

1 Introduction

Administrative data, information collected by organisations as part of their everyday operations, is increasingly being used by Statistics Jersey to produce population and migration statistics. By drawing on administrative sources, Statistics Jersey aims to improve the regularity, coverage, and efficiency of its population and migration estimates.

This report outlines the methodology used to produce population and migration estimates from administrative data held by Statistics Jersey.

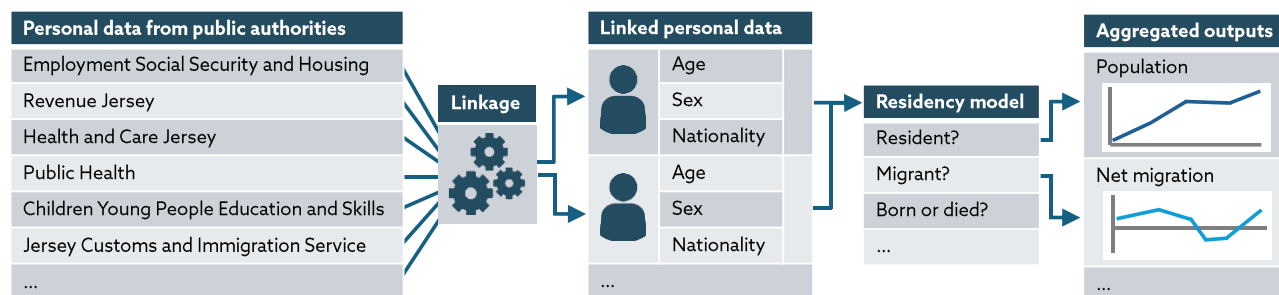
1.1 Summary of method

To produce population and migration estimates, Statistics Jersey collects data about individuals from multiple public authorities, such as Employment, Social Security and Housing; Revenue Jersey; and Children, Young People, Education and Skills.

These datasets are then linked at an individual level to create a statistical person register that contains information about each person such as age, sex, and nationality. The statistical person register is pseudonymised before analysis (identifiable information such as names are removed).

The datasets also include records of people’s interactions with public authorities over time such as receiving social security benefits, making ITIS payments, or attending a school in Jersey. These interactions are used to estimate when people have been resident, inwardly or outwardly migrated, been born, or died. These individual estimates are then aggregated to create outputs for population and migration estimates.

Figure 1: The administrative data method



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3 Methodology and quality

3.1 Data sources

The [Statistics and Census \(Jersey\) Law 2018](#) states that Statistics Jersey:

- must use administrative data wherever possible to produce statistics¹
- can access administrative data from public authorities to produce statistics
- must protect that data to make sure no individual identifiable data is shared outside of Statistics Jersey

The administrative data sources used by Statistics Jersey for the purposes of estimating population and migration are listed in [Table 1](#). More information on administrative sources is available on [stats.je](#).

Table 1: Sources used to produce population and migration statistics from administrative data

Data source	Department
First used in 2022 estimates report	
Social security benefits and contributions	Employment, Social Security and Housing
Employer manpower returns	Employment, Social Security and Housing
ITIS payments	Revenue Jersey
HCS demographic and appointment data	Health and Community Services
Preschool health checks and immunisations	Public Health
School roll data	Children, Young People, Education and Skills
Highlands roll data	Children, Young People, Education and Skills
Student Finance	Children, Young People, Education and Skills
2021 Census data	Statistics Jersey (for evaluation purposes)
First used in 2024 estimates report	
Work permits and visas	Jersey Customs and Immigration Service
Dog licences	The Parishes

The data is linked by comparing forename, surname, date of birth, and address fields across sources to create a statistical person register. The register is pseudonymised before analysis (identifiable information such as names are removed). Further details are in the original [Methodology and evaluation report](#).

¹ [Statistics and Census \(Jersey\) Law 2018](#) Article 8, paragraph 2: 'for the purposes of a census, the Chief Statistician must, as often as the Chief Statistician considers appropriate, analyse and link data collected for administrative purposes already in the possession of the Office of the Chief Statistician [Statistics Jersey] or readily obtainable by it.'

3.2 Notable updates to reporting and methodology

The administrative data methodology is under constant development and is improved and updated in each report to better suit user needs. Notable updates are listed in [Table 2](#).

Table 2: Notable updates to population and migration statistics methodology

Report year	Publication date	Changes to report content	Changes to methods and data
2022	24 November 2023	First publication using administrative data.	
2023	25 September 2024	Addition of section on residential and employment status and self-declared nationality (experimental).	Improved provisional estimate methodology facilitating earlier publication.
2024	24 September 2025	Addition of section on work permits (experimental). Content split out into four separate reports to improve accessibility.	Additional datasets (dog licences and work permits and visas) integrated, improving estimates of residency and reportable characteristics.

3.3 Residency

3.3.1 Activity data

Interactions that individuals have with government services are referred to as 'activity'. Individuals are considered active in a quarter where they have activity such as:

- paying social security contributions
- receiving social security benefits (including pension to a Jersey address)
- attending GP, hospital appointments, or receiving vaccinations
- attending school, college, or university (receiving student finance)
- making ITIS payments
- applying for and collecting a registration card
- applying for a dog licence
- in prison

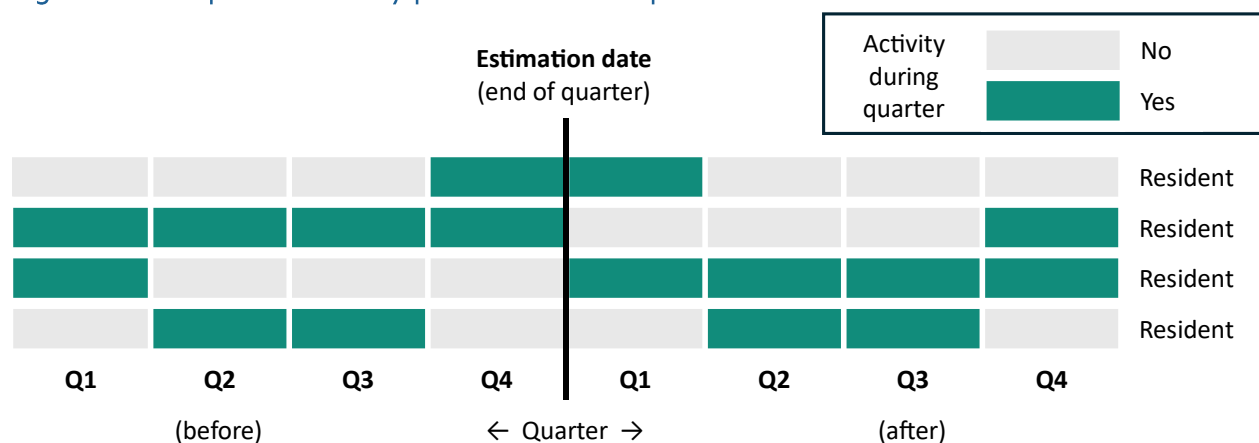
This activity data is used to classify whether people were resident in Jersey at different points in time.

3.3.2 Residency estimation

The activity data is used to classify whether people are resident or not at different points in time using a set of rules. In these estimates, a person is classified as resident at the end of a quarter if they have:

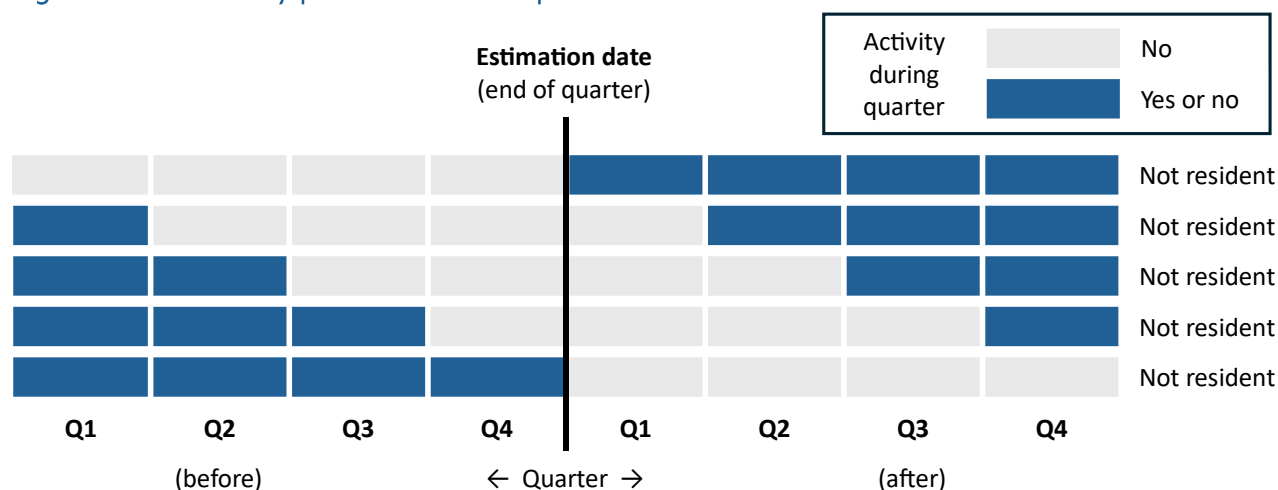
- activity in at least one quarter **before** that point in time, and
- activity in at least one quarter **after** that point in time, and
- a gap of **less than four quarters between** the two closest quarters of activity on either side

Figure 2: Examples of activity patterns where a person would be classified as resident



In contrast, a person is classified as **not** resident at the end of a quarter if they have a period of four consecutive quarters with no activity directly before, directly after, or spanning the quarter end of assessment (see [Figure 3](#)).

Figure 3: The activity patterns where a person is classified as **not** resident



This way of estimating residency was evaluated against the 2021 Census dataset and was shown to overcount the number of residents by a small amount (0.4%). For further information on the evaluation of this method, see the original [Methodology and evaluation report](#), published in June 2023.²

The available activity data starts from the first quarter of 2015. As four quarters of prior data are required to estimate residency, the population can be estimated using this method starting from the first quarter of 2016.

² The initial June 2023 report estimates were revised in November 2023. As a result, the overcount figure is slightly different to that published in the original [Methodology and evaluation report](#).

3.3.3 Length of residency

In these estimates, a person's length of residency is counted as the number of quarters that they are estimated to have been resident, at each quarter end. The residency period ends when a person is estimated to stop being resident, and restarts (from zero) if they are estimated to become resident again later.

This length of residency is not the same as any definition in legislation (such as the [Control of Housing and Work \(Jersey\) Law 2012](#), which determines Islanders' residential and employment statuses). It should be noted that returning migrants will be counted as continuously resident if they appear in the activity data in consecutive years with gaps of three quarters or fewer – i.e. **annually returning seasonal workers are counted as continuously resident in these estimates.**

There will also likely be a small group of **people who interact very rarely with government services** listed in the data sources. Where these interactions have gaps of a year or more, these individuals **will not be counted as continuously resident** but instead **will be included within the immigration and emigration statistics.**

For people who are estimated to have been continuously resident since at least the first quarter of 2016, when the first administrative data extends back to, Employment, Social Security and Housing (ESSH) data on date of arrival was used to estimate when they arrived for their current period of residency.³ This data was available for 99% of the population at the end of the first quarter of 2016.⁴

3.4 Births and deaths

These figures are births and deaths of people estimated to be resident in Jersey using the activity data method described above. Births and deaths registration data is used, as well as dates of birth and dates of death recorded in the various other data sources. Figures produced on a different basis, such as those reported by Public Health, or the Superintendent Registrar will vary slightly. For example:

- when people estimated to be resident die abroad, these will be included, even when the death was not registered in Jersey
- when babies are born in Jersey but are not estimated to be resident due to leaving soon afterwards, these are not included, even when the birth was registered in Jersey

The number of births and deaths are counted over each 12-month period to get the annual figure. This means that annual births and deaths estimates are first available from the first quarter of 2017 using this method.

³ ESSH record people's dates of arrival and exit from the Island to create a 'movement history'. ESSH will not always be notified of movements. Comparison with the 2021 Census showed that the number of people present on Island on census day according to the movement history held in ESSH was 4% larger than the census.

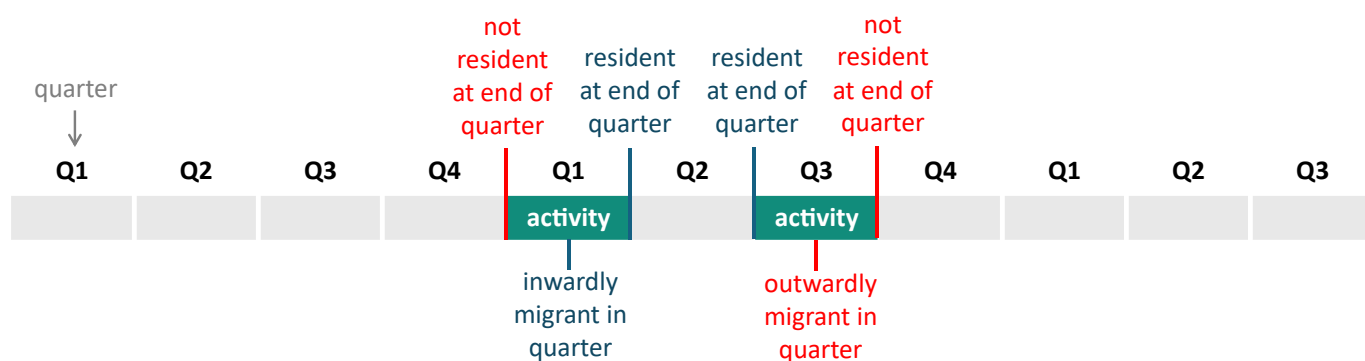
⁴ The 2021 Census, which asked Islanders what year they began their current period of residency, was used for a further 1% of the population where ESSH data was not available. For the small number of people (less than 1%) who did not have data available from these sources: those aged 18 or under at the end of the first quarter of 2016 were assumed they had been continuously resident since birth; everyone else was assumed to have become resident at some point in the last five years.

3.5 Migration

A person is counted as an immigrant in a quarter if they are estimated as resident at the end of the quarter but were not resident at the end of the previous quarter.

A person is counted as an emigrant in a quarter if they are estimated as not resident at the end of the quarter but were resident at the end of the previous quarter.

Figure 4: An example of inwards and outwards migration modelled by activity data



The number of immigrants and emigrants are counted over each 12-month period to get the annual figure. This means that annual migration estimates are first available from the first quarter of 2017 using this method.

3.6 Population characteristics

3.6.1 Age and sex

Different administrative data sources can sometimes have different dates of birth and sex for the same individual. There are various reasons for this, such as data inputting errors or omissions, or some systems being updated before others. In the case of sex, individuals may change their sex and it is possible that not all systems will hold the updated information.

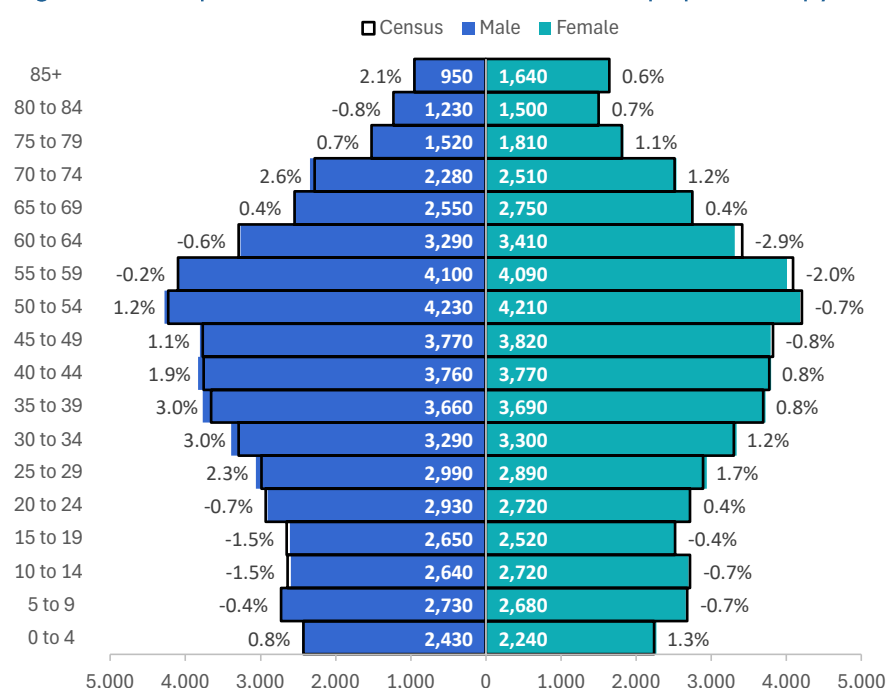
For these population estimates, the 'best' (most likely) value for these characteristics is identified from the available sources. For each person, the most frequent (modal) value is taken from the latest records in each data source. In the event of ties, the value is taken from the more reliable data source.

The various data sources may define the sex characteristic differently, i.e. for some this may be 'sex at birth' and for others this may be 'gender identity'. Only 0.2% of respondents in the 2021 Census said that their gender identity was not the same as the sex they were registered at birth (9.2% preferred not to say), and so this is unlikely to have a large impact on the population statistics by sex.

Comparison of the model with the information collected in the census shows a high consistency between 'best' age (in years) and sex with that self-reported on the census. **Out of those who were resident in both the model and census, 99% had both the same age and the same sex in both sources.**

The population estimates for each five-year age and sex group were also very similar when compared to the 2021 Census, all being within $\pm 3\%$. For males, the largest discrepancies were for 30- to 34-year-olds and 35- to 39-year-olds, where the population model overcounted by 3.0% relative to the census. For females, the largest discrepancies were for 55- to 59-year-olds and 60- to 64-year-olds, where the population model undercounted by 2.0% and 2.9%, respectively, relative to the census. A full comparison is shown in [Figure 5](#).⁵

Figure 5: Comparison of the model and census population pyramids



⁵ The initial June 2023 population model estimates were revised in November 2023. As a result, some of the figures in [Figure 5](#) are slightly different to those published in the original [Methodology and evaluation report](#).

3.6.2 Residential and employment status

Residential and employment statuses determine where people can work and live under the [Control of Housing and Work \(Jersey\) Law 2012](#). There are four categories: Entitled, Entitled for work, Licensed, and Registered. More information about residential and employment statuses is available on the [Government of Jersey website](#).

Registration cards are required by employers, landlords, and when buying property, to confirm a person's residential and employment status. Islanders request these from Employment, Social Security and Housing (ESSH), and at the point in time of the request, they will be issued with an up-to-date status which is recorded in the administrative system.

Children and young people under age 16 do not have a residential and employment status. When they reach age 16, they may not yet have an updated status held on the administrative system, because they have not yet needed to request a registration card. The default status held on the system in these cases is Registered. For these reasons, **residential and employment status is only reported for those aged 20 years and over**.

The ESSH administrative system currently holds a residential and employment status for 99% of people aged 20 years and over and who this residency estimation method counted as resident at the end of the first quarter of 2021. The residential and employment status was also self-reported in the 2021 Census. When compared, it was found that the two datasets held different statuses for 14% of the people in both datasets.

One reason for this is that ESSH cannot always automatically grant people an updated status on the system when they become eligible, because Islanders will often need to provide some evidence of continuous residency before being granted the new status.⁶ In addition, many Islanders do not request an updated status when they become eligible for a new one. For example:

- a pension age person who has lived in Jersey for 20 years, was retired and already owned a house when the Control of Housing and Work Law was introduced, might have never requested a registration card with Entitled status and would therefore be recorded on the system as Registered
- a working age person who has recently gained five years of continuous residency might not apply for Entitled for work status immediately if they are not changing their employment or leasing a new property

⁶ ESSH will usually already hold a lot of evidence of a person's residency in Jersey, such as social security contributions. However, this is not always comprehensive enough to confirm the full period and may require supporting documents such as a letter from their landlord or utility bills with a Jersey address to fill gaps in evidenced periods.

The residential and employment status in the 2021 Census dataset is self-declared, and therefore may be different to the status held in ESSH for individuals for a number of reasons such as:

- respondents were not required to provide supporting evidence as they would when applying for a registration card
- respondents may have reported their length of continuous residency differently from how it is defined in the Control of Housing and Work Law

In comparing the two data sources, it was found that there were almost three times as many residents with Registered status in the ESSH administrative source than self-declared in the 2021 Census. This was particularly seen among people aged 65 and over and working age people without employment.

To make the residential and employment status statistics more useful to users, the statuses have been adjusted to reflect probable eligibility – i.e. the statuses that would likely be granted if everyone requested an updated status at each point in time. In other words, the statuses reported here most closely reflect the practical situation for people if they wanted to change jobs or accommodation.

A number of steps were followed to achieve this, for people not on temporary work permits:

1. for people that had been continuously resident for 10 years or more in the residency estimation, Entitled status was assigned
2. for people with Registered status in the administrative data, who were continuously resident for between five and nine years in the residency estimation, Entitled for work status was assigned

All other people were assigned the status given in the administrative data. The adjusted statuses may not reflect reality for every individual (for example, if someone comes to Jersey regularly for a summer season for five consecutive years or more, they will be counted as continuously resident in the population model. Unless they were returning on a temporary work permit, their status would be adjusted to Entitled for work after five years of regular seasonal residency).⁷ The effect of this is estimated to be relatively small. At a population level, these adjustments make the reported statuses align more closely with if everyone were to request a new registration card at each point in time (for those aged 20 years and over).

The probable eligibility adjustments resulted in the populations of each residential and employment status aligning more closely with the 2021 Census, with the number of people holding different statuses in each dataset dropping from 14% to 3%.

Figure 6 compares the sizes of these populations in the 2021 Census to the administrative data estimates both with and without the adjustments.

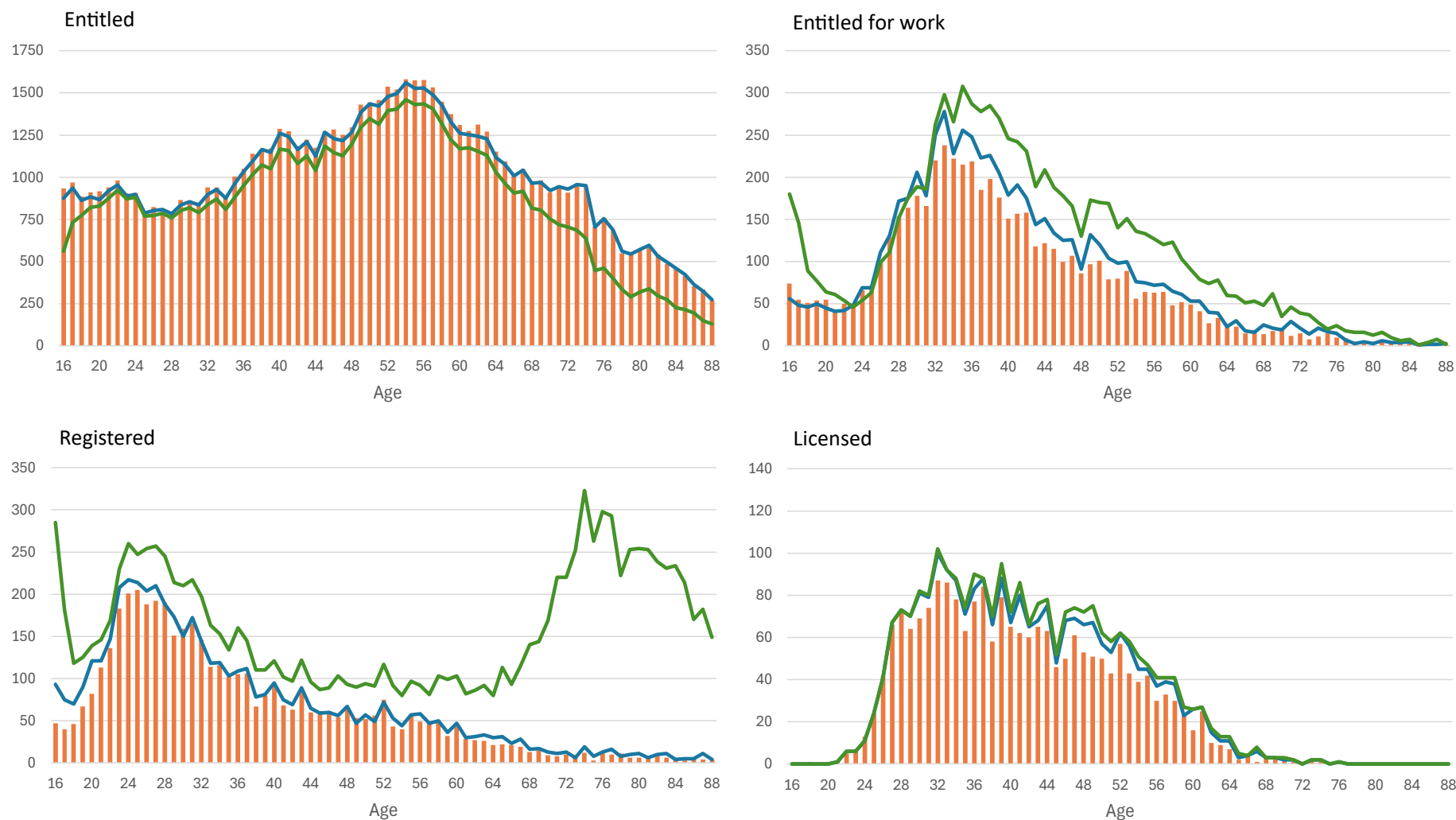
Residential and employment status statistics are reported 'experimentally', to highlight that the figures are in the testing phase and potentially have a wider degree of uncertainty. This gives an opportunity to involve potential users and stakeholders in assessing their quality and suitability, while

⁷ This is because continuous residency in the residency estimation method is not the same as defined in the [Control of Housing and Work \(Jersey\) Law 2012](#). For the purposes of issuing registration cards, the allowed length of gaps in evidenced periods is stricter, and the level of evidence required is higher than for the administrative data method.

still providing useful information, as long as that their nature is understood. You can read more in the [experimental statistics policy](#).

Figure 6: The number people in the 2021 Census and administrative data estimates in March 2021 by residential and employment status

Bars: Census **Line:** Administrative data with adjustments **Line:** Administrative data without adjustments



The vertical axes (number of people) have different scales on each chart.

3.6.3 Self-declared nationality

The current range of administrative data sources used for these statistics do not yet provide a reliable source of ethnicity or place of birth information for all population groups. However, self-declared nationality is held for most people in the Employment, Social Security and Housing (ESSH) administrative system.

ESSH collects information about the nationality of Islanders as part of its public function and statutory duties. Where proof of nationality is required or provided by a person, this will be used as part of the recording process, otherwise ESSH rely on a self-declaration of the person's nationality.

It should also be noted that:

- children born in Jersey after 2015 have not had their nationality recorded in the ESSH administration system
- the nationality data does not differentiate between those with Jersey or British nationality and therefore these nationalities are reported together
- the nationality of people holding dual citizenship is whichever the person chose to provide

Self-declared nationality is reported on for those aged 20 years and over, to align with the reporting age for residential and employment status. This data was available for 99% of people aged 20 years and over on the ESSH system (that were estimated to be resident in Jersey at the end of 2022). For the few people aged over 20 where this was not available, nationality was imputed proportionally based on other residents of similar age.

Self-declared nationality statistics are reported 'experimentally', to highlight that the figures are in the testing phase and potentially have a wider degree of uncertainty. This gives an opportunity to involve potential users and stakeholders in assessing their quality and suitability, while still providing useful information, as long as that their nature is understood. You can read more in the [experimental statistics policy](#).

3.6.4 Work permit type

People not of British or Irish nationality need immigration permission to live and work in Jersey. Work permits allow people needing immigration permission to enter or remain in Jersey for work under the [Immigration \(Work Permits\) \(Jersey\) Rules 1995](#). Information about work permits and visas is collected by the Jersey Customs and Immigration Service (JCIS) and provided to Statistics Jersey.

People with a European Union nationality did not need immigration permission to live and work in Jersey or UK prior to Brexit on 31st January 2020. Immigration permissions can also be granted by the UK Home Office. In these cases, these individuals are not included in the JCIS dataset and therefore their work permit status will not appear in the statistics.

The work permits policy is different from the [Control of Housing and Work \(Jersey\) Law 2012](#) which applies separately. More information about this policy is available on the [Government of Jersey website](#). The following is a brief overview. There are two main types of work permit.

Long-term work permits

Long-term work permits (previously known as skilled work permits) typically:

- can be issued for up to three years and can be renewed without needing to leave the Island
- allow people to accrue time towards indefinite leave to remain⁸
- are available for people employed in any industry
- allow people to bring dependants with them
- allow employers to apply for people to have Licensed status

Temporary work permits

Temporary work permits typically:

- can be issued for periods of up to nine or 12 months
- do not allow people to accrue time towards indefinite leave to remain⁸
- require people to take periods of absence from Jersey which means they cannot gain five years of continuous residency needed to obtain Entitled for work status⁹
- are available for people employed in the agriculture, construction, fishing, or hospitality industries
- do not allow people to bring dependants with them
- do not allow employers to apply for people to have Licensed status and therefore they will have Registered status as new residents in the Island

⁸ Indefinite leave to remain gives permanent immigration permission to live and work in the UK and Islands. This requires five years of continuous residency in the UK or Islands and a citizenship test. The [Control of Housing and Work \(Jersey\) Law 2012](#) will still apply separately.

⁹ This is under the definition of continuous residency to the [Control of Housing and Work \(Jersey\) Law 2012](#). This definition is different to the definition used for the population estimates in this report.

3.7 Provisional estimates

3.7.1 Timeliness

There is often a lag in administrative data between when events happen and when they are recorded and available for use. This delay occurs because data collection, checking, and processing take time.

In addition, the estimation method used to produce population statistics ideally requires activity data for 12 months following the point in time of interest. This is particularly key for groups who do not interact frequently with government services and therefore require a longer view of their activity to understand if they are likely to have left the Island, or if they are simply not interacting frequently.

While the administrative data source lag is difficult to reduce, an estimation method that produces provisional population estimates with only three months of activity data following the point of interest has been developed. These provisional estimates will have more uncertainty but a smaller lag.

3.7.2 Provisional methodology

The provisional method produces four quarters (one year) of population and migration estimates. The earlier of these four estimates are more accurate than the later ones, due to having more activity data available. For example, when the provisional estimates are from the first quarter to the fourth quarter of 2023, the first quarter estimate will be the most accurate, while the fourth quarter will be least.

As of this report, there have been two sets of four provisional quarterly estimates that have been released and subsequently revised. The fourth quarter provisional population estimate (known to be the least accurate) has an average error of ± 270 people (the mean absolute error). See section [4 Revisions](#) for more information about the error rate.

The first three months of activity data after a point in time is enough to be able to use the same set of rules as the full method for 98% of residents (on average). For the remaining people, an immigration or emigration probability is applied.¹⁰ The probabilities are calculated based on what was seen over the previous two years for people with a matching age, residential and employment status, and activity pattern.

Due to this method of estimating probabilities, the provisional methodology will be more accurate during periods where migration trends are stable and less accurate when migration trends change.

The provisional method could be applied using no activity data after the point in time of interest, by applying calculated probabilities to the whole population. This would reduce the lag further. However, evaluation of the trade-off between accuracy and timeliness indicated that waiting for the first three months of activity data significantly improved the accuracy.

Once the full 12 months of activity data is available, the provisional estimates will be revised in the subsequent release.

¹⁰ On average between 2019 and 2023, the size of the remaining group is equivalent to about 6% of the population size (roughly 6,000 people). Out of this group, one third (roughly 2,000 people) was estimated to be resident.

4 Revisions

The population and migration estimates are being continuously improved through additional data, updates to the linking of datasets, and other incremental improvements. To provide a consistent experience for users, historic estimates will only be updated when this is beneficial: i.e. when there is a change that has practical significance.

As described in section 3.7.2, provisional estimates for the end of a particular year (e.g. December 2024) can be released approximately nine months later (e.g. September 2025). At this point in time, full activity data will have been received for the year prior to the provisional year (in this example 2023), and estimates for that prior year are revised. Such provisional estimates and their subsequent revisions, in this report and previous reports, are shown in [Table 3](#).

Revisions to the population estimates may not equal the sum of the revisions to net migration and natural change because the population revisions include an administrative adjustment (see [4.1](#) for more information).

Table 3: The provisional estimates in publications and the subsequently revised values

Year	Type	Publication date	Population	Net migration	Natural change	Admin adjustment
2022	Provisional	24 November 2023	103,150	+60	-90	-
	Revised	25 September 2024	103,300	+200	-110	-
	<i>Revision</i>	-	<i>+150</i>	<i>+140</i>	<i>-20</i>	<i>+10</i>
2023	Provisional	25 September 2024	103,650	+470	-110	-
	Revised	24 September 2025	104,030	+730	-120	-
	<i>Revision</i>	-	<i>+380</i>	<i>+260</i>	<i>-10</i>	<i>+110</i>

A summary of the extent of the revisions is shown in [Table 4](#). It should be noted that there have only been two provisional estimates that have subsequently been revised and so the typical error rate of these estimates is not yet known with great accuracy. The evaluation of these provisional estimates is a work in progress.

Table 4: A summary of the provisional estimate revisions from the 2022 and 2023 reports

Type	Population	Net migration	Natural change
Average revision	±270	±200	±20
Largest revision	+380	+260	-20

Average revision is calculated as the mean of the absolute values of the revisions.

4.1 Administrative adjustments

Once full activity data has been received relating to a particular year and the estimates have been revised, it is rare that further data would cause material changes to the estimates. Therefore to provide a consistent back series, revised estimates are generally not updated (see sections [4.3.2](#) and [4.3.3](#) for the exceptions).

However, additional data and/or improved matching can cause a small number of individual records to have updated statuses during the revised estimate years. In order to maintain consistency in the published revised estimates of population and migration, while also using the updated statuses of those records going forwards, an 'administrative adjustment' is applied to the year-on-year population change.

The 2023 revised population estimate includes an administrative adjustment of +110. This is, in part, due to the inclusion of dog licences data which was able to be integrated into the system during 2025. As a result, a small number of people have been identified as resident in both 2023 and 2022 that were not identified in the previous report. Since this increase is not due to migration or natural change, this is counted as an administrative adjustment.

4.2 Revisions in population and migration reports

Population and migration reports typically include revisions of the provisional statistics from the previous years' release. These are planned revisions of provisional estimates, as outlined in section [4.3.1](#). These revisions are shown in [Table 3](#) on the previous page.

4.3 Categories of revisions

4.3.1 Revisions of provisional estimates

Provisional estimates are published for the latest year in each release. Provisional estimates are sufficiently accurate to be helpful for users but have a wider degree of uncertainty due to having a limited set of available activity data (see [3.7.2 Provisional methodology](#)). These will always be revised in a future publication once the full set of activity data becomes available.

4.3.2 Revisions due to new data sources or improved methods

Revisions to historic population and migration estimates may be necessary when new data sources are acquired, or methods are improved, and this results in changes to historic estimates that have practical significance to users.

[Experimental statistics](#) are in the testing phase and potentially have a wider degree of uncertainty. These statistics are more likely to be revised in future for these reasons, and this will be decided on a case-by-case basis. It will be clearly stated in future reports if there are any revisions to previously released experimental statistics.

4.3.3 Revisions due to errors

Revisions may also be necessary due to errors made by Statistics Jersey or data suppliers. Any such revisions will be clearly stated in future reports.