

Forecasts for areas smaller than a District, using POPGROUP

Organisation: Centre for Census and Survey Research, for Bradford

How many areas: 30

What are these areas: Wards

Range of current population of these areas: 13k-23k

Base year: 1991

The work described has been:

○ Shared internally in the Council. Year: 2002

○ Reported for external access. Year: 2002 (not written up, but at BSPS conference)

For this option the data for <i>small areas</i> comes from (* if this option is not used for small areas)
Base year population	1991 Census augmented for non-response
Population constraints after the first year	1992, 1996 & 2000 SAP Estimates based on patient database for each ward, noting that for 1992 using (SAP96 - Ward Popln1991)/5 + Ward Popln1991.
Fertility age schedule	Ward level ASFRs for 1991 from health episode records
Births since base year	ONS table VS4, mean of adjacent calendar years 1991-2000
Fertility differentials or TFR	Average TFR, from PG output for last 3 years for which births were input mid91-mid99
Future trend of births/fertility	Trending on the TFR from 2000
Mortality age-sex schedule	*
Deaths since base year	As Births
Mortality differentials or SMR	As fertility
Future trend of deaths/mortality	As fertility
Migration age-sex schedule	1991 Census special migration statistics (Option 2)
Migrants since base year	*
Migration differentials or SMigR	Differential for 2000 from average of 1991-1999 from PG output (Option 1)
Future trend of migration	Trending on the SMigR from 2000 (Option 1)

Forecasts for areas smaller than districts Population projections for wards in Bradford

POPGROUP user group meeting
6th December 2004, Birmingham

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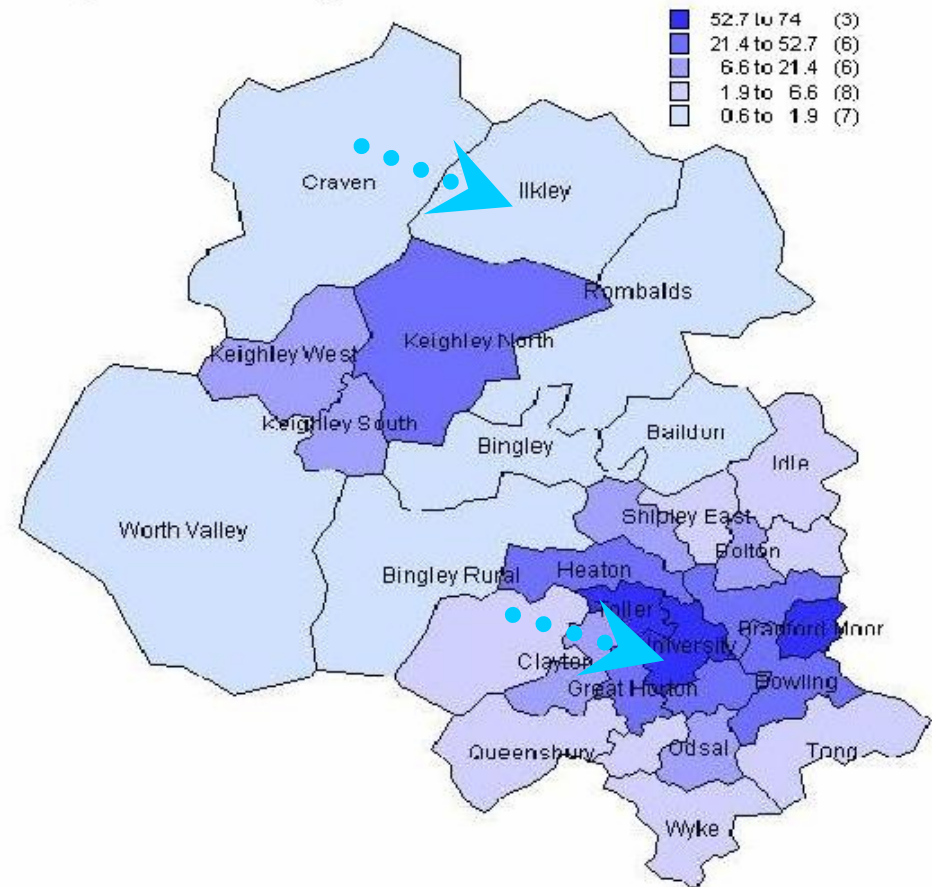
Background

- PhD student at Manchester University
- Race and Population – a Statistical Demographic Approach
- Wider context of research
To provide demographic rates and population projections estimated for wards of Bradford, ethnic groups in wards of Bradford, and ethnic groups in Great Britain.

Bradford Metropolitan District

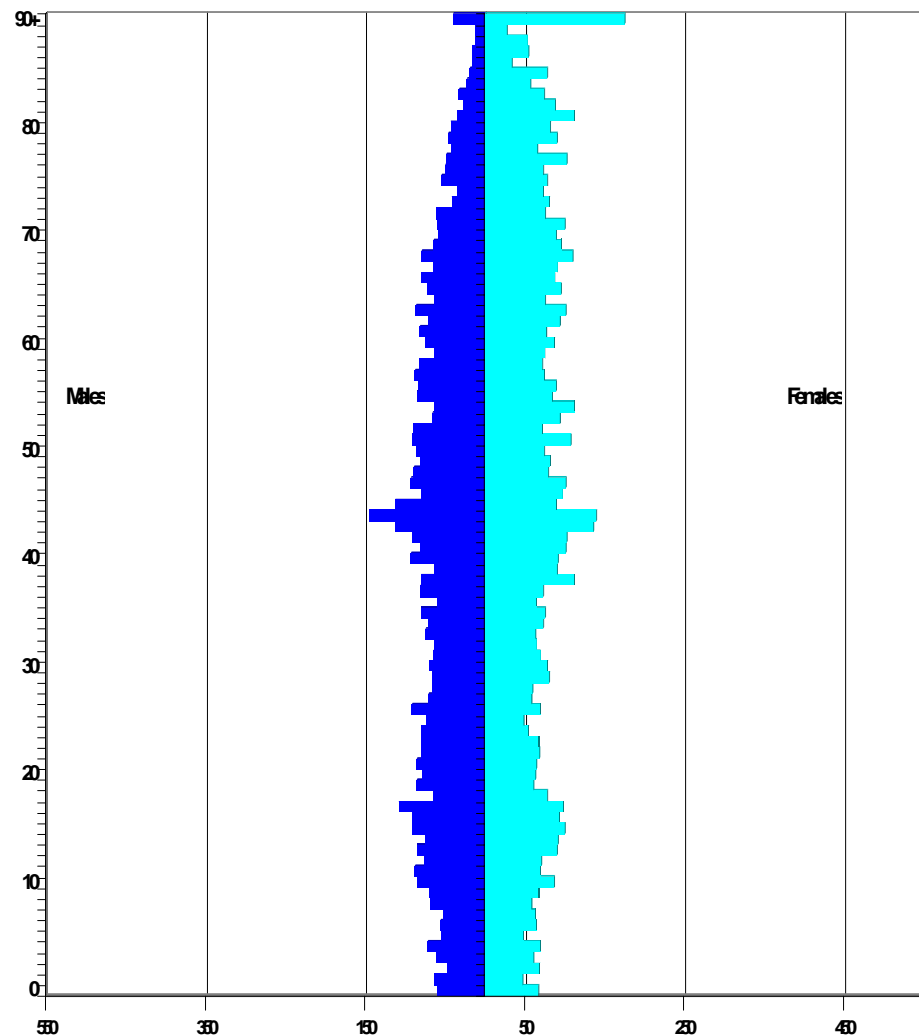
- Bradford is a multicultural district
- Made up of 30 wards
- Ward sizes range from 13,000 to 23,000
- Total population 480,000 (1991)

Map of Percentage of non-white in Bradford Wards

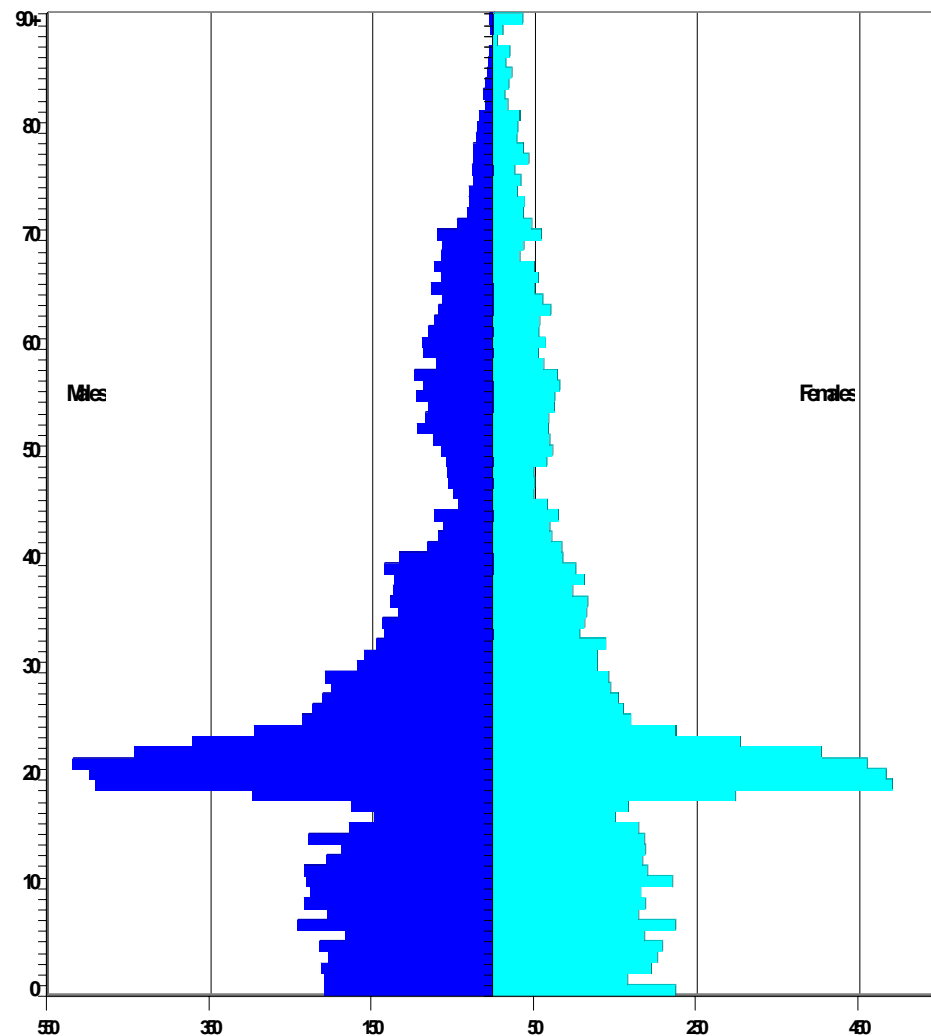


Comparing population pyramids for the wards Ilkley and University in 1991

Ilkley



University



Births and death specifically for each of the Bradford wards

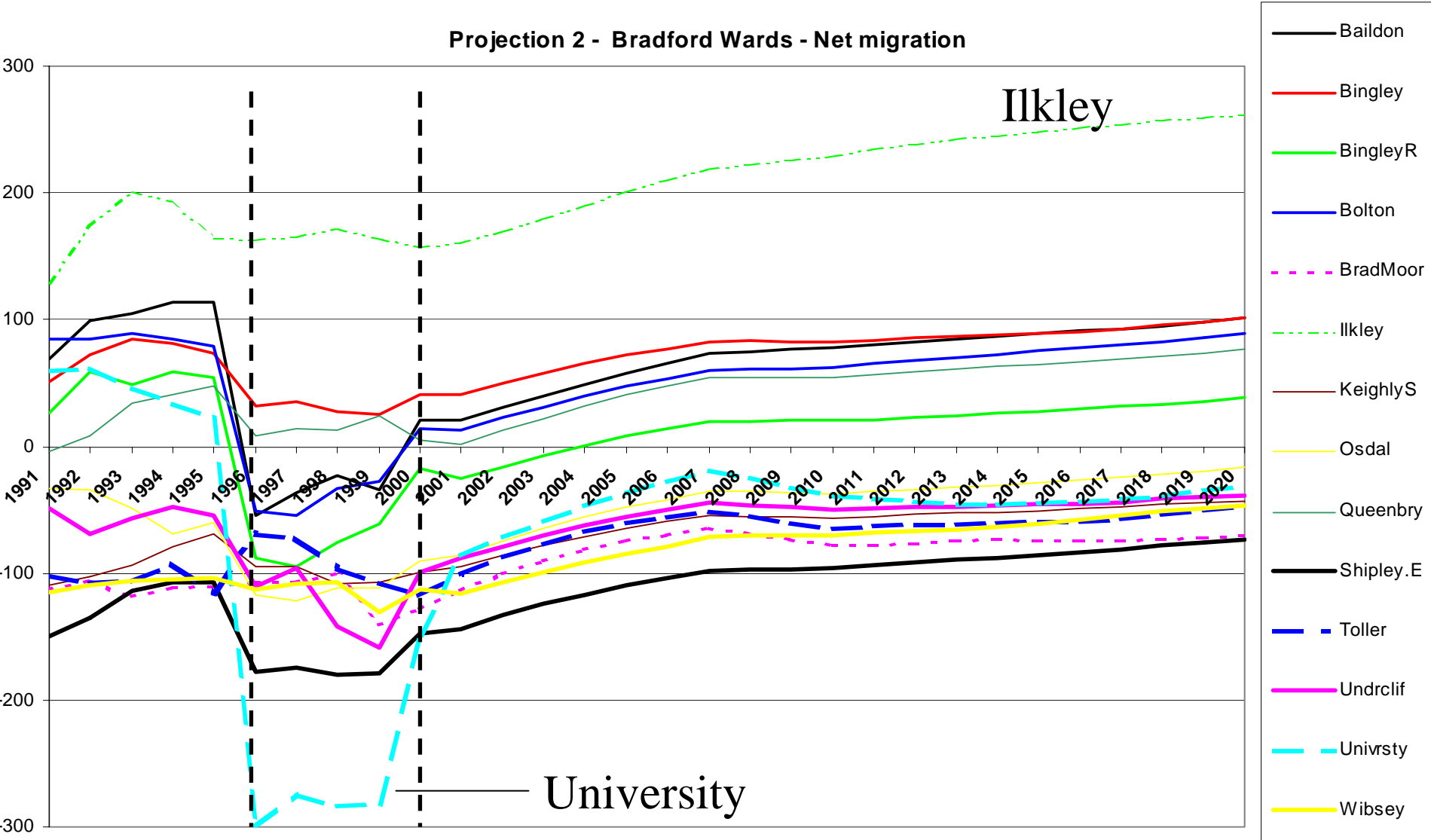
- Entering the mid year birth and deaths for years 1991-2000 calculated from actual counts for each ward
- Using the recalculated TFR and SMR produced by POPGROUP (taking the average of last 3 years)
- This produced fertility and mortality differentials specific for each ward to project forward from year 2000
- Overall impact changed the ward level fertility and mortality

Migration specifically to each of the Bradford wards (option 1)

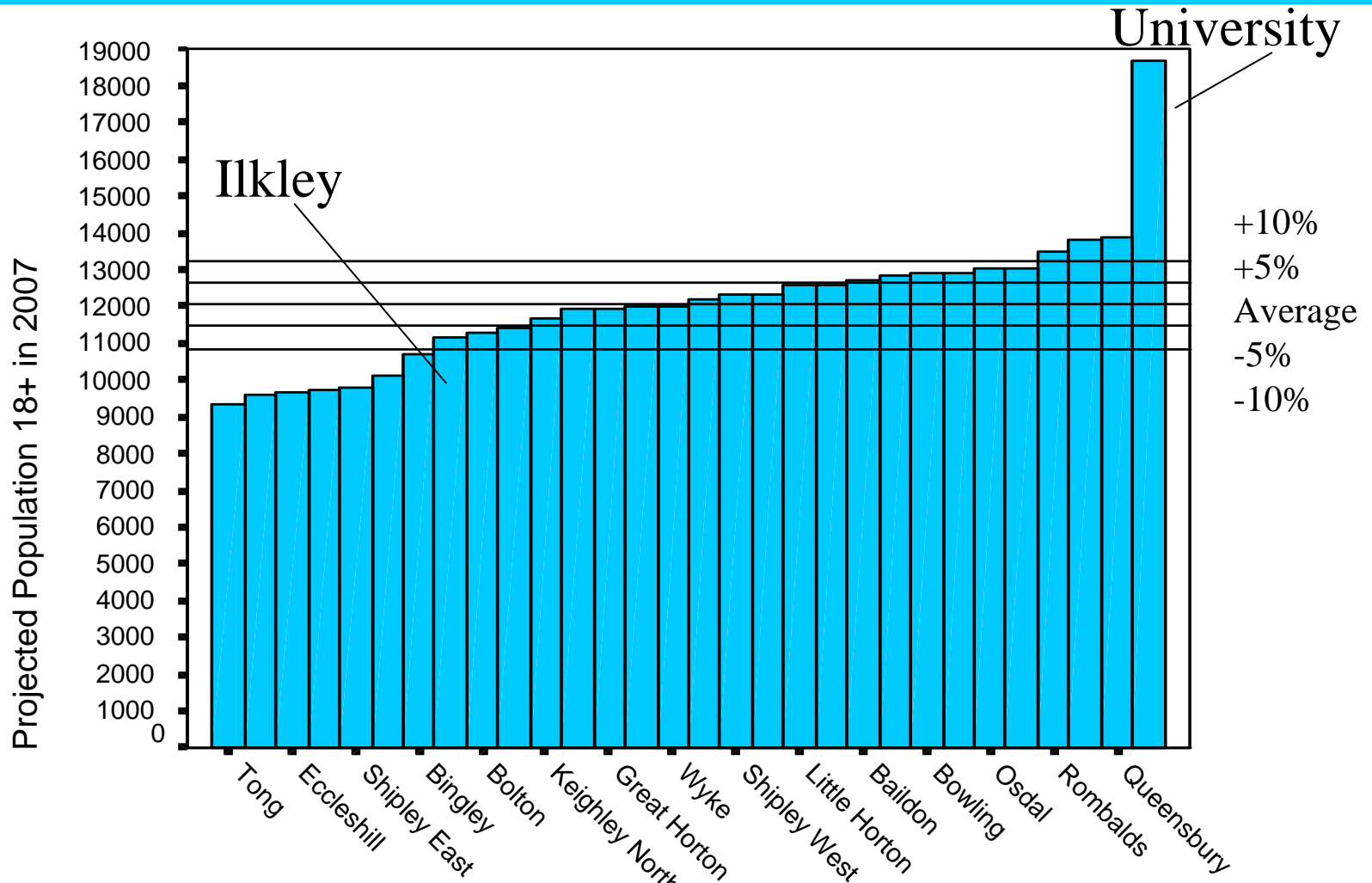
- Entering recent population estimates for the years 1996 and 2000 to act as a constraint on the population for wards
- POPGROUP changed the migration figures to be consistent with the constraint
- Using the resulting forecast to produce migration differentials to extend forward from 2000 (using average of implied migration over the years)
- Lastly using a district level population estimate for years 2001 to 2021 as a population constraint

Option 1

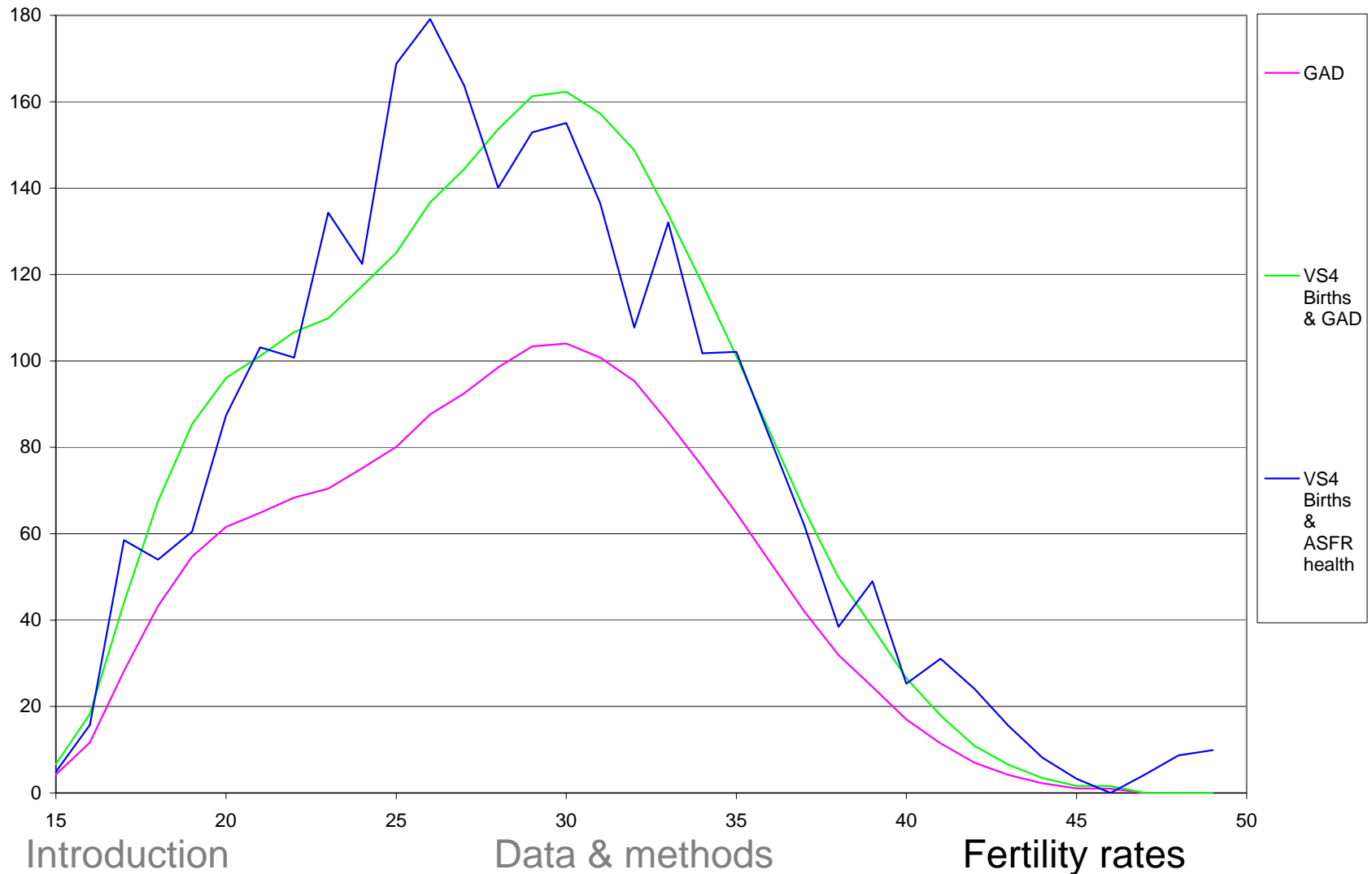
Net migration, extending the migration figures based on population constraints



Ward change in year 2007, predicted population of residents aged 18+



Fertility rates (per 1000) using differing data sources for the ward University



Comparing different sources of fertility data by number of births for University and Ilkley

