

2006-BASED HEREFORDSHIRE POPULATION FORECASTS: FREQUENTLY ASKED QUESTIONS

This paper provides brief answers to some of the questions that may be asked about the 2006-based population forecasts for the county of Herefordshire.

The full results of the forecasts are available on Herefordshire Council's website, along with an overall analysis of changes to the total population and age structure, and reports focusing on forecast numbers of births and school-age children, and the reasons behind the expected trends. A summary of the methodology is given in the *Overview of results* paper, but the full methodology is available as a separate document. All of the information can be accessed using the following link: www.herefordshire.gov.uk/research.

How can you be forecasting a fall in the school-age population when numbers of births have increased in recent years?

- The recent increase in births has been small relative to the levels seen in the early to mid 1990s, i.e. when those who are now of school leaving age were born. For instance 1,710 births in the 2006 calendar year is high compared to lows of under 1,600 in 2001 & 2002, but is still low compared to 1,860 in 1995 (i.e. those who are 11 in 2006 – and will have just left primary school) and 2,090 in 1991 (i.e. those aged 15 in 2006).
- Current (i.e. 2006) numbers of under 4s in Herefordshire are smaller than the current school-age cohorts:
 - There are 1,700 to 1,800 children of each single year of age under 4;
 - Over the next 4 years¹ (i.e. to 2010) these will be replacing children currently aged 7-10 in the primary school-age group – a cohort that has 2,000 to 2,100 children of each single-year of age;
 - These 7-10 year-olds will in turn be moving into the secondary school-age group, replacing 2,300 to 2,400 in each single-year of age from 14 to 17.
- The forecasts do suggest that numbers of primary-age children will rise slightly after 2011 (i.e. when children born in 2007 start school), and numbers of secondary and sixth-form aged children will begin to rise after 2018 (when those same children start secondary school). However, these rises will not be large enough to suggest numbers at or above current levels.

How can you be forecasting that births won't continue to rise when fertility rates are increasing?

- Although these 2006-based Herefordshire forecasts incorporate assumptions about higher fertility rates made by the Office for National Statistics (ONS) in their national population projections for England & Wales (published in November 2007), these rates are not predicted to rise indefinitely: the total fertility rate is assumed to increase to 2010 and then to fall slightly.²

¹ Note: previous versions incorrectly said 5 years.

² http://www.gad.gov.uk/Demography_Data/Population/2006/methodology/fertass.asp

- Fertility rates are only one aspect in forecasting the number of births; just as important are the number of women of child-bearing age expected to be resident in the county.
- The number of women of child-bearing age³ is expected to fall by 12.5% over the forecast period. This is due to the ageing of the population, with a smaller cohort of younger women replacing those born during the baby-boom of the 1960s.
- Provisional data from Herefordshire Primary Care Trust on the number of births to mothers resident in Herefordshire in 2006-07 indicates there was a further increase in the number of births in the county (around 1,720 compared to 1,650⁴ in 2005-06) – this is similar to the number forecast by applying the assumed fertility rates to the existing population of women (1,710).
- Applying slightly higher fertility rates to a declining population results in a broadly consistent forecast number of births – between 1,600 and 1,700 each year from mid-2007 onwards.

How can you be forecasting a fall in the school-age population when surely there will continue to be more immigrants?

- For population estimation purposes an international migrant is defined, by the United Nations, as a person who changes their country of residence for at least a year.⁵
- Current estimates from ONS suggest that in 2005-06 Herefordshire saw a *net* inflow of 50 such people from overseas; in no other year since 2001 has there been more people moving to the county than leaving to live abroad.
- There is no hard evidence to dispute these estimates; it is not possible to ascertain from administrative sources of information on migrant and seasonal workers in Herefordshire the numbers of these that stay for at least a year.
- The current (revised 2004-based) ONS projections⁶ for the population of Herefordshire assume an increasing net *outflow* of international migrants from the county.
- Herefordshire Council's 2006-based population forecasts assume that the county will receive the same proportion of the annual net international migrants to the UK assumed for the 2006-based national population projections as it did, on average, between mid-2004 and mid-2006 – i.e. a net inflow of around 20-25 people per year.
- The age profile of international migrants to the county means that the forecasts assume an annual net *inflow* of younger adults (around 50 women of child-bearing age per year), but a small net *outflow* of children (around 10 per year) and older adults.

³ Age-specific fertility rates are produced for women aged 15-46, but 'child-bearing age' is usually defined as ages 15-44 – this has been amended from version 1 of this document.

⁴ Note: version 1 incorrectly stated 1,660 here.

⁵ See http://www.statistics.gov.uk/downloads/theme_population/2006_MYEs_FAQs.pdf

⁶ <http://www.statistics.gov.uk/statbase/Product.asp?vlnk=997>

- These are the most appropriate assumptions regarding international migration that can be made at this time – i.e. that migration to Herefordshire will follow projected national trends based on observed flows over the two years for which data is available since the expansion of the EU.

How can your forecasts be right when the Office for National Statistics is going to be publishing new official population projections for Herefordshire later in 2008?

- No prediction (projection or forecast) of the population of an area will ever be completely accurate, as there are so many uncertainties regarding future demographic behaviour.⁷
- Population *projections* provide an indication of what could be expected to happen to the population of an area if assumptions based on recent observations of fertility, mortality and migration were realised – without taking into account any known local development or economic factors.
- ONS will be producing 2006-based projections later in 2008 for *all* Local Authority Districts in England, using five years' worth of area-specific trend data. They note that "*care is required in interpreting the projections. ... The assumptions... do not reflect the impact of future development policy. It is to be expected that the projections... will differ from the annual population estimates, which are rolled forward each year and reflect events that have occurred in the previous year.*"⁸ Furthermore, "*since the local component of change assumptions are based on a five year reference period they may not take full account of very recent changes observed in the population.*"⁹
- As we only have to consider one area, Herefordshire Council's Research Team can look in detail at what are the most appropriate assumptions for each component of demographic change in the county. The most notable differences are:
 1. the local projections and forecasts use three years' worth of within-UK migration data and two years' worth of international migration data (i.e. since the expansion of the European Union in May 2004) to reflect more recent trends;
 2. in addition, the population *forecasts* extend the trend-based *projections* into a more realistic prediction of what is likely to happen to the population by taking into account known local factors; in Herefordshire's case, by constraining within-UK migration to meet anticipated housing provision under future development plans.

⁷ See the Government Actuary's Department's reasoning for producing variant projections: http://www.gad.gov.uk/Demography_Data/Population/2006/methodology/varpurpose.asp

⁸ 2006-based subnational population projections for England: Methodology Overview. See: <http://www.ons.gov.uk/about/consultation/Consultations/2006-based-subnational-population-projections/methodology-paper.pdf>

⁹ Revised 2004-based Subnational Population Projections for England: Key notes for users. See http://www.statistics.gov.uk/downloads/theme_population/Important_Key_notes.pdf

Under any of your sensitivity testing, is it possible that there will be more school-age children than there are now?

- The principal forecast is the Research Team's independently-validated prediction of what is most likely to happen to the population of Herefordshire between 2006 and 2026. However, a range of 'variant' projections and forecasts were produced to facilitate understanding of the sensitivity around this forecast; full details of the assumptions underlying each variant will be provided in the full methodology document.
- None of the alternative scenarios (with differing assumptions around fertility, mortality, migration and housing) result in a population aged 11-17 (i.e. secondary and sixth-form age) of more than 89% of the number in 2006 (which is 16,000) at any point throughout the forecast period;
- We produced 28 variant projections and forecasts; if the assumptions underlying two of these were realised it could be expected that the number of children aged 4-10 (i.e. primary school-age) would fall to the same level as expected under the principal forecast until 2011 (i.e. 12,800 compared to 13,800 in 2006), before rising more rapidly than the principal forecast suggests.
- However, even under the combination of these less likely demographic assumptions, there would be fewer primary school-aged children in Herefordshire than there were in 2006 until at least 2021. By 2026 there would be no more than 2% more than in 2006 – an increase of 300 children.
- Both of these scenarios assume 'high' variants of fertility, life expectancy and net immigration, based on the alternative assumptions used in the 2006-based national population projections. One constrains average within-UK migration rates over the last five years to the anticipated housing development; the other average rates over the last three years (i.e. the principal migration assumption).

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