

## Mapping Trends in the Auckland Region

# Population density

## Commentary

### Overview

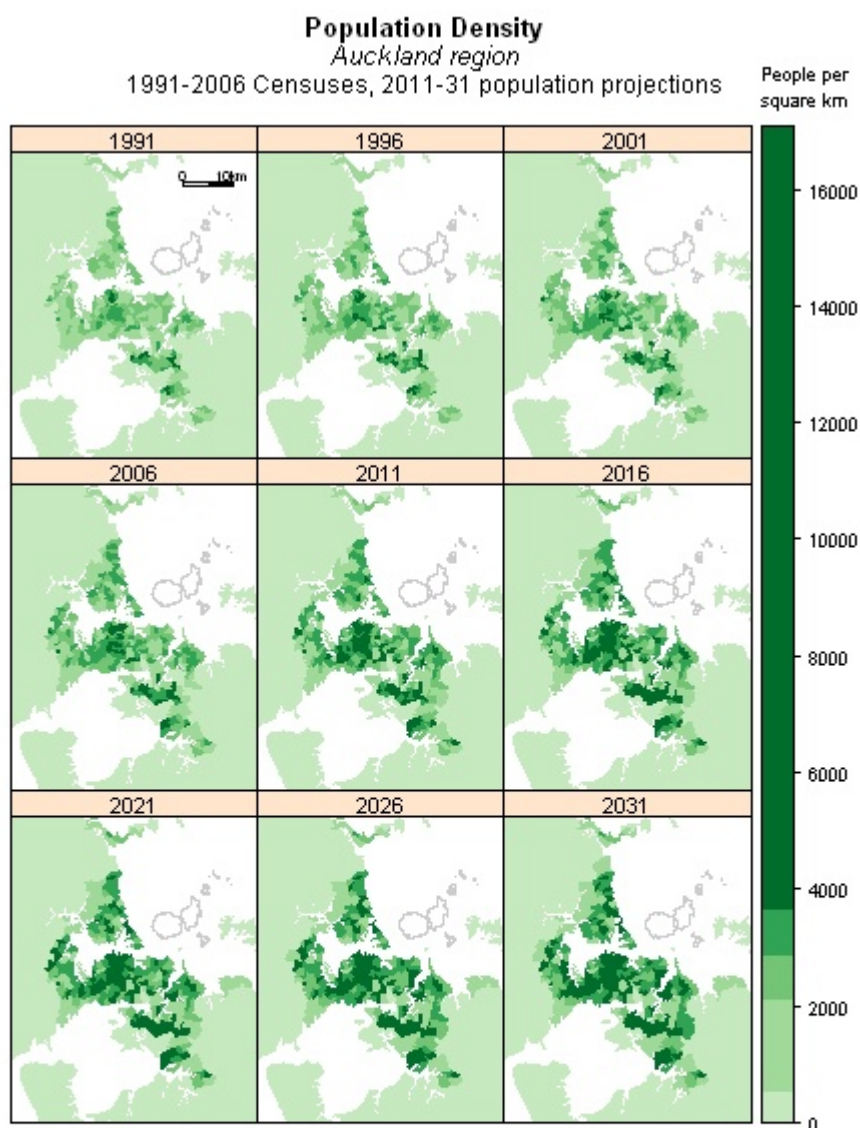
Population density has increased rapidly in parts of central Auckland, and this is likely to continue. If the Auckland region is to accommodate almost two million people by 2031, some residential suburbs will need to have population densities similar to those central Auckland has at present.

### Mapping population density

Figure 4.1 shows the population density for each area unit of the Auckland region. Population density is the number of usual residents per square kilometre. Darker shades of green indicate higher population density.

These maps pull together information about the historical and projected populations. The maps for 2011–31 are based on current population projections (2006-base medium series) and show one possible future. They illustrate how the population density could change if the Auckland region attained a population of 1.93 million by 2031.

Figure 4.1



**Note:** More information about interpreting the maps is in the [Interpreting the maps](#) chapter.



[Downloadable version of figure 4.1 \(PDF, 6.8MB\)](#)

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## **Population density 1991–2006**

The parts of the Auckland region with the highest population density are in Manukau city and Auckland city, and in particular central Auckland. In 1991 there were four area units with a population density of more than 4,000 people per square kilometre. By 2006 there were 26 area units with a population density this high. The Auckland CBD has seen the largest increase in population density, due to the population more than doubling every five years between 1991 and 2006.

## **Population density 2011–31**

Population projections indicate that the Auckland region's population will grow substantially through to 2031. These projections take into account the Metropolitan Urban Limit and assume that the urban area boundary in Auckland region remains unchanged during the projection period. As the population increases, especially within the urban area, so does population density.

The medium-variant projections are one possible scenario of where people will live and what the region might look like. These projections show that by 2031 there could be more than 110 area units having a population density greater than 4,000 people per square kilometre. The Auckland CBD will continue to have the highest population density – increasing from 4,600 people per square kilometre in 2006 to possibly over 13,300 people per square kilometre by 2031.

In addition, higher density would spread to other parts of Auckland and Manukau cities, as seen by the increasing number of darker areas on the map. The population density in some western parts of Manukau city in 2031 would be the same density as in parts of the Auckland CBD in 2006.

The darker areas on the map also indicate there could be parts of North Shore and Waitakere cities having major population growth, and hence significant increases in their population density in the future.

Population densities in Rodney and Franklin districts have generally been low and stable over time, and are likely to remain low in these areas.

## **Differences between high density areas**

High density areas in Auckland city are different from those in Manukau city. The number of people living in multi-unit dwellings in the Auckland CBD more than quadrupled between 1991 and 2001 (Statistics NZ, 2005). A much higher proportion of people living in the Auckland CBD were living in one-person households (16 percent) than for the Auckland region as a whole (6 percent). In contrast, Manukau city has a higher proportion of households made up of one or more families than do other territorial authorities in the Auckland region (Statistics NZ, 2006).

## Implications

A number of implications arise from increasing population density in the Auckland region:

- A compact settlement plan is part of the goals of both Auckland's Regional Growth Strategy and the Long Term Sustainability Framework, as discussed in the evaluation of the Regional Growth Strategy (Regional Growth Forum, 2007). Higher population density, in the identified growth centres, will help maintain the green zones around the region. The Regional Growth Forum's growth concept aims to protect and enhance environmental values in areas that are already urbanised (Regional Growth Forum, 1999).
- An increase in population density, especially over a short period of time, affects the character of an area. For example, detached dwellings may be replaced by apartments to accommodate the larger number of people living in an area.
- Higher density living makes the expansion of services such as public transport more feasible. However, services such as waste management may be more difficult with a denser population.
- Grimes and Liang (2007) find that there is a positive association between high population density and land value. Higher land values are good for property owners, but not for prospective buyers.

## Related chapters

- [Commuting](#)
- [Households and families](#)
- [Housing](#)
- [Population growth](#)

## Further information

This page is part of [Mapping Trends in the Auckland Region](#), available on [www.stats.govt.nz](http://www.stats.govt.nz).

# Notes and sources

## Definitions

Population density is the number of usual residents per square kilometre. It is calculated by dividing the number of residents by the total land area, for each area unit.

## Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

The projected data comes from the 2006-base population projections released in December 2007. Projections are based on assumptions about future fertility, mortality, and migration. There are three alternative series produced (low, medium, and high) using different assumptions. The population projections have as a base the estimated resident population at 30 June 2006, and extend to 2031. More information about population projections is on the Subnational Population Projections page, available on [www.stats.govt.nz](http://www.stats.govt.nz).

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries, available on [www.stats.govt.nz](http://www.stats.govt.nz).

The Auckland region is one of 16 regions, which are aggregations of area units governed by Regional Councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

## References

Grimes, A & Liang, Y (2007). Spatial Determinants of Land Prices in Auckland: Does the Metropolitan Urban Limit Have an Effect? Motu Working Paper 07-09.

Regional Growth Forum (1999). Auckland Regional Growth Strategy: 2050 Auckland Regional Council.

Regional Growth Forum (2007). Auckland's growth: an evaluation of the Regional Growth Strategy Auckland Regional Council.

Statistics New Zealand (2005). Downtown Dwellers 2005: New Zealand's CBD Residents.

Statistics New Zealand (2006). Households – Territorial Authority by Household Composition – Households in Private Occupied Dwellings – 1996–2006 table.