits. The average income multiple for mortgage finance was 3.20. It is clear that households' savings however continue to restrict the ability of first-time buyers to get on the housing ladder.

2.21 For those with a sufficient deposit, housing is now actually relatively affordable given the reductions in the value of homes since the peak of the market in 2007 and low interest rates. Figure 2.5 tracks interest rates over the period since 2007. Interest rates over most of this period have been low by historical standards.

2.22 Indeed since March 2009 the Bank of England Base Rate has been just 0.5% - as low as it has even been. This compares for instance to a Base Rate of between 10.4% - 13.4% in 1991.



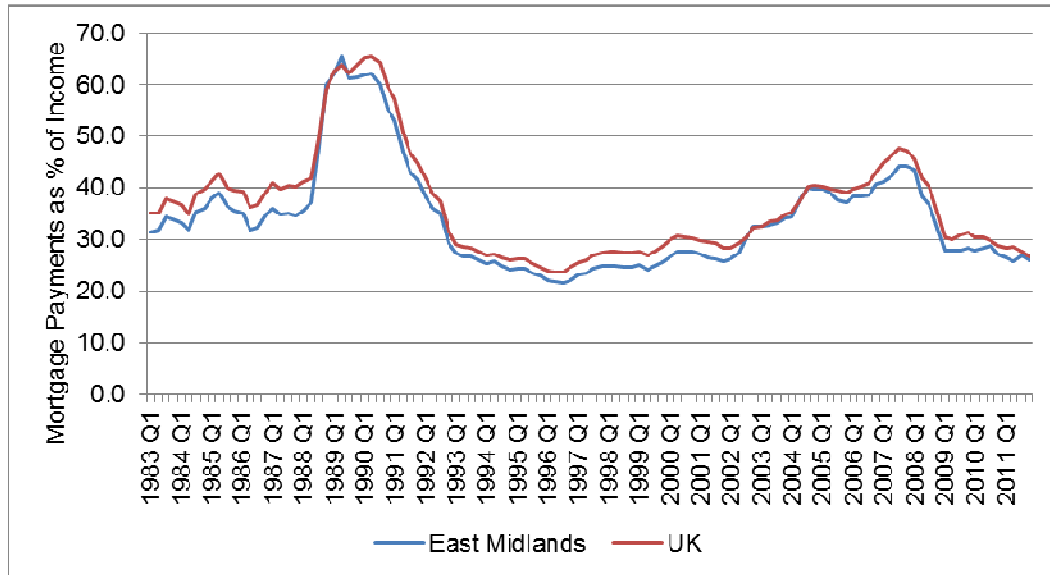
**Figure 5: Interest Rates**



Source: Bank of England Statistics

- 2.23 The persistence of low interest rates has helped to make monthly mortgage payments for first-time buyers the most affordable (at a national level) for almost eight years at 12.2% of income in January 2012 according to the Council for Mortgage Lenders.
- 2.24 Figure 2.6 assesses long-term trends in the balance between housing costs and incomes as an indicator of the affordability of market housing. It considers the cost of mortgage payments as a percentage of monthly income.
- 2.25 With reductions in house prices and low interest rates, market housing is now as affordable as it was in the late 1990s on this measure. Mortgage repayments are on average 26.1% of (gross) household income in the East Midlands (and 26.6% across the UK). This is significantly down on the peak of the market in Q3 2008 when mortgage repayments were on average 44.1% of gross income across the region. Indeed affordability on this measure is similar to 2000.

**Figure 6: Mortgage Payments as a % of Monthly Income**



Source: Halifax House Price Index

- 2.26 Thus the key constraint on the market is not the affordability of housing (in terms of the ability of households to cover mortgage repayments<sup>3</sup>), but the ability of households to raise a sufficient deposit and to meet lending criteria to secure mortgage finance.
- 2.27 The mortgage market has been generally subdued since 2007, but there are some positive signs. 2011 saw an increase in annual gross lending (of 4% on a year-on-year basis) for the first time since the onset of the credit crunch. This was particularly driven by an increase in remortgage activity. However the Eurozone problems still present a real risk that that lending in 2012 could fall back again.
- 2.28 The level of deposits needed by many first-time buyers has led to a significant drop in the levels of FTBs from pre-2007 levels. Data from the Council for Mortgage Lenders indicates that levels of first-time buyers (based on mortgage advances) over the last three years, 2008-2010, were half the levels achieved between 2005-7. CML data indicates that levels of first-time buyers fell further in 2011 with 193,000 loans taken out nationally, 4% down on 2010.
- 2.29 There have however been some recent signs of improvement. The latest data suggests volumes of first-time buyer loans in January 2012 were 23% up on a year previously however this could well be

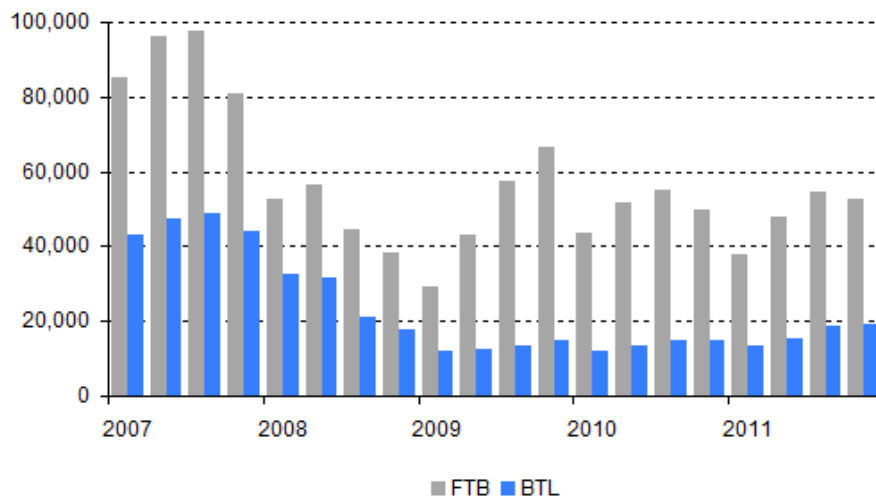
<sup>3</sup> Notwithstanding that there are likely to be some repossessions associated with high unemployment



linked to first-time buyers seeking to complete purchases before the current stamp duty exemptions end on 24<sup>th</sup> March 2012.

2.30 Younger buyers (particularly those under 30) are heavily reliant in the current market on parents and other relatives for financial support in getting on the housing ladder (the so called ‘bank of mum and dad’).

**Figure 7: House Purchases by First-time Buyers & Buy-to-Let Landlords**



Source: Council for Mortgage Lenders

2.31 Sales of homes are however not just influenced by first-time buyers and those trading up or down within the housing market. They are influenced by investment activity – properties bought to be rented privately.

2.32 It is important to consider and recognize the difference between supply and demand dynamics in the private rented sector.

2.33 Demand in many areas has increased notably since 2008 as households who previously might have been able to buy a home are unable to do so, or choose to defer purchasing (for instance because of uncertainty about price trends). Households living in the private rented sector are typically living in properties for longer (reducing supply).

2.34 Furthermore supply has been affected by mortgage finance constraints with investors against requiring significant deposits to purchase property. This has restricted the numbers of investment purchases and buy-to-let mortgage activity, particularly from smaller investors (as larger investors often can raise capital through remortgage of existing properties).

- 2.35 Buy-to-let ('BTL') lending remains significantly below pre-credit crunch levels achieved before 2007. BTL lenders financed 66,000 new home purchases in 2011 - less than 8% of total purchases. This was however better than in the previous few years.
- 2.36 With growth in rents and lower capital costs for house purchases, housing represents an improved investment proposition. There is evidently occupier demand from a combination of demographics, limited new-build and restrictions on home purchases.
- 2.37 However access to finance remains restricted and is restraining effective demand from investors. The availability of buy-to-let mortgage finance did improve in early 2011 but towards the end of the year gross lending turned downwards as the escalating debt crisis in the Eurozone resulted in a reduction in banks' access to wholesale funding.
- 2.38 Despite wider economic conditions, mortgage possessions have been falling (no doubt supported by low interest rates). In 2011, 36,500 properties were taken into possessions – the lowest level since 2007. The trend in mortgage arrears is also downwards. However worsening unemployment and the continuing pressures on real incomes mean that the Council for Mortgage Lenders predicts an increase in possessions to 45,000 in 2012.

*What does this mean?*

For the purposes of assessing future housing requirements in the Derby HMA it is important to recognise:

- The importance of macro-economic factors in influencing effective market demand. Critical factors here are:
- Loan-to-value ratios & mortgage criteria: the deposit requirements required by many buyers together with the mortgage finance criteria are significantly restricting effective market demand. However these factors could potentially improve fairly quickly if economic conditions and international financial stability improved. Were this to happen it could support a rapid improvement in demand;
- Interest rates & inflation: interest rates are currently at historically low levels but this is doing little to support the housing market because of the restrictions on access to finance. Inflationary pressures are however eroding households abilities to save. Inflation is predicted to fall, which may support some growth in real earnings. In time this could support improvements in effective housing demand.
- That increasing access to mortgage finance in the 2001-7 period actually made housing more affordable to more people, with demand growing more strongly than supply (and driving increases in prices, particularly 2001-4, as we will describe below). This can be expected to have increased headship rates.
- In contrast the restrictions on home purchases since the onset of the credit crunch in 2007 are likely to have suppressed growth in headship rates to some degree (we will consider this further later in the report) as young adults continue to live with family or in shared housing for longer.
- The key issue perhaps is to what extent access to mortgage finance and effective demand may change moving forward, and over what timescales. This will influence changes in headship rates (as well as housing delivery). We return to these issues later.

### **Local-Level Dynamics**

2.39 We next turn to consider local level dynamics. As we will show, local level trends in house prices and sales relate strongly to national and regional trends. This indicates the importance of the macro-economic dynamics and drivers described above in influencing housing market conditions in the Derby HMA.

2.40 We consider key market indicators – sales (as indicative of 'effective' market demand) and house prices (which reflect the balance between supply and demand).

#### *House Prices*

2.41 Figure 2.8 profiles trends in the price of a standard property across the East Midlands and the UK using the Halifax House Price Index. The Index indicates that the price of a standard property in the East Midlands increased by 98% between Q2 2001 – Q2 2004 (over just a three year period) as effective demand from both owner occupiers and investors grew rapidly (and faster than supply). This strong growth in prices was influenced by:

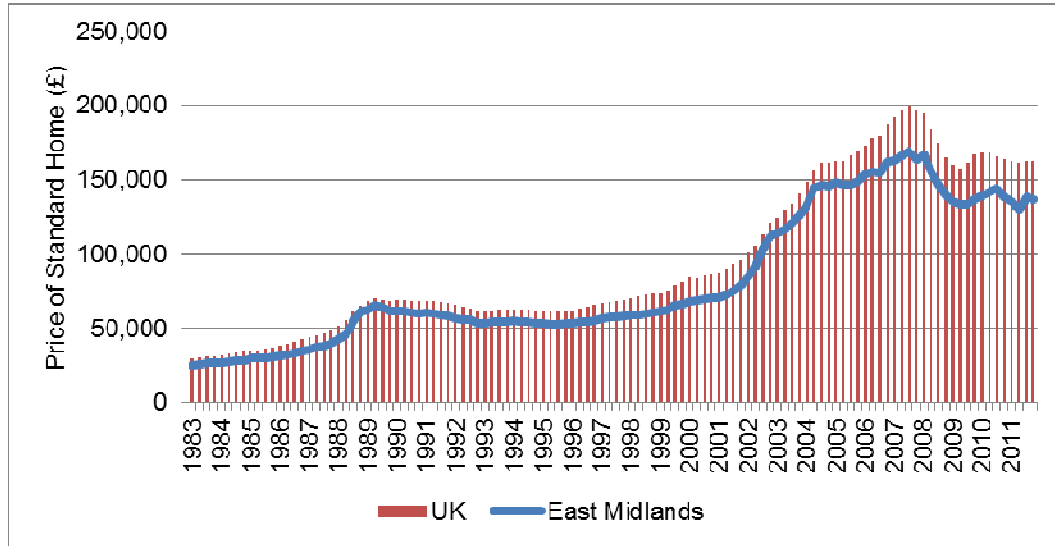
- Low interest rates;
- Competition in the mortgage market, with increasing range of mortgage products;
- A stable, growing economy; and
- The relative inelasticity of housing supply, which did not increase as fast as demand.

2.42 Between Q2 2004 and the peak of the market in 2007, house prices in the region grew by a more modest 17%.

2.43 House prices in the region and nationally have since fallen. At Q4 2011 the price of a standard property in the East Midlands stood at £137,000, 19% below its previous peak in nominal terms. This is similar to prices in mid 2004 (although that it would be lower if 'inflation-adjusted') and just 2.4% above the low-point of house prices in 2009. Indeed the price of a standard property in the region has fallen by 15.5% over the past five years (2006-2011).

2.44 A fall in house prices is indicative of greater supply than effective demand for housing over this period, for the reasons described above.

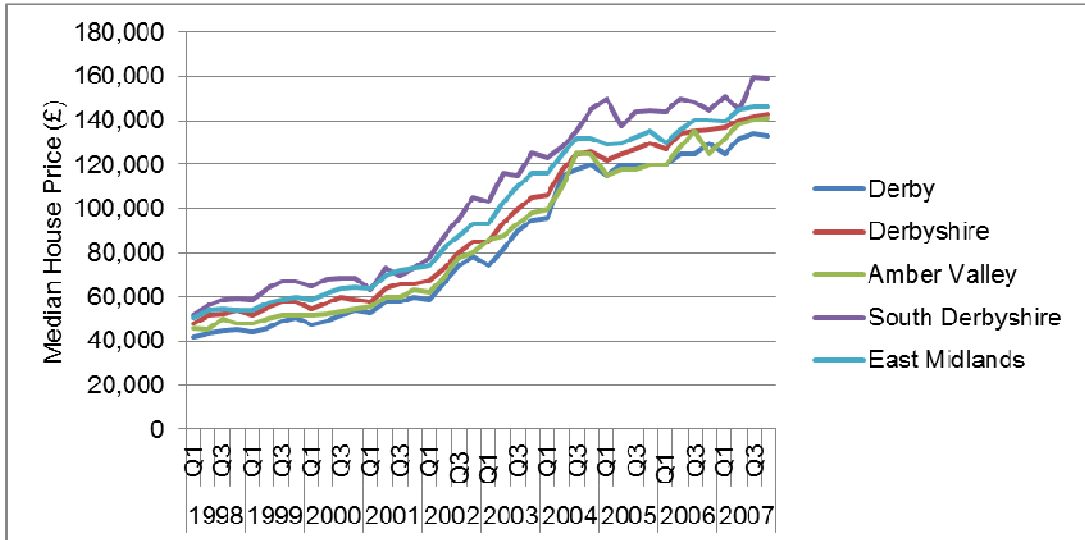
**Figure 8: Price of a Standard Property, East Midlands and UK**



Source: Halifax House Price Index

- 2.45 Looking at house price dynamics at a more local level within the Derby HMA, we have analysed trends in house prices for two time periods – the decade to 2007; and the period since 2007.
- 2.46 Median house prices grew throughout the decade to 2007, as Figure 2.9 below indicates, with the strongest growth rates posted between 2001 – 2004. Over the decade (Q4 2008 – Q4 2007) the average house price in Derby increased by £88,000 (196%) and in Derbyshire by £89,000 (165%). Growth in prices was stronger still in Amber Valley (£93,000, 194%) and South Derbyshire (£99,500, 167%). Trends in house prices closely tracked regional and national trends (highlighting the importance of macro-economic drivers).

**Figure 9: Median House Price Trends, 1998 - 2007**

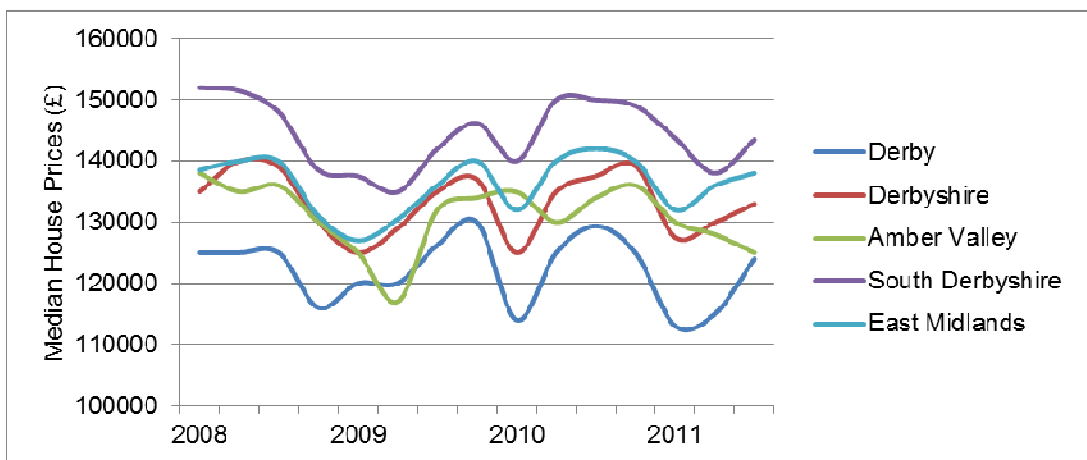


Source: HM Land Registry/ CLG

2.47 Price trends since the beginning 2008 have however been very different, as the chart below indicates. Between Q1 2008 and Q3 2011 house prices have been broadly static across the East Midlands (with a modest fall of -£500 in the median price). In the Derby HMA, median house prices in Derby have fallen by £1,000 (-1%) but this has been modest compared with reductions of £8,500 in South Derbyshire (-6%) and £13,000 (-9%) in Amber Valley.

2.48 Price trends would indicate that since 2008, there has a reasonable balance between effective demand for market homes and supply.

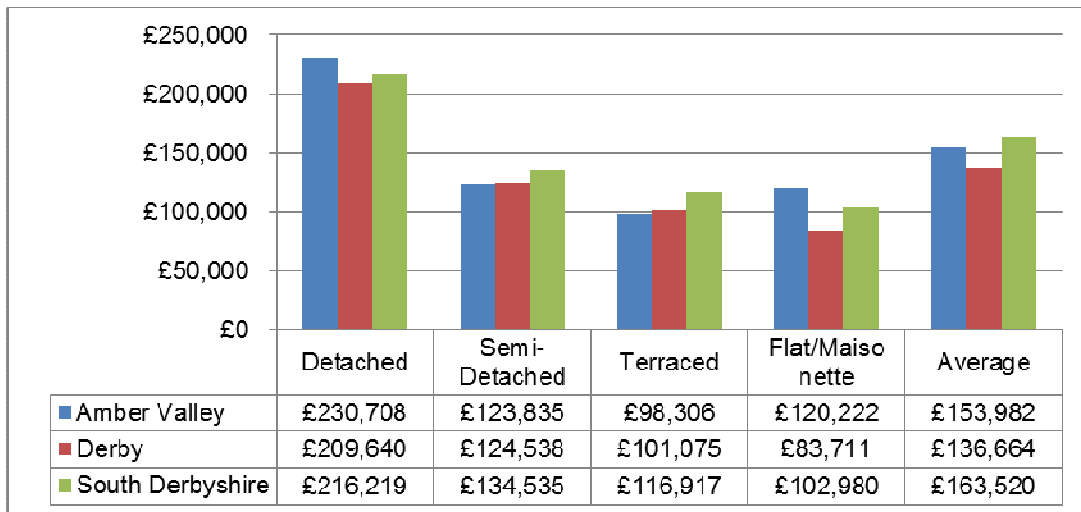
**Figure 10: Median House Price Trends, 2008 – 2011**



Source: HM Land Registry/ CLG

2.49 Average house prices are influenced by the mix of homes sold. Figure 11 profiles average prices of properties sold in 2011 by type. The analysis indicates that house prices by type do not vary that significantly between the three authorities, particularly compared to the differences in housing costs between different types of property.

**Figure 11: Average House Price by Type, 2011**



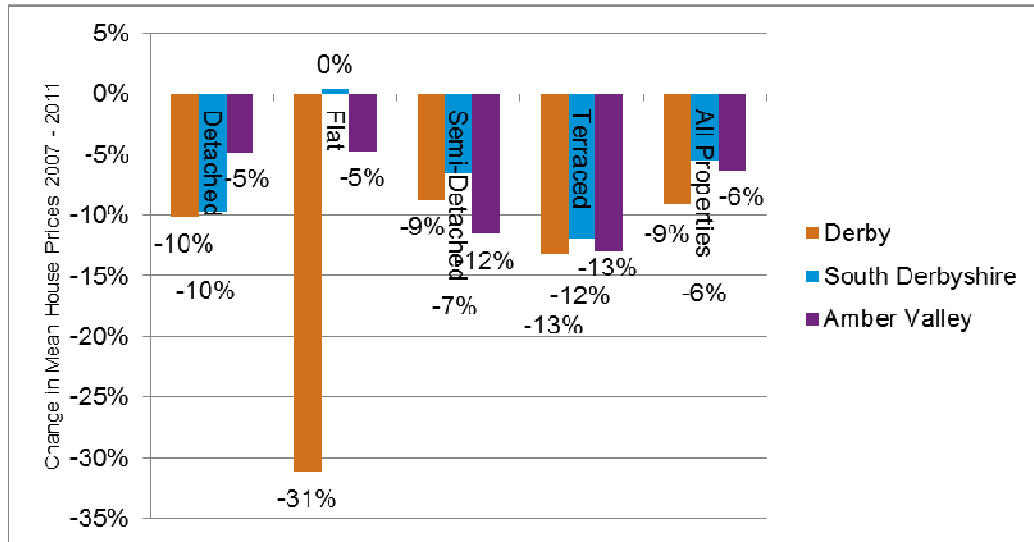
Source: HM Land Registry/ Hi4em

2.50 House prices are notably higher for detached properties (ranging between £210,000 - £231,000 across the three authorities). Prices for semi-detached and terraced properties are strongest in South Derbyshire. Values of flats are notably lower in Derby (averaging £84,000). This provides an indication of relative demand.

2.51 Figure 12 profiles changes in house prices between 2007-2011 by property type. The chart highlights that the value of flats in Derby has declined dramatically (whilst in contrast values have been broadly stable in South Derbyshire, and declined only moderately in Amber Valley).

2.52 In Amber Valley the value of detached properties has declined less than in Derby or South Derbyshire. However semi-detached values have declined to a greater extent in comparative terms.

**Figure 12: Change in Mean House Prices by Type, 2007-2011**



Source: HM Land Registry/ Hi4EM/ GLH

2.53 Overall the analysis points to a period of significant over-supply of flats in Derby (relative to demand) and indicates that prices for terraced housing have fallen more dramatically than for detached or semi-detached homes. It suggests that the lower end of the market has seen a more substantial reduction in demand which is likely to relate to a reduction in investment and first-time buyer demand which makes up a strong element of demand for these products. While the market for detached and semi-detached homes has been clearly affected by overall market conditions, as buyers often have capital in their existing properties they are less susceptible to current constraints on mortgage finance.

**Sales Trends**

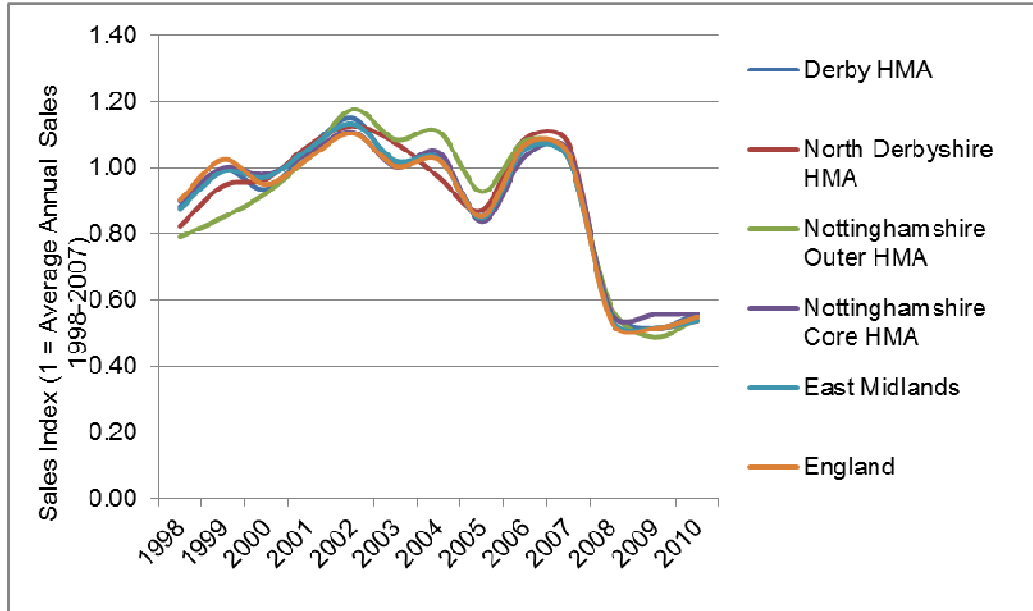
2.54 We consider sales trends to be a key indicator of 'effective' market demand for homes (as discussed above).

2.55 Figure 13 benchmarks sales rates between 1998-2010 in the Derby HMA and surrounding Housing Market Areas. It uses an indexed analysis where 1 is the average annual volume of sales between 1998-2007. The analysis indicates that sales volumes dropped dramatically in 2008 and there has been very limited subsequent recovery. Sales in 2010 in the Derby HMA were 44% down on pre-recession levels, which was broadly consistent with the picture across the East Midlands (-46%) and England (-45%). The similarity between trends indicates the importance of macro-level factors in influencing effective market demand.





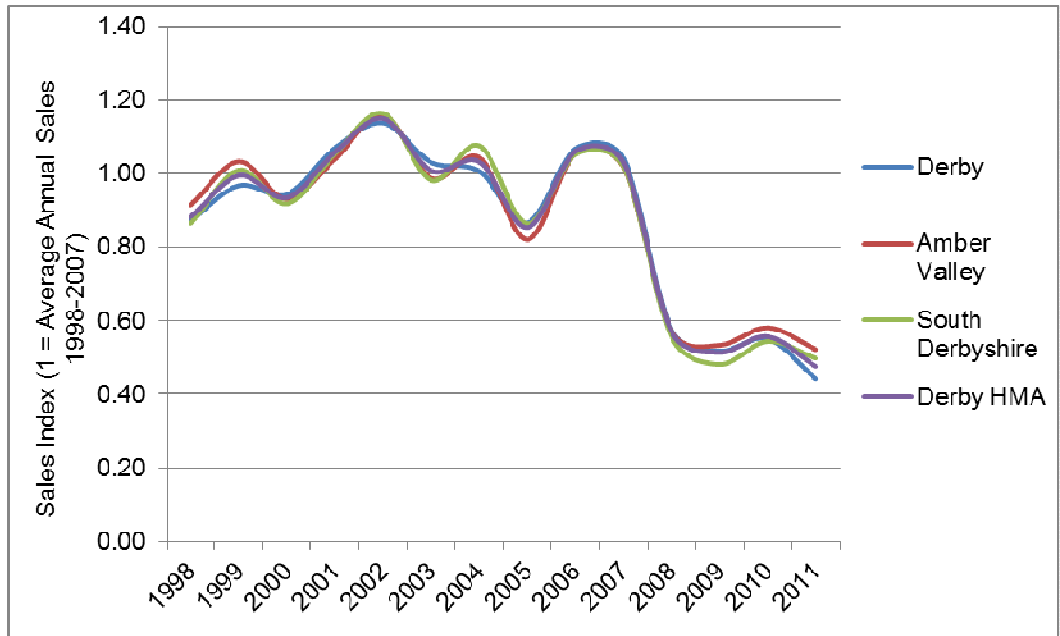
**Figure 13: Indexed Analysis of Sales Trends (1998 – 2010), Housing Market Areas**



Source: HL Land Registry/ CLG/ GLH

2.56 Sales trends in each of the three local authorities are broadly consistent with these trends across wider geographies.

**Figure 14: Indexed Analysis of Sales Trends (1998 – 2010), Local Authorities**



Source: HL Land Registry/ CLG/ GLH

2.57 Figure 14 above indicates that effective demand in Amber Valley has been slightly stronger in 2010 and 2011 in relative terms than in the other authorities. In 2011 sales across the HMA were -52% down on average levels in the pre-recession decade (1998-2007). In Amber Valley sales were -48% down, in South Derbyshire -50% and in Derby -56%. These differentials appears to be influenced by differences in the housing mix across the three authorities (which we consider next).

2.58 Over the past four years, we have seen a reduction in sales across all types of housing in Derby, but this has been most pronounced for flatted development where sales in 2011 were -72% lower than in 2007. Sales of terraced housing have also been more affected – with a -51% reduction in sales compared to -43% for detached and -47% for semi-detached properties. Flats/maisonettes and terraced properties have similarly seen the strongest reductions in prices in proportional terms.

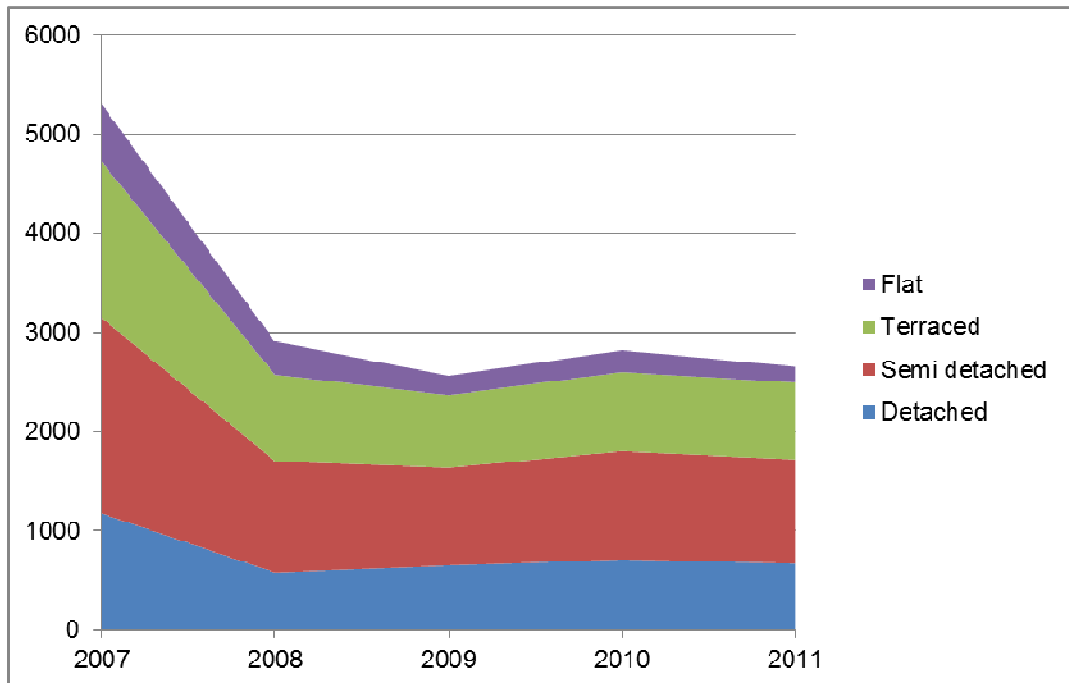
**Figure 15: Sales by Type in Derby, 2007 and 2011**

	2007	2011	% Change
Detached	1176	670	-43%
Semi-Detached	1975	1050	-47%
Terraced	1571	775	-51%
Flat/Maisonette	584	162	-72%
All Properties	5306	2657	-50%

Source: HM Land Registry/ Hi4em

2.59 The overall profile of sales however continues to be dominated by sales of houses rather than flats, with the greatest proportion of sales in the City of semi-detached properties.

**Figure 16: Sales Trends – Derby (2007-11)**



Source: HM Land Registry/ Hi4em

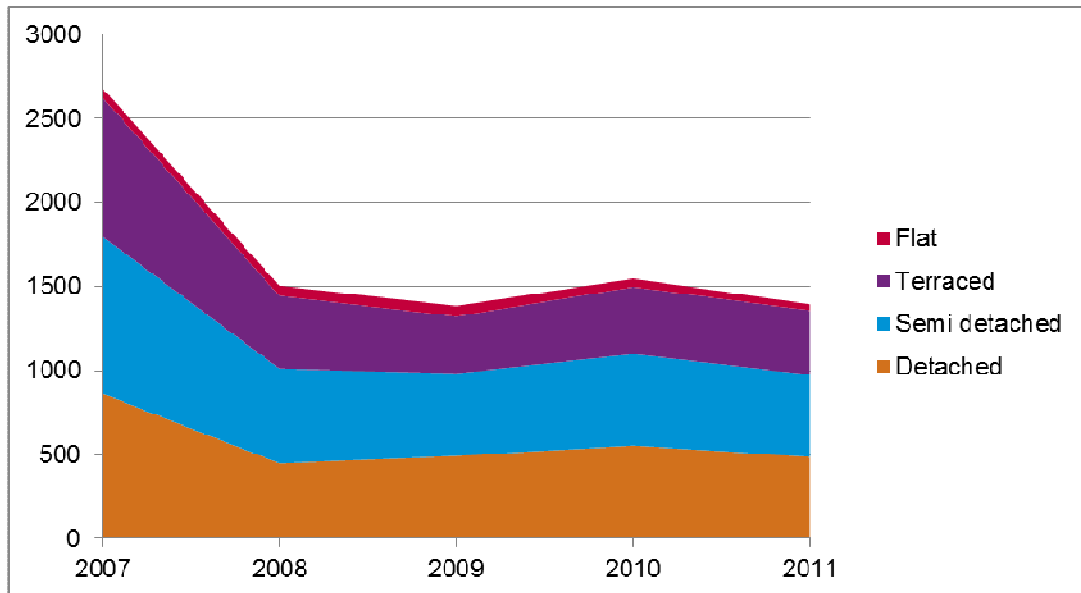
2.60 Turning to Amber Valley, the volume of flatted sales has reduced less than for other property types but this may well be affected by the relatively limited size of this market (with flats accounting for just 2% of total sales in 2007). The volume of sales of terraced housing has reduced more significantly (a -54% reduction from 2007 to 2011) than has been the case for semi-detached and detached properties (-44% and -48% reductions respectively).

**Figure 17: Sales by Type in Amber Valley, 2007 and 2011**

	2007	2011	% Change
Detached	863	486	-44%
Semi detached	936	490	-48%
Terraced	828	382	-54%
Flat/Maisonette	56	37	-34%
Total	2683	1395	-48%

Source: HM Land Registry/ Hi4em

**Figure 18: Sales Trends – Amber Valley (2007-11)**



Source: HM Land Registry/ Hi4em

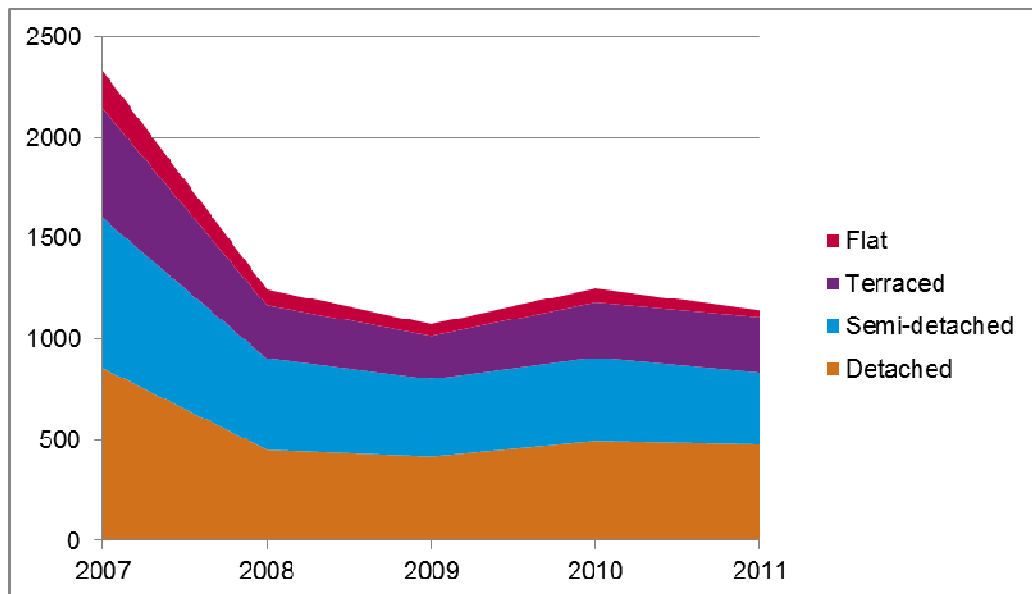
2.61 Looking at South Derbyshire, as with Derby there has been a very substantial reduction in sales of flats/maisonettes with a reduction in sales of -82% between 2007-11. In South Derbyshire, the number of sales of semi-detached properties has fallen slightly more than for terraced housing. Detached sales have fallen the least (in common with the other two local authority areas).

**Figure 19: Sales by Type in South Derbyshire, 2007 and 2011**

	2007	2011	% Change
Detached	857	478	-44%
Semi-detached	744	358	-52%
Terraced	544	275	-49%
Flat	188	33	-82%
Total	2333	1144	-51%

Source: HM Land Registry/ Hi4em

**Figure 20: Sales Trends – South Derbyshire (2007-11)**



Source: HM Land Registry/ Hi4em

*What does this mean?*

- 2.62 Overall the sales analysis highlights that property market activity and ‘effective’ market demand (from both owner occupiers and in regard to investment purchases) in the Derby HMA have been significantly affected by constraints on access to mortgage finance and wider market confidence. We can expect changes in macro-economic dynamics to therefore impact on market conditions at a local level.

#### **Interactions across Tenures**

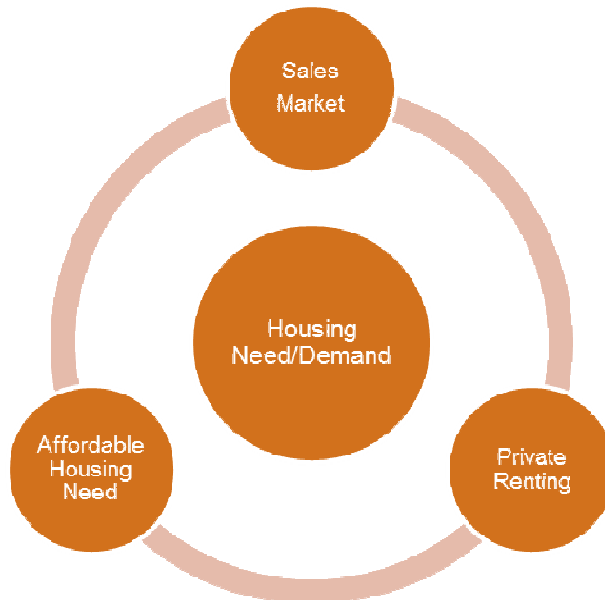
- 2.63 Indicators of effective market demand such as house prices and sales volumes need to be understood alongside other housing ‘tenures’ – social/ affordable housing and the private rented sector. Sales and market evidence only provides a partial picture of dynamics across tenures.

2.64 At a national level, demand for private renting has been rising as households who are unable to buy are instead living in the private rented sector, or remaining in the private rented sector for longer. Between 2000 – 2010 the number of private rented dwellings increased by 106% in the East Midlands, growing from 8.4% to 15.6% of the overall housing stock. It has been the key growth ‘sector’ within the housing market over the decade. There is anecdotal evidence from discussions with estate and letting agents that this is also happening in the Derby HMA. This is however an area in which there is limited information from which to specifically quantify demand.

2.65 Demand for private rented properties is also influenced by the balance between supply and need for affordable housing. Households in ‘housing need’ are able to live in the private rented sector supported by Local Housing Allowance (LHA). The scale of this LHA-supported market for private rented properties is influenced by the availability of affordable housing available locally.

2.66 Figure 21 indicates the interactions across tenure categories.

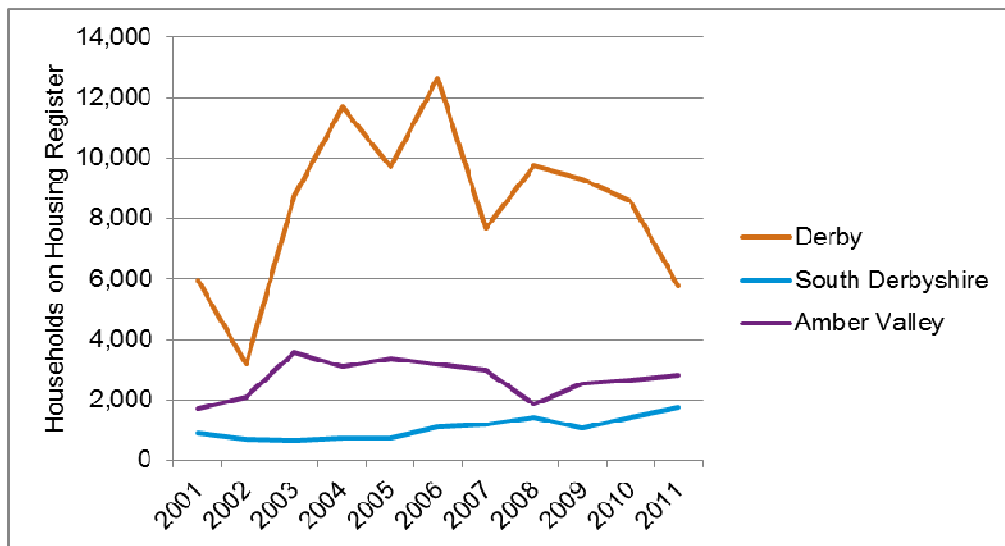
**Figure 21: Overview of Interactions across Tenures**



### Households on the Housing Register

- 2.67 There were a total of 10,330 households on the Housing Register as at April 2011<sup>4</sup> across the Derby HMA. Trends in the number of households on the Register in each of the authorities in shown in Figure 2.22. The analysis indicates a 21% increase in the size of the three authorities' registers between 2001-2011.
- 2.68 On a year-by-year basis the number of households on individual authorities registers can be quite varied. This variance is influenced by how registers are managed, as for instance periodic reviews or a shift to choice-based lettings can influence the size of housing registers. Trends in households on housing registers are thus not necessarily a good indicator of trends in levels of (unmet) housing need.
- 2.69 Given the variability of the Housing Register data it is clear that this source alone cannot provide an accurate measure of the need for affordable housing; it does however give an indication that at any point in time there is a significant demand for social housing in each of the three local authority areas.

**Figure 22: Trends in Households on Housing Registers, 2001-2011**



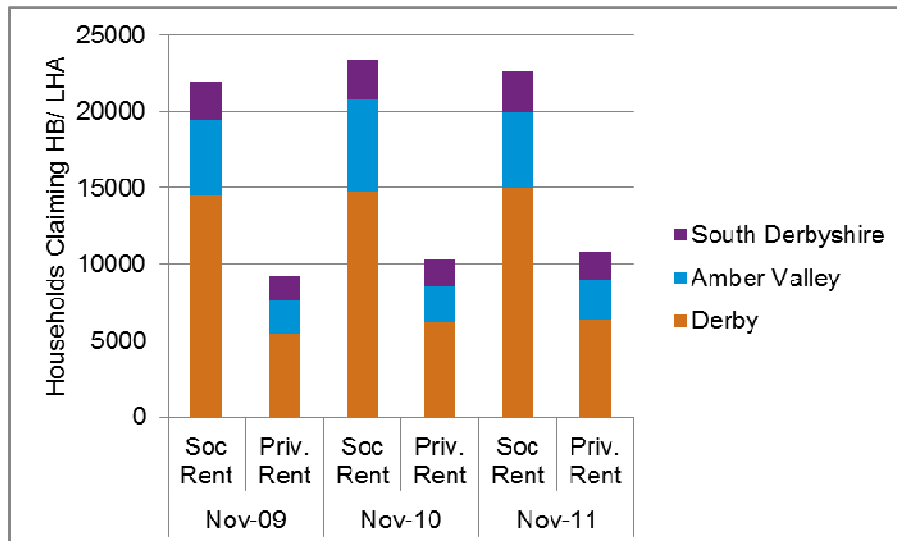
Source: HSSA Returns/ CLG Table 600

- 2.70 Across the three authorities, 5.2% of all households are on the Housing Register in April 2011. This is highest in Derby at 5.4% (5775 households) compared to 5.3% in Amber Valley (2820 households) and 4.4% in South Derbyshire (1735 households).

<sup>4</sup> Source: HSSA Returns, 2011

- 2.71 Figure 23 instead looks at the number of households claiming Housing Benefit (in the social sector) or Local Housing Allowance (in the private rented sector). The total number of households claiming either benefit has increased by 7% over this two year period. This may well be linked to economic conditions, with increasing levels of unemployment, and potentially the costs of private rented accommodation.
- 2.72 Two thirds of those claiming a housing-related benefit across the sub-region live in social rented accommodation. The number of claimants in this sector increased by 3% between Nov 2009 – Nov 2011.
- 2.73 A third of those claiming a housing-related benefit live in the Private Rented Sector. The number of claimants in the Private Rented Sector increased by 18% between Nov 2009 – Nov 2011 with the largest increase (21%) recorded in Amber Valley.

**Figure 23: Households Claiming Housing Benefit or LHA, 2009 – 2011**



Source: DWP

**Evidence from Estate & Letting Agents**

- 2.74 As part of the research we spoke to a cross-section of estate and letting agents operating across the Derby HMA in February 2012. This is intended to provide a qualitative assessment of market conditions which can sit alongside the analysis of statistical data. However it should be recognized that this very much represents a snapshot view of market dynamics and perceptions in Spring 2012.

### *Sales Market*

- 2.75 Agents suggested that there were signs in early 2012 that the market was picking up, with people bringing more properties to the market and greater overall buoyancy than at the same time the previous year.
- 2.76 Demand appears strongest for mid-market properties, such as 3-bed houses prices between £200,000 - £300,000, and for bungalows.
- 2.77 The estate agents we spoke to indicated that first-time buyer numbers remain low, but had been starting to improve. First-time buyers were typically interested in properties priced up to £125,000.
- 2.78 In Derby, the oversupply of flatted properties, following significant new construction immediately prior to the market downturn, was now starting to 'balance out.'
- 2.79 Looking forward, most agents indicated that the market was most likely to remain stable over the next year with market conditions remaining similar. Key influences on performance suggested were any changes to interest rates and changes to stamp duty exemptions from March 2012 (which were expected to have a negative impact).
- 2.80 Investment demand is currently mainly from established investors, with agents suggesting that the buy-to-let market has begun to slow.

### *Lettings Market*

- 2.81 Letting agents described the private rented sector across the HMA as very buoyant. They described strong demand, linked to difficulties households are having in getting onto the housing ladder (influenced by access to mortgage finance). As a result people are renting for longer. Repossessions are also feeding into demand for rental properties.
- 2.82 Supply of new properties is however constrained by mortgage finance. Some landlords were looking for further investments, and yields are now relatively strong (particularly for properties priced under £100,000). However it is access to capital which is constraining growth in supply.
- 2.83 Demand is outstripping supply, and as a result rents are growing. Re-let periods were described as generally low.
- 2.84 Letting agents indicated that there was a broad profile of tenants in the Private Rented Sector, and a broad range of properties. The lower end of the spectrum within Derby City was the most dynamic



currently (i.e. there was strong demand for cheaper properties). Outside of Derby, most enquiries were for 3-bed properties in areas with good transport links.

- 2.85 Agents indicated that there were further prospects for rental growth in the sector linked to strong demand relative to supply.

*What does this mean?*

The evidence does point to some improvement in market conditions in early 2012 but from a very depressed level. In considering future housing requirements, the weight which should be attached to the evidence of market dynamics is a matter of judgement. It is important to set this in the context of the interaction across different tenures.

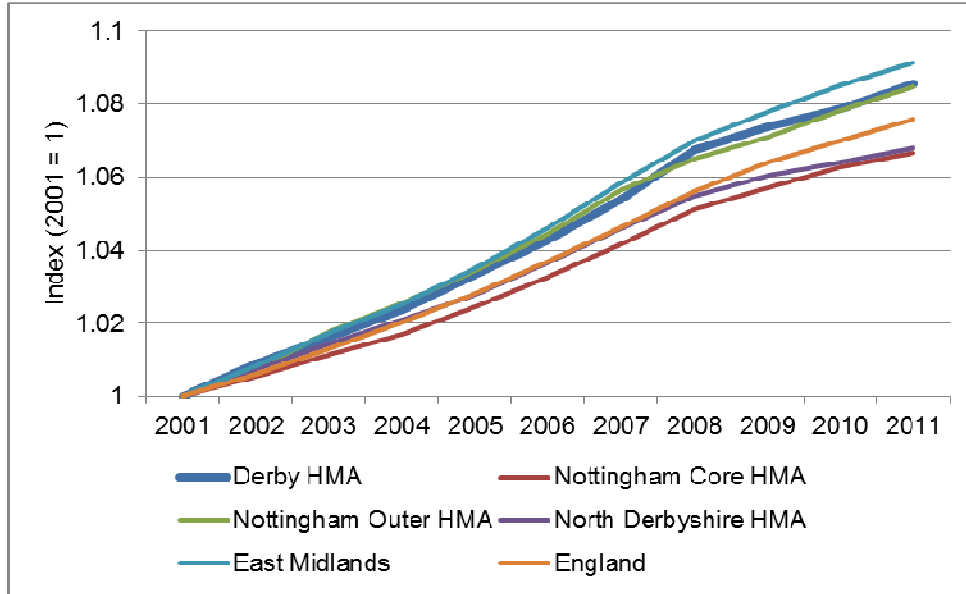
There is evidence that market conditions are to some degree 'displacing' demand towards the rented tenures, with evidence that demand has been growing for both affordable housing and private rented housing. There is not however robust information available which can be used to quantify the scale of demand.

Nonetheless there is likely to be some impact from market conditions on suppressing growth in headship rates (and household formation) as households defer from establishing new households, such as through living with parents or in shared households for longer. It is clear that this is likely to play out over at least the first quarter of the plan period.

### **Housebuilding**

- 2.86 The final key indicator which we have looked at is trends in housebuilding. It is important to recognize that new homes are a segment of housing supply, and generally represent a relatively small proportion of private housing sales or social lettings in any given year (typically less than 10%).
- 2.87 Using an indexed analysis, Figure 24 benchmarks growth in the dwelling stock in the Derby HMA and in surrounding Housing Market Areas. Over the 2001-2011 decade, the housing stock grew by 8.6% across the Derby HMA, which was similar to the Nottingham HMA (8.5%) and above the England average (7.6%). It was however slightly below average for the East Midlands where the housing stock grew by 9.1%.

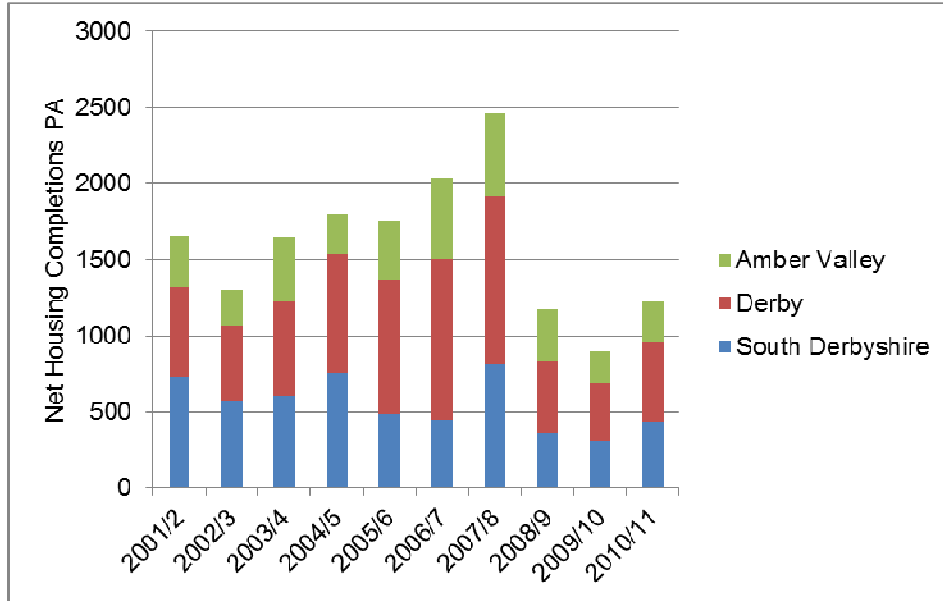
**Figure 24: Net Changes in Housing Stock, 2001 – 2011**



Source: CLG Table 125

- 2.88 Net completions across the HMA increased from 1,301 dwellings in 2002/3 to 2,461 in 2007/8 (an increase of 89%). Completions however dropped significantly thereafter, with just 899 net completions in 2009/10 and 1,222 in 2010/11.
- 2.89 If high social housing completions over the last couple of years are taken into account, the drop off in private sector housebuilding is stronger still.

**Figure 25: Net Completions**

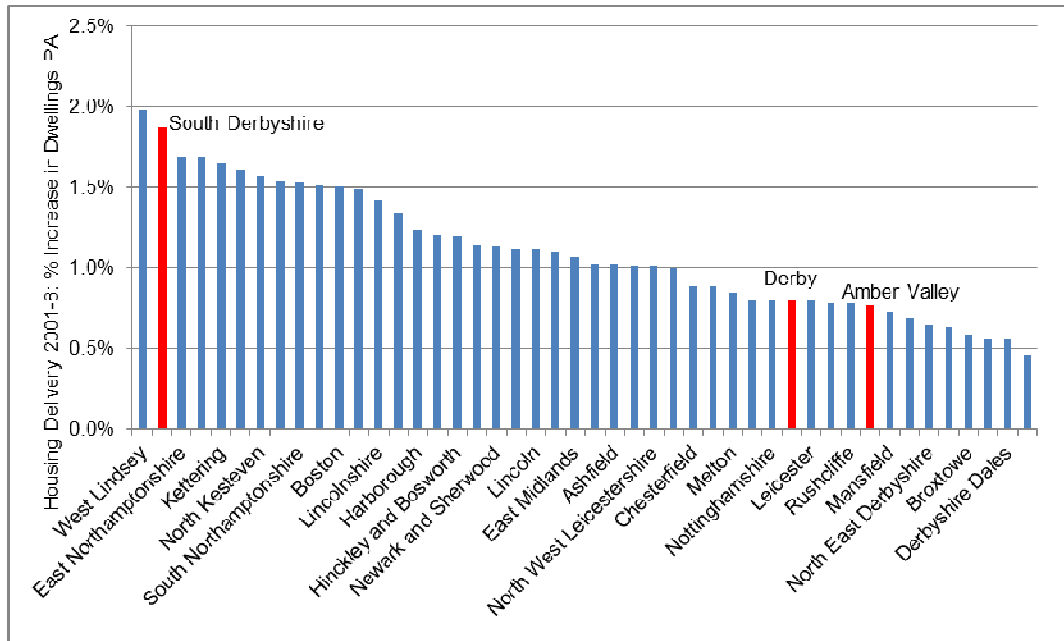


Source: LPA Monitoring Reports

- 2.90 The table below, Figure 26, benchmarks net housing completions before the onset of the market downturn (2001-8) and since (2008-11).
- 2.91 Looking first at trends prior to 2008, housing delivery was strongest in South Derbyshire with an average growth in the housing stock of 1.9% per annum. This was the second highest of the local authorities in the region (behind West Lindsey). In contrast delivery rates in both Derby and Amber Valley were below the regional average of 1.1% growth per annum. In Derby the average is 0.8% per annum; in Amber Valley 0.7%.

2.92

**Figure 26: Housing Delivery - % Household Growth per Annum, 2001-8**



Source: EM Councils; GL Hearn

2.93 Across the HMA, housing completions between 2008-11 were -39% below averages between 2001-8. This was the case across all three authorities but Amber Valley has been the least affected (-30%) and Derby the most affected (-42%).

**Figure 27: Net Housing Completions – Averages Pre/ Post 2008**

	Average 2001-8	Average 2008-11	% Change
Derby	788	504	-36%
Amber Valley	389	271	-30%
South Derbyshire	632	371	-41%
Total	1809	1146	-37%

Source: LPA Monitoring Report/ GLH

2.94 The drop off in housing completions is relatively similar to the reduction in sales/ effective demand which we have seen across the HMA. It should be noted however that the completions data includes both market and affordable units. The proportion of housing delivered as affordable homes increased in the latter period (2008-11).

2.95 Figure 28 below expresses this in terms of rates of housing growth. Rates of housing growth across the Derby HMA pre-2008 as discussed were similar to the region, however delivery has fallen since

to a slightly greater degree than has occurred across the East Midlands. This contrasts to the reduction in overall housing sales volumes where reductions were similar.

- 2.96 It is clear that South Derbyshire saw stronger housing growth (relative to its existing population base) pre-2008, but has also seen a notable drop-off in housing delivery.
- 2.97 In Derby, housing delivery relative to the existing population base has been lower but has fallen dramatically, with recent growth around half the pre-2008 levels. It is possible that this is partly linked to the importance of flatted development to pre-2008 delivery rates. The flatted market has been impacted by declining values (to a greater extent than other property types as indicated above) and higher finance costs (as blocks of flats have to be built at once rather at the pace at which they are selling) more so than other property types.
- 2.98 In Amber Valley, housing delivery rates pre-2008 were moderately below the East Midlands average (but consistent with the national picture). Again they have dropped dramatically, by around 50% since 2008.

**Figure 28: Rates of Household Growth, 2001-8 and 2008-11**

	2001-8	2008-11
Derby	0.8%	0.4%
Amber Valley	0.7%	0.5%
South Derbyshire	1.8%	1.0%
Derby HMA	1.0%	0.6%
Nottingham Core HMA	0.7%	0.5%
Nottingham Outer HMA	0.9%	0.6%
North Derbyshire HMA	0.8%	0.4%
East Midlands	1.0%	0.7%
England	0.8%	0.6%

Source: LPA Monitoring Report/ GLH

- 2.99 Delivery in individual authorities will be influenced by land availability. At an individual site level, developers are currently working on the basis of around one sale per week (i.e. c. 50 per year) on an individual scheme. This does not mean that an individual site cannot achieve more than this, with variation in product/ developer and with multiple start points.
- 2.100 Given that sales are 40-50% down on long-term trends, we can expect sales rates to improve over time. In more normal market conditions (akin to pre-2007), housing delivery at around twice this pace might have been achievable (i.e. c. 2 sales per week/ 100 per year on a site). Over the plan period a blended sales rate might equate to c. 1.3 - 1.6 sales per week might be reasonable as an average based on improved market vitality in the medium-term with long-term sales trends or above achieved post 2016.

2.101 Factors which key local stakeholders have identified which may impact on the recovery of housebuilding levels include:

- Changing density aspirations of buyers, which is shifting towards lower-density family housing;
- Concerns regarding the impact of increasing sustainability standards on the viability of development schemes;
- Increasing Section 106/ CIL and infrastructure requirements which impact on viability but also on development finance costs/ cashflow;
- The potential role of the National Planning Policy Framework in improving land supply and supporting increased delivery;
- Levels of funding available (including through developer contributions) for affordable housing delivery.

2.102 There was a general level of consensus that a recovery in housebuilding will need to be supported by stronger economic conditions and will take place over 3-4 years.

### **Market Prospects**

2.103 From the analysis above, we can identify a number of key drivers which influence 'effective demand' for homes. These include:

- Access to mortgage finance / loan-to-value ratios – impacting on levels of first-time buyers, those re-mortgaging properties or existing owner occupiers moving home, and investment purchases;
- Interest rates & the cost of servicing debt – with lower house prices and historically low interest rates, housing is now relatively affordable for those with the savings or who can access capital;
- Trends in real household incomes – which have been squeezed by inflationary pressures over the past couple of years, but play an important role in helping households save up a deposit. The balance between inflation and wage growth is important here;
- Economic performance and outlook – which feeds into market confidence and trends in incomes. There is also a relationship between unemployment and repossessions/ housing need.

2.104 The market outlook is outlook currently influenced by:

- Access to mortgage finance – many households don't have savings required to secure competitive mortgage deals;
- Macro-economic conditions – the economy is effectively flat-lining with risk that we're moving back into recession, with an upward trend in unemployment;
- Household finances – inflation has been out-pacing income growth (with real earnings falling) – expected to improve this year;

2.105 Current conditions and the short-term outlook are clearly very different to those in 2003-8 (which influenced the ONS / CLG 2008 demographic projections). In the 2003-8 period, the economy was stable and growing, inflationary was lower, and mortgage finance was much more readily available. These factors supported effective demand for market housing.

- 2.106 Looking forward, the Council for Mortgage Lenders predictions for 2012 are for transactions levels to remain flat. The market was expected to be boosted early on in the year to transactions from households seeking to complete before the end of the stamp duty concessions in March. This corresponds with the buoyancy of the market in Q1 indicated by estate agents.
- 2.107 CML predict that the Government's new-build indemnity scheme will have an 'incremental rather than transformative' impact on the overall market, albeit that it may support a gradual improvement in completions. On the downside, they predict that rising unemployment may feed into increasing repossessions.
- 2.108 Knight Frank's medium-term forecasts for the housing market (Spring 2012) – based on their 'principal forecast' are for a slow correction with sales returning to near long-term averages by 2016. On this basis we would see a recovery in market conditions in the medium rather than short-term. The principal forecast indicates continuing demand and growth in the private rented sector, with growing first-time buyer numbers in the medium-term.
- 2.109 However there are evident upside and downside risks to the forecasts. The upside risks are that we might see a stronger and faster recovery, linked for instance to:
- Resolution of the Eurozone debt crisis and stable global financial conditions/ growth;
  - Faster improvements to the availability of mortgage finance.
- 2.110 The downside risks are associated with:
- Rises in interest rates, especially if strong inflation re-emerges, which could hinder improvements in effective demand;
  - The collapse of a Eurozone economy/ currency, which could have serious impacts on the global financial system and result in a further 'credit crunch' which could have a further downward impact on sales (to potentially an unprecedented level). It could also trigger a further economic recession.
- 2.111 Knight Frank see the new-build market improving in the medium-term as housebuilders' balance sheets improve, with increased policy certainty provided by Local Plans and the NPPF. However this needs to be balanced against reductions in funding for affordable housing.
- 2.112 We can draw this together to outline a number of potential scenarios for the housing market. These have been developed following input from key stakeholders:

<p><b>Scenario 1: Slow correction to 2016</b></p> <ul style="list-style-type: none"> <li>• Gradual improvement in sales &amp; first-time buyers</li> <li>• Improving economic performance &amp; price inflation from 2013</li> <li>• Moderate interest rate increases in medium-term</li> <li>• Housebuilding returns to long-term trend over 4 years</li> </ul>	<p><b>Scenario 2: Rapid Improvements in Market Demand</b></p> <ul style="list-style-type: none"> <li>• Eurozone crisis resolved quicker than expected; global growth</li> <li>• Wage growth and lower inflation support increasing household incomes</li> <li>• Improved availability of mortgage finance supports stronger housing market recovery</li> </ul>
<p><b>Scenario 3: Eurozone Default</b></p> <ul style="list-style-type: none"> <li>• Further credit crunch – leading to further reduction in sales &amp; sharp price falls</li> <li>• Further rental growth in private rented sector ... feeding through to increasing housing need</li> <li>• Prolonged economic recession and high unemployment</li> <li>• Lending restrictions impact on new-build market</li> </ul>	<p><b>Scenario 4: Economic Resilience &amp; Growth</b></p> <ul style="list-style-type: none"> <li>• Improved macro-economic outlook and the local economy performs more strongly than other areas</li> <li>• Moderate employment growth supports reductions in unemployment and worklessness and continues to attract people to the area</li> <li>• Employment growth in key higher value-added sectors supports growth in household incomes</li> </ul>

2.113 Three of the above scenarios were considered at a workshop with key stakeholders held on 6<sup>th</sup> March 2012. This included public sector stakeholders, developers, landowners and their agents, as well as key businesses and voluntary groups. This has informed the development of the scenarios and presentation of Scenario 4.

2.114 We consider that it is prudent to take a generally more optimistic outlook, as should some of the downside factors come to fruition these will impact on housing delivery (e.g. it will take longer for a portfolio of allocated sites to be built out than anticipated). On the other hand, if planning is based on a more pessimistic scenario and some of the upside factors come to play this could have negative social and economic consequences (resulting from lack of supply of homes/ land which



could for instance contribute to growth in house prices, wages etc.). This would favour Options 2 or 4.

*What does this mean?*

The analysis in this section collectively points towards housing market conditions impacting on how households occupy homes (and thus headship rates).

The market analysis highlights that market activity has halved relative to pre-recession trends, and there are notable barriers for young households seeking to buy a home – in particular access to mortgage finance. Increasing numbers of households are renting for longer, and the private rented sector has grown significantly over the last decade. As we will come onto, household sizes have remained more stable, particularly in Derby and South Derbyshire, relative to long-term trends.

Looking forward we may see some improvement in market conditions, but it seems likely that the recovery will be paced over 3-4 years. On this basis it seems reasonable to assume that market conditions may subdue growth in headship rates over much of the first half of the 2008-28 plan period.

In addition there is some potential that societal changes could lead to an increase in multi-generational households, for instance with households living with an older relative with existing equity or to provide social care. It is however difficult to robustly establish the likelihood or impact of this.

In the Derby HMA the household base has grown by 1.0% per annum pre-recession (which is consistent with the East Midlands average) and 0.6% since (slightly below the 0.7% achieved across the East Midlands).

A continuation of current economic conditions with delivery at a rate of 0.7% household growth per annum would be equivalent to delivery of 1325 homes a year. However this is linked to a downturn in sales of over 40% on long-term trends.

It seems reasonable to assume that there is some recovery in housing market conditions and activity in the medium-term. However given that market activity (i.e. sales rates) is unlikely to return to levels nearer long-term trends before 2016, and there could be a time-lag before housing completions respond to this; housing market conditions should be recognised as an important factor in influencing what level of housing development can be delivered over the plan period to 2028.

In developing planning policies, the Councils will need to demonstrate that their plans are deliverable in order to meet national policy 'tests.' On this basis it seems realistic to assume that housing delivery over the 2008-28 plan period is unlikely to exceed on average more than 1% growth a year in the housing stock over the 2008-28 period in the HMA as a whole.



### 3 ECONOMIC PERFORMANCE

- 3.1 One of the key influences on future housing requirements will be economic performance, particularly as the level and pace of employment creation will influence migration dynamics (both flows in and out of the Derby HMA).
- 3.2 The focus of this section is on considering and critically quantifying prospects for employment growth over the 2008-28 plan period. This needs to be built on an understanding of the characteristics of the local economy.
- 3.3 Our analysis of economic performance and potential draws on the following:
- Review of Local Economic Assessments prepared for both Derby and Derbyshire;
  - Analysis of key economic and labour market statistics;
  - Interrogation of baseline employment forecasts for the three Districts; and
  - Consultation with key stakeholders.

#### Characteristics of the Derby HMA Economy

##### *Output and Employment*

- 3.4 The Derby HMA is a £7.7 billion economy (2010). Of this total economic output, 57% is derived from Derby, 26% from Amber Valley and 17% from South Derbyshire. Total employment across the HMA was 216,100 in 2010.

**Figure 29: Output and Employment, 2010**

2010	Total Output (billion)	% Output	Total Employment	% Employment
Derby	£4.4	57%	127,200	59%
Amber Valley	£2.0	26%	55,200	26%
South Derbyshire	£1.2	17%	33,700	16%
Total	£7.7	100%	216,100	100%

Source: Experian

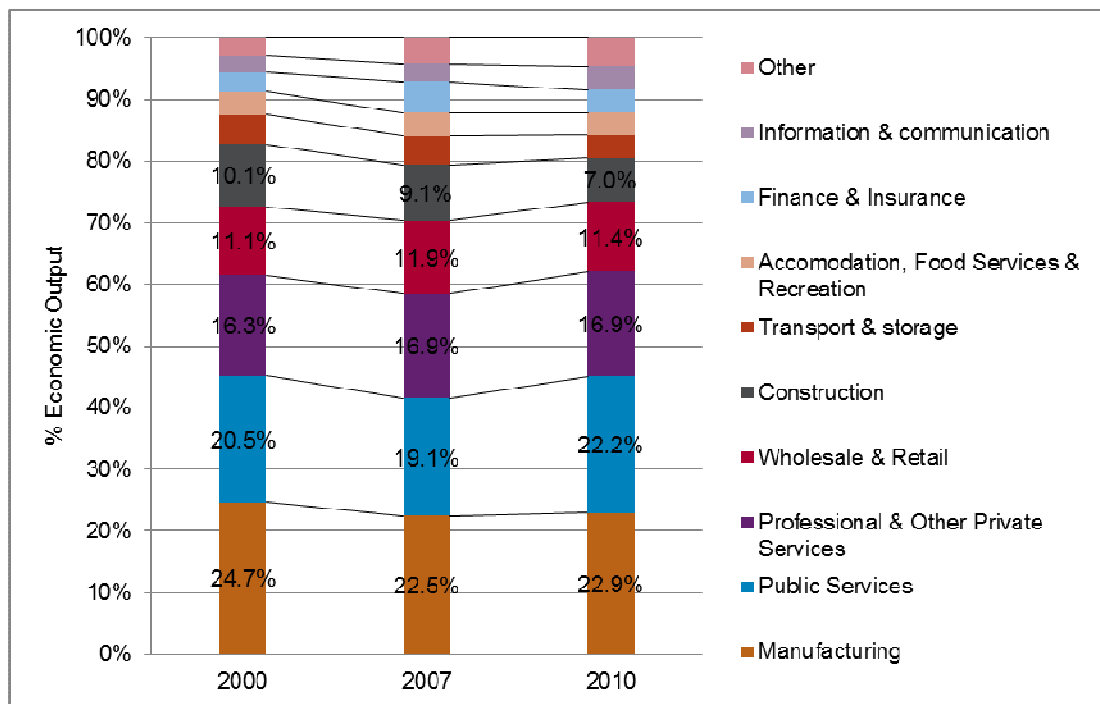
- 3.5 The Derbyshire Local Economic Assessment (April 2011) indicates that the Derbyshire's economy has been growing slower than other parts of the East Midlands, and has below average productivity compared to both the regional and national benchmarks. In 2008 GVA per employee was 88% of the national average in South and West Derbyshire<sup>5</sup> but was 4% above the national average in Derby. However in both cases the trend in relative productivity was downward.

<sup>5</sup> This comprises the local authorities of Amber Valley and South Derbyshire together with Derbyshire Dales, Erewash and High Peak

*Economic Structure*

3.6 Figure 30 identifies the contribution of broad economic sectors to wealth creation (GVA) in the local economy. Manufacturing makes a very strong contribution to wealth creation across the HMA and makes up 23% of economic output (GVA). Its relative contribution has however fallen over the last decade.

**Figure 30: GVA, 2000 – 2010 (Derby HMA)**



Source: Experian

3.7 In contrast, the contribution which the public sector makes to wealth creation has increased as has the utilities sector.

3.8 The table below profiles employment by sector in 2010. Manufacturing is the largest sector across all three authorities, followed by wholesale/retail, health and education. These are the largest sectors in many local economies.

3.9 50% of employment in Derby was in knowledge-intensive industries in 2009 compared to 45% across England and 39% across the East Midlands.

**Figure 31: Employment by Sector, 2010**

% Employment by Sector	Amber Valley	Derby	South Derbyshire	Derby HMA	East Midlands
Manufacturing	24.7	16.8	23.0	19.7	13.3
Wholesale; Retail; Car Repair	13.1	14.6	13.8	14.1	16.5
Health & Social Work	11.3	16.0	9.4	13.8	12.8
Education	10.0	9.2	12.7	9.9	9.5
Administration & Support Services	4.6	8.8	5.8	7.3	8.4
Accommodation & Food	4.9	5.6	6.5	5.6	5.5
Professional, Scientific & Technical	4.2	5.8	5.9	5.4	5.6
Construction	7.1	4.0	6.5	5.1	4.8
Transport & Storage	5.7	3.9	5.9	4.6	5.3
Public Administration & Defence	5.0	3.4	2.4	3.6	5.2
Information & Communications	1.9	3.1	1.1	2.5	2.5
Arts, Entertainment & Recreation	2.3	2.1	2.0	2.2	2.4
Other Services	1.8	2.1	2.9	2.1	2.1
Financial & Insurance	1.3	2.2	0.5	1.7	1.8
Real Estate	1.1	1.3	0.8	1.1	1.1
Utilities	0.8	1.1	0.4	0.9	0.7

Source: BRES/Derbyshire Observatory

- 3.10 We have used a location quotient analysis to consider the relative concentration of employment by sector. This is shown in Figure 32 below. It indicates a strong concentration of manufacturing employment in all three authorities. In Derby there is also above average employment in utilities (albeit job numbers are relatively low), the health sector, and in office-based sectors such as finance/insurance, and information/communications.
- 3.11 The HMA clearly has a strong manufacturing base, which is an important contributor to value added and wealth creation within the local economy, but has also seen a significant loss of employment in recent years.
- 3.12 Besides manufacturing, Amber Valley has a concentration of employment in construction. In South Derbyshire there is above average employment in other services and in education.

3.13

**Figure 32: Location Quotient Analysis (vs. East Midlands), 2010**

	Amber Valley	Derby	South Derbyshire	Derby HMA
Manufacturing	1.85	1.26	1.72	1.48
Utilities	1.19	1.61	0.67	1.36
Construction	1.46	0.82	1.34	1.06
Wholesale/Retail	0.80	0.88	0.84	0.85
Transport & Comms	1.08	0.73	1.12	0.88
Accommodation & Food	0.89	1.02	1.18	1.01
Information & Communications	0.75	1.23	0.45	0.99
Financial & Insurance	0.74	1.25	0.31	0.98
Real Estate	0.98	1.12	0.68	1.02
Professional Services	0.75	1.03	1.05	0.96
Administrative & Support Services	0.54	1.05	0.69	0.87
Public Administration	0.95	0.64	0.46	0.69
Education	1.05	0.97	1.34	1.04
Health & Social Work	0.89	1.25	0.74	1.08
Arts, Entertainment & Recreation	0.98	0.91	0.83	0.91
Other Services	0.86	1.00	1.40	1.02

Source: BRES/Derbyshire Observatory

- 3.14 South Derbyshire shows a strong level of employment in transport and communications. The area draws benefit from its proximity to East Midlands Airport (located closely in North West Leicestershire) which is the UK's leading airport from express freight and the main centre for UK operations for DHL, UPS and Royal Mail.
- 3.15 Moving forward, there are proposals which exist for the development of a large rail freight interchange in South Derbyshire around Eggington albeit that the remain notable uncertainties about whether this will be delivered.
- 3.16 Employment in the public sector has grown significantly over the last decade (and indeed its proportion of total economic output has increased from 20.5% to 22.2% across the HMA). However public sector growth is likely to be impacted in the period to 2017 by spending restraints. Figure 33 indicates the number and proportion of jobs in the public sector. This is strongest in Derby, and least in South Derbyshire.

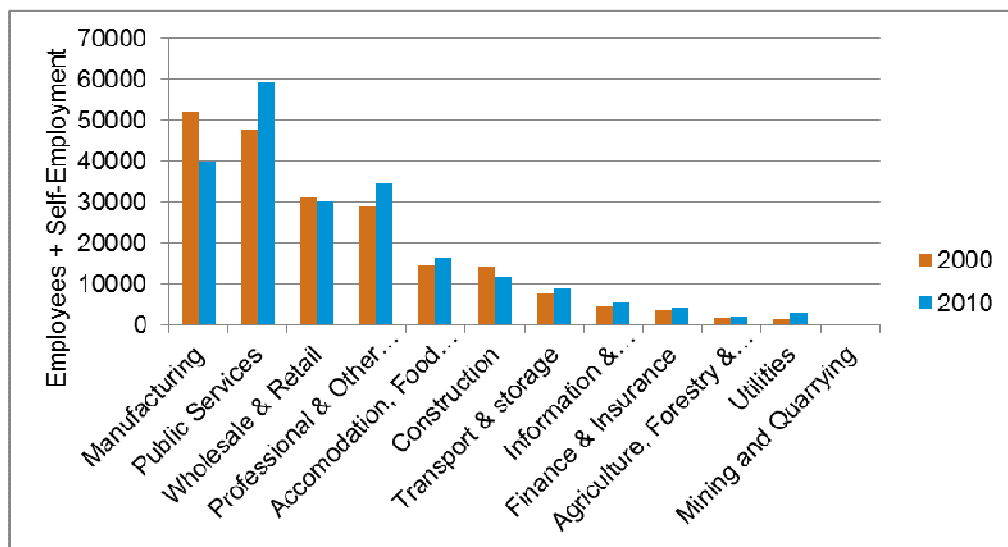
**Figure 33: Public Sector Employment, 2010**

	Jobs in Public Sector	% Employment in Public Sector
Amber Valley	10500	21%
Derby	28900	24%
South Derbyshire	4600	15%
East Midlands	408000	21%

Source: NOMIS

- 3.17 What is particularly notable about Derby is the concentration of employment in 'advanced manufacturing.' This employs 9.5% of Derby's workforce compared to 1.2% across GB<sup>6</sup>. This is particularly influenced by the presence of Rolls Royce. However across the wider HMA, the manufacturing base is more diverse.
- 3.18 In the past there have been widespread job losses, particularly in engineering. However even following consolidation, the manufacturing sector accounts for a fifth of all employment across the Derby HMA – twice the national rate and over six percentage points higher than the East Midlands average. Manufacturing employment is particularly high in both Amber Valley and South Derbyshire (at 25% and 23% of total employment respectively).
- 3.19 A key economic challenge is that we consider it likely that manufacturing employment will continue to contract. The ability to support employment growth is likely to be influenced by both the pace of job losses in manufacturing, and the degree to which this is offset by employment growth in other sectors.
- 3.20 Over the past decade (2000-2010), job losses in manufacturing have been offset by growth in employment in the public sector and in professional and other private services. Public sector employment growth in the short-term to 2017 is likely to be more muted.

**Figure 34: Change in Employment by Sector, Derby HMA (2000-2010)**



<sup>6</sup> Centre for Cities (Oct 2010)

- 3.21 The challenge is that we could see employment within the manufacturing sector consolidate further (whilst recognizing that in the past it has been more resilient than in other areas); whilst 'higher value sectors' such as banking, finance and other services which can generate growth in employment as well as growth in output are currently relatively under-represented (particularly in Derby given its scale and proximity to Nottingham).
- 3.22 The manufacturing sector in Derby is particularly influenced by the presence of a number of larger key employers ('catalyst' employers). These include Rolls-Royce in the aerospace sector (11,000 employees), and Bombardier rail engineering (3,000 employees) as well as Toyota car manufacturing (within South Derbyshire).
- 3.23 Rolls Royce in particular plays a central role in Derby's strong representation of employment in advanced manufacturing. The Derby site is the firm's largest in the UK with around half its UK workforce, with c. 11,000 employees. In October 2011 the firm announced that it would increase employment in Derby by 600 jobs.
- 3.24 Add to this Bombardier, which manufactures trains in Derby. This is estimated to employ around 2,000 staff directly, and there are a number of other rail-related firms in the City including companies that own and lease rolling stock, employment at Network Rail and rail consultancy businesses. Direct employment at Bombardier is currently however under threat with plans for 1,400 redundancies announced in 2011.
- 3.25 Toyota has a major plant at Burnaston, in South Derbyshire. This directly employs around 2,900 people. Toyota has recently announced that the plant will be its European centre for its new generation of hatchback vehicles, creating up to 1,500 new jobs.
- 3.26 Each of the above 'catalyst' firms supports a wider supply chain within and beyond the sub-region. However previous research highlights limited tangible benefits from co-location of these major manufacturing firms.
- 3.27 However while these catalyst employers and their supporting supply chains in the manufacturing sector support value added, and significant higher-paid employment opportunities; the reliance on a selected number of sectors and key employers also brings a degree of 'risk' or exposure to trends affecting particular sectors. Furthermore, we would expect job losses in other parts of the manufacturing sector.

#### *Enterprise and Small Business*

- 3.28 The Centre for Cities Report highlights that Derby's economic success is less attributable currently to business start-ups. The Derby LEA highlights that business birth rates continue to lag behind



other areas in the county, with 41 business births per 10,000 population compared to 47 at the regional level in 2008. Business survival rates have though been above average in the City, supporting growth in the number of active enterprises.

- 3.29 Within Derbyshire, Amber Valley has the lowest level of active enterprises (4,350 in 2009 according to the LEA). There is some evidence that self-employment has increased notably in South Derbyshire over the last few years.

*Labour Market Characteristics*

- 3.30 Next we move on to consider key characteristics of the labour market. Figure 35 summarises key labour market indicators. The employment rate in Amber Valley is marginally above regional and national averages. In South Derbyshire the employment rate however substantially above average – at 82% compared to 71% across the region. South Derbyshire in particular has a notably high level of semi-employment. In Derby in contrast, unemployment is much higher (10.2%) and the employment rate is therefore notably lower.

- 3.31 In both Amber Valley and Derby there is potential to support employment growth through increasing the employment rate, through reductions in unemployment and worklessness.

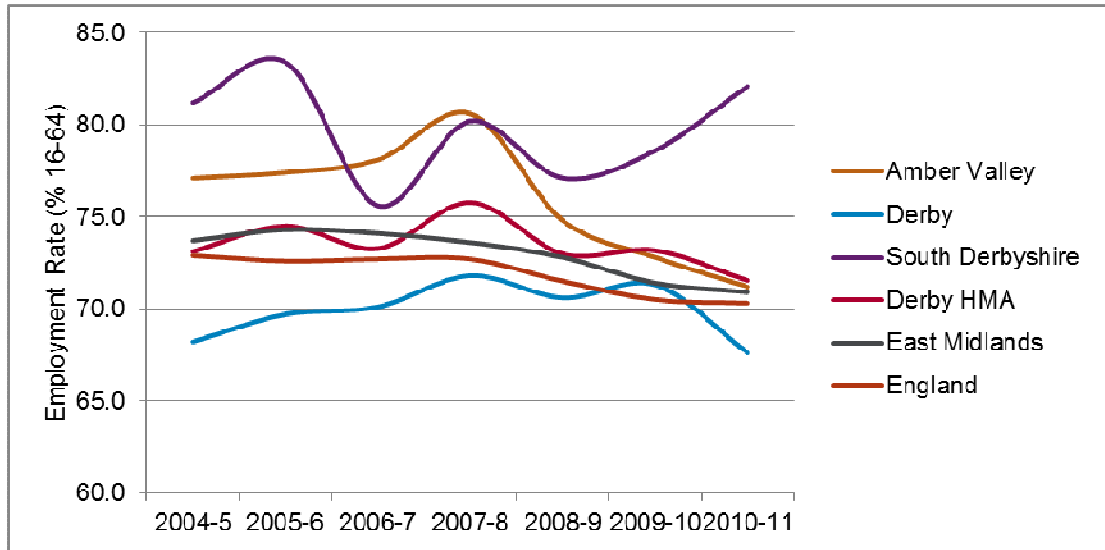
**Figure 35: Key Labour Market Statistics**

Jul 2010-Jun 2011	Amber Valley	Derby	South Derbyshire	East Midlands	England
Employment Rate (% 16-64)	71.2	67.6	82.1	70.9	70.3
Employees (%)	61.6	61.7	71.9	61.8	60.6
Self-Employed (%)	9.5	5.8	10.2	8.7	9.3
Unemployment (% 16-64)	5.1	10.2	2.5	7.8	7.8
Unemployment (% 16+)	7.5	9.6	5.0	7.6	7.7
Economically Inactive (% 16-64)	25	24.7	15.8	23.1	23.7

*Source: Annual Population Survey*

- 3.32 Figure 36 tracks changes in the employment rate over time. It indicates that since the beginning of the plan period (2008), the employment rate has fallen in Derby and particularly in Amber Valley. We would consider some potential to support employment growth through improvement in employment rates in both of these authorities.

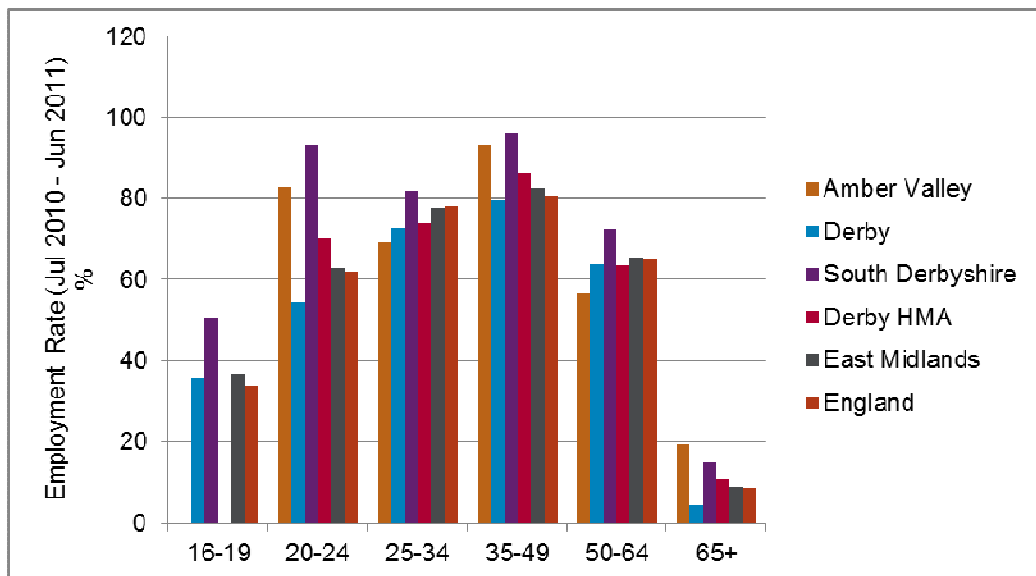
**Figure 36: Employment Rate**



Source: Annual Population Survey

3.33 The lower employment rate in Derby is affected by the student population and skills base. Figure 37 profiles the employment rate for different age groups.

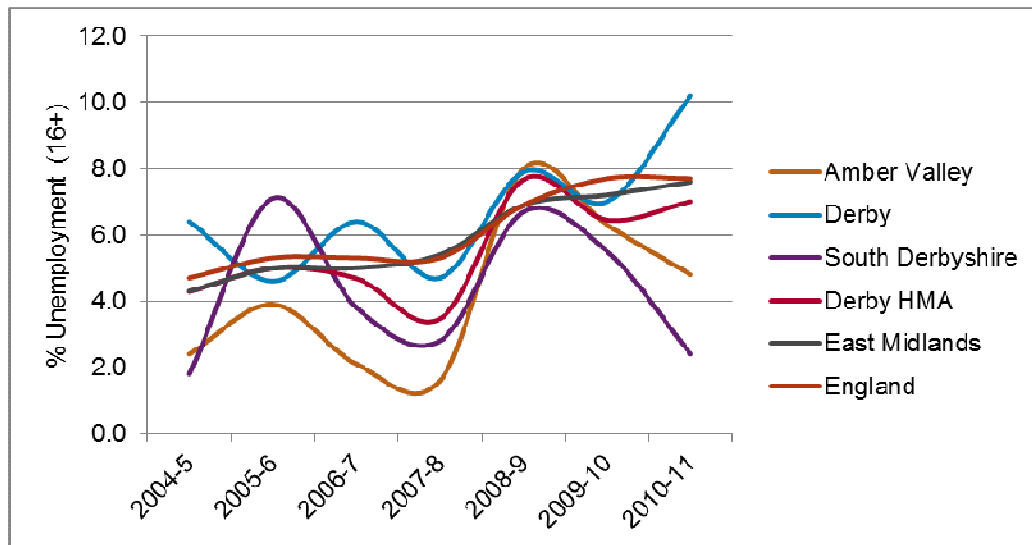
**Figure 37: Employment Rate by Age**



Source: Annual Population Survey (NB No date 16-19 in Amber Valley)

3.34 Figure 38 tracks trends in unemployment. It indicates a notable jump in unemployment (measured by the Annual Population Survey) from the onset of the recession in 2008 in Derby.

**Figure 38: Unemployment**



Source: Annual Population Survey

3.35 The most recent trends evident suggest that unemployment has begun to fall back in South Derbyshire and Amber Valley, but continued to grow in Derby.

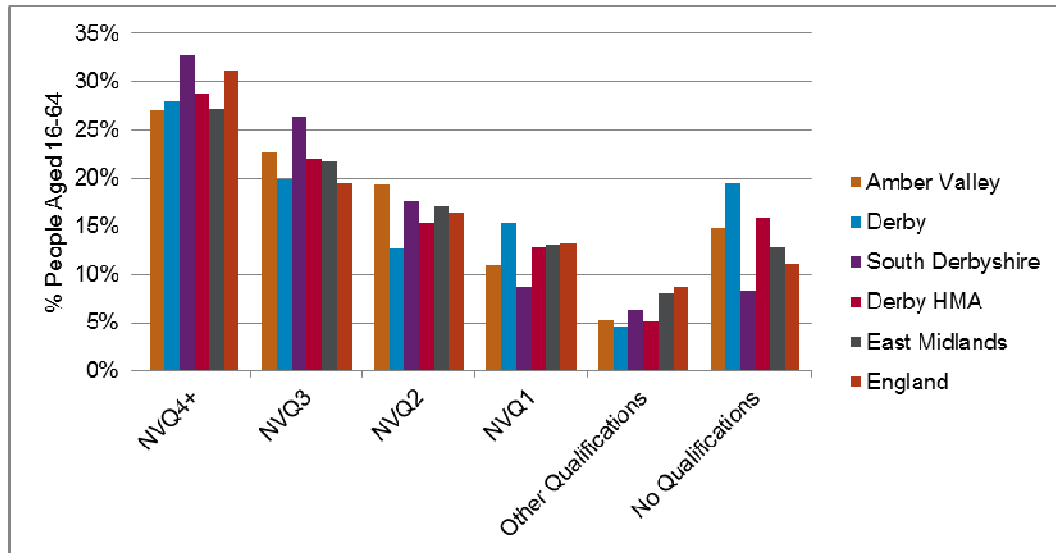
3.36 The match between skills available and the types of jobs created will influence the degree to which job creation can be supported by reductions in unemployment and worklessness.

3.37 South Derbyshire is home to a notable proportion of higher-skilled residents qualified to degree or A-level or equivalent. This is likely to reflect its housing-quality of life offer.

3.38 Derby has a similar level of working-age residents qualified to NVQ level 4 or more (or equivalent) as is the case across the region, in part influenced by the presence of a University, but also has the highest level of residents with no qualifications or basic skills at NVQ1.

3.39 Amber Valley has a slightly above average proportion of working-age residents with no qualifications, but overall its qualifications profile is similar to the regional profile.

**Figure 39: Skills of Resident Working-Age Population, 2010**



Source: Annual Population Survey

- 3.40 Typically those employed in higher-level qualifications are often prepared to travel further to access employment.
- 3.41 The Derbyshire LEA indicates net out-commuting in 2001 of 5,450 persons from Amber Valley and 12,750 persons from South Derbyshire with significant commuting from both into Derby.
- 3.42 The table below provides an indication of changes in commuting dynamics since 2001. In-commuting to Derby appears to have increased slightly in proportional terms, from both South Derbyshire and Amber Valley as well as East Staffordshire.

**Figure 40: Commuting into Derby, 2001 and 2008**

Where people working in Derby live ....	2001 flow	2008 flow
Derby	64.1%	63.6%
South Derbyshire	8.4%	8.6%
Amber Valley	4.8%	5.3%
Erewash	6.6%	5.3%
East Staffordshire	0.9%	3.2%
Broxtowe	2.0%	2.4%
Nottingham	1.4%	1.4%
North West Leicestershire	0.8%	1.1%

Source: Local Labour Force Survey, 2001; Annual Population Survey, 2008

- 3.43 The proportion of Derby residents commuting out appears to have fallen from 25% in 2001 to 24% in 2008; but with a proportionally marginal increase in commuting to East Staffordshire, Amber Valley and Erewash districts.
- 3.44 In South Derbyshire, there is significant out-commuting. Self-containment has increased but from a low base, with a significant proportion of the resident workforce commuting to Derby, East Staffordshire or North West Leicestershire to work. The proportion of residents commuting to Derby and East Staffordshire however appears to have fallen slightly.

**Figure 41: Out-Commuting from South Derbyshire, 2001 and 2008**

Where people living in South Derbyshire work ...	2001 flow	2008 flow
South Derbyshire	33.8%	40.2%
Derby	23.9%	22.9%
East Staffordshire	18.4%	12.7%
North West Leicestershire	7.0%	7.3%
Nottingham	..	2.7%

Source: Local Labour Force Survey, 2001; Annual Population Survey, 2008

- 3.45 For Amber Valley, out-commuting is less substantial and again self-containment has increased – in this case to 59% in 2008. Out-commuting to Nottingham appears to have grown, but has fallen to other locations. Commuting into Amber Valley from Bolsover and Nottingham appears to have increased.

**Figure 42: Out-Commuting from Amber Valley, 2001 and 2008**

Where people living in Amber Valley work ...	2001 flow	2008 flow
Amber Valley	53.1%	58.7%
Derby	11.2%	11.1%
Nottingham	4.1%	5.9%
Erewash	6.0%	5.5%
Derbyshire Dales	4.9%	3.8%
Broxtowe	3.5%	2.9%

Source: Local Labour Force Survey, 2001; Annual Population Survey, 2008

- 3.46 These commuting dynamics are influenced by:
- The type and quality of jobs;
  - The balance between jobs and homes; and
  - The housing-quality of place offer available in different locations.
- 3.47 Looking first at the balance of jobs and homes, we have analysed data on job densities which describe the ratio between jobs and the size of the working-age population. The analysis indicates that both Amber Valley and particularly South Derbyshire have a low jobs density – with more

working-age residents than jobs. This is particularly apparent in South Derbyshire. In Derby the jobs density is above average, but remains below other larger cities in the region.

3.48 The Centre for Cities report indicates that there were 51,560 in-commuters into Derby in 2003 (41% of the workforce) but highlights that this is significantly less than the 92,100 who commute into Leicester and 120,100 who commute into Nottingham.

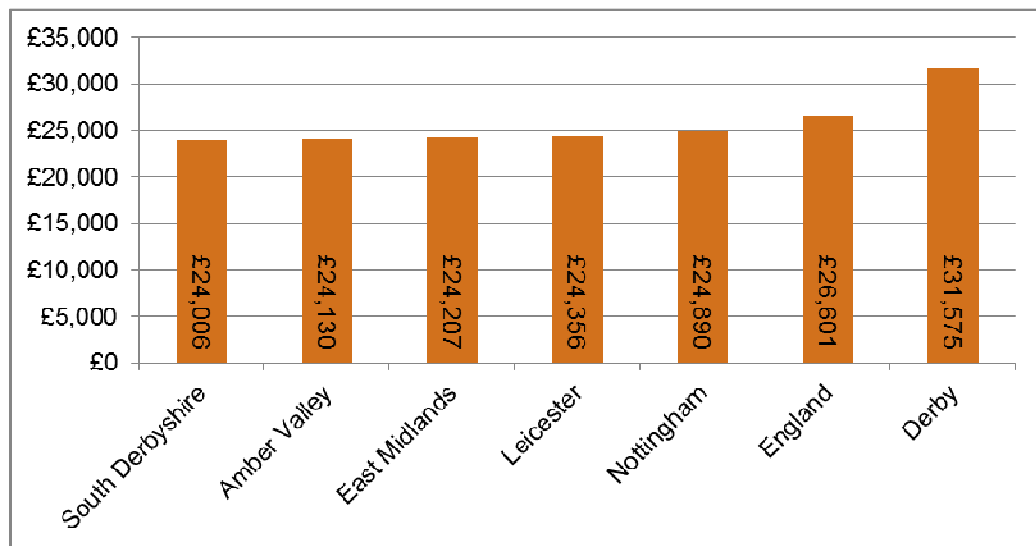
**Figure 43: Jobs Density, 2009**

	Jobs Density, 2009
Amber Valley	0.69
Derby	0.81
South Derbyshire	0.51
East Midlands	0.74
England	0.78
Nottingham	0.92
Leicester	0.84

Source: NOMIS

3.49 Looking at the profile of wages in different areas, the distribution of jobs is much more strongly focused towards higher-paid jobs in Derby than in either Amber Valley or South Derbyshire. Earnings for those in jobs with above median earnings is on average notably higher than in Derby than the other two authorities.

**Figure 44: Gross Annual Earnings (Workplace), 2011**

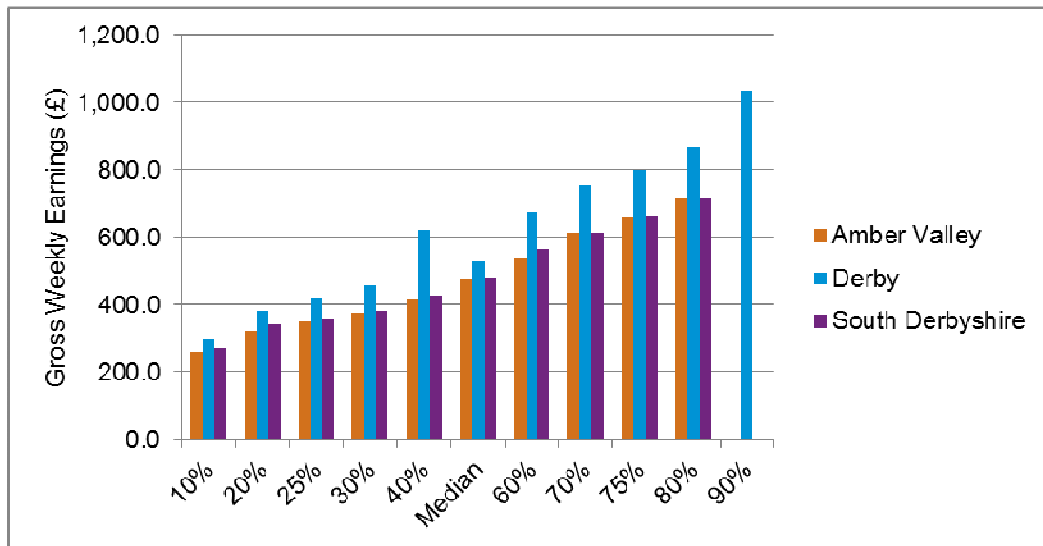


Source: Annual Survey of Hours & Earnings

3.50 Indeed average median for people working in Derby are a substantial 30% above the East Midlands average and higher than those in both Leicester and Nottingham. Indeed they are highest of any

city outside London and the South East – highlighting Derby’s role as a hub for highly specialized and skilled jobs for people living in the City and surrounding areas<sup>7</sup>.

**Figure 45: Workplace Wages, 2011**



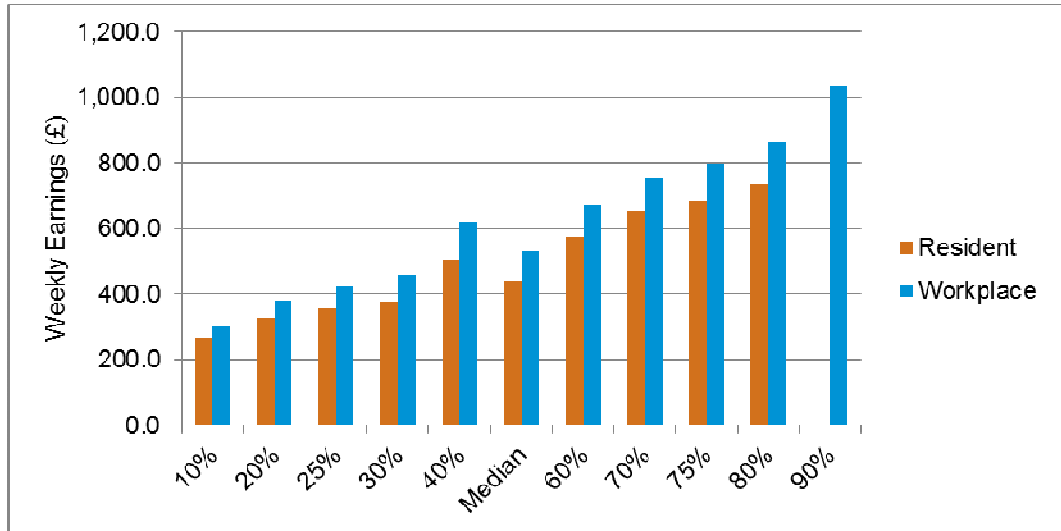
Source: Annual Survey of Hours & Earnings

3.51 In Derby, workplace earnings are notably above resident earnings, and this supports an inflow of workers into the City to access higher-paid occupations. An Experian report in 2007 estimated that 51% of professional jobs in Derby are filled by non-Derby residents compared to 16% of those employed in elementary occupations in the City<sup>8</sup>.

<sup>7</sup> See Centre for Cities (2010)

<sup>8</sup> Experian (2007) Commuting Flows in the East Midlands

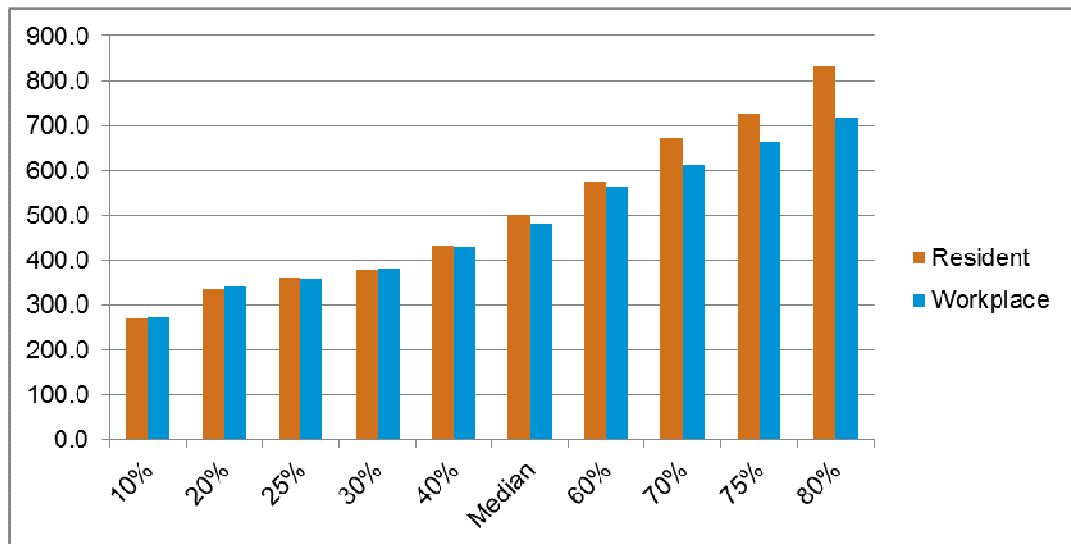
**Figure 46: Comparison of Resident & Workplace Earnings, Derby (2011)**



Source: Annual Survey of Hours and Earnings

3.52 In South Derbyshire, the evidence points to a particular outflow of residents in the top 30% income bands to work. Residence-based earnings are notably above workplace-based earnings for these groups.

**Figure 47: Comparison of Resident & Workplace Earnings, South Derbyshire (2011)**

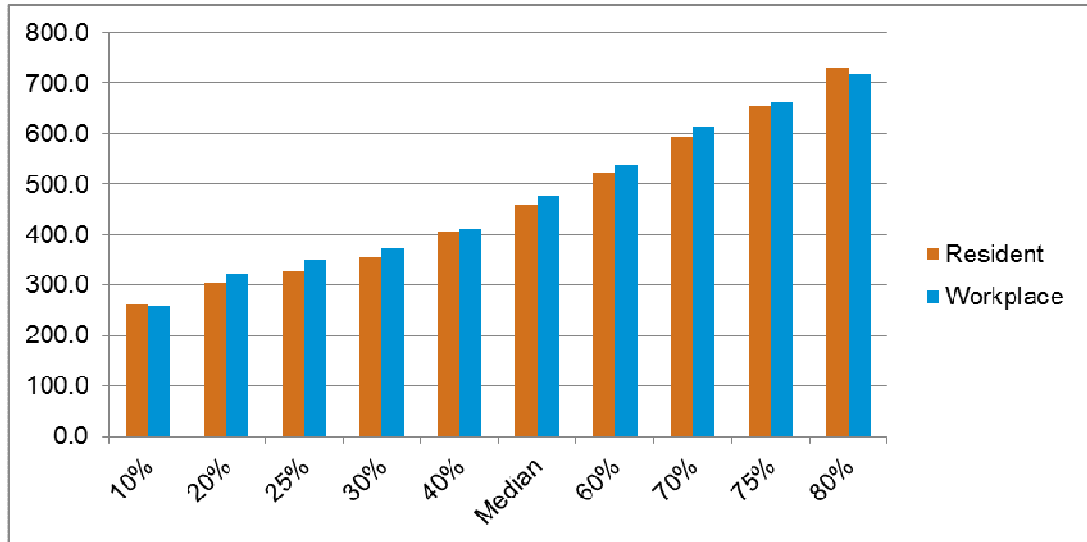


Source: Annual Survey of Hours & Earnings



3.53 In contrast in Amber Valley, there is not a substantial difference between the earnings profile of residents and local workers.

**Figure 48: Comparison of Resident & Workplace Earnings, Amber Valley (2011)**



Source: Annual Survey of Hours & Earnings

3.54 The analysis highlights the inter-connectedness of the three local authorities with Derby forming a hub for employment but both Amber Valley and particularly South Derbyshire providing a housing-quality of life offer which supports the HMA's economy.

### *SWOT Analysis of the Derby HMA Economy*

We can draw the background economic analysis together to identify key strengths, weaknesses, opportunities and threats which may influence future economic performance:

#### *Strengths*

- Location: central position of the HMA in England with strong road and rail connections, including Midland Main Line and Cross Country Rail and M1 Motorway;

#### *Weaknesses*

- Entrepreneurial Culture: relatively low levels of enterprise and business start-ups, which may hold back economic restructuring;

#### *Opportunities*

- Manufacturing Base: a strong manufacturing base which supports rebalancing of the national economy towards trade and investment. National support to nurturing and developing higher value-added manufacturing and increasing exports. Opportunities from investment and innovation in key manufacturing firms to support and develop wider supply chains;
- Freight/Logistics: existing concentration of employment in freight/logistics particularly in South of HMA, with potential to develop activities and employment further through development of Rail Freight Interchange.
- Economic Participation: potential to support employment growth in Derby and Amber Valley through reductions in unemployment and bringing people into/ back into the workforce;
- University-Business Relationships: currently the University of Derby undertakes limited commercial R&D and has had limited success in developing new business spin-offs or providing consultancy. There are however opportunities to develop this over time;
- Derby Urban Renaissance: the last 5 years has seen significant investment in Derby City Centre, such as Westfield, Quod, and hotel developments. The pipeline of further regeneration schemes, such as office developments and the new world class leisure facilities provide further opportunities to support job creation and boost the city's economy.

#### *Threats*

- Public Sector Employment: vulnerability to public sector spending cuts, particularly in Derby and Amber Valley where more than 1 in 5 jobs is in the public sector.
- Reliance on Key Manufacturing Employers: bringing with it a risk of external shocks arising from economic trends affecting particular sectors, or the individual decisions of key companies. In the short-term there is a risk to jobs in the rail sector. Technological change could also significantly impact on job numbers.
- Skills: loss of skills from those retiring from the workforce, which if not replaced may undermine the area's competitive advantage.

### **Baseline Employment Forecasts**

3.55 In light of the above analysis of the characteristics of the economy of the Derby Housing Market Area, we move on next to consider and interrogate employment growth forecasts prepared by Experian.

#### *How the Forecasts Work*

3.56 The Experian forecast data models economic performance between 1997 and 2031. We first describe key past trends as a basis for considering the forecasts. The forecasts are based on data up to 2010, and wider economic trends, performance and outlook up to the base date of the forecasts at January 2012.

3.57 The forecasts assume that historical relationships between the performance of different economic sectors in each of the three local authorities relative to the East Midlands region in the past, will continue to hold true moving forward. They take account of Experian's view regarding future performance of the national and regional economy.

3.58 The forecasts do not however take account of local factors regarding the investment or disinvestment decisions of specific companies, nor supply-side measures such as provision of employment sites or infrastructure. Nor do they take account of local economic strategies and regeneration programmes. It is therefore necessary to interrogate the forecast in light of these factors.

3.59 Economic forecasts need to be treated with some caution, particularly at the time of writing given significant uncertainty regarding the pace and timing of recovery from the current recession and economic performance in the next 'economic cycle.'

#### *Past Economic Trends*

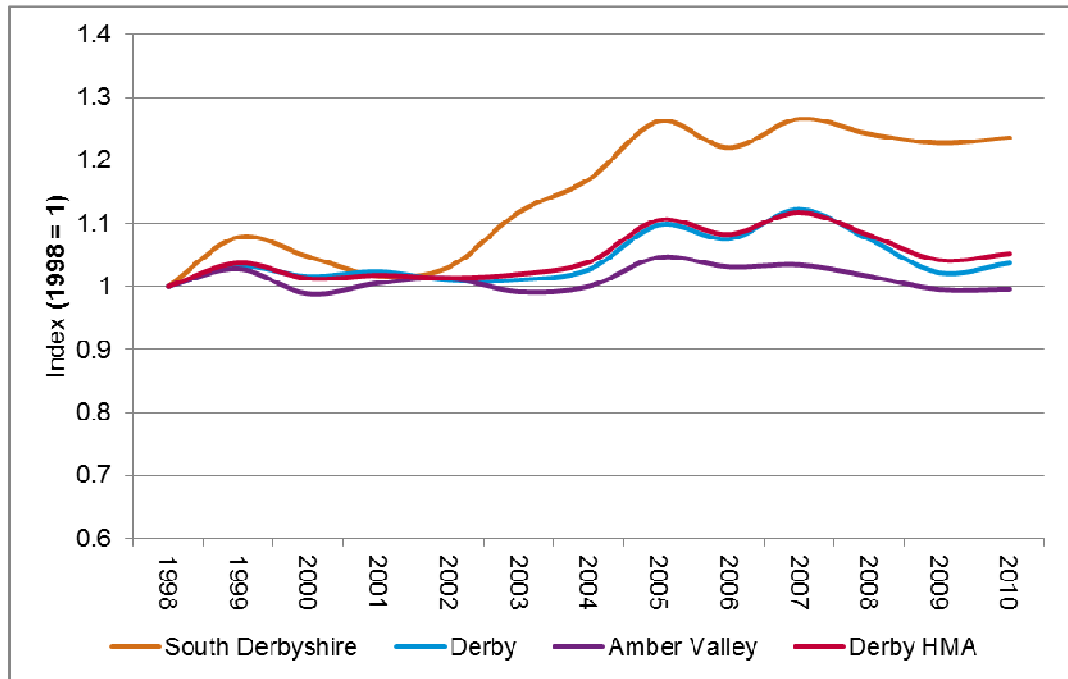
3.60 The Experian data indicates that total employment increased across the Derby HMA by 16,700 (7.8%) over the 1998-2008 decade. However much of this growth occurred between 2003-5 during which employment increased by 17,600.

3.61 Strong employment growth between 2003-5 was influenced by employment growth in all three authorities, but with particularly strong growth in South Derbyshire.

3.62 Total employment declined in all three authorities between 2007-9. Employment in 2010 across the Derby HMA was -5.8% below levels in 2007, with the smallest reduction (-2.4%) in South

Derbyshire, compared to -3.7% in Amber Valley and -7.6% in Derby. It is evident that the recession has had a greater impact on overall employment levels in Derby, whilst the impact has been much more moderate in South Derbyshire.

**Figure 49: Total Employment, 1998-2010**



Source: Experian

- 3.63 Looking at the 2000-2010 period, full-time equivalent employment however declined across the Derby HMA. Over this period it increased by 11,300 between 2000 – 2007, but declined by -13,700 between 2007-2009 during the economic recession.
- 3.64 The strongest employment growth over the 2000-2010 period as a whole was in residential care and social work (+4500) and health (+3200). Other sectors which saw a notable growth in jobs were professional services (+1900), public administration (+1400) and real estate (+1300). Computing and Information Services also saw growth in employment of over 1000 jobs.

**Figure 50: Growing Sectors, 2000-2010**

	Growth in Total Employment ('000s)			
	Amber Valley	Derby	South Derbyshire	Derby HMA
Residential Care & Social Work	0.96	3.09	0.44	4.49
Health	0.79	2.09	0.32	3.20
Professional Services	0.22	1.25	0.41	1.89
Public Administration & Defence	0.94	0.54	-0.04	1.44
Real Estate	0.38	0.76	0.17	1.31
Computing & Information Services	0.14	0.80	0.21	1.15
Finance	0.21	0.94	-0.05	1.10
Accommodation & Food Services	0.45	0.07	0.34	0.85
Transport Equipment	-0.30	-0.30	1.12	0.52
Utilities	0.10	0.35	0.00	0.45
Land Transport, Storage & Post	-0.32	0.15	0.53	0.36

Source: Experian

3.65 Growth in employment in these areas was however offset to a significant degree by reductions in manufacturing employment, with a net loss of -12,600 manufacturing jobs. Within this, the strongest reduction was in textiles and clothing (-3900) and metal products (-2700) as well as other manufacturing (-1600). As Figure 51 shows, the transport equipment sub-sector was the only part of manufacturing in which employment increased across the HMA. There was also a notable reduction of -2800 jobs in construction.

**Figure 51: Employment Change in Manufacturing Sub-Sectors, 2000-2010**

	Growth in Total Employment ('000s)			
	Amber Valley	Derby	South Derbyshire	Derby HMA
Food, Drink & Tobacco	0.94	-0.75	-0.51	-0.32
Textiles & Clothing	-1.98	-1.21	-0.73	-3.92
Wood & Paper	-0.61	-0.11	0.05	-0.66
Printing and Recorded Media	-0.19	-0.63	-0.03	-0.85
Fuel Refining	-0.04	0.00	0.00	-0.04
Chemicals	-0.75	-0.46	0.05	-1.17
Pharmaceuticals	-0.53	-0.37	-0.07	-0.97
Non-Metallic Products	-0.28	0.43	-0.22	-0.06
Metal Products	-0.55	-2.08	-0.08	-2.71
Computer & Electronic Products	-0.24	-0.16	0.05	-0.34
Machinery & Equipment	-0.47	-0.11	0.15	-0.43
Transport Equipment	-0.30	-0.30	1.12	0.52
Other Manufacturing	-0.54	-1.01	-0.06	-1.61

Source: Experian

3.66 The picture varies however depending on what time period is considered. Considering the 2000-2007 period, employment grew strongly across a number of sectors. Key growth sectors (in terms of FTE job numbers) were residential care and social work (+3600), transport equipment (+3000),

public administration (+2900) and health (+2600). Finance, real estate and professional services also posted growth in employment. However the manufacturing sector overall lost -8000 jobs.

- 3.67 Looking at the more recent data, the picture is different. Employment growth was concentrated in a limited number of sectors – with residential care and social work, health, computing and information services showing reasonable growth. On the other hand, manufacturing employment continued to decline with further job losses of over -5000 (around half of which was in transport equipment). Employment also declined notably in construction (-3600), the wholesale, retail and land transport sectors. A -1500 reduction in FTE employment was also posted in public administration and -1400 in administration and support services.

*What do past trends tell us about economic dynamics in the Derby HMA?*

The analysis of economic dynamics in the HMA points to:

- Vulnerability to economic dynamics which affect individual sectors and decisions of major manufacturing companies, including train manufacture/rail engineering, car manufacturing, and the aerospace/defence sector;
- A consistent downward trend in manufacturing employment both before and during the recession, which appears only to have been bucked by growth pre-2007 in the manufacturing of transport equipment;
- The impact of the housing market and infrastructure investment on the jobs in the construction industry;
- The impact of population dynamics and inflationary pressures on employment in retail and consumer services;
- Growing demand for health, and residential / social care linked to changing population dynamics; and
- The influence of public expenditure which was a key contributor to job creation prior to 2007.

The evidence suggests a likely continuance of manufacturing job losses (albeit that output is likely to increase). Against this context, overall employment growth will be influenced by the ability of growth in other (primarily service) sectors to offset job losses in manufacturing.

### **Baseline Economic Forecasts**

- 3.68 Turning to consider the Experian economic forecasts, Figure 52 considers GVA growth rates, as a measure of economic output. Across the 2008-28 plan period, output is expected to grow by an annual average of 1.7% in Amber Valley, 1.8% in Derby and 2.2% in South Derbyshire.

**Figure 52: GVA Growth Rates**

GVA	1998-2003	2003-2008	2008-2013	2013-2018	2018-2023	2023-2028
	% pa	% pa	% pa	% pa	% pa	% pa
Amber Valley	3.1%	1.0%	0.6%	1.8%	2.0%	1.9%
Derby	3.4%	2.1%	0.5%	1.7%	2.0%	2.3%
South Derbyshire	5.4%	2.0%	1.3%	2.2%	2.0%	2.2%

Source: Experian

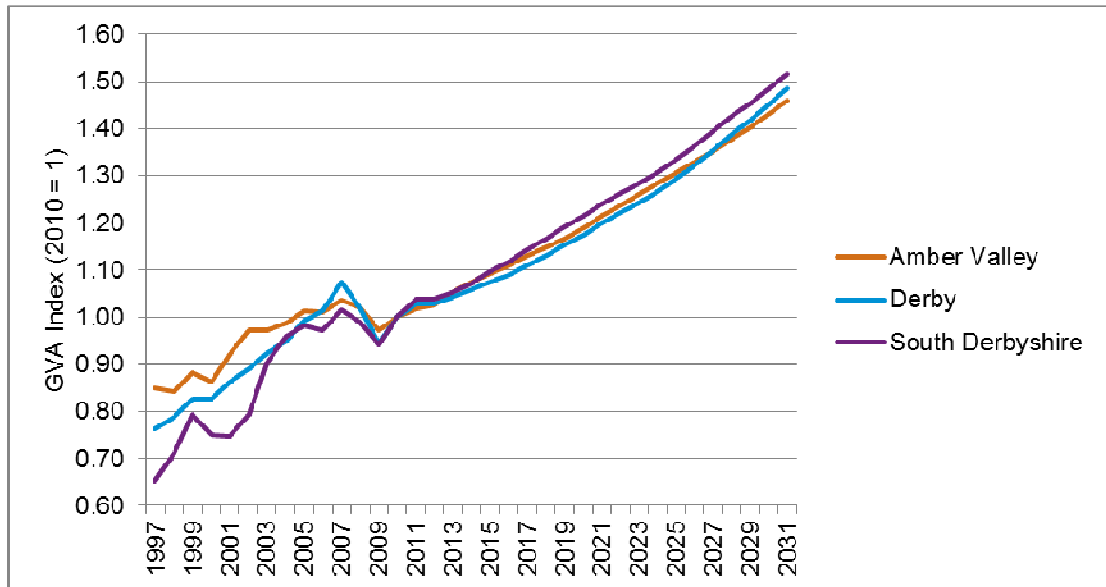
3.69 Growth in output is expected to be muted in the short-term affected by global and national economic trends, returning to nearer long-term growth rates in the medium term. Performance will however continue to be impacted by public sector spending restraints to 2017.

3.70 The background context to the forecasts is one of:

- A weak near-term economic outlook linked to a faltering Eurozone economy, squeezed incomes impacting on consumer spending and fragile economic confidence which feeds into business investment; as well as government spending cuts; and
- An assumption of an orderly resolution to the Eurozone crisis. However in the short-term the combination of limited growth in exports and weak domestic demand (influenced by inflation) will result in negligible growth until 2013. Efforts by both Government and householders to reduce their debt burdens will also impact on the economic growth in the medium-term.

3.71 Output growth is forecast to be strongest in South Derbyshire, in line with past trends where the output growth is estimated to have outperformed that in Derby (albeit from a lower base).

**Figure 53: GVA Growth Trends**



Source: Experian

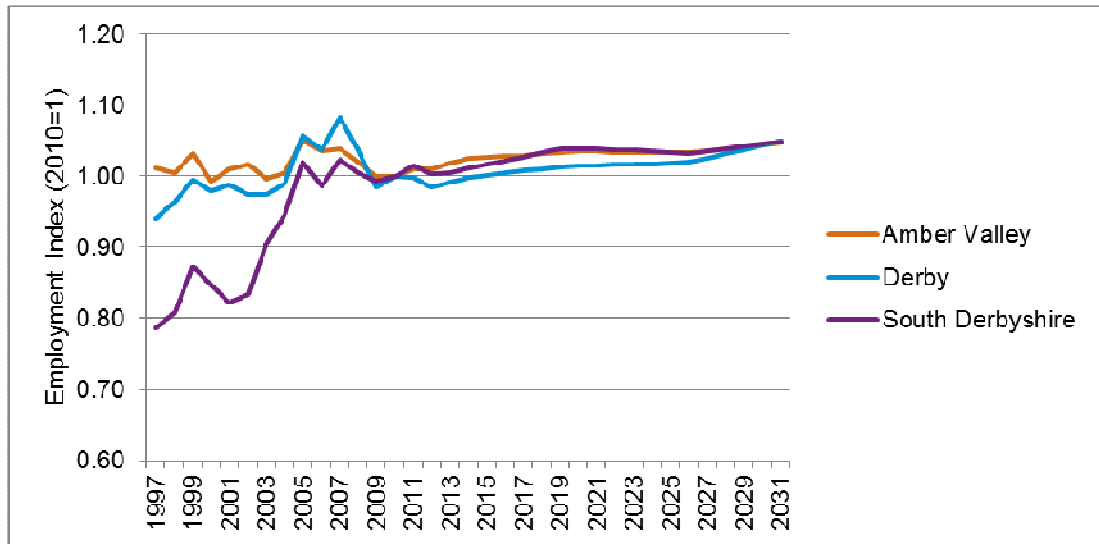
3.72 Total employment includes self-employment and Government trainees. The forecasts indicate that despite relatively strong employment growth immediately prior to 2007 total employment in Derby is expected to be more strongly affected by the recession, posting a substantial net reduction in employment between 2008-2013 of -5,700 jobs which is not recovered during the remainder of the plan period to 2028.

**Figure 54: Employment Growth Rates (Total Employment)**

Total Employment	1998-2003	2003-2008	2008-2013	2013-2018	2018-2023	2023-2028
	% pa	% pa	% pa	% pa	% pa	% pa
Amber Valley	-0.2%	0.5%	0.0%	0.3%	0.0%	0.1%
Derby	0.2%	1.3%	-0.9%	0.4%	0.1%	0.3%
South Derbyshire	2.4%	2.2%	0.0%	0.6%	0.1%	0.0%

3.73 Between 1998-2008 total employment in South Derbyshire grew more strongly than in either Amber Valley or Derby. It is expected to continue to outperform these authorities moving forward.

**Figure 55: Employment Growth Trend**



Source: Experian

3.74 Between 2012-2028, Experian forecasts (net) employment growth of 1,600 in Amber Valley, 5,900 in Derby and 1,200 in South Derbyshire.

3.75 Total employment is a count of all jobs. Some of the jobs are part time and some people can have more than one job. Figure 56 below tracks growth rates in full-time equivalent (FTE) employment.



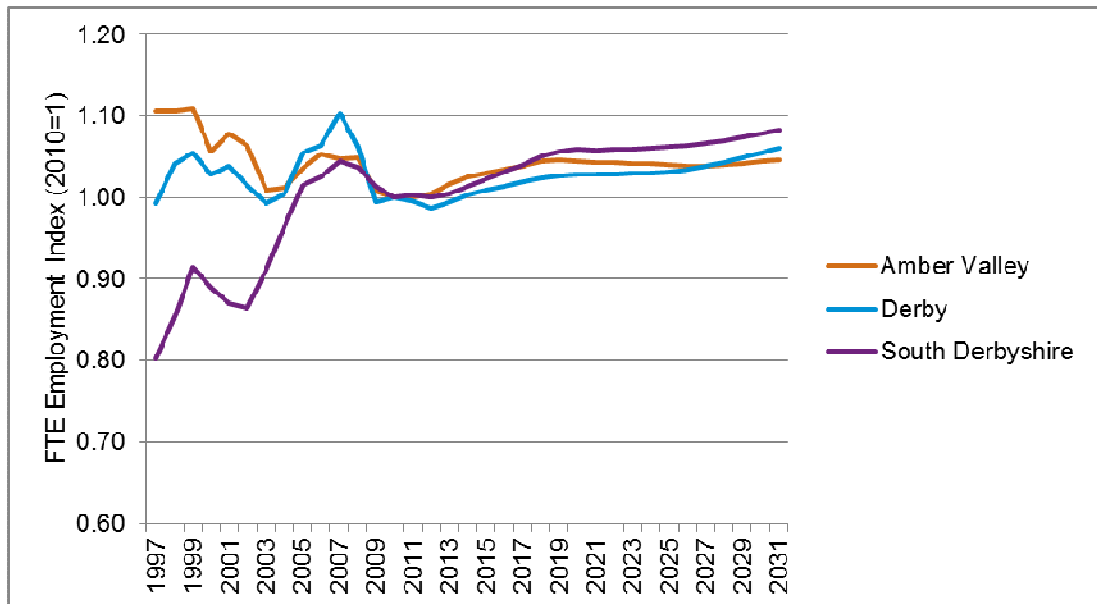
3.76 The Experian data indicates that full-time equivalent employment in each of the local authorities actually fell between 1998-2003 (likely as a result of the reduction in manufacturing employment). It indicates that FTE employment growth is expected to be negative in each of the three local authorities between 2008-13 (with the strongest reduction in Derby). Over the longer-term, FTE employment growth is expected to be weakest in Amber Valley. South Derbyshire is expected to perform more strongly in the medium term with longer-term performance similar to Derby.

**Figure 56: FTE Employment Growth Rates**

FTE Employment	1998-2003	2003-2008	2008-2013	2013-2018	2018-2023	2023-2028
	% pa	% pa	% pa	% pa	% pa	% pa
Amber Valley	-1.7%	0.8%	-0.6%	0.5%	0.0%	0.0%
Derby	-1.0%	1.4%	-1.3%	0.6%	0.1%	0.3%
South Derbyshire	1.3%	2.7%	-0.6%	0.9%	0.2%	0.2%

Source: Experian

**Figure 57: FTE Employment Growth Trend**



Source: Experian

3.77 Next we turn to consider performance of individual sectors, looking first at output then employment. It should be recognized that larger growth rates in some sectors (e.g. agriculture; mining and quarrying and utilities) are affected by the relatively smaller size of these sectors.

3.78 Figure 58 indicates past performance forecast changes in GVA in Amber Valley. In the period between 2008-2013, output is forecast to fall significantly in construction, wholesale/retail, and

transport/storage sectors linked to conditions in the housing market, public expenditure trends and the impact of the wider economic outlook and inflationary pressures on consumer spending.

**Figure 58: GVA Growth by Broad Sector, Amber Valley**

Output (GVA): Amber Valley	1998-2003	2003-2008	2008-2013	2013-2018	2018-2023	2023-2028
Agriculture, Forestry & Fishing	13.9%	7.9%	0.9%	-0.9%	0.0%	-1.8%
Accommodation, Food Services & Recreation	8.7%	1.8%	-0.3%	1.7%	3.5%	2.6%
Construction	6.2%	-1.5%	-1.6%	4.5%	3.3%	3.2%
Wholesale & Retail	5.8%	1.9%	-1.4%	2.1%	2.4%	2.2%
Mining and Quarrying	-10.1%	-7.6%	-7.5%	-10.5%	-14.3%	-12.8%
Finance & Insurance	-1.1%	5.1%	-1.9%	2.0%	4.7%	3.9%
Information & communication	8.2%	0.6%	5.4%	2.6%	2.7%	2.9%
Manufacturing	-1.8%	0.8%	1.7%	1.2%	0.3%	0.2%
Professional & Other Private Services	3.4%	1.6%	1.7%	2.2%	2.6%	2.4%
Public Services	12.1%	2.0%	1.4%	0.8%	2.0%	2.1%
Transport & storage	3.6%	-5.6%	-3.0%	2.8%	3.6%	2.8%
Utilities	12.3%	14.6%	2.2%	1.3%	1.3%	0.9%
Total Output	3.1%	1.0%	0.6%	1.8%	2.0%	1.9%

Source: Experian

- 3.79 The construction sector (in which Amber Valley has a degree of specialism) is expected to respond relatively strongly in the 2013-18 period posting strong output growth. Manufacturing output is expected to grow relatively strongly pre-2018, but less strongly thereafter (potentially reflecting the lower proportion of higher value-added activities).
- 3.80 In Derby, construction output has particularly been influenced by the recession alongside the finance/insurance and transport and storage sectors. Manufacturing is forecast to perform relatively strongly, as are the professional & other private services and finance and insurance sectors. These are sectors in which Derby has a degree of specialism.

**Figure 59: GVA Growth by Broad Sector: Derby**

Output (GVA): Derby	1998-2003	2003-2008	2008-2013	2013-2018	2018-2023	2023-2028
Agriculture, Forestry & Fishing	39.7%	-2.1%	9.0%	-1.6%	-0.8%	-0.5%
Accommodation, Food Services & Recreation	5.3%	-0.3%	-1.6%	2.0%	2.1%	2.3%
Construction	5.8%	-3.7%	-2.7%	2.8%	1.7%	2.4%
Wholesale & Retail	2.9%	2.7%	-1.3%	1.9%	2.2%	2.2%
Mining and Quarrying	49.1%	-9.6%	-4.0%	-10.8%	-14.4%	-12.9%
Finance & Insurance	4.4%	12.0%	-4.8%	4.1%	3.0%	2.8%
Information & communication	6.6%	0.0%	7.3%	2.5%	2.8%	3.1%
Manufacturing	1.9%	1.2%	2.4%	1.2%	0.5%	1.9%
Professional & Other Private Services	0.9%	3.3%	1.5%	2.2%	3.0%	2.9%
Public Services	4.5%	1.6%	1.6%	0.9%	2.3%	2.4%
Transport & storage	4.5%	0.0%	-3.9%	1.3%	2.2%	2.0%
Utilities	6.9%	15.0%	-0.7%	1.2%	1.2%	0.9%
Total Output	3.4%	2.1%	0.5%	1.7%	2.0%	2.3%

Source: Experian

3.81 In South Derbyshire, the construction and wholesale/retail sectors are expected to post robust output growth post 2013. Manufacturing output is expected to increase in the short-term. Output growth from public services is expected to be stronger over the longer-term (post 2018) than in Derby or Amber Valley. Key developments could have a notable impact, including in creating construction jobs.

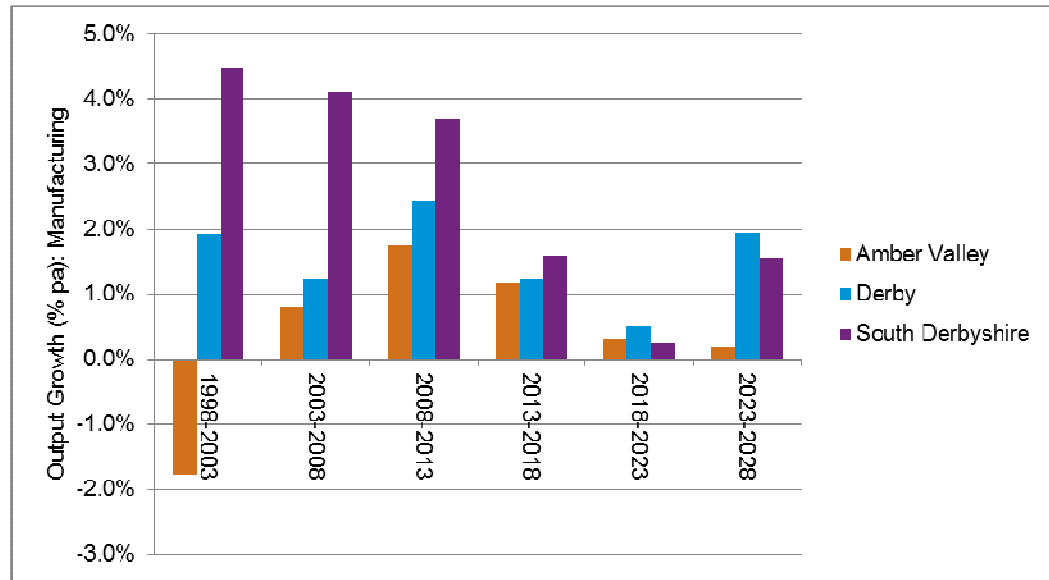
**Figure 60: GVA Growth by Broad Sector: South Derbyshire**

Output (GVA): South Derbyshire	1998-2003	2003-2008	2008-2013	2013-2018	2018-2023	2023-2028
Agriculture, Forestry & Fishing	0.2%	6.2%	3.1%	0.5%	1.2%	-0.9%
Accommodation, Food Services & Recreation	5.7%	4.4%	-0.2%	2.0%	2.6%	2.2%
Construction	15.0%	-4.1%	-1.0%	5.9%	4.0%	3.3%
Wholesale & Retail	4.2%	7.1%	-1.4%	3.5%	3.3%	2.7%
Mining and Quarrying	-18.4%	-7.9%	4.3%	-11.2%	-14.6%	-13.1%
Finance & Insurance	14.4%	-4.3%	-15.2%	1.8%	2.9%	4.4%
Information & communication	15.1%	3.4%	8.5%	3.0%	3.0%	3.1%
Manufacturing	4.5%	4.1%	3.7%	1.6%	0.2%	1.6%
Professional & Other Private Services	3.8%	3.2%	1.8%	1.8%	2.2%	2.1%
Public Services	9.2%	0.0%	1.6%	1.3%	2.7%	2.5%
Transport & storage	3.3%	4.2%	-0.8%	1.5%	2.1%	2.9%
Utilities	5.3%	-7.3%	-5.0%	1.5%	1.7%	1.2%
Total Output	5.4%	2.0%	1.3%	2.2%	2.0%	2.2%

Source: Experian

3.82 Figure 61 below indicates past and forecast relative performance of the manufacturing sector. Strong growth in output is forecast in the short-term to 2013 in all three authorities. Post 2013 while output will continue to grow through improvements in productivity, growth rates are likely to be lower.

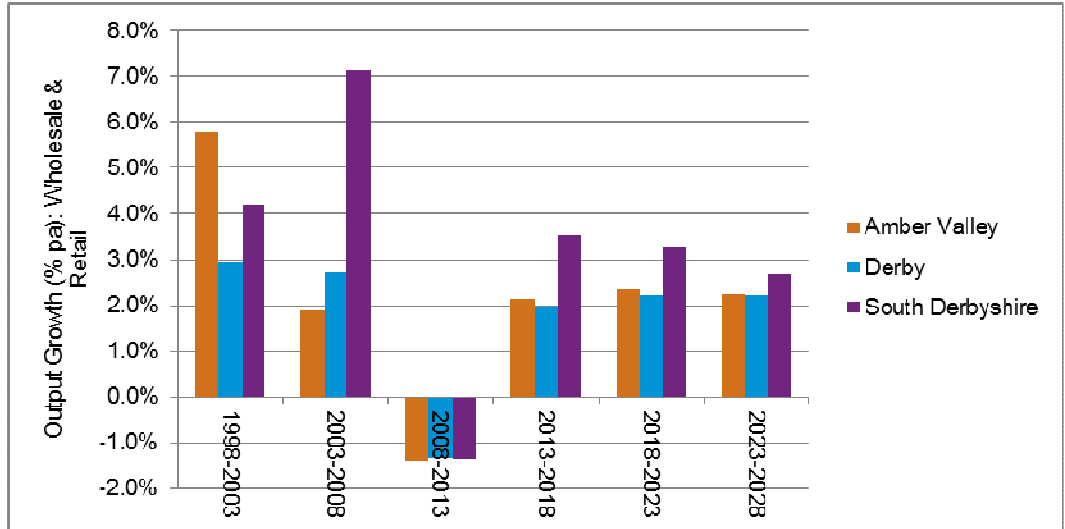
**Figure 61: GVA Growth, Manufacturing**



Source: Experian

3.83 In the wholesale/retail sector, output is expected to fall in the 2008-13 period (linked to trends in consumer spending), but recover thereafter. Growth rates moving forward are forecast to be more moderate than in the last decade (where spending was fuelled to some degree by access to finance). In South Derbyshire forecast growth rates are stronger; however this could be affected by future levels of housing delivery.

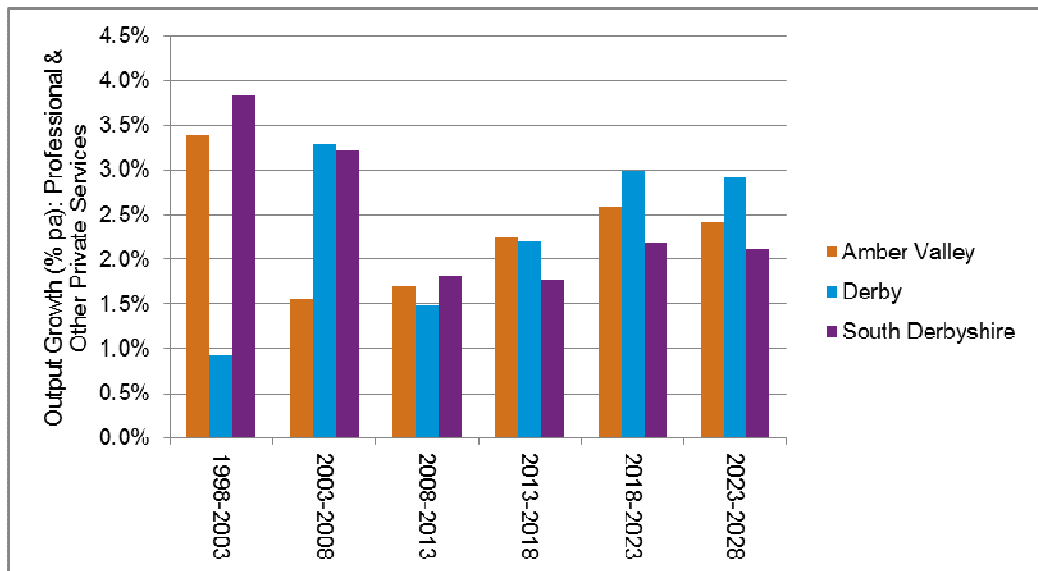
**Figure 62: Growth, Wholesale & Retail**



Source: Experian

3.84 Economic output from professional and other private services is forecast to grow between 2003-8 in each of the authorities, but with stronger growth rates in Derby and Amber Valley. In the longer-term, post 2018, Derby is expected to post the strongest performance.

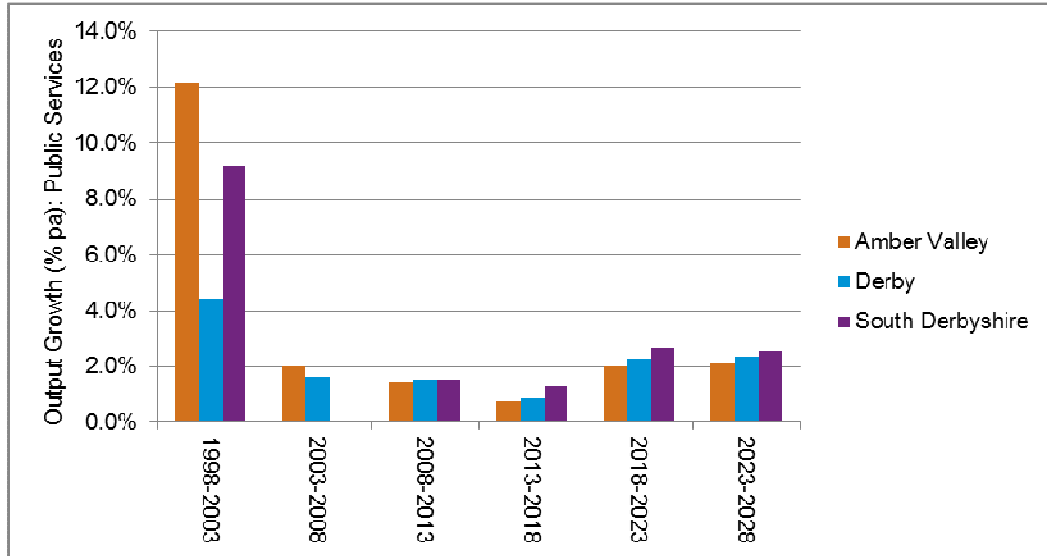
**Figure 63: GVA Growth, Professional & Other Private Services**



Source: Experian

3.85 In contrast, output growth from public services is expected to be much more muted over the period to 2018 in all three authorities relative to past trends. Over the longer-term, growth rates are forecast to be relatively similar.

**Figure 64: GVA Growth, Public Services**



Source: Experian

3.86 Next we consider trends in employment by sector. Figure 65 indicates forecast growth rates in total employment in broad sectors across the Derby HMA. Over the plan period as a whole (2008-2028), a net growth in employment is forecast in:

- Professional and other private services: 7,600 jobs;
- Public services: 5,800 jobs (inc. health/education);
- Utilities: 1,600 jobs; and
- Transport and Storage: 300 jobs.

3.87 This however is expected to be offset by forecast job losses in manufacturing (-7,500), construction (-3,200), and wholesale/retail (-3,100) between 2008-28. Construction employment is however forecast to increase marginally from 2012 forwards.

**Figure 65: Employment Growth, Broad Sectors – Derby HMA**

	1998-2003	2003-2008	2008-2013	2013-2018	2018-2023	2023-2028
Agriculture, Forestry & Fishing	-27.5%	5.7%	50.9%	3.7%	10.7%	-0.8%
Accommodation, Food Services & Recreation	16.6%	6.4%	-6.8%	0.8%	0.3%	1.0%
Construction	29.7%	-9.2%	-21.4%	2.9%	-2.2%	-1.0%
Wholesale & Retail	7.9%	3.3%	-6.3%	-0.4%	-1.8%	-1.1%
Mining and Quarrying	86.3%	0.5%	-45.6%	-22.9%	-22.5%	-19.6%
Finance & Insurance	3.6%	28.4%	-5.9%	5.8%	0.7%	0.6%
Information & communication	22.1%	-7.4%	-1.0%	4.5%	1.2%	1.8%
Manufacturing	-22.7%	-4.1%	2.5%	-4.7%	-8.7%	-7.8%
Professional & Other Private Services	0.1%	18.2%	7.5%	5.6%	3.8%	3.6%
Public Services	17.4%	12.3%	-4.6%	4.3%	5.2%	5.3%
Transport & storage	10.5%	8.7%	-8.7%	5.0%	3.8%	3.8%
Utilities	-6.8%	87.7%	9.4%	15.4%	10.2%	10.6%

Source: Experian

3.88 Figure 66 below provides a more detailed analysis for sectors employing more than 2,000 people across the HMA in 2008. It indicates that:

- Retail is the largest sector in terms of total employment, but employment is expected to fall over the plan period by around 1900 jobs. Jobs in wholesaling are also expected to fall;
- Healthcare jobs are anticipated to continue to grow, increasing by over 3,300 over the plan period. Notable growth is also expected in residential and social care (1,700 jobs). Jobs in the education sector are also expected to grow post 2013. Employment growth will be affected by demographic changes as well as housing delivery;
- Jobs in the manufacture of transport equipment are expected to increase to remain stable over the plan period, increasing in the short-term but declining post 2018. This seems reasonable given recent major investments by local firms, set against longer-term improvements in productivity;
- Professional services are expected to be a major contributor to employment growth with an increase of 5,900 forecast over the plan period increasing the size of this sector substantially. This seems reasonable, and takes account of the potential for development of advisory and consultancy businesses associated with the engineering skills in the area, but will require delivery of new office floorspace;
- Growth in construction jobs is forecast to be relatively moderate, with very limited growth forecast from 2012 forward and a net decline of over 3,000 over the plan period as a whole. Given the potential for major infrastructure projects including High Speed Rail and a Rail Freight Interchange, together with recovery of the housing market, these forecasts are considered relatively moderate;
- Employment in public administration is also forecast to fall, by a moderate -1400 over the plan period, principally in the short-term with employment rising post 2018. The forecasts seem reasonable set against the Government's austerity programme;
- Employment is forecast to increase in computing and IT, with a net growth of over 600 jobs forecast. This is a potential higher value-added growth sector.

**Figure 66: Employment Growth, Derby HMA (Key Sectors)**

Key Sectors	Employment 2008	Employment, 2008 %	% Change in Employment per Annum					
			1998- 2003	2003- 2008	2008- 2013	2013- 2018	2018- 2023	2023- 2028
Retail	20500	9.3%	6.1%	-0.3%	-5.7%	-0.9%	-2.1%	-1.1%
Education	16900	7.6%	18.2%	-2.3%	-4.2%	3.2%	5.8%	7.1%
Health	16600	7.5%	19.7%	16.3%	2.3%	6.1%	5.5%	4.9%
Administrative & Supportive Services	16600	7.5%	-0.5%	23.5%	-5.7%	6.2%	3.8%	3.7%
Transport Equipment	15500	7.0%	8.2%	17.8%	7.0%	1.9%	-4.4%	-4.2%
Residential Care & Social Work	13700	6.2%	12.1%	26.8%	-5.7%	6.7%	5.7%	5.4%
Wholesale	12900	5.8%	11.2%	9.5%	-7.3%	0.4%	-1.4%	-1.0%
Accommodation & Food Services	12200	5.5%	14.9%	4.3%	-5.8%	0.2%	-0.7%	0.5%
Professional Services	11100	5.0%	-0.7%	20.0%	28.3%	7.1%	5.5%	5.4%
Specialised Construction Activities	9700	4.4%	38.7%	-16.8%	-25.0%	2.4%	-3.6%	-2.1%
Land Transport, Storage & Post	8800	4.0%	10.8%	8.9%	-8.4%	5.1%	3.9%	3.9%
Public Administration & Defence	8800	4.0%	19.7%	17.5%	-16.8%	-1.6%	2.3%	2.0%
Recreation	5200	2.4%	21.3%	11.9%	-9.0%	2.1%	2.4%	2.2%
Non-Metallic Products	5200	2.3%	-28.6%	-2.5%	21.5%	-3.1%	-6.9%	-7.1%
Finance	4300	2.0%	5.5%	39.2%	-5.9%	5.8%	0.7%	0.6%
Food, Drink & Tobacco	4300	1.9%	-15.3%	2.9%	14.4%	0.0%	-3.2%	-2.4%
Other Private Services	4300	1.9%	3.7%	-18.7%	24.3%	0.0%	-0.1%	-1.0%
Metal Products	3900	1.7%	-44.3%	-9.4%	-7.4%	-11.7%	-17.0%	-16.7%
Other Manufacturing	3300	1.5%	-10.6%	-22.9%	-5.5%	-2.2%	-6.6%	-7.3%
Computing & Information Services	3100	1.4%	29.9%	0.1%	7.2%	7.1%	2.7%	2.3%
Utilities	2900	1.3%	-6.8%	87.7%	9.4%	15.4%	10.2%	10.6%
Construction of Buildings	2900	1.3%	13.3%	0.7%	-4.4%	3.4%	0.9%	1.6%
Real Estate	2700	1.2%	-0.6%	91.0%	-23.4%	4.6%	0.6%	0.7%
Civil Engineering	2300	1.0%	9.5%	24.0%	-27.2%	4.4%	-1.4%	-0.8%
Textiles & Clothing	2200	1.0%	-61.1%	-29.8%	-7.9%	-25.1%	-32.8%	-30.9%
Machinery & Equipment	2000	0.9%	-25.1%	17.2%	3.6%	-10.0%	-15.8%	-16.6%
Chemicals	1880	0.8%	-4.8%	-11.1%	-15.5%	-12.7%	-15.0%	-15.0%

Source: Experian



### ***Opportunities for Enhanced Performance***

3.89 Drawing the analysis together, we consider that the following upside risks exist to the baseline forecast, based on local intelligence:

- Opportunities to further embed the base of skills/companies in advanced manufacturing and engineering through the development of local supply chains, innovation and spin-offs. There are opportunities for development of green technology and to increase exports, including to BRIC<sup>9</sup> economies. We consider however that this is likely to support relatively modest additional employment over the long-term;
- Potential for stronger employment growth in the construction sector linked to earlier/ stronger housing market recovery and in longer-term potential major infrastructure projects such as rail freight terminal and High Speed 2;
- Potential stronger employment growth in cultural/leisure facilities in Derby City Centre and the wider tourism offer with proactive public sector support;
- Potential for enhanced performance of the freight/logistics sector linked to the opportunities for further development of East Midlands Airport and rail freight proposals which provide opportunities for the development of this sector within the sub-region..

3.90 Our analysis of impacts in terms of total job creation are high-level and do not relate to specific development projects.

### ***Downside Risks***

3.91 In addition to the upside impact which could potentially arise from local investment projects, there are a number of downside risks, particularly at the macro-level which should be appreciated. Key macro-level risks include:

- Economic weakness in the Eurozone: the potential that a Eurozone economy could collapse which could potentially have a significant impact on UK exports (and thus the manufacturing sector), and lead to a crisis of confidence and a severe further credit crunch impacting on business investment and the housing market;
- Sustained Fiscal Austerity: the potential that the fiscal austerity programme is further extended beyond 2017, for instance by another two years; with a particular impact on growth in employment in public administration and major Government contracts. The latter for instance could impact on defence and rail spending and thus Derby's engineering/manufacturing sector;
- Inflationary Pressures: continued strong inflation particularly should the oil price rise coupled with continuing household deleveraging, impacting on consumer spending and thus jobs in retail, wholesale/distribution and consumer services. Growth in consumer income forecast in the Derby HMA is already fairly moderate relative to cities in the south of England.

3.92 There is also a risk that a major employer could withdraw from the local area. Given major recent investment at Toyota, it seems unlikely that they would withdraw in the short-term. Rolls Royce appears firmly embedded as are Bombardier who have announced that they are staying in Derby

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<sup>9</sup> Brazil, Russia, India, China

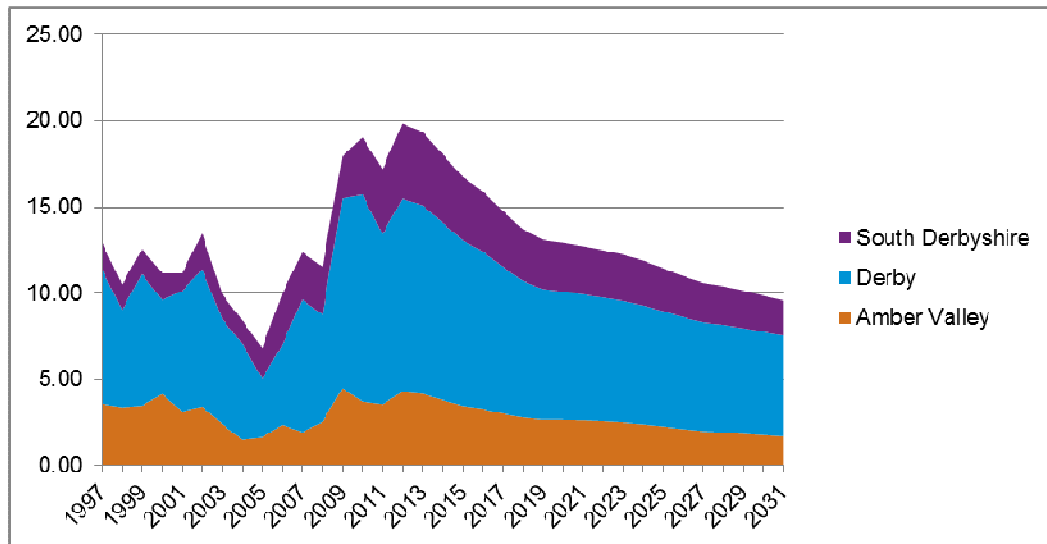
with no further redundancies planned. These major employers and the associated sectors compete globally and are however vulnerable to downturns affecting these sectors.

- 3.93 Other risks identified from a workshop with key stakeholders include the impact of a change in Government (on business confidence and spending/austerity planning). The workshop with key stakeholders also identified other relevant issues including competition with Nottingham, which has invested in infrastructure including the tram system.

### **IMPLICATIONS FOR DEMOGRAPHIC PROJECTIONS**

- 3.94 The impact between employment growth and demographics/ housing demand is expected to be influenced by:
- The level and nature of employment growth;
  - Future changes in economic participation rates; and
  - Changes in commuting dynamics.
- 3.95 The match between the skills required by employers and workforce skills is influenced by people joining and leaving the workforce. The skills required by new jobs may not for instance match those of current unemployed residents and thus the balance between jobs supported by changes in economic participation and in-migration.
- 3.96 On one level, the projections of employment growth are relatively moderate over the plan period as a whole. This is particularly influenced by timescales, with employment growth forecast post 2012, but with the net impact negated by employment losses through the recession.
- 3.97 As discussed however there are a notable set of risks (on both the upside and downside) to the Experian forecasts. Furthermore there are a number of factors which will influence the interplay of these on demographics.
- 3.98 One question is the degree to which employment growth will support migration. This will be influenced in part by changes to unemployment. Unemployment across the HMA has increased substantially since 2004 (more than doubling in size). It was 5.0% in 2008, but has increased to an estimated 7.4% in 2011. It is expected to peak at 8.5% in 2012 before falling, declining over time to 4.1% at the end of the plan period in 2028. Reductions in unemployment can support employment growth without the need for in-migration; but this is reliant on those who are unemployed having the necessary skills to match job vacancies.
- 3.99 Experian's assumptions regarding changes in unemployment moving forward seem reasonable to us. These are shown below:

**Figure 67: Unemployment (LFS Definition)**



Source: Experian

3.100 The extent to which job creation is supported by reductions in unemployment and worklessness, and thus the extent to which the employment rate increases, is however difficult to predict. There is evidence at a national level that, over the last couple of years, international in-migration to take-up employment opportunities in the UK has continued whilst domestic unemployment has increased. It appears that this is potentially influenced by both attitudes to work and skills. Moving forward this could potentially influence migration dynamics.

3.101 The other relevant factor here is changes in commuting dynamics. This will be influenced by the following factors:

- The balance between growth in the size of the workforce and growth in job numbers in different areas (which can be influenced by levels of housing development and economic growth);
- The nature of employment growth and relationship to skills, with longer-distance commuting more likely for higher-paid occupations;
- Transport infrastructure investment (where this reduces/ changes commuting times) and the cost of travel (particularly petrol costs).

3.102 The stakeholder consultation events undertaken highlighted the potential for reductions in commuting to arise as a result of increasing petrol costs, the parking levy in Nottingham and congestion issues in both Nottingham and Derby. Set against this is upgrades to the A52.

3.103 A further factor which may influence commuting dynamics is a trend towards increased home-working (or part-time working from home). ICT infrastructure will influence the degree of growth in this regard.

*What does this mean?*

It is difficult to forecast economic performance over the long-term with accuracy. There are both notable upside and downside risks to the Experian forecasts, and some evidence that the HMA economy has been performing relatively well over the last 18 months with a number of major investments announced particularly by key manufacturing firms.

Furthermore the analysis highlights the difficulties in relating economic performance within the HMA to demand for housing, linked to questions over the degree to which jobs within the HMA will be taken up by current HMA residents as opposed to in-migrants; and the extent to which commuting dynamics may change (and particularly the interaction between the Derby and Nottingham HMAs). The difficulties in drawing correlations between economic and demographic trends are highlighted by the recent evidence that migration to Derby has increased between 2007-8 to 2009-10 (as we will come onto) whilst employment in the City has fallen.

Nonetheless whilst it is difficult to make a direct correlation between economic performance moving forward and how this might influence demographics, the economic analysis highlights that employment growth in the HMA over the plan period could be relatively moderate. This may well moderate migration to the area relative to trends indicated in the ONS 2010-based SNPP.

## **4 DEMOGRAPHIC DRIVERS OF POPULATION AND HOUSEHOLD CHANGE**

### **Introduction**

- 4.1 In this section we analyse in some detail the key drivers of population change in the HMA and the impact this will have on household numbers (and hence housing requirements). We consider both past trends and also future projections with data being drawn from a range of sources – mainly ONS data, including the detailed demographic information underlying the 2010-based subnational population projections (SNPP).
- 4.2 The key drivers of population and household change moving forward are each considered along with commentary about a possible set of assumptions that could be used by the Councils in determining a reasonable level of housing to plan for in the future. The key components considered in this section are therefore:
- Overall population change
  - Fertility rates
  - Mortality rates
  - Migration
  - Headship rates
  - Economic performance
  - Student housing requirements
  - The impact of welfare reforms
- 4.3 In Section 5 of the report we have taken the data in this section to provide a set of assumptions which we recommend as a reasonable basis for future population and household growth forecasting. This section begins with a brief discussion of past population trends and an understanding of the components of population change.

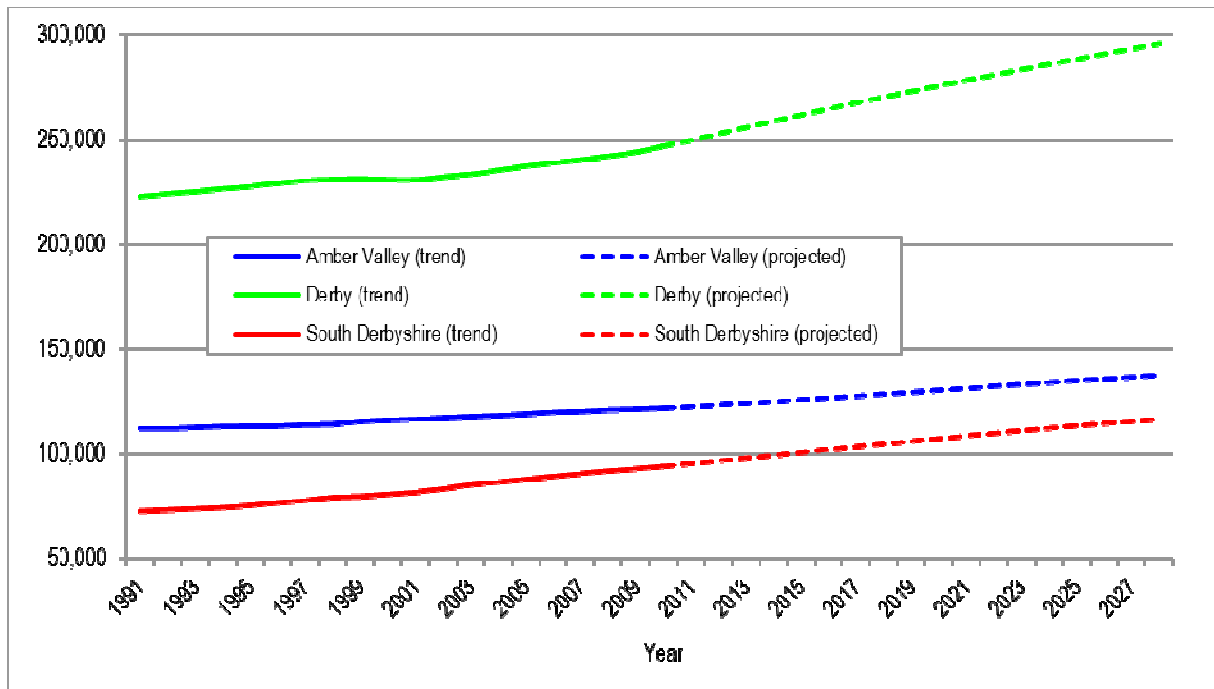
### **Past Population Trends and Overall Projected Change**

- 4.4 Figure 68 below shows trends in overall population size in each of the three local authorities from 1991 to 2010. We have also added projected future population change from the 2010-based SNPP for the period from 2010 to 2028. The data shows in all three authorities that the population has been growing. In the case of Amber Valley the population has grown from 112,216 in 1991 to 121,788 in 2010 – an increase of 9,572 people (or 8.5%). In Derby the population increase over this period was from 222,880 to 246,924 – a 24,044 increase (or 10.8%) with South Derbyshire showing

the highest population growth in proportionate terms; the population increasing from 72,693 to 94,055 – an increase of 21,362 (or 29.4%).

- 4.5 The strong population growth in South Derbyshire is consistent with above average levels of past housing delivery which have supported substantial net in-migration.
- 4.6 Looking forward, Figure 68 suggests in both Amber Valley and South Derbyshire that population growth is broadly expected to follow long-term trends whilst in Derby the latest projections suggest considerably faster population growth from 2010 than had been seen over the longer-term past. Taking the period from 2009 to 2028 (which is a nineteen year period to match the period for which we have past trend data) the projections suggest population increase of 16,255 in Amber Valley, 51,698 in Derby and 23,705 in South Derbyshire. All of these population increases are above past (long-term) trend levels and significantly so in the case of Derby (and to a lesser degree Amber Valley).

**Figure 68: Past and Projected trends in Population**



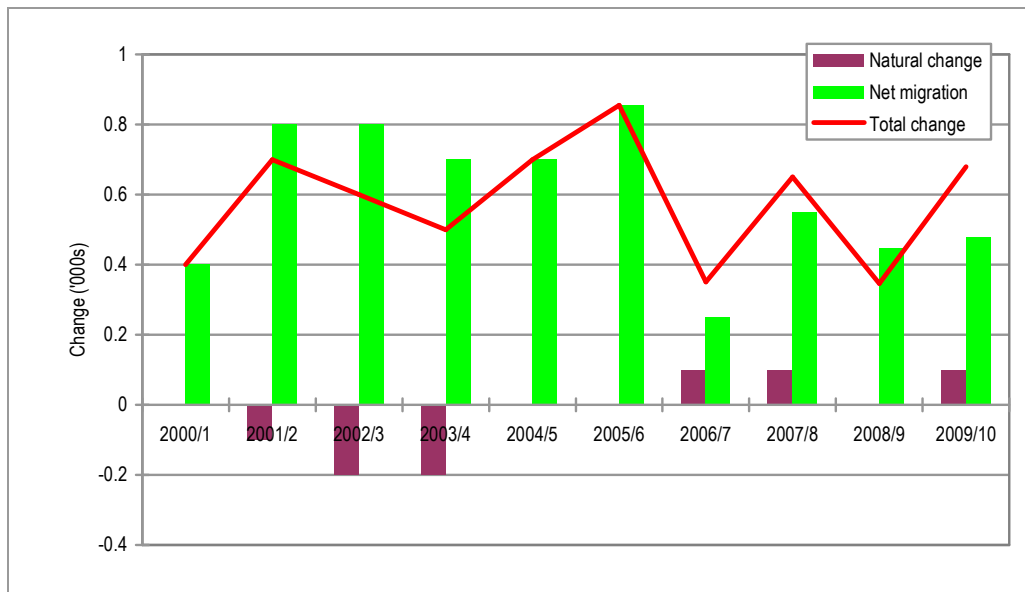
Source: ONS

- 4.7 Given the clear shift in the HMA in long-term population projections from long-term past trends it is useful to consider the reasons for past population growth as this will be the principal information used by ONS in their 2010-based SNPP. The change in population is driven by two components; natural change (births minus deaths) and net migration. To try to understand the above patterns in

more detail we have below provided data for the past ten years about the components of change for each of the three local authorities (the longest period for which reliable data is available).

- 4.8 Figure 69 below shows components of change for Amber Valley. The data shows over the 10-year period that population growth has always been positive but that this has varied year-on-year. In the early part of the period levels of natural change were negative (i.e. more deaths than births) whilst towards the end of the period this had started to be positive – due to a combination of increasing birth rates and improvements to life expectancy (both of which are described below).
- 4.9 Generally however, the main driver of population change can be seen to be net migration. Over the period studied net migration levels have continually been positive varying from about 200 to 900 people per annum. The overall trend does however suggest that migration levels have been lower in the past four years when compared with the earlier part of the data period.
- 4.10 On this basis it is difficult to see clearly why the 2010-based SNPP is projecting a higher level of population growth moving forward than had been seen from longer-term trends although this may in part be due to ONS taking a very short term view of trends (emphasising the most recent evidence) with migration arguably having increased over the past four years. We consider migration dynamics in more detail later in this section.

**Figure 69: Components of Population Change – Amber Valley**



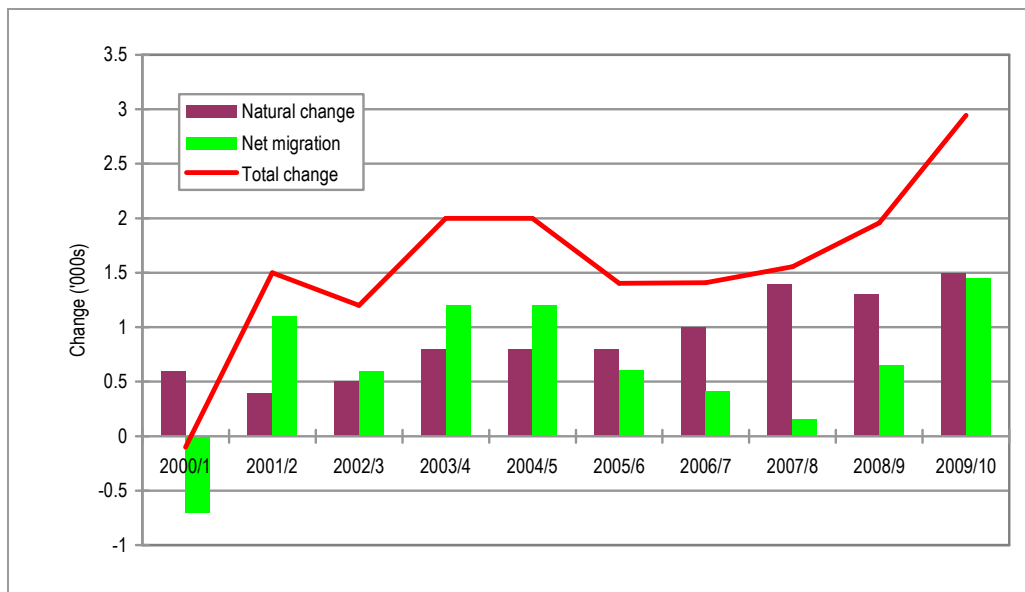
Source: ONS mid-year population estimates

- 4.11 In Derby we see a somewhat different situation to that found in Amber Valley with levels of natural change being positive throughout the period studied and increasing over time. Migration levels have

been highly variable with the most recent period for which we have data (2009/10) suggesting a relatively high level of net in-migration. Population change in Derby appears to have been strongest in the last couple of years studied with the rate of increase in population steadily increasing from about 2006/7.

4.12 This recent increase in population growth would go some way to explaining the projected population change in Derby found in the 2010-based SNPP which tends to heavily weight future projections on data over the preceding five years (and in particular data for the most recent two years). A key question is therefore what weight to attach to short-term trends and the likelihood of them continuing?

**Figure 70: Components of Population Change - Derby**

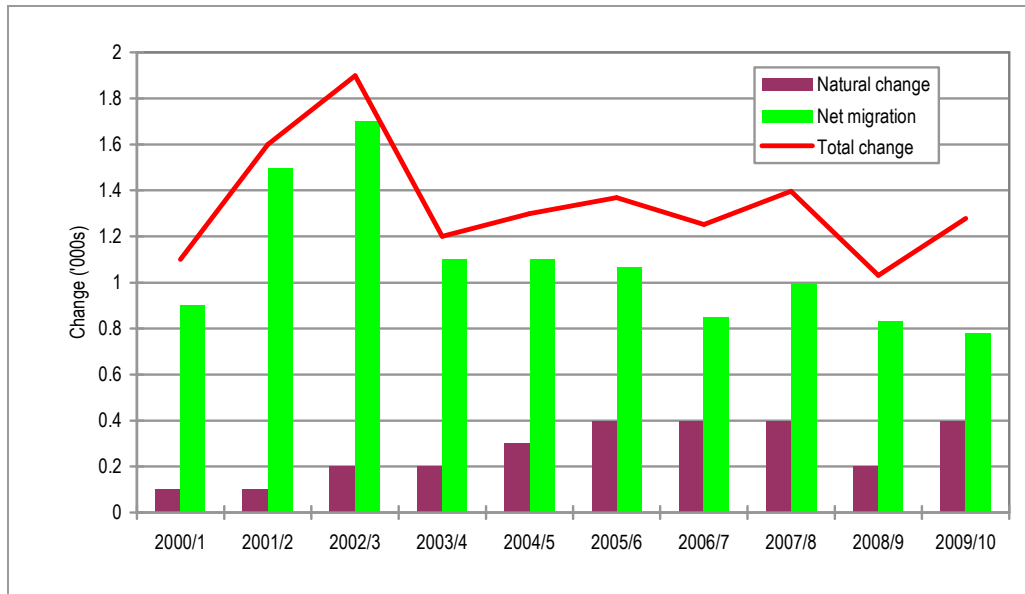


Source: ONS mid-year population estimates

4.13 In South Derbyshire levels of natural change are again positive throughout the period studied (and rising) although these are relatively minor as a component of change when compared with migration. Throughout the ten year period studied levels of migration are continuously positive and high, with net in-migration figures ranging from about 800 to 1,700 people per annum. The level of net migration over the last four years has been relatively stable (as has overall population growth over the last seven years). This finding may go some way to explaining why the 2010-based SNPP for South Derbyshire does not project population growth rates that are much different from longer-term trends.



**Figure 71: Components of Population Change – South Derbyshire**



Source: ONS mid-year population estimates

*What does this mean?*

Data about past population change has shown that all three local authorities have seen fairly steady increases over the period from 1991 to 2010. In projecting forward however, the ONS 2010-based SNPP suggests an accelerating rate of population increase in all areas - most notably Derby and Amber Valley. In Amber Valley the past trend data does not really support this whilst in Derby the ONS Projections appear to be based on some very short-term trends. Next we consider whether this is reasonable, and supported by local evidence.

**Fertility Rates**

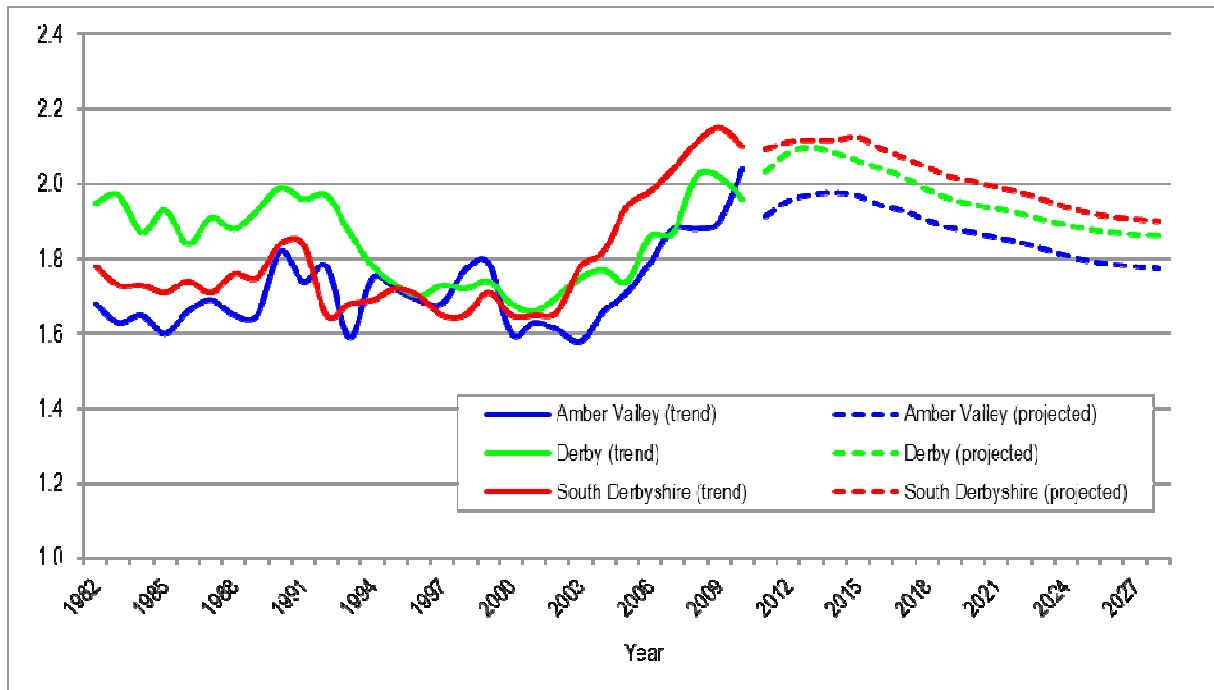
4.14 Figure 72 shows trends in fertility back to 1982 and projected forward (as in the 2010-SNPP). The measure used is the Total Fertility Rate (TFR) which can be defined as the number of children that would be born to a woman if she were to live to the end of her childbearing years. The data shows that fertility rates in all areas have been somewhat variable over time and show a notable increase in the period from about 2003 to 2010. In 2003 the TFR stood at 1.58 (children per woman) in Amber Valley, 1.75 in Derby and 1.78 in South Derbyshire. By 2010 these figures had risen to 2.04, 1.96 and 2.10 respectively.

4.15 Projecting forward the ONS 2010-based SNPP data suggests that figures will start at roughly the 2010 levels and rise very slightly in the short-term (to about 2014) before gradually falling over the

remainder of the projection period to reach between about 1.8 and 1.9 by 2028. The projections also suggest that the TFR is expected to be highest in South Derbyshire and lowest in Amber Valley. This seems reasonable given trends seen over the past eight years or so. The patterns of short-term increases in fertility but a long-term decline is consistent with the national (2010-based) population projections.

4.16 It is notable that the recent increase in birth rates has been sustained over a number of years, has been occurring across all three authorities, and includes the period both prior to and including the recent economic recession/ stagnation (since 2007). The analysis indicates however than in 2010 the birth rate declines slightly in both Derby and South Derbyshire.

**Figure 72: Past and Projected trends in Total Fertility Rate**



Source: ONS

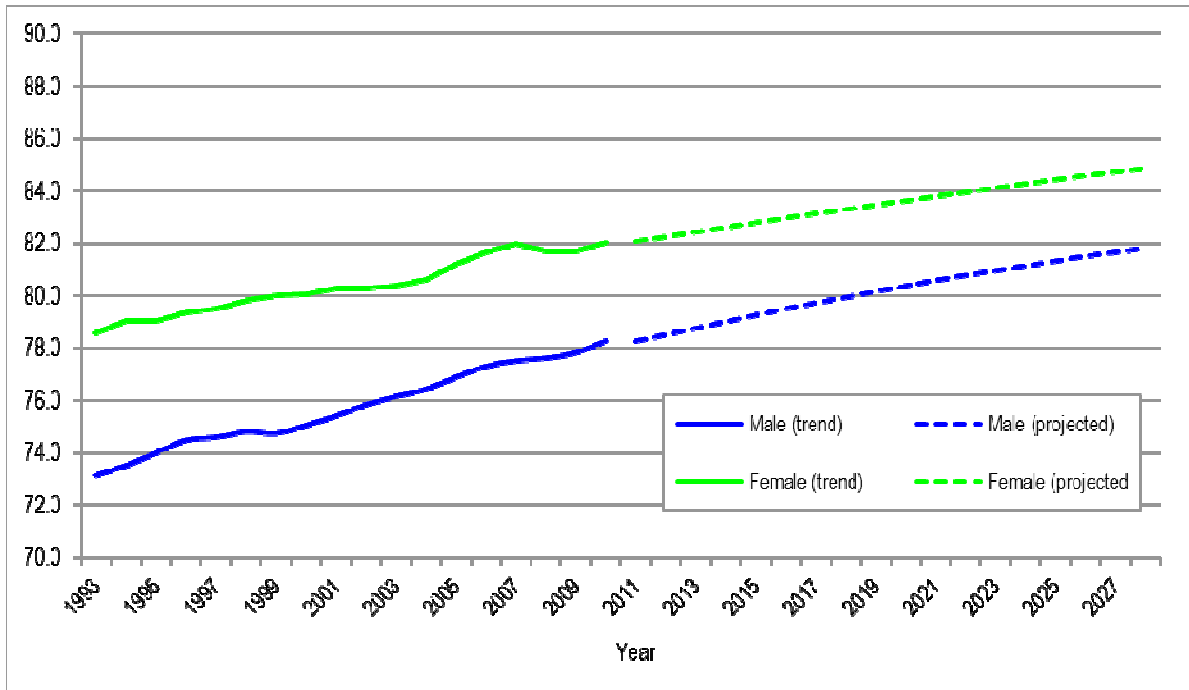
*What does this mean?*

In considering past trends and the future projections of fertility we do not believe there is a strong case to suggest that fertility rates can be projected to be much different to those contained in the 2010-based SNPP. The trends (and projections) shown locally are consistent with national trends and projections. In any case changes to fertility rates would only have a small difference to projections of households as very few of those born in the projection period (taken to be 2008 to 2028) would be expected to form independent households during this timeframe.

### **Mortality Rates**

- 4.17 Below we have provided information about death rates in the whole Derby HMA – this includes trends from 1993 to 2010 and projections (based on 2010-based SNPP) from 2010 to 2028. The figures used are for life expectancy at birth and are provided separately for both males and females. We have only provided figures for the whole of the HMA as the trends and projections are virtually identical in all three authorities.
- 4.18 The data shows from 1993 to 2010 an improvement in life expectancy for both males and females; males going from 73.1 years to 78.7 and females from 78.6 to 82.0. Thus in this period there has been a slight convergence of rates between males and females although female life expectancy is notably higher than for males throughout the period. In the future these trends are expected to continue with life expectancy projected to improve to 81.8 by 2028 for males and 84.9 for females. Hence the projections continue to show a difference between males and females with some continued convergence of rates.
- 4.19 As with fertility projections the projected trends in the Derby HMA very closely correspond with national expectations of improvements to life expectancy (as in the 2010-based National Projections).
- 4.20 Improvements in life expectancy reflect improvements in health and lifestyle as well as medical advances. It is notable that in Derby, life expectancy is relatively similar to Amber Valley and South Derbyshire. In many cities, life expectancy is lower than in surrounding smaller towns and rural areas reflecting the socio-economic characteristics of the population.

**Figure 73: Past and Projected Trends in Life Expectancy in Derby HMA**



Source: ONS

*What does this mean?*

In considering past trends and the future projections of mortality we do not believe there is a strong case to suggest that death rates can be projected to be much different to those contained in the 2010-based SNPP. The trends (and projections) shown locally are consistent with national trends and projections.

**Migration**

4.21 As has been seen from the analysis above it is migration trends that are the key driver of population change in the HMA. This is particularly true in Amber Valley and South Derbyshire whilst in Derby the data shows that variations in migration patterns are the principal driver for the population growth assumptions in the 2010-based SNPP.

***Migration Interactions across Areas***

4.22 Before we study migration dynamics across areas we have sought to consider the interactions between the three authorities in regard to domestic migration flows.

4.23 Dealing first with the Derby HMA as a whole, Figure 74 profiles internal migration flows to and from the City. It indicates a moderate net inflow from the Nottingham HMA as well as from Birmingham, North West Leicestershire and East Staffordshire. It indicates a net outflow to the north of the County.

**Figure 74: Internal Migration Flows to/ from the Derby HMA, Annual Averages 2005-10**

2005-10	To Derby HMA from ...	From Derby HMA to ...	Net Flow
Sheffield	330	330	0
Leeds	210	210	-10
Leicester	250	210	40
Nottingham	620	530	90
Bolsover	350	410	-60
Chesterfield	140	150	-10
Derbyshire Dales	490	550	-60
Erewash	1060	1100	-40
North East Derbyshire	200	240	-30
Charnwood	190	190	0
North West Leicestershire	590	510	70
Ashfield	300	330	-30
Broxtowe	460	390	80
East Staffordshire	1070	1010	60
Birmingham	450	370	70

Source: ONS (based on NHS Central Health Register)

4.24 Turning to look at individual Districts, Figure 75 indicates internal migration flows to Amber Valley. There is a substantial net inflow from Derby, as well as an inflow from the Nottingham HMA.

**Figure 75: Internal Migration Flows to/ from Amber Valley, Annual Averages 2005-10**

2005-10	To Amber Valley from ...	From Amber Valley to ...	Net Flow
Sheffield	80	90	-10
Derby	940	630	310
Nottingham	230	160	70
Bolsover	260	300	-50
Derbyshire Dales	240	260	-20
Erewash	400	350	50
North East Derbyshire	140	160	-20
South Derbyshire	100	110	-10
Ashfield	210	230	-20
Broxtowe	300	240	60

Source: ONS (based on NHS Central Health Register)

4.25 Looking at Derby, there is a significant net out-flow to Amber Valley and South Derbyshire, as well as (to a lesser degree) to Erewash.

**Figure 76: Internal Migration Flows to/ from Derby, Annual Averages 2005-10**

2005-10	To Derby from ...	From Derby to ...	Net Flow
Sheffield	210	180	20
Leeds	130	120	0
Leicester	180	150	30
Nottingham	330	360	-30
Amber Valley	630	940	-310
Bolsover	70	90	-10
Chesterfield	70	80	-10
Derbyshire Dales	170	200	-40
Erewash	540	660	-110
South Derbyshire	910	1190	-280
Charnwood	90	110	-10
North West Leicestershire	100	130	-30
Broxtowe	130	130	10
East Staffordshire	230	260	-20
Tamworth	260	260	0
Stoke-on-Trent	120	80	40

Source: ONS (based on NHS Central Health Register)

4.26 Finally, Figure 77 shows internal migration flows at South Derbyshire. There is a net in-flow to the District from Derby, as well as North West Leicestershire, East Staffordshire, Tamworth and Birmingham.

**Figure 77: Internal Migration Flows to/ from Derby, Annual Averages 2005-10**

2005-10	To South Derbyshire from ...	From South Derbyshire to ...	Net Flow
Derby	1190	920	270
Nottingham	70	60	10
Amber Valley	110	100	10
Derbyshire Dales	90	90	0
Erewash	110	100	20
Charnwood	50	50	10
North West Leicestershire	470	370	100
East Staffordshire	780	720	80
Birmingham	150	80	70
Tamworth	130	70	70

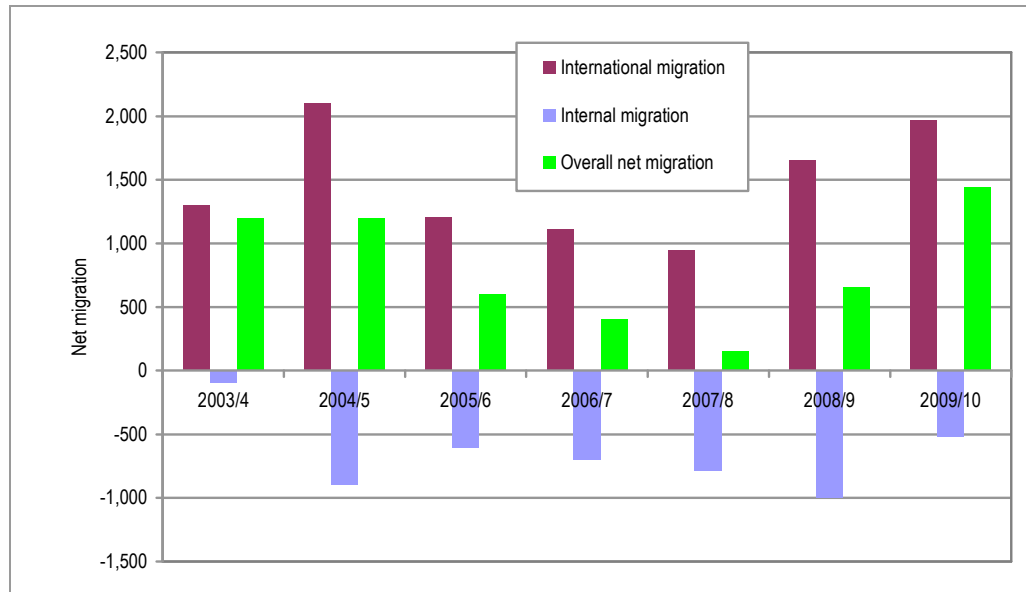
Source: ONS (based on NHS Central Health Register)

- 4.27 Overall around 60% of net migration to Amber Valley is from Derby; with around 30% of the flow to South Derbyshire from Derby. These figures should be regarded as indicative given both positive and negative net migration flows.

***Derby City***

- 4.28 In Derby the components of change data provided an overall view of changes in the population due to net migration. We can look at these figures in more detail based on whether or not the migration is international (i.e. to/from outside the United Kingdom) or internal (i.e. from another part of England). The 2010-based SNPP also separates out cross-border migration which is migration from one Country in the UK to another (e.g. between England and Scotland). The numbers involved in cross-border migration are very small and difficult to obtain accurate data about. We have therefore not considered these in any detail with the analysis. For information, the 2010-based SNPP records an expected average level of net out-migration from cross-border migrants of 46 per annum from Derby so it is clear that this has relatively little impact on overall figures.
- 4.29 Figure 78 below shows net migration to/from Derby split by international and internal migration. The period used is 2003-4 to 2009-10 as this period reflects the longest time series for which reasonable data is readily available. The data is interesting as it shows that international net migration is the main component of population growth with internal migration actually being negative for all seven years studied. This pattern is fairly consistent with other UK cities. In the case of both international and internal migration the data suggests some variation over time with net international migration falling from 2004/5 to 2007/8 before rising in the last two years for which we have data. Levels of internal out migration rose from 2005/6 to 2008/9 but fell back in 2009/10. The combined impact of this was for net in-migration to rise quite noticeably from 2007/8 to 2009/10.

**Figure 78: Net Migration Patterns to Derby City (2003-4 to 2009-10)**



Source: ONS

4.30 The evidence seems to suggest that there is a relatively limited relationship between housing delivery, which has declined notably since 2007/8, and migration to/from Derby.

4.31 As well as considering levels of net migration it is of interest to see how each of international and internal migration are made up in terms of in- and out-migration. This is shown in the table below, Figure 79. The table shows that whilst net internal migration levels are low compared with international migration figures the opposite is true in terms of the gross levels of in- and out-migration with on average over 10,000 people either moving in or out of the City to/from other parts of England compared with figures in the region of 1,000-3,000 in the case of international migration. Hence whilst international migration is the main driver of change in Derby, the actual population numbers involved are relatively small when compared with internal movers.

**Figure 79: Detailed migration data – Derby City**

Year	International migration			Internal migration			Total migration		
	In-	Out-	Net-	In-	Out-	Net-	In-	Out-	Net-
2003/4	2,300	1,000	1,300	10,200	10,300	-100	12,500	11,300	1,200
2004/5	3,100	1,000	2,100	9,300	10,200	-900	12,400	11,200	1,200
2005/6	2,536	1,326	1,210	9,376	9,984	-608	11,912	11,310	602
2006/7	2,338	1,227	1,111	9,875	10,577	-702	12,213	11,804	409
2007/8	1,934	987	947	9,980	10,771	-791	11,914	11,758	156
2008/9	2,565	907	1,658	9,374	10,374	-1,000	11,939	11,281	658
2009/10	2,708	739	1,969	10,105	10,628	-523	12,813	11,367	1,446

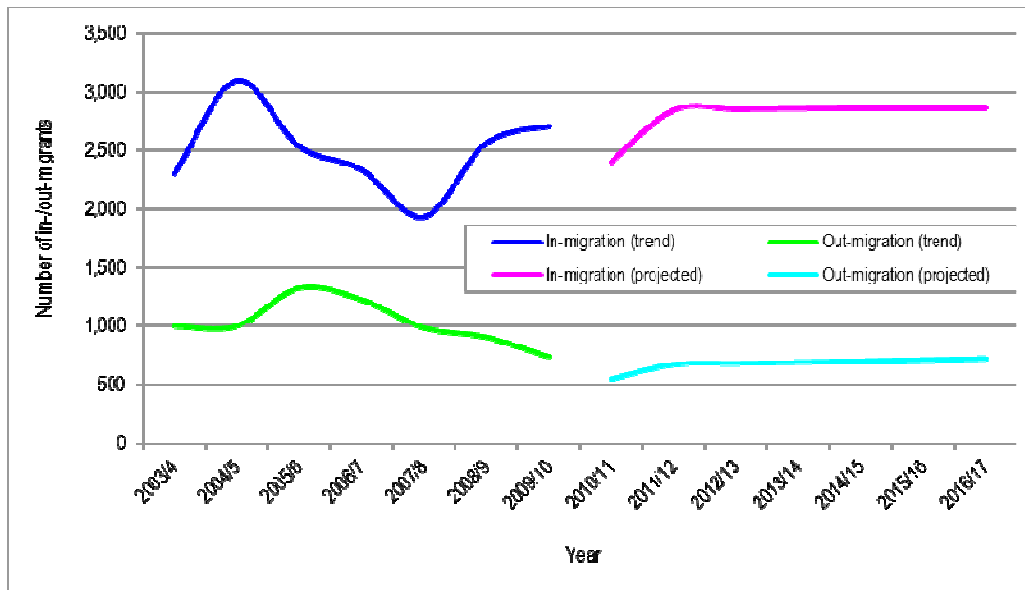


Source: ONS

4.32 It is perhaps more useful to plot the past trend data against how ONS have used this to project future migration trends. This has again been separated for international and internal migration with Figure 80 below showing trend and projected levels of international in- and out-migration from 2003/4 to 2016/17. We have cut the figure off at 2016/17 as ONS project constant levels of international migration from that date onwards.

4.33 Figure 80 emphasises how variable rates of international migration have been in the past (particularly in-migration). The data also shows that in projecting forward, the ONS data tends to project in-migration at a level very close to the highest seen in any year in the past whilst out-migration levels are projected to be low when compared with past trend data.

**Figure 80: Past and projected trends in international migration – Derby City**



Source: ONS

4.34 It is quite difficult to see, on the basis of the trends shown, how ONS has made its projections for international migration. Whilst in the last two years for which we have trend data there is an increase in in-migration and a decrease in out-migration; both trends (particularly the in-migration) are very short-term changes with no strong evidence that such levels would be expected to be sustained in the future.

4.35 The difference between past trend and projections is emphasised more in the table (Figure 81) below which shows average levels of international in- and out-migration over the past five years and for the first five years of the ONS 2010-based SNPP. The data shows that over the past five years the average level of international in-migration was 2,416 people per annum with an out-migration of 1,037 – giving a net in-migration figure from this source of 1,379 per annum. In the ONS projections the in-migration figure is 2,766 with an out-migration of just 660 per annum – leading to a much higher level of net in-migration of 2,106 per annum. If we were to look at the ONS projections for a longer-term period such as from 2017 to 2028 we see an even higher estimated net migration figure (of 2,140 per annum).

**Figure 81: Average international migration levels – past five years (trend) and first five years of ONS 2010-based SNPP – Derby City**

Component	Past five years	First five years of projection
In-migration	2,416	2,766
Out-migration	1,037	660
Net migration	1,379	2,106

Source: ONS

4.36 It would be fairly easy from this data to conclude that the ONS 2010-based SNPP are projecting international migration at a level which is unlikely in reality (based on past trends) to develop. However, it is also important to understand why people are moving to the City (similar data for those out-migrating is unfortunately not available). Figures 82 and 83 below analyse the characteristics of people moving to Derby for international in-migrants over the past five years. This data has been provided by ONS as part of its work to improve immigration statistics.

4.37 The data clearly shows that the majority (55% on average) of international in-migrants are classified as 'workers' with none of the other groups showing significant numbers at any point in the period studied. Hence for high levels of international in-migration to continue (or increase as suggested in the ONS 2010-based SNPP) it is likely that there would need to continue to be jobs available for new in-migrants to take up.

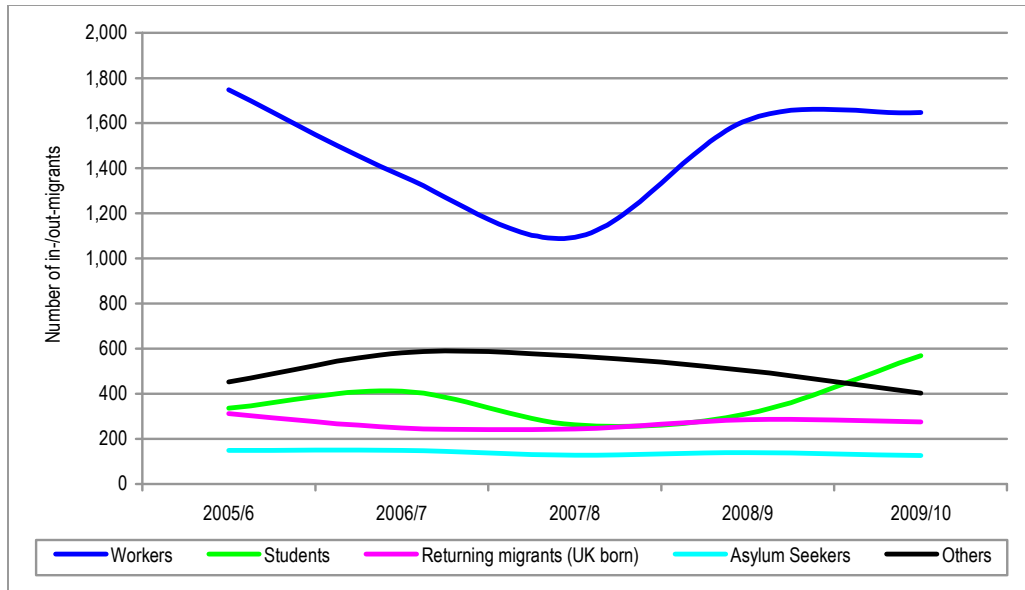
**Figure 82: International in-migration by broad stream – Derby City**

Year	Workers	Students	Returning migrants (UK born)	Asylum Seekers	Others	Total
2006	1,520	319	179	144	397	2,559
2007	1,171	316	140	144	517	2,288
2008	922	249	135	128	508	1,941
2009	1,492	301	163	139	441	2,536
2010	1,577	537	154	126	363	2,756

Average	1,336	344	154	136	445	2,416
% of migrants	55.3%	14.3%	6.4%	5.6%	18.4%	100.0%

Source: ONS

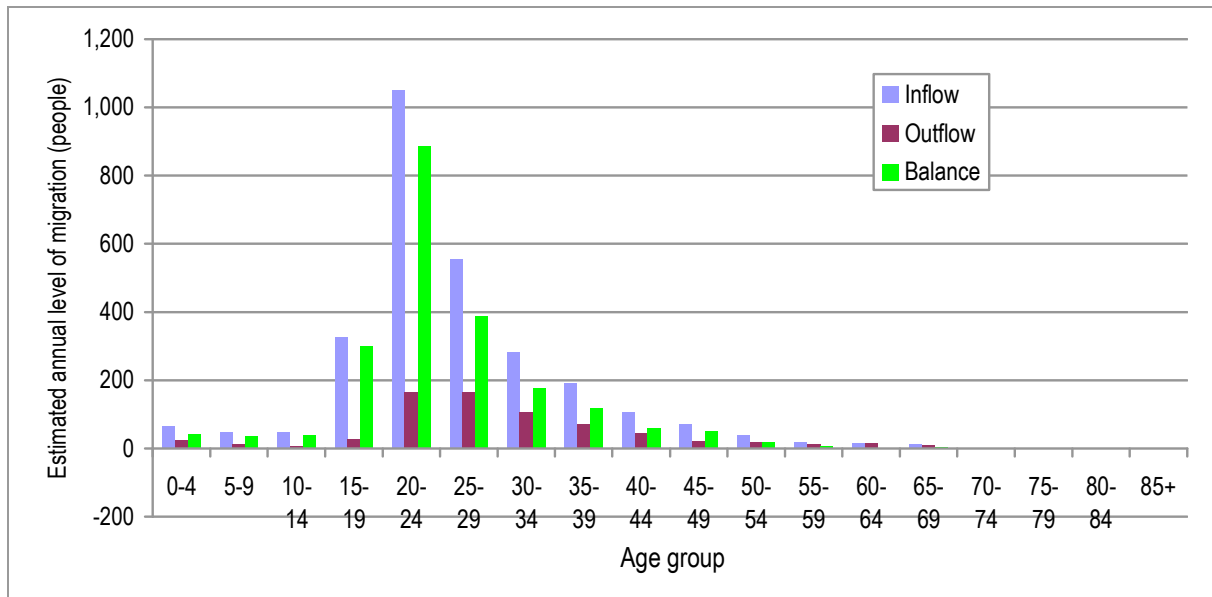
**Figure 83: International in-migration by broad stream – Derby City**



Source: ONS

4.38 To consider this further, we have sought to analyse the age structure of migrants to and from the City. It is clear that in-migration is biased strongly towards people in their 20s, the majority of whom are economically active. Given the economic dynamics of the City, we consider it likely that this is partly related to the availability of higher-skilled employment opportunities.

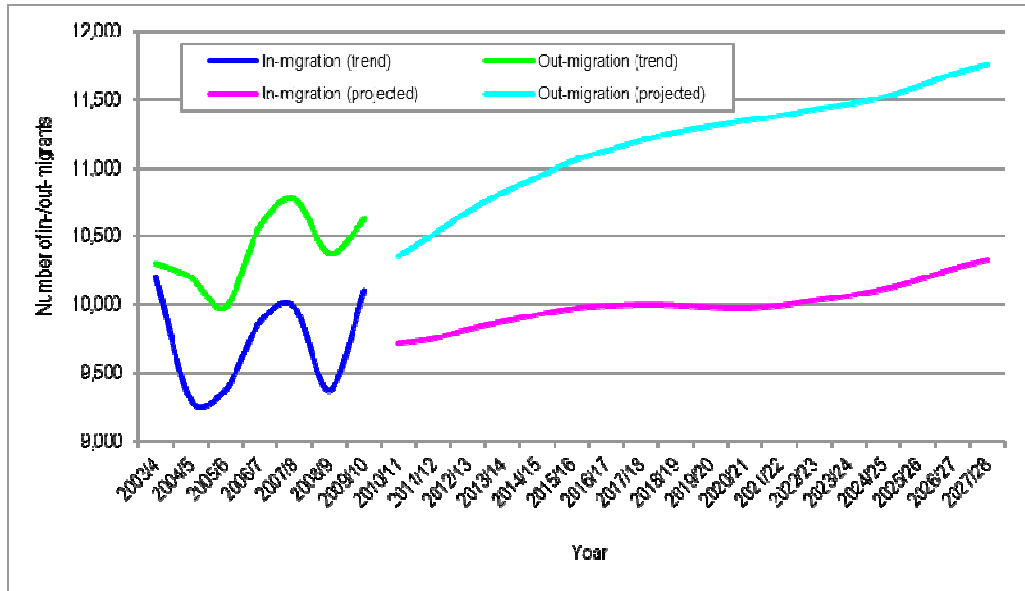
**Figure 84: Estimated Annual Levels of International Migration by 5 Year Age Band, Derby City 2010-28**



Source: Derived from ONS 2010-based population projections

- 4.39 Overall therefore, economic performance (including the creation of graduate and other employment opportunities for people in their 20s) can be expected to have a strong influence on the international migration dynamics to Derby. We can however not see any particularly strong basis as to why international out-migration can be expected to be more subdued than has been the case in the past particularly against a context of an increasingly globalised economy.
- 4.40 Having considered international migration patterns it is also important to understand past and projected trends in internal migration. As seen previously the volume of moves (both in and out) involved in internal migration in Derby are significant and throughout the past ten years there has been a notable level of net out-migration of internal movers each year.
- 4.41 Figure 85 below shows past trends in internal in- and out-migration from 2003 to 2010 and future projections (from the 2010-based SNPP) from 2010 to 2028 – we have taken a longer time series for looking at internal migration given that the ONS projections vary internal migration on a year-by-year basis right up to the end of the projection period (of 2035).
- 4.42 The data shows that past trends have been highly variable year on year with no real discernible trend. In the last year for which there is data (2009/10) both in- and out-migration are shown to have increased and it may be this that has lead the ONS projections to suggest continued increase in each of these components moving forward. Over the whole of the projection period ONS suggest that the gap between in- and out-migration will widen; leading to greater levels of net out-migration later in the projection period.

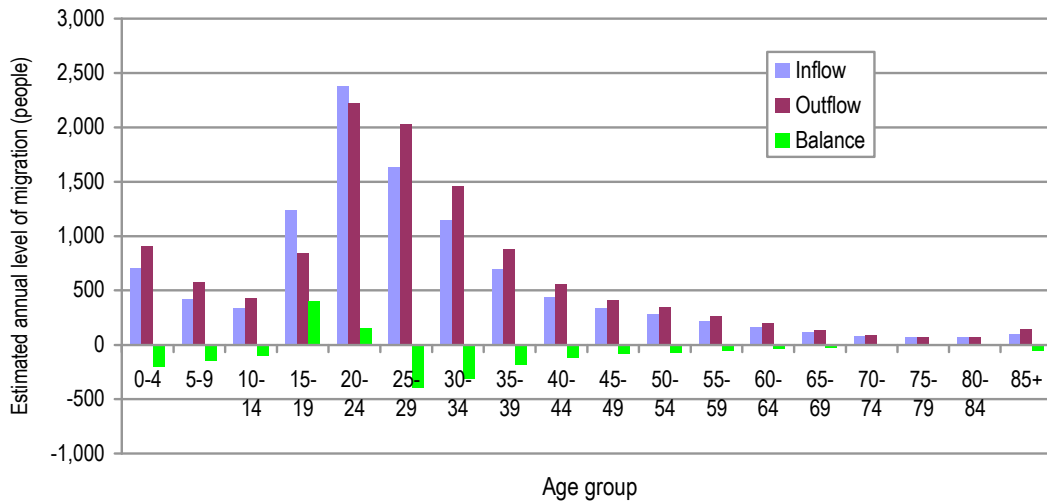
**Figure 85: Past and projected trends in internal migration – Derby City**



Source: ONS

4.43 Again we have sought to profile the age structure of internal migrants. This indicates that again migration is heavily biased towards working-age groups, with net in-movement of 15-24 year olds (potentially linked to the presence of a university) and net out-migration of other age groups.

**Figure 86: Estimated Annual Level of Internal and Cross-Border Migration by 5 Year Age Band, Derby City 2010-28**



Source: Derived from ONS 2010-based population projections

4.44 As with the international migration it is difficult to say with confidence that the ONS assumptions are reasonable. Whilst the data might suggest some widening of the gap between in-and out-migration the figures are so variable that it would be difficult to confidently describe this as a trend. That said, the early part of the ONS projections (2010-2015) do suggest a broadly similar level of net out-migration as the previous five years for which we have trend data. This is shown in the table below. It may be that the ONS projections simply reflect the changing age structure of the population. Overall, both in and out migration figures in the projections and in past trends are of a similar order of magnitude with the overall annual level of net out-migration varying from 725 people per annum when looking at past trends to 843 for the 2010-based SNPP for the 2010-15 period.

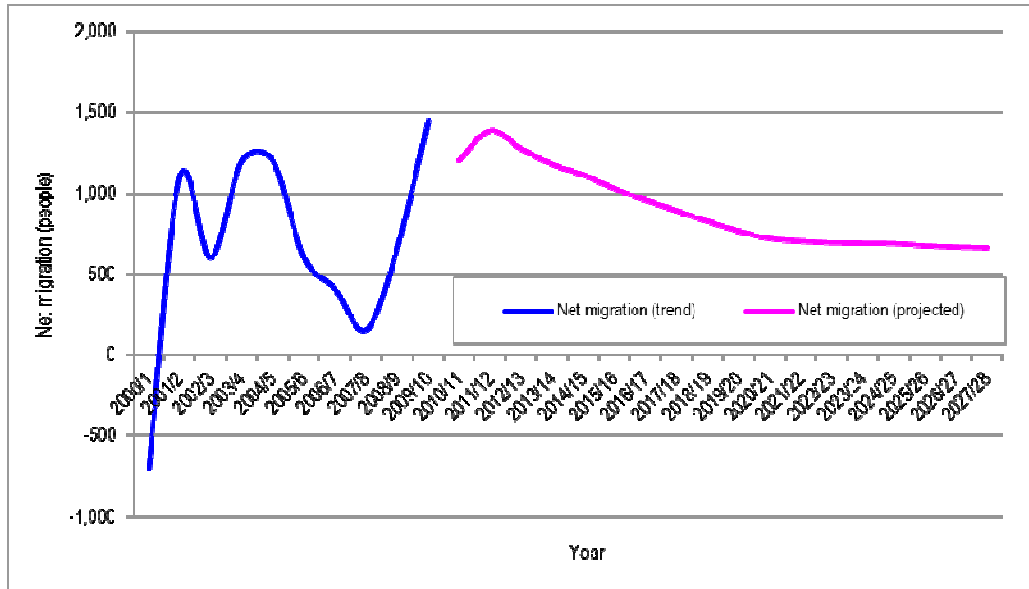
**Figure 87: Average internal migration levels – past five years (trend) and first five years of ONS 2010-based SNPP – Derby City**

Component	Past five years	First five years of projection
In-migration	9,742	9,819
Out-migration	10,467	10,662
Net migration	-725	-843

Source: ONS

4.45 Clearly trying to use past demographic trends to project future change is highly problematic in Derby and a range of conclusions could be drawn from the data. Certainly the assumptions behind the ONS 2010-based SNPP may be unduly impacted by very short-term trends (over the past year or two years). To emphasise the difficulty in using past trends to project the future we have below provided a chart which shows past trends in net migration (over the last ten years) along with how ONS has projected migration change in the future.

**Figure 88: Past and projected levels of net migration to Derby City**



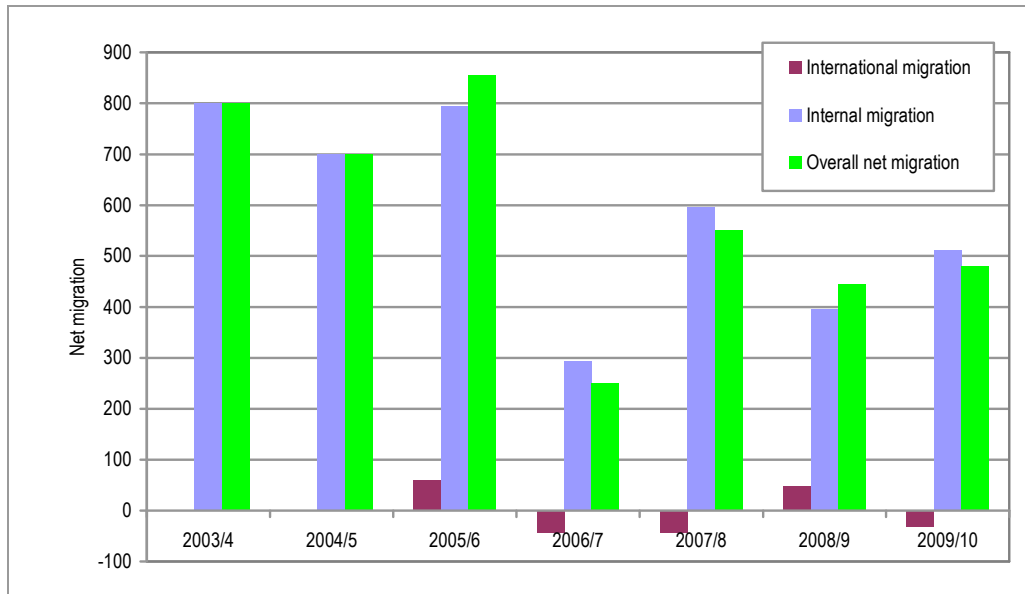
Source: ONS

4.46 This being said, the trend shown of reducing net migration to Derby over time may well be reasonable taking account of economic prospects and land supply constraints.

**Amber Valley**

4.47 In Amber Valley the impact of international migration is much less than in Derby as is shown in the figure below. Indeed, over the past seven years for which we have data levels of international migration are negligible with virtually all net migration being generated by internal movers. As with Derby the impact of cross-border migration is also negligible with the 2010-based SNPP projecting an average out-migration of 19 people ‘cross-border’ per annum over the projection period.

**Figure 89: Net migration patterns to Amber Valley (2003-4 to 2009-10)**



Source: ONS

4.48 Although the level of net international migration is negligible it is worth considering if this is due to the balance between in- and out-migration or largely due to the figures just being very small – this is shown in the table below. Figure 90 clearly shows that the net international migration figures are largely driven by both in- and out-migration being very low. International migration figures (whether in- or out-) typically vary between about 100-200 per annum whilst figures for internal migration are typically in the range of 4,000-5,000 per annum.

**Figure 90: Detailed migration data – Amber Valley**

Year	International migration			Internal migration			Total migration		
	In-	Out-	Net-	In-	Out-	Net-	In-	Out-	Net-
2003/4	100	100	0	5,200	4,400	800	5,300	4,500	800
2004/5	200	200	0	4,800	4,100	700	5,000	4,300	700
2005/6	234	174	60	4,798	4,003	795	5,032	4,177	855
2006/7	150	193	-43	4,996	4,702	294	5,146	4,895	251
2007/8	151	195	-44	4,995	4,400	595	5,146	4,595	551
2008/9	168	119	49	4,796	4,399	397	4,964	4,518	446
2009/10	80	112	-32	5,013	4,501	512	5,093	4,613	480

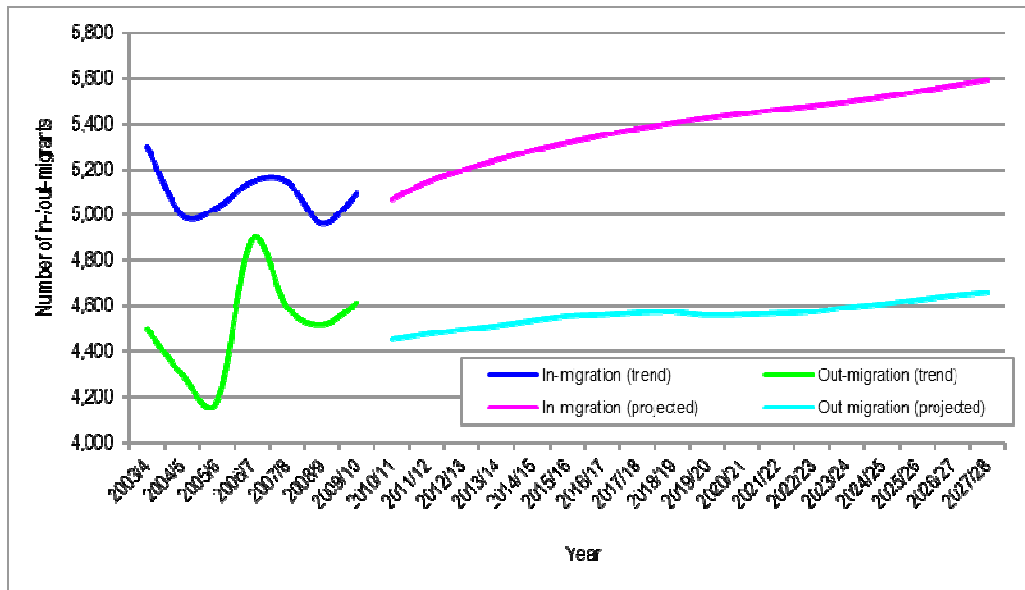
Source: ONS



4.49 Due to the low levels of international (and cross-border) migration we have further considered migration patterns by reference to overall migration (from all sources) and Figure 88 below shows past trends in in- and out-migration for the past seven years along with projected change (from the 2010-based SNPP) for the period from 2010 to 2028. The trend figures for both in- and out-migration are highly variable and again with no discernible trend.

4.50 To the extent that a trend could be derived from this data it might be argued that the gap between in- and out-migration has been closing slightly over time – despite this the ONS projections actually suggest that the gap will widen as we move through a projection period to 2028. However there is in fact some logic to a widening gap between in- and out-migration – as the population grows (both in the District and a wider area) we would expect these numbers to increase to some degree. Looking at the data below however our main concern is around the starting levels for in- and out-migration with the initial gap between the two looking to be significantly wider than is suggested by recent past trends (this point is discussed in more detail in the following Section of the report).

**Figure 91: Past and projected trends in all migration – Amber Valley**



Source: ONS

4.51 The difference between past trends and future projections is shown in Figure 92 below which shows levels of in-, out- and net migration in the five years to 2010 and the first five years of the ONS projection (2010-2015). Whilst trend and estimated levels of in- and out-migration are not much different from these two sources there is an impact when looking at net migration levels which show a net in-migration of 517 people per annum on average over the past five years compared with a figure of 692 per annum for the first five years of the ONS projection.

4.52 It should also be noted (with reference to the components of change diagram shown earlier in this section) that the first year of the past trends analysis (2005/6) showed a particularly high level of net in-migration with figures for all subsequent years being lower – were we to look at a trend over the past four years then the net migration figure would be around 430 per annum.

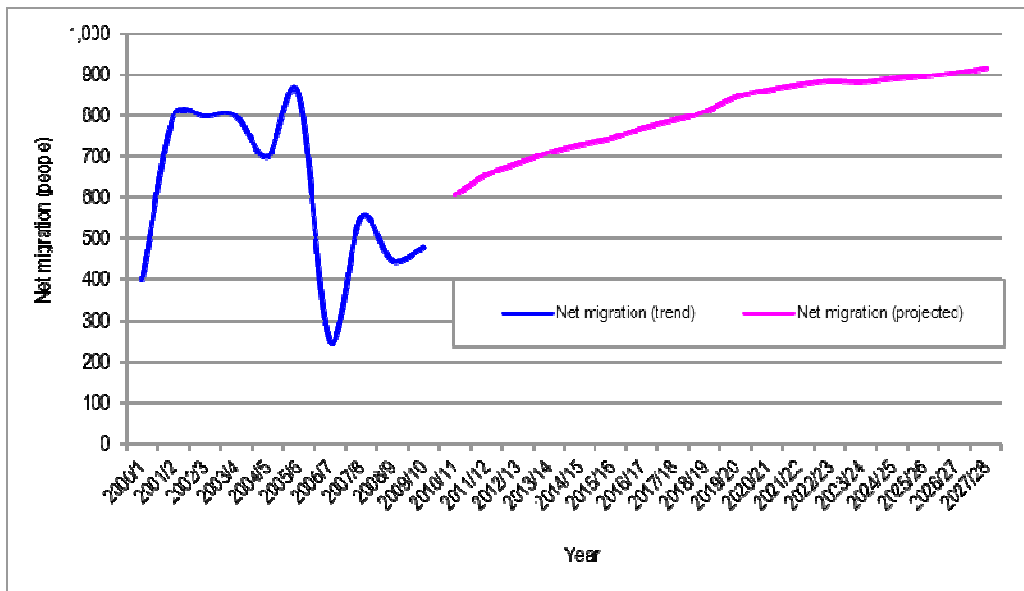
**Figure 92: Average migration levels – past five years (trend) and first five years of ONS 2010-based SNPP – Amber Valley**

Component	Past five years	First five years of projection
In-migration	5,076	5,187
Out-migration	4,560	4,495
Net migration	517	692

Source: ONS

4.53 Figure 93 charts past trends in net migration (going back 10-years) and projected figures for 2010 to 2028 (from the 2010-based SNPP) in Amber Valley. The data clearly shows that ONS are projecting net migration to increase quite notably in the future with a start point which is notably above the most recent past trends.

**Figure 93: Past and projected levels of net migration to Amber Valley**

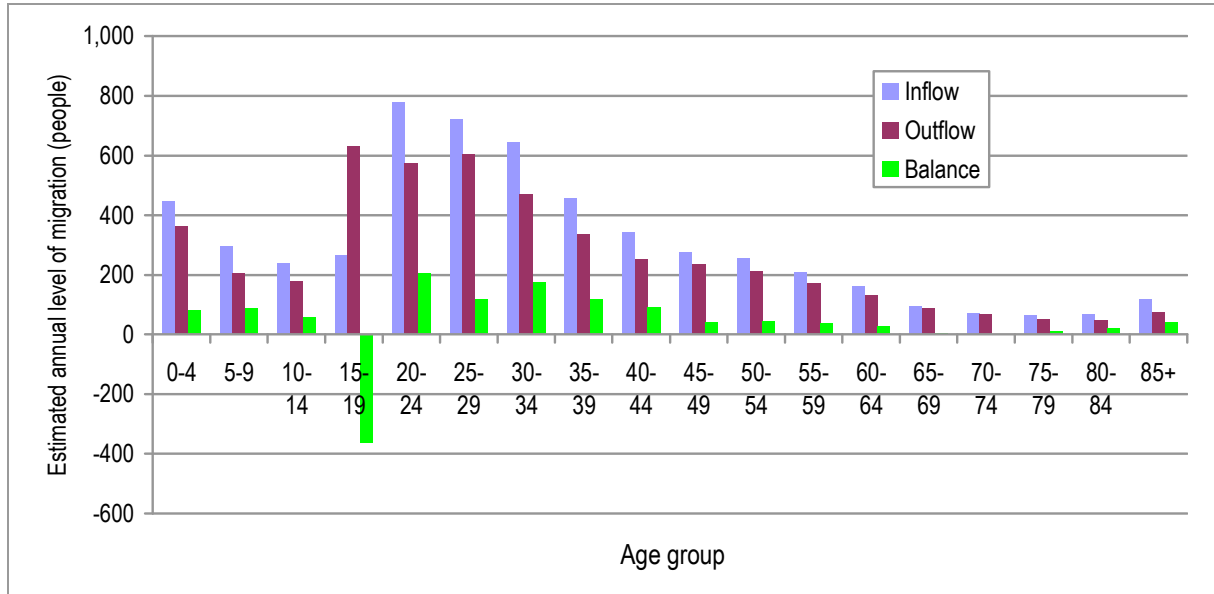


Source: ONS

4.54 Again it is instructive to consider the age dynamics of people moving in and out of the District. Domestic in-migration to Amber Valley is particularly from Derby. Again it is clear that the migration balance is driven by net in-migration of people of younger people including those in their 20s; and family households. Changes in the population age structure in different areas as well as economic performance can therefore be expected to influence future migration dynamics.



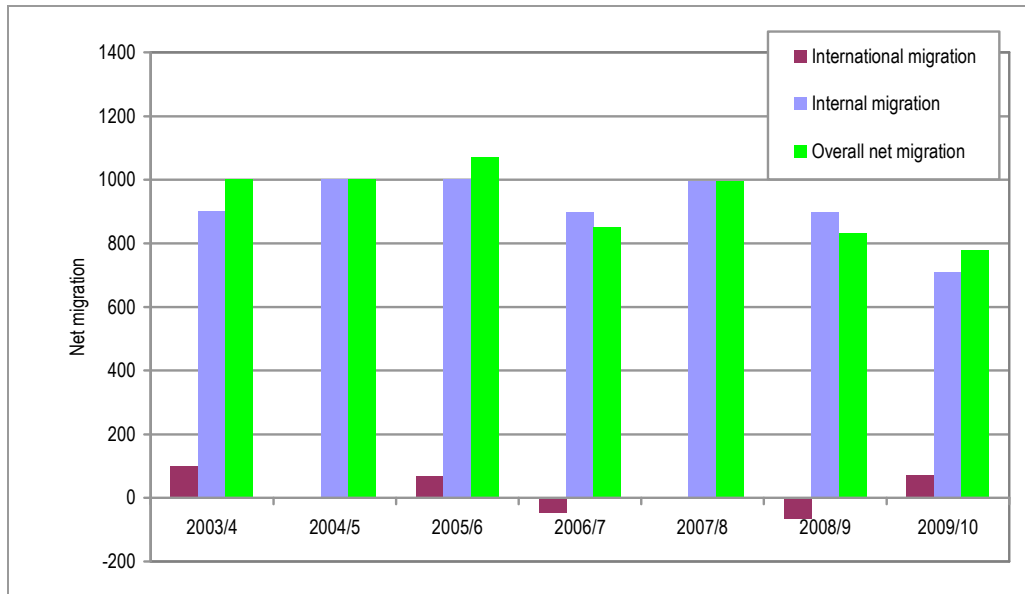
**Figure 94: Estimated annual level of migration by five-year age band (2010-2028) – Amber Valley**



**South Derbyshire**

4.55 Finally, we have looked at migration patterns in South Derbyshire. As with Amber Valley the impact of international migration is much less than in Derby as is shown in the figure below. Throughout the period studied levels of international net-migration are negligible (never being more than 100 in any year compared with figures in the range of about 700 to 1,000 in the case of internal migration). Cross-border migration, which has been excluded from the data below, is also fairly negligible; amounting to a net out-migration of around 33 people per annum based on ONS 2010-SNPP.

**Figure 95: Net migration patterns to South Derbyshire (2003-4 to 2009-10)**



Source: ONS

4.56 Figure 96 below shows the difference between international and internal migration in terms of the components of net migration (i.e. in- and out-migration). Whilst levels of international migration are higher in South Derbyshire than in Amber Valley they are still very low when compared with the volume of flows to and from other parts of England. International migration (whether in- or out-) typically varies between about 100 and 300 per annum compared with internal migration figures which broadly have a range from 4,000 to 6,000 per annum.

**Figure 96: Detailed migration data – South Derbyshire**

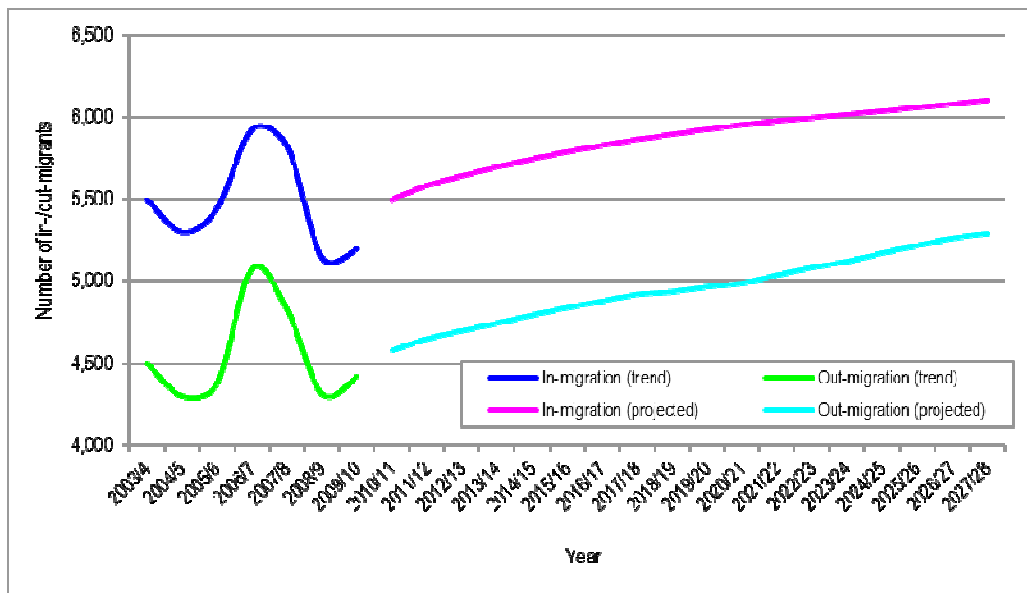
Year	International migration			Internal migration			Total migration		
	In-	Out-	Net-	In-	Out-	Net-	In-	Out-	Net-
2003/4	200	100	100	5,300	4,400	900	5,500	4,500	1,000
2004/5	200	200	0	5,100	4,100	1,000	5,300	4,300	1,000
2005/6	246	178	68	5,197	4,196	1,001	5,443	4,374	1,069
2006/7	233	279	-46	5,695	4,798	897	5,928	5,077	851
2007/8	230	230	0	5,595	4,599	996	5,825	4,829	996
2008/9	148	214	-66	4,996	4,099	897	5,144	4,313	831
2009/10	187	117	70	5,011	4,302	709	5,198	4,419	779

Source: ONS

4.57 Due to the low levels of international migration we have further considered migration patterns with regard to looking at all migration together. Figure 97 shows in- and out- migration over the past seven years for which we have data as well as how ONS have interpreted this data in projecting

forward from 2010 to 2028. As with other areas there is no obvious trend in the data for South Derbyshire although it is notable that levels of both in- and out-migration do closely track each other. In the future ONS project that both in- and out-migration will increase at a fairly linear rate. As with Amber Valley, this trend is to be expected given a growing population which increases the number of people who are potential movers (hence both in- and out-migration will be expected to increase). The start points for the ONS 2010-based SNPP are also broadly in line with where we might expect these although the figure for in-migration in particular is slightly higher than immediate past trends would suggest.

**Figure 97: Past and projected trends in all migration – South Derbyshire**



Source: ONS

4.58 We can use this data to show average levels of migration over the past five years and for the first five years of the projection period – this is shown in Figure 98 below. The table shows that levels of both in- and out-migration are expected to be slightly higher in the projections than is the case in looking at past trends. The overall difference in net migration is relatively slight with past trends suggesting annual net migration of 905 people per annum with the first five year of the projection suggesting a slightly higher figure of 942. It should however be noted (as seen in the figure below) that in the longer term ONS expect net migration to decline and if we were to take an average for the whole period from 2010 to 2028 then average net migration would stand at 844 per annum.

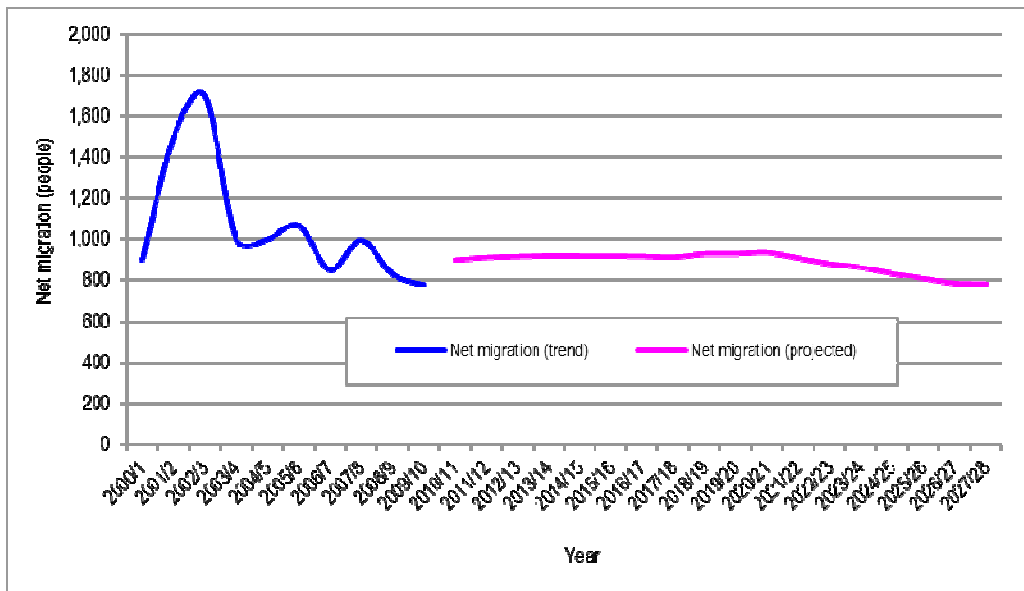
**Figure 98: Average migration levels – past five years (trend) and first five years of ONS 2010-based SNPP – South Derbyshire**

Component	Past five years	First five years of projection
In-migration	5,508	5,635
Out-migration	4,602	4,693
Net migration	905	942

Source: ONS

4.59 Figure 99 below shows trends in net migration over the past ten years (to 2010) and also projected net migration levels in the 2010-based SNPP from 2010 to 2028. In this case the longer-term trends in South Derbyshire do tend to provide some support for the ONS figures with a clear downward trend over time which appears to be reflected by ONS towards the back end of their projection. It is not clear on the basis of this data however why migration levels are fairly constant for the first ten years or so of the ONS projection.

**Figure 99: Projected levels of net migration to South Derbyshire**



Source: ONS

*What does this Mean?: Conclusions about Migration*

The analysis above clearly demonstrates how difficult it is to use past trends to project future changes in migration to- or from- a local authority area and it is quite difficult on the basis of the data presented to fully understand the rationale for ONS 2010-based SNPP moving forward. In all areas (and Amber Valley and Derby in particular) the projection data appears to be particularly influenced by very short-term trends. There is however some logic to the 2010-based figures moving forward such as increases in levels of both in- and out-migration over time (linked to growing population) and we suggest that the ONS figures can be used as a basis for projecting forward; but with some minor amendments (particularly for start levels) on the basis of our analysis.

In Amber Valley the ONS projections suggest an increasing level of both in- and out-migration over the period to 2028. This makes sense in the context of a growing population (both in the District and a wider area). On this basis we feel that the ONS projection figures can be considered as broadly realistic. However, we do have concerns that the start position for net migration is too high (on the basis of studying past trends) and believe that a realistic start point would have lower net migration with figures broadly tracking the SNPP thereafter. Detailed assumptions for modelling are provided in the next Section of the report.

In Derby the situation is complicated by a significant component of international migration within the population change statistics. There is some evidence in the short term that the balance between in- and out-migration (international) has been widening although this is not clear cut – particularly when looking at longer-term trends. The ONS projections suggest a widening gap with levels of both in- and out-migration projected to be at levels which are not really supported by previous trends. In addition, given that the majority of in-migrants are classified as ‘workers’ there is the possibility that migration levels will be affected by the performance of the economy. Regarding internal migration the ONS projection figures look to be more plausible (with increased levels of both in- and out-migration over time) although we have some concerns with the start point for these and have suggested an alternative in the following section (which again broadly tracks SNPP assumptions but with a different start point). A changing start point for net migration levels can be justified through an analysis of past trends.

In South Derbyshire, it is arguable that the trend and projected figures are fairly plausible (again showing increases in both in- and out-migration over time). We would again suggest that a slightly different start point for the levels of in- and out-migration might be appropriate on the basis of past trends. Again detailed modelling assumptions are provided in the next section of the report.

## **Headship Rates**

- 4.60 The discussion above has centred on overall population change and the components of this change (i.e. fertility, mortality and migration). In this project we are however particularly interested in how population change is likely to impact on the number of households in each area and hence the number of additional housing units that might need to be provided. In converting population into households it is conventional to use the concept of headship rates. Headship rates can be described in their most simple terms as the number of people who are counted as heads of households.



- 4.61 The latest headship rate information available is from the 2008-based CLG household projections. These projections use long-term trends in household formation (and headship) based on a time-series going back to 1971. One of the key trends over this period has been rapidly declining household sizes and a general growth in the proportion of single person households. However, data from studies such as the English Housing Survey (and its predecessor the Survey of English Housing) have over time suggested that the trend of falling household sizes has stalled somewhat with additional evidence since 2008 suggesting that household formation rates have dropped quite notably.
- 4.62 This is likely to be due to the economic downturn which has meant that many households who might have been expected to form have chosen not to do so (often continuing to live with parents) or alternatively have moved to shared rather than self-contained accommodation. It is possible through a range of sources to test the extent to which household formation and headship rates differ from those contained within the 2008-based CLG household projections.
- 4.63 Figure 100 below shows for 2010 an estimate of the number of households in each area and also the number that would be suggested if the 2008-based headship rates (for 2010) were applied to the local population. The household figure for 2010 is essentially the number of occupied dwellings in each area which is taken as a reasonable proxy for households. The figure has been derived from a range of sources including CLG data on the dwelling stock and number of vacant homes along with Valuation Office and Census data about the number of second/holiday homes in each area.
- 4.64 The data shows there are significant differences between the figures derived by applying CLG headship rates and those found by looking at the current stock of housing in the HMA. In total, it is estimated in 2010 that the same population actually occupies nearly 8,000 fewer dwellings than would be suggested by applying CLG headship rates. The difference is most marked in Derby with a difference between the two estimates of over 6,000 households.

**Figure 100: Comparison of household estimates in 2010**

Area	2010-based households	HSSA occupied dwellings	Difference	% difference
Amber Valley	52,930	52,025	-905	-1.7%
Derby	105,963	99,893	-6,070	-5.7%
South Derbyshire	38,350	37,490	-860	-2.2%
Derby HMA	197,243	189,408	-7,835	-4.0%

Source: Derived from ONS, CLG and HSSA data

- 4.65 Figure 101 above looks at just a single year and in providing advice about trends we have looked at household and headship rates going back to 2001. This has been done through reference to

average household sizes. The table below shows estimates for each local authority of the change in average household size from 2001 to 2010. The population data has been taken from ONS mid-year population estimates (as updated to include improved methods for recording migration) with household numbers derived from a range of sources as noted above.

- 4.66 It should be noted that strictly the figures in the final column are not for average household size as the population figure includes people living in institutional establishments – however, for the purposes of establishing a trend this will have little impact on overall conclusions.
- 4.67 The data shows in Amber Valley that household sizes have fallen over the period studied, 2001-10, (from 2.40 to 2.34) with some evidence that this has levelled off in the last year. In Derby there is no evidence of any change in average household sizes in the period studied (the figure rising, then falling and then rising again). In South Derbyshire the evidence suggests over time that average household sizes have been increasing and have been broadly stable since about 2004.

**Figure 101: Trends in Average Household Size 2001 to 2010**

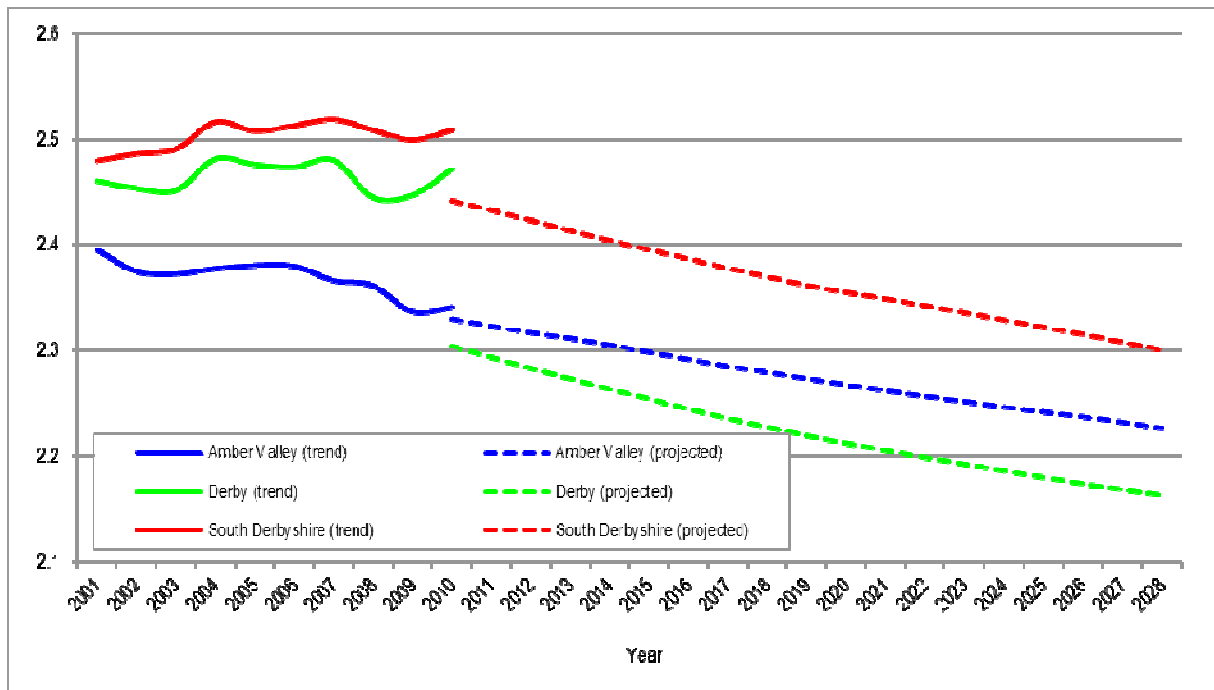
Year	Amber Valley			Derby			South Derbyshire		
	Popn	Hhs (occ'd dwellings)	Average hh size	Popn	Hhs (occ'd dwellings)	Average hh size	Popn	Hhs (occ'd dwellings)	Average hh size
2001	116,559	48,660	2.40	230,725	93,772	2.46	81,738	32,963	2.48
2002	117,224	49,360	2.37	232,242	94,656	2.45	83,378	33,532	2.49
2003	117,803	49,655	2.37	233,418	95,216	2.45	85,292	34,243	2.49
2004	118,341	49,774	2.38	235,372	94,847	2.48	86,526	34,383	2.52
2005	119,013	49,990	2.38	237,336	95,849	2.48	87,855	35,031	2.51
2006	119,865	50,364	2.38	238,840	96,545	2.47	89,246	35,513	2.51
2007	120,224	50,806	2.37	240,361	96,909	2.48	90,577	35,960	2.52
2008	120,952	51,220	2.36	242,025	98,990	2.44	91,893	36,628	2.51
2009	121,241	51,891	2.34	243,948	99,687	2.45	92,919	37,172	2.50
2010	121,788	52,025	2.34	246,924	99,893	2.47	94,055	37,490	2.51

Source: Derived from ONS and CLG data

- 4.68 Figure 102 below shows the past trend data shown above along with a projection of average household sizes (from 2010 to 2028) based on the 2008-based CLG household projections. The findings of this analysis are stark (particularly for Derby and South Derbyshire). The data shows a significant discrepancy between average household sizes recorded and expected sizes in 2010.
- 4.69 Looking at individual local authorities we see that the past trend and future projected figures for Amber Valley do generally follow a linear trend. However, in both Derby and South Derbyshire the past trend is clearly one of no overall change in household sizes and yet the projections in both cases would suggest significant declines in average household size over the projection period from

2010 to 2028. Indeed the projected decline in household sizes in Derby and South Derbyshire are projected to be more rapid than in Amber Valley.

**Figure 102: Past and projected trends in Average Household Size**



Source: Derived from ONS and CLG data

*What does this mean?: Conclusions about Headship Rates*

Analysis of the relationship between population and households has shown some very clear trends with all areas currently having fewer households than would be expected by applying CLG 2008-based headship rates. Past trends in Derby and South Derbyshire also indicate no change in average household sizes over the past ten years and yet the CLG projections would suggest rapidly decreasing average sizes in the future. The preceding analysis has identified housing market and economic drivers of this.

In making recommendations about how to treat this information in any future projections we need to be mindful of how things might develop in the future. On the one hand it is possible that household formation will continue to be constrained linked to market conditions (and particularly mortgage finance constraints) and household sizes will continue to be roughly at current levels. On the other hand it might be that the changes to headship rates are a short-term trend and with an improving economy and housing market conditions, that households will once again be able to form at the sorts of rates seen in the past and headship might return to longer-term trend levels.

We would recommend that the Councils consider the implications on household numbers of headship rates remaining constant at 2010 levels (probably by maintaining a constant household size rather than keeping rates the same as these will to some degree be impacted by the population structure) and also of headship rates returning to long-term trends (as evidenced in the CLG household projections). These two projections would form reasonable extremes of what might happen in reality.

In all cases we would suggest that baseline figures for 2010 are adjusted to take account of the differences between actual households and household numbers derived through CLG headship rates.

Within this range (constant headship vs. long-term trends) we feel that the evidence would suggest a slightly different approach in different areas. In Derby and South Derbyshire, where differences from projections are more pronounced, we would recommend that a mid-point between constant headship and long-term trends would be appropriate with Amber Valley tending slightly more towards following long-term trends. This is discussed in more detail in the next Section of the Report.

### **Economic Performance**

- 4.70 In the sections above we have considered the components of population growth and also how populations might be translated into household numbers. All of the information has been based on considering demographic trends without taking account of wider economic factors that might impact on population growth and housing demand.
- 4.71 A key consideration for the three local authorities will therefore be around expected levels of economic (employment) growth and the population and housing requirements this will generate. Essentially, creating additional job opportunities is likely to attract additional in-migrants to take up jobs and this will potentially generate a requirement for additional housing. On the flip side additional housing development without any great improvement in employment opportunities could lead to an increase in worklessness and potentially (at the extreme) a growth in pockets of low demand properties and vacant homes. It is important therefore for the Councils to balance housing requirements with economic growth.
- 4.72 As part of this project, the Project Steering Group commissioned a set of economic forecasts from Experian to assist with understanding how the economy might perform moving forward. Whilst a series of projections were provided we have focussed on one which estimates the likely number of workforce jobs in each area – this is essentially the number of jobs available regardless of where the people taking up those jobs actually live.
- 4.73 Figure 103 below shows the Experian projections for workforce jobs from 2008 to 2028. The table shows that across the whole HMA there is only projected to be a very moderate increase in employment opportunities with a total increase over the 20-year period of around 1,400 additional jobs. Taking the Derby HMA as a whole we see that the number of jobs is expected to decline from 2008 to 2012 before steadily increasing to 2028. Over the whole period the projections expect moderate employment growth in both Amber Valley and South Derbyshire with a slight drop in the case of Derby (albeit increasing from 2012).

**Figure 103: Experian projection of workforce jobs (2008 to 2028)**

Year	Amber Valley	Derby	South Derbyshire	Derby HMA
2008	56,324	131,873	33,914	222,111
2009	55,143	125,372	33,504	214,019
2010	55,169	127,235	33,744	216,147
2011	55,766	127,057	34,263	217,086
2012	55,705	125,358	33,843	214,907
2013	56,226	126,172	33,908	216,306
2014	56,528	127,054	34,120	217,701
2015	56,658	127,536	34,340	218,534
2016	56,722	127,932	34,496	219,150
2017	56,766	128,238	34,654	219,658
2018	56,937	128,618	34,859	220,414
2019	57,042	128,992	35,032	221,066
2020	57,106	129,198	35,074	221,377
2021	57,086	129,242	35,045	221,373
2022	57,077	129,277	35,016	221,369
2023	57,067	129,315	34,995	221,376
2024	57,068	129,440	34,948	221,456
2025	57,064	129,627	34,895	221,587
2026	57,042	129,881	34,856	221,778
2027	57,112	130,488	34,915	222,515
2028	57,272	131,238	35,040	223,550
Change 2008-2028	948	-634	1,126	1,439

Source: Experian

- 4.74 We believe that the forecasts are on the pessimistic side although they are certainly in-line with recent economic trends both locally and nationally. Our overall conclusions on the weight which should be attached to the economic projections were set out in Section 3.
- 4.75 However for theoretical purposes we have sought to project what level of population growth would be necessary to support forecast economic growth.
- 4.76 Whilst the Council should consider the implications on population and household growth of the above baseline forecasts for employment growth we consider that it would be reasonable to consider and plan for a scenario for enhanced economic performance based on the impact of the potential additional job creation in the following areas:
- Derby – culture/ leisure jobs in City Centre – 500+ jobs phased 2016-28

- Freight/ logistics – capitalising on rail freight proposals and development of East Midlands Airport – 1,000 jobs. Assume 60% South Derbyshire (600 jobs), 30% Derby (300 jobs), 10% Amber Valley (100 jobs)
- Construction – 1,000 jobs – assume 19.5% South Derbyshire (195 jobs), 47.5% Derby (475 jobs), 33% Amber Valley (330 jobs)

4.77 The following forecasts of workforce jobs in the HMA are derived by adding these additional jobs to the baseline forecasts from Experian. The data now shows positive employment growth in all areas.

**Figure 104: Forecast for Workforce Jobs (Enhanced Scenario) 2008 to 2028**

Year	Amber Valley	Derby	South Derbyshire	Derby HMA
2008	56,324	131,873	33,914	222,111
2028	57,702	132,513	35,835	226,050
Change 2008-2028	1,378	640	1,921	3,939

Source: Experian and GL Hearn

4.78 The above figures are for the number of jobs in each local authority but for the purposes of understanding population numbers it is more important to know the number of residents who are in employment. This will depend on commuting patterns and below we have provided information from the 2001 Census about the locations of residence and workplace for people who are either living or working in any of the three local authorities.

4.79 The data shows some variation between different locations with South Derbyshire seeing only 39% of its working residents also working in the area. This compares with 77% of Derby residents who also work within the City boundary. Looking at workplaces we find that 58% of people working in South Derbyshire also live in the area with the highest figure (of 66%) being seen in Derby.

**Figure 105: Commuting Dynamics, 2001**

Residence/workplace location	Area of residence			Area of workplace		
	Amber Valley	Derby	South Derbyshire	Amber Valley	Derby	South Derbyshire
Amber Valley	30,794	2,967	399	30,794	8,133	597
Ashfield	1,227	337	90	2,166	549	183
Bolsover	1,627	214	56	2,075	392	124
Broxtowe	1,329	630	141	1,579	1,572	219
Charnwood	111	407	335	75	480	99
Chesterfield	410	186	106	601	318	67
Derby	8,133	72,868	7,392	2,967	72,868	2,943
Derbyshire Dales	1,782	1,029	334	1,268	1,931	272
Erewash	2,345	2,276	396	1,910	6,100	555
Gedling	235	165	32	302	486	58
Hinckley and Bosworth	17	85	204	27	112	74
Leicester	96	334	237	33	222	32
Mansfield	376	115	45	638	306	124
North East Derbyshire	380	63	42	1,598	424	99
NW Leicestershire	301	2,026	3,812	89	855	1,292
Nottingham	2,272	2,394	566	586	1,284	146
Rushcliffe	215	247	106	153	666	69
South Derbyshire	597	2,943	15,647	399	7,392	15,647
Elsewhere E Midlands	356	439	354	497	868	166
Birmingham	147	453	528	31	193	61
East Staffordshire	280	1,788	6,243	130	1,987	3,005
Lichfield	53	186	421	36	213	225
North Warwickshire	21	49	230	13	49	59
Tamworth	8	57	359	12	72	130
Elsewhere W Midlands	296	926	908	208	1,139	578
All other areas	1,132	2,031	964	919	2,204	396
<b>Total</b>	<b>54,540</b>	<b>95,215</b>	<b>39,947</b>	<b>49,106</b>	<b>110,815</b>	<b>27,220</b>
<b>% in same area</b>	<b>56.5%</b>	<b>76.5%</b>	<b>39.2%</b>	<b>62.7%</b>	<b>65.8%</b>	<b>57.5%</b>

Source: 2001 Census

4.80 We can use the above information to calculate a commuting ratio which is essentially the proportion of people living in an area who are working compared with the number of jobs in an area. This is important as job creation in one area does not necessarily mean that all additional employees will come from that location. The table below shows our calculation of the commuting ratio on the basis of the Census data. This shows quite a wide variation between areas with 1.47 people in employment per job in South Derbyshire and a figure of 0.86 in Derby. Essentially this shows that South Derbyshire has net out-commuting with Derby seeing a greater number of people commuting

into the area than commute out. Amber Valley also sees net out-commuting although this is at a lower rate than seen in South Derbyshire.

**Figure 106: Commuting ratios in the Derby HMA**

Location	Work in area	Live in area and are working	Commuting ratio
Amber Valley	49,106	54,540	111.1%
Derby	110,815	95,215	85.9%
South Derbyshire	27,220	39,947	146.8%

Source: Based on 2001 Census data

4.81 More recent information about commuting patterns can be obtained from the 2008 Annual Population Survey (APS) by ONS. This data source suggests that between 2001 and 2008 a greater proportion of people living in each of Amber Valley and South Derbyshire are also working within the local authority area. However, given that the APS is a sample based survey some caution needs to be used in interpreting this and ONS note that the changes seen in these two local authorities are not statistically significant. In Derby the APS does not record any notable change in commuting patterns between 2001 and 2008. On this basis it therefore seems reasonable to project forward on the basis that commuting patterns are broadly the same currently (and moving forward) as were recorded in the 2001 Census.

4.82 We can therefore apply our commuting ratio data to the Experian employment projections to provide projections for growth in the resident workforce. The results are shown in the table below (which includes our further adjustment for a more positive economic outlook).

**Figure 107: Projected number of residents in employment – Derby HMA**

Year	Amber Valley	Derby	South Derbyshire	Derby HMA
2008	62,576	113,279	49,786	225,641
2028	64,107	113,829	52,606	230,541
Change 2008-2028	1,531	550	2,820	4,901

Source: Experian and GL Hearn

4.83 In projecting forward the number of people in an area in employment we also need to consider underlying economic participation rates. As a result of the economic downturn many parts of the Country have seen increases in unemployment levels and reductions in the proportion of the population of working age who are in employment – this is indeed the case in the Derby HMA.

4.84 Essentially what this means is that there is a potential pool of latent labour supply available in most areas whereby new job creation can be filled by people who are already resident in an area rather

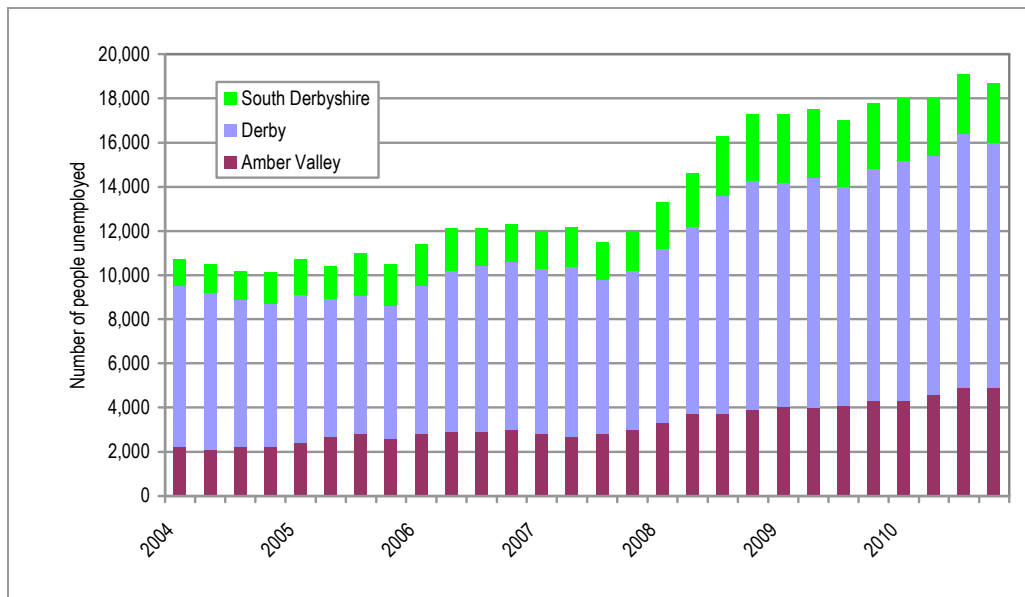


than there being a need for additional in-migration (or in-commuting) for jobs to be filled. There will however never be a perfect match between jobs available and the people seeking work as there may be differences in the skills and experience required. However, the Councils should consider the extent to which the existing population will be able to take up any new jobs created locally.

4.85 We can study the latent labour supply through reference to two main sources of information: unemployment and employment rates and each of these are discussed below.

4.86 Figure 108 below shows the number of people unemployed going back to 2004 for the whole of the Derby HMA. The number of people unemployed is currently about 8,000 higher than in pre-recession times with similar trends seen in all three local authorities. There is therefore quite a notable pool of people seeking employment within the current population of each area.

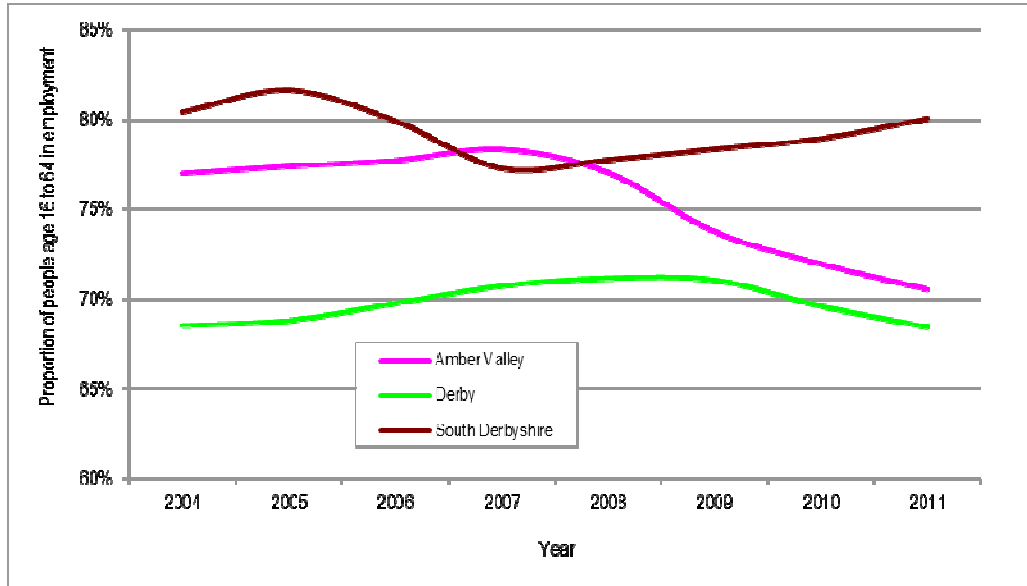
**Figure 108: Past Trends in Unemployment 2004 to 2010 – Derby HMA**



Source: ONS Annual Population Survey

4.87 Figure 109 shows employment rates in each local authority (this is based on the proportion of the working age population (those aged 16 to 64) who are working, including self-employment). In Amber Valley the data is clear that employment rates have dropped and in particular since 2007/8 (the start of the economic downturn). In Derby the employment rate rose slightly to 2008/9 but has fallen back since whilst in South Derbyshire the employment rate has generally been quite high throughout this period.

**Figure 109: Number of People and Proportion of People Working**



Source: NOMIS/Annual Population Survey

4.88 This latter data suggests that there is significant scope in Amber Valley to fill additional local jobs through improvements to employment rates although this possibility is less clear in Derby and South Derbyshire. Closer inspection of data around employment rates reveals in Derby that there has been a slight drop in male employment rates over time with the same finding for females in South Derbyshire. There may therefore be some scope in these areas to improve employment rates through finding work for the existing population although the issues of matching jobs to skills will be important in enabling this to happen. In Amber Valley both males and females have seen notable drops in employment rates over time.

*What does this mean?*

For the purposes of estimating employment growth associated with demographic projections it is necessary to consider how economic participation and commuting patterns may change.

In addition we have sought to develop, for comparative purposes, demographic forecasts linked to a demand-driven scenario for employment growth within the HMA.

As well as considering the demographic drivers of population change and housing requirements the Councils need to understand the link between employment and housing requirements. This link can work in two ways. Firstly additional job opportunities may create an additional demand for housing from in-migrants taking up jobs locally. On the other hand provision of housing without additional job creation in the HMA could see increases increasing out-commuting and at worst sustained worklessness and unemployment or the potential for problems to arise in the housing market including low demand housing.

All three areas currently appear to have a potential pool of latent labour supply as evidenced through increasing unemployment levels and generally reducing employment rates. The extent to which these people can be brought back into work will however depend to some degree on the skills available compared to the skills required in any new employment opportunities.

In coming to a view about employment prospects we have some reservations about the Experian projections which look to be somewhat on the pessimistic side and are likely to only require quite moderate population growth to achieve. We would therefore suggest that projections are developed on the basis of demographic trends but with outputs for the working population also being provided to give an indication of likely changes in employment levels.

### **Other Issues**

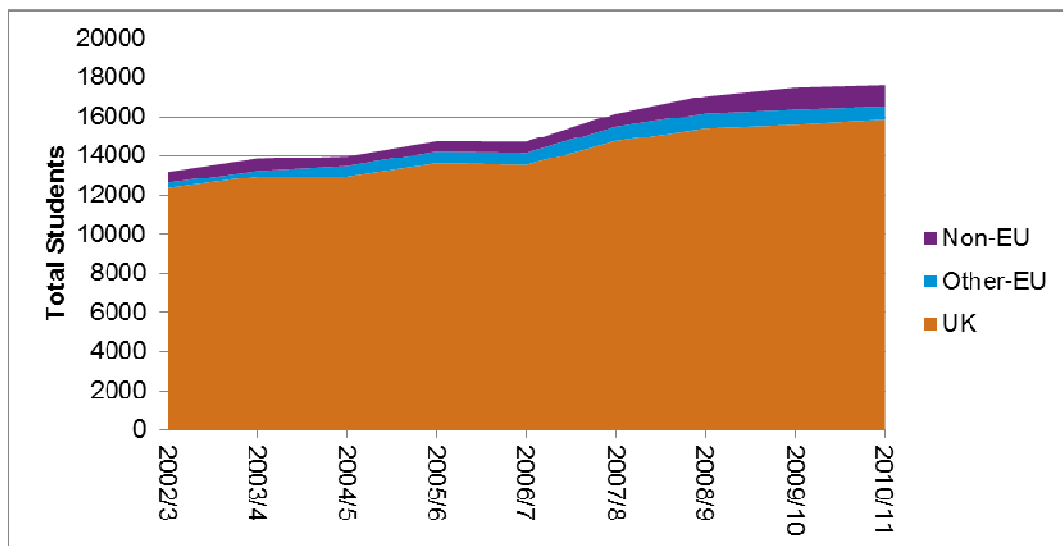
- 4.89 There are two other main issues we feel the Councils should consider when setting target for housing numbers; student housing and the impact of welfare reforms. These are briefly discussed below:

#### **Students**

- 4.90 At present only Derby has a significant student population and so the issue of student housing requirements is particular to this local authority. Student housing requirements will largely be influenced by overall student numbers and also the availability of housing in institutional accommodation (e.g. halls of residence). At present the outlook for student numbers is uncertain given the introduction of tuition fees which may see a decrease in the number of people starting courses in places such as Derby.

4.91 Student numbers have increased by two-thirds over the last decade with an increase in 5,600 students at the University of Derby between 2001 and 2011. However half of this growth has been in part-time students. International students make up just 7% of the student population.

**Figure 110: Trends in Student Numbers at University of Derby**



Source: Higher Education Statistics Agency

4.92 Moving forward, growth in student numbers could be significantly impacted by the introduction of higher tuition fees. This makes it difficult to predict trends moving forward. Recent research commissioned by LV= Insurance (Student Towns) suggests that from 2010 to 2020 Derby will see a loss in the resident student population of 3,717. If we were to assume that all of these students would have been housed in the private sector housing stock (thereby assuming full occupancy in halls of residence) and that there are an average of around 4 students per dwelling then this figure would equate to a reduction of around 1,000 homes being required over this ten year period.

4.93 However, as noted it is not clear at present whether Derby will see a significant drop in student numbers and so this information is presented as much for information as any hard evidence to feed into housing requirements. We do however suggest that the City Council monitors this situation with local educational establishments and makes revisions to housing targets (possibly on a locational basis) as appropriate.

### Welfare Reforms

4.94 The Coalition Government has heralded a period of considerable change by way of welfare reforms which will have an effect on residents in the HMA. The reforms are set against a backdrop of

government spending cuts, which has seen funding levels drop, and an economic recession which has led to changes to the country's housing market and how housing can be accessed. A number of the welfare reforms are likely to have an impact on the demand for housing and these are summarised below:

- Reducing the Local Housing Allowance (LHA) from the median rent in a Broad Rental Market Area (BRMA) to the 30<sup>th</sup> centile from October 2011
- Limiting Housing Benefit entitlements for working age people in social housing sector to reflect family size could increase arrears
- Limiting payments for people under 35 to the shared accommodation rate (up from age 25) from January 2012

4.95 Whilst the first two of these may have an impact on the housing choices for local households such as forcing households to move to cheaper accommodation or possibly downsize in the case of the social rented sector it is unlikely that they will have any great impact on the overall level of demand for housing in the area.

4.96 The third point however might potentially see some changes in housing requirements if for example households who had previously been able to afford self-contained accommodation (through claiming LHA for a one-bedroom home) were to move to shared accommodation due to the loss of benefits.

4.97 Data contained in a Department for Work and Pensions (DWP) document looking at the impact of the change in shared accommodation rate age eligibility suggests across the whole HMA that there are/were likely to be 470 people affected (100 in Amber Valley, 310 in Derby and 60 in South Derbyshire). If all of these were forced to move to shared accommodation and we again took an average of four people per home then this might potentially reduce housing requirements by around 350 units.

4.98 This figure when taken over a full 20-year projection period is actually quite small and at present there is no firm evidence of a large number of people taking up shared accommodation rather than accessing self-contained homes and so this information should be viewed mainly for interest. We would however recommend that the Councils monitor this, particularly over the remaining months of 2012, in which time the effect of the change is likely to fully materialise.

*What does this mean? Conclusions on Student Growth & Welfare Reforms*

There is the potential for some impact on housing requirements to be seen (particularly in Derby City) as a result of changing student numbers and the recent welfare reforms (notably changes to the shared accommodation rate age eligibility). At this stage it is however difficult to say what the long-term impact will be of these changes and we suggest that the Councils monitor the situation and makes amendments to housing requirements should there be any clear impact on the demand for housing in the HMA.

## **5 RECOMMENDED ASSUMPTIONS FOR MODELLING**

- 5.1 The NPPF sets out that local planning authorities should seek to meet identified development needs at an HMA level, with sufficient flexibility to respond to rapid shifts in demand. It outlines that development needs should be considered in light of household and population projections. The report conclusions are drawn in this context.
- 5.2 It seems appropriate to plan on meeting demographic growth, albeit that in reality market conditions might constrain the ability to achieve this; not least to ensure that the planning system does not become a barrier to housing market/ economic recovery.
- 5.3 A key outcome of this Study has been to recommend assumptions which can be used to forecast future housing requirements through additional demographic modelling. The final section of the report draws together the analysis undertaken to outline proposed assumptions to inform modelling of future population, household and dwelling growth. We address the key components of demographic change in turn below.

### **Fertility**

- 5.4 The latest Sub-National Population Projections (SNPP) (2010-based) project changes in fertility in each of the three authorities. They indicate short-term increases in fertility but with fertility declining over the longer-term. The expected trends in each local authority are similar those expected nationally.
- 5.5 We do not believe that there is a strong case to suggest that fertility rates will differ much from those set out in the 2010 SNPP based on current evidence. We would therefore recommend that the assumptions on future fertility trends within the 2010 SNPP are applied.

### **Mortality**

- 5.6 Mortality is modelled using life tables which relate to levels/ trends in life expectancy. Life expectancy in the three authorities is similar; and the 2010-based SNPP projects that these will improve over time at a similar rate to expected national trends. The differences in life expectancy between men and women are expected to converge over time.
- 5.7 Again we do not believe that there is a strong case to suggest that mortality rates will differ notably from those set out in the 2010 SNPP based on current evidence. We would therefore recommend that the assumptions on future mortality trends within the 2010 SNPP are applied.

## **Migration**

- 5.8 Forecasting future migration is much more difficult: there is significant variance in migration levels year-on-year and it is difficult to accurately predict future trends.
- 5.9 The analysis of economic prospects undertaken indicates that economic performance moving forward could (theoretically) result in some moderation of migration levels relative to the past. However migration flows are biased towards those of working age and the link over the last few years between economic performance and migration has not been that linear (particularly in Derby). Furthermore there is considerable uncertainty regarding long-term economic prospects which feeds through into a considerable error margin which needs to be attached to economic forecasts.
- 5.10 On the basis of the balance of evidence we consider that greater weight should be attached to past demographic information. We address migration in each of the three authorities in turn.

### *Derby*

- 5.11 In-migration to Derby has varied from 11,900 – 12,800 per annum between 2003/4 and 2009/10. Over this period, the range of out-migration has been narrower, 11,300 – 11,800 per annum. This has resulted in net migration of between 200-1,400 persons per annum.<sup>10</sup> Net in-migration has been driven by a net inflow of international migrants, and a modest net outflow to other parts of the UK.
- 5.12 International in-migration is strongly focused towards economically active persons. In the future it can be expected to be influenced by student growth and the availability of employment opportunities. It seems reasonable to assume that international migration to Derby will continue. However we find it difficult to support the assumptions in the ONS SNPP, that from 2011/12+ international in-migration of 2,770 per annum will be supported (which between 2003-10 has only been exceeded in 2004/5) and out-migration of just 660 persons per annum (below the level seen in any year between 2003-10) will occur. In policy terms it does not make sense to plan for this either, given the City's economic structure and existing local latent labour force.
- 5.13 On this basis we recommend planning on the basis of international in-migration of 2,500 persons and out-migration of 1,030 persons per year. These are average levels experienced between 2005/6 – 2009/10. It is recommended that these are held constant throughout the projection period (2010 to 2028). This approach is broadly consistent with that taken by ONS in the 2010-based SNPP which hold international migration levels constant for the majority of this projection period.
- 5.14 We consider that the level of domestic migration will be influenced by a number of factors including housing supply, changes in the student population and job creation. It seems reasonable to assume

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<sup>10</sup> Figures are expressed to the nearest 100



that with a growing population and land supply constraints, out-migration may increase over time (as is suggested in the 2010-based SNPP).

- 5.15 Past trends in internal migration suggest that over time the gap between in- and out-migration has been widening with a general increase in levels of net out-migration and in the future we would expect this trend to continue as the population of both Derby and a wider area (to include the whole of the UK for example) grows. In other words, as the population of the UK grows we would expect more people (in gross terms) to move to Derby; but at the same time, as the population of Derby grows, we would expect more people to out-migrate. Given that the number of internal out-migrants is in excess of the number of in-migrants we would generally expect this gap to widen.
- 5.16 To take a start point for internal migration we have looked at trends over the past seven years (provided in Section 4 of the report). From this we conclude that a reasonable start position (mid-2010) would be to assume gross in-migration of 9,800 people per annum along with gross out-migration of about 10,600. Over a long-term period from 2010 to 2028, taking account of population growth in a wider area we might expect these figures to increase to 10,400 and 12,000 by 2028 respectively (changes consistent with the 2010-based SNPP). We recommend that this change in migration levels is modelled in line with figures from the 2010-based SNPP, which is not linear over time.
- 5.17 Levels of cross-border migration (both to and from Derby) are relatively slight and for the purposes of running a projection we suggest that figures within the 2010-based SNPP would be reasonable to assume moving forward.
- 5.18 There are also issues around the age structure of migration which may in part be influenced by issues such as the educational offer (students) and employment prospects. We do not have sufficient information to strongly suggest any alternative age profile to that suggested in the 2010-based SNPP but would note that when getting down to this level of detail there will be issues around the accuracy of data feeding into the ONS model. It should however be noted in applying alternative levels of in- and out-migration into a demographic model that the age profile will also change (in net terms). We suggest that in applying different migration assumptions that the age/sex profile is adjusted on a proportionate basis (i.e. if the assumption shows a figure of say 10% below the ONS SNPP position then it should be assumed that 10% fewer migrants will fall into each age/sex band).

5.19 To conclude we would recommend modelling the following migration patterns in Derby:

**Figure 111: Suggested Assumptions for International Migration in Derby City**

	In-migration	Out-migration	Net migration
2010/11	2,500	1,030	+1,470
2027/28	2,500	1,030	+1,470

**Figure 112: Suggested Assumptions for Internal Migration in Derby City**

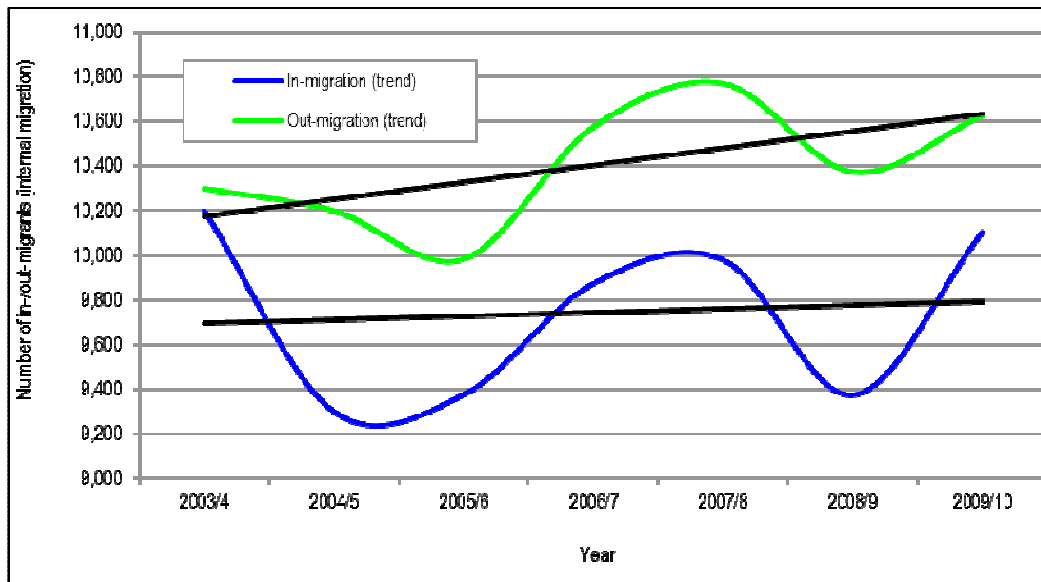
	In-migration	Out-migration	Net migration
2010/11	9,800	10,600	-800
2027/28	10,400	12,000	-1,600

**Figure 113: Suggested Assumptions for Cross-Border Migration into Derby City**

	In-migration	Out-migration	Net migration
2010/11	As in 2010-based SNPP	As in 2010-based SNPP	As in 2010-based SNPP
2027/28	As in 2010-based SNPP	As in 2010-based SNPP	As in 2010-based SNPP

5.20 The start point for the internal migration levels can be justified by studying the trends in migration over the past seven years. By drawing a linear trend line through each of in- and out-migration we can see that in 2010 the start points would be as shown in the tables above.

**Figure 114: Derby City – Internal migration trends**



Source: ONS

*Amber Valley*

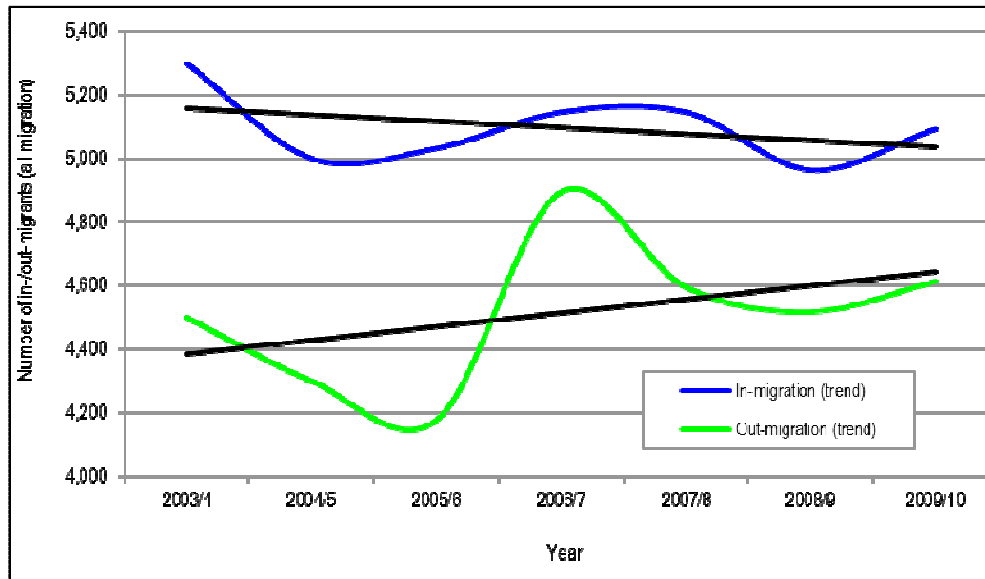
- 5.21 Net migration to Amber Valley is primarily of family households (with notable in-migration of those in their 30s and early 40s) although there is also some movement of older households into the area as well. There is substantial net in-migration to the District from Derby.
- 5.22 As discussed in Section 4, the vast majority of migration movement to and from Amber Valley is from other parts of England with very little international or cross-border migration. For this reason we would suggest that migration modelling is carried out for the population as a whole (essentially merging data for each of internal, international and cross-border migration into one group). Such an approach will not undermine the figures given that in gross terms migration other than internal only makes up about 5% of all population movement.
- 5.23 In Amber Valley there are a consistently higher proportion of in-migrants when compared with out-migrants (i.e. net in-migration). Given expected population increase in Amber Valley (and other areas), we would expect levels of both in- and out-migration to increase in the future (as indeed is projected in the 2010-based SNPP) and we recommend that analysis of future migration patterns broadly track those in the SNPP. However, analysis of the SNPP compared with past trends suggests that the start points for both in- and out-migration are somewhat at odds with what we might expect and hence we suggest a rebasing of figures for migration in 2010/11 to take account of these trends.
- 5.24 As shown in Figure 115 below we would recommend for the purposes of modelling future change that in 2010/11 in migration is assumed to be around 5,040 with an out-migration of 4,640. By 2027/28 these figures might be expected to increase to 5,560 and 4,850 respectively. Again we recommend that migration changes are modelled broadly in line with SNPP assumptions which mean that changes in migration levels are not linear over time.

**Figure 115: Suggested Assumptions for All Migration in Amber Valley**

	In-migration	Out-migration	Net migration
2010/11	5,040	4,640	+400
2027/28	5,560	4,850	+710

- 5.25 The start point for the migration levels can be justified by studying the trends in migration over the past seven years. By drawing a linear trend line through each of in- and out-migration we can see that in 2010 the start points would be as shown in the table above.

**Figure 116: Amber Valley – Migration Trends (All Migration)**



Source: ONS

- 5.26 As with Derby we do not have any strong evidence to support a fundamental change in the age/sex structure of migrants in Amber Valley from that which is suggested in the 2010-based SNPP. We would however recommend that any adjustments from the ONS position are treated proportionately across all age/sex groups.

#### *South Derbyshire*

- 5.27 South Derbyshire has clearly experienced high net in-migration over the last decade, in part influenced by strong housing supply. Net migration has varied over time, albeit that the recent trend is downward – likely partly influenced by recent reductions in new housing delivery. We consider that it is realistic to assume that migration may therefore remain somewhat moderate in the short-term (linked to expected housing market conditions).
- 5.28 As with Amber Valley, levels of international and cross-border migration are relatively low when compared with internal migration figures and so we suggest that the migration component of any projection is treated as a single category including all three of these sources of migration.
- 5.29 Looking at trends over the past seven years we conclude that as of 2010/11 it would be reasonable to have a start point with in-migration at 5,400 people per annum and out-migration at 4,570 (net

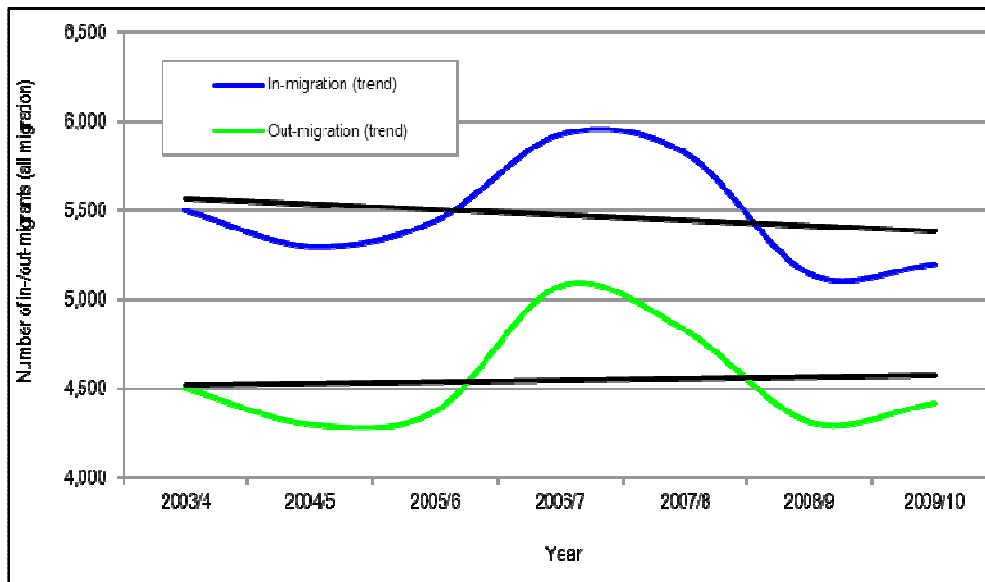
migration of 830 people). Over the longer-term we would expect both in- and out-migration to increase (due to a growing population) and this is also the position taken in the 2010-based SNPP. As with other areas we consider the SNPP assumptions to be the most realistic in terms of projecting forward but believe that a slightly different start point for migration (in 2010/11) should be taken to reflect recent trends. Figure 117 below shows our suggested migration assumptions for modelling at the start and end of the projection period. As with other areas it should be noted that these changes are not linear over time.

**Figure 117: Suggested Assumptions for Migration in South Derbyshire**

	In-migration	Out-migration	Net migration
2010/11	5,400	4,570	+830
2027/28	6,000	5,290	+710

5.30 The start point for the migration levels can again be justified by studying the trends in migration over the past seven years. By drawing a linear trend line through each of in- and out-migration we can see that in 2010 the start points would be as shown in the table above.

**Figure 118: South Derbyshire – Migration trends (all migration)**



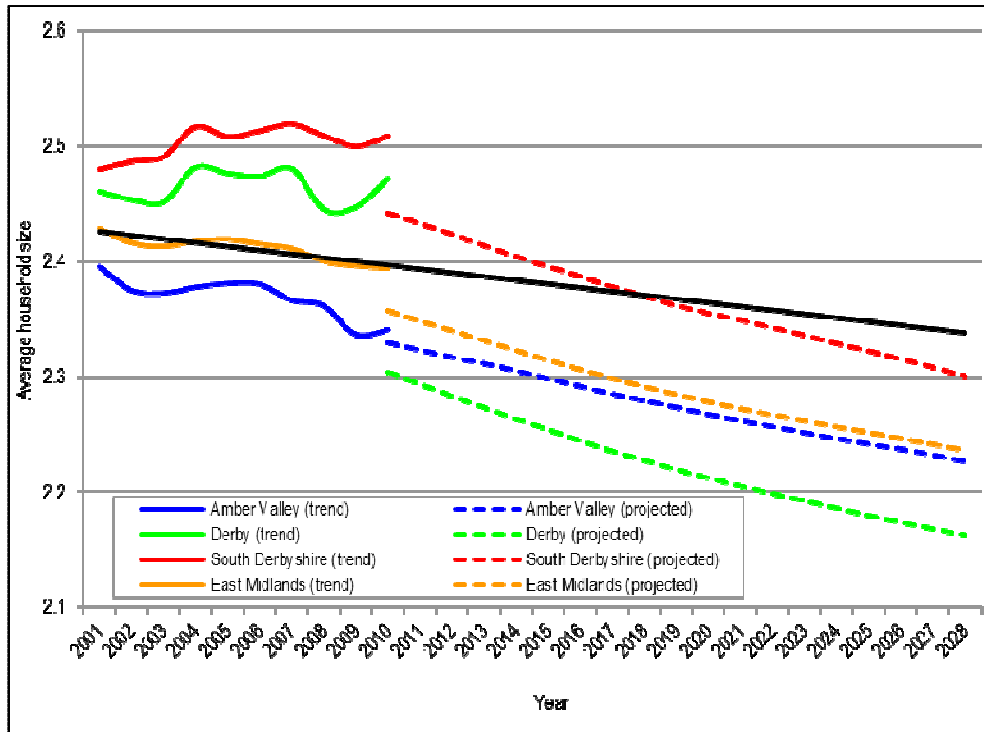
Source: ONS

5.31 As with Derby and Amber Valley we do not think there is a strong case to suggest that the age/sex profile of migrants will differ significantly from that suggested in the 2010-based SNPP.

*Headship Rates*

- 5.32 Within the report we identified that projected reductions in household size in both Derby and South Derbyshire do not appear to have occurred in recent years. In our view the trend in South Derbyshire may be partly influenced by in-migration of family households (influenced by the types of homes delivered). When comparing population age profile changes over the past ten years in South Derbyshire this potential explanation for no reduction in household sizes is broadly supported with greater relative growth in working-age groups compared with older persons. The first of these groups are more likely to live in larger households (e.g. with children) whilst the latter tend to have smaller household sizes.
- 5.33 In Derby, the trends may reflect migration of younger workers and students to the City, with an increase over the last decade in larger households within the private rented sector including younger people, students and migrants.
- 5.34 In Section 4 of the Report we provided trends in average household size for each of the three local authorities. We have reproduced this analysis below, with the addition of a regional trend line.
- 5.35 At a regional level the data also shows that there has been a notable movement away from long-term trends projected in the CLG 2008-based Household Projections. Overall our linear trend line (which looks plausible) suggests that regionally the true level of change is roughly midway between constant household sizes and the long-term trend. It seems reasonable to expect the three Derby HMA authorities to tend towards this regional position.

**Figure 119: Headship rate trends and projections (measured through average household size)**



Source: Derived from ONS and CLG data

- 5.36 In reality we have seen different trends in each of the three areas with Derby and South Derbyshire showing no downward trend in household sizes over the last ten years whilst Amber Valley household size changes have been close to long-term trends
- 5.37 Clearly it would not be realistic to suggest that household sizes will return to the long-term trends given the differences shown to exist even at a base date of 2010 (particularly in Derby and South Derbyshire) and the housing market context in the short-term. However, as the population ages we might expect to see some decrease in household sizes but at a lesser rate to that projected by CLG in 2008.
- 5.38 Given the trends seen over the past ten years we suggest that in Derby and South Derbyshire that it would be reasonable to project that headship rates follow a trend that is somewhere between 'no change' and the regional average with Amber Valley falling in the gap between the regional average and long-term trends.

**Figure 120: Suggested Headship Rate Assumptions**

	2010	2028
Amber Valley	Rebase to 2010 position	Revert to midway between regional and long-term trends
Derby		Revert to midway between 'no change' and regional trends
South Derbyshire		

5.39 Within these changes we might expect growth in headship in the medium-term (e.g. to 2016) to continue to be moderated by economic and market conditions, returning over this period towards long-term trends. This will mean that headship growth is suppressed for a good proportion of the first half of the plan period. For the purposes of looking at a projection up to 2028 this distinction would make little difference to overall housing figures although it is likely to see a slightly lower housing requirement in the early part of the projection.

*Vacant Dwellings*

5.40 In converting an estimated number of households (derived through headship rates) into requirements for additional dwellings it is also necessary to factor in a vacancy allowance. For the analysis we suggest that a vacancy rate of 2.5% is added to the household forecast. This is sufficient to support 'frictional turnover' of the new-build housing stock in a properly functioning housing market.

5.41 A 2.5% vacancy rate is slightly lower than is recorded across the whole HMA and we would make the distinction between vacant homes in the existing stock and new dwellings. It is for example unlikely that developers will continue to build/complete homes if there are problems finding potential occupants. Where vacancy rates in the existing stock are higher than 2.5% (notably in Derby City) this is likely to be partly influenced by the age and quality of stock.

5.42 There may be an opportunity to bring some homes back into use (reducing the overall vacancy rate) which may reduce new-build housing requirements slightly. Overall, however the assumption around vacant homes makes relatively little difference to the outputs of the analysis.

*Changes in Employment*

5.43 The suggested projection modelling set out above is purely based on interrogating demographic trends. The Councils should also consider the implications of population change on the working population in each area. As part of this project we analysed Experian economic projections for the HMA but concluded that these looked fairly pessimistic – hence we are not recommending tying a projection back to these figures.



- 5.44 We do however recommend that the Councils model the likely change in employment arising from the demographic projection and consider how this level of employment growth could be supported. This modelling should also inform future employment land provision.
- 5.45 In looking at how levels of employment might be expected to change we recommend the Councils' take account of increases in unemployment over the past few years and model the fact that some of these people might be able to get back into work were jobs available. Any figures should also include a small allowance for likely increases in employment rates as a result of changes to pensionable age. Generally, in Amber Valley and Derby there appears to be greater scope to improve employment rates in the long-term with the employment rate in South Derbyshire generally being quite high (even through the recessionary period).

*Monitoring and Review*

- 5.46 The conclusions on key demographic variables in this Section are intended to inform demographic modelling and the development of policies for housing provision. In drawing conclusions we have taken a relatively positive view in regard to the economic evidence available. We have also based the conclusions on seeking to meet demographic needs, and not placed undue emphasis on current housing market conditions and the impact which this could have on housing delivery.
- 5.47 The analysis is based on the evidence available at the time of writing. However it will be important that a clear mechanism for monitoring and review is included within Core Strategies or Local Plans such that should demographic trends differ significantly from those projected; or the housing market recover very strongly and result in housing delivery notable above planned targets over a consistent period; then this would trigger a review of the strategic planning approach and assumptions.