Population, projections and challenges

This is a brief introduction to the population of Fife.

If you're interested to know what the population of Fife is, why it's important, where it comes from and why it needs to be treated with caution, you should find something here to help you out.

If you're just looking for some of the most relevant population numbers, skip to the last pages for a section you might find useful.

And if you're inspired by Olivia and Jack and want to find out more about the data used here, there are links at the end for you to research further.

Olivia, Jack and births in Fife

Olivia and Jack were the most popular names given to children born in Fife in 2020. There were 26 Olivias' and 26 Jacks' from 3,144 babies.

This is the lowest number of births in Fife since records began in 1855. The number of births across Scotland was also the lowest in this same period.

Babies born in Fife in 2020	Female	Male
Number 3,143	1,508	1,635
Percentage	48%	52%
Total	3,143 (100%)	

The number of births in Fife each year from 1991 to 2020
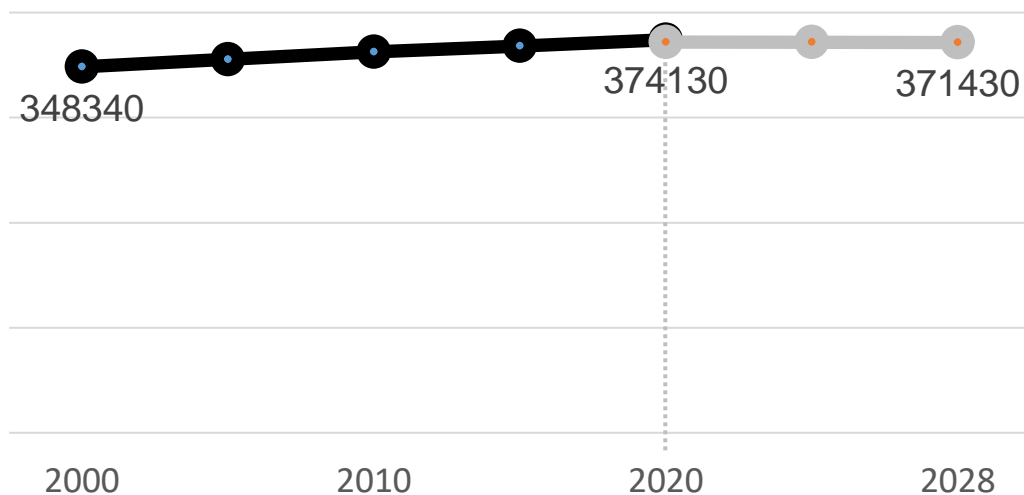from National Records of Scotland Births Time Series Data Table BT.4
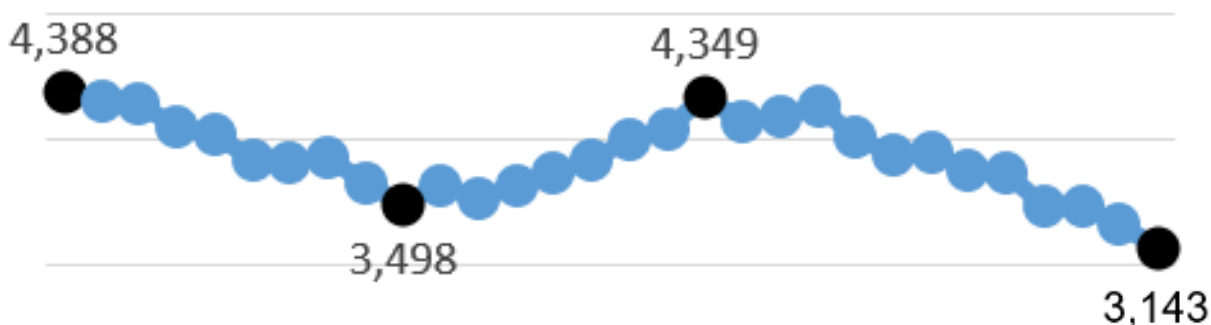
People in Fife

Olivia and Jack were born in a Fife where the population has been increasing for 20 years and there are now an estimated 374,130 people living in Fife, making it the third largest local authority by population.

But the Fife that Olivia and Jack will go to school and grow up in is expected to see its population decrease slightly over the next 10 years.

This reduction is due to natural change (there have been 2.3% more deaths than births, not specifically due to COVID-19) and migration (there have been 2.3% more people coming to live in Fife than moving out of Fife) which have mostly cancelled each other out.

The population of Fife estimated (2000-2020) and projected (2020-2028) from National records of Scotland Population Estimates Time Series Data

These population calculations from National Records of Scotland (NRS) use data from Scotland's Census, mid-year population estimates and long-term population projections. In the 10 years between each Census the population is estimated, starting with the known Census population then:

- adding the number of births;
- adding the number of people moving into Fife;
- subtracting the number of deaths; and
- subtracting the number of people moving out of Fife.

This population estimate is rolled forward and repeated each year until the next Census, when the estimates are recalibrated and the process restarts.

Why do we need population projections?

Local councils and other organisations need to know about the people in their area to help them plan how best to provide their services.

They might want to know about our age, sex and health, our homes, employment or education and we can find the answers in Scotland's Census which has been asking every household these questions every 10 years since 1801 (except 1941 and 2021 as Scotland's Census has been moved to 2022 due to the impact of COVID-19).

If we want to look forward to predict the number of people living in an area in the next 5, 10 or 20 years, we can make assumptions of what we expect to happen in the future (mostly about fertility, mortality and migration) based on what is happening now and what has happened in the past.

Birth rates	**Women are having fewer children.** Birth rates have been falling steadily for a number of years. Fewer children were born in Fife in 2020 than any other year since records began in 1855.
Births v deaths, life expectancy	**There are more deaths than births each year.** COVID-19 has had some impact but most of the projected change is due to longer-term trends showing more deaths than births. Life expectancy has also stalled since 2012-2014.
Migration	**More people move to Scotland than leave.** More people are projected to move to Scotland than leave each year, but beyond 2028 this will no longer offset the gap between births and deaths.

These are *population projections* and are important for allocating budgets, planning schools, roads, houses, doctors surgeries, care homes and other future services and facilities.

Some of these examples can involve large sums of public money where over-estimating the population could result in services that may not be fully utilised, or underestimating the population could result in organisations being unable to meet demand for their services.

"Lower birth rates are the main reason these projections are lower than previous ones".

Are projections reliable?

Population projections are tricky as no-one really knows with any certainty what is going to happen in the future.

As an example, between 2001 and 2011, Fife's population was over-estimated by 3,000 people, largely because of the difficulty in estimating migration.

Projections made during periods of rapid change are also less accurate.

The last two years (2020, 2021) have highlighted this uncertainty and given us examples of circumstances that could not have been expected from analysis of historical data, as they had never happened before:

- the COVID-19 pandemic may affect not only people's longer-term health but also where they choose to live or work. For example, if working from home, people may choose to live further away from their workplace. This impact has been quick and widespread; and

- Britain exiting the European Union (Brexit) is an example of the impact of government policy and its influence on migration is as yet largely unknown.

"Projections made during periods of rapid change are less accurate".

Some age groups are less reliable than others

Projections for young people are least reliable as the number of future births is unknown and the life choices they make are difficult to predict.

Migration in to and out of Fife is the biggest driver of population change. Small areas with less people tend to be affected more by changes in migration than large areas with more people. Areas with high migration are less reliable.

Areas with more elderly people tend to have more reliable projections than areas with high numbers of children and families, as it is more difficult to predict future fertility levels or where parents of these children may migrate to, than mortality rates amongst elderly people.

In all these cases, the further into the future projections go, the less accurate they become. This means that projections of the number of elderly people (age 65+) are more reliable than those for working age people (age 16-64) with children (age 0-15) less reliable.

Similarly, population projections for all of Scotland are more reliable than those for council areas such as Fife, with smaller areas such as Buckhaven or Kincardine, less reliable.

Fife population projections (2018 based) for each broad age group from National Records of Scotland sub-national population projections 2018-based detailed datasets
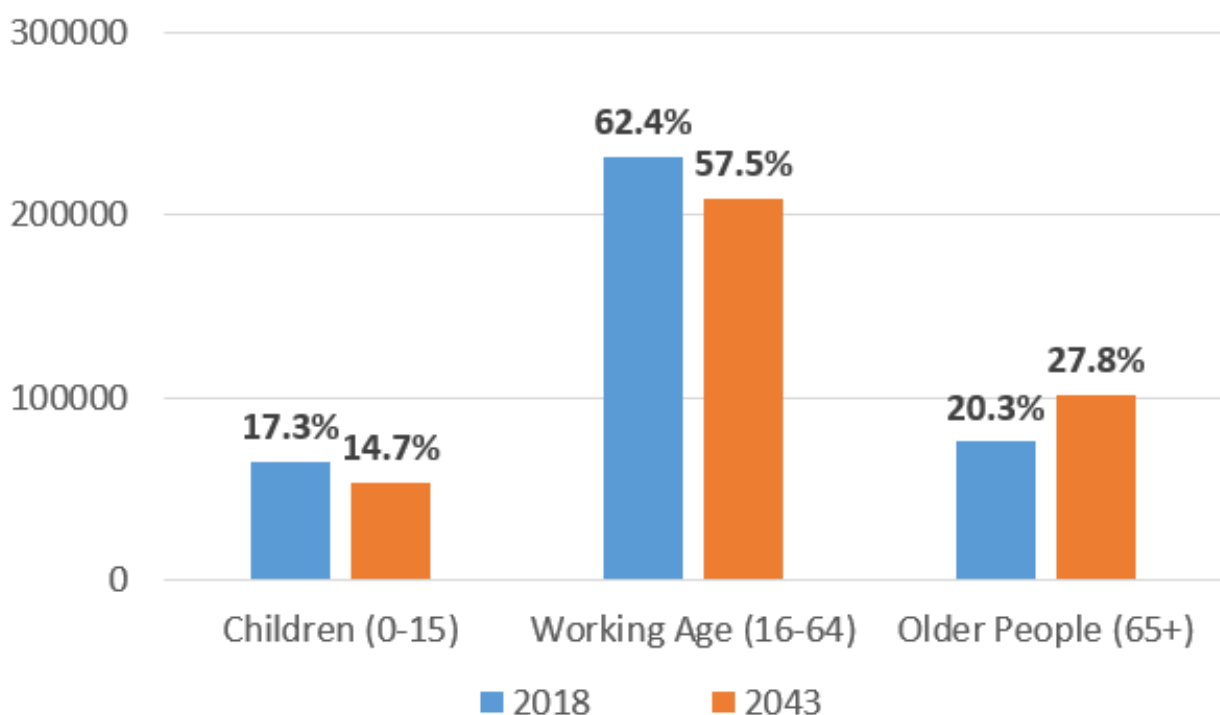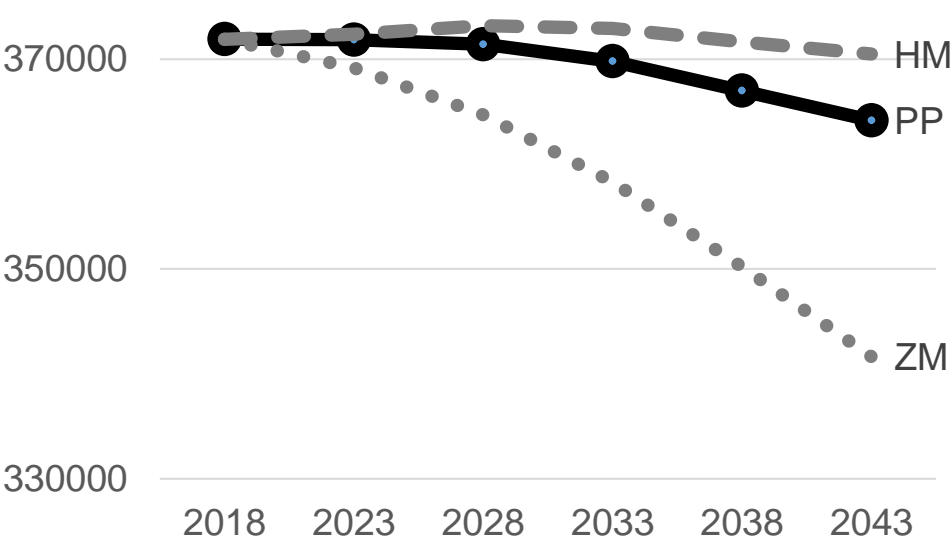
Variant projections

To try to limit the uncertainty of population projections, NRS also produce 'variant' projections alongside their main or 'principal' projection to provide an alternative picture of what future populations could look like.

These can cover scenarios such as high or low fertility, high or low mortality and high or low migration.

The chart below shows the potential variation in the 2018 Fife population projection by comparing the NRS principal projection with the highest population variant (high migration) and the lowest population variant (zero migration).

Fife population projections (principal, highest and lowest variants)

- - - - HM   is the High Migration population projection variant
───── PP   is the Principal Population projection
· · · · · · ZM   is the Zero Migration population projection variant

*"the further into the future projections go,
the less accurate they become"*

For more charts for more councils visit:
https://scotland.shinyapps.io/nrs-sub-national-population-projections/

School roll projections

School roll projections estimate the number of children expected and classes needed in all primary and secondary schools and is an example of population information helping to manage a local authority service in Fife.

These projections calculate the future number of young people (age 5-18), in small areas (120 school catchments) over a long period of time (up to 20 years) and so meet all the criteria for being the least reliable projections.

The option for parents to choose which school to send their children to and the potential movement of people into areas where new homes are proposed, but the limited confidence over exactly when homes will be built and the number and characteristics of the people who might move into these new homes, adds to the uncertainty around future school rolls.

"school roll projections meet all the criteria for being the least reliable projections"

The current low birth rate is expected to continue for the next 20 years and as these children reach school age and become primary and secondary school pupils, the future school rolls are likely to be lower than current rolls.

Things to think about ...

- There will always be uncertainty around population projections.

- There is currently no evidence that assumptions made about the number of future births, birth rates, fertility rates, household size or migration are higher than they could be, or that population projections are also high.

- Birth rates, fertility rates, average household size and migration rates are all currently at low or their lowest values, some in over 100 years

- As these values are currently low, it is also very possible that they could recover at some point in the next 20 years and increase the population which would be in contrast to what is currently projected.

"There will always be uncertainty around population projections"

Summary

After decades of growth, Fife's population is expected to decline slightly over the next 10 years.

National population projections are currently low, but could change. The low birth rates, low fertility and declining household sizes are not unique to Fife and are repeated across Scotland.

The impact of COVID-19 and Brexit are not yet fully realised but are both expected to influence the decline in Fife's population, particularly due to reduced migration.

It is not clear yet by how much, or for how long, this influence will last.

More information and references

National Records of Scotland (NRS) Fife Council Area Profile is available [here](https://www.nrscotland.gov.uk/files/statistics/council-area-data-sheets/fife-council-profile.html#population_estimates) or by searching www.nrscotland.gov.uk for 'Fife Council Area Profile' https://www.nrscotland.gov.uk/files/statistics/council-area-data-sheets/fife-council-profile.html#population_estimates

NRS Uses and Limitations of Population Projections https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/uses-and-limitations-of-population-projections

Contact

The Research Team welcomes and encourages feedback so please get in touch if you have any comments. We are always happy to speak to you about your own research and to provide guidance, mentoring or more formal support where our priorities allow.

This report introduces population projections and their challenges and was prepared by William Penrice, Andrew Ballingall, Paul Blackburn and Gary Scott and published in February 2022.

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7 things to know about people in Fife
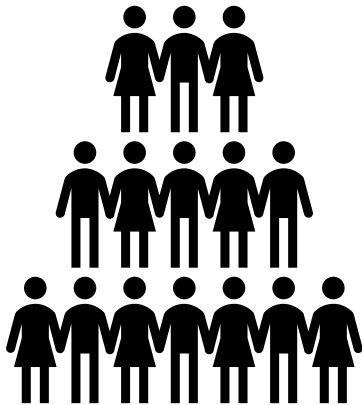
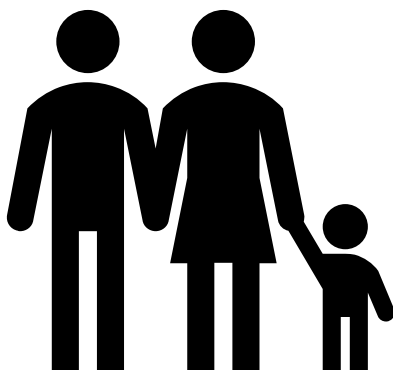The mid-2020 Fife population is estimated at 374,130 people

This is an increase of 7.8% since 1998

The Fife population is expected to fall to around 364,000 people by 2043

In 2020 the Fife average birth rate was 8.4 births per 1000 people

Life expectancy for children born in 2019 is 81.1 years for girls and 77.3 years for boys

In 2020 the Fife average household size was 2.16 people

Projections are generally not produced for areas with less than 10,000 people