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The Economic Impact of Immigration on Housing in New Zealand 1991 - 2016

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1 Executive Summary

This paper reports on our study of the relationships between immigration and the composition of housing demand. The study is a component project within the wider Economic Impacts of Immigration (EII) project that will undertake computable general equilibrium (CGE) economy-wide modelling of various immigration scenarios.

This study assesses available Census data from 1991 to 2006 and establishes the housing behaviour of identified groups of the population. It projects these behaviours onto two future migration scenarios over the 2006 to 2016 period, providing indications of two pictures of housing demand in 2016.

The paper discusses the required supply response to these 2016 housing demand pictures and implications of an imbalance between demand and the supply response. However, a full reconciliation of the effects of demand and supply changes is not attempted here as this properly awaits the economy-wide CGE modelling exercise. Rather, this paper outlines potential scenarios, their consequent impact on the quantum and nature of housing demand, and the issues arising from this assessment.

1.1 Key trends, issues and policy implications

Key trends and issues outlined in this sub-section follow.

- The housing behaviour of migrant households is more linked to household status (single/couple) rather than country of birth, i.e. immigrant couples act more like other couple households than single households from their own country of birth.
- Migrants housing behaviours change as they spend more time in New Zealand. After 15 years here, their housing behaviour becomes very similar to New Zealand-born households.
- The capacity of the building industry to supply appears adequate to meet the absolute level of demand for housing**,** even in a high immigration scenario.
- However, the ability of supply to adjust to the changing composition (household status, country of birth and tenure and dwelling types) of demand for housing is the more central issue and relevant to policy makers.

1.1.1 The immigration experience, 1991 to 2006

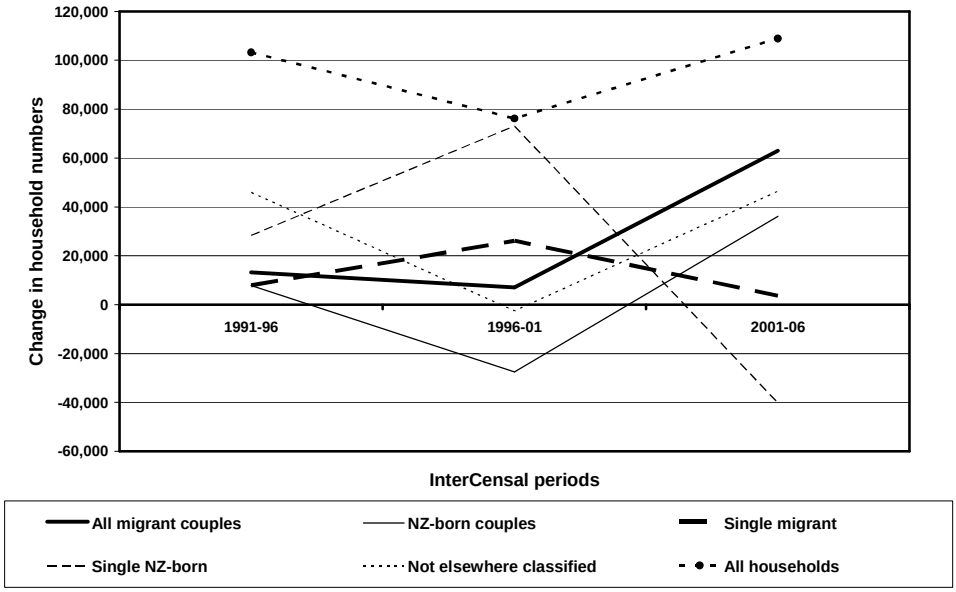
Two broad themes emerge from our assessment of the 1991 to 2006 Census data. First, housing behaviour is linked more to the single / couple status of a household than to migrant / NZ-born status. In other words, housing tenure, dwelling type and the number of occupants per household of couples from various birthplaces, including New Zealand, has more in common with couples generally, than with single households from the same birthplace. And housing behaviour among singles with different countries of birth has more in common with singles households generally, than with couples from the same birthplace.

Second, the housing behaviour of migrants differs according to time spent in New Zealand. In general, the housing behaviour of migrants who have been in New Zealand for more than 15 years becomes similar to that of NZ-born residents. There is some variation across birthplaces in terms of how quickly this adjustment in behaviour occurs, and in just how similar housing behaviour is after 15 years.

From an overall viewpoint as to what has been the impact of immigration between 1991 and 2006 on housing demand, the impact is by no means clear. The intention was to identify trends in this impact, i.e. the general tendency or direction of movement of the impact through this period. In fact taking the 5-year periods between each Census, there was not a wild swing in the net households created in each period. There was about 100,000 in 1991 to 1996; about 80,000 in 1996 to 2001; and about 110,000 households in 2001 to 2006.

There were movements in numbers of migrant couples households, and migrant singles households, and these movements to some extent compensated each other. There were much wider swings in numbers of NZ-born households especially those of single NZ-born. Again they were to some extent compensated by changes in the NZ-born couples. These changes are apparent in Figure 1.1.

Figure 1.1 Changes in household types 1991 to 2006



These swings in NZ-born net household formation presumably reflect swings in formation of couples, perhaps reflecting income opportunities and levels. They also presumably reflect changes in emigration by NZ-born. The scope of this research specifically excluded impacts of emigration on housing, and so these aspects are not researched in this report.

The main conclusion is there has not been a steady trend, or general tendency or direction of movement in terms of the impact immigration has had on the demand for housing over the period 1991 to 2006. There have been significant changes in housing behaviour, with the number of households increasing or decreasing in each household type, but there has been no readily-discernible pattern to these changes. Therefore in generating scenarios we take most cognisance of changes in the most recent period.

1.1.2 The 2006 to 2016 scenarios

Given the focus of this project and the key trends identified above, we examine the impact of future demand by constructing consistent, credible scenarios of immigration. These scenarios use the coefficients of household creation from the historical data to indicate future housing demand. We use this technique to explore the demand for housing for two scenarios over the 2006 to 2016 period. The scenarios include projections not just of the level of migration and the number of households, but also their composition. That is, we specify birthplace, single / couple status as well as tenure and dwelling types. We project this composition on the basis of parameter values experienced over the past. In particular:

- Scenario I uses parameter values close to those experienced over the 1991 to 2001 period, i.e. a relatively low immigration period.

- Scenario II uses parameter values close to those experienced over the 2001 to 2006 inter-Census period, i.e. a relatively high immigration period.

Our projections indicate net household formation over the 10 year period of just under 147,900 in scenario I, and 235,900 in scenario II. Thus, the required supply response in the higher immigration scenario is an annual average of 23,600 new housing units. This is below the annual average for new residential building consents issued over the past 10 years of 25,400, while the dwelling supply in the last five years has averaged 27,400 per annum.

1.1.3 Implications of scenarios

In terms of the ability of the building industry to construct dwellings, it does not appear that even high immigration will lift dwelling demand to a level greater than the building industry's capacity to supply. However, we argue it is more likely to be the composition, rather than the level, of the supply response that requires scrutiny.

In particular, in both of these scenarios the growing importance of the private rental market is central. The ability to meet the composition of the demand for housing rests on a large expansion in dwellings in the private rental market. As to dwelling type, while the relatively faster growth in flats or apartments is noticeable, the importance of the house category should not be overlooked. Combining this observation with those for tenure, it is clear that the required growth in private rental market dwellings will need to cater for the demand for house and flat/apartment dwelling types.

If the private rental market does not expand to meet this housing demand, other adjustments will occur. There could be a shift towards rates of home ownership higher than those projected in the scenarios. Or, there could be a larger expansion in public sector rental housing supplied. The relative prices of different housing types are also a factor in this adjustment process.

There is a further supply question as to whether there will be sufficient building sites (or sections) for this number of dwellings to be supplied. This also raises the question as to whether regulation and planning requirements will limit or facilitate increases in urban density. If (or where) such limitations are present, the burden of the necessary adjustment is more likely to fall on changes in relative prices.

1.1.4 The CGE modelling role

As noted earlier, investigation of the economic effects of a demand and supply imbalance should properly be addressed in an economy-wide modelling framework.

Where the magnitude and type of change in housing demand in a particular scenario is not appropriately met by the supply response then some other change, or changes, must occur. Some behaviour may change (and could be reflected in assumptions as to scenario parameters) that will alter the composition of demand.

But such changes are also likely to have 'feedback' effects on the level and composition of the original migration scenario itself. Capturing these 'feedback' effects, along with consequences for other sectors of the economy, requires a wider general equilibrium economic impact model. This is a role for the EII project. The role of this paper in relation to CGE modelling is to provide core parameters and data, as well as contextual information and associated insights.

1.2 Summary of New Zealand's past experience

Migration surged over the 2001 to 2006 period. This has considerably increased the proportion of migrant households that have resided in New Zealand fewer than five years. More than a quarter (27.7%) of migrant households across the country in 2006 arrived in the last five years. This is a noticeably higher proportion than the comparable 22.4% figure recorded for 2001.

The proportion is particularly relevant when considering housing implications. In particular, we note that the housing behaviour of recent migrant households differ from NZ-born household groups. There is also a marked change for many behaviour measures for migrant groups residing in New Zealand for more than five years. Indeed, for migrant groups that have 15 or more years residence in New Zealand, their behaviours have either moved close to the comparable NZ-born measure, or, in some cases, 'overtaken' such measures. Selected examples are provided in the table below.

Table 1.1 Tenure and dwelling type ratios for selected household types, 2006

	Living in			
Household type	**Own home**	**Private rental**	**House**	**Single-storey flat**
NZ-born couples	77.1	20.0	90.6	4.5
NZ-born and migrant couples	77.0	20.2	87.3	5.4
Migrant couples	62.4	27.3	78.0	10.5
Migrant couple with 15 or more years in NZ	77.0	13.3	86.2	6.7
NZ-born single	51.5	34.1	69.7	16.8
Single migrant	48.9	32.9	61.3	18.8
Single migrant with 15 or more years in NZ	59.6	24.5	65.9	19.5

Note that proportions calculated by this study may differ slightly from those provided in Statistics New Zealand publications. For example, we calculate the proportion of the population residing in their own home as 62.4% in 2006, although Statistics New Zealand publications place this at 66.9%. These differences result from a combination of rounding and confidentiality processes applied by Statistics New Zealand before they supply the requested datasets. While not ideal, we judged these discrepancies to be minor and do not bias our analyses or conclusions.

1.2.1 Migrants and housing tenure

Home ownership rates vary with single/couple status. A higher proportion of couples live in their own houses. Singles are more likely to rent, with the majority renting from the private sector. This may be because singles require greater flexibility or face budget constraints.

The dwelling tenure of migrant households varies depending on their length of residence in New Zealand. For example, migrant couples who have lived less than five years in New Zealand are more likely to rent, than migrant couples who have lived more than 15 years in this country. Home ownership rates among these earlier migrants are similar to those for NZ-born households, at 77.0% in 2006.

In Auckland, overall home ownership rates are lower than for the country as a whole (58.1% compared with 62.7%). While most people still live in their own homes, the proportion renting from the private sector has increased in recent years. This is particularly so among the migrant couple and single migrant household categories.

The age composition of migrants may play a role in differentiating Auckland's migrants' behaviour from those in the rest of New Zealand. Many are students, coming to Auckland or New Zealand for a short time. For these residents, purchasing a home may not be a practical option. This is reflected in the proportions renting from private landlords. The Auckland-wide average of 27.4% renting from private landlords in 2006 hides a lot of sub-group diversity. For example, rental rates captures a range from 34.1% for single households (both migrant and NZ-born) to 20.6% for NZ-born couple households.

But investigation of the relationship between age and housing tenure proved to be beyond the scope of this project. In particular, issues in relating an individual characteristic (age) to households, allied with the number of potential cross-tabulations requiring analysis, put this topic well beyond the resources available to this project. However, we judged household income to be a factor that could not be ignored in this project.

1.2.2 Migrants, housing tenure and income

Establishing fully-specified formal relationships explaining differences in the rates of home ownership was outside the scope of this project. In addition, the absence of explanatory variables other than household income further limited the extent to which formal regression analysis could be pursued.

Nevertheless, limited analysis confirmed the importance of the single versus couple status of the household in determining home ownership rates. Indeed, when including both an income variable and a single/couple 'dummy' identifier in estimated equations for home ownership, the income variable became insignificant, while the single/couple dummy remained significant.[1]

The analysis supported the observation that migrants who have less than five years in New Zealand clearly have a lower home ownership rate. However, migrants that have resided in New Zealand between five and 15 years do not have significantly different rates of home ownership than other population groups. And migrants that have resided in New Zealand for 15 or more years record a rate of home ownership that is significantly above those of all other groups.

These findings provide robust and formal support for the observations summarised earlier.

1.2.3 Migrants and dwelling type

In New Zealand, 77.4% of households lived in houses, 10.2% in flats or apartments in single-storey buildings, 6.8% in flats or apartments in multi-storey buildings; and 5.6% in other categories of dwellings in 2006.

Migrants are less likely to live in houses overall. But as the number of years since arrival in New Zealand increases, migrants are more likely to have proportions living in the various dwelling types similar to those of NZ-born couples and singles.

The choice of dwelling type varies more with single / couple status, rather than with migrant status. The proportion of migrant couples living in houses was 78.0%, compared with a NZ-born couple rate of 90.6%. However, NZ-born singles have a rate of 69.7%, well below that of NZ-born couples, and far more similar to that of single migrants, at 61.3%.

[1] The income variable had a p-value of 0.247, the single household dummy had a p-value of 0.015.

On arrival in this country, the dwelling choices of migrants from Asia are generally most different from the NZ-born group. For example, the proportion of recent migrant households from Asia living in houses is only 54.4%. However, this is also the group which shows the greatest change as time spent in New Zealand changes. Consequently, the proportion of households with earlier migrants[2] born in Asia living in houses is close to that for the NZ-born (i.e. 86.4% compared to 90.6%).

Overall, proportions living in houses in Auckland are lower than for New Zealand (69.4% compared to 77.4% in 2006). This comparison holds for both migrant and NZ-born households.

As in the rest of the country, migrant housing behaviour changes substantially as the number of years in the country increases, and this behaviour depends more on single / couple status than migrant / NZ-born status.

Migrants born in the Pacific Islands living in Auckland tend to have the lowest proportions living in houses among all regions of birth and across all lengths of residence in New Zealand. However, migrants from this region also have the highest proportion (5.5%) recorded in the unknown "other dwelling type" category[3], which may explain part of the discrepancy.

1.3 Two scenarios for 2016

We explored the consequences on the demand for housing (by tenure and dwelling type) using two analytical scenarios. In particular:

- Scenario I used parameter values (migration levels, composition and housing tenure and type ratios) close to those experienced over the 1991 to 2001 period, i.e. a relatively low migration period.

- Scenario II used parameter values close to those experienced over the 2001 to 2006 inter-Census period, i.e. a higher migration period.

Scenario I suggested a net migrant inflow of approximately 20,000 per annum. This is consistent with a net permanent and long-term (PLT) inflow[4] of the order of 10,000 per annum. Again this is similar to the average experience over the 1991 to 2001 period.

[2] That is, migrants who first arrived in New Zealand 15 or more years earlier.

[3] That is, not in a house or a flat or apartment in a single or multi-storey building.

[4] Note, migrant inflow relates to migration of overseas born only, while PLT inflow includes the outflow and (returning) inflow of NZ-born persons.

Scenario II yielded a net migrant inflow of 37,500 per annum, consistent with a net PLT annual inflow of the order of 23,000, similar to the comparison for the 2001 to 2006 period.

Scenario I results in a 2016 New Zealand population of 4.34 million, up 313,000, while scenario II sees the New Zealand population grow to 4.58 million in 2016. These numbers, in turn, translate to a net additional 148,000 households formed over the 2006 to 2016 period in scenario I; while in scenario II there are 236,000 more households formed over the 10 year period. The consequential increases in housing demand, by tenure and dwelling type are summarised in table 1.2.[5]

Table 1.2 Projected changes in household numbers (000s)

	Total New Zealand		Auckland	
Increase between 2006 and 2016 (000s)	**Scenario I**	**Scenario II**	**Scenario I**	**Scenario II**
Increase in total number of households	**147.9**	**235.9**	**47.5**	**70.1**
Increase by tenure				
In own home	46.2	102.3	8.0	26.1
Renting from private sector	74.4	103.8	25.0	41.4
Renting from central government	9.0	8.4	4.3	1.8
Renting from local government	1.5	1.8	0.1	..
Increase by dwelling type				
House	79.2	145.3	16.7	41.8
Flat or apartment in single storey building	28.5	35.7	11.3	14.7
Flat or apartment in multi-story building	12.8	31.5	5.2	21.3

Clearly, in either of these scenarios, the growing importance of the private rental market is a central issue. Whether the demand for housing arising in these scenarios is satisfied appears to rest on a large expansion in dwellings in the private rental market. As to dwelling type, while the relatively faster growth in flats or apartments is noticeable, the importance of the house category should not be overlooked. Combining this observation with those for tenure, it is clear that the required growth in private rental market dwellings will need to cater for the demand for house and flat/apartment dwelling types.

[5] Note some of the increase in households will be in 'other' and 'not elsewhere specified' tenure and dwelling type categories.

We note that if an appropriate supply response does not eventuate, other changes would occur. Such changes may be reflected in different behavioural preferences in respect of housing tenures (perhaps induced by relative price adjustments) or, in feedback influences on the level of migration and/or household formation.

Unsurprisingly, the projected expansion in demand for private rental dwellings in Auckland is even more pronounced. The particular role of flats and apartments in multi-storey buildings is also substantial. However, growth in the demand for houses should not be overlooked. In the event of an insufficient supply response in Auckland the above noted changes may also affect Auckland's share of the assumed level of migration and population in each scenario.

2 Introduction

This paper reports on our study of the relationships between immigration and the composition of housing demand. This study has been undertaken for the Centre for Housing Research Aotearoa New Zealand (CHRANZ) and the Department of Labour (DoL). This is a component project within the wider Economic Impacts of Immigration (EII) programme overseen by DoL.[6] The wider EII programme will undertake computable general equilibrium (CGE) economy-wide modelling of various immigration scenarios.

2.1 Project brief and goals

The objective of this project was to examine the short and long-term economic impacts of immigration on housing demand and supply in New Zealand from 1991 to 2016, with a particular focus on Auckland.

The stated goals of this project were to:

- Explore the links between immigration and housing demand and supply.
- Explore the economic impact of immigration flows to New Zealand between 1991 and 2006 on housing demand and supply.
- Use scenarios to look at the possible impact of immigration to New Zealand between 2006 and 2016 on housing demand and supply.

The research questions addressed by this project were:

- What has been the impact of immigration between 1991 and 2006 on housing demand?
- How have different immigrant groups affected housing demand?
- How has housing supply responded to changes in housing demand?
- How might immigration affect housing demand and supply in the future?

[6] Another project being conducted under the EII research programme is 'Housing Markets and Migration: Evidence from New Zealand'. This work will examine the relationship between population changes (new migrants, returning New Zealanders, and earlier migrants and New Zealanders moving from other areas) in local areas and changes in house sale prices and rental rates in these areas.

- What are the key trends and issues in the link between immigration and housing demand and supply?
- How does the situation in Auckland differ for that of New Zealand as a whole?
- What are the implications for policy makers at local, regional and central government level of the current and future scenarios of immigration to New Zealand?

2.2 Structure

This study assesses available Census data from 1991 to 2006 and establishes the housing behaviour of identified groups of the population. Thereafter, we project this behaviour onto two future migration scenarios over the 2006 to 2016 period, providing indications of two pictures of housing demand in 2016.

This report begins with a literature review in Section 3. The literature review provides a brief overview, for contextual purposes, of key literature. This review notes the limited New Zealand literature on the effect of immigration on housing but examines literature from Australia, Canada, the US, the UK, and Europe.

Section 4 provides a summary of household numbers and composition over the 1991 to 2006 period. This section includes information on household numbers nationwide, as well as in Auckland. It also discusses key elements of the housing behaviour of migrants between 1991 and 2006. Section 5 provides details on housing supply and whether the building industry in New Zealand would be able to meet any projected increase in housing demand caused by immigration.

Section 6 examines the assumptions and drivers of the two migration scenarios from 2006 to 2016. Under each scenario, the household and birthplace of migrant couples and singles are discussed.

Having looked at the assumptions and drivers of the two migration scenarios from 2006 to 2016, Section 7 then turns to focus on the projected tenure and dwelling types of New Zealand households. Projected tenure and dwelling type for migrant couples is also broken down by birthplace. The projected tenure and dwelling types required in Auckland are discussed in Section 8.

Section 9 draws out the policy implications based on the summary of household numbers and composition, and housing behaviour of migrants over the 1991 to 2006 period. It also looks at the assumptions and drivers of the two migration scenarios and how these potential impact on policy.

The report finishes with concluding comments in Section 10, a bibliography in Section 11, and appendices. The appendices in Sections 12 to 17, provide detail on the Census data on tenure and dwelling type for the various migrant groups over the 1991 to 2006 period. These appendices also include data on Auckland.

2.3 Terms and abbreviations

This study investigates the characteristics and behaviour of *households*, not of families or of individuals[7]. Further, only those households comprising the 'usually resident population', as defined by Statistics New Zealand, are included in our analysis.

This study accessed Census data for the years 1991, 1996, 2001, and 2006. However, 1991 Census data did not include a "year of first arrival" questions and so the population characteristics for 1991 could not be grouped by the number of years in New Zealand. The data for the 2006 year (particularly that related to Auckland) was also less detailed than desired due to confidentiality restrictions applied by Statistics New Zealand.

This report does include some terms and abbreviations adopted for convenience and/or brevity in tables.[8] Particular terms used in this report include:

- migrant = a person born overseas, as recorded by the individual's response to the birthplace question in the Census.
- OB = overseas born
- NZB = New Zealand born
- WAP = working age population (those aged 15 years or more)
- hhd (or hhds) = household (or households)
- recent migrant = a migrant with less than five years residence in New Zealand
- intermediate migrant = a migrant with between five and 15 years residence in New Zealand

[7] In particular, investigation of the relationship between age of individuals and household characteristics (e.g tenure) was outside the scope of this project. Issues relating an individual characteristic (such as age) to a household, allied with the number of potential cross-tabulations requiring analysis, put this topic beyond the resources available to this project.

[8] We are aware of concern about some of the labels used to identify the groups. We use these labels for reference purposes only. They should be interpreted in a neutral manner and no inferences, favourable or otherwise, should be drawn from our use of these labels.

- earlier migrant = a migrant with 15 or more years residence in New Zealand
- reference person = recorded by Statistics New Zealand as the person who completed the Census household dwelling questionnaire.
- migrant couple = a household where both the reference person and partner were born overseas
- NZ-born and migrant couple = a household where either the reference person or the partner was born overseas, with the other born in New Zealand
- NZB-OB = a NZ-born and migrant couple (as above)
- NZ-born couple = a household where both the reference person and partner were born in New Zealand
- single migrant household = a household where the reference person was single, or had no partner, who was born overseas
- NZ-born single household = a household where the reference person was single, or person had no partner, who was born in New Zealand
- Auckland = the area comprising the four cities. Auckland, Waitakere, North Shore and Manukau.

3 Literature overview

In this section we provide a brief overview, for contextual purposes, of key literature. The New Zealand literature on the effect of immigration on housing is limited, although the Reserve Bank of New Zealand (RBNZ) released a discussion paper as this report was being finalised and we have noted preliminary results from contemporary research of which we are aware. We also examined literature from Australia, Canada, the United States, the United Kingdom, and Europe.

3.1 New Zealand literature on the effects of immigration on housing demand

Literature on the effect of immigration on housing demand in New Zealand is extremely limited.

Of some interest as background to this study was *The Determinants of House Prices in New Zealand: An Aggregate and Regional Analysis* (1997) by Brendan O'Donovan and David Rae, which modelled the determinants of house prices in New Zealand at an aggregate and regional level. This study considered the demand for housing as part of households' overall consumption decision. It found that house prices were affected by a region's economic performance, population, and by agricultural commodity prices. Furthermore, this study concluded there is little evidence to support the view that house prices in geographically close regions are co-integrated over the longer term.

Poot, Nana and Philpott (1988) carried out a major study on the long-run impacts of migrants on the New Zealand economy. The impact of immigration on housing is considered in an appendix through a set of scenarios projecting the housing stock and number of households. The analysis notes three components that affect housing demand: population size, average quality, and capacity utilisation. It assumes that immigration will affect population size only. The appendix notes that housing investment depends on more than household formation (new demand). Housing demand also depends on depreciation (demand for replacement housing) and market conditions (relative demand for housing compared to other assets).

Winkelmann (1999) gives a history of immigration and immigration policy in New Zealand. He notes that New Zealand's relative economic position combined with liberal policy settings for British migrants in the 1970s created large inward migrant flows. The size of these flows created "immense pressure on housing and schools and other services". Another large immigration wave in the 1990s put pressure on urban centres and "and a housing crisis in Auckland in particular"

Coleman and Landon-Lane (2007) use sophisticated macroeconomic modelling to analyse the relationship between migration flows, housing construction, and house prices in New Zealand over the past four and a half decades. This analysis indicates a stable, positive relationship between relative immigration flows, house prices, and construction. But the magnitude of this relationship is substantially greater than the long-run relationship between population growth and house prices. The paper offers three explanations of this difference, but its conclusions are equivocal. A first explanation is that, in the short run, immigration creates a genuine housing shortage. A second explanation is that migration and local demand for housing occur at the same time due to a third variable such as changing future income expectations. A third explanation is that migrant flows cause fluctuations in house prices that destabilise people's expectations of house prices so, for example, expectations become over-optimistic.

3.2 International literature on the effects of immigration on housing demand

3.2.1 Australia

Immigration and Housing Tenure Choice in Australia (1994) by Steven Bourassa compared the housing tenure choices of the Australian-born population with those of 10 major immigrant groups in Sydney and Melbourne. This study considered the effect of various economic and demographic characteristics in determining the level of home ownership among migrant groups. It compared the housing tenure choices of immigrant and Australian-born residents while controlling the economic and demographic characteristics relevant to that tenure decision. The difference in ownership among the groups was broken down into endowment and residual effects. Endowment effects were due to factors such as income or time spent in Australia, while residual effects were due to behavioural differences among the groups, or parameters not accounted for in the model.

Bourassa's study found that time spent living in Australia tended to act as a proxy variable for wealth, and that home ownership rates among most migrant groups followed those of the Australian-born population. Compared with the Australian-born population, seven of the 10 major immigrant groups in Sydney and Melbourne also displayed no significant differences in housing tenure choices after controlling for differences in endowments. The most important differences in endowments included time spent living in Australia, the proportion of never-married household heads, and the relative cost ratio (which is high for younger households with lower incomes). Only one group, the Lebanese, displayed significant behavioural differences from the Australian-born population.

Bourassa concluded that the economic and demographic model of home ownership used in his study could be applied across ethnic groups in Australia.

A finding of Bourassa's study of interest to New Zealand, and possibly applicable to migrant groups in New Zealand, relates to home ownership and freedom (or perceived freedom) to migrate and re-migrate into a country.

In Sydney and Melbourne, Australian-born home ownership was 73.6%, and seven of the 10 migrant groups had ownership rates in the range of 71.7% to 96.7%. In contrast, the New Zealand home ownership rate was 42.2%. New Zealanders shared the lowest home ownership rates with Vietnamese and Lebanese. Bourassa argued this fitted the model because these three groups had the shortest average residence in Australia. He also noted that:

> New Zealanders are free to travel back and forth between New Zealand and Australia, and because they are more likely to be transient, they may be less likely to invest in owner-occupied housing. Their transience is reflected in their relatively low level of concern for security of tenure.

This raises important points that could be relevant, or become relevant, in the housing behaviour of migrants in New Zealand. These are:

- Since Australians can travel back and forth to New Zealand, do they similarly have a lower-than-average home ownership rate in New Zealand?
- Is there, or would there be, a similar (if reduced) effect observed in migrants who may not have the statutory freedom to travel, but perceive it as little social or economic challenge to migrate and re-migrate to another country and society?
- Would bilateral migration agreements with other countries have similar effects?

While this research does not address these questions directly, there is some information on the rate of departure, or 'churn', by migrants from different regions in another draft BERL study.[9] This churn may reflect re-migration by migrants from some regions. Another relevant piece of research work is being completed by Jacques Poot, Philip McCann, and Lynda Sanderson at Waikato University.[10] This study shows that the 'depreciation of family 'social capital' back home is reduced by home visits'. The retention

[9] Nana G and Sanderson K (2007, draft). Migration and Labour Market Outcomes. Economic Impact of Immigration, Department of Labour. Wellington: BERL.

[10] McCann P., Poot J., and Sanderson L. (2007). Economic perspectives on migrants' home country attachment, remittances and travel. A paper presented at the Pathways, Circuits and Crossroads seminar, 15 May 2007. New Research on Population, Migration and Community Dynamics, Wellington.

of family 'social capital' in the birthplace of migrants is a factor in causing re-migration, and potentially reduces the relative propensity for home ownership.

3.2.2 Canada

Samuel Laryea in *Housing Ownership Patterns of Immigrants in Canada* (1999) found that after controlling for age, marital status, education, household type, income, and period of migration, there were significant differences between home ownership rates among migrants from different countries. For example, home ownership rates were highest among migrants from Europe or the US, and lowest among those from the Caribbean. This study estimated it took between six and eight years for the migrant population as a whole to have the same rate of home ownership as the Canadian-born population. However, 15 years after migrating migrants from the US, Europe, and Asia had higher home ownership rates than the Canadian-born population.

Research on Immigration and Integration in the Metropolis (2002) by Galina Didukh found that the difference in home ownership rates between migrant and Canadian-born households was mostly due to factors other than endowments, such as discrimination, differential tastes and preferences, or a lack of credit record.

3.2.3 United States

Albert Saiz estimated in *Immigration and Housing Rents in American Cities* (2006) that immigration pushed up rents and housing values in US cities by roughly 1% for each 1% increase in the city's population as a result of immigration. This was compared to a drop of 0.03% in wages within a skill-group caused by a 1% increase in the number of people with that skill. This study concluded that the effect of immigration on the housing market was more substantial than its effect on the labour market.

A study by Dowell Myers and Cathy Yang Liu entitled *The Emerging Dominance of Immigrants in the US Housing Market 1970 – 2000* (2005) found that migrant households were an increasingly large share of the total households in the US. In the 1990s, migrant households accounted for 32% of all household growth and 67% of all rental growth. In some states, immigrants accounted for 100% of all rental growth and more than half of all growth in home ownership.

In addition, this study found that the percentage of rental housing and multi-family housing units was higher in immigrant "gateway" states. However, their length of residence impacted on where migrants chose to live.

Home ownership rates among migrants tended to be substantially below that of the American-born, but migrants tended to progress into home ownership once their understanding of the US housing market and duration of stay increased.

Immigrant Trajectories into Homeownership: A Temporal Analysis of Residential Assimilation (1998) by Dowell Myers and Seong Woo Lee explored the rate at which immigrants took up home ownership, relative to the American-born population in Southern California. This study, which looked at datasets between 1980 and 1990, found that recently-arrived migrants had lower home ownership rates than migrants who had been in the area for longer. It adjusted home ownership rates for the influence of income, education, English skills, and marital status. The report concluded that Asian migrants achieved significantly higher levels of home ownership soon after their arrival compared to Hispanic migrants, who demonstrated a sustained increase in home ownership rates from initially low levels.

Another study by Myers and Lee, *Cohort Estimation of Homeownership Attainment among Native-born and Immigrant Populations* (1998) also suggests that temporal factors such as cohort membership, ageing, and duration of US residence are strong predictors of home ownership rates.

3.2.4 United Kingdom

The Survey of English Housing 2005/06 produced by National Statistics in the United Kingdom found that 8% of all households in England were BME (black or minority ethnic) households. Among BME households, 50% were owner-occupiers (compared to a national average of 70%). A stand-out group within the BME category was Indian households, with an ownership rate of 75%.

3.2.5 Europe

Traditionally, European countries have relatively low home ownership rates compared to New Zealand. Switzerland, Germany, France and Austria all have ownership rates between 37% and 60%. This compares to New Zealand's home ownership rate, which is just under 63%. Therefore, making inferences about New Zealand's situation from European studies, where immigration patterns and viewpoints about housing behaviour are quite different, should be dealt with cautiously.

Home Ownership and Rent Control in Switzerland (1997) by Elia Werczberger considers the small demand for home ownership in Switzerland, and the survival of the private rental sector despite decades of rent control. This report suggests that home ownership rates

are low (around 37% in 2007) due to the high cost of owning a house caused by tax and capital gains. In addition, rent control laws have been designed to prevent arbitrary eviction and exploitation of temporary housing shortages, and have not acted as a deterrent to rental property ownership.

Home Ownership Finance in Austria and Germany (1995) by Edwin Deutsch and Horst Tomann studied the financial barriers to home ownership in Austria and Germany. Their study found that home ownership rates varied with household size, age, and income of the occupants, and whether the occupants lived in a rural or urban setting.

3.3 Literature overview summary

Much of the available literature is concerned with the determinants and patterns of home ownership rates among migrant groups. This work is interesting as it relates to the types of housing tenure demanded by migrant groups. The factors explored include economic and demographic characteristics, such as the period since immigration, and region of birth; and financial factors such as rentals and home ownership finance.

However, findings on the determinants and profile of home ownership rates by migrant groups does not address the core question of the present work, namely the total volume of housing demanded by any given level of immigrant flow.

There are some issues raised in the literature that have implications in the broad picture of immigration in New Zealand, though not necessarily specifically for the demand for housing. One issue is the finding by Bourassa in Australia that the home ownership rate of New Zealand-born migrants in Australia was low, partly because New Zealanders are free to shift back and forth between the two countries. It could therefore be expected that people who have low actual or perceived barriers to migrating to New Zealand, and then re-migrating may similarly exhibit a lower home ownership rate in New Zealand. Other research by BERL indicates that this situation could apply, especially to those born in UK and Ireland but also to those born in Europe and North America, and Australia. It would not apply so much to people born in Asia or the Pacific Islands.

This could also be an indirect implication of policies that expand bilateral migration agreements with other countries.

The next two sections of this report now turn to the situation in New Zealand. These sections examine the effect of immigration on housing demand and supply between 1991 and 2006.

4 Demand for housing 1991 to 2006

As stated earlier, the objective of this project was to examine the short and long-term economic impacts of migration on housing demand and supply in New Zealand from 1991 to 2016, with a particular focus on Auckland. In Section 3 we set the scene for this research by examining international literature on this topic. This section of the report now turns to examine the extent to which immigration impacts on the demand for housing.

4.1 Five main household types

In 2006, there were more than 1.45 million households in New Zealand.

For the purposes of this research, we have broken New Zealand households into five broad types. The types are distinguished by the birthplace characteristics of the 'reference person' and partner for each household. In this context, the reference person is identified by Statistics New Zealand as the person who filled in the Census household dwelling questionnaire. The five household types are defined as follows.

- Migrant couple household – where both the reference person and partner were born overseas.
- NZ-born and migrant couple household – where either the reference person or the partner was born overseas, while the other was born in New Zealand.
- NZ-born couple household – where both the reference person and partner were born in New Zealand.
- Single migrant household – where the reference person is single, or has no partner, and was born overseas.
- NZ-born single household – where the reference person is single, or has no partner, and was born in New Zealand.

Note study investigates the characteristics of households, not of families. In particular, the two 'single' household categories include single-parent households as well as non-family (e.g. flatting) households. Note further, information regarding members of the household other than the reference person and partner was not obtained.

Note the totals provided in these detailed tables may differ slightly from data provided in Statistics New Zealand publications. Consequently, ratios and rates also differ slightly from official Statistics New Zealand publications. For example, we calculate the

proportion of the population residing in their own home as 62.4% in 2006, although Statistics New Zealand publications place this at 66.9%[11].

These differences result from a combination of rounding and confidentiality processes applied by Statistics New Zealand before they supply the requested datasets. In particular, the degree of disaggregation ordered resulted in there being 1,008 households unaccounted for in the 2006 figures for New Zealand. Similarly, there were 330 households unaccounted for in the 2006 data for Auckland. These are in addition to the households included in the "not elsewhere classified" categories, which number 100,680 for New Zealand, and 25,377 in Auckland.

While not ideal, we judged these discrepancies to be minor and do not bias our analyses or conclusions. In particular, we ensure the comparison of rates and proportions on a like-for-like basis, ensuring consistent and appropriate analyses are extracted from the data.

Table 4.1 lists the number of households by type, from 1991 to 2006.

Table 4.1 Number of household types, 1991 to 2006

Household type	1991	1996	2001	2006
Migrant couple	83,691	91,458	98,976	140,685
NZ-born and migrant	115,362	120,807	120,336	141,651
NZ-born couple	481,608	489,441	461,964	498,033
Single migrant	84,369	92,301	118,395	122,013
Single NZ-born	388,878	417,195	490,239	450,105
Not elsewhere classified	10,959	56,889	54,330	100,680
All households	**1,164,867**	**1,268,091**	**1,344,240**	**1,453,167**

The changes between censuses in the number of households and the different types of households provide an interesting picture.

Table 4.2 Inter-censal change in number of households, 1991 to 2006

Household type	1991-96	1996-01	2001-06
Migrant couple	7,767	7,518	41,709
NZ-born and migrant couple	5,445	-471	21,315
NZ-born couple	7,833	-27,477	36,069
Single migrant	7,932	26,094	3,618
Single NZ-born	28,317	73,044	-40,134
Not elsewhere classified	45,930	-2,559	46,350
All households	**103,224**	**76,149**	**108,927**

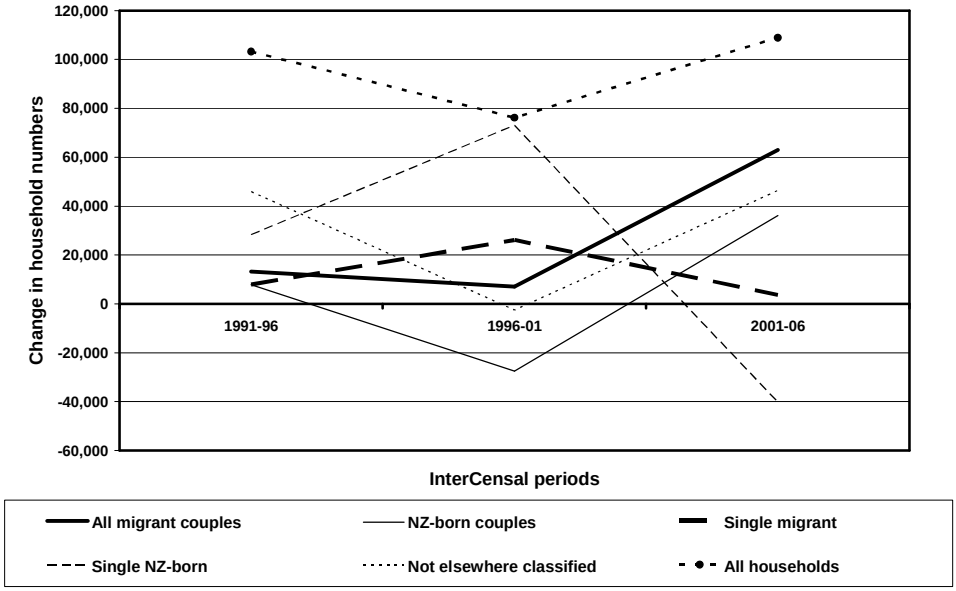
[11] Similar discrepancies arise in calculations for earlier years, viz: 64.6% in 2001, 67.9% in 1996 and 72.8% in 1991. These compare with Statistics New Zealand published figures of 67.8%, 70.7% and 72.4%, respectively.

The change in household types has seen wide fluctuations over the last 15 years. Unfortunately, the actual changes in types of 'classified' households is the more difficult to analyse because there has been a wide swing in the change of the "not elsewhere classified" households from an increase of 45,930 between 1991 and 1996; to a decrease by 2,559 between 1996 and 2001; and then a swing back up to an increase by 46,350 between 2001 and 2006. In the various analyses we have done we have not been able to gain a sense as to the most likely classifications responsible for this swing.

From an overall viewpoint as to what the impact of immigration between 1991 and 2006 has been on housing demand, the impact is by no means clear. The intention was to identify trends in this impact, i.e. the general tendency or direction of movement of the impact of immigration on formation of households through this period. The overall finding is that taking the 5-year periods between each Census, there was not a wild swing in the net households created in each period. There was about 100,000 in 1991 to 1996; about 80,000 in 1996 to 2001; and about 110,000 households in 2001 to 2006.

There were movements in numbers of migrant couples households, and migrant singles households, and these movements to some extent compensated each other. There were much wider swings in numbers of NZ-born households especially those of single NZ-born. Again they were to some extent compensated by changes in the NZ-born couples. These changes are apparent in Figure 4.1.

Figure 4.1 Changes in household types 1991 to 2006



These swings in NZ-born net household formation presumably reflect swings in formation of couples, perhaps reflecting income opportunities and levels. They also presumably

reflect changes in emigration by NZ-born. The scope of this research specifically excluded impacts of emigration on housing, and so these aspects are not researched in this report.

The main conclusion is that there has not been a steady trend, or general tendency or direction of movement in terms of the impact immigration has had on the demand for housing over the period 1991 to 2006. There have been significant changes in housing behaviour, with the number of households increasing or decreasing in each household type, but there has been no readily-discernible pattern to these changes.

Therefore we take most cognisance of changes in the most recent period.

Between 2001 and 2006 there was an increase of about 109,000 households. This increase was disproportionately concentrated in the number of migrant couple households, which increased by nearly 42,000. That is, while this category accounted for only 10% of all households in 2006 (as shown in Figure 4.2) it contributed to more than 38% of the increase between 2001 and 2006.

In addition, there were a further 21,000 NZ-born and migrant couple households, and a further 3,000 single migrant households. These numbers may underestimate the increases in these categories due to the 45,000 increase in the number of households "not elsewhere classified".

4.1.1 Auckland household types

In 2006, there were nearly 371,000 households in Auckland. This represents just over a quarter (25.5%) of all households in New Zealand. The proportion of households in Auckland has grown slightly over the last 15 years, from 23.7% of all households in New Zealand in 1991, to 25.5% of all households in 2006.

Table 4.3 Number of household types in Auckland, 1991 to 2006

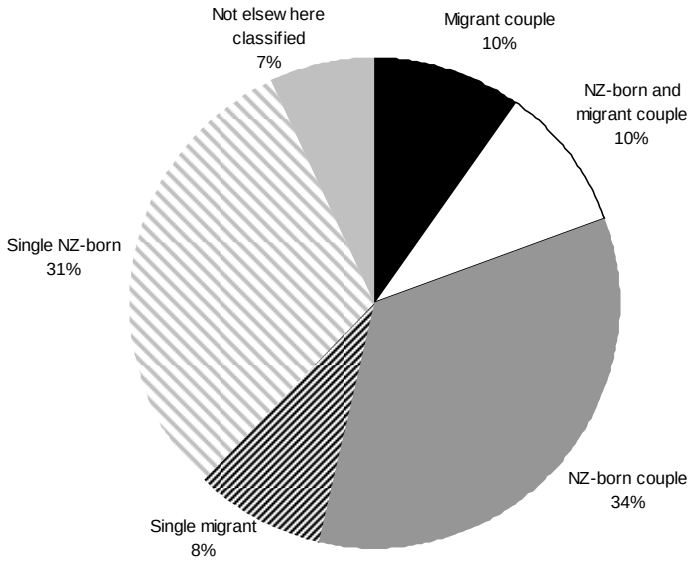
Household type	1991	1996	2001	2006
Migrant couple	36,450	43,248	50,661	73,143
NZ-born and migrant	35,421	37,134	37,737	42,906
NZ-born couple	85,593	86,163	82,275	84,414
Single migrant	32,445	36,372	49,146	53,187
Single NZ-born	83,022	85,773	99,198	91,878
Not elsewhere classified	3,363	16,869	16,203	25,377
All households	**276,294**	**305,559**	**335,220**	**370,905**

Table 4.3 illustrates the increase in households by type in Auckland between 1991 and 2006. Of the 370,905 households in Auckland in 2006, approximately 73,143 households (20%) were migrant couples.

4.2 The composition of New Zealand household types

The composition of household types in New Zealand in 2006 is shown in Figure 4.2.

Figure 4.2 Composition of household types, 2006



Households were composed of about one-third NZ-born couples and one third NZ-born singles. There were 10% migrant couples, a further 10% NZ-born and migrant couples, and 8% migrant singles. A further 7% of households were "not elsewhere classified".

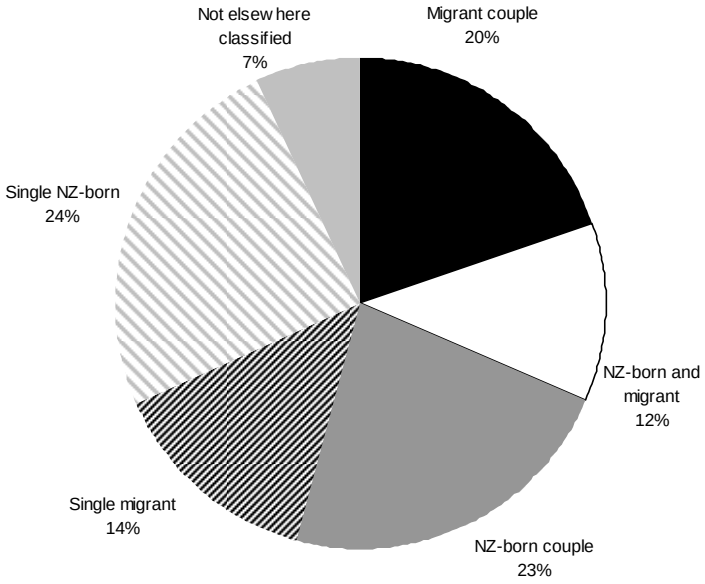
4.2.1 The composition of Auckland household types

Between 2001 and 2006, the number of households in Auckland increased by approximately 35,000. Of these 35,000 households, nearly 23,000 (66%) were migrant couple households. As a result of this growth, migrant couple households accounted for 20% of all households in Auckland in 2006.

As illustrated in Figure 4.3, migrant couples comprised 20% of all households in Auckland in 2006. This proportion is noticeably greater than the equivalent 10% figure for New Zealand as a whole.

However, these numbers may underestimate the growth in households during this period, due to the increase of 9,000 Auckland households in the "not elsewhere classified" category.

Figure 4.3 Composition of household types in Auckland, 2006



The proportion of all households containing migrants in Auckland was higher than the proportion for New Zealand as a whole. NZ-born and migrant couple households were 12% of households in Auckland, while the single migrant households were 14% of the Auckland total.

4.3 Migrant couple households

The following section examines in more detail the increase nationwide of nearly 42,000 migrant couple households between 2001 and 2006.

Firstly, this section examines the birthplace of migrants and the impact birthplace has on housing behaviour. Secondly, this section examines the dwellings of migrants, and discusses the type of dwellings migrants live in and the proportions of migrants that reside in houses, flats or apartments. Where the data was available, it was further divided into those couples residing in flats or apartments in single-storey buildings and those residing in multi-storey buildings. The number of occupants relative to the number of bedrooms was also reviewed. Thirdly, this section examines the tenure status of migrant couple households, investigating the proportion of migrant couples that own their own home, rent from the private sector, or rent from the public sector. Details of these analyses, including a similar set of analysis for those residing in Auckland, are provided in the appendices in Sections 12 to 17.

4.3.1 Birthplace of migrant couple households

Between 1991 and 2006, the number of migrants who listed their birthplace as the UK and Ireland, Europe and North America, or the Pacific Islands remained relatively stable or increased gradually. In contrast, the number of migrants born in Asia grew rapidly.

Examining the 42,000 increase in migrant couple households between 2001 and 2006, it can be seen that a large proportion of these households consisted of one partner who was born in Asia. Over the last five years, households in this category increased by more than 18,000, which is a much larger increase than in earlier inter-census periods.

In contrast, the number of migrant couple households that listed the UK and Ireland as their birthplace only increased by 8,000 between 2001 and 2006. Further, the number of migrant couple households that listed the Pacific Islands as their birthplace only increased by 5,000, and the number of migrant couple households that listed Europe and North America as their birthplace increased by 3,000.

These changes in migrant couple birthplaces are further illustrated in the table below.

Table 4.4 Birthplace of migrant couple households, 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	2,307	2,697	2,532	3,336
Pacific Islands	16,848	16,227	18,255	23,346
UK & Ireland	40,329	37,347	32,889	40,821
Europe & North America	11,451	12,282	11,694	14,610
Asia	10,626	18,570	24,915	43,131
Other	2,130	4,335	8,691	15,441
All migrant households	**83,691**	**91,458**	**98,976**	**140,685**

4.3.2 Birthplace of migrant couple households in Auckland

Examining the increase in migrant couple households in Auckland between 2001 and 2006, it can be seen that a large proportion of these households consisted of one partner who was born in Asia. The second largest contribution in terms of birthplace was the Pacific Islands, with an increase of 4,000 people.

Table 4.5 Birthplace of migrant couple households in Auckland, 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	888	1,032	963	1,254
Pacific Islands	11,973	11,778	13,470	17,328
UK & Ireland	14,049	12,750	10,797	12,276
Europe & North America	3,282	3,951	3,930	4,926
Asia	5,313	11,514	16,440	29,139
Other	945	2,223	5,061	8,220
All migrant households	**36,450**	**43,248**	**50,661**	**73,143**

It is interesting to note that of the 73,000 migrant couples in Auckland in 2006, some 22,400 (30.7%) had spent less than five years in New Zealand.

Different migrant groups have different housing requirements in terms of tenure and dwelling type. A major trend between 1991 and 2006 is that migrant birthplaces changed, and more households consisted of people born in Asia. An increase in the number of recent migrant couple households where one or both partners were born in Asia also impacted on the type of residential housing required. In addition, the age structure of recent migrants from Asia also differed from other migrant groups, which impacted on residential housing requirements. As will be discussed in a later section, recent migrant couple households are less likely to own their own home and are more likely to rent. However, the longer these households reside in New Zealand the more likely they are to buy a house and resemble the household behaviour of NZ-born couples.

4.3.3 Length of residence of migrant couple households

The increase in migrant couple households between 2001 and 2006 also increased the proportion of recent migrant households.

In 2006, of the 141,000 migrant couple households, more than 39,000 households consisted of both partners arriving within the last five years. This is nearly double the comparable figure in 2001, of 22,000 households.

Consequently, in 2006 more than a quarter (27.7%) of migrant couple households in New Zealand had arrived in the last five years. This is a noticeably higher proportion than that recorded in 2001 (22.4%).

In contrast, the number of earlier migrant couple households decreased between 2001 and 2006. In 2006, there was almost 46,000 (32.7%) earlier migrant couple households, compared with 38,000 (38.7%) earlier migrant couple households in 2001.

The increase in recent migrant couple households between 2001 and 2006 also impacted on the demand for residential housing. The following section describes how the housing behaviour, in terms of demand for different types of tenure and dwellings, of recent migrant couples differs from intermediate and earlier migrant couples.

4.4 Household tenure

As mentioned earlier, there were more than 1.45 million households in New Zealand in 2006.

The majority of NZ-born households lived in their own homes, while a large proportion of migrant households rented, especially from private landlords. Overall, migrants are less likely to own their own home. However, as the number of years since their arrival in New Zealand increases, migrants are more likely to live in dwelling types similar to that of the NZ-born population.

Table 4.6 Dwelling tenure and type of selected household types, (%), 2006

	Living in			
Household type	**Own home**	**Private rental**	**House**	**Single-storey flat**
NZ-born couples	77.1	20.0	90.6	4.5
NZ-born and migrant couples	77.0	20.2	87.3	5.4
Migrant couples	62.4	27.3	78.0	10.5
Migrant couple with 15 or more years in NZ	77.0	13.3	86.2	6.7
NZ-born single	51.5	34.1	69.7	16.8
Single migrant	48.9	32.9	61.3	18.8
Single migrant with 15 or more years in NZ	59.6	24.5	65.9	19.5

However, as the above table illustrates home ownership rates vary depending on whether the household is made up of a single person or a couple. A large proportion of NZ-born and earlier migrant couples lived in their own home in 2006. In contrast, NZ-born single and single migrants were more likely to rent, with the majority renting from private landlords. This difference may be because these households required greater flexibility or faced budget constraints.

The dwelling tenure of migrant households also varies depending on their length of residence in New Zealand. For example, recent migrant couple households are more likely to rent than earlier migrant couple households. This point is illustrated in 2006, where the datasets show home ownership rates among earlier migrants, at 77%, were similar to those of NZ-born couple households.

In Auckland, overall home ownership rates were lower than for New Zealand (58.2% compared with 62.4%). While most people lived in their own home, the proportion of people renting from private landlords increased. This was particularly so among migrant couple and single migrant households in Auckland.

The age of migrants may also play a role in differentiating Auckland's migrants from those in the rest of New Zealand.[12] Many migrants in the Auckland region are students who come to Auckland or New Zealand for a short time. For these migrants purchasing a home may not be a practical option, which is reflected in the large number of Auckland

[12] Investigation of the relationship between age and housing tenure was outside the scope of this project. Issues relating an individual characteristic (such as age) to a household, allied with the number of potential cross-tabulations requiring analysis, put this topic beyond the resources available to this project.

migrants who rent from private landlords. In 2006 for example, 27.4% of Auckland households rented from private landlords, this figure includes 34.1% of single households (both migrant and NZ-born) and 20.6% of NZ-born couple households.

4.5 Dwelling types

If we examine these households by dwelling type, this 1.45 million households breaks down into:

- 77.4% of people in New Zealand lived in houses.
- 10.2% lived in flats or apartments in single-storey buildings.
- 6.8% lived in flats or apartments in multi-storey buildings.
- 5.6% lived in the "other dwelling types" categories.

The choice of dwelling type is more likely to be influenced by household type, such as whether the household is a single or a couple household, than migrant status. For example, in 2006 the proportion of migrant couples living in houses was 78.0%, compared with 90.6% of NZ-born couples. In contrast, the number of NZ-born singles living in houses was 69.7%, well below the proportion of NZ-born couples, and similar to that of single migrants at 61.3%.

Households that consist of recent migrants who were born in Asia are less likely to live in houses. In 2006, only 54.4% of this group lived in houses. However, this group also has the greatest change in housing behaviour as time spent in New Zealand changes. Consequently, in 2006 the proportion of earlier migrants who were born in Asia and lived in a house was 86.4%, close to that of NZ-born couples at 90.6%.

In contrast, migrants who were born in the Pacific Islands and live in the Auckland region tend not to live in their own home and this trend does not change with their length of residency in New Zealand.

Overall, the proportion of people (migrant and NZ-born) living in houses in Auckland is lower than for New Zealand as a whole. In 2006, 69.4% of people lived in a house in the Auckland region compared to 77.4% nationwide. However, migrants from this region also

had the highest proportion (5.5%) of households recorded in the unknown "other dwelling type" category,[13] which may explain part of this discrepancy.

4.6 Household income, tenure and housing characteristics

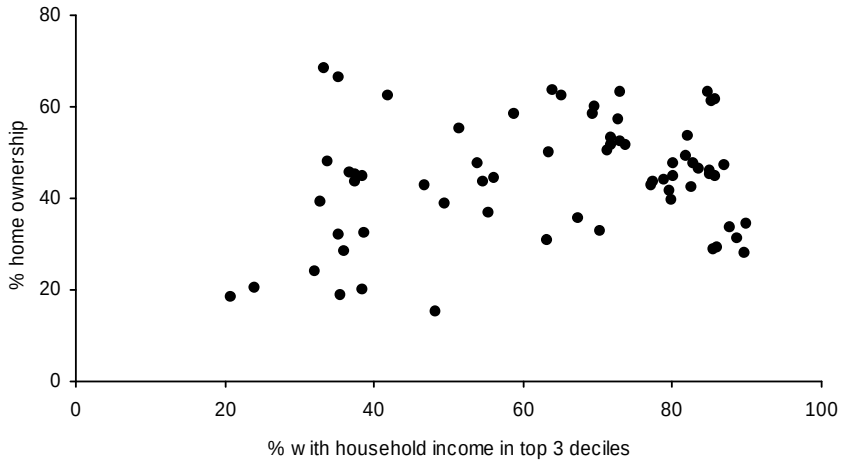
The establishment of detailed formal relationships between household income, tenure, and migrant housing characteristics is beyond the scope of this project. However, we have undertaken a brief assessment.[14]

In this assessment we examined the relationship between rates of home ownership in household groups, and the proportion in each of these groups that had an income within the top three deciles of the national household income distribution.

4.6.1 Couple households

The scatter plot (Figure 4.4) of the two variables, household income and tenure, for the 66 couple population groups from our dataset[15] suggests that there is little relationship between these two factors. This supports our earlier observation that household ownership and behaviour appears to be more likely influenced by household type, such as whether the household is a single or a couple household, than migrant status.

Figure 4.4 Household income and tenure in couple households



[13] The unknown "other dwelling type" category is a dwelling that is not a house or a flat or apartment in a single or multi-storey building.

[14] It could be argued that the omission of age is partially balanced by the inclusion of income, given the positive relationship between age and income.

[15] The 66 couple population groups are comprised of migrant couple groups by the six source countries and one NZB-OB couple group, by the three lengths of residence categories for each of the three census years plus the one NZ-born migrant couple group for each of the three census years.

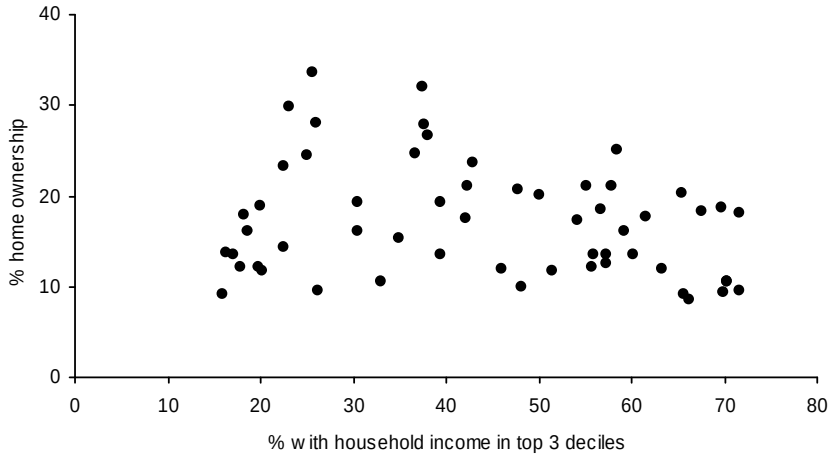
More formal regressions also support our earlier observation that home ownership rates increase among migrants based on their length of residence in New Zealand. In particular, recent migrant couples have a significantly lower home ownership rate than other population groups, while earlier migrant couples record a significantly higher home ownership rate.

As to migrant birthplace influencing tenure and household behaviour, couples born in the UK and Ireland have a significantly higher rate of home ownership, while those born in the Pacific Islands have a significantly lower home ownership rate. Noticeably, couples born in Asia, Australia, and Europe and North America do not record significantly different rates.

4.6.2 Single households

The scatter plot of the two variables, household income and tenure, for the 57 single population groups[16] is illustrated in Figure 4.5. Again, the relationship between these two variables appears slight, supporting our earlier observation that household behaviour appears to be more likely influenced by household type, such as whether the household is a single or a couple household, than migrant status.

Figure 4.5 Household income and tenure in single households



Investigating the significance of various migrant-related variables for these single households provided similar findings to those of couples. Home ownership rates increased among single migrants based on their length of residency in New Zealand. In

[16] The 57 single population groups are comprised of single migrant households by the six source countries, by three lengths of residence categories for each of three census years plus the one NZ-Born single group for each of three census years.

particular, recent migrant singles exhibited significantly lower rates of home ownership and earlier single migrants had significantly higher rates. Again, single migrants born in the Pacific Islands had a lower rate of home ownership.

All other migrant-related variables, including the NZ-born identifier, were not significant for the single households group.

4.6.3 Significance of migrant characteristics in home ownership

As noted earlier, establishing fully-specified formal relationships between the characteristics of groups within the population and their level of home ownership was outside the scope of this project. The form of analysis that would be used for testing relationships would be multiple regression analysis, and this would require data on a number of variables that may determine home ownership. The only explanatory variable we have is household income, and this limits the extent to which multi-variable regression analysis can be used. Of course, progressively introducing 'dummy' variables representing each population sub-group would improve the explanatory power of the equation for such an estimated relationship. But that approach would be of questionable value in understanding any relationship between migrant status and home ownership.

Instead we have analysed the data separately for the various migrant groups and tested the extent to which they are significant in explaining home ownership rates. We show the findings below in Table 4.7.

Table 4.7 The significance of migrant-related variables in home ownership rates

Population group	Coefficient	t-statistic (absolute value)	p-value
Significant at 95% level of confidence			
Recent migrants	-29.7	11.34	0.000
Earlier migrants	24.1	7.86	0.000
Pacific born	-26.8	6.18	0.000
UK & Ireland born	14.3	2.98	0.003
Not significant at 95% level of confidence			
New Zealand born	13.4	1.66	0.099
NZ & OB couple	8.0	1.16	0.249
Asia born	4.7	0.94	0.349
Intermediate migrants	2.8	0.73	0.464
Other overseas born	-3.6	0.72	0.475
Europe & Nth America born	3.2	0.64	0.524
Australia born	-0.9	0.17	0.863

The diagnostics listed are from a series of regressions using the dataset of all households from each of the various population groups noted above.[17] Noting that the rate of home ownership is significantly lower for single households than for couples, 11 separate regressions were undertaken each including one single household 'dummy' and one further identifier representing the population group of interest. The population groups of interest are the 11 listed in the left hand column.

The first column of numbers in the table contains the coefficient of the variable as it relates to home ownership. The value listed for the coefficient indicates the degree to which the rate of home ownership for the specified population group differs from all other groups. For example, the coefficient for the recent migrant groups is -29.7. This means that home ownership rates for recent migrant groups are 29.7%, or about 30 percentage-points below the average of the other groups. Earlier migrants have home ownership rates about 24 percentage points above the other groups. Coming to region of birth, Pacific Islands born have ownership rates of 26.8%, or about 27 percentage points below

[17] That is, 123 observations made up of the 66 couple and 57 single household groups.

the other groups, and UK and Ireland born have home ownership rates 14 percentage points above the other groups. All of these factors are significant at the 95% level of confidence, i.e. are highly statistically significant.

The further two columns of figures provide statistical information on the strength of the relationship. The t-statistic and the p-value measure the degree to which the associated coefficient is significant in statistical terms. A larger value for the t-statistic implies that the statistical significance of the calculated coefficient is higher. A smaller p-value indicates a higher confidence that the coefficient is significantly different from zero.

Further, the value of the t-statistic indicates this coefficient is highly significant, while the p-value indicates high confidence that the coefficient is significantly different from zero.

The values listed in Table 4.7 confirm that four of the sub-groups of the population captured by our data have significantly different – at the 95% level of confidence – home ownership rates, compared to the remainder of the population. Table 4.7 also lists, in descending order of significance, those population groups that have statistically insignificant differences in home ownership rates from the other groups.

We note that migrants who have spent less than five years in New Zealand have lower home ownership rates. However, when they remain in New Zealand and become earlier migrants they eventually surge past the home ownership rates of other groups. That is, migrants that have resided in New Zealand for 15 or more years record a rate of home ownership nearly 25 percentage points above those of all other groups. We also note the result for the NZ-born group is insignificant. In addition, migrants from Australia appear to have home ownership rates the closest to those of all other groups (i.e. coefficient with lowest significant difference from zero).

It is also pertinent to note that this analysis finds that the significance of the couples versus singles status in determining home ownership rates is above that of income (as measured here). In particular, when introduced individually into a regression both the proportion of households in the top three deciles and the single household status are found to have significant coefficients. However, when included together, the income variable becomes insignificant, while the single household dummy remains significant.[18]

[18] p-value of income variable = 0.247; while p-value of single household dummy = 0.015.

4.7 Summary

Between 1991 and 2006, the number of households in New Zealand increased by approximately 109,000. Of this number, nearly 42,000 were migrant couple households. This increase in migrant households, and any subsequent changes in housing behaviour, may impact on the building industry. The follow section discusses whether the building industry can sufficiently meet this demand for housing.

5 Supply of housing 1991 to 2006

As discussed in the previous section, the housing behaviour of migrants changed between 1991 and 2006 as household types changed. The number of migrant couple households increased, particularly recent migrant couple households, and more migrant couple households consisted of people born in Asia.

Housing behaviour impacts on the tenure and type of dwellings required, which impacts on the supply requirements of the New Zealand building industry. This section of the report now turns to examine the extent to which the New Zealand building industry can sufficiently supply the demand for housing that immigration may create.

5.1 Residential building consents

Residential building consents provide key information on new additions to the supply of residential building. Residential and non-residential building consent information is provided by councils to Statistics New Zealand. The number of residential building consents for new dwellings represents the gross number of possible new dwellings to be built. This information is collected monthly for new dwellings (apartments and other) and alterations.

For new dwellings, data is available on the number of dwellings, floor area, and the value of the building consents issued. For alterations, data is available on the number and value of the consents issued.

The number of building consents issued does not necessarily reflect the number of new dwellings built or alterations completed. A builder or developer may decide not to proceed with a new dwelling. There is also a time lag between the issuing of a building consent and when the new dwelling or alteration is completed. This time lag can vary between a few months to a couple of years. Despite these issues, the residential building consent data remains our best source of information on the supply response to housing demand.

Table 5.1 shows the number of new dwelling consents issued for New Zealand from the year ending March 1992 to the year ending March 2007. It also lists the number of apartments and other dwellings, and the average floor area. From the table it can be seen that residential building activity reached a peak in the March 1998 year.

Table 5.1 New dwelling building consents for New Zealand, 1992 to 2007

Year	Apartments		Other dwellings	
	number	avge floor area m^2	number	avge floor area m^2
Mar 92	120	65.06	17,443	140.91
Mar 93	217	86.55	17,688	154.23
Mar 94	406	82.96	18,955	161.86
Mar 95	1,110	125.90	22,571	168.26
Mar 96	959	147.29	20,297	172.72
Mar 97	1,402	105.48	21,016	174.75
Mar 98	3,110	94.99	22,455	168.42
Mar 99	2,718	92.67	18,048	169.46
Mar 00	3,941	99.87	21,917	176.48
Mar 01	2,116	106.70	17,254	182.95
Mar 02	3,063	107.34	18,199	194.93
Mar 03	5,816	86.22	22,504	199.14
Mar 04	5,489	95.35	26,334	200.90
Mar 05	6,202	86.26	24,053	204.95
Mar 06	3,456	90.37	21,950	208.75
Mar 07	2,898	95.04	22,842	206.07

The early 1990s were comparatively quiet for the building industry, with well under 20,000 consents issued per annum. However, since the March 2003 year residential building activity has been well over the 20,000 per annum mark, assisted by a noticeable increase in apartment building.

Also noticeable is the average size of new dwellings is larger than in the past. From close to 140m^2 15 years ago, the average dwelling is now well over 200 m^2. This factor needs to be reconciled with the housing behaviour of migrants and the NZ-born population. Housing behaviour among migrant couple households, as mentioned earlier, is changing. In turn, the housing behaviour of the NZ-born population is also changing due to factors such as urban density, changing lifestyles, and changing family sizes. The construction of new dwellings needs to match this behaviour to sufficiently supply housing demands.

5.1.1 Residential building consents for Auckland

Table 5.2 shows the number of new dwelling consents issued for Auckland from the year ending March 1992 to the year ending March 2007.

Table 5.2 New dwelling building consents for Auckland, 1992 to 2007

Year	Apartments		Other dwellings	
	number	avge floor area m^2	number	avge floor area m^2
Mar 92	18	66.67	4,229	137.78
Mar 93	130	58.04	4,045	162.68
Mar 94	333	81.17	4,714	172.63
Mar 95	945	129.02	6,072	186.08
Mar 96	624	149.25	5,660	187.28
Mar 97	840	110.57	6,076	182.70
Mar 98	1,776	93.15	6,316	173.37
Mar 99	1,715	102.32	5,020	171.18
Mar 00	2,774	101.17	6,585	173.46
Mar 01	1,247	102.88	4,872	181.19
Mar 02	2,107	99.10	5,248	195.52
Mar 03	4,135	73.50	6,178	196.64
Mar 04	3,992	89.75	6,095	197.69
Mar 05	4,559	77.86	4,528	204.54
Mar 06	1,851	82.68	3,758	213.00
Mar 07	1,444	97.41	3,787	221.88

This table also illustrates that residential building activity in Auckland rose sharply between 1991 and 2001, peaking in the March 2000 year. This growth was driven predominantly by an increase in the number of apartment building consents. Well over half of all apartment building activity in New Zealand during this period was concentrated in the Auckland area.

Since 2001, the level of apartment building consents in Auckland has risen to a peak of around 4,000 consents in 2004/2005, before falling back to 2001 levels. Other dwellings building consents have fallen after peaking in 2003, but have remained relatively stable over the last two years.

5.2 Removal or demolition of existing dwellings

Residential building consent information does not capture the number of existing dwellings that are removed and/or demolished to make way for new dwellings. We do not have any data that shows the number of existing dwellings that are removed and/or demolished, but suspect this number is not significant.

5.3 Dwelling alterations

The number of consents for dwelling alterations provides further information on the capacity of the building industry, and whether the industry can sufficiently supply the

demand for housing. However, we are unable to determine what level of alterations are needed to adapt the current housing supply to meet the needs of migrants versus any alterations that are done as part of the overall upgrade of housing.

Table 5.3 shows the number of dwelling alteration consents for New Zealand for the year ending March 1992 to the year ending March 2007. It also lists the number of consents, the total value of consents, and the average value of consents.

Table 5.3 Dwelling alteration consents for New Zealand, 1992 to 2007

Year	number	value $m	avge value $
Mar 92	24,164	414	$17,126
Mar 93	23,364	434	$18,557
Mar 94	25,191	508	$20,148
Mar 95	26,549	577	$21,721
Mar 96	27,166	619	$22,786
Mar 97	27,351	635	$23,224
Mar 98	28,011	686	$24,504
Mar 99	27,701	680	$24,562
Mar 00	28,519	730	$25,585
Mar 01	26,481	711	$26,834
Mar 02	27,534	758	$27,532
Mar 03	30,262	876	$28,936
Mar 04	33,325	1,050	$31,505
Mar 05	33,547	1,174	$35,011
Mar 06	34,021	1,242	$36,499
Mar 07	33,955	1,311	$38,610

The number of dwelling alteration consents has been steadily increasing since 2002. There was just over 24,000 dwelling alteration consents in the year ending March 2002, and this number rose by nearly 9,000 consents to just under 34,000 dwelling alteration consents in the year ending March 2007. The total value of consents has also risen by over 300% during this time, which has also impacted on the average value of consents.

As discussed above, the number of consents for dwelling alterations provides further information on the capacity of the building industry and whether the industry can sufficiently supply the demand for housing. This table illustrates that the industry has the potential, if needed, to shift its focus from alteration work to new dwelling construction.

5.3.1 Dwelling alterations for Auckland

Table 5.3 shows the number of dwelling alteration consents for Auckland for the year ending March 1992 to the year ending March 2007. The table shows the number of consents, the total value of consents, and the average value of consents.

Table 5.4 Dwelling alteration consents for Auckland, 1992 to 2007

Year	number	value $m	avge value $
Mar 92	5,375	112	$20,838
Mar 93	5,186	124	$23,879
Mar 94	5,322	140	$26,251
Mar 95	6,451	187	$28,985
Mar 96	6,869	212	$30,879
Mar 97	7,127	226	$31,681
Mar 98	7,230	258	$35,631
Mar 99	6,395	226	$35,333
Mar 00	6,316	246	$38,870
Mar 01	5,707	219	$38,298
Mar 02	5,841	237	$40,588
Mar 03	6,366	266	$41,776
Mar 04	6,810	345	$50,624
Mar 05	6,423	384	$59,844
Mar 06	6,261	387	$61,787
Mar 07	5,990	395	$65,953

The number of dwelling alteration consents in Auckland has not grown at the same rate as New Zealand. After a large increase in dwelling alteration consents between 1991 and 2001, the number of dwelling alteration consents has settled to around 6,000 in the year ending March 2007.

The volatility of alteration consents in Auckland is similar to that seen in the number of new dwelling consents. As discussed in the previous section, the number of consents for dwelling alterations provides further information on the capacity of the building industry and whether the industry can sufficiently supply the demand for housing. This table illustrates that the industry in Auckland has the potential, if needed, to shift its focus from alteration work to new dwelling construction.

5.4 Comparing the number of households to dwelling consents

It is important to compare the change in the number of households between 1991 and 2006 with the change in dwelling consents over the same period. This comparison signals whether supply from the building industry met the demand for new residential buildings.

Table 5.5 shows the change in the number of households between 1991 and 2006 for New Zealand. It also shows the number of new apartment and other dwelling consents, and dwelling alteration consents issued.

Table 5.5 Household growth and building consents for New Zealand, 1991 to 2006

	1991	1996	2001	2006
All households	1,164,867	1,268,091	1,344,240	1,453,167
5 year change		*103,224*	*76,149*	*108,927*
New dwelling consents*				
Apartments		*2,812*	*13,287*	*24,026*
Other dwellings		*96,954*	*100,690*	*113,040*
Other housing activities				
Alterations		*126,434*	*138,063*	*158,689*

* The consent numbers are for the 5 years ended March

Between 1991 and 1996, the number of households grew by over 103,000, while the number of new dwelling consents grew by just under 100,000. The reasons for, or the implications of, this mismatch are unclear. In 1991, New Zealand was experiencing a recession and there may have been a small number of unoccupied or partially occupied dwellings. Alternatively, there may have been a time delay between the issuing of a new dwelling consent and the construction of that dwelling. Suffice to say, there were sufficient consents being issued for new dwellings during this period.

Between 1996 and 2001, the number of consented new dwellings exceeded the number of new households by nearly 38,000. This gap declined to just over 28,000 between 2001 and 2006, despite the number of new dwelling consents growing by over 23,000 over the previous five years. Again the reasons for this mismatch are unclear.

It is beyond the scope of this report to look at this issue in more detail, but it should be investigated further.

We note that over the 15 years covered in this table, the average number of new dwelling consents per annum is about 23,390; although, in the last five years this average increased to over 27,400 new dwelling consents per annum. These figures are important to note when we look at scenarios for household growth later in this report.

The table also shows that the number of new dwelling consents for apartments rose from 3% of new dwelling consents between 1991 and 1996, to 18% between 2001 and 2006.

Included in the table are the changes in the number of dwelling alteration consents, as an illustration of the capacity of the building industry to supply any demand for housing caused by immigration. The number of dwelling alterations consents rose by over 32,000 consents in the 2001 to 2006 period, compared to the 1991 and 1996 period.

5.4.1 Household numbers to dwelling consents in Auckland

As mentioned in the previous section, it is important to compare the change in the number of Auckland households between 1991 and 2006 with the change in dwelling consents over the same period. This comparison signals whether supply from the building industry in Auckland met the demand for new residential buildings.

Table 5.6 shows the change in the number of households in Auckland between 1991 and 2006. It also shows the number of new apartment and other dwelling consents, and dwelling alteration consents issued.

Table 5.6 Household growth and building consents for Auckland, 1991 to 2006

	1991	1996	2001	2006
All households	276,294	305,559	335,220	370,905
5 year change		*29,265*	*29,661*	*35,685*
New dwelling consents*				
Apartments		*2,872*	*9,619*	*15,981*
Other dwellings		*26,567*	*28,041*	*24,346*
Other housing activities				
Alteration		*29,203*	*32,775*	*31,701*

* The consent numbers are for the 5 years ended March

Between 1991 and 2001, the number of households in Auckland grew by over 29,000. This growth increased between 2001 and 2006 to over 35,000 households.

The number of new dwelling consents also grew in Auckland. Between 1991 and 1996, the number of new dwelling consents increased by slightly more than the number of households, with 10% of these new dwelling consents being for apartments. Between 2001 and 2006, the number of new dwelling consents in Auckland grew to over 40,000, with 40% of these consents being for apartments.

Over the 15 years covered in this table, the average number of new dwelling consents per annum is about 7,160, although in the last five years this average increased to over 8,060 new dwelling consents per annum.

5.5 Summary

Between 1991 and 2006, the number of residential building consents issued grew. The number of dwelling alteration consents has also steadily increased since 2002. From these figures we can see that the building industry has the potential, if needed, to shift its focus from alteration work to new dwelling construction. Comparing the number of households with the number of dwelling consents issued between 1996 and 2001 also indicates the building industry was able to meet any increased demand for new residential

building caused by immigration. This indicates the building industry has the capacity to meet any increased demand for housing caused by immigration. The following sections now turn to discuss immigration scenarios from 2006 to 2016.

6 Migration scenarios to 2016

This section introduces the assumptions and drivers of two migration scenarios from 2006 to 2016. Under each scenario, the household and the birthplace of migrant couples and singles will be investigated. In addition, the outcomes for Auckland under these scenarios will be discussed separately. The impact of the two scenarios will be discussed in detail in Sections 7 and 8.

6.1 Assumptions and drivers

In our scenarios we apply relevant household characteristics (as described in detail in the appendices) to our five household types to generate key housing requirements by tenure and dwelling type.

Our first scenario involves a conservative net inflow of around 5,000 migrants per annum. This group has a composition and characteristics similar to the average experienced between 1991 and 2001. A second scenario is built around an assumed continuation of migration patterns more similar to that seen between 2001 and 2006.

Changes in household numbers over this period, across the various households, are listed in Table 6.1.

Table 6.1 Annual average change in household numbers, 1991 to 2006

Period	Migrant couple	Single migrant	NZ-born and migrant	NZ-born couple	Single NZ born	NEC	Total
1991-1996	1,553	1,586	1,089	1,567	5,663	9,186	20,645
1996-2001	1,504	5,219	-94	-5,495	14,609	-512	15,230
2001-2006	8,342	724	4,263	7,214	-8,027	9,270	21,785
1991-2001	1,529	3,403	497	-1,964	10,136	4,337	17,937
1996-2006	4,923	2,971	2,084	859	3,291	4,379	18,508
1991-2006	**3,800**	**2,510**	**1,753**	**1,095**	**4,082**	**5,981**	**19,220**

Between 1991 and 2006, 19,200 households were created per annum with a net reduction in the number of NZ-born single households in the latest five year period. This contrasts with the 1996 to 2001 period, where there was a noticeable increase in this category, but a reduction in NZ-born couple households.

Table 6.2 and Table 6.3 provide summaries of the population changes over these periods.

Table 6.2 Annual average net change in total population, 1991 to 2006

Period	Migrant	NZ-born	NEC	Total
1991-1996	16,862	7,235	24,778	48,875
1996-2001	18,132	8,532	-2,868	23,795
2001-2006	36,568	13,869	7,695	58,133
1991-2001	17,497	7,884	10,955	36,335
1996-2006	27,350	11,201	2,414	40,964
1991-2006	**23,854**	**9,879**	**9,868**	**43,601**

Table 6.3 Annual average net change in the working age population (WAP), 1991 to 2006

Period	Migrant	NZ-born	NEC	Total
1991-1996	13,632	5,666	19,886	39,184
1996-2001	16,349	6,319	-1,999	20,669
2001-2006	32,457	15,758	5,948	54,163
1991-2001	14,990	5,992	8,944	29,926
1996-2006	24,403	11,039	1,975	37,416
1991-2006	**20,813**	**9,248**	**7,945**	**38,005**

The majority of changes in the net population can be attributed to changes in the working age population (WAP). For example, between 1991 and 2006 the population increased by approximately 43,600 per annum, with an annual average increase of 38,000 in the WAP. Changes in the migrant population contribute to more than half of these figures, with an annual average increase of 23,850 people, including an annual increase in the migrant WAP of 20,810.

During this time the total WAP would have struggled to expand were it not for the contribution of migrants.

Between 1996 and 2001 was the lowest growth in the WAP, and the lowest growth in household numbers, as listed in Table 6.1.

To investigate housing impacts of migration scenarios, we associate the changes in population and the WAP to changes in household numbers. In particular, Table 6.4 associates the changes in the WAP of migrants to their household type. This is generated by allowing for two people in the WAP in each migrant couple household, one in each migrant single household, and one in each NZ-born and migrant couple household. This

leaves a subset of the migrant WAP in unidentified households. The majority of this group is likely to comprise:

- Overseas born children (aged over 15) residing in migrants couple households.
- Overseas born children (aged over 15) residing in NZ-born and migrant couple households.
- Overseas born people residing with other (unrelated) migrants.
- Overseas born people residing with other (unrelated) NZ-born individuals.

Table 6.4 Location of net average annual changes of migrant WAP, 1991 to 2006

Period	Migrant couple	Single migrant	NZ-born and migrant	Unidentifed	Total
1991-1996	3,107	1,586	1,089	7,850	13,632
1996-2001	3,007	5,219	-94	8,217	16,349
2001-2006	16,684	724	4,263	10,787	32,457
1991-2001	3,057	3,403	497	8,033	14,990
1996-2006	9,845	2,971	2,084	9,502	24,403
1991-2006	**7,599**	**2,510**	**1,753**	**8,951**	**20,813**

Note, an increase in this group of migrants does not result in the formation of recent households and so does not generate a demand for new housing units. Thus, in generating a scenario, the proportion of any net change in the migrant population accounted for by this 'unidentified households' group is important.

We generate scenarios through the following process:

1. Specify the inter-census change in the migrant population (either as a percentage rate on the base population or as an annual average net inflow).
2. Specify the proportion of the inter-census change in the migrant population that is accounted for by the change in the migrant WAP.
3. Specify the inter-census change in the NZ-born population (either as a percentage rate on the base population or as an annual average net addition).
4. Specify the proportion of the inter-census change in the NZ-born population that is accounted for by the change in the NZ-born WAP.
5. For the consequential level of the migrant WAP, we specify:
    i) The proportion that is residing in migrant couple households.

ii) The proportion that is residing in NZ-born and migrant couple households.

iii) The proportion that is residing in unidentified households.

6. For the consequential level of the NZ-born WAP, we specify:

i) The proportion that is residing in NZ-born couple households.

ii) The proportion that is residing in unidentified households.

Given these specifications or assumptions, the number of new households formed and the demand for housing units can be investigated. Values for these parameters for the period 1991 to 2006 are listed in Table 18.1 and Table 18.2. Key parameters for the two scenarios are summarised in Table 6.5. These are:

- Scenario I - generated from parameter values close to those experienced over the 1991 to 2001 period.
- Scenario II - generated from parameter values close to those experienced over the 2001 to 2006 period.

Table 6.5 Assumptions and population, 1991 to 2016

	1991	2001	2006	Scenario I 2016	Scenario II 2016
Intercensal change as proportion of total base year popn (%)					
Migrants	2.50	4.89	2.50	2.50	4.50
NZ-born	1.07	1.86	1.13	1.13	1.85
Population (000)					
Migrant	527.3	702.3	885.1	1,090.4	1,259.7
NZ-born	2,812.0	2,890.9	2,960.2	3,053.0	3,114.2
NEC	34.6	144.1	182.6	196.7	207.7
Total	3,373.9	3,737.3	4,027.9	4,340.1	4,581.6

Given the household numbers implied from each of these scenarios, the demand for housing units is assessed in Section 7. In addition, the composition of such demand (by tenure and dwelling type) is also discussed. These scenarios also assume the birthplace of recent migrants will mirror those of the two periods.

Migrant numbers here relate to the overseas born. Consequently, they differ from changes in net permanent and long-term (PLT) migration flows, as these include returning and departing NZ-born.

To precisely convert the migrant scenario to a PLT equivalent requires detailed modelling of emigration as well as returning New Zealand born. Unfortunately, this is beyond the scope of this project.

However, for guidance, we list recent data in Table 6.6. Consequently, we would argue the following concordance:

- Scenario I: net migrant inflow of approximately 20,000 per annum is consistent with a net PLT annual inflow of the order of 10,000 - similar to the comparison for the 1991 to 2001 period.
- Scenario II: net migrant inflow of 37,500 per annum is consistent with a net PLT annual inflow of the order of 23,000 - similar to the comparison for the 2001 to 2006 period.

Table 6.6 Annual average PLT and migrant net inflows, 1991 to 2006

Period	net PLT inflow	net migrant inflow
1991-1996	15,650	16,862
1996-2001	-1,628	18,132
2001-2006	22,996	36,568
1991-2001	7,011	17,497
1996-2006	10,684	27,350
1991-2006	**12,339**	**23,854**

6.2 Household composition

This section discusses the outcomes of the two scenarios in terms of household type in 2016. We also break down the migrant couple category by birthplace.

The largest household category remains NZ-born couples, but this category grows at a slower rate from 2006 to 2016 in both scenarios. The faster growth occurs in the migrant household categories, including NZ-born and migrant couples. The upward trend is more obvious in Auckland, which is discussed separately in Section 6.2.2.

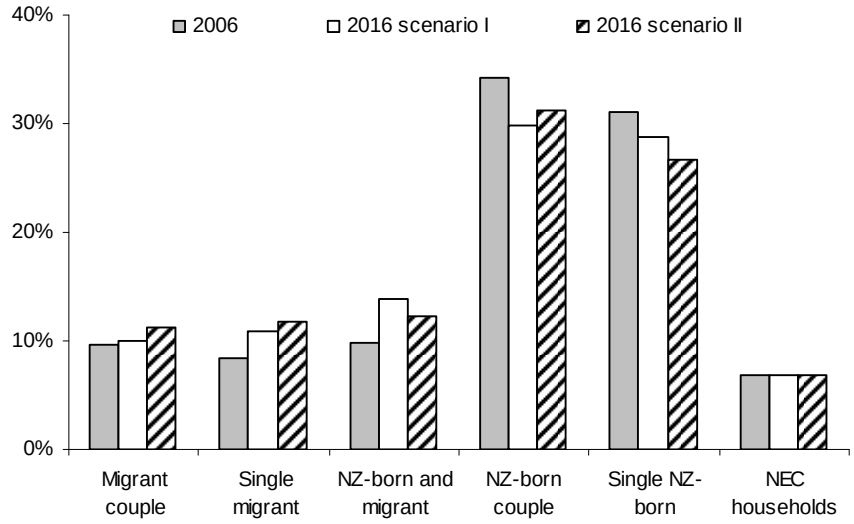
6.2.1 New Zealand household type

Figure 6.1 compares the share of different household types in New Zealand in 2006 and 2016, including the two scenarios. NZ-born couples and NZ-born singles together account for over 50% of the total number of New Zealand households. However, this proportion declines over the next 10 years, due to the inflow of migrants. It is noticeable

that the number of migrant single and NZ-born and migrant couple households increases, while the increase for migrant couples is less pronounced.

Comparing the two scenarios, while there is a higher migrant inflow assumed in scenario II, the share of NZ-born and migrant couples is lower compared to scenario I. However, consistent with the 2001 to 2006 period, on which scenario II is based, there is a noticeable fall in the proportion of NZ-born single households.

Figure 6.1 Share of household categories in total New Zealand households



Scenario I assumptions for NZ-born and migrant growth result in the New Zealand population totalling 4.34 million in 2016, representing a 312,000 increase from 2006. This figure translates to an estimated total of 1.6 million households in 2016. Among these households, almost 159,000 are migrant couples (Table 6.7). But more noticeable, is the significant increase in the number of single migrants, which results in an extra 50,000 households. This increase takes this household type from 8.4% of the 2006 total to 11.2% in 2016. In contrast, there is a reduction in the number of NZ-born couple households. This composition of growth, an increase in migrant singles and decline in NZ-born couples households, is consistent with that experienced between 1991 and 2001.

Table 6.7 Number of households by household types (000s)

Household type	1991	2001	2006	Scenario I 2016	Scenario II 2016
Migrant couple	83.7	99.0	140.7	159.0	188.6
Single migrant	84.4	118.4	122.0	173.4	197.1
NZ-born and migrant	115.4	120.3	141.7	221.6	208.3
NZ-born couple	481.6	462.0	498.0	476.2	528.3
Single NZ-born	388.9	490.2	450.1	460.0	449.7
NEC households	11.0	54.3	100.7	110.9	117.0
All households	**1,164.9**	**1,344.2**	**1,453.2**	**1,601.1**	**1,689.1**

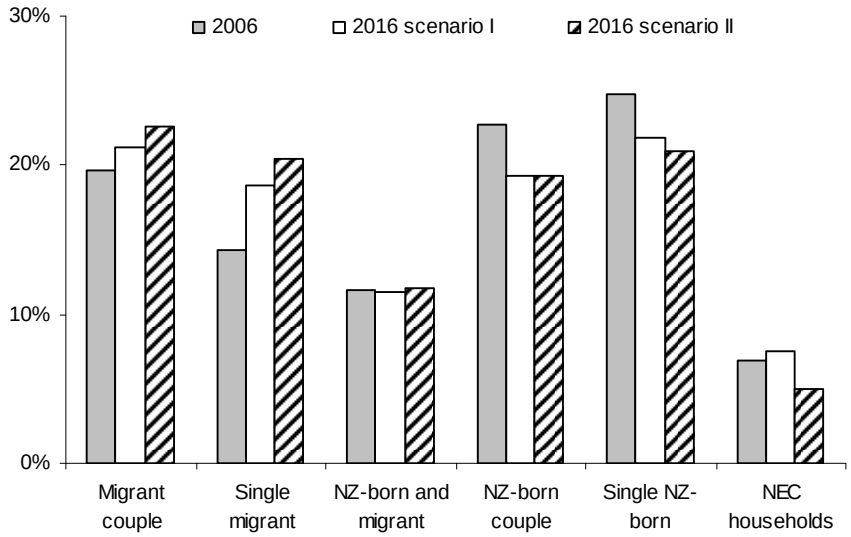
Scenario II provides a projection consistent with a larger migrant inflow, as well as slightly higher NZ-born population growth. In this scenario, the New Zealand population in 2016 totals 4.58 million, 241,000 higher than that for scenario I. In this scenario the migrant population increases to 1.26 million, or over 27.5% of the total New Zealand population. The NZ-born population will reach 3.1 million, growing at the rate of 1.85% per annum over the 2006 to 2016 period.

These assumptions, consistent with the 2001 to 2006 period, translate to a scenario with 1.69 million households in 2016. Scenario II projects noticeably more migrant couples (188,600), nearly 30,000 more than in scenario I. Also noticeable in this scenario is the even larger increase in single migrants, compared with the scenario I picture. In contrast, NZ-born single households remain static over the 2006 to 2016 period, taking this category's share of total households down to 26.6%, from 34.3% in 2006. Further, there is an increase in NZ-born couple households. In this scenario, the composition of growth, more migrant single and fewer NZ-born single households is consistent with movements experienced over the 2001 to 2006 period.

6.2.2 Auckland household type

Translating the above household numbers and composition at the national level to Auckland reinforces the contrast between the two scenarios. The share of each household type in the total number of households in Auckland is illustrated in Figure 6.2. The growth in the number of migrant couple and single households in both scenarios is more pronounced in Auckland. In particular, the growth in single migrants in scenario II sees over 20% of households in Auckland in this category in 2016. Consequently, there is a reduction in the proportion of NZ-born single and couple households in both scenarios.

Figure 6.2 Share of household categories in total Auckland households



The projected number of households in Auckland for each of the scenarios is listed in Table 6.8. In scenario I the additional 48,000 households created over the 2006 to 2016 period are dominated by the increased number of migrant households. In particular, the 25,000 extra single migrants in Auckland over this period contrasts with a reduction in the number of NZ-born couple households. Again, the composition of this growth is consistent with that experienced over the 1991 to 2001 period, on which this scenario is based.

Table 6.8 Number of households in Auckland

Household type	1991	2001	2006	Scenario I 2016	Scenario II 2016
Migrant couple	36.5	50.7	73.1	88.7	99.6
Single migrant	32.4	49.1	53.2	78.2	90.0
NZ-born and migrant	35.4	37.7	42.9	48.1	52.1
NZ-born couple	85.6	82.3	84.4	80.8	85.0
Single NZ-born	83.0	99.2	91.9	91.3	92.6
NEC households	3.4	16.2	25.4	31.3	21.8
All households	**276.3**	**335.2**	**370.9**	**418.4**	**441.0**

Scenario II sees not only a much larger increase in overall household numbers in Auckland, but the dominant influence of migrant households. This mirrors changes over the 2001 to 2006 period, when the number of NZ-born couple households in Auckland was close to static and the number of NZ-born single households declined.

6.2.3 New Zealand migrant couple households by birthplace

Table 6.9 provides the birthplace of migrant couples between 1991 and 2006, as well as for 2016 under the two scenarios.

In scenario I, the number of migrant couples in New Zealand will total 159,000 in 2016, an increase of 18,300 from 2006. The majority of this increase is accounted for by the 9,400 more couples from Asia, with only 200 more couples from Australia.

Table 6.9 New Zealand migrant couples by birthplace (000)

Birthplace	1991	2001	2006	Scenario I 2016	Scenario II 2016
Australia	2.3	2.5	3.3	3.5	3.7
Pacific Islands	16.8	18.3	23.3	24.3	25.8
UK & Ireland	40.3	32.9	40.8	44.2	49.6
Europe & North America	11.5	11.7	14.6	14.8	15.0
Asia	10.6	24.9	43.1	52.5	67.8
Other	2.1	8.7	15.4	19.8	26.8
All migrant households	**83.7**	**99.0**	**140.7**	**159.0**	**188.6**

Scenario II sees a much larger increase in migrant couples, with a 47,900 increase over the 2006 to 2016 period. This increase is also primarily due to the growth in couples from Asia (an additional 24,700). In this scenario, the UK and Ireland also contributes noticeably to this growth, with an additional 8,800 households over this period.

6.2.4 Auckland migrant couple households by birthplace

Table 6.10 provides the Auckland dimension to the breakdown of migrant couples by birthplace.

For scenario I, the 15,600 increase in migrant couples over the 2006 to 2016 period includes an 8,500 increase in those born in Asia. Increases from the remaining birthplace categories are of much smaller orders of magnitude. However, the rise of the “Other” birthplace is noticeable, reflecting its rise over the 1991 to 2001 period.

Table 6.10 Auckland migrant couples by birthplace (000)

Birthplace	1991	2001	2006	Scenario I 2016	Scenario II 2016
Australia	0.9	1.0	1.3	1.3	1.4
Pacific Islands	12.0	13.5	17.3	18.5	19.3
UK & Ireland	14.0	10.8	12.3	14.6	16.2
Europe & North America	3.3	3.9	4.9	5.4	5.8
Asia	5.3	16.4	29.1	37.6	43.5
Other	0.9	5.1	8.2	11.3	13.5
All migrant households	**36.5**	**50.7**	**73.1**	**88.7**	**99.6**

As for scenario II, again the largest proportion of the 26,500 increase in migrant couples is accounted for by those born in Asia. This is largely due to the large proportion of Asian migrants in the assumed inflow. The preference of Auckland as the first destination in

New Zealand for most migrants from Asia, at least in the short term, also contributes to this increase. Again, these assumptions are consistent with observations over the 2001 to 2006 period, on which scenario II is based.

7 Tenure and dwelling scenarios to 2016

Having looked at the assumptions and drivers of the two migration scenarios from 2006 to 2016, we will now focus on the projected tenure and dwelling types of New Zealand households. Projected tenure and dwelling type for migrant couples is also broken down by birthplace in this section. The projected tenure and dwelling types required in Auckland are discussed in Section 8.

It is important to note that the projections provided describe the consequent demand for households contingent on the assumptions adopted to generate the scenarios. In particular, we make no allowance for the supply response of the market. Thus, the projections indicate the quantum and composition of the demand changes in each of the scenarios. The consequent supply and price adjustments should be investigated in the context of a wider general equilibrium economic impact model.

7.1 Tenure

Living in one's own home remains the largest form of tenure for households in New Zealand. As expected, the majority of those owning their own homes in 2016 are still couples, rather than single households. Consistent with the finding that recent migrants have a lower rate of home ownership, NZ-born households are more likely to reside in their own homes compared to migrant households. However, there is a noticeable demand from migrant couples and migrant singles for their own homes, as their household numbers increase solidly in the next 10 years in both scenarios.

Renting from private landlords increases proportionately more, as the relative importance of migrants increases over the projected period. In particular, single migrant and NZ-born and migrant couple households are the key drivers of this growth.

The 148,000 extra households in scenario I consist of:

- 46,200 households that reside in their own home.
- 74,400 households that rent from the private sector.
- 9,000 households that rent from the central government.
- 1,500 households that rent from the local government.[19]

[19] The remaining households will be in 'other' and 'not elsewhere specified' tenure categories.

In contrast, the 236,000 extra households in scenario II consist of:

- 102,300 households that reside in their own home.
- 103,800 households that rent from the private sector.
- 8,400 households that rent from central government.
- 1,800 households that rent from local government.

In either scenario, the growing importance of the private rental market is central. The satisfaction of the demand for housing that arises from the assumptions adopted to generate the migration scenarios appears to rest on a large expansion in dwellings in the private rental market.

7.1.1 Own home

In both scenarios, residing in one's own home will still be the primary form of tenure in 2016. Table 7.1 suggests an additional 46,200 own their own home over the next 10 years in scenario I, compared to an extra 102,300 in scenario II.

Recall that the total number of households increases by 148,000 and 236,000 in scenarios I and II, respectively. Clearly, this suggests an on-going decline in the measured rate of home ownership. This is consistent with the assumptions we have adopted to drive each of the scenarios, and the measured declines in home ownership rates over the 1991 to 2001 period and the 2001 to 2006 period.

Within the categories, noticeable changes are in the NZ-born couple and NZ-born single households. The scenario I decline in the later reflects the fall in the formation of this type of household over the 1991 to 2001 period. This decline is a feature that contributes to the restrained growth in the total number of households residing in their own home.

In contrast, scenario II sees NZ-born single household numbers remain static, reflecting minimal growth experienced over the 2001 to 2006 period. However, growth across other categories, including migrant couples and singles, counters this feature.

Table 7.1 Households – own home

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Own home					
Migrant couple					
Australia	2,130	2,180	50	2,311	181
Pacific Islands	9,510	9,774	264	10,446	936
UK & Ireland	33,411	35,550	2,139	39,322	5,911
Europe & North America	10,011	10,076	65	10,170	159
Asia	24,598	26,828	2,230	34,764	10,165
Other	8,191	9,468	1,277	12,604	4,412
Total migrant couple	87,852	93,877	6,025	109,616	21,764
NZ-born and migrant	111,853	150,340	38,487	148,745	36,893
NZ-born couple	384,081	367,469	-16,612	407,344	23,263
Single migrant	59,674	70,685	11,011	76,017	16,343
Single NZ-born	231,592	237,020	5,428	231,552	-40
Not elsewhere classified	36,212	38,048	1,836	40,277	4,066
ALL HOUSEHOLDS	**911,263**	**957,439**	**46,176**	**1,013,552**	**102,289**

Scenario I records almost 94,000 migrant couples owning their own homes in 2016, 10% of the total number of households. The couples coming from Asia and the UK and Ireland are the drivers of this category, accounting for nearly 4,400 of the 6,000 increase to 2016. Noticeably, couples from the remaining countries record little change in the numbers owning their own home, with the exception of the “Other” birthplace category.

The most substantial projected increase in this scenario is in the NZ-born and migrant couple category, with a 34.4% jump in numbers over the 2006 to 2016 period. Although the single migrant household is the smallest category among all other household types, it registers a noticeably large increase in home ownership numbers. This is largely due to the composition of the inflow of migrants assumed in scenario I, rather than any increase in the rate of home ownership.

In scenario II, a larger migrant inflow presents a different picture of the additional number of households residing in their own home. Migrant couples account for a fifth of the increase, with a 24.8% rise from the 87,852 recorded in 2006. Of this increase, migrant couples from Asia account for nearly one-half, with couples from the UK and Ireland accounting for another quarter.

Scenario II also sees a further contribution to the increase in those residing in their own home from the single migrant category.

7.1.2 Rent from private sector

Table 7.2 provides the projected number of households renting from the private sector. In both scenarios, the next 10 years will see more households renting from private landlords across almost all the categories we have captured. The exceptions are NZ-born couple households in scenario I, and NZ-born single households in scenario II. The most significant increases are in the NZ-born and migrant couple households and the single migrant household categories.

Table 7.2 Households – rent from private sector

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Rent from private landlord					
Migrant couple					
Australia	1,095	1,189	94	1,298	203
Pacific Islands	6,153	6,488	335	7,473	1,320
UK & Ireland	6,786	7,806	1,020	9,724	2,938
Europe & North America	3,882	3,959	77	4,133	251
Asia	14,387	19,886	5,499	26,885	12,498
Other	6,029	8,614	2,586	12,128	6,099
Total migrant couple	38,332	47,942	9,610	61,640	23,308
NZ-born and migrant	26,674	61,621	34,946	56,009	29,335
NZ-born couple	99,633	96,001	-3,632	107,120	7,487
Single migrant	40,161	67,244	27,083	79,490	39,329
Single NZ-born	153,574	156,527	2,952	153,140	-435
Not elsewhere classified	17,329	20,760	3,430	22,117	4,787
ALL HOUSEHOLDS	**375,704**	**450,093**	**74,390**	**479,515**	**103,811**

In particular, Scenario I sees an increase of 27,000 in the number of single migrant households renting from the private sector – representing a 67% increase on the number recorded in 2006. There is also a 25% increase in migrant couples renting from the private sector. Again, migrant couples with an Asian birthplace are the main driver here, followed by the UK and Ireland birthplace.

The number of NZ-born and migrant couple households renting from the private sector will more than double (up 131%) by 2016 in scenario I. This feature arises from a combination of moderate growth in this household category and a declining rate of home ownership.

In scenario II, there is an increase of more than 39,300 in the number of single migrant households renting from the private sector. This results in the 2016 total being nearly double that in 2006. There is also a 61% increase in migrant couples and a 98% increase in the single migrant category. About 87% more migrant couples from Asia are projected to rent from private landlords, whereas those from the UK and Ireland rise by 43.3%.

It is noticeable that the projected expansion in demand for private sector rented dwellings is restrained, to a degree, by the muted growth arising from the largest category, the NZ-born single households. This observation is relevant to both scenarios presented.

7.1.3 Rent from public sector

Clearly, the proportion of households renting from the public sector is small, compared to other tenures. However, the impact of the two migration scenarios is noticeable, especially in light of the on-going decline in home ownership rates. Table 7.3 lists the projected changes from 2006 to 2016 for the two scenarios.

Scenario I sees an increase of nearly 9,000 households renting from the central government over the 2006 to 2016 period, while the increase is just over 8,400 for scenario II. In both scenarios this increase is dominated by a demand from single migrant households.

Table 7.3 Households – rent from central government

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Rent from central government					
Migrant couple	7,642	8,930	1,288	8,043	402
NZ-born and migrant	2,045	4,422	2,377	2,341	296
NZ-born couple	10,053	9,658	-395	10,599	546
Single migrant	8,802	13,434	4,632	15,482	6,680
Single NZ-born	29,644	30,127	483	29,592	-52
Not elsewhere classified	4,140	4,737	597	4,700	560
ALL HOUSEHOLDS	**62,326**	**71,307**	**8,981**	**70,758**	**8,432**

The additional demand from single migrant households in scenario I is accompanied by further demand from NZ-born and migrant couple households as well as migrant couples. However, the total increase in demand in both scenarios is curtailed by the muted growth in the largest category, NZ-born single households.

On the local government side, as shown in Table 7.4, the predominance of the single migrant household category in the increase in demand over the 2006 to 2016 period is again apparent.

Table 7.4 Households – rent from local government

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Rent from local government					
Migrant couple	574	649	75	768	193
NZ-born and migrant	214	430	216	266	52
NZ-born couple	807	783	-24	854	47
Single migrant	2,568	3,556	989	4,003	1,435
Single NZ-born	7,766	7,924	158	7,764	-2
Not elsewhere classified	675	755	80	773	98
ALL HOUSEHOLDS	**12,604**	**14,098**	**1,494**	**14,428**	**1,824**

7.2 Dwelling type

In both scenarios a household living in houses remains the largest dwelling type category in 2016. This is followed by flats or apartments in single-storey buildings and flats or apartments in multi-storey buildings. However, growth in these dwelling types is projected to be faster, driven by growth in the formation of households by single migrants.

The 148,000 extra households in scenario I consist of:

- 79,100 households that reside in houses.
- 28,500 households that reside in flats or apartments in single-storey buildings.
- 12,800 households that reside in flats or apartments in multi-storey buildings.[20]

The 236,000 extra households in scenario II consist of:

- 145,300 households that reside in houses.
- 35,700 households that reside in flats or apartments in single-storey buildings.
- 31,500 households that reside in flats or apartments in multi-storey buildings.[21]

While growth in flats or apartments is noticeable, the importance of the house dwelling type should not be overlooked. Combining this observation with those earlier for tenure, it

[20] The remaining households will be in 'other' and 'not elsewhere specified' dwelling type categories.

[21] The remaining households will be in 'other' and 'not elsewhere specified' dwelling type categories.

is clear that the required growth in private rental market dwellings will need to cater for house and flat or apartment dwelling types.

7.2.1 House

Table 7.5 lists the number of households living in houses in 2006, and the projections for 2016 for scenario I and scenario II.

In scenario I, the total number of households living in houses will reach 1.2 million, with a 79,000 increase in number. While NZ-born couples are the largest category here, their decline in this migration scenario has a suppressing impact on the demand for the house dwelling type. However, this is countered by the strong growth in the NZ-born and migrant couple households. The increase in migrant couples is dominated by couples from Asia, the UK and Ireland, and noticeably the "Other" birthplace category. In addition, the single migrant category also contributes positively to the expansion in overall demand for the house dwelling type.

Table 7.5 Households living in houses

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
House					
Migrant couple					
Australia	2,701	2,806	105	2,978	277
Pacific Islands	17,607	17,997	390	19,327	1,720
UK & Ireland	35,871	38,690	2,819	43,599	7,728
Europe & North America	11,736	11,843	107	12,028	292
Asia	29,743	33,720	3,977	43,446	13,703
Other	12,118	15,213	3,095	20,495	8,376
Total migrant couple	109,776	120,268	10,493	141,873	32,097
NZ-born and migrant	125,428	183,270	57,842	175,217	49,789
NZ-born couple	450,972	432,615	-18,357	479,233	28,261
Single migrant	74,814	94,469	19,655	103,912	29,097
Single NZ-born	313,575	319,588	6,013	313,173	-402
Not elsewhere classified	49,980	53,499	3,520	56,439	6,459
ALL HOUSEHOLDS	**1,124,545**	**1,203,710**	**79,165**	**1,269,847**	**145,302**

With the higher migrant inflow assumed in scenario II, the number of households living in houses rises accordingly. In particular, there is a large contribution from the NZ-born and migrant couple household category, supplemented by an increased demand from migrant couple, NZ-born couple as well as single migrant households. Among migrant couples, the growing importance of the "Other" birthplace category appears even more pronounced – further reflecting its emergence over the 2001 to 2006 period. However, the decline in the number of single migrants living in houses counters some of this growing demand.

7.2.2 Flat or apartment in a single-storey building

Single households are more likely to reside in a flat or apartment in a single-storey building in 2006. Table 7.6 lists the comparison of the two scenarios in 2016. In each scenario, the increase in the demand for this dwelling type from single migrant households is greatest.

Table 7.6 Households living in flats or apartments in single-storey buildings

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Flat/apartment in single storey building					
Migrant couple households					
Australia	213	231	18	236	23
Pacific Islands	2,682	2,900	218	3,235	553
UK & Ireland	2,394	2,658	264	2,549	155
Europe & North America	1,200	1,222	22	1,250	50
Asia	6,669	9,241	2,573	13,809	7,141
Other	1,607	2,250	644	3,094	1,487
Total migrant couple	14,764	18,502	3,738	24,173	9,409
NZ-born and migrant	6,930	17,946	11,016	12,869	5,939
NZ-born couple	22,185	21,008	-1,177	23,356	1,171
Single migrant	22,888	35,299	12,411	40,838	17,950
Single NZ-born	75,783	77,157	1,374	75,599	-184
Not elsewhere classified	5,954	7,098	1,143	7,387	1,432
ALL HOUSEHOLDS	**148,505**	**177,010**	**28,505**	**184,223**	**35,718**

In scenario I the single migrant increase is supplemented by the increase in the NZ-born and migrant couple households. Again, the reduction in NZ-born couple households in this scenario is reflected in the lower demand from this source. Among migrant couples, the increase from Asia is clear, while the importance of the "Other" birthplace category is again apparent.

Scenario II presents a more substantial increase, as shown in Table 7.7. The number of migrant couples living in flats or apartments in single-storey buildings records impressive growth, some 63.7% over the projection period. Migrant couples from Asia more than double the 2006 figure, while the increase in demand from couples from the "Other" birthplace category is also noticeable. However, the increase in demand is clearly dominated by the single migrant household in this scenario.

7.2.3 Flat or apartment in multi-storey buildings

In 2006, households living in flats or apartments in multi-storey buildings numbered almost 100,000. Table 7.7 shows this number rising to over 112,200 in scenario I in 2016, and to nearly 131,000 in scenario II.

Among the household types, single NZ-born households comprised the largest category residing in this dwelling type. Consequently, the muted growth in this category across both scenarios restrains the expansion in demand for this dwelling type.

Table 7.7 Households living in flats or apartments in multi-storey buildings

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Flat/apartment in multi-storey building					
Migrant couple households					
Australia	363	379	16	456	93
Pacific Islands	1,758	1,765	7	2,108	350
UK & Ireland	2,070	2,185	115	2,979	909
Europe & North America	1,356	1,367	11	1,443	87
Asia	5,766	6,724	958	10,836	5,071
Other	1,446	1,501	55	3,215	1,770
Total migrant couple	12,758	13,920	1,162	21,037	8,279
NZ-born and migrant	7,386	12,441	5,055	18,623	11,237
NZ-born couple	17,517	16,731	-786	18,665	1,148
Single migrant	17,624	23,953	6,329	27,021	9,398
Single NZ-born	39,438	39,908	470	39,364	-74
Not elsewhere classified	4,661	5,261	600	6,135	1,474
ALL HOUSEHOLDS	**99,384**	**112,215**	**12,831**	**130,846**	**31,462**

In scenario I the increased demand of 12,800 households is almost totally accounted for by increases in single migrant and NZ-born and migrant couple households.

In contrast, scenario II projected a significant increase in migrant couples in this dwelling type. Asian couple numbers nearly double by 2016, reaching 10,800, while the “Other” birthplace category again becomes noticeable.

8 Auckland tenure and dwelling scenarios to 2016

Given the share of the New Zealand population and the migrant population accounted for by Auckland, it is pertinent to translate the previous projections to their Auckland equivalent. This section presents the consequences of the above scenarios on the demand for housing in Auckland.

As noted in Section 6.2, scenario I sees a net additional 47,500 households formed in Auckland between 2006 and 2016, compared with 70,100 for scenario II.

8.1 Tenure

The home ownership rate in Auckland is low, and the disproportionate growth in renting from the private sector observed for New Zealand as a whole is even more pronounced in Auckland. The increase in renting from the private sector over the next 10 years in Auckland will be well above the national rate of increase, according to both scenarios.

The 47,500 extra households in scenario I consist of:

- 8,000 households that reside in their own home.
- 25,000 households that rent from the private sector.
- 4,300 households that rent from the central government.
- 100 households that rent from the local government.

The 70,100 extra households in scenario II consist of:

- 26,100 households that reside in their own home.
- 41,400 households that rent from the private sector.
- 1,800 households that rent from the central government
- Almost no change in the number of households that rent from the local government.

Clearly, earlier comments concerning the importance of the private rental sector in meeting the demand for housing, in either scenario, are of greater significance in Auckland. We further note that if such a supply response does not eventuate, other

changes will occur. Such changes may be reflected in different preferences in respect of housing tenures (perhaps induced by relative price adjustments) or in 'feedback' influences on the level of migration and/or household formation. In the Auckland context, such changes may also extend to the Auckland share of the assumed migration scenario.

8.1.1 Own home

The total number of households owning their own house in 2016 is expected to reach 223,400 in scenario I, as listed in Table 8.1. The additional 8,000 households mainly come from the migrant couple household type. We note the subdued picture for NZ-born single households in Auckland, which further reinforces the importance of the migrant couple category. Strong growth in demand from the single migrant category is also evident.

Table 8.1 Auckland households – own home

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Own home					
Migrant couple	41,766	46,300	4,534	53,180	11,414
NZ-born and migrant	32,682	34,884	2,202	37,262	4,581
NZ-born couple	64,533	61,907	-2,626	64,994	461
Single migrant	23,514	27,480	3,966	32,006	8,492
Single NZ-born	46,602	46,321	-281	46,971	369
Not elsewhere classified	6,312	6,548	236	7,077	765
ALL HOUSEHOLDS	**215,409**	**223,440**	**8,031**	**241,491**	**26,082**

Scenario II returns a different result in terms of home ownership rates. In particular, the most significant rise is in the single migrant category, rising by 36% over the period. The increase in NZ-born single and couple households is negligible. However, growth in the migrant couples' households (27%) leads to it becoming the second largest category in 2016 in scenario II.

8.1.2 Rent from private sector

In 2006, the proportion of Auckland households renting from the private sector was much higher compared to the rest of New Zealand. This proportion, and difference, is projected to grow over the next 10 years in both of the scenarios presented.

The scenario I migrant inflow projects an increase of 13,900 single migrants renting from the private sector between 2006 and 2016. This category, by far, accounts for most of the increases listed in Table 8.2. Migrant couples add a further 8,600, with the majority from Asia, and the "Other" birthplace being the next largest group. Again, the negligible

change from the largest group, single NZ-born households, mutes the overall increase in demand for private sector rental dwellings.

Table 8.2 Auckland households – rent from private sector

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Rent from private landlord					
Migrant couple households					
Australia	477	518	41	533	56
Pacific Islands	4,386	4,843	457	5,463	1,077
UK & Ireland	2,367	3,300	933	3,990	1,623
Europe & North America	1,563	1,815	252	2,139	576
Asia	9,837	14,862	5,025	17,080	7,243
Other	3,335	5,256	1,921	6,347	3,012
Total migrant couple	21,965	30,595	8,629	35,552	13,587
NZ-born and migrant	8,969	11,352	2,384	13,482	4,513
NZ-born couple	17,427	16,755	-672	17,586	159
Single migrant	18,144	32,058	13,914	39,546	21,402
Single NZ-born	31,359	31,195	-164	31,593	234
Not elsewhere classified	3,622	4,514	891	5,099	1,476
ALL HOUSEHOLDS	**101,486**	**126,470**	**24,983**	**142,858**	**41,372**

In scenario II, there is a significantly large increase in the demand for private rental dwellings. A projected increase from the number of single migrant households is the predominant driver of this larger demand in Auckland. In addition, the number of migrant couples renting from private landlords is projected to rise 62% over the 10 year projection period.

In contrast, NZ-born single and couple households barely register in the projected growth of demand for rental dwellings in the private sector.

8.1.3 Rent from public sector

In Auckland the number of households renting from central or local government remains small compared to those that own their own homes or rent from private landlords.

As expected, Table 8.3 shows the largest increase is projected to be in the single migrant category. A 49% increase makes this the largest category in 2016 in scenario I, while migrant couple households grow by 22%. All other categories are projected to have much smaller absolute changes.

However, the larger migrant inflow in scenario II leads to a lower increase in renting from central government compared to the increase projected in scenario I. The single migrant category is again the dominant influence. The lower increase in scenario II arises from

the lower proportion of recent single migrants renting from central government over the 2001 to 2006 period compared to the 1991 to 2001 period. Recall that the scenario II projection is based on parameters and proportions close to those experienced in the 2001 to 2006 period. Consequently, scenario II has a noticeably lower increase in households renting from central government despite the relatively higher migrant inflows.

Table 8.3 Auckland households – rent from central government

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Rent from central government					
Migrant couple	5,388	6,587	1,199	5,751	363
NZ-born and migrant	937	1,137	201	1,023	86
NZ-born couple	2,244	2,163	-81	2,260	16
Single migrant	5,583	8,316	2,733	6,779	1,196
Single NZ-born	8,307	8,269	-38	8,369	62
Not elsewhere classified	1,352	1,594	242	1,456	104
ALL HOUSEHOLDS	**23,811**	**28,067**	**4,256**	**25,638**	**1,827**

The number of households renting from local government remains almost unchanged in both scenarios. A rise of just over 100 households is projected for scenario I over the 10 year period, and less than 100 in scenario II.

8.2 Dwelling type

While the majority of Aucklanders will continue to live in houses, the rate of growth will slow compared to the number of households living in flats or apartments in multi-storey buildings. The sizable increase in Auckland households living in flats or apartments in multi-storey buildings reflects the growing number of apartments in central Auckland, although the number of apartment building consents has been declining in recent years.

In summary, of the additional 47,500 households created in Auckland in scenario I, the number of houses is projected to increase by 16,700 over the 10 year period. Consequently, there is projected to be nearly 11,300 more households living in flats and apartments in single-storey buildings, and another 5,200 more households living in flats and apartments in multi-storey buildings.

In scenario II, the additional 70,100 households in Auckland is projected to comprise of nearly 41,800 more households living in houses, 14,700 households living in flats and apartments in single-storey buildings, and 21,300 more households living in flats and

apartments in multi-storey buildings.[22] The significantly larger importance of flats and apartments in multi-storey buildings in scenario II clearly results from the assumptions based on the 2001 to 2006 period.

However, despite the surge in flat and apartment dwelling numbers, the importance of houses remains. As for the New Zealand situation, combining the observations on the demand for private rental properties, the need for both houses and apartment-type dwellings is clear.

8.2.1 House

Scenario I projects a 16,700 increase (6.4%) in Auckland households living in houses in the next 10 years, as listed in Table 8.4. Almost all of this growth can be accounted for by the expansion in demand from migrant single and couple households. However, reduced numbers in the two largest categories, NZ-born single and couple households, restrains the increase in demand to a degree.

Table 8.4 Auckland households – living in houses

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
House					
Migrant couple	53,444	61,470	8,026	70,181	16,737
NZ-born and migrant	35,711	39,081	3,370	41,863	6,153
NZ-born couple	72,030	69,110	-2,920	72,554	524
Single migrant	30,398	38,379	7,981	46,931	16,534
Single NZ-born	57,300	56,984	-316	57,745	445
Not elsewhere classified	8,536	9,090	554	9,922	1,386
ALL HOUSEHOLDS	**257,419**	**274,115**	**16,696**	**299,196**	**41,777**

The larger migrant inflow in scenario II significantly boosts the projected number of Auckland households living in houses. Both the migrant single and couple categories register an expansion of more than 16,500, with a further 6,100 from the NZ-born and migrant couple households almost totally accounting for the increase of nearly 41,800.

8.2.2 Flats and apartments

The considerable proportion of flats or apartments in multi-storey buildings in the Auckland housing market attests to its significant role. The number of households living in this type of dwelling is projected to become more noticeable in the following 10 years, particularly in scenario II. Again, migrant single and couple households (and NZ-born and

[22] These numbers imply a reduction in numbers of households in the 'other' and 'not elsewhere specified' dwelling categories.

migrant couples to a lesser extent) are the primary drivers of this expansion, as seen in Table 8.5.

In scenario I, there is a projected 35% increase in the number of single migrant households living in flats or apartments in multi-storey buildings.

Table 8.5 Auckland households – living in flats or apartments in multi-storey buildings

	2006	scenario I		scenario II	
		2016	2006 to 2016	2016	2006 to 2016
Flat/apartment in multi-storey building					
Migrant couple households					
Australia	201	211	10	235	35
Pacific Islands	1,140	1,158	18	1,406	266
UK & Ireland	1,113	1,304	191	1,829	716
Europe & North America	786	819	33	1,006	220
Asia	4,176	5,111	935	7,218	3,042
Other	985	1,090	105	1,943	958
Total migrant couple	8,401	9,693	1,292	13,638	5,237
NZ-born and migrant	4,045	4,592	548	6,580	2,535
NZ-born couple	6,789	6,602	-187	6,859	70
Single migrant	9,673	13,065	3,392	22,226	12,554
Single NZ-born	14,325	14,274	-51	14,431	106
Not elsewhere classified	1,649	1,839	190	2,431	782
ALL HOUSEHOLDS	**44,882**	**50,066**	**5,184**	**66,164**	**21,283**

Scenario II sees migrant couples, as well as the NZ-born and migrant couple household also contribute to the demand for flats or apartments in multi-storey buildings. This increase is led by migrant couple households from Asia followed by the “Other” birthplace category.

In terms of flats and apartments in single-storey buildings, there is a projected 11,300 increase in scenario I compared to a 14,700 increase in scenario II. Note that scenario I growth in this category is much higher than that for flats or apartments in multi-storey buildings. But this comparison switches for scenario II. This is consistent with the assumed parameter values derived from the 1991 to 2001 period for scenario I, and from the 2001 to 2006 period for scenario II.

9 Key themes and policy implications

This section draws together the key themes and issues from the analyses on the economic impact of immigration on housing demand and supply in New Zealand 2001 to 2016. These have policy implications for policy makers at local, regional and central government levels.

9.1 Key themes

Between 1991 and 2006, New Zealand experienced periods of low and high migrant inflow, and low and high economic activity.

As discussed earlier in this report, between 1991 and 2006 the number of households in New Zealand grew by 288,300. The fastest growth in households during this period occurred between 2001 and 2006, when households increased by approximately 109,000. Of these 109,000 households, nearly 42,000 (38%) were migrant couple households.

If we examine migrant couple households between 2001 and 2006 in more detail, we are able to see changes in migrant birthplace and housing behaviour.

The number of migrant couple households that listed their birthplace as Australia, the Pacific Islands, UK and Ireland, Europe and North America grew slowly between 1991 and 2006, while the number of migrant couple households where one or both partners were from Asia increased rapidly.

Housing behaviour includes housing type and tenure. Home ownership rates depend more on the composition of the household - whether the household is made up of a single person or a couple – than whether the household is migrant or NZ-born. A large proportion of NZ-born and earlier migrant couples lived in their own home. In contrast, NZ-born single and single migrants were more likely to rent, with the majority renting from private landlords. In turn, the number of people renting from central and local government was small.

The dwelling tenure of migrant households also varied depending on their length of residence in New Zealand.

A key theme that has emerged from our analyses of immigration between 1991 and 2006 is the lack of a steady trend that highlights the impact immigration has had on the demand for housing. Rather, over this 15 year period there have been significant changes in the household behaviour of each of the migrant and New Zealand-born classifications. There is no readily-discernible pattern to these changes, and there is insufficient resource in this

project to fully research the causes of these changes. Overall there has not been a wide movement in number of households formed in each of the 5-year inter-Census periods over this 15 years. Also, in general the movements in numbers of one household type have to some extent been compensated by opposite direction of movement in another, as discussed in section 4.1. These changes included wide changes in numbers of NZ-born that presumably reflected changes in rates and composition of emigration. The scope of this research specifically did not include impacts of emigration.

For these reasons, we believed the issue of the adequacy of future housing supply to meet future demand was best handled by constructing consistent, credible scenarios of immigration going forward. These scenarios used the coefficients of household creation from historical data, and were constructed to indicate housing demand arising from different immigration flows. These scenarios of housing demand were then compared with the capacity for housing supply.

9.2 Immigration and housing demand: supply balance

The two scenarios presented show the expected net growth in household types and dwellings between 2006 and 2016 under two different immigration assumptions.

9.2.1 Conservative and growth scenarios for New Zealand

Table 9.1 shows the impact of the conservative and the growth immigration scenarios on the total number of households in 2016, including NZ-born and migrant households. The growth in household numbers between 2006 and 2016 for the two scenarios is shown as well as the per annum average change.

Table 9.1 Household Growth Scenarios for New Zealand, 2016

	2016 conservative scenario	2016 growth scenario
Total households	1,601,125	1,689,084
Inter-Censal change		
2006 to 2016 change	147,958	235,917
Per annum change	14,796	23,592
Migrant couples	158,964	188,621
Inter-Censal change		
2006 to 2016 change	18,279	47,936
Per annum change	1,828	4,794

Under the conservative scenario, the net number of households will grow by just under 148,000 between 2006 and 2016. This translates into a per annum average of just under 14,800 households. In the growth scenario, the net number of households will grow by just under 236,000, which is equivalent to over 23,600 households per annum. Of these

14,800 and 23,600 households annually, migrant couples account for only 1,828 (12%) and 4,794 (20%) respectively.

If we assume this growth in household numbers translates directly into demand for new dwellings, then we can compare these numbers with the supply expected from the building industry. In Section 5 we noted that over the last 15 years, the average number of new dwelling consents per annum was about 23,390; although, in the last five years this average has increased to over 27,400 new dwelling consents per annum. Based on this information we believe that dwelling demand is not expected to exceed the capacity of the building industry to meet this supply.

9.2.2 Conservative and growth scenarios in Auckland

Table 9.2 shows the impact of conservative and growth immigration scenarios on the total number of households in Auckland in 2016, including NZ-born and migrant households. The growth in household numbers between 2006 and 2016 for the two scenarios is shown as well as the per annum average.

Table 9.2 Household growth scenarios for Auckland, 2016

	2016 conservative scenario	2016 growth scenario
Total households	418,425	441,025
Inter-Censal change		
2006 to 2016 change	47,520	70,120
Per annum change	4,752	7,012
Migrant couples	88,713	99,584
Inter-Censal change		
2006 to 2016 change	15,570	26,441
Per annum change	1,557	2,644

Under the conservative scenario, the net number of households will grow by just over 47,500 between 2006 and 2016. This translates into a per annum average of just over 4,750 households. In the growth scenario, the net number of households will grow by just over 70,100, which is equivalent to over 7,000 households per annum. Migrant couples are a significant share of these being 1,557 or 33% under the conservative immigration scenario and 2,644 or 37.7% under the growth immigration scenario.

If we assume this growth translates into demand for new dwellings, then we can compare these numbers with the supply expected from the building industry. In Section 5 we noted that over the last 15 years, the average number of new dwelling consents per annum in Auckland was about 7,160, although in the last five years this average has increased to over 8,060 new dwelling consents per annum. Therefore, based on this information,

despite the increased share of migrants, we believe that dwelling demand is not expected to exceed the capacity of the building industry to meet this supply.

9.3 Policy implications of report findings

The policy implications of our findings include those implications directly related to the central question of immigration impact on demand and supply of housing, as well as more general implications for policies affecting housing and immigration. Housing and urban design are matters for local and regional government, as well as for various organs of central government.

9.3.1 The policy and immigration impact on housing

The first core finding of the report was that housing behaviour depended more on the single/couple status of a person rather than where they were born. That is, housing behaviour depended more on the composition of the household - whether the household is made up of a single person or a couple – than whether the household contains migrants or NZ-born. The policy relevance of this finding is that the future demand for housing will be best found by projecting the total population and the breakdown of this population between single people and couples.

A second core finding of the report was that the simple scenario analyses developed, consistent with past immigration coefficients, indicated that within the likely upper level of immigration to 2016, the capacity of the building industry in New Zealand and in Auckland specifically was sufficient to build the housing necessary to meet the supply.

A third core finding of the report was that while the number of houses required can be supplied, the range of types of houses supplied will change significantly. This applies to the physical structure of the house, as well as the tenure as between owned homes, private rental and public rental. Public housing policies may have to change to reflect this.

9.3.2 Immigration, house prices and affordability

The scope of this project specifically excluded the effects of immigration on house prices and the related issue of the effects on housing affordability. This project does indicate by partial analysis that future demand for housing is unlikely to exceed the building industry's capacity to supply. Subject to the matter being tested in an economy-wide general equilibrium setting, one would not expect immigration to cause house price increases.

Recent publications by the Reserve Bank have firstly explored the relationship between housing markets (especially house prices) in New Zealand, 1962-2006;[23] and secondly addressed housing affordability in Auckland.[24] In the latter paper they recommended that housing affordability could be improved (prices restrained) by government policy to restrain immigration, and by local measures to increase land supply by expanding the area within the Metropolitan Urban Limit (MUL). It is not the purpose of this report to critique these papers; however, both have policy implications and/or make policy recommendations relevant to migration and housing. In making our assessment of the possible policy implications of our work it is necessary to signal that we believe there is some uncertainty around some of the conclusions in these papers.

BERL's position is that the findings from those papers leave some uncertainty as to causality between immigration and house prices, and as to causality between the increased urban sprawl of Auckland and housing affordability. In this situation of uncertainty, we suggest it unwise to formulate policy on the basis that immigration causes (substantial) house price increases, or that deregulating land use and allowing urban sprawl will restrain house prices and increase affordability.

Our bases for questioning the causality between immigration and house prices are as follows:

1. Some decades of observation and analysis of the New Zealand economy and migration has indicated to us that when real incomes are increasing in New Zealand, immigration is strong. When real incomes are increasing we would expect real house prices also to increase.

2. The Reserve Bank paper itself expresses some disbelief as to the magnitude of the impact of immigration on house prices. This could indicate that at least some of the house price increase has been caused by an omitted variable that itself is correlated with immigration.

3. The Reserve Bank paper also in analysing separately the 2001 to 2006 migration and housing boom noted that 'the estimated relationship between migration flows and housing prices is weaker when a more comprehensive measure of incomes (real GDP) is included in the vector autoregression in place of the unemployment rate.' We make two comments on this observation. Firstly, in this period we would have

[23] Coleman A and Landon-Lane J. Housing markets and migration in New Zealand, 1962-2006. Discussion Paper DP2007/12, Reserve Bank of New Zealand, Wellington. September 2007. (pp60)

[24] Submission from the Reserve Bank of New Zealand to the Commerce Committee on the Inquiry into housing affordability in New Zealand. Wellington August 2007. (pp18)

thought the unemployment rate a particularly inappropriate measure of incomes, given that the main change in the labour market has been a very major increase in supply of labour (by 257,000 or 13.2%) over the period, partly due to increases in participation rates from 65.9% to 68.8% of the labour force. Employment increased by 272,000 over the same period, or 14.8% which will have driven strong income increases. Secondly, the fact that the estimated relationship between migration flows and housing prices is weaker when real GDP is included in the specification of the model could indicate that there is a need to explore further the causality between GDP, migration flows and housing prices.

9.3.3 Land supply, price and affordability

Our scenario analyses indicated that the demand for housing even with high immigration flows can be supplied within the capacity of the building industry. However, a further supply question remains, and this has a number of policy implications at central, regional and local government levels.

The question is whether there will be sufficient building sites (or sections) for this number of dwellings to be supplied. One answer to this question is the economics and affordability of supplying dwellings by increasing urban density in main cities. This process is gaining momentum and it is expected that there will be little problem in obtaining sufficient sites to maintain this supply. Work by BERL in the Auckland Region shows that as urban density increases land prices per hectare increase but land prices per resident decline.[25] Further analyses show increased productivity and increased labour participation rates at higher urban densities in Auckland. This calls into question the economics of policies to increase building sites by generally extending or eliminating the MUL and increasing sprawl.

Another supply issue is that while it appears that the building industry has sufficient capacity to cope with the increased demand for housing from immigration, we have no indication of how quickly the supply response can change to meet the changing housing behaviour of migrants and NZ-born households. Policies to monitor this flexibility to respond without compromising building quality would be prudent.

Anecdotal evidence has shown that supply, in the form of the Auckland building industry, responded quickly in Auckland to meet the demand of the student apartment market. But this supply then appeared to overshoot the demand for apartments. The situation in

[25] Sanderson, Kelvin T, Statement of Evidence 20 April 2007, LGAAA Hearings, Auckland Regional Council., and related presentation: Auckland Region Urban Density, Economic Productivity, Housing Affordability

Auckland was not only an issue in terms of the type of dwellings being built but also the size and quality, which limited their suitability for alternative households.

The experience of the past 15 years has shown that there has been sufficient housing supply to meet demand, but this will need to be monitored

10 Summary

Our study of the relationships between immigration and the composition of housing demand is a component project within the wider Economic Impacts of Immigration (EII) project. This project will undertake computable general equilibrium (CGE) economy-wide modelling of various immigration scenarios.

Our study assessed available Census data from 1991 to 2006 and established the housing behaviour of identified groups of the population.

Two broad themes emerged from our assessment of the 1991 to 2006 Census data. Firstly, housing tenure, dwelling type and the number of occupants per household were more similar among singles from various birthplaces, including New Zealand, to singles generally, than with couples from the same birthplace. Similarly, housing behaviour among couples with different countries of birth had more in common with couples generally, than with singles from the same birthplace.

Secondly, the housing behaviour of migrants differs according to the time spent in New Zealand. In general, the housing behaviour of migrants who have been in New Zealand for more than 15 years becomes similar to that of NZ-born residents. There is some variation across birthplaces in terms of how quickly this adjustment in behaviour occurs, and in just how similar housing behaviour is after 15 years.

Given the focus of this project and the housing behaviour identified above, we examined the impact of future demand by constructing consistent, credible scenarios of immigration. These scenarios used the coefficients of household creation from the historical data to indicate future housing demand. We also projected the behaviours identified above onto two future migration scenarios over the 2006 to 2016 period, providing indications of two pictures of housing demand in 2016.

However, no steady trend emerged in terms of the impact immigration has had on the demand for housing between 1991 and 2006. There have been significant changes in housing behaviour, with the number of households increasing in each household type, but there has been no readily-discernible pattern to these changes.

While this project has discussed the required supply response to these 2016 housing demand pictures and the implications of an imbalance between demand and the supply response. A full reconciliation of the effects of demand and supply changes is not attempted here as this properly awaits the economy-wide CGE modelling exercise.

Rather, this paper outlines potential scenarios, their consequent impact on the quantum and nature of housing demand, and the issues arising from this assessment.

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12 Appendix I: Tenure characteristics 1991 to 2006

This section looks at the characteristics of migrants in terms of dwelling tenure. This discussion focuses on household types, the migrants' birthplaces, and their length of residence in New Zealand. The data is from the census datasets for the 1991, 1996, 2001 and 2006 years[26].

Key notes

- In general, the majority of NZ-born households live in their own house while large proportions of migrants rent, especially from private landlords.
- A higher proportion of couples than singles live in their own house.
- The home ownership rate of NZ-born couples is higher than that of migrant couples.
- In 2006, the average home ownership rate of 62.7% included a home ownership rate of 62.4% for migrant couple households, a 77.1% home ownership rate for NZ-born couple households, a 48.9% home ownership rate for single migrant households, and a 51.5% home ownership rate for single NZ-born households.
- Singles, perhaps requiring greater flexibility or facing tighter budget constraints, are more likely to rent, with the majority renting from private landlords. Renting from local government accounts for a small proportion of most New Zealand households. Apart from single migrant households (2.1%) and single NZ-born households (1.7%), the percentages were below 0.5% for couples across all birthplace categories, including NZ-born.
- Fewer migrant couples have been purchasing houses since 1991. Instead migrant couples are renting from private landlords, especially couples from the UK and Ireland (this percentage has tripled in the last 15 years). A large percentage of couples born in the Pacific Islands (around 23%) rented from central government, compared to 2.2% of couples born in Asia, and 1.6% of couples born in Europe and North America.

[26] The totals provided in the tables in these appendices may differ slightly from the data provided in Statistics New Zealand publications. These differences result from a combination of rounding and confidentiality processes applied by Statistics New Zealand before they supply us the requested datasets. In particular, the degree of disaggregation ordered resulted in there being 1,008 households unaccounted for in the 2006 figures for New Zealand. Similarly, there were 330 households unaccounted for in the 2006 data for Auckland. These are in addition to those included in the "not elsewhere classified" categories. While not ideal, we judged these discrepancies to be minor and would not bias our analyses or conclusions.

- The dwelling tenure of migrant households varies depending on their length of residence in New Zealand. Recent migrant couples are more likely to rent, whereas earlier migrant couples recorded a home ownership rate in 2006 of 77.0%, a figure comparable to that of NZ-born households.

- In general, couples that include one migrant partner tend to have housing behaviour most similar to that of NZ-born couples.

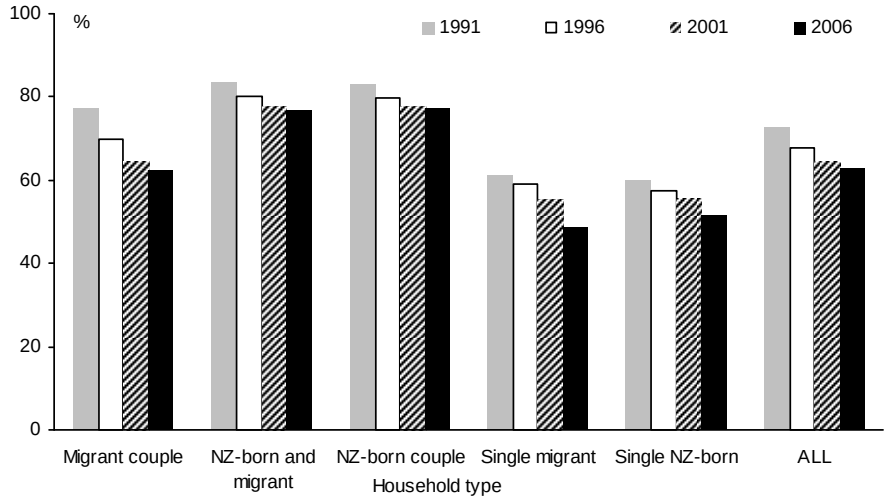
- Renting from private landlords is becoming more common among migrants of various birthplace categories.

12.1 Home ownership

In 2006, 911,000 households owned their own home, accounting for 62.7% of the total households in New Zealand. This percentage is a drop in home ownership from 72.8% in 1991, 67.9% in 1996, and 64.6% in 1991.

Figure 12.1 shows the percentage of people living in their own home between 1991 and 2006.

Figure 12.1 Households living in their own home, New Zealand, 1991 to 2006



Overall, there has been a decline in home ownership since 1991. The most significant decline has been among migrants. Home ownership among migrant couples, for example, dropped from 77.1% in 1991 to 62.4% in 2006. Only 48.9% of single migrants had their own house in 2006, down from 61.0% in 1991.

There has been little change in the home ownership rates of NZ-born couples. Although a slight drop occurred between 1991 and 1996, from 2001 to 2006 the home ownership rates of NZ- born couples has changed little.

In 2006, the home ownership rate of NZ-born households was high at 77.1%, although it was a slight drop from the 82.9% recorded in 1996. Not far behind were households with one NZ-born resident and one migrant, 75.3% of whom owned a house. Over 50% of NZ-born singles owned their own home in 2006. All of these figures have fallen over the years. However, the declines have eased slightly in recent years for NZ-born households and households with one NZ-born resident and one migrant. The decline in NZ-born singles owning a house continues at a constant rate.

Looking at migrants, there are large differences in house ownership rates by length of residence in New Zealand, and by birthplace. Table 12.1 shows the percentage of migrant couples from various birthplaces living in their own home.

Table 12.1 Migrant couples living in their own home, New Zealand, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	71.4	67.6	64.1	63.8
Pacific Islands	48.3	43.6	41.0	40.7
UK & Ireland	89.5	85.7	83.6	81.8
Europe & North America	85.3	73.7	71.2	68.5
Asia	70.0	61.5	58.9	57.0
Other	69.7	55.8	47.8	53.0
All migrants	**77.1**	**69.8**	**64.4**	**62.4**
NZ-born couples	**3.8**	**2.9**	**2.3**	**2.0**

Overall, migrant couples born in the Pacific Islands are least likely to live in their own home (40.7%), while those born in the UK and Ireland have higher home ownership rates than NZ-born couples.

12.1.1 Recent migrants

For migrants who stay in New Zealand for less than five years, the house ownership rate actually went up slightly between 1996 (43.3%) and 2006 (43.6%) with a slight drop in 2001 (37.9%).

Table 12.2 Recent migrant couples living in their own home, New Zealand, (%), 1996 to 2006[27]

Birthplace	1996	2001	2006
Australia	35.2	33.3	42.0
Pacific Islands	20.8	23.9	32.2
UK & Ireland	51.4	58.8	63.5
Europe & North America	32.8	37.5	37.5
Asia	48.2	35.6	38.4
Other	38.6	33.8	36.7
All migrants	**43.3**	**37.9**	**43.6**
NZ-born couples	**79.6**	**77.6**	**77.1**

Since 1991, more recent migrant couples born in the Pacific Islands and the UK and Ireland are purchasing houses rather than renting. Recent migrant couples born in the UK and Ireland have the highest percentage of home ownership rates among migrants, recording 63.5% in 2006. 42% of recent migrant couples born in Australia owned their own home in 2006. There was no change in the percentage of recent migrant couples born in Europe and North America owning their own home, stable at 37.5% between 2001 and 2006. For recent migrant couples born in Asia, there was a sudden decline in home ownership rates from 48.2% in 1996, to 35.6% in 2001, with a slight recovery in 2006 to 38.4%.

Recent single migrants are half as likely to own their own home as NZ-born singles, as shown in Table 12.3.

Table 12.3 Recent migrant singles living in their own homes, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	26.0	25.6	23.1
Pacific Islands	19.8	15.9	17.9
UK & Ireland	37.7	37.5	38.0
Europe & North America	25.1	22.6	20.1
Asia	48.1	32.9	26.2
Other	18.6	18.3	16.3
All migrants	**37.8**	**28.4**	**25.4**
Single NZ-born	**57.3**	**55.9**	**51.5**

Rates vary between 16.3% in the "Other" birthplace category, to 38.0% for recent migrant singles from the UK and Ireland. However, all of these rates are well below that of NZ-born singles.

[27] In the 1991 Census, Statistics New Zealand did not collect information on the length of residency of migrants.

12.1.2 Intermediate migrants

In contrast, the home ownership rate of intermediate migrant couples was high at 63.5% in 2006. This is highlighted in Table 12.4.

Table 12.4 Intermediate migrant couples living in their own home, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	72.9	73.1	69.5
Pacific Islands	35.9	38.8	35.3
UK & Ireland	85.9	84.7	85.2
Europe & North America	80.1	71.8	71.3
Asia	67.5	70.3	63.3
Other	69.3	64.0	65.1
All migrants	**62.4**	**65.1**	**63.5**
NZ-born couples	**79.6**	**77.6**	**77.1**

In 2006, the UK and Ireland (85.2%), Europe and North America (71.3%), and Australia (69.5%) had the highest rates of home ownership among intermediate migrant couples. However, only 35.3% of the intermediate migrant couples born in the Pacific Islands owned their own home.

The change in behaviour as single migrants move from recent to intermediate status is marked, with home ownership rates overall rising from 25.4% to 41.2%, as shown in Table 12.5.

Table 12.5 Intermediate single migrants living in their own home, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	47.8	43.0	39.4
Pacific Islands	20.1	22.6	17.0
UK & Ireland	57.9	58.4	55.2
Europe & North America	56.7	50.0	42.1
Asia	54.2	57.2	46.1
Other	42.4	36.7	30.4
All migrants	**45.3**	**48.2**	**41.2**
Single NZ-born	**57.3**	**55.9**	**51.5**

Across birthplaces, the least change was among migrants born in the Pacific Islands, who had a lower rate of home ownership at the intermediate migrant stage. All other groups rose by at least 14%.

12.1.3 Earlier migrants

Although the percentage of earlier migrant couples owning their own home dropped from 84.4% in 1996 to 77.0% in 2006, the house ownership rate of earlier migrant couples is almost identical to that of NZ-born couples.

Table 12.6 Earlier migrant couples living in their own home, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	85.1	80.2	78.9
Pacific Islands	55.4	49.4	46.8
UK & Ireland	90.0	87.8	88.8
Europe & North America	89.6	86.0	85.5
Asia	85.9	82.5	79.8
Other	86.9	81.8	82.0
All migrants	**84.4**	**79.7**	**77.0**
NZ-born couples	**79.6**	**77.6**	**77.1**

The change in home ownership between 1996 and 2006 across all the birthplaces was not as dramatic as those of recent or intermediate migrant couples. Apart from earlier migrants born in the Pacific Islands, house ownership rates were around 80.0%, higher than that of the NZ-born population, at 77.0%.

Most significantly, earlier migrant couples born in the UK and Ireland, and in Europe and North America enjoyed a home ownership rate of 88.8% and 85.5% respectively in 2006. Earlier migrant couples born in Asia and Australia were not far behind with 79.8% and 78.9% respectively.

Among earlier single migrants, the change in behaviour is more striking, with all groups except those born in the Pacific Islands having home ownership rates higher than that of NZ-born singles.

Table 12.7 Earlier single migrants living in their own home, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	63.4	60.2	55.7
Pacific Islands	39.3	35.0	30.5
UK & Ireland	69.9	70.2	66.3
Europe & North America	71.7	70.3	65.6
Asia	71.7	69.6	61.6
Other	67.5	65.3	59.3
All migrants	**66.5**	**65.2**	**59.6**
Single NZ-born	**57.3**	**55.9**	**51.5**

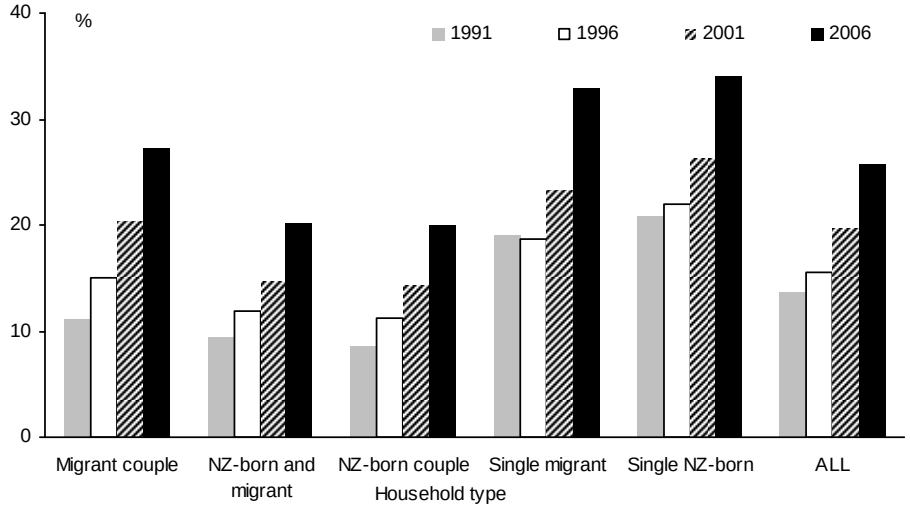
Earlier single migrants born in the Pacific Islands had a home ownership rate half that of the earlier single migrant group as a whole in 2006. Earlier single migrants born in the UK and Ireland and in Europe and North America had the highest home ownership rates.

12.2 Renting from private landlords

In 2006, 376,000 households in New Zealand were renting from private landlords; around 278,000 of these households consisted of at least one NZ-born resident. Figure 12.2

shows the proportion of households renting from private landlords between 1991 and 2006.

Figure 12.2 Households renting from private landlords, New Zealand, 1991 to 2006



The total percentage of New Zealand residents renting from private landlords was 25.9%, a figure which has almost doubled since 1991 (13.7%). Among NZ-born couples, 20.0% were renting from private landlords; this percentage was 21.4% for households with one NZ-born resident and one migrant. Single migrants and single NZ-born residents are the two main categories renting from private landlords, at 32.9% and 34.1% respectively.

Table 12.8 shows the relative percentage of total migrant couples renting from private landlords from 1991 to 2006.

Table 12.8 Migrant couples renting from private landlords, New Zealand, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	21.5	22.6	27.3	32.8
Pacific Islands	15.5	12.4	19.1	26.4
UK & Ireland	5.7	8.7	10.0	16.6
Europe & North America	9.4	16.6	18.2	26.6
Asia	21.4	23.8	28.1	33.4
Other	22.3	32.6	41.1	39.0
All migrants	**11.0**	**15.0**	**20.4**	**27.3**
NZ-born couples	**8.6**	**11.2**	**14.4**	**20.0**

The total percentage increased from 11.0% in 1991 to 27.3% in 2006. In the last five years, the percentages across all birthplaces have experienced significant increases. The percentage of migrant couples born in the Pacific Islands renting from private landlords has increased from 15.5% in 1996, to 26.4% in 2006. The percentage of migrant couples

born in Europe and North America renting from private landlords has jumped from 9.4% to 26.6%.

Looking at singles households, whether NZ-born or migrants, it is evident that huge changes have occurred between 1991 and 2006, as shown in Table 12.9.

Table 12.9 Single migrants renting from private landlords, New Zealand, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	24.4	25.9	30.6	39.6
Pacific Islands	22.6	16.9	24.5	28.1
UK & Ireland	14.8	15.3	17.2	26.0
Europe & North America	19.3	19.5	22.2	33.4
Asia	31.9	24.2	30.3	40.1
Other	28.7	33.0	39.6	45.9
All migrants	**19.0**	**18.7**	**23.3**	**32.9**
Single NZ-born	**20.8**	**22.0**	**26.3**	**34.1**

Single migrants are slightly less likely to rent from private landlords than NZ-born singles. Rental rates vary between 26.0% and 45.9% across all birthplaces.

12.2.1 Recent migrants

A growing number of recent migrant couples rent from private landlords. However, growth rates vary depending on birthplace. Overall, recent migrant couples are twice as likely to rent from private landlords as NZ-born couples.

Table 12.10 Recent migrant couples renting from private landlords, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	50.2	57.2	53.4
Pacific Islands	35.6	36.4	45.5
UK & Ireland	41.5	35.2	34.4
Europe & North America	50.3	48.9	55.0
Asia	36.3	47.8	49.6
Other	47.6	54.4	53.8
All migrants	**41.4**	**46.2**	**46.9**
NZ-born couples	**11.2**	**14.4**	**20.0**

More recent migrant couples born in the Pacific Islands and Asia are renting houses from private landlords. The increases were from 35.6% in 1996 to 45.5% in 2006 and 36.3% in 1996 to 49.6% in 2006. In contrast, only 34.4% of recent migrant couples born in the UK and Ireland rented from private landlords in 2006, down from 41.5% in 1996. The number of recent migrants born in Australia who rented from private landlords increased from 1996 to 2001, but dropped in 2006.

As the mirror image of home ownership, it is not surprising that at the recent migrant stage, most single migrants rent from private landlords, as shown in Table 12.11.

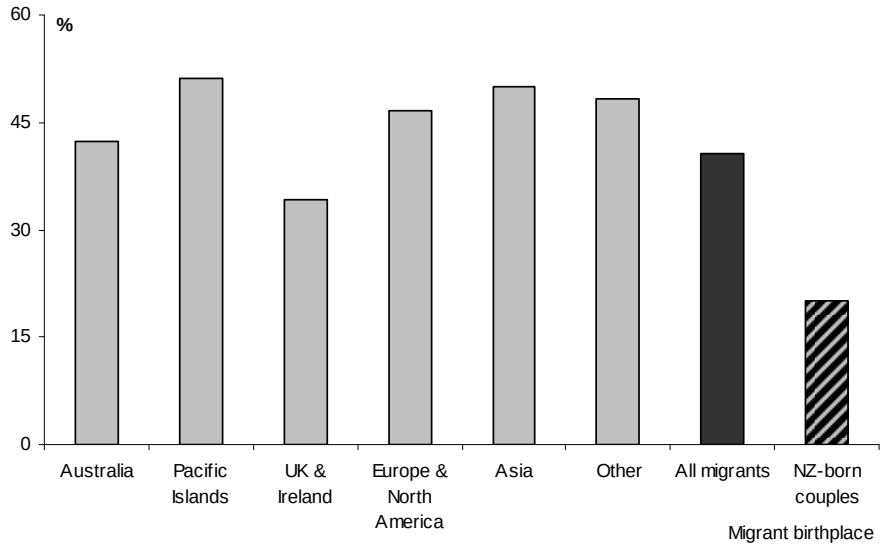
Table 12.11 Recent single migrants renting from private landlords, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	53.5	60.1	64.7
Pacific Islands	31.7	36.4	47.9
UK & Ireland	46.5	50.3	54.7
Europe & North America	52.4	56.1	63.1
Asia	30.9	42.9	50.0
Other	50.9	52.6	57.5
All migrants	**39.5**	**47.1**	**53.7**
Single NZ-born	**22.0**	**26.3**	**34.1**

The number of migrants born in the Pacific Islands that rent from private landlords increased significantly between 2001 and 2006, from 31.7% in 2001 to 47.9% in 2006. More recent single migrants born in Asia are renting from private landlords, with an increase from 30.9% in 1996, to 50.0% in 2006. This is largely due to the growing number of international students arriving in recent years.

It is worth noting that within the recent migrant category, behaviour among couples with one recent migrant partner resembles that of migrant couples more than that of NZ-born couples, with 40.7% of these couples renting from private landlords.

Figure 12.3 Couples with one recent migrant partner renting from private landlords, New Zealand, 2006



The proportion of couples with one recent migrant partner renting from private landlords in 2006 was significantly higher than for NZ-born couples.

12.2.2 Intermediate migrants

Although the percentage of intermediate migrant couples renting from private landlords grew significantly from 1996 to 2006, it is still a small percentage compared to those who own their own home.

Table 12.12 Intermediate migrant couples renting from private landlords, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	17.1	17.2	28.2
Pacific Islands	14.7	19.5	29.8
UK & Ireland	9.4	11.2	14.4
Europe & North America	12.3	19.2	22.2
Asia	17.2	19.1	27.7
Other	19.9	25.2	27.6
All migrants	**14.4**	**18.5**	**25.6**
NZ-born couples	**11.2**	**14.4**	**20.0**

Intermediate migrant couples born in Australia and the Pacific Islands saw the largest increases in the last decade, especially from 2001 to 2006, with more people in these groups renting from private landlords. However, all birthplaces had an increase in rental rates.

Substantial declines in the proportion of single migrants renting from private landlords occur as this group moves from recent to intermediate migrant status.

Table 12.13 Intermediate single migrants renting from private landlords, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	34.7	43.0	49.4
Pacific Islands	19.7	28.3	33.5
UK & Ireland	27.8	30.3	38.9
Europe & North America	30.9	34.6	42.3
Asia	23.3	26.4	38.6
Other	39.0	42.3	45.8
All migrants	**25.7**	**30.4**	**39.9**
Single NZ-born	**22.0**	**26.3**	**34.1**

More intermediate single migrants are renting from private landlords, although the gap between NZ-born singles and single migrants was just 5.8% in 2006, compared to that between NZ-born singles and recent single migrants, which was 19.6%. The total rate of intermediate single migrants renting from private landlords increased from 25.7% in 1996 to 39.9% in 2006.

Intermediate single migrants whose behaviour most closely matched that of NZ-born singles were those born in the Pacific Islands, at 33.5%. Interestingly, intermediate single

migrants born in Australia had far higher rental percentages, perhaps because there is a greater likelihood of them returning to Australia, than any other migrant group.

12.2.3 Earlier migrants

The percentage of earlier migrant couples renting houses from private landlords in New Zealand between 1996 and 2006 was below 20% across all birthplace categories, as shown in Table 12.14.

Table 12.14 Earlier migrant couples renting from private landlords, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	8.7	11.6	18.8
Pacific Islands	7.2	13.4	19.1
UK & Ireland	4.6	5.3	9.7
Europe & North America	3.5	4.5	12.1
Asia	4.6	7.0	14.8
Other	6.7	11.0	15.7
All migrants	**4.9**	**7.1**	**13.3**
NZ-born couples	**11.2**	**14.4**	**20.0**

The lowest rate was among earlier migrant couples born in the UK and Ireland at 9.7% in 2006. Earlier migrant couples born in Australia and the Pacific Islands had comparatively higher percentages, at 18.8% and 19.1% respectively.

Meanwhile, the proportion of earlier single migrants renting from private landlords was lower than that of NZ-born singles, at 24.5%.

Table 12.15 Earlier single migrants renting from landlords, New Zealand, (%), 1996 to 2006

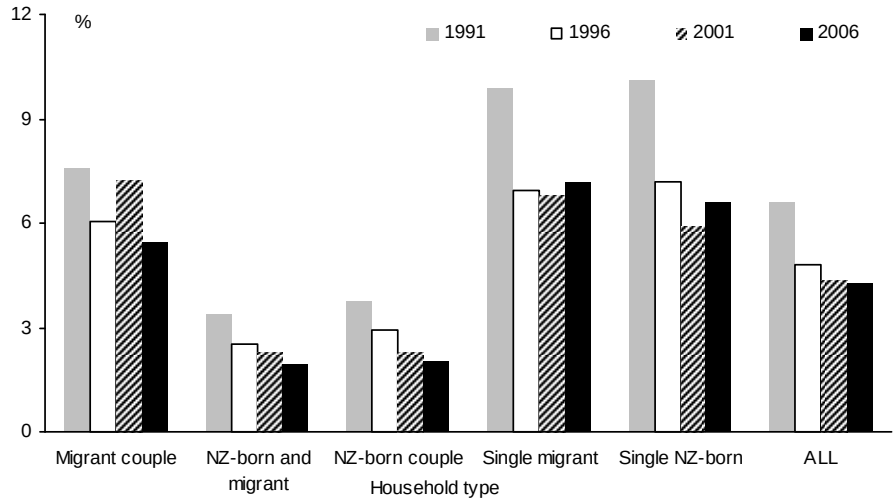
Birthplace	1996	2001	2006
Australia	20.3	24.4	34.0
Pacific Islands	13.9	21.0	24.4
UK & Ireland	12.9	14.1	22.2
Europe & North America	11.8	13.1	24.0
Asia	11.8	14.7	28.1
Other	20.0	21.6	31.2
All migrants	**13.6**	**15.9**	**24.5**
Single NZ-born	**22.0**	**26.3**	**34.1**

Nevertheless, the overall percentage rose from 13.6% in 1996 to 24.5% in 2006. Across birthplace categories results were not dissimilar, varying within a narrow band from 22.2% to 34.0%. Interestingly, earlier single migrants born in Australia are once again most likely to rent from private landlords.

12.3 Renting from central government

Compared to the number of people renting from local government, the number of people renting from central government is high, at 4.3%. Again, singles account for the majority, with 7.2% of single migrants and 6.6% of single NZ-born residents renting from private landlords.

Figure 12.4 Households renting from central government, New Zealand, 1991 to 2006



The percentage of migrant couples renting from central government fell in 2006 (5.4%), after an increase in 2001 (7.2%). Overall, renting from central government only accounted for a small percentage of the rental market; although, it was much higher than the percentage renting from local government.

As Table 12.16 indicates, there was a wide variation in the percentage of people renting from central government, depending on their birthplace.

Table 12.16 Migrant couples renting from central government, New Zealand, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	2.3	1.4	2.3	1.3
Pacific Islands	29.6	26.5	29.7	23.9
UK & Ireland	1.9	1.1	0.9	0.6
Europe & North America	1.1	1.5	1.9	1.6
Asia	3.0	2.5	3.4	2.2
Other	4.2	3.3	3.3	3.7
All migrants	**7.6**	**6.1**	**7.2**	**5.4**
NZ-born couples	**3.8**	**2.9**	**2.3**	**2.0**

A large percentage of couples born in the Pacific Islands rented from central government between 1991 and 2006. The proportion in 2006 was 23.9%, compared to only 2.2% of couples born in Asia, and 1.6% of couples born in Europe and North America.

The percentage of single migrants renting from central government is not much greater than that for migrant couples, at 7.2% in 2006.

Table 12.17 Single migrants renting from central government, New Zealand, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	7.2	4.7	3.6	4.4
Pacific Islands	35.6	29.2	29.6	30.2
UK & Ireland	6.3	3.9	3.1	3.2
Europe & North America	4.2	2.7	2.8	3.4
Asia	5.0	3.0	3.5	3.3
Other	4.7	4.9	6.9	9.2
All migrants	**9.9**	**7.0**	**6.8**	**7.2**
Single NZ-born	**10.1**	**7.2**	**5.9**	**6.6**

More single migrants rent from central government than NZ-born singles, at 7.2% compared to 6.6%. The rate for single migrants born in the Pacific Islands is four times the rate for the single migrant population as a whole.

12.3.1 Recent migrants

Recent migrant couples were only slightly more likely to rent from central government than NZ-born couples in 2006.

Table 12.18 Recent migrant couples renting from central government, New Zealand, (%), 1996 to 2006

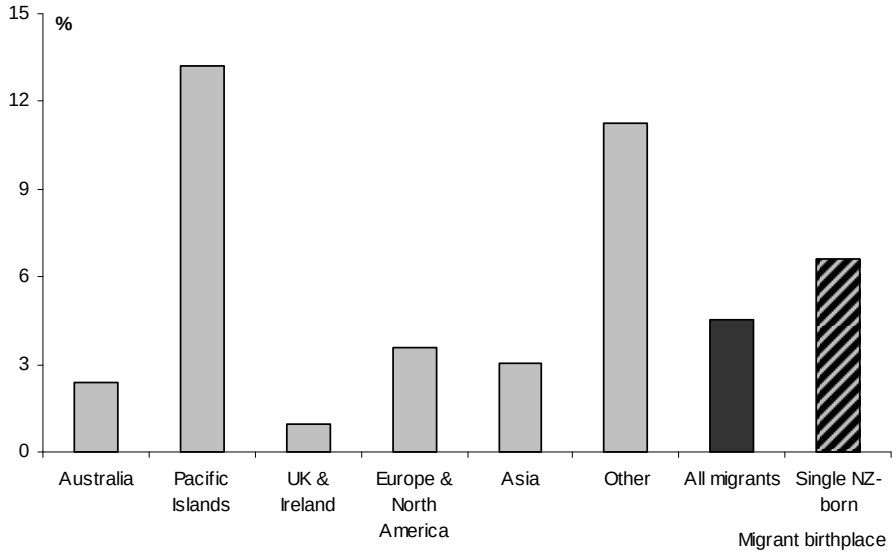
Birthplace	1996	2001	2006
Australia	1.5	1.5	1.0
Pacific Islands	23.3	28.1	9.9
UK & Ireland	1.3	1.3	0.5
Europe & North America	4.0	4.2	1.3
Asia	3.1	5.8	2.1
Other	4.1	3.9	3.6
All migrants	**4.0**	**6.9**	**2.6**
NZ-born couples	**2.9**	**2.3**	**2.0**

The percentage of recent migrant couples born in the Pacific Islands renting from central government experienced a dramatic drop from 28.1% in 2001, to 9.9% in 2006.

The year 2001 was a peak year for the number of recent migrant couples born in the UK and Ireland, Europe and North America, and Asia renting from central government. However, these groups were now less likely to rent from central government.

Overall, 4.5% of recent single migrants rented from central government, compared to 6.6% of NZ-born singles, as highlighted in Figure 12.5.

Figure 12.5 Recent single migrants renting from central government, New Zealand



However, this figure hides the broader story of wide fluctuations across birthplace - from just 1.0% of recent single migrants born in the UK and Ireland renting from central government, compared to 13.2% of those born in the Pacific Islands.

12.3.2 Intermediate migrants

The number of intermediate migrant couples that rented from central government is similar to that of recent migrant couples. The exception was the large percentage of intermediate migrants born in the Pacific Islands renting from central government (24.6%).

Table 12.19 Intermediate migrant couples renting from central government, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	2.9	2.2	1.1
Pacific Islands	31.5	32.2	24.6
UK & Ireland	1.1	0.6	0.4
Europe & North America	1.4	3.1	4.0
Asia	2.4	2.3	2.9
Other	4.1	3.0	4.0
All migrants	**11.6**	**8.9**	**5.9**
NZ-born couples	**2.9**	**2.3**	**2.0**

The drop in 2001 for intermediate migrant couples was not as significant as that for recent migrant couples. While the percentage of migrants renting from central government fell

since 1996, intermediate migrant couples born in Asia were bucking the trend, up from 2.4% in 1996 to 2.9% in 2006.

Among intermediate single migrants, 7.8% lived in houses rented from the central government.

Table 12.20 Intermediate single migrants renting from central government, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Australia	5.2	3.0	4.6
Pacific Islands	34.9	33.3	30.8
UK & Ireland	3.1	2.1	1.4
Europe & North America	2.6	3.8	6.8
Asia	4.2	3.1	3.5
Other	6.7	7.2	11.0
All migrants	**12.1**	**8.7**	**7.8**
Single NZ-born	**7.2**	**5.9**	**6.6**

Across birthplace categories the percentages varied widely, from 1.4% for intermediate single migrants born in the UK and Ireland, to 30.8% for those born in the Pacific Islands.

12.3.3 Earlier migrants

Interestingly, the percentage of earlier migrant couples renting from central government increased from 4.1% in 1996, to 6.9% in 2006.

The major driver of this increase was earlier migrant couples born in the Pacific Islands, 27.4% of whom were renting from the central government in 2006.

Table 12.21 Earlier migrant couples renting from central government, New Zealand, (%), 1996 to 2006

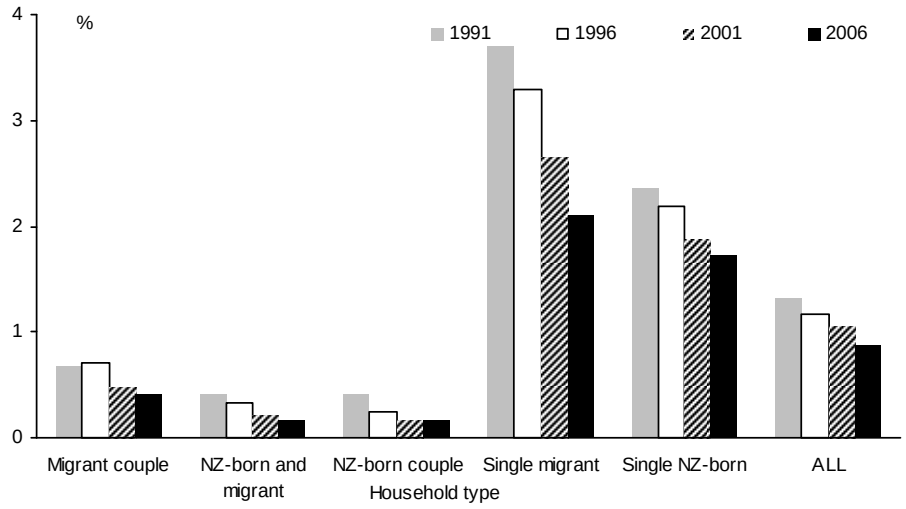
Birthplace	1996	2001	2006
Australia	1.5	2.6	1.3
Pacific Islands	21.9	27.7	27.4
UK & Ireland	1.1	0.9	0.8
Europe & North America	0.6	0.4	0.5
Asia	0.8	1.0	1.0
Other	1.0	1.2	2.3
All migrants	**4.1**	**5.8**	**6.9**
NZ-born couples	**2.9**	**2.3**	**2.0**

Earlier migrant couples born in Asia had similar housing behaviour but on a much smaller scale, with those from other birthplaces excluding the Pacific Islands. However, the percentages of earlier migrant couples born in the UK and Ireland, Australia, and Europe and North America renting from central government decreased over the same period.

12.4 Renting from local government

The number of people renting from local government only accounted for a small percentage (0.9%) of the rental market in 2006. There were relatively more singles renting from local government, with 2.1% of single migrants and 1.7% of NZ-born singles. Less than 0.5% of all couples were renting from local government. There has also been an overall decline in the number of people renting from local government between 1991 and 2006.

Figure 12.6 Households renting from local government, New Zealand, 1991 to 2006



Looking at migrant couples across birthplace categories, percentages were all below 1% in 2006.

The importance of local authority rental properties to single migrants was slightly greater, with between 1.2% (Asia) and 2.8% (UK and Ireland) of single migrants living in this type of dwelling.

No recent migrant couples born in Australia have rented from the local government since 1996. The percentage of migrants born in the UK and Ireland stabilised at around 1.0% over the last decade. Around 0.7% of recent migrants born in the Pacific Islands and Asia rented from local authorities in 2006.

The situation is similar for intermediate and earlier migrant couples across all birthplaces, with a declining trend over the last 10 years.

13 Appendix II: Tenure in Auckland 1991 to 2006

In 2006 there were nearly 371,000 households in Auckland, representing just over a quarter (25.5%) of all households in New Zealand. The proportion of households in Auckland has grown slightly over the past 15 years, from the 23.7% figure recorded in 1991. Migrant households comprised 20% of all households in Auckland in 2006, with a further 14% of Auckland households being single migrant households. These proportions were noticeably greater than the equivalent (10% and 8%, respectively) figures for New Zealand as a whole.

Key notes

- While most people lived in their own home in Auckland, the proportion renting from private landlords has increased in recent years. This is particularly so among migrant couple and single migrant households.

- The implication of this trend is that resources should be prepared for a continued demand for private rental properties in Auckland, due to a continuous migration inflow. Further research on the purchasing and saving behaviours of recent migrants will help the Auckland housing market meet this increasing demand.

- Renting from local and central government accounted for only a small proportion of the rental market. The demand for public sector housing has been declining since 1996, which is reflected in the significant increase in demand for private rental properties.

- The overall home ownership rate in Auckland in 2006 (58.1%) was noticeably lower than the national average (62.7%).

- Home ownership rates in 2006 for Auckland households were 57.1% of migrant couple households owned their own home, 76.4% of NZ-born couple households owned their own home, 44.2% of single migrant households owned their own home, and 50.7% of single NZ-born households owned their own home.

- The age of migrants may play an important role in differentiating Auckland's migrants from migrants in the rest of New Zealand. Many migrants in Auckland are students, coming to Auckland or New Zealand for a short time. For these residents, purchasing a house may not be a practical option.

- This trend is reflected in the proportion of Auckland migrants renting from private landlords. An Auckland-wide average of 27.4% in 2006 captures a range from 34.1%

for single households (both migrant and NZ-born), to 20.6% for NZ-born couple households.

- The proportion of migrant couples renting from private landlords in 2006 was 30.0%. Interestingly, within this group the highest proportions renting from private landlords were those from Australia (38.0%) and the "Other" (40.6%) birthplaces. The lowest proportion was 19.3% from the UK and Ireland.

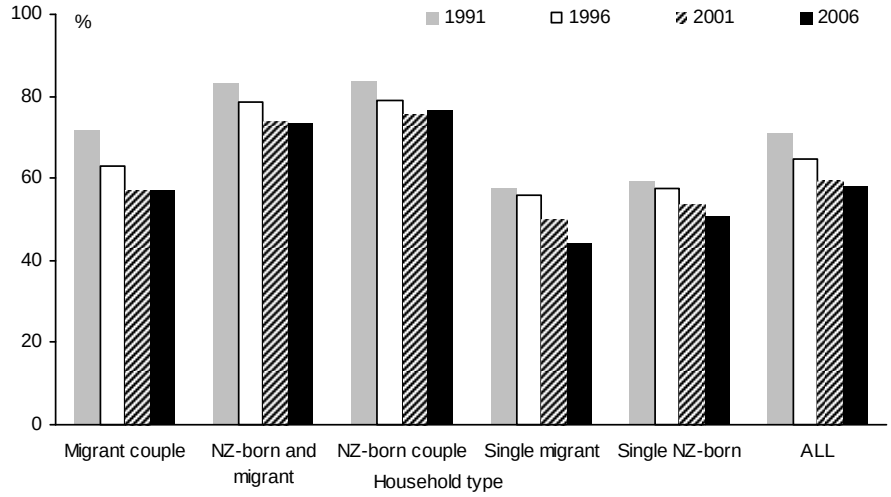
- Migrant households born in the Pacific Islands were more likely to rent from local or central government than other migrants.

13.1 Households living in their own house

In 2006, there were 215,400 households residing in their own house in Auckland. Consistent with behaviour seen nationwide, more couples than singles owned their own home, and more NZ-born residents than migrants also owned their own home.

However, the house ownership rate in Auckland was relatively low compared to the national average. The difference was mainly in the ownership rates of migrants, whereas the house ownership rates of NZ-born residents in Auckland and in New Zealand were similar. Figure 13.1 illustrates these findings.

Figure 13.1 Households living in their own house, Auckland, (%), 1991 to 2006



For NZ-born residents, the decline in home ownership is obvious. The percentage of NZ-born couples owning their own home dropped from 83.5% in 1991 to 76.4% in 2006. For couple households consisting of one New Zealand resident and one migrant their home ownership rates dropped from 83.1% in 1991 to 73.5% in 2006. Only 50.7% of NZ-born singles living in Auckland owned their own house, down from 59.3% in 1991.

As for migrants, the home ownership rate has fallen even faster between 1991 and 2006, as highlighted in Table 13.1.

Table 13.1 Migrant couples living in their own house, Auckland, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	67.2	64.5	56.7	58.4
Pacific Islands	49.2	44.1	41.4	41.7
UK & Ireland	89.7	83.8	81.2	79.4
Europe & North America	84.2	63.5	61.8	61.6
Asia	70.6	61.3	57.7	57.6
Other	68.6	51.9	44.4	51.8
All migrants	**72.0**	**63.0**	**57.3**	**57.1**
NZ-born couples	**83.5**	**79.2**	**75.4**	**76.4**

Migrant couples born in Europe, North America, and Asia experienced the most significant drop over the last 10 years. While the percentage of migrant couples born in Australia and the Pacific Islands living in their own home has remained flat.

Due to confidentiality reasons, Statistics New Zealand has not released data on dwelling tenure by birthplace and years since arrival for the Auckland region. Throughout the Auckland section of this report, when data is broken down by years since arrival in New Zealand, 2001 figures are used. In addition, the 1991 Census did not collect information on the length of time migrants had been in the country.

13.1.1 Recent migrants

From 1996 to 2001, the overall house ownership rate of recent migrant couples in Auckland decreased from 43.8% to 34.0%. This may be due to changes in the housing market, the large inflow of international students, and changes in the exchange rate. As more international students came into New Zealand, the age composition of migrants changed, changing the housing behaviour of migrants.

Table 13.2 Recent migrant couples living in their own house, Auckland, (%)

Birthplace	1996	2001
Australia	31.5	25.7
Pacific Islands	24.7	24.9
UK & Ireland	46.6	50.3
Europe & North America	24.7	28.5
Asia	51.9	35.9
Other	36.1	31.4
All migrants	**43.8**	**34.0**
NZ-born couples	**79.2**	**75.4**

Between 1996 and 2001, more recent migrant couples born in the UK and Ireland, and Europe and North America owned their own house. In contrast, fewer recent migrant

couples born in Australia and Asia owned their own house. In particular, the percentage of recent migrant couples born in Asia dropped from 51.9% in 1996 to 35.9% in 2001. The percentage of recent migrant couples born in the Pacific Islands owning their own house remained unchanged.

Overall, recent migrant couples were less likely to own their own house in Auckland than NZ-born couples.

Interestingly, the gap between NZ-born singles and recent migrant singles was not as large as that for recent migrant couples and NZ-born couples.

Table 13.3 Recent single migrants living in their own house, Auckland, (%)

Birthplace	1996	2001
Australia	23.2	20.8
Pacific Islands	22.8	16.9
UK & Ireland	37.2	31.1
Europe & North America	23.5	18.0
Asia	56.5	34.8
Other	19.7	18.3
All migrants	**28.1**	**28.1**
Single NZ-born	**57.4**	**53.7**

The number of recent single migrants owning their own house varied from 16.9% among those born in the Pacific Islands to 34.8% among those born in Asia. However, all were well below the rate for NZ-born singles.

13.1.2 Intermediate migrants

Intermediate migrant couples enjoyed a higher home ownership rate in Auckland, up from 57.1% in 1996 to 62.4% in 2001.

Table 13.4 Intermediate migrant couples living in their own house, Auckland, (%)

Birthplace	1996	2001
Australia	70.6	64.7
Pacific Islands	37.1	39.9
UK & Ireland	84.6	83.3
Europe & North America	74.2	66.1
Asia	67.8	71.4
Other	68.3	62.1
All migrants	**57.1**	**62.4**
NZ-born couples	**79.2**	**75.4**

More intermediate migrant couples born in Asia purchased houses from 1996 to 2001, with ownership rates up to 71.4% in 2001 from 67.8% in 1996. Unlike migrants born in Asia those born in other places found purchasing a house less attractive. Only 64.7% of Australian born migrants owned their own home in 2001, down from 70.6% in 1996.

83.3% of migrants born in Europe and North America owned their own home in 2006, from 74.2% in 1996.

Also of note, is the change in ownership rates among migrant couples as they moved from recent to intermediate status, with increases of between 15.0% for migrant couples born in the Pacific Islands to well over 30.0% for all other groups.

Changes as single migrants moved from recent to intermediate status were also very large, as shown in Table 13.5.

Table 13.5 Intermediate single migrants living in their own home, Auckland, (%)

Birthplace	1996	2001
Australia	45.1	41.2
Pacific Islands	20.9	22.7
UK & Ireland	57.2	55.3
Europe & North America	51.4	44.9
Asia	59.3	60.9
Other	39.3	33.8
All migrants	**47.7**	**47.7**
Single NZ-born	**57.4**	**53.7**

While the overall rate rose to 47.7%, from 28.1%, for recent single migrants, there was still large variations based on birthplace, with intermediate single migrants born in Asia three times more likely to own their own house than those born in the Pacific Islands.

13.1.3 Earlier migrants

In general, earlier migrant couples in Auckland had significantly higher home ownership rates, compared to recent and intermediate migrant couples. However, 2001 saw a sharp decline in house ownership rates across all birthplaces.

Table 13.6 Earlier migrant couples living in their own home, Auckland, (%)

Birthplace	1996	2001
Australia	83.2	77.7
Pacific Islands	55.6	49.1
UK & Ireland	89.4	86.8
Europe & North America	89.2	83.8
Asia	84.6	80.6
Other	85.2	81.6
All migrants	**79.7**	**73.1**
NZ-born couples	**79.2**	**75.4**

The overall percentage of home ownership in 2001 was 73.1%, whereas in 1996 it was much higher at 79.7%. The home ownership rate of earlier migrant couples born in Australia was down to 77.7% in 2001, from 83.2% in 1996. Earlier migrant couples born in the UK and Ireland continued to have the highest rate of home ownership at 86.8% in 2001.

Earlier single migrants maintained the same level of home ownership between 1991 and 2006, and had higher home ownership rates than NZ-born singles.

Table 13.7 Earlier single migrants living in their own home, Auckland, (%)

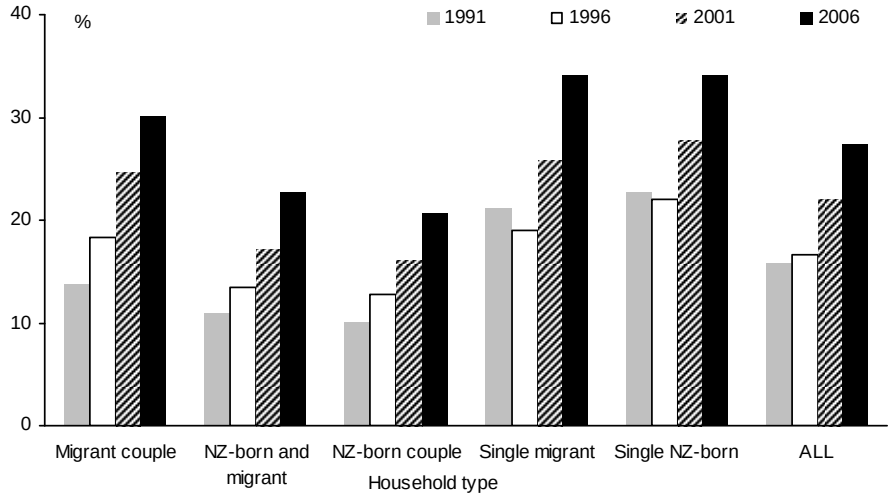
Birthplace	1996	2001
Australia	64.7	60.3
Pacific Islands	39.3	33.8
UK & Ireland	69.3	68.3
Europe & North America	71.5	68.8
Asia	74.3	69.4
Other	68.2	65.8
All migrants	**60.5**	**60.5**
Single NZ-born	**57.4**	**53.7**

Earlier single migrants born in Asia had the highest home ownership rates at 69.4%, double that of earlier single migrants born in the Pacific Islands. Earlier single migrants born in all other regions also had higher home ownership rates than NZ-born singles.

13.2 Renting from private landlords

Overall, the percentage of Auckland residents renting from private landlords across all the household types has almost doubled since 1991 (Figure 13.2). There was a huge leap in these percentages in 2006, to 27.4% from 22.2% in 2001.

Figure 13.2 Households renting from private landlords, Auckland, 1991 to 2006



In terms of household type, the most rapid change was among migrant couples. In 2006, 30.0% of migrant couples were renting from private landlords, more than double the rate seen in 1991. This is consistent with the change in age composition and income factors, as more young migrants move to New Zealand and are less likely to purchase houses.

Also, the flexibility of renting is what young couples are looking for in the early years of living in a new country.

Not surprisingly, the percentage of NZ-born residents in Auckland who rented from private landlords increased as well. The driver of this increase was the NZ-born single category, up from 22.7% in 1991 to 27.8% in 2001. Although there were more NZ-born couples renting from private landlords, the rate of increase was not as high as that of households with one NZ-born resident and one migrant.

Consistent with the overall trend, more migrants rented from private landlords (Figure 13.2 and Table 13.8). This was particularly so among recent migrant couples.

Table 13.8 Migrant couples renting from private landlords, Auckland, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	26.4	25.6	33.0	38.0
Pacific Islands	16.9	12.2	18.8	25.3
UK & Ireland	6.4	11.0	12.3	19.3
Europe & North America	12.1	27.7	27.6	31.7
Asia	23.2	25.1	30.0	33.8
Other	27.3	38.0	45.2	40.6
All migrants	**13.9**	**18.3**	**24.6**	**30.0**
NZ-born couples	**10.0**	**12.8**	**16.2**	**20.6**

Another noticeable change was in the single migrant category, which was a key driver of the increase in the proportion of migrants renting from private landlords. The percentage of single migrants renting from private landlords increased from 25.9% in 1996 to 34.1% in 2006, which was the same rate as NZ-born singles.

Table 13.9 Migrant singles renting from private landlord, Auckland, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	26.7	26.3	31.1	39.4
Pacific Islands	22.5	14.3	23.0	26.3
UK & Ireland	16.5	16.7	19.6	28.2
Europe & North America	22.2	23.6	27.9	37.6
Asia	32.4	21.0	30.3	38.6
Other	33.1	38.7	43.3	47.5
All migrants	**21.2**	**25.9**	**25.9**	**34.1**
Single NZ-born	**22.7**	**22.0**	**27.8**	**34.1**

Looking at birthplace, singles born in Australia topped the list of those renting from private landlords with 39.4% of the total. This was followed by migrant singles born in Asia (38.6%), and Europe and North America (37.6%). Migrant singles born in Asia also had the largest increase from 1996 (21.0%) to 2006 (38.6%). Although the rate of increase was not as significant among those single migrants born in the Pacific Islands, from 23.0% in 2001 to 26.3% in 2006, the period from 1996 to 2001 saw a leap from 14.3% to 23.0%.

13.2.1 Recent migrants

Overall, almost half of recent migrant couples rented from private landlords in 2001, a figure three times that of NZ-born couples, as shown in Table 13.10.

Table 13.10 Recent migrant couples renting from private landlords, Auckland, (%)

Birthplace	1996	2001
Australia	55.9	64.6
Pacific Islands	33.3	37.2
UK & Ireland	48.1	43.8
Europe & North America	63.8	56.7
Asia	34.6	48.6
Other	52.2	57.4
All migrants	**42.6**	**49.4**
NZ-born couples	**12.8**	**16.2**

In terms of birthplace, more recent migrant couples born in Australia and Asia rented from private landlords. The numbers increased from 55.9% in 1996 to 64.6% in 2001, and from 34.6% in 1996 to 48.6% in 2001 respectively.

Trends among recent single migrants were similar, although overall, the percentage renting remained constant between 1991 and 2006 at 46.8%. This figure was lower than that for recent migrant couples, but much higher than that for NZ-born singles, as shown in Table 13.11.

Table 13.11 Recent single migrants renting from private landlords, Auckland, (%)

Birthplace	1996	2001
Australia	57.9	64.4
Pacific Islands	27.6	35.2
UK & Ireland	50.8	56.7
Europe & North America	57.1	61.2
Asia	25.1	42.7
Other	57.7	53.1
All migrants	**46.8**	**46.8**
Single NZ-born	**22.0**	**27.8**

Recent single migrants born in Australia were most likely to rent from private landlords, at a rate of 64.4%, while those born in the Pacific Islands and Asia were least likely, at 35.2% and 42.7% respectively. Nevertheless, recent single migrants born in Asia played an important role in the increase in single migrants renting from private landlords. From 1996 to 2001, the portion renting from private landlords jumped from 25.1% to 42.7%. Single migrants born in Australia were a distant second, in terms of percentage point change from 1996 to 2001, with an increase from 57.9% in 1996 to 64.4% in 2001.

13.2.2 Intermediate migrants

Between 1996 and 2001, the percentage of intermediate migrant couples renting from private landlords increased from 15.5% to 19.5%.

As highlighted in Table 13.12, there was a huge drop in the overall percentage of migrant couples renting, as they moved from recent to intermediate migrant status.

Table 13.12 Intermediate migrant couples renting from private landlords, Auckland, (%)

Birthplace	1996	2001
Australia	17.6	23.5
Pacific Islands	14.4	18.6
UK & Ireland	11.2	12.6
Europe & North America	18.3	25.7
Asia	17.4	19.0
Other	22.1	27.7
All migrants	**15.5**	**19.5**
NZ-born couples	**12.8**	**16.2**

The increases among migrant couples born in the UK and Ireland (from 11.2% to 12.6%), and Asia (17.4% to 19.0%) were not as significant as for those born in Australia (17.6% to 23.5%) and in Europe and North America (18.3% to 25.7%).

Overall rates for NZ-born singles and intermediate single migrants were almost identical.

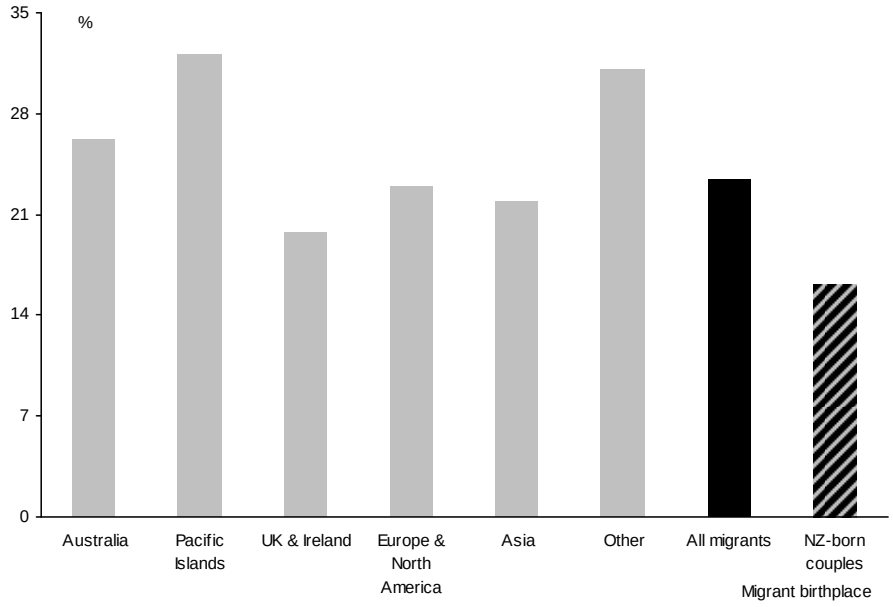
Table 13.13 Intermediate single migrants renting from private landlords, Auckland, (%)

Birthplace	1996	2001
Australia	35.4	43.0
Pacific Islands	17.9	26.8
UK & Ireland	29.7	33.4
Europe & North America	37.1	39.4
Asia	19.4	24.3
Other	42.7	46.2
All migrants	**28.9**	**28.9**
Single NZ-born	**22.0**	**27.8**

Among intermediate single migrants, migrants born in Australia experienced a steady increase in the percentage renting from private landlords, from 35.4% in 1996 to 43% in 2001. In contrast, the percentage of singles born in the UK and Ireland, and Europe and North America renting from private landlords decreased between 2001and 2006.

The behaviour of couples with one intermediate migrant partner is of some interest in that it remained significantly different from that of NZ-born couples. Usually, this group's behaviour mirrors that of NZ-born couples more closely than that of migrant couples.

Figure 13.3 Couples with one intermediate migrant partner renting from private landlords, Auckland, (%)



13.2.3 Earlier migrants

A higher proportion of earlier migrant couples, across all birthplace categories, rented from private landlords between 1996 and 2001.

Table 13.14 Earlier migrant couples renting from private landlords, Auckland, (%)

Birthplace	1996	2001
Australia	9.8	12.8
Pacific Islands	7.3	13.0
UK & Ireland	5.3	6.2
Europe & North America	4.7	7.3
Asia	5.3	8.5
Other	8.9	12.9
All migrants	**6.0**	**9.1**
NZ-born couples	**12.8**	**16.2**

Most significantly, earlier migrant couples born in the Pacific Islands saw an increase from 7.3% in 1996 to 13.0% in 2001. Large gains were also experienced in the Australia and "Other" birthplace categories.

The proportion of earlier single migrants renting from private landlords in 2006 was far lower than that for NZ-born singles, at 17.1% compared to 27.8%. The rate was lower across all birthplaces.

Table 13.15 Earlier single migrants renting from private landlords, Auckland, (%)

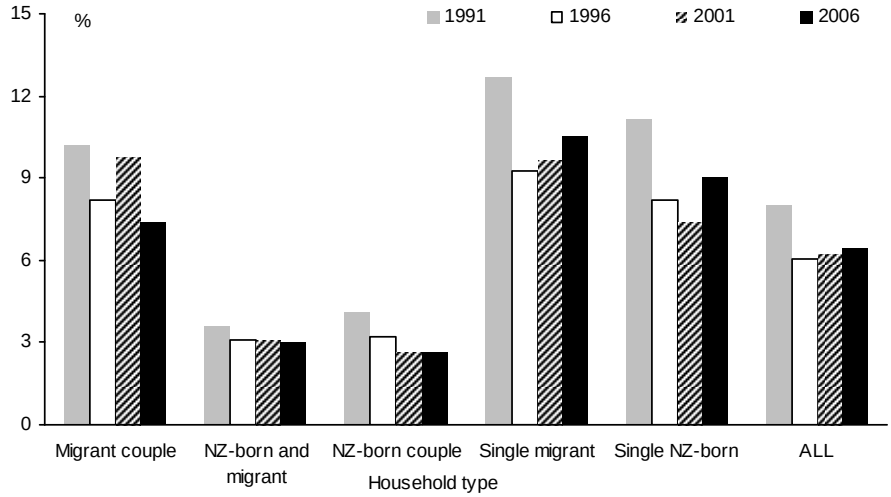
Birthplace	1996	2001
Australia	19.4	23.5
Pacific Islands	11.1	19.3
UK & Ireland	13.8	15.8
Europe & North America	13.4	15.3
Asia	10.5	13.8
Other	20.8	22.6
All migrants	**17.1**	**17.1**
Single NZ-born	**22.0**	**27.8**

Among earlier single migrants, migrants born in the Pacific Islands experienced a significant growth, from 11.1% renting from private landlords in 1996 to 19.3% in 2001. Other birthplace categories only had small increases over the same period.

13.3 Renting from central government

In Auckland, the overall percentage of New Zealand residents renting from central government is much higher than that renting from local government, although not as high as that owning houses or renting from private landlords (Figure 13.4).

Figure 13.4 Households renting from central government, Auckland, 1991 to 2006



The overall percentage of households renting from central government has been slowly increasing. Not surprisingly, a large proportion of single households rented from central government, reaching 10.5% for single migrants and 9.0% for single NZ-born households in 2006. The percentage of NZ-born couples remained unchanged at 2.7% between 2001 and 2006.

Table 13.16 shows the total percentage of migrant couples renting from central government.

Table 13.16 Migrant couples renting from central government, Auckland, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	1.7	2.0	2.8	1.9
Pacific Islands	28.3	26.2	30.1	24.4
UK & Ireland	1.4	0.9	0.9	0.7
Europe & North America	0.8	1.6	2.9	2.6
Asia	1.5	1.8	3.0	2.1
Other	1.6	2.6	3.0	3.6
All migrants	**10.2**	**8.2**	**9.8**	**7.4**
NZ-born couples	**4.1**	**3.2**	**2.7**	**2.7**

A significant proportion of migrant couples born in the Pacific Islands rented from the central government (30.1% in 2001 and 24.4% in 2006), although this proportion dropped to its lowest point in 2006. Among migrant couples born in Europe and North America, 2.6% lived in houses rented from the central government in 2006.

The proportion of single migrants and NZ-born singles that rented from the central government was larger than the proportion of any type of couples.

Table 13.17 Migrant singles renting from central government, Auckland, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	7.2	4.6	4.5	6.0
Pacific Islands	37.4	31.3	32.5	33.4
UK & Ireland	5.9	3.9	3.2	4.4
Europe & North America	4.1	2.9	3.4	5.2
Asia	3.0	1.9	2.9	3.0
Other	3.8	4.2	8.2	10.5
All migrants	**12.7**	**9.6**	**9.6**	**10.5**
Single NZ-born	**11.2**	**8.2**	**7.3**	**9.0**

Single migrants born in the Pacific Islands were 11 times more likely to rent from the central government than migrants born in Asia. Nevertheless, the overall rate for single migrants (10.5%) and NZ-born singles (9.0%) were fairly similar.

13.3.1 Recent migrants

The percentage of recent migrant couples renting from central government doubled between 1996 and 2001 (from 3.2% to 7.4%).

Table 13.18 Recent migrant couples renting from central government, Auckland, (%)

Birthplace	1996	2001
Australia	1.8	0.9
Pacific Islands	21.5	27.2
UK & Ireland	0.6	1.2
Europe & North America	3.1	5.6
Asia	1.8	5.2
Other	3.4	3.2
All migrants	**3.2**	**7.4**
NZ-born couples	**3.2**	**2.7**

A large percentage of these couples were born in the Pacific Islands, and in 2001, this percentage jumped to 27.2% from 21.5% in 1996. The proportion of recent migrant couples born in Asia almost tripled, from 1.8% in 1996 to 5.2% in 2001. The same trend can be seen in the Europe and North America, UK and Ireland birthplace categories. The only exception was in the Australian born recent migrant couple's category, where the percentage halved from 1.8% in 1996 to 0.9% in 2001.

At the recent single migrant stage, the number of people renting from central government in 2001 was quite similar to that of NZ-born singles.

Table 13.19 Recent single migrants renting from central government, Auckland, (%)

Birthplace	1996	2001
Australia	2.1	2.0
Pacific Islands	23.6	28.5
UK & Ireland	1.1	1.5
Europe & North America	2.9	6.5
Asia	1.2	3.5
Other	7.0	11.7
All migrants	**7.7**	**7.7**
Single NZ-born	**8.2**	**7.3**

Table 13.9 shows those born in the UK and Ireland did not rent from central government in large numbers, whereas those born in the Pacific Islands were very likely to.

13.3.2 Intermediate migrants

In contrast, fewer intermediate migrant couples across all the birthplace categories rented from central government between 1996 and 2001, apart from intermediate migrants born in the Pacific Islands, Europe, and North America.

Table 13.20 Intermediate migrant couples renting from central government, Auckland, (%)

Birthplace	1996	2001
Australia	5.9	2.0
Pacific Islands	30.8	32.2
UK & Ireland	0.7	0.4
Europe & North America	2.8	3.5
Asia	2.0	1.6
Other	3.4	2.8
All migrants	**14.5**	**10.4**
NZ-born couples	**3.2**	**2.7**

The percentage of intermediate migrant couples born in Australia renting houses from central government dropped significantly from 5.9% in 1996, to 2.0% in 2001.

Overall, intermediate migrant couples had higher rental rates than recent migrant couples, at 10.4% versus 7.4%.

Among intermediate single migrants, the picture was quite similar, with an overall rate of 10.6% renting from central government.

Table 13.21 Intermediate single migrants renting from central government, Auckland, (%)

Birthplace	1996	2001
Australia	3.7	3.5
Pacific Islands	35.7	35.1
UK & Ireland	2.5	1.6
Europe & North America	2.3	4.5
Asia	2.7	2.4
Other	6.7	7.9
All migrants	**10.6**	**10.6**
Single NZ-born	**8.2**	**7.3**

More than one third of intermediate single migrants born in the Pacific Islands rented from central government in 2001. Intermediate single migrants born in all other birthplace categories had lower rates of rental from central government than NZ-born singles.

13.3.3 Earlier migrants

Among earlier migrant couples, 21.9% of those born in the Pacific Islands rented from central government in 1996. This figure grew to 29.0% in 2001, as seen in Table 13.22.

Table 13.22 Earlier migrant couples renting from central government, Auckland, (%)

Birthplace	1996	2001
Australia	2.3	4.1
Pacific Islands	21.9	29.0
UK & Ireland	0.9	0.9
Europe & North America	0.3	0.4
Asia	0.9	1.2
Other	0.0	0.7
All migrants	**6.6**	**10.3**
NZ-born couples	**3.2**	**2.7**

From 1996 to 2001, there were also significant increases in the number of earlier migrant couples born in Australia (from 2.3% to 4.1%) and Asia (from 0.9% to 1.2%), renting from central government.

Among earlier single migrants, the overall rate of 9.3% was lower than that for earlier migrant couples, but still well above the rate for NZ-born singles, as shown in Table 13.23.

Table 13.23 Earlier single migrants renting from central government, Auckland, (%)

Birthplace	1996	2001
Australia	4.9	4.9
Pacific Islands	29.2	31.6
UK & Ireland	4.2	3.5
Europe & North America	2.8	2.5
Asia	2.5	3.0
Other	1.2	1.7
All migrants	**9.3**	**9.3**
Single NZ-born	**8.2**	**7.3**

This figure was skewed by the large portion of earlier single migrants born in the Pacific Islands living in houses rented from the central government, at 31.6%, compared with values under 5.0% for all other birthplaces.

13.4 Renting from local government

As Table 13.24 shows, the proportion of households renting from local government in Auckland was extremely small, compared to other dwelling tenure categories. The proportion of couples remained the same over the last five years, although declines were experienced from 1991 to 2001. In contrast, singles, including those born in New Zealand, had more obvious declines in the number renting from local government during the same period.

Table 13.24 Households renting from local government, Auckland, (%), 1991 to 2006

Household type	1991	1996	2001	2006
Migrant couple	0.5	0.4	0.2	0.2
NZ-born and migrant	0.3	0.3	0.1	0.1
NZ-born couple	0.3	0.2	0.1	0.1
Single migrant	2.8	2.4	1.8	1.0
Single NZ-born	1.8	1.9	1.5	0.6
ALL	**1.1**	**1.0**	**0.8**	**0.4**

NZ-born singles accounted for the largest proportion of households renting from the local government in Auckland (1,482 out of 2,667 households in 2001).

Migrant couples were unlikely to rent from local authorities, regardless of birthplace, as highlighted in Table 13.25. In Auckland, fewer migrant couples across all birthplace categories, except Europe and North America, rented from the local government. There was no migrant couple born in Australia, whereas 0.3% of migrant couples born in the Pacific Islands rented from the local government.

Table 13.25 Migrant couples renting from local authorities, Auckland, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	0.7	0.6	0.3	0.0
Pacific Islands	0.4	0.4	0.3	0.3
UK & Ireland	0.7	0.5	0.3	0.1
Europe & North America	0.3	0.2	0.1	0.2
Asia	0.3	0.2	0.1	0.1
Other	0.3	0.1	0.2	0.1
All migrants	**0.5**	**0.4**	**0.2**	**0.2**
NZ-born couples	**0.3**	**0.2**	**0.1**	**0.1**

No recent migrant couples born in Australia lived in houses rented from the local government between 1996 and 2001. The percentage of recent migrant couples born in Asia dropped to zero in 2001. Recent migrant couples from other birthplace categories, including Europe and North America, the UK and Ireland, and the Pacific Islands, had small fractions renting from local authorities in 2001, at 0.3%, 0.2%, and 0.1% respectively.

In the intermediate migrant category, in 2001 there were no migrant couples born in Australia, the UK and Ireland or Europe and North America renting from the local government in 2001. Only 0.2% of migrants born in the Pacific Islands and Asia rented from the local government.

The data shows that the percentage of earlier migrant couples renting from local authorities was higher than that for intermediate migrants. Earlier migrant couples born in Australia were not occupying local authority rental properties at all, whereas other earlier migrant couples were having a small fraction of this dwelling tenure, ranging from 0.2% to

0.4% by place of birth. Overall, a declining trend is obvious, especially in the UK and Ireland birthplace category.

Single migrants were more likely than migrant couples to rent from local authorities, but overall the rate was still very low.

Table 13.26 Migrant singles renting from local government, Auckland, (%), 1991 to 2006

Birthplace	1991	1996	2001	2006
Australia	1.8	2.0	1.8	0.5
Pacific Islands	1.1	1.7	1.8	1.1
UK & Ireland	4.5	4.1	3.3	1.8
Europe & North America	1.7	2.0	1.4	1.0
Asia	0.6	0.6	0.4	0.3
Other	1.0	0.9	0.2	0.9
All migrants	**2.8**	**1.8**	**1.8**	**1.0**
Single NZ-born	**1.8**	**1.9**	**1.5**	**0.6**

Between 0.3% (Asia) and 1.8% (Pacific Islands) single migrants rented from the local government in 2006.

14 Appendix III: Dwelling type 1991 to 2006

This section discusses dwelling type by household type, and illustrates how migrants change their dwelling type based on their length of residency.

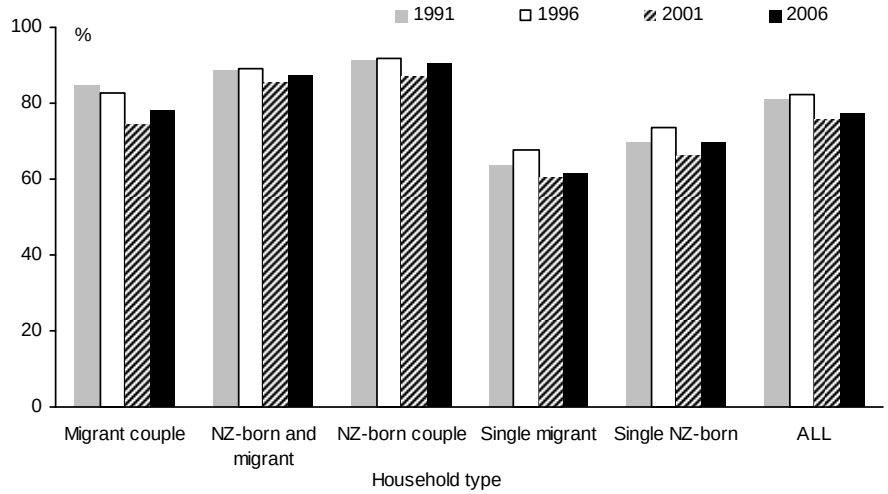
Key points

- In 2006, approximately 75% of people living in New Zealand lived in a house, 10.2% lived in a flat or apartment in a single-storey building, 6.8% lived in a flat or apartment in a multi-storey building, and 5.6% lived in dwellings that were categorised as other.
- NZ-born couple households (90.6%) were more likely to live in houses than migrant couple households (78.0%).
- NZ-born single households (69.7%) were more likely to live in houses than single migrant households (61.3%).
- Single people were more likely to live in flats than couples regardless of their birthplace.
- Recent migrants, including students, were more likely to live in flats than intermediate or earlier migrants.
- The longer migrants lived in New Zealand, the more likely they were to have housing behaviour similar to that of NZ-born households.
- In general, migrants born in the UK and Ireland quickly adopted housing behaviour similar to that of NZ-born households.
- In general, the housing behaviour of recent migrants born in Asia was the most dissimilar from NZ-born couple and single households. However, this group showed the greatest change in behaviour as time spent in New Zealand increases to more closely reflect the housing behaviour of NZ-born households.

14.1 Houses

Figure 14.1 shows the percentage of people living in houses between 1991 and 2006.

Figure 14.1 Proportion living in houses, New Zealand, 1991 to 2006



The total proportion of household types living in houses dropped from 81.1% in 1991 to 77.4% in 2006.

During this time, the percentage of NZ-born couples living in houses remained fairly constant, dropping just 0.7 percentage points, to 90.6%. NZ-born singles living in houses also maintained a constant rate, at 69.7% in 2006.

The story among migrants is different. The proportion of migrant couples living in houses fell from 84.4% to 78.0% over the 15 year period. The proportion of couples with one migrant partner living in houses dropped 1.5 percentage points. The fraction of single migrants in houses declined at a faster rate, dropping to 61.3% in 2006 from 63.6% in 1991.

The proportion of NZ-born couples living in houses was higher than that for all recent migrant couples and couples with one recent migrant partner.

Among intermediate migrants, couples born in the UK and Ireland, and couples with one New Zealand partner and one UK or Ireland-born partner were more likely to live in houses than NZ-born couples.

Similarly, by the time they reached the intermediate migrant category, UK and Ireland-born single migrants were as likely to live in houses as NZ-born singles.

At the earlier migrant level, rates among most couples with one migrant partner were very similar to those of NZ-born couples, as shown in Table 14.1.

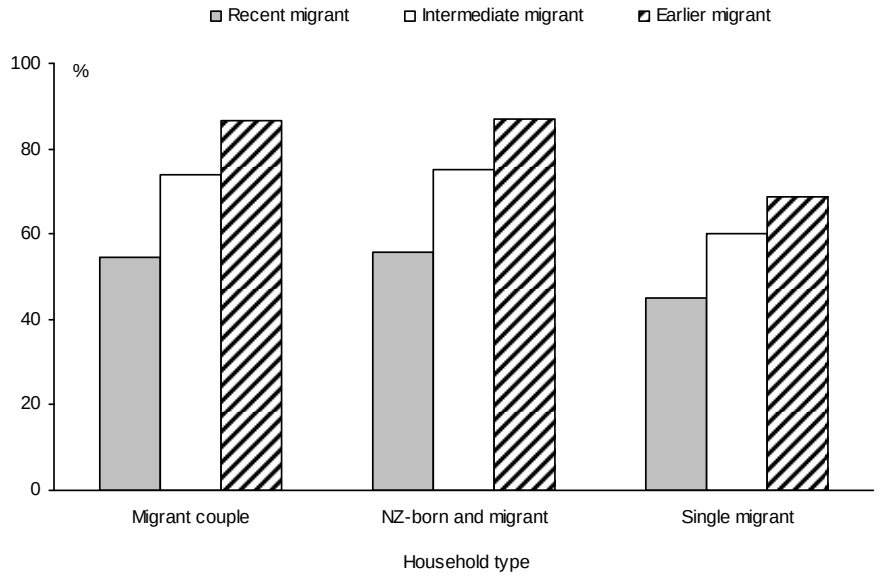
Table 14.1 Couples with one earlier migrant partner living in houses, New Zealand, (%)[28]

Birthplace	1996	2001	2006
Asia	91.7	84.0	86.9
Australia	90.9	86.4	89.1
Europe & North America	92.1	87.1	90.8
Other	91.4	88.0	88.8
Pacific Islands	89.8	80.2	87.1
UK & Ireland	91.1	89.2	91.3
All migrants	**91.2**	**87.9**	**90.4**
NZ-born couples	**91.8**	**87.3**	**90.6**

The gap between NZ-born and migrant couples was larger than that between NZ-born couples and couples with one earlier migrant partner, although still quite small for most migrant birthplaces.

The biggest difference in proportion was between NZ-born and recent migrants born in Asia. The number of recent migrants from Asia who lived in a house was up to 36% lower than the rate for NZ-born couples. In addition, this gap widened substantially over the last 10 years, possibly reflecting the number of short-term stays by students. However, by the time migrants born in Asia reached the earlier migrant category, this difference was less than 4.2%, as indicated in Figure 14.2.

Figure 14.2 Proportion of migrants born in Asia living in houses, New Zealand, 2006



[28] Note that in the 1991 Census Statistics New Zealand did not collect information on the length of time migrants had been in the country.

In 2006, 54.4% of recent migrant couples born in Asia lived in houses, compared to 86.4% of earlier migrant couples born in Asia, indicating a 32 percentage-point change as the time spent in New Zealand inceased.

Among couples with a recent migrant partner born in Asia the rate was 55.7%, while for couples with an earlier migrant partner born in Asia the figure was 86.9%.

Smaller but nevertheless significant changes in behaviour occurred among single migrants born in Asia as their time in New Zealand increased.

14.1.1 Recent migrants

Overall, the portion of recent migrant couples living in houses dropped slightly from 69.8% in 1996, to 67.5% in 2006. The biggest change occurred within the group born in Asia, with the proportion of recent migrant couples living in houses declining from 66.3% to 54.4%.

Meanwhile, the proportion of recent migrant couples born in the UK and Ireland living in houses rose from 1996, reaching 86.0% in 2006.

In contrast, the proportion of couples with one recent migrant partner born in Asia and recent single migrants born in Asia living in households declined from 1996 to 2006.

As Table 14.2 shows, the percentage of migrants born in Asia that lived in houses dropped from 68.7% in 1996, to 46.7% in 2001, and then to 45.2% in 2006.

Table 14.2 Recent single migrants living in houses, New Zealand, (%)

Birthplace	1996	2001	2006
Asia	68.7	46.7	45.2
Australia	60.2	56.0	51.5
Europe & North America	53.7	47.2	48.5
Other	48.4	44.0	43.0
Pacific Islands	55.9	43.4	45.9
UK & Ireland	62.3	61.3	58.4
All migrants	**62.8**	**48.7**	**47.7**
Single NZ-born	**73.5**	**66.5**	**69.7**

Overall, the proportion of single migrants living in houses fell from 62.8% in 1996 to 47.7% in 2006. Recent single migrants born in the Pacific Islands, Europe and North America, as well as those classified as “Other” all had less than a one in two likelihood of living in houses in 2006.

Between 1996 and 2006, the portion of couples with one recent migrant partner born in Asia living in a house declined from 75.5% to 55.7%, as highlighted in Table 14.3.

Table 14.3 Couples with one recent migrant partner living in houses, New Zealand, (%)

Birthplace	1996	2001	2006
Asia	75.5	56.9	55.7
Australia	82.5	81.6	79.4
Europe & North America	79.0	74.2	75.7
Other	78.2	70.2	70.9
Pacific Islands	57.9	54.2	56.1
UK & Ireland	78.2	80.7	81.9
All migrants	**79.0**	**76.7**	**77.3**
NZ-born couples	**91.8**	**87.3**	**90.6**

Couples with one partner born in the Pacific Islands were the second least likely to live in houses, at 56.1% in 2006.

14.1.2 Intermediate migrants

The number of intermediate migrant couples living in houses fell slightly, from 81.7% in 1996 to 78.4% in 2006.

Among intermediate migrant couples, those born in the UK and Ireland were more likely to live in houses than those born in New Zealand, with this figure rising slightly between 1996 and 2006. Meanwhile, the proportion of intermediate migrant couples born in Europe and North America living in houses dropped 10 percentage points, to 80.9% during the same period.

In 2006, 73.9% of intermediate migrant couples born in Asia lived in houses, a 19.5 percentage point increase over recent migrant couples born in Asia.

A similar rise of 19.5% was experienced among couples with one intermediate migrant partner born in Asia, compared to the recent migrant category.

Large gains were also made by couples with one migrant partner born in the Pacific Islands as they move from the recent to intermediate migrant category (up 19.4 percentage points).

As with intermediate migrant couples born in the UK and Ireland, couples with one intermediate migrant partner born in the UK and Ireland were more likely to live in houses than NZ-born couples (91.3% compared with 90.6%).

Overall, couples with one intermediate migrant partner experienced a slight decline in the proportion living in houses, but maintained a level approaching that of NZ-born couples, at 86.8%.

The proportion of intermediate single migrants living in houses experienced a sharp fall, as was the case with recent single migrants, declining from 68.0% in 1996 to 60.3% in 2006. As was the case for recent migrants, most change occurred between 1996 and 2001 (a drop of 7.0%), as highlighted in Table 14.4. This may be explained by the number of young migrants who begin their stay in New Zealand with study, and then move into the workforce.

Table 14.4 Intermediate single migrants living in houses, New Zealand, (%)

Birthplace	1996	2001	2006
Asia	69.2	61.6	60.2
Australia	73.9	65.8	67.4
Europe & North America	72.1	63.2	60.5
Other	63.3	56.1	53.3
Pacific Islands	62.4	50.3	54.4
UK & Ireland	70.3	69.8	69.3
All migrants	**68.0**	**61.0**	**60.3**
Single NZ-born	**73.5**	**66.5**	**69.7**

Intermediate single migrants born in Asia and the Pacific Islands accounted for a large part of the sharp fall. Among intermediate single migrants born in Asia the proportion living in houses fell from 69.2% in 1996 to 60.2% in 2006. Among intermediate single migrants born in the Pacific Islands, the proportion living in houses fell from 62.4% to 54.4%.

Intermediate single migrants born in the UK and Ireland were just as likely to live in a house as NZ-born singles. All other single migrant groups had significantly lower proportions occupying houses except for those born in Australia. Nevertheless, intermediate single migrants born in Asia had a rate 15.0 percentage points higher than recent single migrants born in Asia, indicating a strong change in behaviour over the two time periods since their arrival.

14.1.3 Earlier migrants

The proportion of earlier migrant couples living in houses dropped from 89.0% in 1996 to 86.2% in 2006.

The highest rate among earlier migrant couples was among couples born in the UK and Ireland, at 87.8%. The proportion of earlier migrant couples born in Asia living in houses was 86.4% in 2006, an increase of 32.2 percentage points over the rate achieved by recent migrant couples born in Asia.

In general, the difference in the proportion of NZ-born couples and couples with one earlier migrant partner living in houses was negligible across all three censuses. The

highest proportion was among couples with one earlier migrant partner born in the UK and Ireland. Rates among migrants born in Asia were up to 31.2 percentage points over the rates seen among recent migrants born in the region. The lowest rate was recorded among people born in the Pacific Islands, at 87.1%, compared to NZ-born couples where the average was 90.6%.

Among earlier single migrants, those born in Asia were most likely to live in houses in 2006, at a rate 23.5 percentage points above the rates seen among recent single migrants born in Asia. All migrant groups had rates within 6.0 percentage points of the rate seen among NZ-born singles. The proportions of single earlier migrants living in houses are presented in Table 14.5.

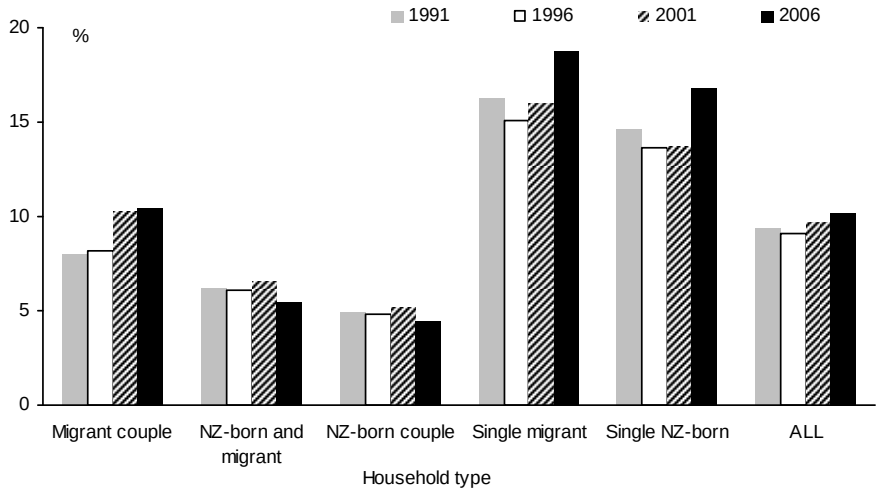
Table 14.5 Earlier single migrants living in houses, New Zealand (%), 1996 to 2006

Birthplace	1996	2001	2006
Asia	73.4	67.0	68.7
Australia	70.9	64.5	67.6
Europe & North America	71.8	65.1	68.3
Other	69.0	64.5	64.2
Pacific Islands	72.9	55.6	65.1
UK & Ireland	66.4	64.3	64.8
All migrants	**68.5**	**63.6**	**65.9**
Single NZ-born	**73.5**	**66.5**	**69.7**

14.2 Flats or apartments in single-storey buildings

The proportion of singles living in flats or apartments in single-storey buildings was notably higher than the proportion of couples. Figure 14.3 shows the percentage of people living in flats or apartments in single-storey buildings between 1991 and 2006. The similarities between the two single groups and the three couples groups can be clearly seen from the graph.

Figure 14.3 Proportion living in flats or apartments in single-storey buildings, New Zealand, 1991 to 2006



Migrant couples were twice as likely to live in flats or apartments in single-storey buildings as NZ-born couples. The proportion of NZ-born and migrant couples living in flats or apartments in single-storey buildings was similar to that of NZ-born couples, while migrant singles were only slightly more likely to live in flats or apartments in single-storey buildings than NZ-born singles.

In New Zealand, the number of households living in flats or apartments in single-storey buildings rose from 9.3% in 1991, to 10.2% in 2006. However, NZ-born couples were far less likely to live in flats or apartments in single-storey buildings than other groups, with just 4.5% living in these dwellings in 2006.

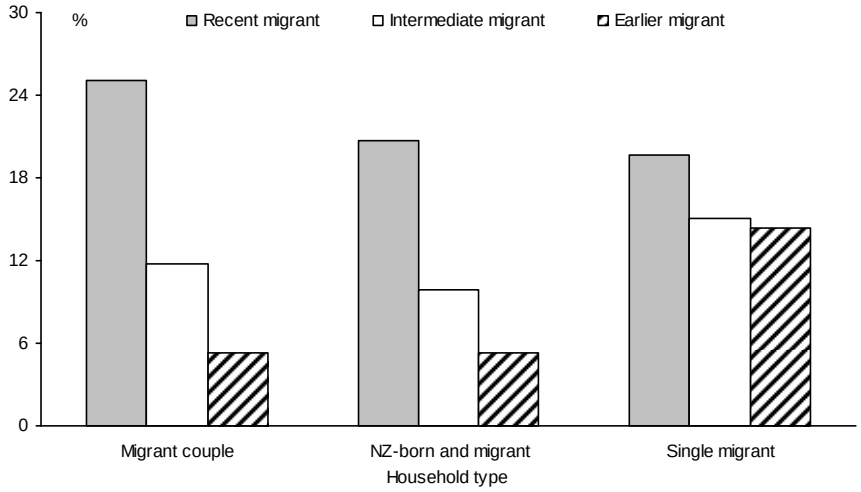
The proportion of NZ-born singles living in flats or apartments in single-storey buildings was four times higher than NZ-born couples, at 16.8% in 2006, a rise of 2.2 percentage points since 1991.

Meanwhile, among migrant groups, it is unsurprising that single migrants had the highest proportion living in flats or apartments in single-storey buildings, at 18.8% in 2006 (up 2.5 percentage points over 15 years). Couples with one migrant partner had a rate of 5.4% in 2006, very similar to NZ-born couples, while 10.5% of migrant couples occupied flats or apartments in single-storey buildings in 2006, up 2.5 percentage points since 1991.

Couples with one earlier migrant partner were less likely to live in flats or apartments in single-storey buildings than NZ-born couples, while intermediate single migrants were less likely to live in flats or apartments in single-storey buildings than NZ-born singles.

As a mirror image of the proportion living in houses, it is no surprise that recent migrants born in Asia were most likely to live in flats or apartments in single-storey buildings. But members of this group experienced the biggest change in behaviour as they moved from being recent to earlier migrants. By the time they reached earlier migrant status, single migrants born in Asia were less likely to live in flats or apartments in single-storey buildings than NZ-born singles, as shown in Figure 14.4.

Figure 14.4 Proportion of migrants born in Asia living in flats or apartments in single-storey buildings, New Zealand, 2006



14.2.1 Recent migrants

From 1996, the proportion of recent migrant couples living in flats or apartments in single-storey buildings rose from 11.4% to 16.3%.

Driving this change was the housing behaviour of recent migrant couples born in Asia. Their portion of recent migrants living in flats or apartments in single-storey buildings had more than doubled from 11.0% to 25.1%. Among recent migrant couples born in the Pacific Islands the rate rose from 14.2% to 21.3%. This is shown in Table 14.6.

Table 14.6 Recent migrant couples living in flats or apartments in single-storey buildings, New Zealand, (%)

Birthplace	1996	2001	2006
Asia	11.0	20.2	25.1
Australia	8.6	10.6	8.0
Europe & North America	13.5	13.7	12.7
Other	13.4	14.2	13.6
Pacific Islands	14.2	19.4	21.3
UK & Ireland	9.3	8.5	4.8
All migrants	**11.4**	**15.9**	**16.3**
NZ-born couples	**4.9**	**5.2**	**4.5**

Rates for migrants born in other regions were steady, or in the case of recent migrant couples born in the UK and Ireland, dropped.

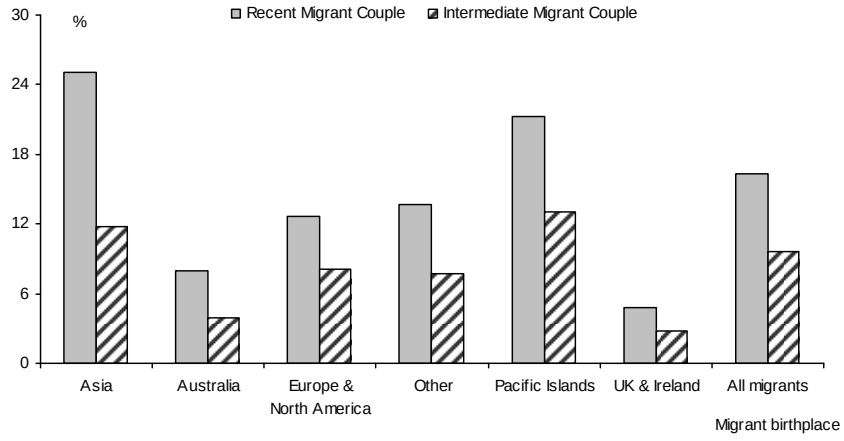
Among couples with one recent migrant partner, the proportion living in flats or apartments in single-storey buildings fell marginally, to 8.8% in 2006 from 9.6% in 1996. This drop was mainly due to a fall in the proportion of couples with one recent migrant partner born in the UK and Ireland living in flats or apartments in single-storey buildings. Meanwhile, the proportion of couples with one partner born in the Pacific Islands living in flats or apartments in single-storey buildings experienced a sharp rise, tripling between 1996 and 2006.

Among recent single migrants, the overall proportion living in flats or apartments in single-storey buildings was 19.4%, just 2.6 percentage points above the rate for NZ-born singles. The biggest change over time in the proportion of migrants living in flats or apartments in single-storey buildings occurred among recent single migrants born in Asia, rising from 10.4% in 1996 to 19.6% in 2006.

14.2.2 Intermediate migrants

Figure 14.5 shows that intermediate migrant couples were half as likely as recent migrant couples to live in flats or apartments in single-storey buildings.

Figure 14.5 Recent and intermediate migrant couples living in flats or apartments in single-storey buildings, New Zealand, 2006



Intermediate migrant couples most likely to live in flats or apartments in single-storey buildings were those born in the Pacific Islands and Asia. However, the rate for intermediate migrant couples born in Asia were less than half that of recent migrant couples born in Asia. There was a drop of 8.2 percentage points in the proportion of

migrant couples born in the Pacific Islands living in flats or apartments in single-storey buildings as they moved from recent to intermediate migrant status.

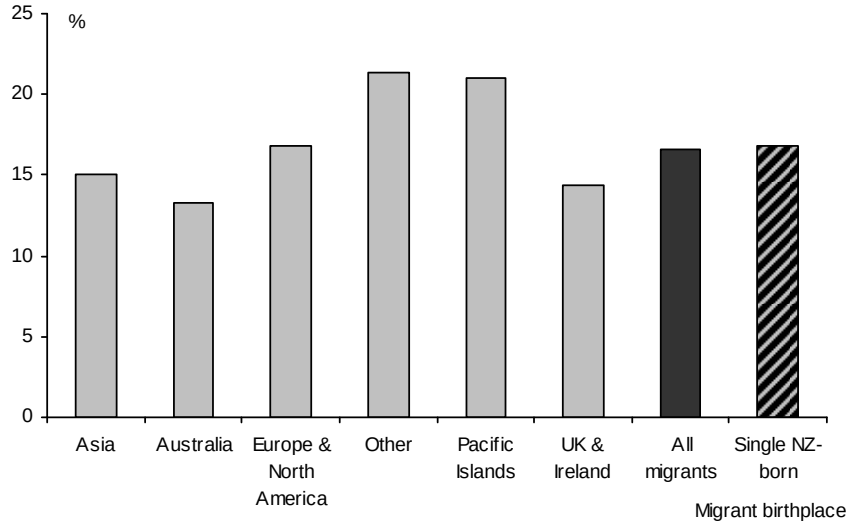
Intermediate migrant couples born in the UK and Ireland were least likely to live in flats or apartments in single-storey buildings, at just 2.7%, which was lower than that for NZ-born couples.

The rate for couples with one intermediate migrant partner was 5.3%, a figure similar to that among NZ-born couples. The likelihood of couples with one intermediate migrant partner living in flats or apartments in single-storey buildings was particularly low for those with one partner born in Australia, Europe or North America.

The proportion of intermediate migrants born in Asia with NZ-born partners living in flats or apartments in single-storey buildings was higher (9.9%), but this rate was half that of recent migrants born in Asia with a NZ-born partner.

The overall proportion of intermediate single migrants living in flats or apartments in single-storey buildings was 16.6%, roughly equivalent to the rate for NZ-born singles, as indicated in Figure 14.6.

Figure 14.6 Intermediate single migrants living in flats or apartments in single-storey buildings, New Zealand, 2006



Among intermediate single migrants, those born in Asia, Australia, and the UK and Ireland living in flats or apartments in single-storey buildings had proportions lower than NZ-born singles. The percentage of intermediate single migrants born in Asia and the Pacific Islands occupying flats or apartments in single-storey buildings has risen over the last 10

years, from 10.9% to 15.0% among those born in Asia, and from 15.5% to 21.0% among those born in the Pacific Islands.

14.2.3 Earlier migrants

After 15 years migrant couples had a 6.7% chance of living in flats or apartments in single-storey buildings. Among these households, earlier migrant couples born in Asia had the lowest rate, at 5.3%, one fifth the rate of recent migrant couples born in Asia.

Table 14.7 shows that couples with one earlier migrant partner were less likely to live in flats or apartments in single-storey buildings than NZ-born couples.

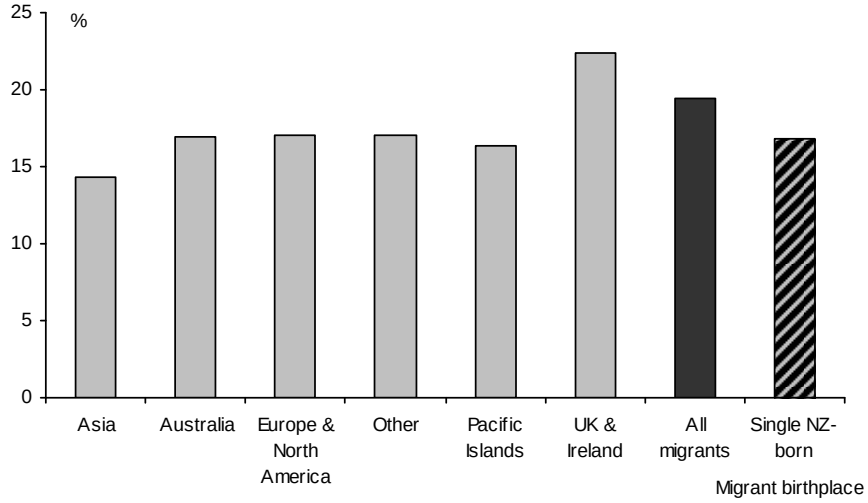
Table 14.7 Couples with one earlier migrant partner living in flats or apartments in single-storey buildings, New Zealand, (%)

Birthplace	1996	2001	2006
Asia	4.6	6.3	5.4
Australia	5.6	5.3	4.8
Europe & North America	4.8	5.7	3.8
Other	5.6	4.9	4.8
Pacific Islands	5.5	7.4	5.4
UK & Ireland	5.7	5.4	4.0
All migrants	**5.5**	**5.5**	**4.3**
NZ-born couples	**4.9**	**5.2**	**4.5**

Particularly low rates were seen among couples with one partner born in Europe and North America, and the UK and Ireland. The portion of couples with one partner born in Asia living in flats or apartments in single-storey buildings dropped from 20.8% to 5.4% as the number of years they lived in New Zealand rose from fewer than five years to more than 15 years.

Figure 14.7 shows the proportion of earlier single migrants living in flats or apartments in single-storey buildings.

Figure 14.7 Earlier single migrants living in flats or apartments in single-storey buildings, New Zealand, 2006

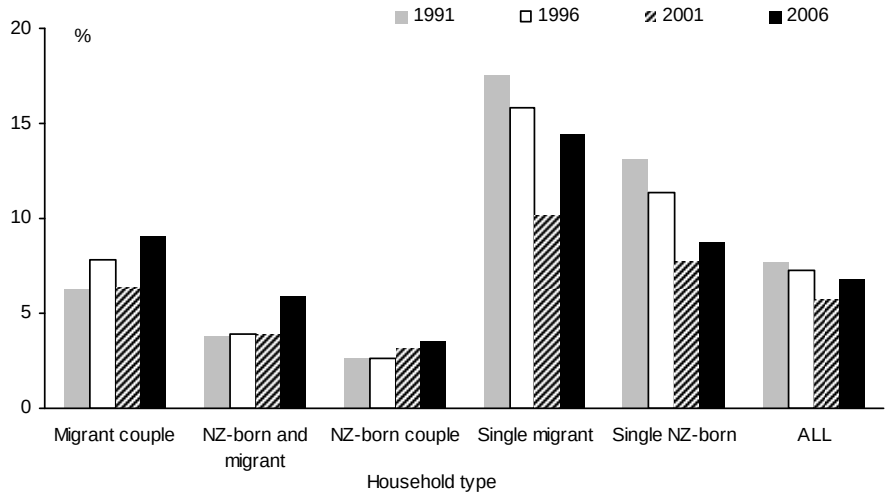


Among earlier single migrants, the proportion living in flats or apartments in single-storey buildings was 19.5%. However, the large percentage of earlier single migrants born in the UK and Ireland living in flats or apartments in single-storey buildings skewed the earlier migrant average rate upward. The lowest rate was among earlier single migrants born in Asia. This group, at 14.3%, had a lower proportion living in flats or apartments in single-storey buildings than that of NZ-born singles.

14.3 Flats or apartments in multi-storey buildings

Figure 14.8 shows the percentage of people living in flats or apartments in multi-storey buildings between 1991 and 2006.

Figure 14.8 Proportion living in flats or apartments in multi-storey buildings, New Zealand



Interestingly, while the total number of households living in multi-storey flats has increased over the last 15 years, the proportion of NZ-born singles and single migrants living in this type of dwelling has dropped substantially.

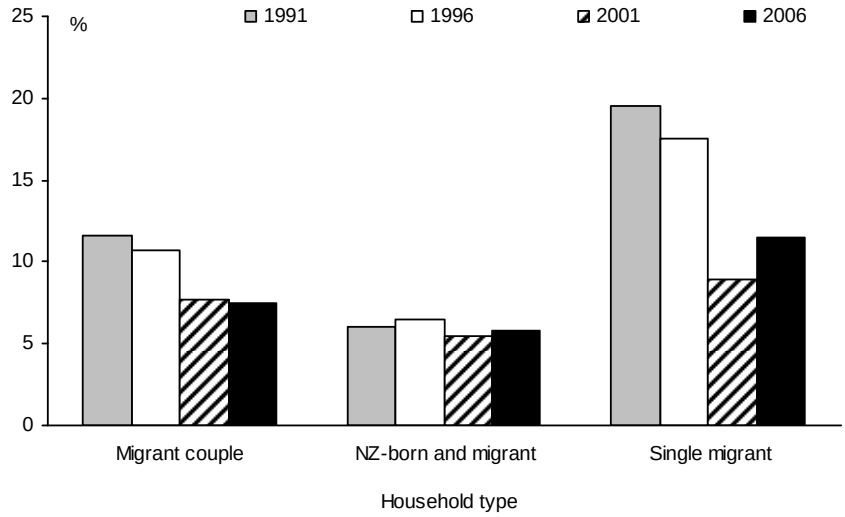
In New Zealand, 6.8% of all households occupied flats or apartments in multi-storey buildings in 2006. This figure has dropped over the last 15 years, from 7.7% in 1991. Among NZ-born couples, the rate was 3.5%, while among NZ-born singles, it was 8.8%.

Migrant couples had a 9.1% chance of living in flats or apartments in multi-storey buildings, while for couples with one migrant partner the figure was 5.9%. Single migrants had a rate of 14.4%, well above the rate for NZ-born singles.

Migrants were significantly more likely to live in flats or apartments in multi-storey buildings between 1991 and 2006 than their NZ-born equivalents.

While the percentage of people in the various migrant categories living in flats or apartments in multi-storey buildings has generally risen over the years, the portion of migrants born in the Pacific Islands living in multi-storey flats has fallen, as shown in Figure 14.9.

Figure 14.9 Proportion of migrants born in Pacific Islands living in flats or apartments in multi-storey buildings, New Zealand, 1991 to 2006



As in other housing types, the greatest change in housing behaviour occurred among migrants born in Asia, with large decreases in the percentage living in flats or apartments in multi-storey buildings as they moved from recent migrant to earlier migrant status.

14.3.1 Recent migrants

Overall, recent migrant couples were four times more likely to live in flats or apartments in multi-storey buildings than NZ-born couples, as shown in Table 14.8.

Table 14.8 Recent migrant couples living in flats or apartments in multi-storey buildings, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Asia	21.5	15.1	18.2
Australia	10.1	10.6	18.1
Europe & North America	20.1	12.7	17.1
Other	13.0	6.3	11.5
Pacific Islands	28.7	10.7	12.8
UK & Ireland	7.9	5.4	8.2
All migrants	**17.6**	**10.8**	**14.0**
NZ-born couples	**2.6**	**3.2**	**3.5**

The percentage of recent migrant couples that lived in flats or apartments in multi-storey buildings varied from 8.2% for those born in the UK and Ireland, to 18.2% for those born in Asia in 2006. The proportion of recent migrant couples born in the Pacific Islands living in flats or apartments in multi-storey buildings has also halved since 1996.

Among couples with one recent migrant partner, the proportion living in flats or apartments in multi-storey buildings rose from 9.8% in 1996 to 12.1% in 2006.

The biggest change in this category was among couples with one recent migrant partner born in Asia, where rates rose from 9.4% in 1996 to 20.8% in 2006. Among migrant couples, the number of couples with one recent migrant born in the Pacific Islands living in flats or apartments in multi-storey buildings decreased from 26.3% in 1996 to 14.6% in 2006.

Recent single migrants were three times more likely to live in flats or apartments in multi-storey buildings than NZ-born singles, as highlighted in Table 14.9.

Table 14.9 Recent single migrants living in flats or apartments in multi-storey buildings, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Asia	19.7	17.4	28.0
Australia	19.3	17.2	27.0
Europe & North America	26.4	19.9	27.5
Other	33.7	15.2	24.3
Pacific Islands	26.7	11.4	17.4
UK & Ireland	18.4	14.8	23.7
All migrants	**21.9**	**16.4**	**26.0**
Single NZ-born	**11.3**	**7.7**	**8.8**

The proportion of single migrants born in the Pacific Islands living in flats or apartments in multi-storey buildings fell from 26.7% in 1996 to 17.4% in 2006. While the proportion of recent single migrants born in the UK and Ireland living in flats or apartments in multi-storey buildings climbed to 23.7% in 2006.

14.3.2 Intermediate migrants

Intermediate migrant couples born in the UK and Ireland were only slightly more likely to live in flats or apartments in multi-storey buildings than NZ-born couples. However, intermediate migrant couples born in Asia were three times more likely to have lived in flats or apartments in multi-storey buildings, although this number was far lower than that for recent migrant couples born in Asia. These figures are shown in Table 14.10.

Table 14.10 Intermediate migrant couples living in flats or apartments in multi-storey buildings, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Asia	11.1	7.3	12.6
Australia	2.8	4.5	9.1
Europe & North America	3.6	6.0	9.4
Other	7.1	4.2	7.7
Pacific Islands	13.2	8.6	8.6
UK & Ireland	2.7	1.4	4.0
All migrants	**9.0**	**6.2**	**9.7**
NZ-born couples	**2.6**	**3.2**	**3.5**

Table 14.11 presents the percentage of couples with one intermediate migrant partner living in flats or apartments in multi-storey buildings.

Table 14.11 Couples with one intermediate migrant partner living in flats or apartments in multi-storey buildings, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Asia	7.5	8.8	13.5
Australia	2.8	3.2	5.7
Europe & North America	4.4	3.5	7.6
Other	7.5	6.5	10.9
Pacific Islands	13.7	7.1	7.3
UK & Ireland	3.8	2.7	4.8
All migrants	**4.9**	**4.0**	**7.0**
NZ-born couples	**2.6**	**3.2**	**3.5**

The percentage of couples with one intermediate migrant partner living in flats or apartments in multi-storey buildings rose from 4.9% in 1996, to 7.0% in 2006. Leading this rise was the increase in couples with one intermediate migrant partner born in Asia living in flats or apartments in multi-storey buildings. This number almost doubled in the last 10 years, to 13.5% in 2006. Couples with one intermediate migrant partner born in the Pacific Islands were almost half as likely to be living in flats or apartments in multi-storey buildings as they were in 1996.

Among intermediate single migrants, the overall proportion living in flats or apartments in multi-storey buildings in 2006 was 17.8%, a third lower than that for recent single migrants. Nevertheless, the proportion of intermediate single migrants living in these dwelling types was well above the average for NZ-born singles. Intermediate single migrants born in Asia had the highest rates, at 20.1%.

14.3.3 Earlier migrants

The percentage of earlier migrant couples living in flats or apartments in multi-storey buildings increased marginally to 4.8% in 2006, from 3.4% in 1996. An increase in the

number of people living in this dwelling type occurred in all groups apart from those born in the Pacific Islands.

While the proportion of couples with one earlier migrant partner climbed from 2.7% to 4.0% between 1996 and 2006, the latest figure is not very different from the 3.5% recorded among NZ-born couples.

The lowest proportion of couples with one earlier migrant partner living in flats or apartments in multi-storey buildings occurred among those born in the UK and Ireland (3.5%), which was equal to that of NZ-born couples and slightly less than those born in North America and Europe (3.9%). Those with an earlier migrant partner born in Asia recorded the highest rate of occupancy of this dwelling type at 6.0%. However, this was a far lower rate than that for couples with one recent migrant partner born in Asia (20.8%).

The proportion of earlier single migrants living in flats or apartments in multi-storey buildings dropped from 14.4% in 1996 to 9.9% in 2006, as shown in Table 14.12.

Table 14.12 Earlier single migrants living in flats or apartments in multi-storey buildings, New Zealand, (%), 1996 to 2006

Birthplace	1996	2001	2006
Asia	12.8	8.6	12.9
Australia	13.4	9.9	10.9
Europe & North America	12.2	8.3	10.1
Other	13.3	9.7	14.5
Pacific Islands	14.5	8.3	10.0
UK & Ireland	15.2	8.5	9.0
All migrants	**14.4**	**8.6**	**9.9**
Single NZ-born	**11.3**	**7.7**	**8.8**

Leading this change was a fall in the percentage of earlier single migrants born in the Pacific Islands, and the UK and Ireland living in flats or apartments in multi-storey buildings.

While 12.9% of earlier single migrants born in Asia lived in flats or apartments in multi-storey buildings in 2006, this was less than half the portion of recent single migrants born in Asia living in flats or apartments in multi-storey buildings.

15 Appendix IV: Dwelling type in Auckland 1991 to 2006

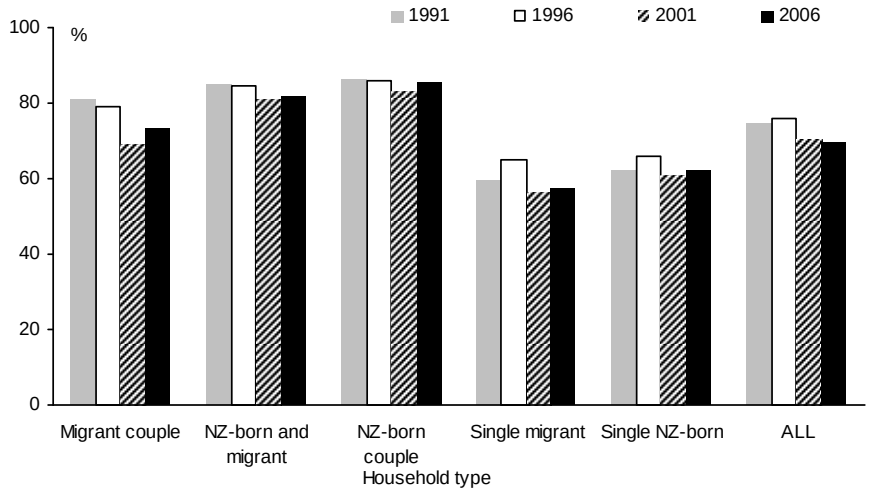
Key Points

- Overall, the proportion of people living in houses in Auckland was lower than for New Zealand as a whole (69.4% compared to 77.4% in 2006).
- Migrants born in the Pacific Islands were less likely to live in houses. However, migrants born in the Pacific Islands also had the highest proportion (5.5%) recorded in the unknown "other dwelling type" category, which may explain part of this discrepancy. [29]
- In a mirror version of the national trend, the percentage of singles living in flats or apartments in multi-storey buildings in Auckland declined between 1991 and 2006, while the proportion of couples living in these buildings rose. These observations hold for migrant and NZ-born households.

15.1 Houses

The proportion of people living in houses in Auckland was higher for NZ-born couples than for migrant couples in 2006, as shown in Figure 15.1. This was always the case, but the gap widened significantly over the last 15 years.

Figure 15.1 Proportion of people living in houses, Auckland, 1991 to 2006



[29] That is, not in a house or a flat or apartment in a single or multi-storey building.

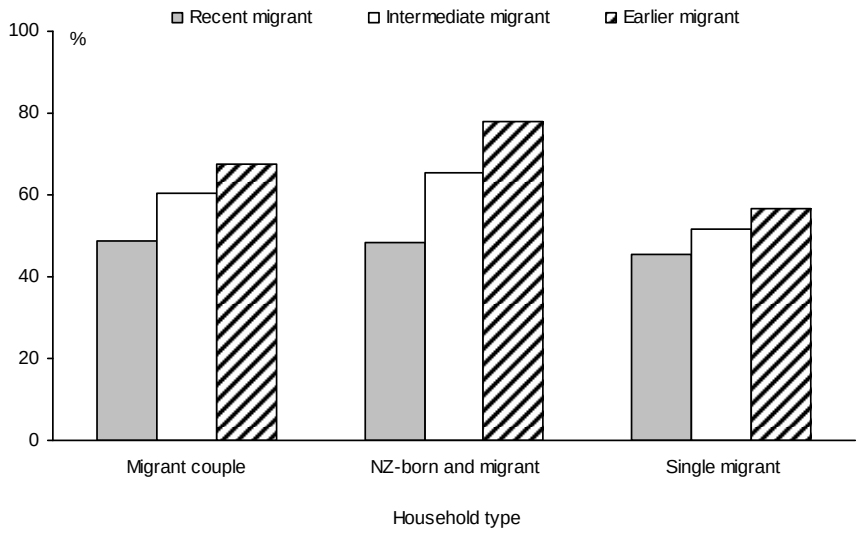
The number of people living in houses in Auckland in 2006 was 69.4%, significantly below the national average of 77.4%. This filters through to all households examined in Auckland. Each of these households had the proportion of people living in houses at least 4.2 percentage points lower than the national rate in 2006.

The rates in Auckland among NZ-born couples and singles have remained constant over the last 15 years, and in 2006 stood at 85.3% and 62.4% respectively.

The picture among migrants is quite different, with falling proportions living in houses across all three groups – single migrants, couples with one migrant partner, and migrant couples – over the 15 years from 1991. The biggest change was among migrant couples, where house rates declined from 80.9% in 1991 to 73.1% in 2006.

This discrepancy is greatest among migrants born in the Pacific Islands who, even as earlier migrants, tended to have rates well below those of the NZ-born population, as shown in Figure 15.2. Although the proportion of migrants born in the Pacific Islands living in houses does rise substantially with length of residency, it does not reach the same levels as other migrants.

Figure 15.2 Proportion of migrants born in the Pacific Islands living in houses, Auckland, 2001[30]



[30] Due to confidentiality reasons, Statistics New Zealand has not released data on dwelling type by birthplace and years since arrival for the Auckland region for 2006. Throughout the Auckland section of this report, when data is broken down by years since arrival in New Zealand, 2001 figures are used.

15.1.1 Recent migrants

The overall proportion of recent migrant couples in Auckland living in houses dropped to 58.6% in 2001, almost 25.0 percentage points below the proportion living in houses for NZ-born couples in Auckland.

Table 15.1 Recent migrant couples living in houses, Auckland, (%)[31]

Birthplace	1996	2001
Asia	67.4	52.2
Australia	74.8	69.9
Europe & North America	54.8	58.7
Other	72.3	69.5
Pacific Islands	57.5	48.9
UK & Ireland	76.9	74.9
All migrants	**67.3**	**58.6**
NZ-born couples	**86.1**	**83.1**

The biggest change between 1996 and 2001 occurred in the number of recent migrant couples who were born in Asia that lived in houses. This number decreased from 67.4% to 52.2%. The percentage of recent migrant couples born in the Pacific Islands that lived in houses also declined, reaching 48.9% in 2001.

The situation among couples with one recent migrant partner was similar. Couples with a recent migrant partner born in Asia showed the greatest change in rates, falling to 56%. Those born in the Pacific Islands had the lowest rate, at 48.1%. Overall, 68.5% of couples with one recent migrant partner occupied a house in Auckland in 2001.

Among recent single migrants, the average proportion living in houses was 46.4%, far below the 62.4% average for NZ-born singles, as shown in Table 15.2.

Table 15.2 Recent single migrants living in houses, Auckland, (%)

Birthplace	1996	2001
Asia	74.2	47.6
Australia	55.2	48.5
Europe & North America	48.2	37.6
Other	48.6	42.8
Pacific Islands	58.5	45.4
UK & Ireland	56.3	53.9
All migrants	**66.0**	**46.4**
Single NZ-born	**65.8**	**60.7**

Of special interest here is the low number of recent single migrants born in Europe and North America that lived in a house, at 37.6%, compared with the national average for this

[31] Note that in the 1991 Census Statistics New Zealand did not collect information on the length of time migrants had been in the country.

group of 47.2%. Substantial drops occurred among migrants born in all regions across the census years.

15.1.2 Intermediate migrants

By the time migrant couples reached the intermediate migrant category, the proportion living in houses in Auckland increased to 71.3%, according to 2001 Census figures. The proportion of intermediate migrant couples who were born in Asia and lived in a house was 72.7%, more than 20.0 percentage points higher than for recent migrant couples born in Asia. Meanwhile, rates among intermediate migrant couples born in the UK and Ireland were as high, or even higher, than for NZ-born couples in Auckland, at 88.8%.

Among couples with one intermediate migrant partner, the likelihood of living in a house in Auckland was 80.2% in 2001, with those born in the UK and Ireland once again having the highest rate, at 85.8%. Couples with one intermediate migrant partner born in the Pacific Islands had the lowest rate, at 65.5%, although this was a substantial change from rates among couples with one recent migrant partner born in the Pacific Islands (48.1%). Couples with one intermediate migrant partner born in Asia also made significant changes in behaviour, with 74.0% occupying houses.

The overall proportion of intermediate single migrants living in houses stood at 59.4% in 2001, well below the rate in 1996 (67.3%), but not far below the rate for NZ-born singles (60.7%) in Auckland.

Table 15.3 Intermediate single migrants living in houses, Auckland, (%)

Birthplace	1996	2001
Asia	71.7	63.3
Australia	69.1	60.5
Europe & North America	65.3	56.4
Other	58.4	52.4
Pacific Islands	65.0	51.6
UK & Ireland	66.0	64.3
All migrants	**67.3**	**59.4**
Single NZ-born	**65.8**	**60.7**

Within the intermediate single migrant group, those born in the UK and Ireland were most likely to live in houses in 2001. Intermediate single migrants born in Asia experienced the biggest change as they moved from recent to intermediate migrant status, up from 47.6% to 63.3%. This rate was also higher than for NZ-born singles.

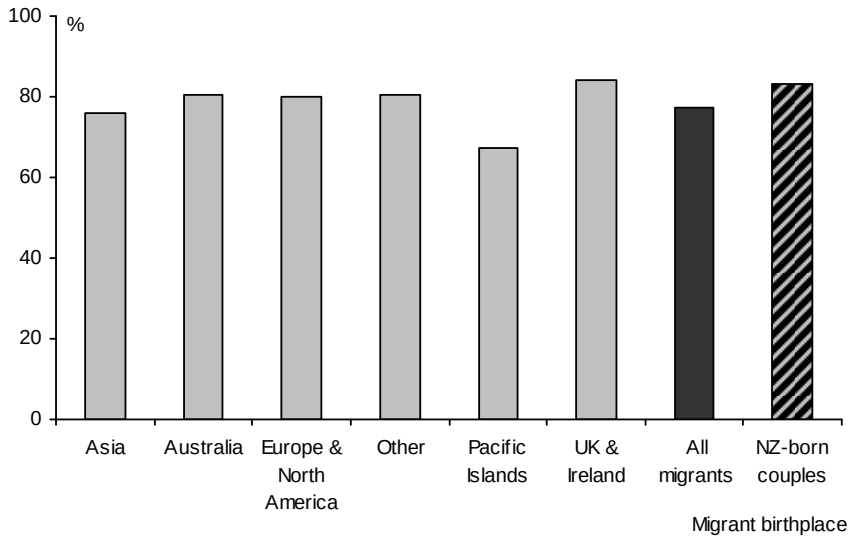
15.1.3 Earlier migrants

Overall, the proportion of earlier migrant couples living in houses in Auckland was 77.1% in 2001, six percentage points below that of NZ-born couples in Auckland.

The rate was lowest among earlier migrant couples born in the Pacific Islands, at 67.3%, and highest among those born in the UK and Ireland (84.0%). Earlier migrant couples born in Asia had a rate 23.6 percentage points higher than for recent migrant couples born in Asia. Nevertheless, the proportion of all earlier migrant couples living in houses dropped across census periods.

Among couples with one earlier migrant partner, the situation is slightly different. Overall, these couples are more likely to live in houses than NZ-born couples, as shown in Figure 15.3. However, this masks the variations evident when we examine birthplace.

Figure 15.3 Couples with one earlier migrant partner living in houses, Auckland, 2001



Most groups have rates approaching that of NZ-born couples, but couples with an earlier migrant partner born in the Pacific Islands had a rate of 77.8%. Although this rate is far higher than the 48.1% seen among couples with one recent migrant partner born in the Pacific Islands, compared with other groups it is low.

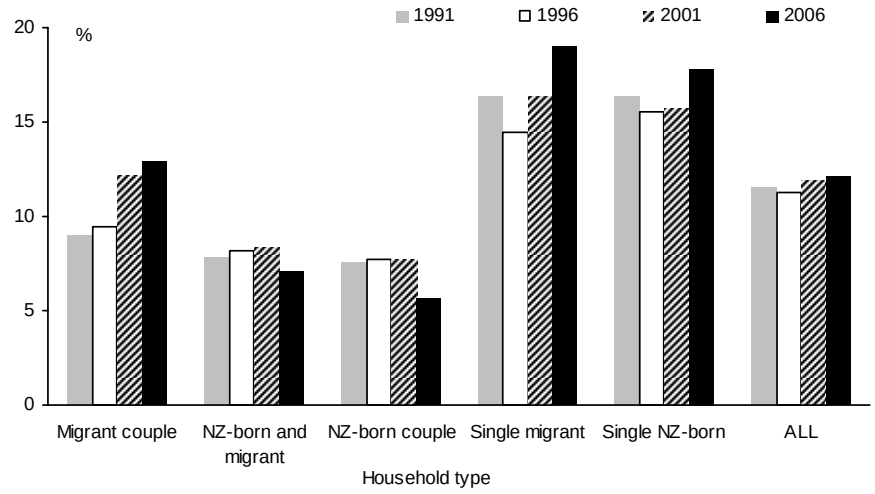
In the earlier single migrant category, migrants born in Asia are the only sub-group to have a rate higher than that of NZ-born singles. Behaviour among single migrants born in Asia changes most as they move from recent to earlier status, with home ownership rates rising 18.3 percentage points, to 65.9%.

It is interesting to note that the percentage of single migrants born in the UK and Ireland who live in houses drops as they move from the intermediate to the earlier migrant category. While intermediate single migrants born in the UK and Ireland have rates higher than for NZ-born singles (64.3% compared with 62.4%), in the earlier migrant category the figure for single migrants born in the UK and Ireland was 59.3%, below the average for NZ-born singles in Auckland.

15.2 Flats or apartments in single-storey buildings

Figure 15.4 shows the percentage of people living in flats or apartments in single-storey buildings between 1991 and 2006.

Figure 15.4 Proportion of people living in flats or apartments in single-storey buildings, Auckland, 1991 to 2006



In Auckland, 12.1% of all households lived in flats or apartments in single-storey buildings between 1991 and 2006. This includes 5.6% of all NZ-born couples and 17.8% of all NZ-born singles living in the region.

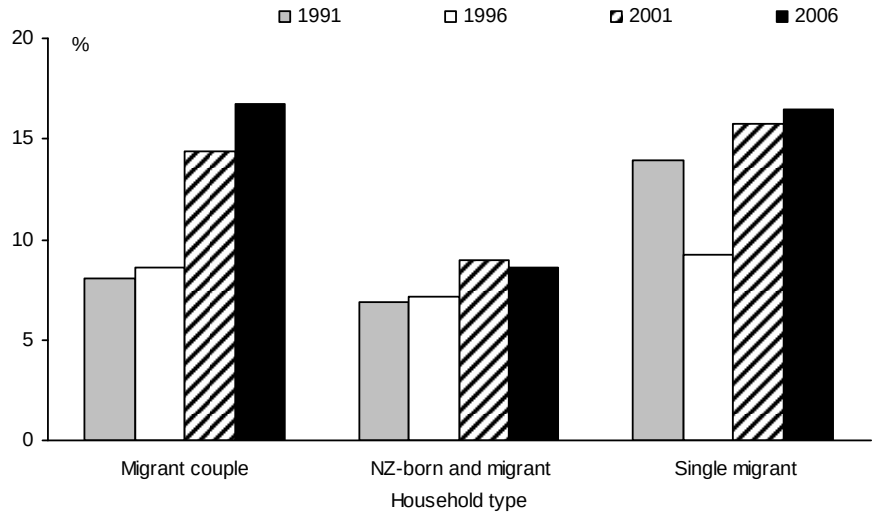
Migrant couples in Auckland were far more likely to live in flats or apartments in single-storey buildings than NZ-born couples, with 12.9% of all migrant couples living in these dwellings. This gap widens in the intermediate years, as the fraction of NZ-born couples living in flats or apartments in single-storey buildings in Auckland falls, and the proportion of migrant couples living in these dwellings rises.

By contrast, the percentage of single migrants living in flats or apartments in single-storey buildings was very similar to that of NZ-born singles, at 19% versus 17.8%. This indicates that the choice of living in a flat or apartment in a single-storey building is linked more to single status than birthplace.

Among couples with one migrant partner, the proportion living in flats or apartments in single-storey buildings was 7.0%, similar to that of NZ-born couples at 5.6%. Migrant couples were twice as likely to live in flats or apartments in single-storey buildings as NZ-born couples, but the differences between NZ-born singles and single migrants was smaller. Intermediate and earlier single migrants were less likely to occupy flats or apartments in single-storey buildings than NZ-born singles.

The biggest overall change in housing behaviour between 1991 and 2006 occurred among migrants born in Asia, with a higher percentage living in flats or apartments in single-storey buildings than previously, as shown in Figure 15.5.

Figure 15.5 Proportion of migrants born in Asia living in flats or apartments in single-storey buildings, Auckland, 1991 to 2006



15.2.1 Recent migrants

The percentage of recent migrants living in flats or apartments in single-storey buildings significantly increased between 1991 and 2006, particularly in the migrant couples and single migrant categories. At the 2001 Census, 18.0% of recent migrant couples lived in flats or apartments in single-storey buildings, up from 11.9% in 1996.

This change was led largely by changes in housing behaviour among migrants born in Asia. The portion of recent migrant couples born in Asia living in flats or apartments in single-storey buildings in Auckland more than doubled between 1996 and 2001.

There were also substantial rises in the percentage of recent migrant couples born in the Pacific Islands living in flats or apartments in single-storey buildings.

Within the recent single migrant category, the percentage of people living in flats or apartments in single-storey buildings increased.

Table 15.4 Recent single migrants living in flats or apartments in single-storey buildings, Auckland, (%)

Birthplace	1996	2001
Asia	8.1	19.4
Australia	15.6	16.8
Europe & North America	13.5	23.7
Other	19.0	26.3
Pacific Islands	14.6	17.2
UK & Ireland	16.4	17.1
All migrants	**11.1**	**20.2**
Single NZ-born	**15.5**	**15.7**

Rates rose by between 0.7% for recent single migrants born in the UK and Ireland, and 11.3% for those born in Asia between the 1996 and 2001 Census.

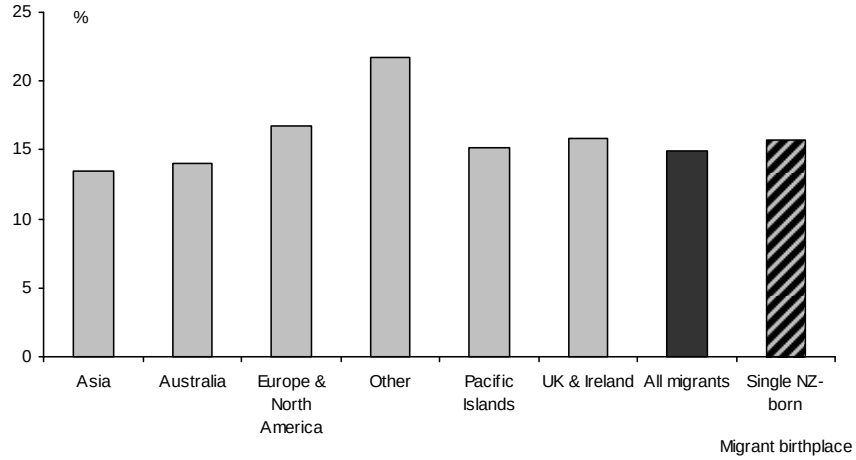
15.2.2 Intermediate migrants

On average, 11.0% of intermediate migrant couples lived in flats or apartments in single-storey buildings in Auckland in 2001. Among intermediate migrant couples, those born in the UK and Ireland were least likely to live in flats or apartments in single-storey buildings (7.0%), while those born in Europe and North America were most likely. The percentage of intermediate migrant couples born in Asia living in flats or apartments in single-storey buildings halved with many moving from recent to intermediate migrant status.

By comparison, 9.2% of couples with one intermediate migrant partner lived in flats or apartments in single-storey buildings. The biggest increase in the number of couples with one intermediate migrant partner living in flats or apartments in single-storey buildings occurred among migrants born in the Pacific Islands, with rates jumping from 11.5% in 1996 to 17.9% in 2001. Once again, the percentage of couples with one partner born in Asia living in flats or apartments in single-storey buildings more than halved as the status of the migrant partner born in Asia changed from recent to intermediate.

Interestingly, by the time single migrants reached the intermediate migrant stage, all groups except those born in “Other” countries were less likely to live in flats or apartments in single-storey buildings than NZ-born singles, as shown in Figure 15.6.

Figure 15.6 Intermediate single migrants living in flats or buildings in single-storey buildings, Auckland, 2001



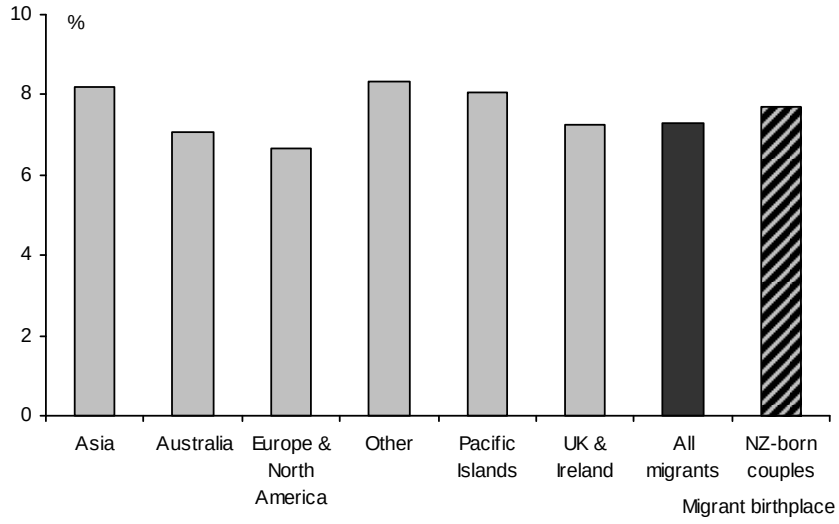
15.2.3 Earlier migrants

The percentage of migrant couples living in flats or apartments in single-storey buildings fell to 8.6% by the time they reached the earlier migrant stage.

Looking at birthplace, the story is as before, with the portion of earlier migrant couples born in Asia living in flats or apartments in single-storey buildings having almost doubled between 1996 and 2001, but falling significantly as migrant couples moved from recent to earlier migrant status.

A similar drop in rates was experienced among couples with one earlier migrant partner, declining to 7.3% in 2001.

Figure 15.7 Couples with one earlier migrant partner living in flats or apartments in single-storey buildings, Auckland, 2001



Among couples with one earlier migrant partner, the proportion living in flats or apartments in single-storey buildings varied between 6.7% and 8.3%, but the overall rate was lower than that for NZ-born couples.

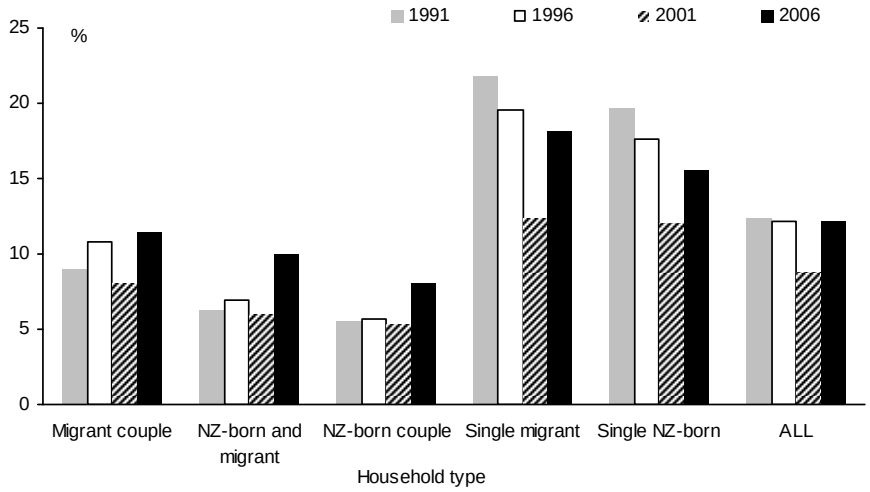
Within the earlier single migrant category, the percentage living in flats or apartments in single-storey buildings actually rose slightly compared to the rate for intermediate single migrants in 2001, reaching 15.7%. This figure was the same for NZ-born singles.

By the time they reached earlier migrant status, single migrants in Auckland were less likely to live in flats or apartments in single-storey buildings than NZ-born singles.

15.3 Flats or apartments in multi-storey buildings

Figure 15.8 shows the overall proportions of various groups in Auckland living in flats or apartments in multi-storey buildings between 1991 and 2006.

Figure 15.8 Proportion of people living in flats or apartments in multi-storey buildings, Auckland, 1991 to 2006



As was the case for flats or apartments in single-storey buildings, 12.1% of Auckland households lived in flats or apartments in multi-storey buildings in 2006. This percentage has stayed constant for the last 15 years.

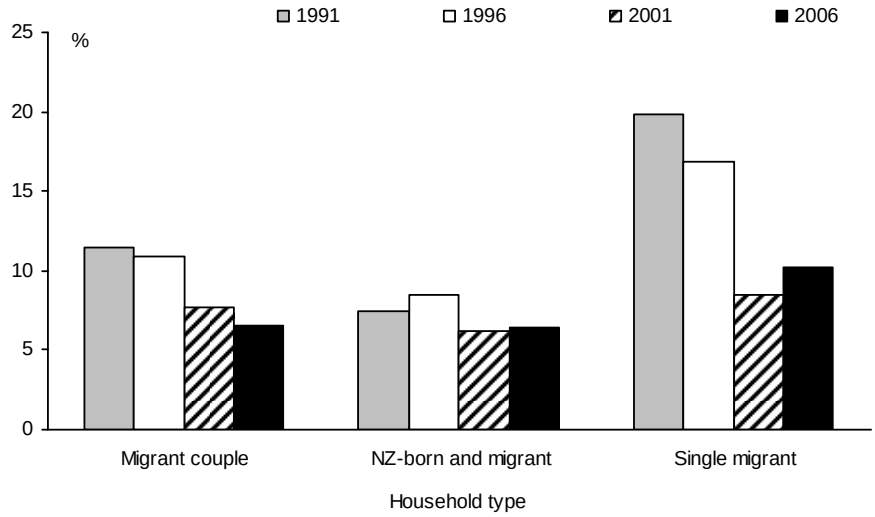
Nevertheless, within categories there have been significant changes during this time. The proportion of NZ-born couples living in flats or apartments in multi-storey buildings rose from 5.6% to 8.0%. Similarly, the portion of migrant couples living in flats or apartments in multi-storey buildings rose from 8.9% to 11.5%, while that for couples with one migrant partner grew to 10.0%.

Meanwhile, the portion of migrant and NZ-born singles living in flats or apartments in multi-storey buildings has grown by 3.7 percentage points in the case of single migrants, and 4.1 percentage points in the case of NZ-born singles.

The choice of living in a flat or apartment in a multi-storey building appears to be more related to household composition than birthplace. Singles are more likely to live in a flat or apartment in a multi-storey building.

While housing behaviour among migrants varied between 1991 and 2006, migrants in Auckland who were born in the Pacific Islands experienced the biggest decline in the proportion living in flats or apartments in multi-storey buildings, as highlighted in Figure 15.9.

Figure 15.9 Proportion of migrants born in the Pacific Islands living in flats or apartments in multi-storey buildings, Auckland, 1991 to 2006



This decrease was evident among migrant couples born in the Pacific Islands, couples with one migrant partner born in the Pacific Islands, and among single migrants born in the Pacific Islands. The latter group was most noticeable in that its rate, at 10.2% in 2006, was well below that for NZ-born singles, at 15.6%.

15.3.1 Recent migrants

Among recent migrant couples in Auckland, those born in the "Other" and the UK and Ireland birthplace categories were least likely to live in flats or apartments in multi-storey buildings, while those born in Europe and North America were most likely.

Table 15.5 Recent migrant couples living in flats or apartments in multi-storey buildings, Auckland, (%)

Birthplace	1996	2001
Asia	21.4	15.6
Australia	13.5	15.9
Europe & North America	28.4	16.2
Other	12.2	7.2
Pacific Islands	27.4	10.2
UK & Ireland	11.0	9.5
All migrants	**20.0**	**12.5**
NZ-born couples	**5.6**	**5.4**

Couples with one recent migrant partner had a 12.4% likelihood of living in a flat or apartment in a multi-storey building, well above the rate for NZ-born couples.

The proportion of recent single migrants living in flats or apartments in multi-storey buildings was higher than for NZ-born singles, with the exception of those born in the Pacific Islands.

15.3.2 Intermediate migrants

By the time they reached the intermediate migrant category, the proportion of migrant couples living in flats or apartments in multi-storey buildings was under 10%. Those born in the UK and Ireland tended to have rates below that of NZ-born couples.

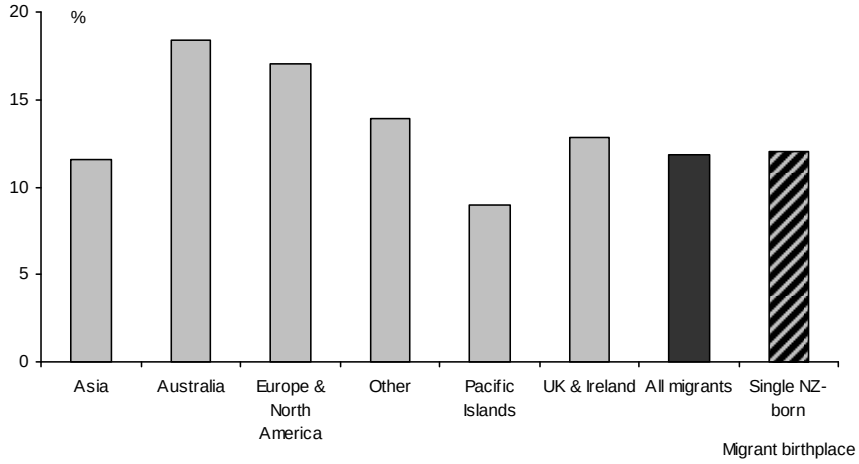
Table 15.6 Intermediate migrant couples living in flats or apartments in multi-storey buildings, Auckland, (%)

Birthplace	1996	2001
Asia	12.5	7.5
Australia	3.9	5.9
Europe & North America	8.0	8.9
Other	7.6	4.5
Pacific Islands	13.5	8.6
UK & Ireland	4.3	2.3
All migrants	**11.3**	**7.2**
NZ-born couples	**5.6**	**5.4**

Among couples with one intermediate migrant partner, those born in the UK and Ireland had the lowest rates, below that of NZ-born couples. The overall proportion of people living in flats or apartments in multi-storey buildings in this category was similar to that of NZ-born couples, at 5.7% for couples with one intermediate migrant couple, compared with 5.4% for NZ-born couples.

The proportion of intermediate single migrants living in flats or apartments in multi-storey buildings was similar to that of NZ-born single households in Auckland overall, as shown in Figure 15.10.

Figure 15.10 Intermediate single migrants living in flats or apartments in multi-storey buildings, Auckland, 2001



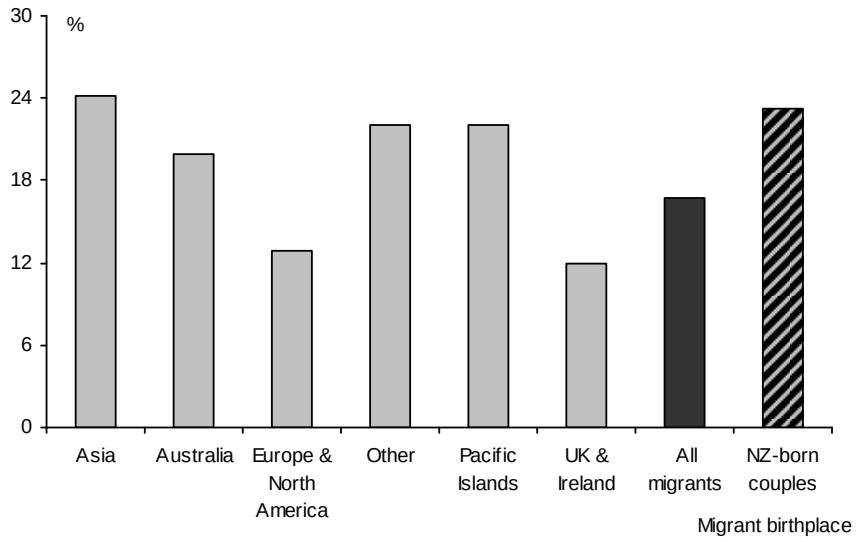
Nevertheless, there was significant variation across the intermediate single migrant groups, with those born in Australia, and Europe and North America tending to live in flats or apartments in multi-storey buildings.

15.3.3 Earlier migrants

The proportion of earlier migrant couples living in flats or apartments in multi-storey buildings tended to be lower than or roughly equal to the proportions for NZ-born couples. These proportions were less than half of those for recent migrant couples.

Little change occurred among couples with one earlier migrant partner across the census years. These couples were as likely to live in flats or apartments in multi-storey buildings as NZ-born couples, but had lower rates overall, as shown in Figure 15.11.

Figure 15.11 Couples with one earlier migrant partner living in flats or apartments in multi-storey buildings, Auckland, 2001



The proportion of earlier single migrants living in flats or apartments in multi-storey buildings decreased between 1991 and 2006. This proportions was generally lower than or equal to those of NZ-born singles, with the lowest rates among earlier single migrants born in the Pacific Islands.

16 Appendix V: Occupants per household to 2006

Key points

- Overcrowding is not a major problem in New Zealand, and the number of occupants per household is shrinking. Less than 0.03% of households (one in 3,900 households) in New Zealand had five or more people living in a one bedroom home in 2006, and less than 0.2% of households (one in 500) had three or four people living in a one bedroom home in 2006.
- While migrant households have a higher number of occupants per household overall, these numbers become more similar to NZ-born households as their length of residency increases.
- In general, single people were less likely to live in homes with five or more occupants.
- Migrant households where the occupants were born in the Pacific Islands recorded the highest number of occupants per bedroom compared to other migrant households.

The following four tables provide background for the analysis that follows.

Table 16.1 Migrant couples by household structure, New Zealand, 2006

	Households by number of occupants				*% of all migrant couples*
Bedrooms	**1 to 2**	**3 to 4**	**5 or more**	**Total**	
One bedroom home	4,308	888	69	**5,262**	***3.7***
Two or three bedroom home	35,370	37,770	14,760	**87,900**	***62.5***
Four or more bedroom home	9,846	20,055	15,888	**45,783**	***32.5***
Other	480	621	636	**1,734**	***1.2***
ALL	**49,998**	**59,322**	**31,362**	**140,691**	***100.0***
% of all migrant couples	***35.5***	***42.2***	***22.3***	***100.0***	

Most migrant couples (62.5%) lived in two or three bedroom homes in 2006. A large portion of migrant couple households had three or four occupants (42.2%). A total of 37,770 migrant couples (26.8%) lived in two or three bedroom homes with three or four occupants, while 25.1% lived in two or three bedroom homes with two occupants.

Table 16.2 NZ-born couples by household structure, New Zealand, 2006

	Households by number of occupants				*% of all NZ-born couples*
Bedrooms	**1 to 2**	**3 to 4**	**5 or more**	**Total**	
One bedroom home	7,470	732	156	**8,358**	***1.7***
Two or three bedroom home	163,920	115,614	25,470	**305,004**	***61.2***
Four or more bedroom home	54,969	78,780	47,373	**181,128**	***36.4***
Other	1,800	1,134	612	**3,546**	***0.7***
ALL	**228,162**	**196,263**	**73,608**	**498,033**	***100.0***
% of all NZ-born couples	***45.8***	***39.4***	***14.8***	***100.0***	

Most NZ-born couples (61.2%) lived in two or three bedroom homes in 2006. A large portion of NZ-born couple households had two occupants (45.8%). A total of 163,920 NZ-born couples (32.9%) lived in two or three bedroom homes with two occupants.

The main difference between NZ-born couples and migrant couples in terms of household structure was that migrant couples were more likely to have more occupants in their homes.

Table 16.3 Single migrants by household structure, New Zealand, 2006

	Households by number of occupants				*% of all single*
Bedrooms	**1 to 2**	**3 to 4**	**5 or more**	**Total**	***migrants***
One bedroom home	14,787	261	27	**15,081**	***12.4***
Two or three bedroom home	59,865	16,758	4,002	**80,625**	***66.1***
Four or more bedroom home	8,712	8,214	4,683	**21,600**	***17.7***
Other	3,162	972	585	**4,710**	***3.9***
ALL	**86,529**	**26,196**	**9,297**	**122,022**	***100.0***
% of all single migrants	***70.9***	***21.5***	***7.6***	***100.0***	

Most single migrants lived in two or three bedroom homes (66.1%). A large majority of single migrants lived on their own or with one other person (70.9%). Almost half of all single migrants lived in two or three bedroom homes with one or two occupants.

Table 16.4 NZ-born singles by household structure, New Zealand, 2006

	Households by number of occupants				*% of all NZ-born*
Bedrooms	**1 to 2**	**3 to 4**	**5 or more**	**Total**	***singles***
One bedroom home	42,099	492	66	**42,657**	***9.5***
Two or three bedroom home	250,617	59,682	9,774	**320,076**	***71.1***
Four or more bedroom home	34,449	27,657	12,222	**74,331**	***16.5***
Other	10,218	1,995	831	**13,044**	***2.9***
ALL	**337,389**	**89,829**	**22,893**	**450,108**	***100.0***
% of all NZ-born singles	***75.0***	***20.0***	***5.1***	***100.0***	

Three quarters of NZ-born singles lived alone or with one other person. A significant majority lived in two or three bedroom homes (71.1%). The largest group of NZ-born singles were those who lived alone or with one other person in a two or three bedroom home (55.7%).

Housing behaviour among single migrants and NZ-born singles was very similar, with just a few percentage points difference.

All remaining percentage numbers in this and the following section are to be interpreted as proportions of one or other of the four household groups listed in Table 16.1 to Table 16.4 above.

16.1 One bedroom homes

Very small numbers of households in New Zealand had five or more occupants living in one bedroom homes. Larger, but still relatively small, proportions of people lived in one bedroom homes with three or four occupants (less than 0.2%).

16.1.1 Five or more occupants

Overall, just 327 (one in 3,910) households in New Zealand lived in one bedroom homes with five or more occupants in 2006. Table 16.5 shows the total number of households living in one bedroom homes with five or more occupants.

Table 16.5 One bedroom homes with five or more occupants, New Zealand, (total), 1991 to 2006

Household type	1991	1996	2001	2006
Migrant couple	84	90	63	69
NZ-born and migrant	21	27	9	9
NZ-born couple	222	270	114	156
Single migrant	24	39	36	27
Single NZ-born	90	126	75	66
ALL	**441**	**552**	**297**	**327**
% of all households	***0.04***	***0.05***	***0.02***	***0.03***

The figures were very low across all household types; among NZ-born couples, it was 156 (one in 3,190), while for NZ-born singles it was 66 (one in 6,820).

Among migrants, the proportion of households with five or more people ranged between one in 2,040 for migrant couples (total of 69) and one in 5,250 for couples with one migrant partner (total of 9).

Looking at birthplaces, rates varied between one in 865 households among migrant couples born in the Pacific Islands and one in 11,700 households for couples with one partner born in the UK or Ireland. Few categories of migrants had one bedroom homes with five or more occupants.

At a more detailed level, such as length of residency, numbers become so small as to be stochastic, meaning figures are likely to be misleading.

16.1.2 Three or four occupants

One in 511 households (total of 2,472) consisted of three or four people living in a one bedroom home in New Zealand in 2006, compared with one in 345 in 1991 (total of 3,048). Table 16.6 shows the total number of households living in one bedroom homes with three or four occupants.

Table 16.6 One bedroom homes with three or four occupants, New Zealand, (total), 1991 to 2006

Household type	1991	1996	2001	2006
Migrant couple	597	744	537	888
NZ-born and migrant	156	138	87	99
NZ-born couple	1,308	1,119	732	732
Single migrant	231	249	264	261
Single NZ-born	756	738	546	492
ALL	**3,048**	**2,988**	**2,166**	**2,472**
% of all households	***0.29***	***0.26***	***0.18***	***0.20***

Among NZ-born couples, the rate was one in 680 households, while among NZ-born singles the figure was one in 915.

Migrants were more likely to live in one bedroom homes with three or four occupants. One in 158 migrant couples lived in such households, as did one in 468 single migrants. The figure for couples with one migrant partner was close to the average for New Zealand, at one in 508.

Looking at birthplaces, migrant couples born in the Pacific Islands had a one in 78 chance of living in a one bedroom home with three or more occupants. Couples with one partner born in the Pacific Islands had a one in 240 chance of living in a one bedroom home with three or more occupants. In contrast, single migrants born in Asia had a one in 208 chance.

Overall, 1.4% of recent migrant couples lived in one bedroom homes housing three or four people in 2006. Among recent migrant couples born in Asia, the portion was 2.4%. The proportions were also relatively high among couples with one recent migrant partner born in Asia (1.9%), and among recent single migrants born in Asia (0.8%).

Recent migrants born in the Pacific Islands had high rates across all categories, from 2.4% among couples with one recent migrant partner to 1.1% among recent single migrants born in the Pacific Islands.

By the time migrants reached the intermediate migrant stage, the proportion of people living in one bedroom homes with three to four occupants dropped significantly. The highest rate was among couples with one partner born in the Pacific Islands, at 1.8%. The rate was also highest for migrants born in the Pacific Islands in the intermediate migrant couple category (0.7%) and the intermediate single migrant category (0.5%).

At the earlier migrant stage, the overall rate for migrant couples living in one bedroom homes with three to four occupants (one in 621) was very similar to that of NZ-born couples (one in 680). For couples with one earlier migrant partner this was lower than for

NZ-born couples, at one in 1,120. Similarly, for earlier single migrants, the figure was far lower than for NZ-born singles (one in 1,600).

16.2 Two or three bedroom homes

Migrants and NZ-born residents were more likely to live in two or three bedroom homes with five or more occupants than one bedroom homes. Similarly, a far larger portion of households of all types lived in two or three bedroom homes with three or four occupants.

16.2.1 Five or more occupants

Overall, 4.4% of households in New Zealand had five or more occupants living in two or three bedrooms in 2006. This figure was a large drop from the 7.1% seen in 1991. Table 16.7 shows the proportions of people living in two or three bedroom homes with five or more occupants.

Table 16.7 Two or three bedroom homes with five or more occupants, New Zealand, (%), 1991 to 2006

Household type	1991	1996	2001	2006
Migrant couple	13.4	12.4	12.0	10.5
NZ-born and migrant	8.1	6.5	5.2	4.4
NZ-born couple	9.8	7.4	6.1	5.1
Single migrant	3.6	4.1	3.6	3.3
Single NZ-born	2.9	2.7	2.2	2.2
ALL	**7.1**	**5.7**	**4.7**	**4.4**
Total households	***77,184***	***65,766***	***58,005***	***56,484***

This figure varied from 2.2% for NZ-born singles to 10.5% for migrant couples. In other words, migrant couples were five times more likely to live in a two to three bedroom home with five or more occupants than a NZ-born single.

Couples with one migrant partner were less likely to live in such a household than NZ-born couples, with a rate of 4.4% versus 5.1%. Among single migrants, 3.3% lived in two or three bedroom homes with five or more occupants.

Looking at birthplace, 29.7% of couples born in the Pacific Islands lived in two or three bedroom homes with five or more occupants, although this figure dropped significantly across the census years from 40.2% in 1991. Migrants born in the Pacific Islands also had the highest rates in the two other categories – couples with one migrant partner (16.0%), and single migrants (14.1%).

Among recent, intermediate and earlier migrants, the trends were almost identical, with migrants born in the UK and Ireland least likely to live in two or three bedroom homes with

five or more occupants in each migrant category, and those born in the Pacific Islands most likely to do so.

16.2.2 Three or four occupants

Overall, 19.0% of households in New Zealand had three or four occupants living in two or three bedroom homes in 2006, compared with 25.0% in 1991. Table 16.8 shows the proportions of people living in two or three bedroom homes with three or four occupants.

Table 16.8 Two or three bedroom homes with three or four occupants, New Zealand, (%), 1991 to 2006

Household type	1991	1996	2001	2006
Migrant couple	28.1	27.2	26.5	26.8
NZ-born and migrant	31.6	28.5	25.7	23.7
NZ-born couple	31.2	27.5	25.4	23.2
Single migrant	14.3	14.5	13.6	13.7
Single NZ-born	17.5	16.4	13.9	13.3
ALL	**25.0**	**22.2**	**19.5**	**19.0**
Total households	***272,238***	***256,956***	***241,503***	***244,230***

This rate varied between 13.3% for NZ-born singles to 26.8% for migrant couples. The figure was only slightly higher for single migrants than for NZ-born singles, at 13.7%. The picture was similar for couples with one migrant partner, at 23.7%, compared to NZ-born couples at 23.2%.

Among migrant couples, those from the “Other” birthplace category were most likely to live in this type of household (35.8%). They were closely followed by migrant couples born in Asia (35.7%).

Couples with migrant partners born in the Pacific Islands and single migrants born in the Pacific Islands had proportions of 27.0% and 23.3% respectively, the highest in these categories.

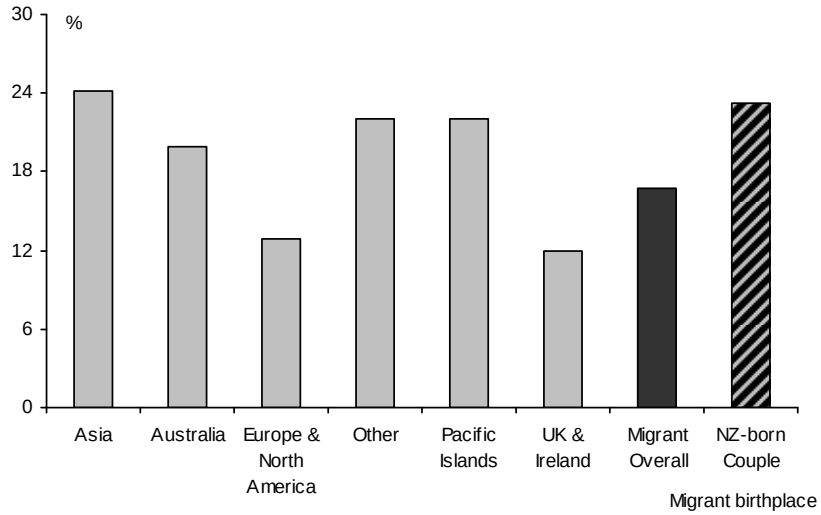
The highest proportions of migrants living in two or three bedroom homes with three or four occupants in the recent migrant couple (44.8%) and recent single migrant (27.8%) categories were among migrants born in Asia. Couples with one recent migrant partner born in the Pacific Islands had the highest proportion in this household structure, at 31.7%.

Among intermediate migrants, migrant couples born in Asia were most likely to live in two or three bedroom homes with three or four occupants, with a rate of 33.2%. Those born in the Pacific Islands had the highest rates among couples with one intermediate migrant partner and among intermediate single migrants, at 34.5% and 28.6% respectively.

The picture was identical for earlier migrants, with earlier migrant couples born in Asia most likely to live in two or three bedroom homes with three or four occupants. Couples with one earlier migrant partner born in the Pacific Islands and earlier single migrants born in the Pacific Islands were most likely to live in this household configuration.

Earlier migrant couples were far less likely to live in two or three bedroom homes with three or four occupants than NZ-born couples, as indicated in Figure 16.1.

Figure 16.1 Earlier migrant couples living in two or three bedroom homes with three or four occupants, New Zealand, 2001



17 Appendix VI: Occupants in Auckland to 2006

Key points

- Households in Auckland had a higher number of occupants per bedroom than New Zealand as a whole. Although, the number of occupants per household is shrinking.
- Migrant households where the occupants were born in Asia and the Pacific Islands were more likely to live in one bedroom homes with five or more occupants.
- Migrant households where the occupants were born in the Pacific Islands had higher proportions living in two or three bedroom homes with five or more occupants than other migrant groups across the 1991 to 2006 period, as well as across all migrant categories and all periods since arrival.

The following four tables provide background for the analysis that follows.

Table 17.1 Migrant couples by household structure, Auckland, 2001[32]

	Households by number of occupants				*% of all migrant*
Bedrooms	**1 to 2**	**3 to 4**	**5 or more**	**Total**	***couples***
One bedroom home	1,182	372	45	**1,596**	***3.2***
Two or three bedroom home	9,282	15,477	8,316	**33,072**	***65.3***
Four or more bedroom home	2,115	6,582	6,363	**15,054**	***29.7***
Other	171	351	405	**927**	***1.8***
ALL	**12,747**	**22,779**	**15,129**	**50,655**	***100.0***
% of all migrant couples	***25.2***	***45.0***	***29.9***	***100.0***	

Most migrant couples in Auckland (65.3%) lived in two or three bedroom homes in 2001. A large portion of migrant couple households had three or four occupants (45.0%). A total of 15,477 migrant couple households (30.7%) lived in two or three bedroom homes with three or four occupants. These figures are generally in line with national trends.

Table 17.2 NZ-born couples by household structure, Auckland, 2001

	Households by number of occupants				*% of all NZ-born*
Bedrooms	**1 to 2**	**3 to 4**	**5 or more**	**Total**	***couples***
One bedroom home	1,749	144	15	**1,908**	***2.3***
Two or three bedroom home	24,771	22,212	4,686	**51,672**	***62.8***
Four or more bedroom home	5,826	13,266	9,087	**28,182**	***34.3***
Other	225	192	96	**513**	***0.6***
ALL	**32,571**	**35,817**	**13,884**	**82,275**	***100.0***
% of all NZ-born couples	***39.6***	***43.5***	***16.9***	***100.0***	

Most NZ-born couples in Auckland (62.8%) lived in two or three bedroom homes in 2001. A large portion of NZ-born couple households had three or four occupants (43.5%),

[32] For confidentiality reasons, Statistics New Zealand has not released data for Auckland from the 2006 Census.

although similar numbers (39.6%) lived only with their partners. A total of 24,771 NZ-born couples (30.1%) lived in two or three bedroom homes with two occupants. Again, these figures are generally in line with national trends.

However, in Auckland NZ-born couples were far more likely to live in homes with just their partner, and were far less likely to live in homes with five or more occupants. In turn, migrant couples were almost twice as likely to live in five-occupant households as NZ-born couples (29.9% compared to 16.9%).

Table 17.3 Single migrants by household structure, Auckland, 2001

	Households by number of occupants				*% of all single*
Bedrooms	**1 to 2**	**3 to 4**	**5 or more**	**Total**	***migrants***
One bedroom home	5,172	174	24	**5,379**	***10.9***
Two or three bedroom home	20,094	8,763	2,985	**31,845**	***64.8***
Four or more bedroom home	2,895	3,906	2,784	**9,597**	***19.5***
Other	1,392	543	405	**2,337**	***4.8***
ALL	**29,568**	**13,377**	**6,213**	**49,149**	***100.0***
% of all single migrants	***60.2***	***27.2***	***12.6***	***100.0***	

Most single migrants (64.8%) in Auckland lived in two or three bedroom homes in 2001. The majority of single migrants lived on their own or with one other person (60.2%). Two out of five single migrants lived in two or three bedroom homes with one or two occupants. Single migrants in Auckland were significantly more likely to have more than one other occupant in their home than single migrants in the rest of New Zealand, at 39.8% compared with 29.1%.

Table 17.4 NZ-born singles by household structure, Auckland, 2001

	Households by number of occupants				*% of all NZ-born*
Bedrooms	**1 to 2**	**3 to 4**	**5 or more**	**Total**	***singles***
One bedroom home	9,513	129	21	**9,663**	***9.7***
Two or three bedroom home	50,940	15,180	2,862	**68,985**	***69.5***
Four or more bedroom home	6,168	7,257	3,894	**17,322**	***17.5***
Other	2,436	543	249	**3,231**	***3.3***
ALL	**69,063**	**23,109**	**7,026**	**99,198**	***100.0***
% of all NZ-born singles	***69.6***	***23.3***	***7.1***	***100.0***	

Two thirds of NZ-born singles in Auckland lived alone or with one other person in 2001. A similar proportion lived in two or three bedroom homes. More than half (50,940) of NZ-born singles lived alone or with one other person in a two or three bedroom home.

There was a noticeable difference in household structures between single migrants and NZ-born singles, as single migrants are less likely to live alone or with one other person. Nevertheless, the size of the house lived in by single migrants was similar to that of NZ-born singles, indicating a larger number of occupants per household.

17.1 One bedroom homes

Although rates were higher than for New Zealand as a whole, the portion of people living in one bedroom homes with five or more occupants, or three to four occupants, was small in Auckland. This number ranged from one in 136 to one in 6,290 across all migrant categories.

17.1.1 Five or more occupants

In Auckland, as in New Zealand as a whole, very few people occupied one bedroom homes in which five or more people lived. Table 17.5 shows the total number of households living in one bedroom homes with five or more occupants.

Table 17.5 One bedroom homes with five or more occupants, Auckland, (total), 1991 to 2001

Household type	1991	1996	2001
Migrant couple	60	63	45
NZ-born and migrant	6	6	3
NZ-born couple	27	33	15
Single migrant	15	18	24
Single NZ-born	9	30	21
ALL	**117**	**150**	**108**
% of all households	***0.05***	***0.06***	***0.03***

The overall rate for Auckland was one in 3,020 households in 2001 (108 households, or 0.03%).[33] This rate was as low as one household in 6,290 for couples with one migrant partner, and one in 5,490 for NZ-born couples.

The group most likely to live in a one bedroom home with five or more occupants was migrant couples, but even then, the rate was one in 1,130 (total of 45).

The highest rate was among couples with one migrant partner born in Asia, where one in 335 households lived in one bedroom homes with five or more occupants.

Among recent migrants, those born in the Pacific Islands were more likely to live in this household structure. In the intermediate migrant category, 1.0% of couples with one intermediate migrant partner born in Asia lived in one bedroom homes with five or more occupants. Earlier migrants were unlikely to live in one bedroom homes with five or more occupants, with rates between one in 500 and one in 2,800 households.

[33] For confidentiality reasons, Statistics New Zealand has not released data by country of origin for Auckland from the 2006 Census.

17.1.2 Three or four occupants

A small fraction of households (855 households) in Auckland lived in one bedroom homes with three or four occupants as of the 2001 Census. Table 17.6 shows the total number of households living in one bedroom homes with three or four occupants.

Table 17.6 One bedroom homes with three or four occupants, Auckland, (total), 1991 to 2001

Household type	1991	1996	2001
Migrant couple	387	489	372
NZ-born and migrant	48	54	36
NZ-born couple	243	207	144
Single migrant	129	150	174
Single NZ-born	150	138	129
ALL	**957**	**1,038**	**855**
% of all households	***0.39***	***0.38***	***0.28***

The proportion varied from one household in 136 among migrant couples, to one in 769 for NZ-born singles. The overall rate was one household in 361 (0.28%). Although these rates were still relatively low, they were around 1.5 times higher than the rates for New Zealand as a whole.

Migrant couples born in Asia were more likely to live in one bedroom homes with three or four occupants, with a rate of 1.4%. Single migrants born in this region were also more likely to live in this household structure, with a rate of 0.8%.

Among recent migrant couples, 2.3% of those born in Asia lived in one bedroom homes with three or four occupants. This figure is 11 times higher than the migrant group least likely to live in this household structure – migrant couples born in the UK and Ireland.

Similarly, couples with one intermediate migrant partner born in Asia and intermediate single migrants born in Asia were more likely to live in one bedroom homes with three or four occupants.

Earlier migrants born in the Pacific Islands had relatively high rates, particularly in the couple with one migrant partner and single migrant categories, compared to other migrant groups.

17.2 Two or three bedroom homes

Households with five or more occupants or with three to four occupants were far more likely to occupy two or three bedroom homes than one bedroom homes in Auckland.

17.2.1 Five or more occupants

As of the 2001 Census, 6.5% of people in Auckland lived in two or three bedroom homes with five or more occupants, although this proportion dropped between 1991 and 2001. Table 17.7 shows the proportions of people living in two or three bedroom homes with five or more occupants.

Table 17.7 Two or three bedroom homes with five or more occupants, Auckland, (%), 1991 to 2001

Household type	1991	1996	2001
Migrant couple	18.8	17.5	16.4
NZ-born and migrant	8.2	7.1	6.1
NZ-born couple	8.4	7.1	5.7
Single migrant	6.1	6.9	6.1
Single NZ-born	3.0	3.2	2.9
ALL	**7.9**	**7.3**	**6.5**
Total households	***20,028***	***20,049***	***19,746***

Migrant couples were almost three times as likely to live in two or three bedroom homes with five or more occupants as NZ-born couples. The lowest rates were among NZ-born singles, with only 2.9% living in this type of household.

The highest proportion of migrants living in two or three bedroom homes with five or more occupants in Auckland occurred among migrants born in the Pacific Islands. This was true for all household types, across all census years and across all periods since arrival. Migrants born in the Pacific Islands were between two and four times more likely to live in two or three bedroom homes with five or more occupants than the average rate.

17.2.2 Three or four occupants

The proportion of people living in two or three bedroom homes with three or four occupants fell from 26.1% in 1991 to 21.8% in 2001, as shown in Table 17.8.

Table 17.8 Two or three bedroom homes with three or four occupants, (%), 1991 to 2001

Household type	1991	1996	2001
Migrant couple	30.5	31.0	30.6
NZ-born and migrant	33.6	31.5	27.9
NZ-born couple	32.7	30.1	27.0
Single migrant	17.4	18.2	17.8
Single NZ-born	18.1	17.7	15.3
ALL	**26.1**	**24.4**	**21.8**
Total households	***65,856***	***66,336***	***66,189***

The portions of NZ-born couples, couples with one migrant partner, and migrant couples living in two or three bedroom homes with three or four occupants were fairly similar, at between 27.0% and 30.6% in 2001.

The lowest rate was among NZ-born singles, who did not have a rate much different than that of single migrants. Migrants born in Asia were most likely to live in two or three bedroom homes with three or four occupants. While among intermediate and earlier migrants, it was difficult to pinpoint a general pattern.

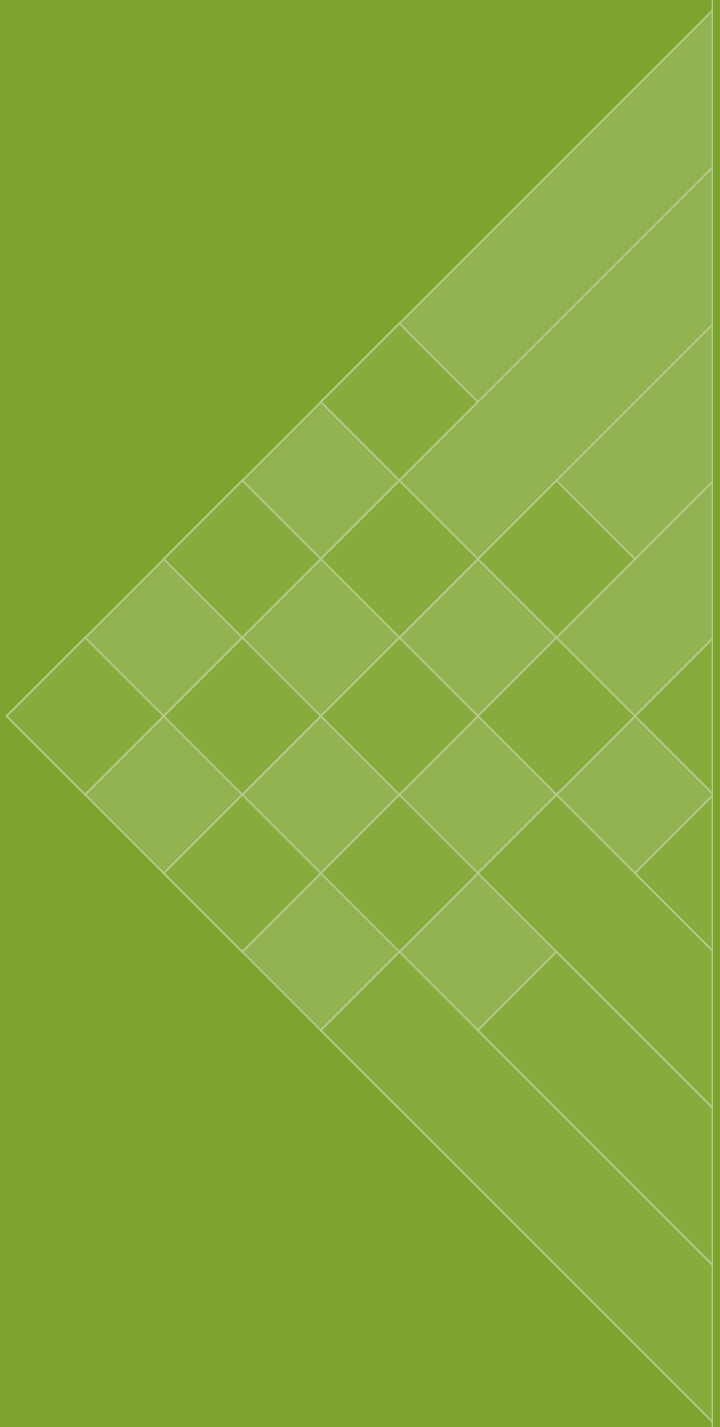
18 Appendix VII: 2016 scenario parameters

Table 18.1 Parameters for generating scenario I

#		unit	Actual							Scenario I	
			1991	1991 to 1996	1996	1996 to 2001	2001	2006	1991 to 2001	2006 to 2016	2016
1	inter-census change in the OB population	% of base popn		2.50		2.51			2.50	2.50	
	memo: annual average net inflow			*16,862*		*18,132*			*17,497*	*20,523*	
2	inter-census change in the NZB population	% of base popn		1.07		1.18			1.13	1.13	
3	proportion of inter-census change in OB popn accounted for by change in OB WAP	%		80.84		90.17			85.50	85.00	
4	proportion of inter-census change in NZB popn accounted for by change in NZB WAP	%		78.31		74.06			76.18	76.00	
5	For OB WAP:										
	i) proportion residing in OB couple hhd	%	35.11		33.57		31.59	35.66	33.42	33.50	33.00
	ii) proportion residing in NZB-OB couple hhd	%	24.20		22.17		19.20	17.95	21.86	22.00	23.00
	iii) proportion residing in unidentified hhd	%	23.00		27.33		30.32	30.92	26.88	27.00	26.00
6	For NZB WAP:										
	i) proportion residing in NZB couple hhhd	%	46.18		46.30		43.06	44.78	45.18	42.25	41.50
	ii) proportion residing in unidentified hhd	%	29.64		28.25		28.48	28.62	28.79	28.80	28.80

Table 18.2 Parameters for generating scenario II

#		unit	Actual			Scenario II	
			2001	2001 to 2006	2006	2006 to 2016	2016
1	inter-census change in the OB population	% of base popn		4.89		4.50	
	memo: annual average net inflow			*36,568*		*37,457*	
2	inter-census change in the NZB population	% of base popn		1.86		1.85	
3	proportion of inter-census change in OB popn accounted for by change in OB WAP	%		88.76		90.00	
4	proportion of inter-census change in NZB popn accounted for by change in NZB WAP	%		113.62		115.00	
5	For OB WAP:						
	i) proportion residing in OB couple hhd	%	31.59	33.62	35.66	33.50	33.50
	ii) proportion residing in NZB-OB couple hhd	%	19.20	18.58	17.95	18.50	18.50
	iii) proportion residing in unidentified hhd	%	30.32	30.62	30.92	30.50	30.50
6	For NZB WAP:						
	i) proportion residing in NZB couple hhhd	%	43.06	43.92	44.78	44.00	44.00
	ii) proportion residing in unidentified hhd	%	28.48	28.55	28.62	28.60	28.60



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