

Article

Alternative populations, England and Wales: Census 2021

Local authority out-of-term and workday populations compared with usual residents. Includes age-sex distribution and characteristics of the workday population.



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Table of contents

1. [Main points](#)
2. [Out-of-term population](#)
3. [Workday population](#)
4. [Alternative populations data](#)
5. [Glossary](#)
6. [Measuring the data](#)
7. [Strengths and limitations](#)
8. [Related links](#)
9. [Cite this article](#)

1 . Main points

- All local authorities with the smallest out-of-term populations compared with their usual resident populations contained universities; for example, Oxford's out-of-term population was 11.0% smaller than the usual resident population.
- Differences between usual resident and out-of-term populations were concentrated in ages 18 to 22 years; in St Albans, there were more than twice (2.1 times) as many females aged 20 years out of term than in the usual resident population.
- More than one in nine people (11.4%) had a workday address in a different local authority in England and Wales to where they were usually resident.
- Westminster's workday population was 1.8 times the size of the usual resident population, a decrease from 2011 when the workday population was over three times the size of the usual resident population.
- Other characteristics of an area's alternative population can differ from the usual resident population; for example, a larger proportion of North Warwickshire's workday population (15.8%) identified as an ethnic minority than the usual resident population (6.8%).

Census 2021 took place during the coronavirus (COVID-19) pandemic, a period of rapid change which will have affected where people worked and studied. As a result, care should be taken in using these data for planning and policy purposes.

2 . Out-of-term population

The usual resident population records full-time schoolchildren and students at their term-time address, regardless of where they were living on Census Day.

The out-of-term population is the same as the usual resident population but full-time schoolchildren and students are counted at their out-of-term address. This may be a family home address. Those with an out-of-term address outside of England and Wales are removed from the population. The population does not include people whose term time address is outside England and Wales but return to England and Wales out of term.

There was some evidence of changes to the term-time population resulting from the coronavirus (COVID-19) pandemic. Read more about how we ensured an accurate estimate of students at their term time address in our [Students: Census 2021 publication](#).

In 2021, the out-of-term population in England and Wales was 59.5 million when students return to their home addresses. This was lower than the usual resident population of 59.6 million because 75,000 (0.1%) usual residents had an out-of-term address outside of England and Wales. The population with an out-of-term address outside of England and Wales in 2021 decreased from 125,000 (0.2%) usual residents in 2011.

The population with an address outside of England and Wales will not reflect the total number of international students, as some remain at their term time address out of term. The decrease to 75,000, from 125,000 in 2011, may be because of fewer international students being in England and Wales on Census Day because of the coronavirus pandemic. Read more in our [International student population in England and Wales article](#).

Out-of-term population by local authority

Nearly 1 in 100 people (0.9%) had an out-of-term address in a different local authority in England and Wales to where they were usually resident (their term time address).

Most (67.1%) local authorities had little difference (less than 1% of the usual resident population) between the out-of-term and usual resident population. The local authorities with the largest difference all contained universities. Oxford had the largest proportional difference (11.0% smaller than the usual resident population). In Wales, this was Cardiff (4.1% smaller than the usual resident population). Oxford and Cambridge were the only local authorities in 2021 to decrease by 10% or more out of term.

Most (81.3%) local authorities had a slightly larger population out of term. The local authorities with the largest increases out of term were mainly found in the South East and the East of England. In England, the local authority with the greatest difference in out-of-term population compared with their usual resident population was Isles of Scilly, which was larger by 2.9%. The second largest was St Albans (2.1%). In Wales, Monmouthshire was larger by 1.3%.

Figure 1: Local authorities containing universities had the largest decrease in population out of term

The difference between the usual resident and out-of-term population of local authorities, as a proportion of the usual resident population, Census 2021

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Age and sex

Local authorities' age and sex distributions are different in the out-of-term population to the usual resident population.

The difference in age-sex distributions of usual resident and out-of-term populations was concentrated between ages 18 and 22 years. Of the people with an out-of-term address in a different local authority to their usual resident address, 85.0% were aged 18 to 22 years. The change in females was larger than males. This reflects the age and sex distribution of university students.

Oxford's large decrease in population out of term is largely concentrated in ages 18 to 22 years because of Oxford's large number of undergraduate students who are likely to have an out-of-term address. The largest percentage decrease was for females aged 19 years, which was 67.7% fewer during out-of-term time. For males, it was 62.3% fewer.

St Albans had an out-of-term population that was larger than the usual resident population. The difference was also concentrated in the age 18 to 22 years age group. For females, the difference peaked at age 20 years, which was larger by 114.7% for the out-of-term population. For males, it peaked at age 19 years (99.3% larger).

Figure 2: The largest differences between the out-of-term and usual resident population were at ages 18 to 22 years

Usual resident and out-of-term population in St Albans and Oxford in England and Wales by single year of age and sex, Census 2021

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Figure 3: Explore local authorities' out-of-term populations

Interactive population pyramid showing usual residents and out-of-term population in local authorities in England and Wales by single year of age and sex, Census 2021

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3 . Workday population

The workday population is an estimate of the population during the working day. It includes everybody who works in an area, and all respondents who live in the area but do not work. It includes all usual residents except for those with a workday address outside of England and Wales or offshore.

In 2021, the workday population in England and Wales was 59.5 million, slightly lower than the usual resident population of 59.6 million. There were 102,000 (0.2%) usual residents who had a workplace offshore or outside of England and Wales. The proportion remained unchanged from 2011. The workday population does not include people who work in England and Wales but are usually resident outside of England and Wales.

The coronavirus (COVID-19) pandemic affected where people worked on Census Day. Large numbers of people were still supported by government furlough schemes. Some people may have provided workplace information for the last time they worked, or they may have answered based on their behaviours on Census Day. Read more in our [Labour market quality information for Census 2021 methodology](#).

In 2021, there was a large increase in the number of people working from home, from 10.3% of people in work in 2011 to 31.2% in 2021. People working from home were not asked for their workplace address, as this is assumed to be the same as their home address. Workday populations at local authority level are likely to be strongly affected by these changes and will vary across geographies and industries. Read more in our [Travel to work quality information methodology](#).

Workday population by local authority

More than one in nine people (11.4% of the total usual resident population and 13.9% of the usual resident population aged 16 years and over) had a workday address in a different local authority in England and Wales to where they were usually resident. Only nine local authorities had a workday population at least 10.0% larger than the usual resident population.

The local authorities with the greatest proportional difference between the workday and usual resident population were largely urban except for North Warwickshire and North West Leicestershire. The top 10 included areas with universities in England.

The local authority with the largest difference in workday population compared with their usual resident population was City of London, which had a population that was over 10 times larger than their usual resident population. This workday population may have been affected by many people working from home during the coronavirus pandemic. In 2011, it was over 48 times higher than the usual resident population. The second largest difference was Westminster (1.8 times larger), a much smaller difference compared with 2011 (over 3 times larger). In Wales, Cardiff had the biggest increase from the usual resident population (5.2%), a decrease from 11.6% in 2011.

Most local authorities which had a workday population larger than the usual resident population had a smaller difference compared with 2011. This may have been an impact of the coronavirus pandemic where there was an increase in homeworking, with varying affect on different occupations. Some local authorities saw a larger difference in 2021. For example, Kensington and Chelsea had a workday population 29.3% larger than the usual resident population in 2021, compared with a workday population 22.2% larger in 2011.

In 2021, the local authorities with a workday population that was smaller than the usual resident population tended to be close to larger urban areas and residential London boroughs close to London's commercial centre. The local authority that had the largest decrease in workday population compared with their usual resident population was Gosport which has a workday population 10.3% lower than the usual resident population. In Wales, this was Blaenau Gwent (9.7%). Gosport and North East Derbyshire are the only local authorities that had a workday population of more than 10.0% smaller than the usual resident population.

Figure 4: Some of the largest differences in workday population compared with usual resident population were found in London

The difference between the usual resident and workday population as a proportion of the usual resident population, local authorities in England and Wales, Census 2021

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Age and sex

In Westminster, there were twice as many males in the workday population than the usual resident population across single years of age from ages 25 to 60 years. There were twice as many females across single year of age from ages 26 to 43 years compared with the usual resident population.

In Gosport, there were substantially fewer people of working age in the workday population than the usual resident population. The overall percentage difference was larger for males, with the number of males aged 31 years in the workday population smaller by 27.1%. The largest difference for females was for those aged 22 years (23.0% smaller).

Figure 5: The workday population of Westminster was much larger than the usual resident population at working ages

Usual resident and workday population in Westminster and Gosport by single year of age and sex, Census 2021

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Figure 6: Explore local authorities' workday populations

Interactive population pyramid showing usual residents and workday population in local authorities in England and Wales by single year of age and sex, Census 2021

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Characteristics of the workday population

The movement of people between local authorities based on their place of work can change the population structure of different characteristics. The coronavirus pandemic may have changed the working patterns of people on Census Day. This may have had an impact on where people worked. The effect on working patterns will be different for people with different characteristics. For example, by occupation and age. This will affect the characteristics of the workday population.

Throughout this section we look at specific local authorities that have a different structure in their workday population compared with their usual resident population. These include ethnic group, health, and hours per week worked. Workday population data are available for all local authorities in England and Wales broken down by more characteristics in our [accompanying dataset](#).

Ethnic group

The ethnic composition of England and Wales varies between local authorities. As a result, the ethnic group breakdown can change when people work in a different local authority to where they live. The difference is most pronounced where neighbouring local authorities have very different usually resident ethnic group breakdowns, where people usually resident in one local authority work in neighbouring areas.

An example of this can be seen in North Warwickshire, a local authority in the West Midlands. North Warwickshire borders Birmingham and Coventry, which are both more ethnically diverse. It had one of the largest gains in the workday population compared with the usual resident population. The workday population was 24.3% larger than the usual resident population. The characteristics of the people who work in North Warwickshire are different from those who live there. The workday population is more ethnically diverse than the usual resident population.

Most people usually resident in North Warwickshire identified their ethnic group as “White: English, Welsh, Scottish, Northern Irish, or British” (93.2%). This proportion is lower (84.2%) in the workday population. The second largest ethnic group that people who worked in North Warwickshire identified as was “White: Other White”, which was 5.7% of the workday population, over double the proportion in the usual resident population (2.1%).

The number of people who identified as “Asian, Asian British or Asian Welsh: Pakistani” was over eight times larger than the number of people usually resident, increasing to 1.4% of the workday population compared with 0.2% of people who lived there.

Figure 7: A larger proportion of North Warwickshire’s workday population (15.8%) identified as an ethnic minority than the usual resident population (6.8%)

Ethnic groups of usual resident and workday population in local authorities in England and Wales, Census 2021

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Hours worked

The coronavirus pandemic may have affected the number of hours people worked per week. Furlough, and businesses being open for reduced hours in England and Wales at the time of the 2021 Census, may have led to people reporting more, or fewer, hours worked than pre-pandemic.

Camden is a London borough where the working hours per week of the workday population aged 16 years and over was different to that of the usual resident population. Camden’s workday population was 36.8% larger than the usual resident population.

On Census Day, 42.4% of usual residents aged 16 years and over in Camden were not in employment compared with 29.6% of the workday population. Over half (53.1%) of the workday population in Camden worked full time (over 31 hours) compared with 42.4% of the usual resident population. The proportion of people working part-time hours was slightly less in the usual resident population (15.2%) compared with the workday population (17.4%). Most people who work in Camden but live elsewhere work full-time.

Figure 8: Over half (53.1%) of the workday population in Camden worked full-time compared with 42.4% in the usual resident population

The hours worked per week of usual residents aged 16 years and over and workday population aged 16 years and over in local authorities in England and Wales, Census 2021

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Industry

The coronavirus pandemic affected where people travelled to work. For example, an area with a large proportion of health workers is likely to still have large numbers of people travelling to the local authority for work. Local authorities with large sectors containing office-based roles may lose workday population because of the increase in homeworking in this sector. Furthermore, service-based industries such as hospitality may have had larger numbers of furloughed workers.

Some people on government furlough schemes may have provided workplace information for the last time they worked, or they may have answered based on their behaviours on Census Day.

Middlesbrough is an example of how the proportion of people working in each industry was different for those who live and work in the area. Middlesbrough is in the North East and borders Redcar and Cleveland, Stockton-on-Tees and Hambleton. In Middlesbrough, the workday population was 3.1% higher than the usual resident population in 2021.

Of the workday population aged 16 years and over, nearly a quarter (24.2%) worked in the public administration, education, and health industries compared with 18.1% of the usual resident population. Over half (50.5%) of usual residents aged 16 years and over in Middlesbrough were not in employment on Census Day. This is only slightly larger than the 48.6% of the workday population who were not in employment.

Figure 9: Nearly a quarter (24.2%) of the workday population aged 16 years and over in Middlesbrough worked in public administration, education and health

The current industry of usual residents aged 16 years and over and workday population aged 16 years and over in local authorities in England and Wales, Census 2021

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Highest level of qualification

The education level of people in local authorities varies across England and Wales. The workday population may be different from the usual resident population. This can depend on different factors, such as the types of occupations that the workday population do. The coronavirus pandemic may have had an impact on the number of people working from home and on furlough. This will be concentrated in certain sectors. This will affect the highest level of qualification of the workday population, and the level of qualification of people in employment varies by sector.

An example of a local authority where the education composition changes is in Harborough, a local authority in the East Midlands which borders Leicester. In Harborough, the workday population was smaller than the usual resident population by 0.3%.

Despite the small difference in total population, more people with the highest level of qualifications leave the area for work than work in the area but do not live there. The proportion of people aged 16 years and over in the workday population with the highest qualification of level 4 or above (degree or equivalent) was 34.1%, lower than the usual resident population (37.8%).

In comparison, the proportion of people with no qualifications, level 1 (one to four GCSE passes or equivalent) or other qualifications were all higher in the workday population than the usual resident population. This may be because of the movement of people to and from neighbouring Leicester, which had a lower proportion of usual residents who indicated that their highest qualification was level 4 or above. The local authorities which had smaller proportions of people with level 4 qualifications or above in the workday population compared with the usual resident population tended to be areas that were near larger urban areas.

Figure 10: A smaller proportion of the workday population aged 16 years and over in Harborough (34.1%) have level 4 or above qualifications than the usual resident population (37.8%)

The highest qualification of usual residents aged 16 years and over and workday residents aged 16 years and over in local authorities in England and Wales, Census 2021

Notes:

1. For the full list of highest level of qualification categories, see [Section 5: Glossary](#).

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Main language

The main language spoken varied across England and Wales. As a result, the main language of the population changes when people work in a different local authority to where they live. The difference is most pronounced where neighbouring local authorities have different proportions of main languages and where there are larger movements of people between local authorities for work.

An example of this is Boston, a local authority in the East Midlands. Boston borders North Kesteven, South Holland and East Lindsey. These local authorities had higher proportions of people who speak English as their main language. Overall, the workday population was 3.1% smaller than the usual resident population.

The proportion of the workday population aged three years and over in Boston whose main language was English was 83.8%, compared with 79.3% in the usual resident population. This is explained by people with a main language that is not English living in Boston but working outside of the area. The number of people with European languages (Polish and other EU languages), Russian and Portuguese were all around a quarter less in the workday population compared with the usual resident population.

Figure 11: In Boston, 83.8% of the workday population had a main language that was English compared with 79.3% of the usual resident population

The main language of usual residents aged three years and over and workday population aged three years and over in local authorities in England and Wales, Census 2021

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General health

The self-reported general health of the population varies across local authorities. This is affected by factors including age distribution of the local authority. When people of working age move between local authorities for work this can result in the general health of the workday population differing to the usually resident population.

An example of this is Richmondshire, a local authority in Yorkshire and the Humber which has a large armed forces presence. In 2021, the workday population in Richmondshire was 2.9% larger compared with the usual resident population. The proportion of people with very good health was 51.4%, larger than the usual resident population (49.9%).

Otherwise, the patterns were comparable between the usual resident population and the workday population for other general health classifications. The increase in the number of people with very good health in Richmondshire may be linked to the large gains in the workday population compared with the usual resident population, which can be seen across males between ages 17 and 40 years old.

Figure 12: In Richmondshire, a higher proportion (51.4%) of the workday population had very good health than the usual resident population (49.9%)

The general health of usual residents and workday residents in local authorities in England and Wales, Census 2021

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In Blaenau Gwent, the proportion of people with good health and very good health is slightly smaller in the workday population compared with the usual resident population. Blaenau Gwent is in Wales and has a workday population that is 9.7% smaller than the usual resident population. The proportion of people in the workday population who reported having good or very good health is 72.3%, compared with 73.8% in the usual resident population. This may be because those of working age, who are more likely to have good or very good health, go to another local authority for work.

4 . Alternative populations data

[Out-of-term population, England and Wales: Census 2021](#)

Dataset | Released 10 October 2023

These datasets contain estimates for the out-of-term population. The estimates are as at Census Day, 21 March 2021.

[Workday population, England and Wales: Census 2021](#)

Dataset | Released 10 October 2023

These datasets contain estimates for the workday population. The estimates are as at Census Day, 21 March 2021.

[Workplace population, England and Wales: Census 2021](#)

Dataset | Released 10 October 2023

These datasets contain estimates for the workplace population. The estimates are as at Census Day, 21 March 2021.

[Second address population, England and Wales: Census 2021](#)

Dataset | Released 10 October 2023

These datasets contain estimates for the second address population. The estimates are as at Census Day, 21 March 2021.

5 . Glossary

Out-of-term population

The out-of-term population is a redistribution of the usually resident population to their place of residence in out-of-term periods. Students who reported a second address that was a student's home address are counted at that second address. Students that did not provide an out-of-term address and usual residents who are not students are counted at their usual residence.

Workday population

The workday population is an estimate of the population during the working day. It includes everybody who works in an area, including those working from home, wherever they usually live, and all respondents who live in the area but do not work. The following population groups are excluded from the workday population of England and Wales:

- those living in England and Wales but working in Scotland, Northern Ireland, outside the UK or on offshore installations
- those with a place of work in England and Wales but who are not usually resident in England and Wales
- short-term residents

Ethnic group

The ethnic group that the person completing the census feels they belong to. This could be based on their culture, family background, identity, or physical appearance.

Respondents could choose one out of 19 tick-box response categories, including write-in response options.

Hours worked

The number of hours worked per week before the census includes paid and unpaid overtime. This covers the main job of anyone aged 16 years and over.

Industry

Classifies people aged 16 years and over who were in employment between 15 March and 21 March 2021 by the Standard Industrial Classification (SIC) code that represents their current industry or business.

The SIC code is assigned based on the information provided about a firm or organisation's main activity.

Highest qualification

The highest level of qualification is derived from the question asking people to indicate all qualifications held, or their nearest equivalent.

This may include foreign qualifications where they were matched to the closest UK equivalent.

The full list of qualification categories include:

- no qualifications: no formal qualifications
- Level 1: one to four GCSE passes (grade A* to C or grade 4 and above) and any other GCSEs at other grades, or equivalent qualifications
- Level 2: five or more GCSE passes (grade A* to C or grade 4 and above) or equivalent qualifications
- apprenticeships
- Level 3: two or more A Levels or equivalent qualifications
- Level 4 or above: Higher National Certificate, Higher National Diploma, Bachelor's degree, or post-graduate qualifications
- other qualifications, of unknown level

Main language

A person's first or preferred language.

General health

A person's assessment of the general state of their health from very good to very bad. This assessment is not based on a person's health over any specified period of time.

Usual resident

A usual resident is anyone, who on Census Day, 21 March 2021, was in the UK and had stayed or intended to stay in the UK for a period of 12 months or more, or had a permanent UK address and was outside the UK and intended to be outside the UK for less than 12 months.

6 . Measuring the data

Reference date

The census provides estimates of the characteristics of all people and households in England and Wales on Census Day, 21 March 2021. It is carried out every 10 years and gives us the most accurate estimate of all the people and households in England and Wales.

We are responsible for carrying out the census in England and Wales, but will also release outputs for the UK in partnership with the Welsh Government, the National Records of Scotland (NRS), and the Northern Ireland Statistics and Research Agency (NISRA). The census in Northern Ireland was also conducted on 21 March 2021, whereas Scotland's census was moved to 20 March 2022. All UK census offices are working closely together to understand how this difference in reference dates will affect the UK-wide population and housing statistics, in terms of both timing and scope.

Response rate

The person response rate is the number of usual residents for whom individual details were provided on a returned questionnaire, divided by the estimated usual resident population.

The person response rate for Census 2021 was 97% of the usual resident population of England and Wales, and over 88% in all local authorities. Most returns (89%) were received online. The response rate exceeded our target of 94% overall and 80% in all local authorities.

7 . Strengths and limitations

Quality considerations, along with the strengths and limitations of Census 2021 more generally, are provided in our [Quality and methodology information \(QMI\) for Census 2021](#). Also see our [Measures and interactive tools showing the quality of Census 2021 methodology](#). Read more about the specific quality considerations for demography and migration in our [Demography and migration quality information for Census 2021 methodology](#).

Further information on our quality assurance processes is provided in our [Maximising the quality of Census 2021 population estimates methodology](#).

Census 2021 took place during a period of unparalleled change because of the coronavirus (COVID-19) pandemic. On Census Day, 21 March 2021, a nationwide lockdown was still in place, with government guidance requiring people to work from home wherever possible. Because of the circumstances in which Census 2021 data were collected, take care when comparing 2011 and 2021 estimates for the workday population. The data are not directly comparable because of definitional and behavioural differences.

The government guidance will have increased the number of people in 2021 who selected the “Work from home” box for their place of work compared with the 2011 Census. We did not collect any workplace address information for those working at home. This means that a smaller proportion of the population in employment have been recorded at a workplace address in 2021 compared with 2011.

Some people in employment will have been unable to work in the week before Census Day, as retail and businesses that were defined as “non-essential” were closed. During the coronavirus pandemic, people in England and Wales were supported by the Coronavirus Job Retention Scheme and the Self-Employment Income Support Scheme, national income support schemes also referred to as “furlough”. We gave extra guidance to help people on furlough answer the Census 2021 questions about work.

It is unclear how representative Census 2021 workday estimates are of people’s typical workday locations before and during the coronavirus pandemic. People in employment were advised to record how they travelled on Census Day, while people temporarily away from work (including those on furlough) were asked to record their previous travel to work patterns. We are unable to determine if people on furlough followed the guidance to record their previous employment and travel to work information, or if they responded with their status as at Census Day.

Take care when using workday population data for planning purposes. Read more about specific quality considerations in our [Labour market quality information for Census 2021 methodology](#) and [Travel to work quality information for Census 2021 methodology](#) on the Office for National Statistics (ONS) website.

8 . Related links

[Labour market quality information for Census 2021](#)

Methodology | Released 8 December 2022

Known quality information affecting labour market data from Census 2021 in England and Wales to help users correctly interpret the statistics.

[Travel to work quality information](#)

Methodology | Released 8 December 2022

Known quality information affecting travel to work data from Census 2021 in England and Wales to help users correctly interpret the statistics.

[Travel to work, England and Wales: Census 2021](#)

Bulletin | Released 8 December 2022

Method of travel and distance travelled to work, Census 2021 data.

[Industry and occupation, England and Wales: Census 2021](#)

Bulletin | Released 8 December 2022

Industries that people are employed in, types of work people do as their main job and social grades, Census 2021 data.

[Characteristics of people in England and Wales with a second address: Census 2021](#)

Article | Released 19 April 2023

People with second addresses in 2011 and 2021 by age, sex, addresses inside and outside of their usual local authority and the UK and distance from usual address.

9 . Cite this article

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