Subnational Population Projections: 2022 based (migrant category)

(2022-2047)

An overview

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1. Background and methodology

Subnational population projections (SNPPs) provide an indication of the potential future population size of the subregions of England. These statistics are widely used in planning; for example, fiscal projections, health, education, and pensions. They are trend-based projections, which means assumptions for future levels of births, deaths and migration are based on observed levels mainly over the previous five years. They show what the population will be if recent trends continue.

The projected resident population of an area includes all people who usually live there, whatever their nationality. People moving into or out of the country are only included in the resident population if their total stay in that area is for 12 months or more, thus visitors and short-term migrants are not included. Armed forces stationed abroad are not included, but armed forces stationed within an area are included. Students are taken to be resident at their term-time address.

The projections generally do not take into account any policy changes that have not yet occurred, nor those that have not yet had an impact on observed trends.

This data is based on administrative geographic boundaries in place on April 2022.

1.1 Variant projections

The ONS produce projections based on a number of different variants or scenarios. They advise the use of the migration category variant as the principal projection, rather than other variants, therefore this is what has been used throughout this report.

This migrant category variant better reflects patterns in international migration. When estimated international migration is relatively high, there is a higher degree of uncertainty in the short term, including around potential future levels of emigration. The migrant category methodology includes specific migration category variant assumptions. The resulting projections show what could happen in the future from change in international migration, based on different types of immigration in the years leading up to the latest data point.

This method has been developed over the last few years as an alternative for examining the potential implications for emigration and net migration that result from different types of immigration. The variant is based on the type of immigration and whether those who have arrived on different types of visa stay in the UK. It is better placed to take into account the recent rise in immigration, especially among students, which may lead to higher emigration and therefore lower net migration in the short term and the potential implications of immigration policy change.

2. Projected population change

Assuming current population trends continue, the Office for National Statistics (ONS) projections suggest that the population in Gloucestershire will rise by 51,144 between 2022 and 2032; rising from 652,666 to 703,810. This increase of 7.8% of the 2022 population is equivalent to an average annual increase of 0.8% per annum.

Between 2032 and 2047, the population is projected to rise to 766,595, an increase of 8.9% of the 2028 population. Over the full 25 year period of the ONS projections, the Gloucestershire population is projected to increase by 17.5% to 766,595 people, with an annual average growth rate of 0.7%. This projected change is substantially higher than that for England. Gloucestershire is also projected to see greater growth than many other county and unitary authorities across England, sitting in the top 20% of authorities in terms of projected growth rates between 2022 and 2047.

Within the county, Tewkesbury and Stroud are projected to have the largest percentage increases in population over the next 25 years (29.6% and 22.2% respectively). Cheltenham and Gloucester are projected to have the smallest increases (10.1%) and are the only districts in the county with a predicted growth below the national average for the period 2022-2047. Figure 1 shows the different growth rates will have potential implications for dynamics across the county, in 2040 Stroud is projected to overtake Gloucester, becoming the largest district in the county in terms of population size.

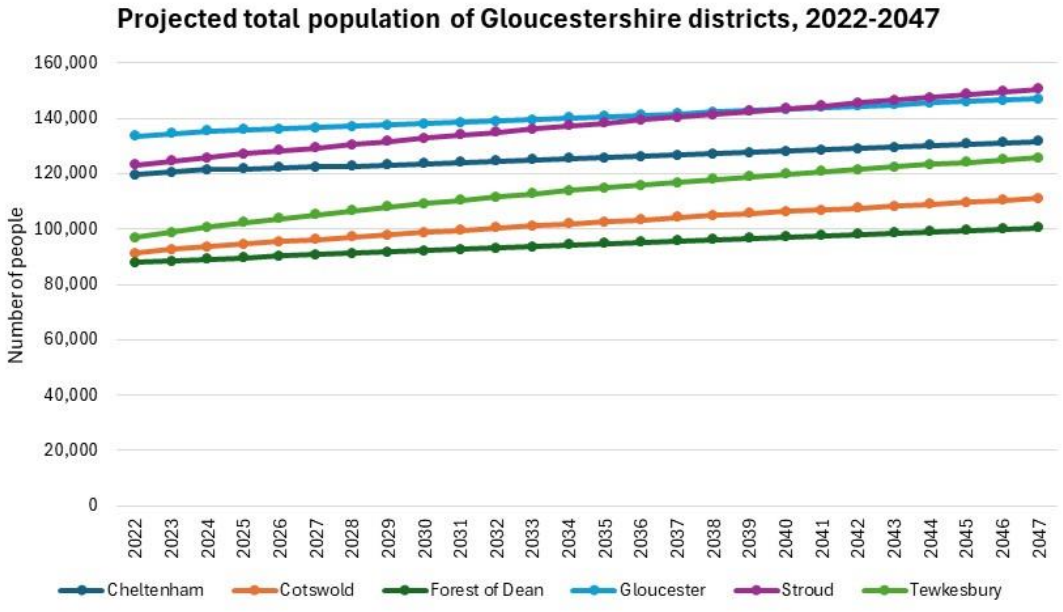

Figure 1: Projected total population of Gloucestershire districts, 2022-2047[1]

[1] 2022 based Subnational Population Projections (migrant category), ONS

Nationally all but four unitary and district authorities in England are projected to experience population growth between 2022-2047. Tewkesbury is projected to have the 8th highest percentage increase of all 309 district and unitary authorities nationally, growing by 29.6% by 2047. This is mainly because of a high level of net internal migration. Stroud and Cotswold also have high levels of projected growth, with both districts sitting in the top 20% of authorities nationally in terms of projected growth between 2022-2047.

Table 1: Projected population change, Gloucestershire, its districts, South West and England, 2022-2047[2]

	Number of people			Projected population growth			Rank of projected change in population (1= highest increase of 309 LA's in England)		
	2022	2032	2047	2022-2032	2032-2047	2022-2047	2022-2032	2032-2047	2022-2047
Cheltenham	119,585	124,498	131,693	4.1%	5.8%	10.1%	215	161	190
Cotswold	91,360	100,374	111,040	9.9%	10.6%	21.5%	49	28	35
Forest of Dean	87,934	93,232	100,512	6.0%	7.8%	14.3%	148	89	120
Gloucester	133,530	139,055	147,052	4.1%	5.8%	10.1%	211	162	189
Stroud	123,225	135,033	150,522	9.6%	11.5%	22.2%	55	16	32
Tewkesbury	97,032	111,619	125,776	15.0%	12.7%	29.6%	8	7	8
Gloucestershire	652,666	703,810	766,595	7.8%	8.9%	17.5%	-	-	-
South West	5,766,937	6,197,013	6,659,569	7.5%	7.5%	15.5%	-	-	-
England	57,112,542	60,759,854	64,388,887	6.4%	6.0%	12.7%	-	-	-

3. Projected changes in age structure

3.1 Broad Age Groups

Figure 2 shows the projected changes in the age structure of the Gloucestershire population. The notable feature of the projections is the sharp increase in population in the age group 65 or over, which is projected to increase from 153,038 in 2022 to 205,169 in 2047. The percentage increase of 43.4% over this period is higher than the national trend for England (at 38.6%). As a result, by 2047, the proportion of people in Gloucestershire who are aged 65 or over is predicted to stand at 26.8% up from 21.9% in 2022 as shown in Figure 3.

By contrast, the population of children and young people (those aged 0-15) is projected to show a decline of -4.7% over the twenty-five year period, however this decline is lower than that projected at a national (-7.3%) and regional level

[2] *Ibid.*

(7.5%). By 2047 Gloucestershire's 0-15 year old population will account for 14.2% of the total population down from 17.5% in 2022.

Gloucestershire's working age population (those aged 16-64) is projected to rise by 14.5% between 2022 and 2047, greater than the growth projected at a national (11.0%) and regional level (12.2%). These changes will see the working age population account for a smaller proportion of the total population falling from 60.6% in 2022 to 59.0% in 2047.

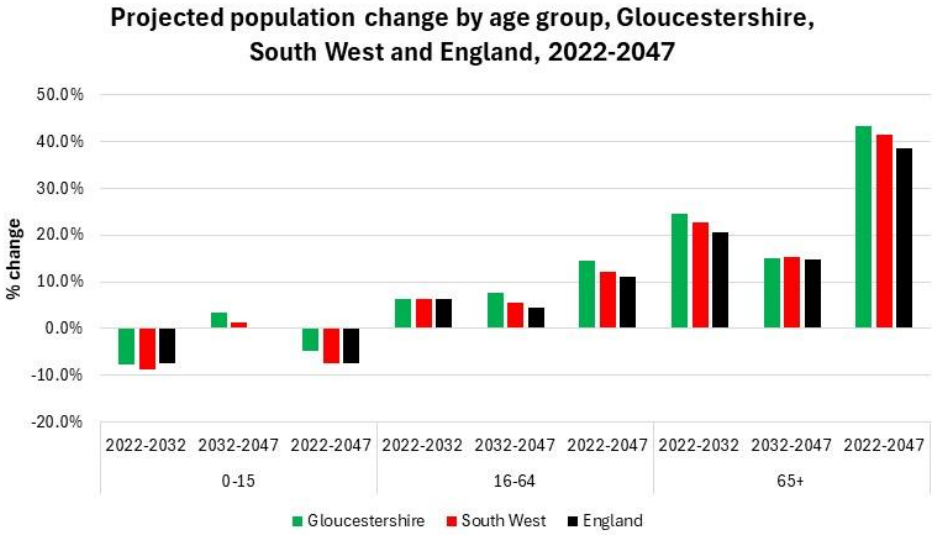

Figure 2: Projected population change by age group, Gloucestershire, South West and England, 2022-2047[3]

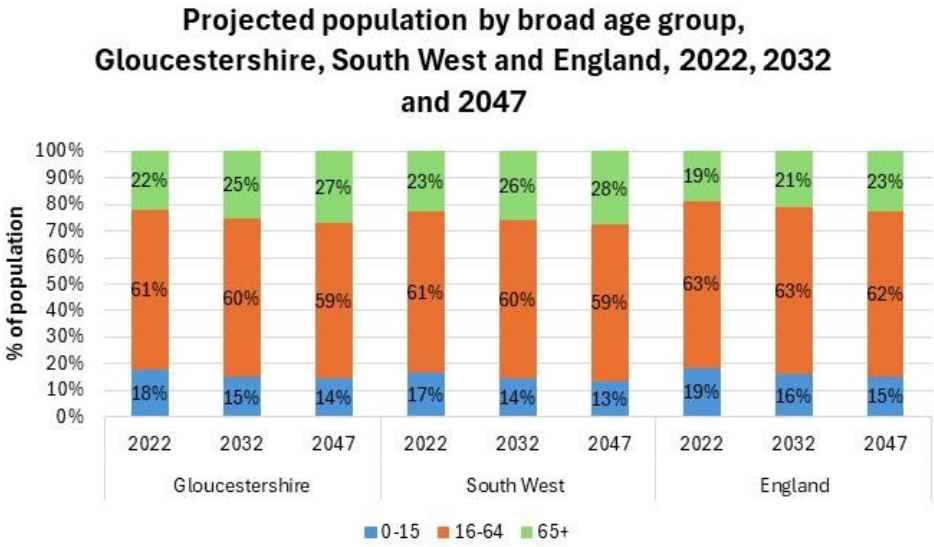

Figure 3: Projected population by broad age group, Gloucestershire, South West and England, 2022, 20232 and 2047[4]

[3] *Ibid.*

[4] *Ibid.*

Figure 4 and Figure 5 show in greater detail the predicted growth in the population aged over 65 from 2022 to 2047. Across all time periods the greatest increase is expected in those aged 85+, between 2032 and 2047 those aged 65-74 are expected to decline. These changes mean that by 2047, the proportion of people in the county who are aged 85+ will have risen from 3.0% in 2022 to 5.4% This is likely to have implications for health and social care as an increase in the oldest age groups is likely to translate into a greater need for health and social care services.

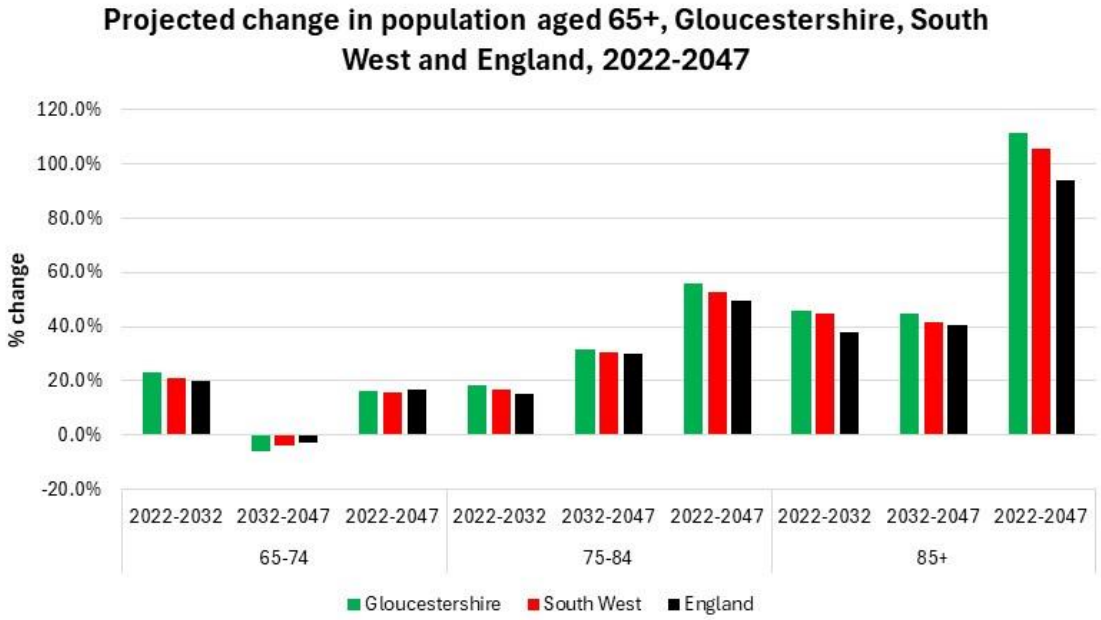

Figure 4: Projected change in population aged 65+, Gloucestershire, South West and England, 2022-2047[5]

[5] *Ibid.*

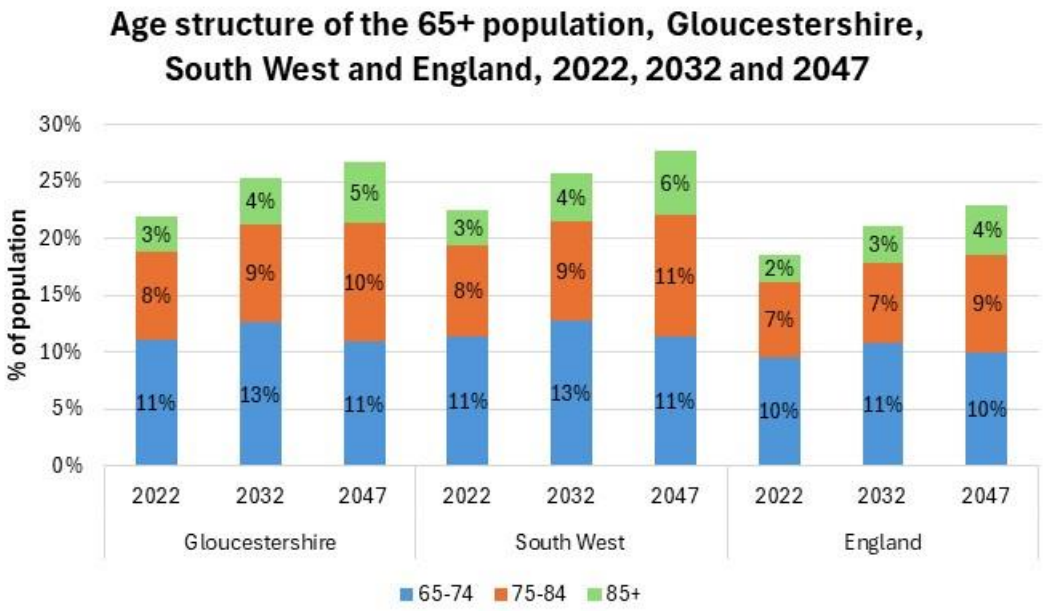

Figure 5: Age structure of the 65+ population, Gloucestershire, South West and England, 2022,2032 and 2047[6]

Figure 6 and Figure 7 show in greater detail the predicted decline in children and young people from 2022 to 2047. Those aged 10-14 are projected to see a decline in all time periods and as a result are expected to see the greatest overall decline between 2032 and 2047, those aged 0-4 and 5-9 are expected to decline during the period 2022-2032, before seeing growth between 2032-2047. These changes mean that by 2047, the proportion of people in the county who are aged 10-14 will have fallen 5.9% in 2022 to 4.5%, the proportion of people aged 0-4 and 5-9 are also expected to decline but by a smaller amount.

[6] *Ibid.*

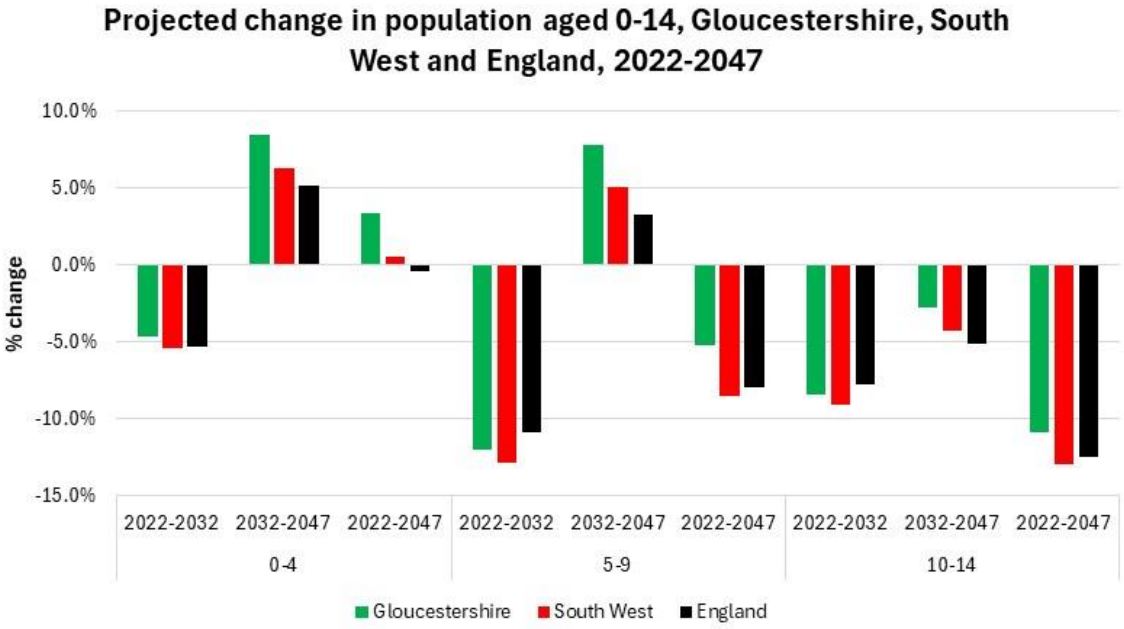

Figure 6: Projected change in population aged 0-14, Gloucestershire, South West, and England, 2022-2047[7]

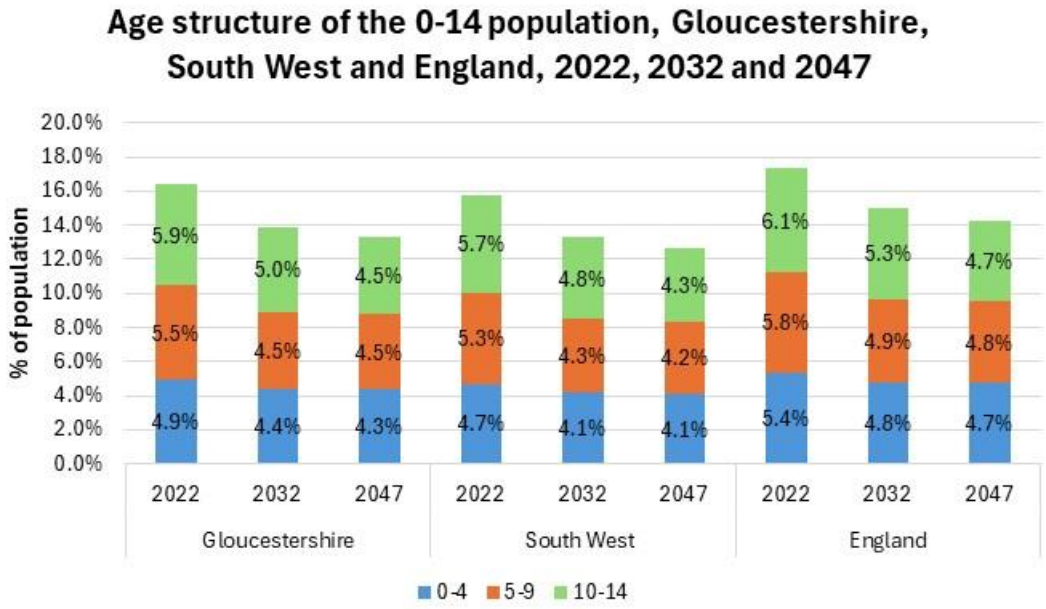

Figure 7: Age structure of the 0-14 population, Gloucestershire, South West and England, 2022, 2032 and 2047[8]

[7] *Ibid.*

[8] *Ibid.*

3.1.1 District Picture

Figure 8 shows the projected percentage population changes for each Gloucestershire district for the period 2022 to 2047

- Tewkesbury is expected to see the greatest population growth across all three age groups.
- Stroud (3.6%) and Tewkesbury (8.4%) are expected to see an increase in the 0-15 year old population between 2022-2047. All other districts are expected to see a decline in 0-15 year olds during this period, with the greatest decline expected in Cheltenham (16.3%).
- All areas are expected to see an increase in the working age population (16-64) between 2022-2047, the greatest increase is expected to be in Tewkesbury (27.1%), with the smallest increase occurring in Cheltenham (8.0%).
- All districts are expected to see a considerable growth in their 65+ population between 2022-2047. Growth is predicted to be greatest in Tewkesbury (54.0%) and lowest in the Forest of Dean (32.4%)

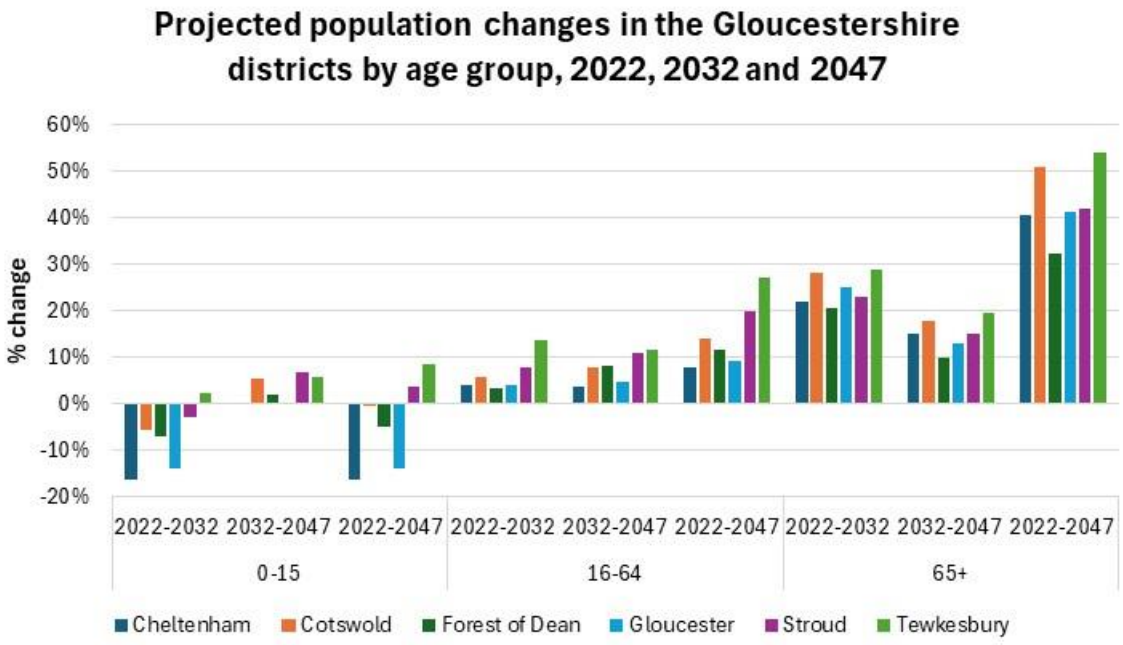

Figure 8: Projected population changes in the Gloucestershire districts by age group, 2022, 2032 and 2047[9]

[9] *Ibid.*

Figure 9 shows the age profile of the districts in 2022, 2032 and 2047. All districts are expecting to see the 65+ population account for a greater proportion of the total population in 2047 than 2022, while those aged 0-15 and 16-64 will account for a smaller proportion of the total population.

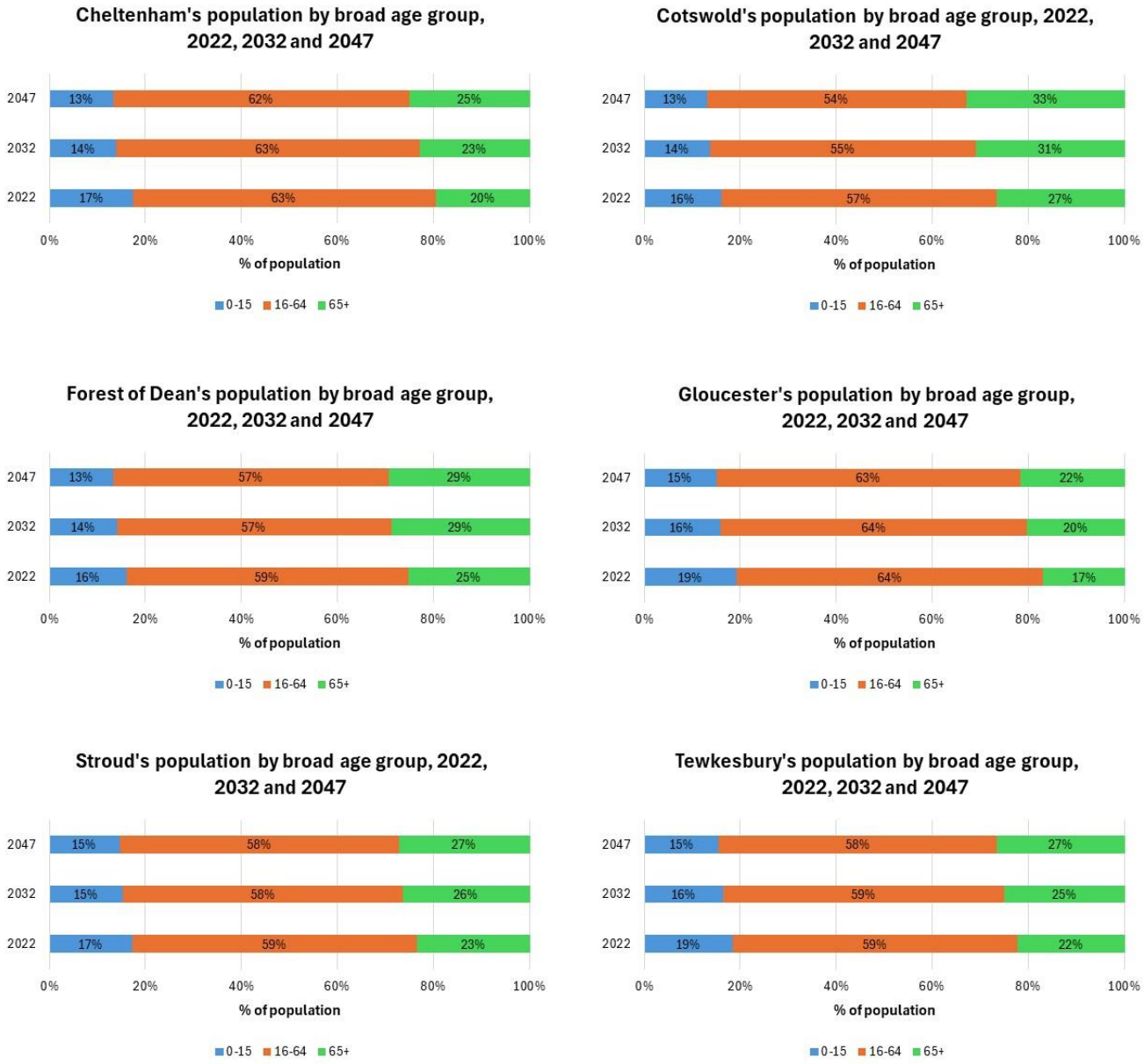

Figure 9: Age profile of Gloucestershire districts, 2022, 2032 and 2047[10]

3.2 Population pyramids

Population projections by 5-year age groups can show in more detail how a population structure may change. The pyramids also provide a visual representation of the projected population change and can help identify which

[10] *Ibid.*

age groups might experience a significant increase or decrease in the coming years.

Figure 10 indicates that an increase in 35-49 year olds can be expected up until 2047. It also highlights that the proportion of the population aged 65+ is increasing as the baby boomer generation ages up and reaches retirement age. Of concern is the shrinking proportion of the population aged under 24, which may pose challenges for future generations.

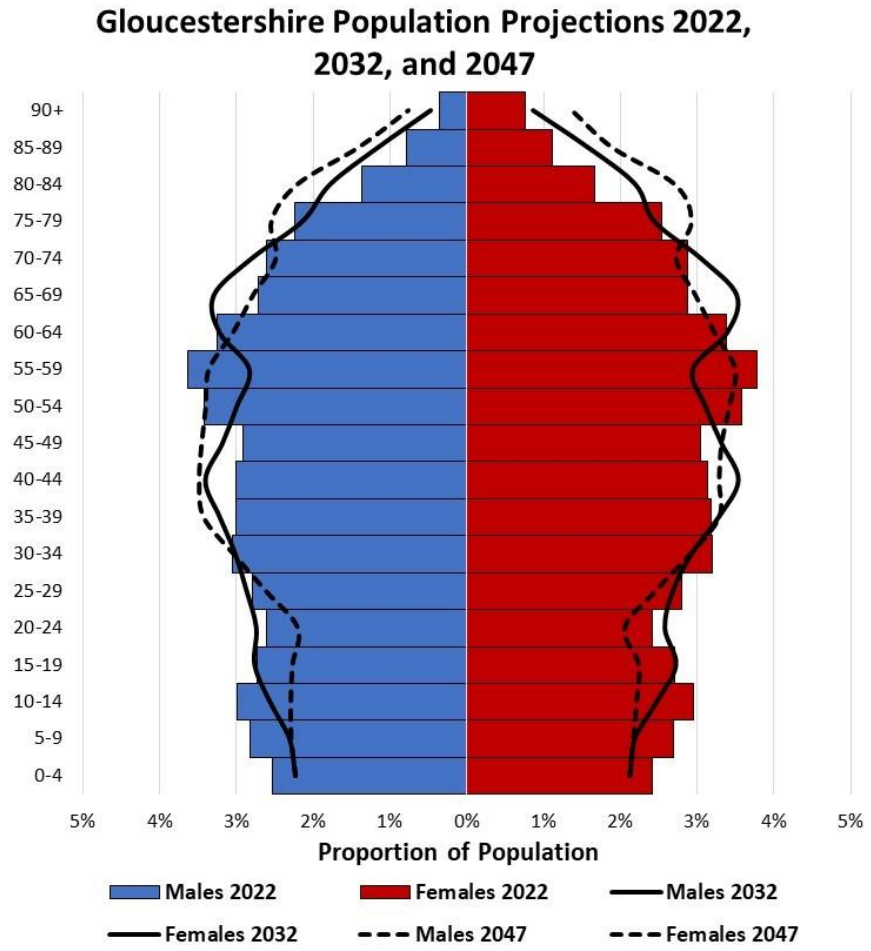

Figure 10: Gloucestershire Population Projections, 2022, 2032 and 2047 by sex and age band[11]

3.2.1 District picture

The district population projection pyramids are provided in Figure 11, all the districts show a widening of the top of their population pyramids and a narrowing at their base as their population becomes older and the children's population declines. Furthermore, Stroud and Tewkesbury are projected to continue having a noticeably smaller proportion of the population aged 20-24 compared to the other age groups in their population.

[11] *Ibid.*

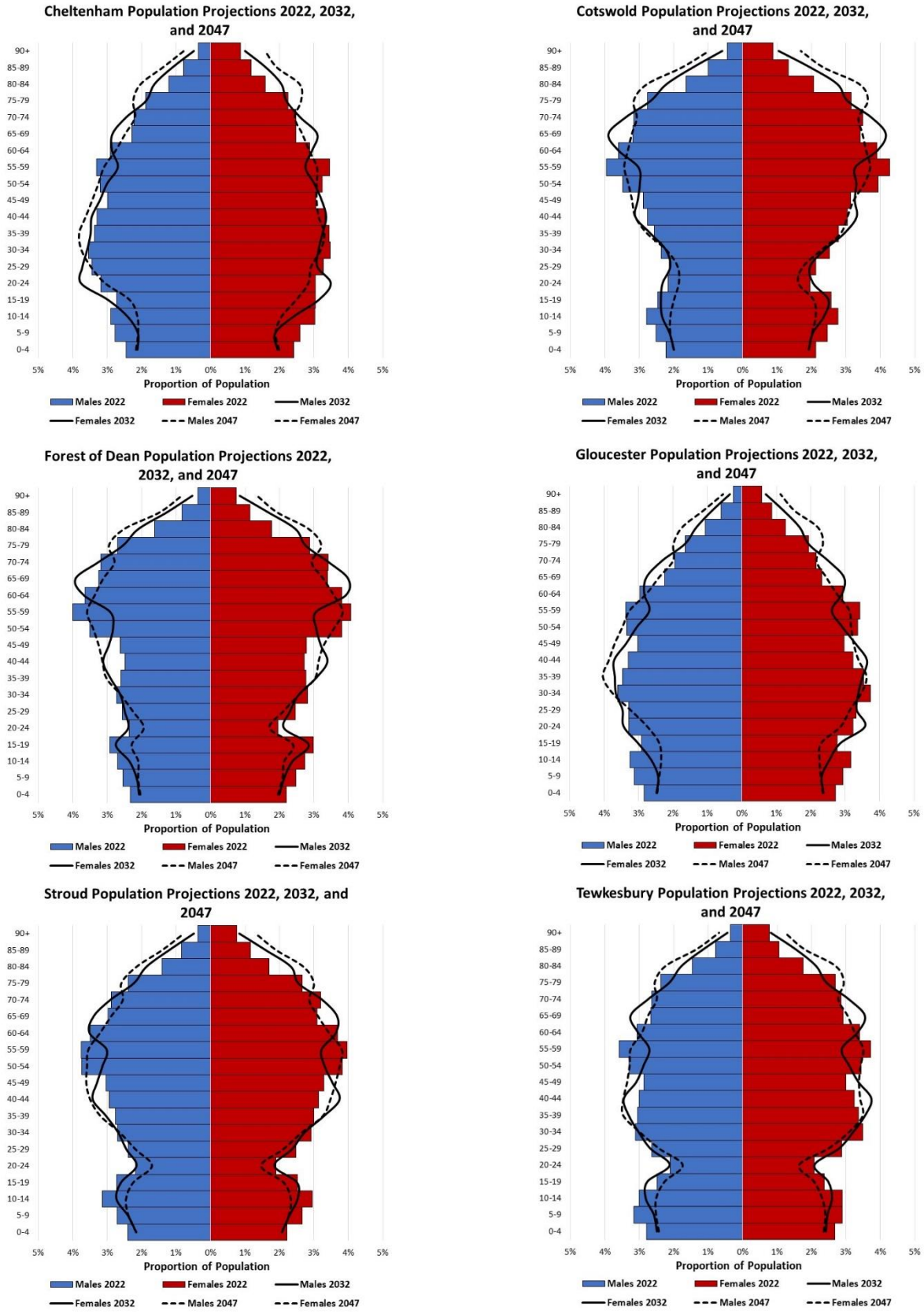

Figure 11: Population Projections, 2022, 2032 and 2047 by sex and age band[12]

[12] *Ibid.*

3.3 Dependency ratios

Dependency ratios[13] are a measure that indicate the level of support that needs to be provided by the working population (aged 16-64) to the younger (aged 0-15) and older population (aged 65+). A low dependency ratio indicates that there is a sufficient ratio of the working population to the dependent population. In contrast, a high dependency ratio indicates there may be more financial burden on the working population to support the dependent population.

Table 2 shows that between 2022-2047 Gloucestershire's dependency ratio is projected to increase from 0.65 in 2022 to 0.69 in 2047, this means for every 100 people of working age, there will be an additional 4 people reliant on them. The South West and England saw a similar increase in dependency ratios during the period.

Cotswold is projected to have the biggest increase in dependency ratio between 2022 and 2047, from 0.74 to 0.85 equating to an additional 11 dependents per 100 working age residents. Conversely, Gloucester is expected to see the smallest increase, going from 0.56 to 0.58.

Table 2: Projected Dependency Ratio, Gloucestershire, its districts, South West and England, 2022, 2032 and 2047[14]

	Overall Dependency Ratio		
	2022	2032	2047
Cheltenham	0.59	0.59	0.62
Cotswold	0.74	0.81	0.85
Forest of Dean	0.70	0.75	0.74
Gloucester	0.56	0.57	0.58
Stroud	0.69	0.71	0.72
Tewkesbury	0.69	0.71	0.72
Gloucestershire	0.65	0.67	0.69
South West	0.65	0.67	0.70
England	0.59	0.59	0.62

Dependency ratios can also be broken down by type of dependent as shown in Table 3. Across all areas the overall increase in dependency ratios have been driven by an increase in old age dependency ratios, with the youth dependency ratio falling reflecting the decline observed in the 0-15 population.

[13] Dependency ratios only provide a rough indication of the level of support needed to sustain the dependent population and should not be used on its own. As the retirement age increases, the dependency ratio should change.

[14] 2022 based Subnational Population Projections (migrant category), ONS

Table 3: Youth and Old Age Dependency Ratios, Gloucestershire, its districts, South West and England, 2022, 2032 and 2047[15] [16]

	Youth Dependency Ratio			Old Age Dependency Ratio		
	2022	2032	2047	2022	2032	2047
Cheltenham	0.28	0.22	0.21	0.31	0.36	0.40
Cotswold	0.28	0.25	0.24	0.46	0.56	0.61
Forest of Dean	0.27	0.25	0.23	0.43	0.50	0.51
Gloucester	0.30	0.25	0.24	0.26	0.32	0.34
Stroud	0.29	0.26	0.25	0.40	0.45	0.47
Tewkesbury	0.31	0.28	0.27	0.38	0.43	0.46
Gloucestershire	0.29	0.25	0.24	0.36	0.42	0.45
South West	0.28	0.24	0.23	0.37	0.43	0.47
England	0.29	0.26	0.25	0.30	0.34	0.37

4. Components of change

Components of change are the factors that contribute to population change. This includes births and deaths (commonly referred to as natural change) and net migration. Migration includes movements of people between England and the various countries of the world (international migration), between local authority areas within the UK (internal migration) and moves from local authorities in England to other countries that make up the UK (cross border migration).

Figure 12 shows the drivers of population change in Gloucestershire between 2022-2047. More deaths than births mean that the population is projected to decrease by 46,383, with 153,273 births and 199,656 deaths in Gloucestershire between 2022 and 2047. This means natural change is expected to decrease the population in Gloucestershire by 7.15%, compared with a decrease of 0.9% in England.

Net internal migration (people moving to and from other local authorities in England) is projected to increase the population by 149,319, with 796,907 people moving to the area and 647,588 people moving from the area between 2022 and 2047. This would increase the population in Gloucestershire by 22.9%. This is the greatest contributor to Gloucestershire population growth.

Net cross-border migration (between UK nations) is projected to reduce the population by 11,273, with 75,491 people moving to the area and 86,763 people

[15] *Ibid.*

[16] The old-age dependency ratio is calculated by dividing the number of people aged 65+ by the number of people aged 16-64, the youth dependency ratio is calculated by dividing the number of people aged 0-15 by the number of people aged 16-64

moving from the area between 2022 and 2047. This would decrease the population in Gloucestershire by 1.7%, compared with a 0.9% across England.

Net international migration is projected to increase the population by 22,680, with 81,524 people moving to the area and 58,844 people moving from the area between 2022 and 2472. This would increase the population in Gloucestershire by 3.5%, compared with an increase of 14.6% in England.

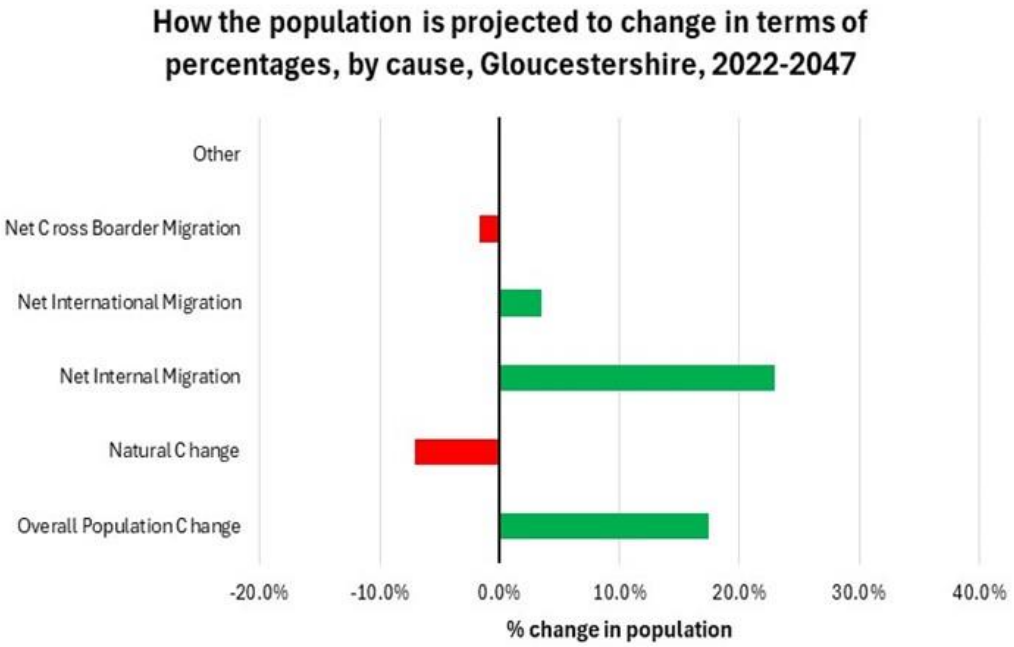

Figure 12: How the population is projected to change in terms of percentages by broad cause, Gloucestershire, 2022-2047[17]

Figure 13 shows the drivers of change at a district level. In all districts deaths are expected to outnumber births resulting in negative natural change. Gloucester expects to see minimal natural change compared to the other districts (-0.6%), natural change is expected to have the greatest impact in Cotswold (-14.2%) and the Forest of Dean (-12.2%).

Internal migration is projected to increase the population in all areas, with the greatest impacted expected in Cotswold (35.4%), Stroud (32.8%) and Tewkesbury (31.4%). Internal migration is expected to have the greatest positive impact on population change in all areas except Gloucester.

[17] 2022 based Subnational Population Projections (migrant category), ONS

Net cross-border migration (between UK nations) is projected to reduce the population in all areas, with the greatest impact expected in the Forest of Dean (3.9%).

Net international migration is projected to increase the population in all districts. The greatest impact is expected in Gloucester (8.2%), with net international migration expected to exceed net internal migration in this district.

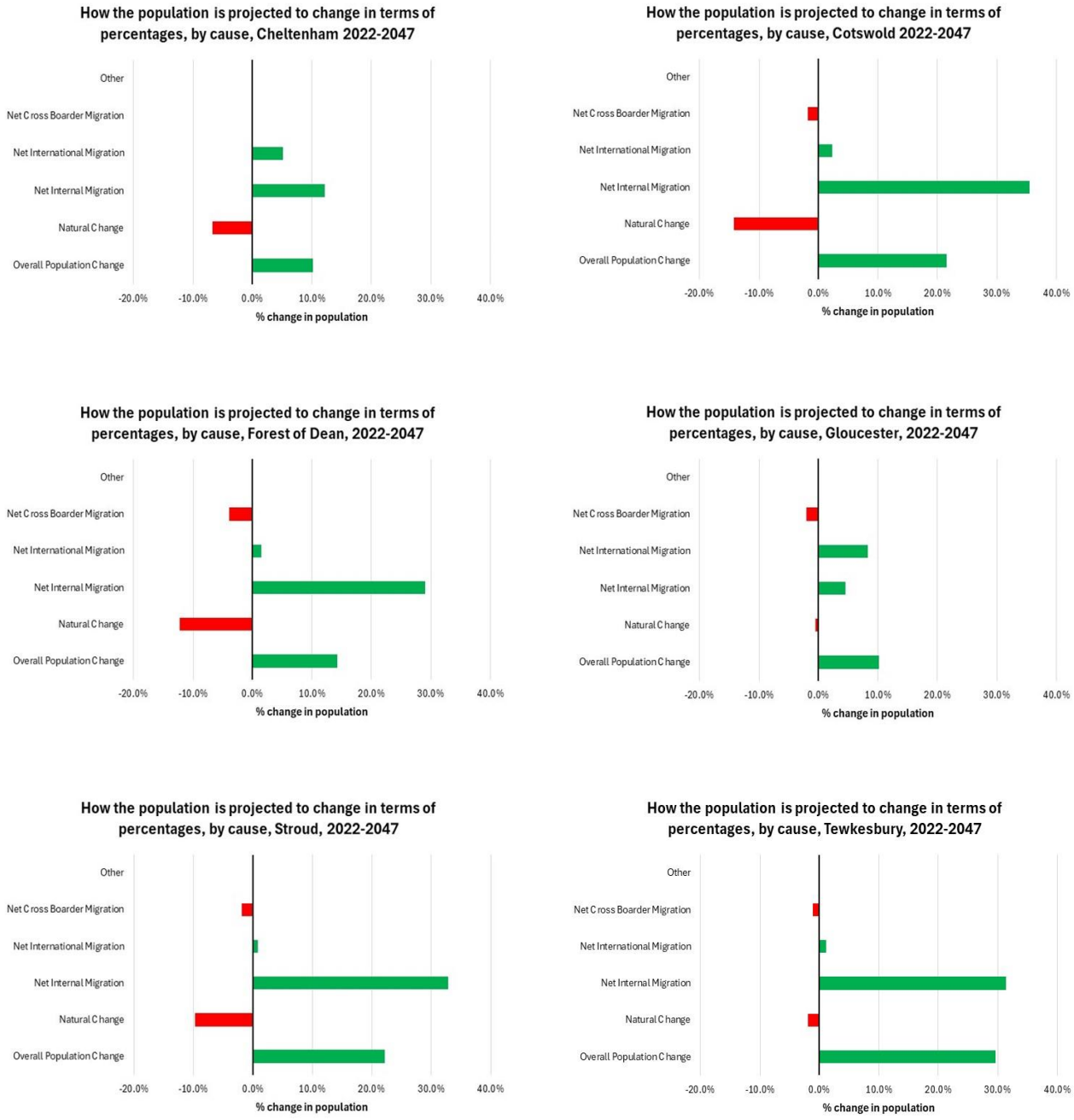

Figure 13: How the population is projected to change in terms of percentages by broad cause, Gloucestershire districts, 2022-2047[18]

[18] *Ibid.*

5. Variant projections

The data used throughout this report are from the ONS Migrant Category 2022-based subnational population projections (SNPPs). However, the ONS also publishes variant SNPPs.

The migrant category projection includes specific migration category variant assumptions. This means they show what could happen in the future from change in international migration, based on different types of immigration in the years leading up to the latest data point. They are thought to better reflect recent patterns in international migration.

In addition, the ONS also published:

- a high international migration variant, this assumes higher levels of net international migration to England as a whole, but the proportional distribution at local authority level remains the same
- a low international migration variant, this assumes lower levels of net international migration to England as a whole, but the proportional distribution at local authority level remains the same
- a zero net migration variant, a scenario where the number of people immigrating to a country equals the number of people emigrating from it, resulting in no overall change in population size due to migration. It also assumes zero migration between England and the rest of the UK
- a 10-year migration variant, this uses a 10-year average of migration data. A 10-year trend may even out a potentially atypical five-year period, but may reduce the effect of more systemic changes that occurred over the 10 years.
- a 5-year migration variant, this uses a five-year trend of data for all components of change

Figure 14 shows the different results for all the variant projections for Gloucestershire compared to the migrant category variant. The high migration category variant results in the highest population projection for Gloucestershire in 2047, while the 5 and 10 year variant projections result in similar projections to the migrant category variant.

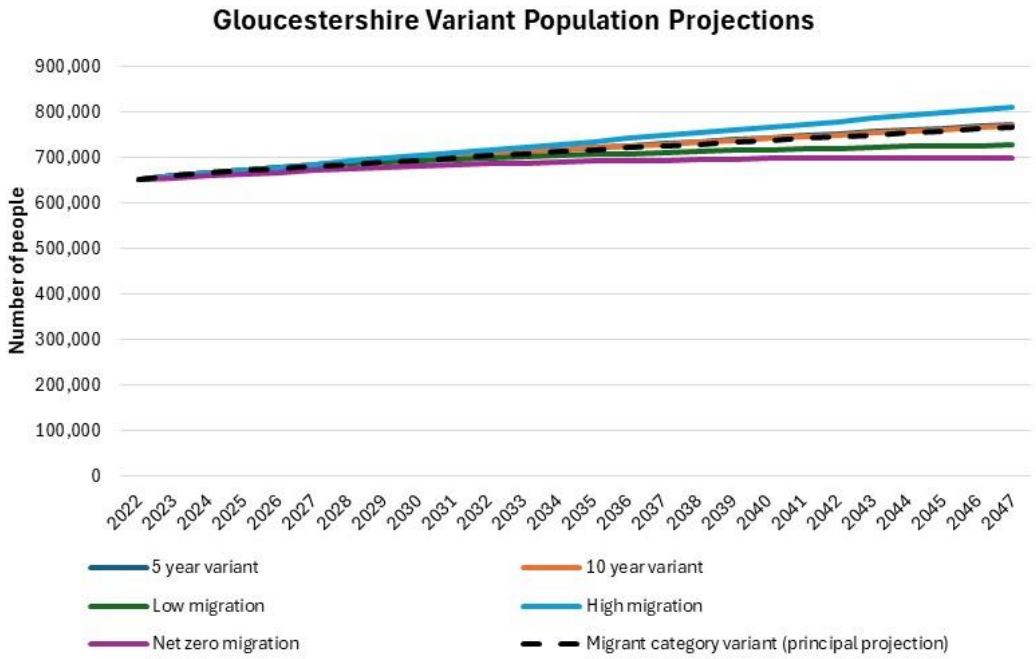

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Figure 14: Gloucestershire Variant Population Projections[19]

Figure 15 shows the variant projections at a district level. The high migration variant delivers the highest projection in all areas. Interestingly the 10 year variant suggests in 2047 Gloucester will have the largest population, while all other projections suggest Stroud will have the largest population in 2047.

[19] 2022 based Subnational Population Projections (variant projections), ONS

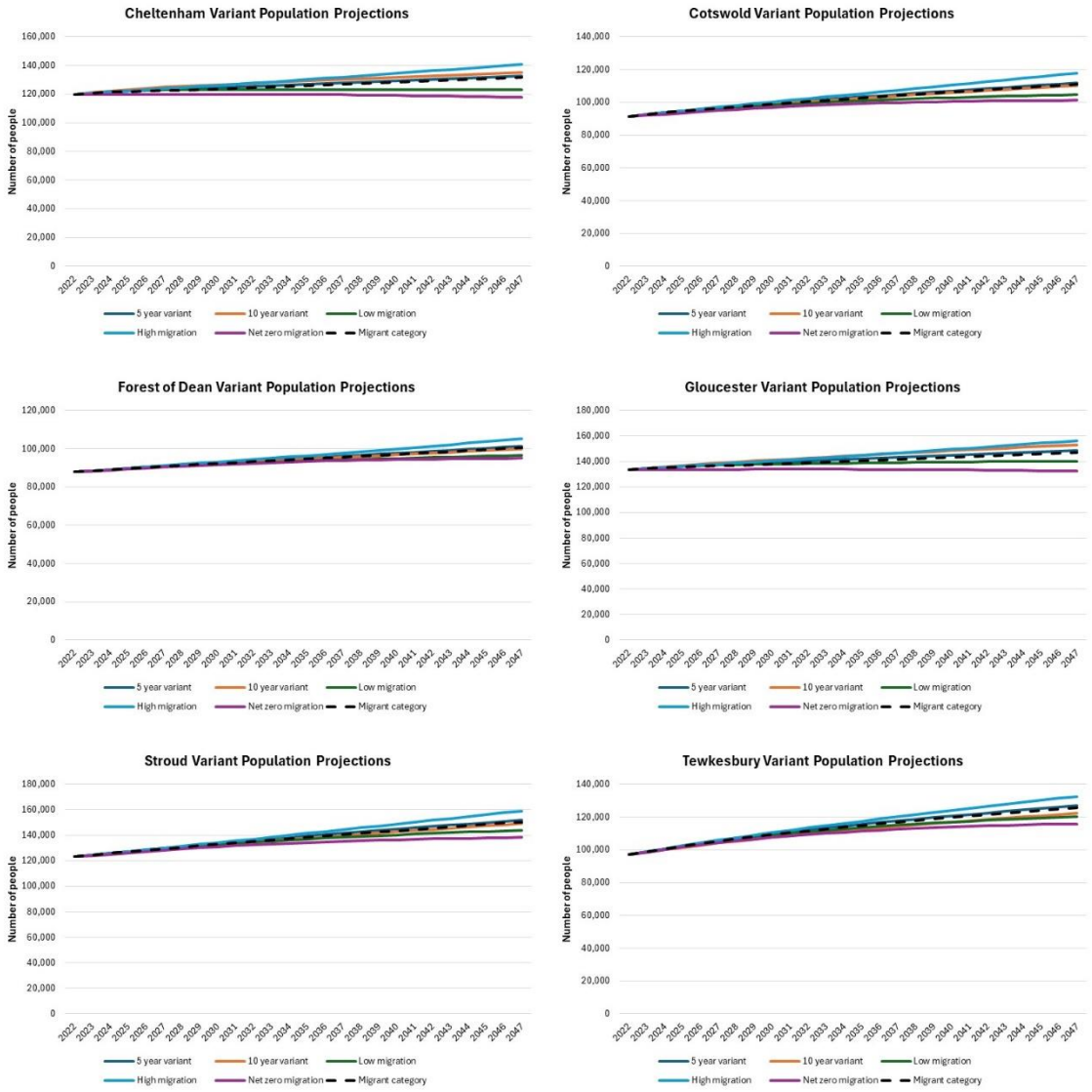

Figure 15: Gloucestershire districts Variant Population Projections[20]

[20] 2022 based Subnational Population Projections (variant projections), ONS