

Where should we build?

Housing supply and the construction outlook in regions of New Zealand

- **We have assessed housing supply in each region of New Zealand except Canterbury.**
- **Auckland has a housing shortage, and is building far too few houses to accommodate population growth.**
- **There is tentative evidence of underbuilding in Wellington, Hamilton and Palmerston North.**
- **There is no compelling evidence of underbuilding in any other region or city.**
- **All this suggests that Auckland could easily experience a doubling in dwelling construction over the next few years. Construction might pick up a little in Wellington, Hamilton and Palmerston North. Elsewhere, we see little reason to expect any change in the quantum of building activity.**

There has been much discussion about housing shortages and the lack of new building in recent years. This bulletin takes a close look at the state of housing supply in each region of New Zealand except Canterbury (where earthquakes have brought about an obvious shortage of housing). The idea is to assess whether enough houses are being built in each region, and to give a sense of the outlook for residential construction in each region.

We found that Auckland has a shortage of housing and is building far too few houses to keep pace with forecast population growth. We conclude that Auckland will experience a strong lift in residential construction activity over coming years – rising house prices, rising building consent numbers, improving economic confidence, and anecdotes from industry all suggest this process has already begun. But the annual rate of new dwelling construction would have to double before we could say Auckland is building enough houses to keep pace with population growth.

Meanwhile, there is little reason to expect much change in building activity elsewhere in New Zealand. There is tentative evidence to suggest that Wellington, Hamilton and Palmerston North might need a modest lift in building activity to keep pace with population growth. Conversely, tentative evidence suggests Nelson might be building too many houses relative to population growth. Everywhere else, the current level of building activity is sufficient, and there is little reason to expect a change in the rate of construction activity.

The analysis is based on Westpac's People Per House measure, which we developed in 2008 to assess housing supply across New Zealand as a whole. The Canterbury earthquakes

complicated that nationwide analysis, so we have applied it on a regional basis.

The idea behind the People Per House (PPH) measure is simple. In normal times, the number of people per house should be trending slowly downwards as families shrink, the population ages, and society get wealthier. Abnormal changes in PPH may indicate that the prevailing rate of construction activity is unsustainable. For example, if PPH is rising, this indicates that building activity is slower than population growth, and suggests that at some point in the future building activity will increase (or population growth will slow).

For each region, we have calculated the number of people per house over history.¹ We have then forecast each region's population out to 2015,² and assessed whether the current rate of construction activity is sufficient to keep pace with that forecast of population growth. Specifically, we calculate the rate of change in PPH that would result if the annual rate of building consent issuance remained unchanged at 2012 levels, and the population grew in line with forecast. The "normal" rate of change in PPH is defined as anything between -0.002 per annum and -0.012 per annum (this is the range of 10-year averages observed across New Zealand as a whole over the past three decades).

The results for each region are charted on pages 3 and 4, and are summarised below.

We also applied the analysis to a range of small cities that sit within larger regions, to check if rural areas were skewing the results. The lower population level in these cities makes the results less reliable – we advise drawing only tentative conclusions from these results, which are charted on page 5.

The outright number of people per house currently ranges from 2.3 in Otago to 3 in Auckland. Urban areas tend to have a higher number of people per house than rural areas. It is difficult to draw strong conclusions from regional differences in the level of people per house – these might reflect the regional population's age structure, ethnic composition, level of wealth, or simply the prevalence of holiday homes. We prefer to look at the rate of change in PPH.

1. Population estimates are sourced from Statistics New Zealand. The number of private dwellings (occupied and unoccupied) is available in the 1996, 2001, and 2006 censuses. Inter-census and post-2006 regional dwelling estimates were calculated using regional building consents data. The calculation method was the same as Statistics New Zealand uses to calculate nationwide dwelling estimates, available here: <http://www2.stats.govt.nz/domino/external/omni/omni.nsf/outputs/Dwelling+and+Household+Estimates>

2. Population forecasts were based on Statistics New Zealand's "medium projection" from the October 2012 update of the subnational population projections, with an adjustment to reflect Westpac's own forecast of future net migration (which is slightly higher than Statistics New Zealand's assumption).

Auckland Region

In Auckland the number of people per house has been rising in recent years, and is significantly higher now than it was in 1996. This suggests that repeated episodes of underbuilding have led to a built-up shortage of houses in Auckland. If construction activity remains at 2012 levels, the number of people per house in Auckland will continue to rise sharply. This is not sustainable. Either construction activity will go up, population growth will slow, or people get awfully cosy with one another.

The Auckland council issued 4,582 consents for new dwellings in 2012. We calculate that to keep pace with population growth and get the number of people per house gently trending downwards, that number would have to rise to 9,500 – a 107% increase. Even then, it would take many years to unwind the shortage of houses that has built up.

Our conclusion from this is that the rate of Auckland house building will indeed go up in the coming years.

A sceptic might argue that Auckland is incapable of doubling the rate of dwelling construction due to the ever-present tangle of red tape and expense associated with property development.

But we would point out that 12,277 consents for new dwellings were issued in Auckland in 2003, so the industry is clearly capable of such activity levels.

We would further point out that the lack of building in recent years has prompted both market and regulatory responses. The market response has been higher house prices, which have incentivised building activity. For the Government's part, it recently announced a range of regulatory changes aimed at boosting construction.³ If the industry remains stagnant, both the market and regulatory responses will intensify.

Wellington Region

Wellington has a less clear-cut case of underbuilding. Actually, construction activity in 2012 was sufficient to keep pace with population growth – people per house fell that year. But if population growth accelerates in line with forecast, construction activity would have to increase by 32% to keep pace.

Other regions

All regions except Auckland, Wellington and Canterbury are currently building sufficient dwellings to keep up with forecast population growth. There is no compelling reason to expect a change in the rate of dwelling construction in any of these regions. This is quite a significant conclusion. Building activity in these regions is low compared to the mid-2000s. Yet today's low level of activity may be sufficient. Builders in these regions should not necessarily await a return to the activity levels of the mid-2000s.

Hamilton and Palmerston North

We also applied the analysis to a range of smaller cities that sit within larger regions. Even though Waikato and Manawatu regions showed no evidence of underbuilding, the smaller-city analysis did suggest that Hamilton and Palmerston North

are underbuilding relative to forecast population growth. This suggesting there could be an increase in building activity in these cities in the future.

In Hamilton's case, a 10% increase in building activity would be sufficient to accommodate forecast population growth.

Palmerston North's numbers are rather more extreme – a 100% increase in building activity, relative to 2012 level, would be required to accommodate forecast population growth.

However, we caution against drawing strong conclusions from the small-city analysis, as it is inherently more difficult to accurately forecast population growth for smaller centres.

Nelson City

The smaller-city analysis suggests that Nelson city is building slightly too many houses relative to forecast population growth – suggesting there could be a drop in building activity in the future. Again, we caution against drawing strong conclusions from the small-city analysis, as it is inherently more difficult to accurately forecast population growth for smaller centres.

Dunedin

Dunedin is an interesting case. PPH has been rising in recent years, and now stands at the same level as it was in the late-1990s – suggesting a shortage of housing has built up.

However, it appears that Dunedin's residential construction industry has already ramped up sufficiently to rectify the shortage over time. Dunedin City issued 379 consents for new dwellings in 2012, which is a 60% increase over the number issued in 2011.

Tauranga and Napier/Hastings

Tauranga and Napier/Hastings are currently building sufficient dwellings to match forecast population growth. PPH has been falling steady for some time in both urban areas.

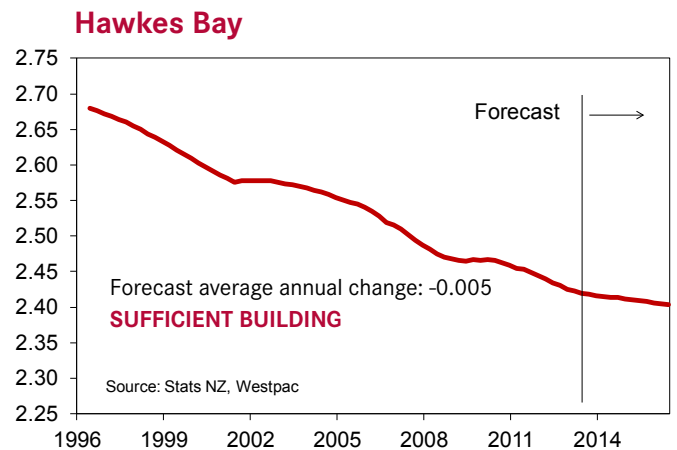
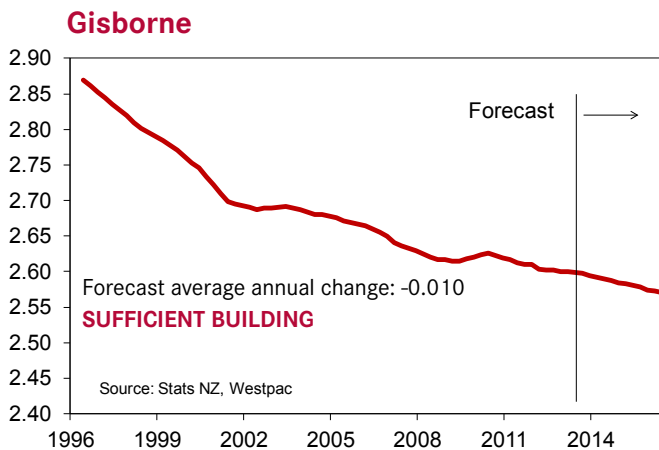
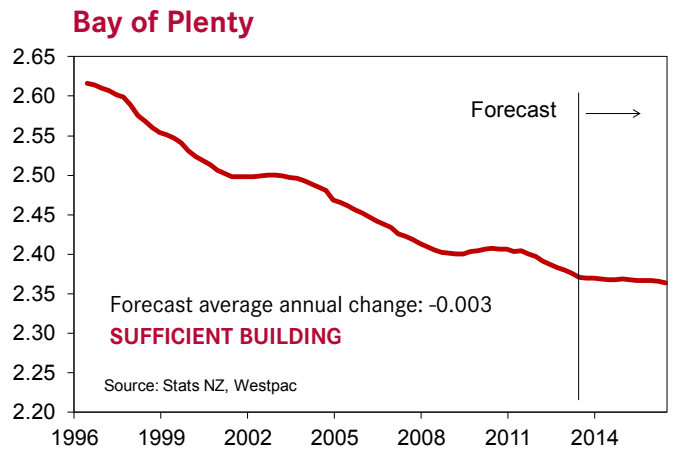
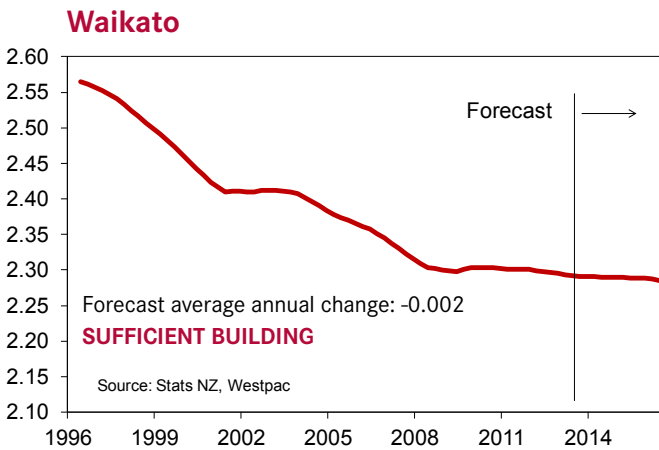
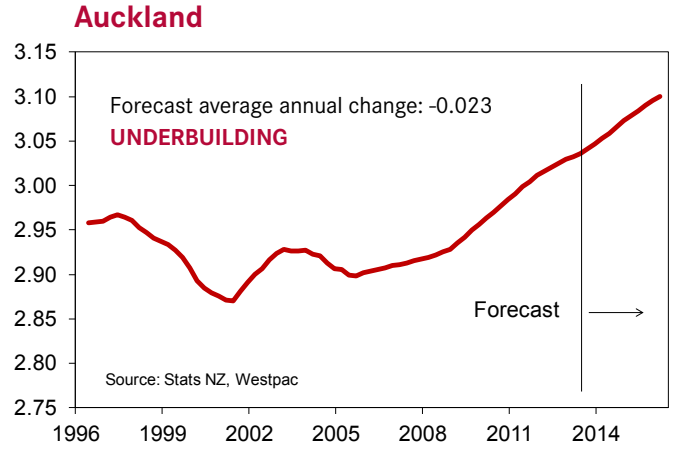
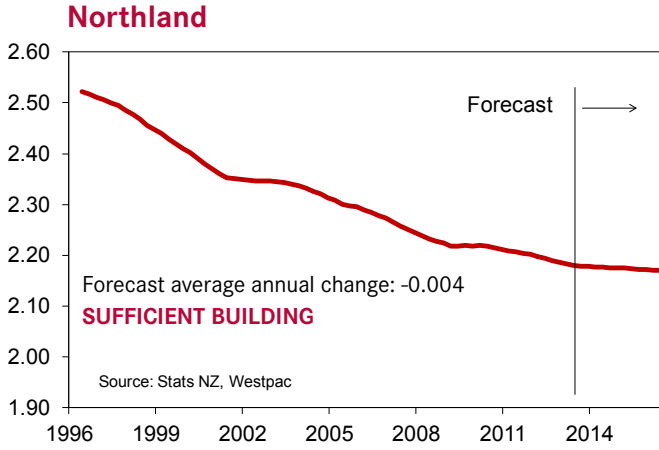
Dominick Stephens

Chief Economist

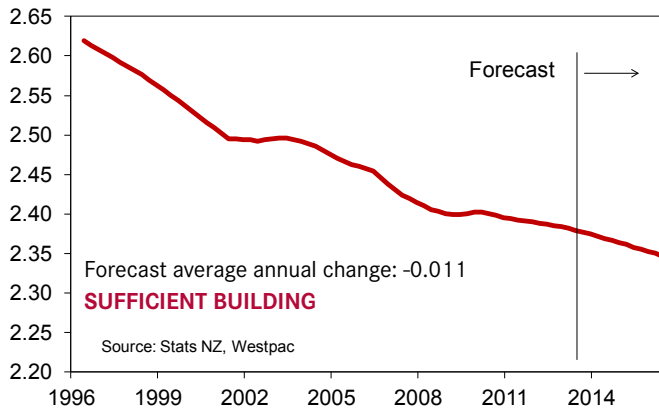
3. <http://beehive.govt.nz/release/govt-responds-housing-affordability-report>

People per house, regions of New Zealand

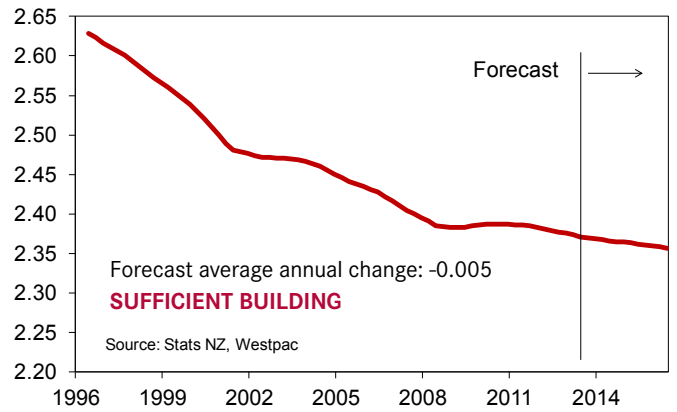
Forecasts assume construction activity remains at 2012 levels.



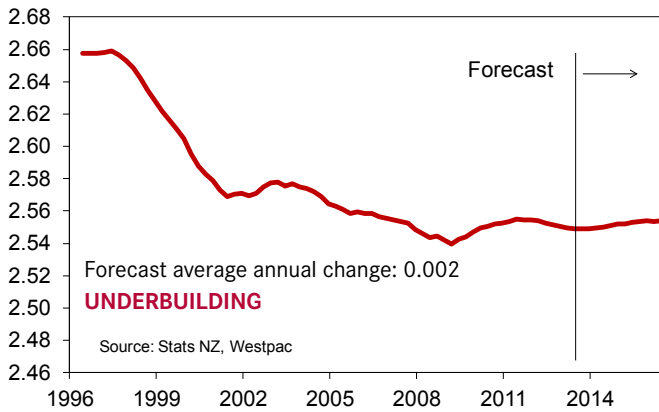
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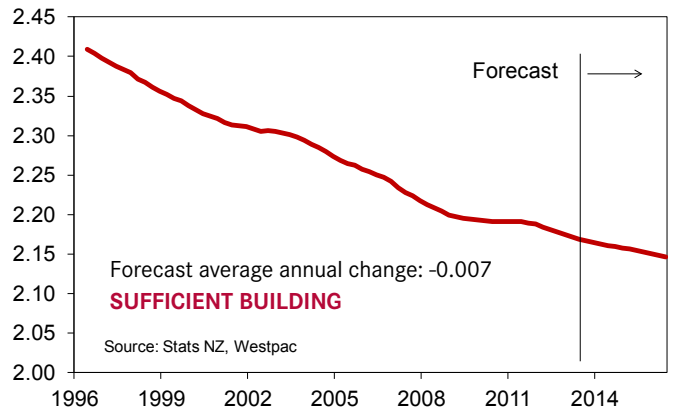
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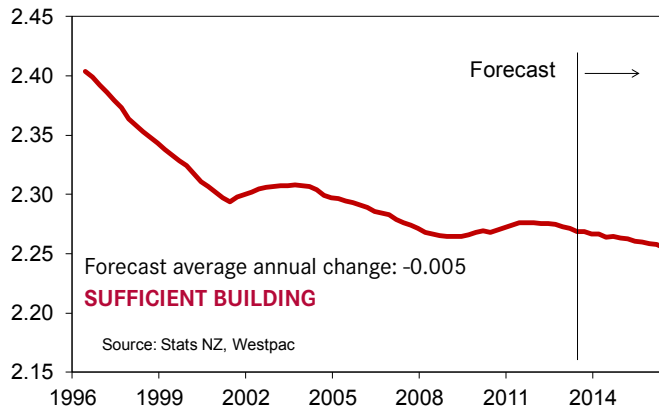
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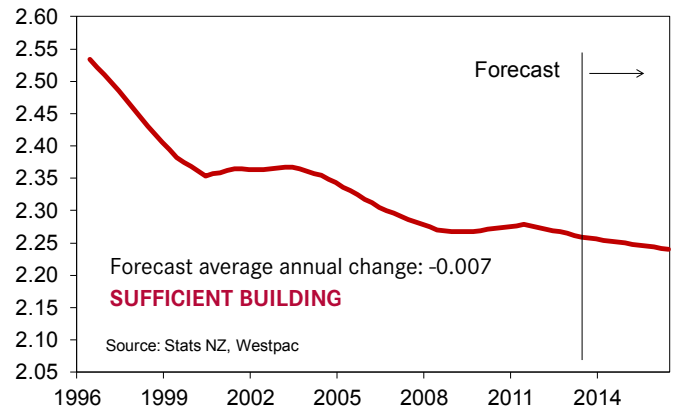
Nelson/Tasman/Marlborough/West Coast



Otago

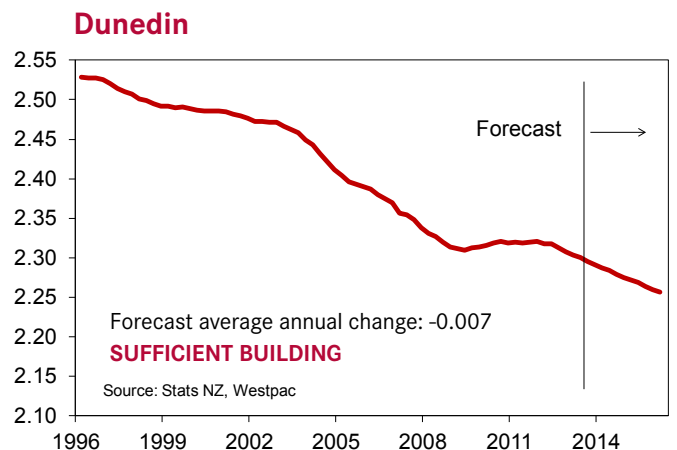
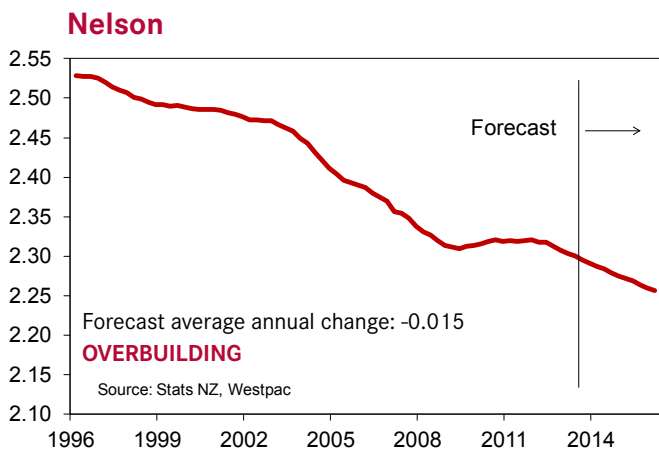
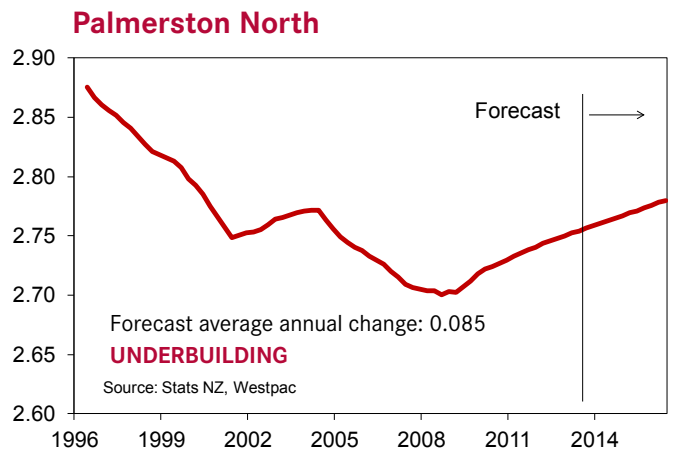
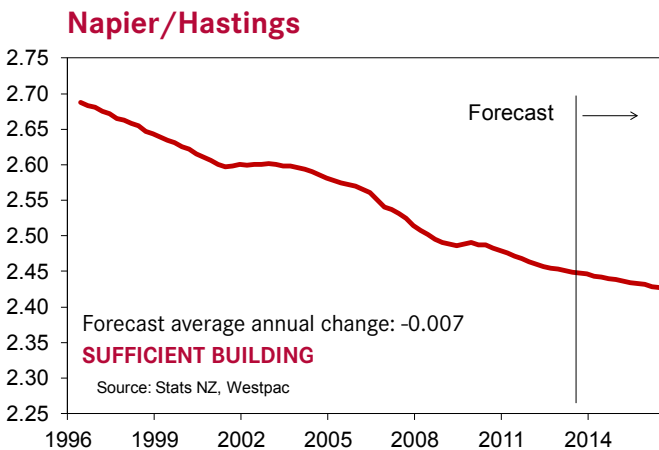
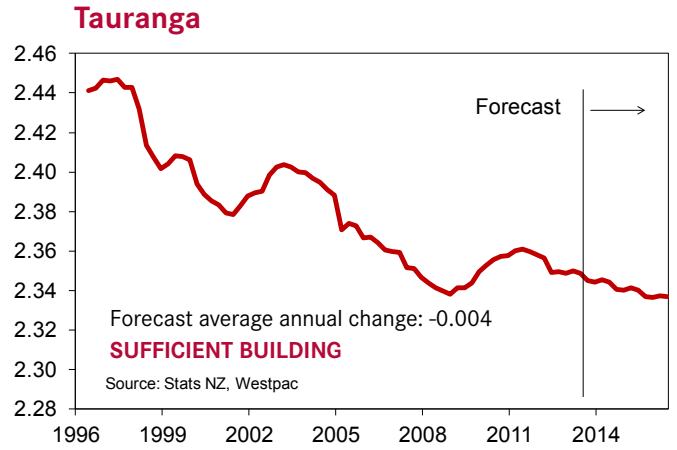
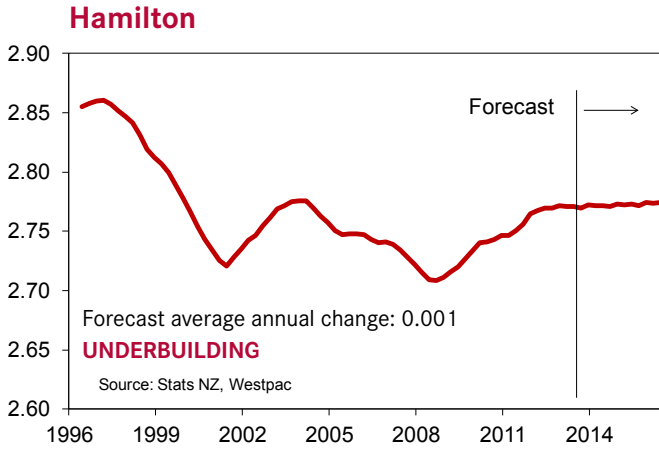


Southland



People per house, regions of New Zealand

Forecasts assume construction activity remains at 2012 levels.



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