



THE DEMAND AND SUPPLY OF HOUSING IN THE AUCKLAND REGION 1991-2001

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Auckland
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Executive Summary

This report considers some of the key demographic changes occurring within the Auckland region that are likely to impact on the demand for housing. Census data from the 1991 and 2001 census years has been used for analysis.

The separate (stand alone) dwelling is by far the most common type of dwelling in the Auckland region. Separate houses account for 78% of permanent private dwellings in 2001, and this proportion has not changed since 1991. The fastest growing dwelling type is flats or houses joined to a business or shop, which grew 78% between 1991 and 2001, though from a low base.

Only a small proportion of households (14%) have more than four members. The most common household size is two members (31%), followed by one member (19%) and three members (18%). 17% have four members. By contrast, the fastest growing household size is those with six or more members. For example, households with eight or more members increased by nearly 50% between 1991 and 2001. Very small households are also growing faster than medium sized households indicating a duplicity of trends are occurring.

The three bedroomed dwelling remains the most common type of home in 2001. However, larger dwellings (four and five+ bedrooms) are increasing at a faster rate.

While there is some correlation between dwelling size and the size of the household living in them, this correlation is fairly weak. Many households appear to be living in dwellings that have more bedrooms than household members.

Smaller dwellings (one and two bedrooms) are increasingly being occupied by larger households. Conversely, larger dwellings are being increasingly occupied by smaller households. This dual trend mirror the duality of trends noted above, with both small and large households increasing faster than middle sized households. If these trends continue, both smaller and larger dwellings will be required in the future.

Over the next 20 years (to 2021), an additional 156,000 households will be living in the region, an increase of 37%. 27% of this increase is due solely to falling occupancy rate.

Population and household projections suggest the following key points:

- Without a strong policy shift, the greatest numbers of new households will be formed in areas peripheral to the current urban area, with the exception of the Auckland CBD.
- Occupancy rates (members per households) will gradually fall in most areas, creating a demand for housing beyond the rate of population increase.
- The median age of the population in most areas of the region will increase suggesting an increasing demand for housing and facilities supportive of an elderly population. The impacts of the ageing of the population will however, be modified by the increasing health and mobility of the same.
- Housing densities will increase, particularly in Auckland City, with densities of over 15 dwellings per hectare by 2021 not uncommon. Providing a range of housing types and sizes at higher densities will be the challenge.

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Introduction

Change in the demographic structure of the Auckland regional population impacts directly upon how we structure our societies and build our communities, and the housing is no exception.

This report considers some of the key demographic changes occurring within the Auckland region that are likely to impact on the demand for housing. The purpose of doing this demand analysis at this time can be summarized as follows.

- 2001 census data has become available, and earlier demand analyses needed to be updated.
- Socio-demographic change has been increasing at an accelerating rate over the last decade, it is timely to consider the effects that this may have on housing.
- The Auckland Regional Growth Strategy is currently being implemented at a policy level, and will have an impact 'on the ground' shortly. It is important to ensure that policies are developed with the most up to date information possible, and to continually monitor the impact that policies have on development patterns.

This report updates an earlier report which was based on 1996 census information.

Methodology

Housing 'need' and 'demand' are partly based on societal and/or cultural assumptions. In addition, housing demand is also influenced by factors such as household size, housing location, and housing expectations (e.g. number of bedrooms, style of housing, appearance, site size). For the purpose of this report however, the number of households is assumed to determine housing 'need'. Meeting these needs assumes at least an equal number of dwellings. This report in general considers only the number of houses available to house the population, along with some rudimentary characteristics of the housing available.

Census data from the 1991 and 2001 census years has been used for analysis. The main unit of data is 'households' and in this respect may differ from earlier reports that used both 'household' and 'resident population' data. Household information is gained from the householder - the person who filled out the household census form on census night.

Areas of ambiguity between the use of household and resident population may occur when interpreting data that involves the variable 'ethnicity'. For example, the ethnicity of the household is given by the ethnicity of the householder, but with an increasingly diverse ethnic structure, households cannot be classified according to fixed ethnic groups without a certain degree of artificiality. Nonetheless data that includes ethnicity such as family size and income still provide a useful guide to the demand for and patterns evident in the distribution of housing within the region.

In all cases percentages were obtained on totals that omitted 'not specified' and

'other' response categories. In instances where these numbers were large they are included at the bottom of the table for the reader's interest.

Indians and Chinese have been identified in this study as ethnic groups that have increased significantly in numbers throughout this decade, and have been separated out from the Asian category so that their characteristics can be further identified. Throughout this report, Indian refers to people from India as well as Fijian Indians, and Chinese includes people from a range of localities with Chinese extraction.

Totals may differ between tables due to variations in the 'not specified' category.

This study was conducted by the Auckland Regional Council with assistance from Helen Jacob.

Housing Demand and Supply

Type of Dwelling

Table 1: Type of Dwellings in the Auckland Region

Dwelling	1991	1991 proportion	2001	2001 proportion	% Change 1991-2001
Separate house	243,375	77%	281,898	78%	16%
Two Flats or Houses Joined Together	34,971	11%	44,382	12%	27%
Three+ Flats or Houses Joined Together	36,204	11%	31,485	9%	-13%
Flat or House Joined to a Business or Shop	2,400	1%	4,260	1%	78%
Bach, Crib or Other Holiday Home	1,092	0%	1,449	0%	33%
Permanent Private Dwellings (excl 'not specified')	318,042	100%	363,474	100%	14%
Other Private Dwelling including unknown	417		28,807*		
Temporary Private Dwelling	1,533		984		
Non-Private Dwellings	1,413		1,551		
Total Dwellings	321,405		394,816		23%

Source: NZ Census of Population and Dwellings 1991, 2001

Dwelling type for households in the Auckland Region

*The rise in Other Private Dwellings between 1991 and 2001 is largely attributable to changes in census methodologies.

- Changes in census data collection methodology make direct comparison between 1991 and 2001 difficult. Nevertheless, sufficient data exists to draw some conclusions.
- The separate (or stand-alone) house is by far the most common type of dwelling in the Auckland region. Separate houses account for 78% of permanent private dwellings in 2001 (excluding 'not specifieds'), and this has increased from 77% in 1991.
- Two flats or houses joined together have increased slightly also to comprise 12% of the Auckland regional dwelling stock. Three or more flats or houses joined together have dropped as a proportion of private dwellings and have also dropped in absolute terms.
- The greatest percentage change between 1991 and 2001 has occurred for flats or houses joined to a business or shop. This dwelling type has increased by 78%, although the overall numbers are still quite small. This increase may reflect the trend towards mixed use buildings and/or working from home.

Number of Households

Table 2: Household Size in the Auckland Region

Household Size	1991	1991 proportion	2001	1996 proportion	% Change 1991-2001
One	59,403	19%	71,100	19%	20%
Two	99,057	31%	113,475	31%	15%
Three	55,887	18%	65,667	18%	17%
Four	54,726	17%	62,730	17%	15%
Five	26,715	8%	31,011	8%	16%
Six	10,134	3%	12,840	3%	27%
Seven	3,957	1%	5,451	1%	38%
Eight or more	3,798	1%	5,580	2%	47%
Total	315,677	100%	367,854	100%	17%

Source: NZ Census of Population and Dwellings 1991, 2001

Household size for private dwellings

Excludes 'not specified'.

- Two member households are the most common, accounting for 31% of all households in 2001, followed by one member households (19%).
- While larger households (especially those with six or more members) are less common than their smaller counterparts, they have been increasing rapidly in the ten years to 2001. The largest households (8+) have increased 47% in this period.
- From the data presented in this report and what is known about the demographic structure of the Auckland region, it is believed that there is a duplicity of trends occurring with respect to household size. Some households are getting smaller due to:
 - a. the increasing preference for couples to be childless
 - b. couples having fewer children when children do come
 - c. the increasing numbers of elderly residents living alone
 - d. declining rates of marriage and the increasingly flexible family arrangements e.g. de facto arrangements which change more often than formal marriages
 - e. increasing rates of marital break-ups and the fragmentation of families
 - f. migration patterns that favour smaller families.

Concurrently with the trend towards smaller households, larger households are growing even more rapidly. This trend can be accounted for by:

- g. the increasing incidence of single adults living together in flatting arrangements
- h. the increasing incidence of multiple-family households
- i. a high birth rate amongst some ethnic groups.

Housing Demand

Table 3: Number of Dwellings and Households in the Auckland Region

	1991	2001	% Change 1991-2001
Housing Supply			
Number of Permanent Private Dwellings (including 'not specified')	318,042	363,474	14%
Housing Need			
Number of Households	315,668	369,855	17%
Difference	2,374	-6,381	

Source: NZ Census of Population and Dwellings 1991, 2001

Number of Permanent Private Dwellings

The 2001 figures differ from some of the totals in other tables, as they include not specifieds.

- The number of permanent private dwellings roughly matches the number of households in the Auckland region. In 2001, there was a 'deficit' of 6,000 dwellings.
- The 'deficit' of dwellings in 2001 is largely attributable to the increase in 'not specified' dwellings in the 2001 census (not included in Table 3). For this reason, there does not appear to be an overall deficit of dwellings in the region, although sub-markets may be in deficit. These figures also say nothing about ownership of the dwellings or the affordability of dwellings in the region for the majority of people, especially the lower end of the market.

Number of Bedrooms

Table 4: Number of Bedrooms per Dwelling in the Auckland Region

Bedrooms	1991	1991 proportion	2001	1996 proportion	% Change 1991-2001
One	20,595	7%	22,149	6%	8%
Two	76,944	25%	76,317	21%	-1%
Three	157,332	50%	170,352	46%	8%
Four	47,607	15%	74,634	20%	57%
Five or More	11,202	4%	24,399	7%	118%
Total	313,680	100%	367,851	100%	17%

Source: NZ Census of Population and Dwellings 1991, 2001

Number of bedrooms for private dwellings

Excludes 'not specified' (1991: 3,945, 2001: 21,810)

- The three-bedroom home remains the most common type of home in 2001. However, the three-bedroom home has decreased as a proportion of all homes since 1991, from 50% to 46%.
- Two bedroomed dwellings have also decreased as a proportion of the total. In 1991 the two bedroom home accounted for one quarter of all dwellings.

By 2001 this was reduced to a fifth. In addition, two bedroomed dwellings have actually decreased in absolute numbers – there are less in 2001 than in 1991.

- Four and five bedroomed homes have increased substantially. Five bedroomed homes still only account for a small proportion of all homes but have more than doubled since 1991. Four bedroomed homes are about as numerous as two bedroomed dwellings, but have increased by more than 50%, while the number of two bedroomed dwellings have remained static.
- This pattern of increasing large homes and, to a lesser extent, smaller homes, mirrors the pattern of size of households seen in Table 2. Thus:
 - a. Large households have increased the most and so have large dwellings.
 - b. Small households have increased somewhat and so have small dwellings.
 - c. Both medium sized households and dwellings have either increased only moderately or have decreased.
- If this pattern continues, the Auckland region is likely to see a greater demand for dwellings with larger numbers of bedrooms (4+) and, to a lesser extent, one bedroomed dwellings. Dwellings with two or three bedrooms are likely to see only moderate demand.

Household Size and Number of Bedrooms

Table 5: Household Size by Number of Bedrooms - 2001

Household Size	Number of Bedrooms				
	One	Two	Three	Four	Five or more
One	14,862	27,498	23,703	3,933	1,104
Two	6,150	30,666	57,054	16,296	3,309
Three	786	10,683	36,327	14,463	3,408
Four	222	4,956	31,737	20,565	5,250
Five	81	1,596	12,318	12,045	4,971
Six	27	567	4,980	4,035	3,231
Seven	9	204	2,211	1,626	1,401
Eight +	15	150	2,022	1,674	1,719
Total	22,152	76,320	170,352	74,637	24,393

Source: NZ Census of Population and Dwelling 1991

Household members in private dwellings by number of bedrooms in private dwellings

e.g. in 2001 57,054 three bedroom dwellings were occupied by two member households.

Excludes 'not specified'

Table 6: Number of Bedrooms by Number of Household Members, 2001 (percent)

Household Size	Number of Bedrooms				
	One	Two	Three	Four	Five or more
One	67%	36%	14%	5%	5%
Two	28%	40%	34%	22%	14%
Three	4%	14%	21%	19%	14%
Four	1%	7%	19%	28%	22%
Five	0.4%	2%	7%	16%	20%
Six	0.1%	1%	3%	5%	13%
Seven	0.0%	0.3%	1%	2%	6%
Eight +	0.1%	0.2%	1%	2%	7%
Total	100%	100%	100%	100%	100%

Source: NZ Census of Population and Dwelling 1991

Household members in private dwellings by number of bedrooms in private dwellings

Percentages calculated on totals for number of bedroom e.g. 40% of two bedroom dwellings in 2001 were occupied by two member households.

Excludes 'not specified'

- While there is some correlation between dwelling size and the size of the household living in them, this correlation is fairly weak. Many households appear to be living in dwellings that have more bedrooms than household members. The reasons for having more bedrooms than needed for sleeping in may include:
 - a. home working
 - b. flexible families e.g. broken families with children staying only some of the time
 - c. empty nests where children have moved away but parents are still living in family home
 - d. a desire to have a place for visitors to sleep
 - e. a desire to have more storage space
 - f. a perception that a dwelling with more bedrooms is of greater market value.
- If it is assumed that households with more bedrooms than occupants are living with excess bedrooms, then it can be calculated that at least 42% of households have 'excess' bedrooms. This figure does not account for couples sharing a single bedroom, and the actual figure would be a lot higher if these were included. Thus, the incidence of surplus bedrooms is very high.
- Two thirds of one bedroom dwellings are occupied by one member households, and most of the remaining one third are occupied by two member households. Only a very small proportion of one-bedroom dwellings are occupied by households with more than two members.
- At the other end of the scale, nearly a fifth of five bedroomed dwellings are occupied by one and two person households.

Table 7: Household Size by Number of Bedrooms - % Change 1991 - 2001

% Change	Number of Bedrooms				
	Household Size	One	Two	Three	Four
One	10%	2%	42%	98%	250%
Two	9%	-7%	13%	87%	176%
Three	-16%	6%	6%	63%	124%
Four	-24%	8%	-5%	49%	111%
Five	-34%	7%	-8%	34%	87%
Six	13%	19%	0%	36%	92%
Seven	-25%	17%	7%	52%	123%
Eight or more	400%	61%	11%	42%	142%
Total	8%	-1%	8%	57%	118%

Source: NZ Census of Population and Dwelling 1991, 2001

Household members in private dwellings by number of bedrooms in private dwellings

Excludes 'not specified'

- The change in the distribution of various household sizes in dwelling sizes (Table 7) provides some clues as to the living preferences of household types, and allows us to make some assumptions about future demand.
- Smaller dwellings (one and two bedrooms) are increasingly being occupied by larger households. This is especially true for two bedroomed dwellings. Larger dwellings however, are being occupied by smaller households. Whether the living situations displayed in Table 7 is a result of actual demand or just inappropriate supply is not discernible from the data and would require further research.
- The dual trends noted in the point above mirror the duality of trends pointed out from Table 2 – that both small households and large households are increasing, with households in-between static. Table 7 above allows us to further identify that the smaller households are living in larger dwellings, while larger households are increasingly living in smaller dwellings – suggestive of the fact that the latter are flats or multi-family households, and the former are households who desire spare bedrooms.
- If these trends continue, both smaller dwellings and larger dwellings will be required in the future.
- The 400% increase in eight member households living in one bedroom dwellings is based on very low numbers. Even after this very large increase between 1991 and 2001, there are only 15 households in this situation (Table 5).

Socio-Demographic Change and Living Arrangements

Age

Table 8: Age Structure, Auckland Region

Age	1991	1991 proportion	2001	1996 proportion	% Change 1991-2001
0 - 4 yrs	78,414	8%	88,326	8%	13%
5 – 19 yrs	213,822	23%	261,051	23%	22%
20 – 29 yrs	164,394	17%	167,238	14%	2%
30 – 39 yrs	149,616	16%	193,875	17%	30%
40 – 49 yrs	123,102	13%	165,936	14%	35%
50 – 59 yrs	80,364	9%	123,936	11%	54%
60 – 69 yrs	67,467	7%	75,459	7%	12%
70 – 79 yrs	45,354	5%	53,631	5%	18%
80+ yrs	21,240	2%	29,445	3%	39%
Total	943,773	100%	1,158,897	100%	23%
Median Age	30.9		33.3		

Source: NZ Census of Population and Dwellings, 1991, 2001
Usually Resident Population of the Auckland Region

- The Auckland region's population is ageing. The region's median age over the ten year period increased by 2.4 years to 33.3.
- Although the region's population is ageing, it is ageing slower than most other regions in New Zealand. As at 2001, the Auckland region has the second youngest population in New Zealand, older than only Gisborne region.
- The 5–19 year age group accounts for the largest proportion of the population. This age group represents the 'echo baby boomers' or the children of the 'baby boomers'. While there has been some growth in the number of people in this age group between 1991 and 2001 (22%), this is slower than some of the older age groups.
- The 50–59 year age group has been increasing faster than any other age group (54% between 1991 and 2001) as a result of the maturing baby-boom generation. This is consistent with demographic analyses that reveal that the next twenty years will see rapid growth in the older working age population. This group will continue to expand in the future, as substantial growth is also currently occurring in the 30-39 and 40-49 groups.
- Those aged 80+ are the second fastest growing group (39%). This is reflective of the fact that life expectancy is increasing.
- The 20-29 year age group is nearly static in real terms, as a result of the popularity of overseas travel, especially working holidays, at this stage of life.
- Overall, most age groups over 30 are increasing faster than the population average. Notably, the 0-4 year age group is growing very slowly indicating a

sub-replacement level birth rate. These trends suggest that the population will continue to age in the foreseeable future.

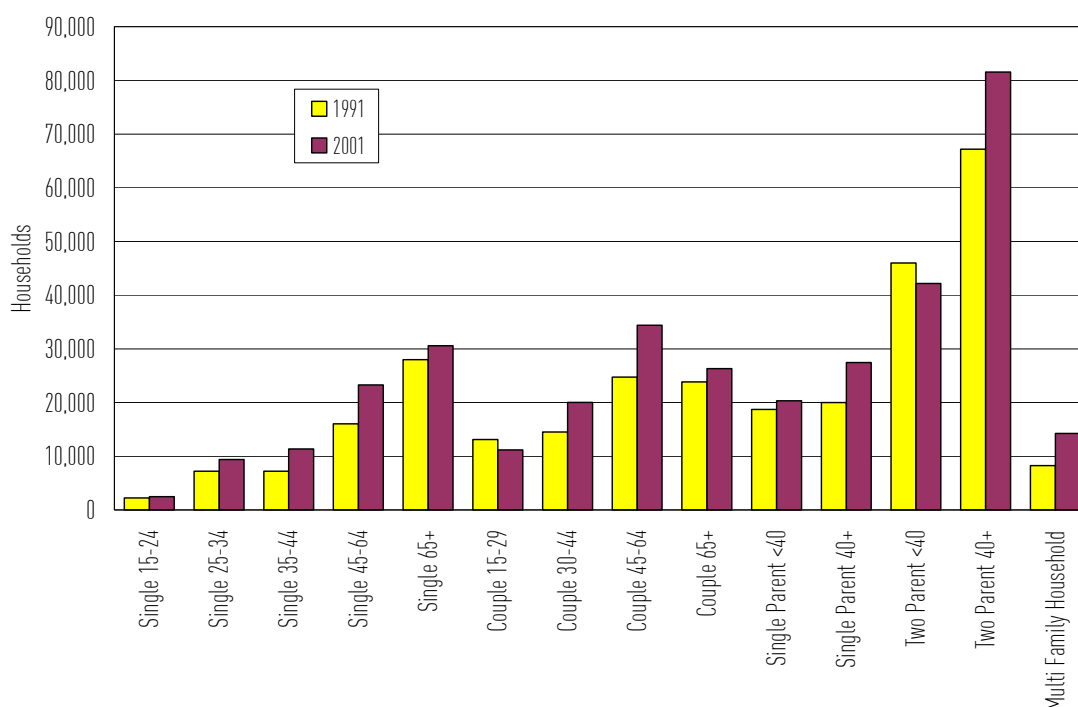
Life-Stage

Table 9: Life-Stage of the Auckland Region, 1991 and 2001

Life-Stage	1991	1991 proportion	2001	1996 proportion	% Change 1991-2001
Total Singles	60,786	20%	77,178	22%	27%
Total Couples	76,248	26%	91,929	26%	21%
Total Parent(s)	151,932	51%	171,585	48%	13%
Multi Family Households	8,259	3%	14,265	4%	73%
Total	297,225	100%	354,957	100%	19%

Excludes 'not specified'

Figure 1: Life Stage, Auckland Region, 1991 and 2001



Source: NZ Census of Population and Dwellings, 1991, 2001

Singles = a single person household

Couples = Corresponds to single family households made up of a couple without children. The age component corresponds to the eldest partner

Two Parent = Corresponds to single family households made up of a two parent family. The age component corresponds to the eldest parent.

Couples, Single Parent and Two Parent households, may or may not include other non-family persons

- Of household life-cycle types considered in this report, single person households is the smallest, though fastest growing, group. By 2001, there were more than 77,000 single person households in the Auckland region, and they constituted 22% of households. There has been a 27% increase in these households since 1991.

- The number of singles aged between 35 and 64 grew particularly quickly, probably reflecting the high immigration levels of this age group.
- Couples are the next most common household type (26% of households). The number of couples also grew faster than the population overall.
- Couples aged less than 30 actually decreased in number as well as in proportion.
- Families with children were the slowest growing group, particularly those with two parents. Families with two parents where at least one of the parent was aged under 40, actually decreased in number, while older families did increase, though relatively slowly.
- There has been a considerable increase in the number of multi-family households. Although still a relatively small proportion of the total number of households, multi-family households have grown by 73% between 1991 and 2001, and now constitute 4% of households. The reasons for this may include the changing ethnic structure of the population, and may be related to housing affordability issues.
- Overall, there is a shift away from people living in families with children, towards other forms of households, particularly single people living by themselves. Many of these family types will also be living with other people e.g. adult children living with their parents. Nevertheless, life stage statistics do give an indication of the structure of the population and lay a foundation for examining their housing preferences.

Table 10: Number of Bedrooms by Life Stage

Life Stage	Bedrooms				
	One	Two	Three	Four	Five+
Singles					
15 - 24	38	29	23	7	3
25 - 34	349	34	27	4	1
35 - 44	24	36	33	5	2
45 - 64	18	36	38	7	2
65+	17	44	33	5	1
Couples					
15 - 29	16	34	40	8	2
30 - 44	8	29	50	11	2
45 - 64	3	15	54	23	5
65+	3	25	54	15	3
Multifamily households	0.2	7	42	32	19

Source: NZ Census of Population and Dwellings 1991

Number of bedrooms and life-stage of household for households in the Auckland region

Percentages calculated on totals for each life-stage

Excludes 'not specified'

Table 11: Life-Stage by Number of Bedrooms: Percentage Change 1991-2001

Life Stage	Number of Bedrooms				
	One	Two	Three	Four	Five+
Singles					
15 - 24	-5%	0%	16%	133%	200%
25 - 34	34%	8%	13%	105%	210%
35 - 44	58%	30%	52%	113%	238%
45 - 64	26%	17%	58%	104%	274%
65+	-19%	-11%	37%	80%	253%
Couples					
15 - 29	-3%	-15%	-26%	41%	95%
30 - 44	66%	41%	22%	89%	163%
45 - 64	49%	3%	25%	110%	191%
65+	-28%	-26%	17%	90%	224%
Multifamily households	22%	51%	32%	95%	197%

Source: NZ Census of Population and Dwellings 1991, 2001

Number of bedrooms and life-stage of household for households in the Auckland region

Percentages difference calculated between totals 1991-2001

Excludes 'not specified'

- The majority of single person households occupy two and three bedroom dwellings.
- Younger single person households are more likely to live in smaller dwellings, while their older counterparts are more likely to live in a larger dwelling. The latter group includes widow and widowers who may still be living in the family home.
- The largest proportion by far of couple households are living in three-bedroom dwellings. The majority of couples aged 45-64 and 65+ are living in three-bedroom dwellings.
- The incidence of couples living in larger dwellings increases with age, although after 60 years of age, couples appear to begin to trade down to smaller dwellings again.

Family Type

Table 12: Family Type in the Auckland Region

Family Type	1991	1991 proportion	2001	1996 proportion	% Change 1991-2001
Family with one child aged <18 years	45,264	30%	52,704	31%	16%
Family with two children aged <18 years	45,522	30%	52,803	32%	16%
Family with three children aged <18 years	19,272	13%	21,051	12%	9%
Family with four or more children aged <18 years	8,856	6%	9,804	6%	11%
Family with children aged 18+ years	33,018	22%	35,223	21%	7%
Sub Total (Families)	151,932	100%	171,585	100%	13%
Couple Only Households	76,245		91,926		21%
Multi Family Household	8,259		14,265		73%
One Person Household	60,810		77,172		20%
Other Households	20,373		34,710		97%
Total Households	317,622		389,661		23%

Source: NZ Census of Population and Dwellings 1991, 2001

Family Type – Families in private Dwellings

Multi Family Household = Groups of individuals living within the one household.

Excludes 'not specified'

- It has already been noted above that families with children are the slowest growing type of household. This is particularly true for two-parent families.
- Families with fewer children are growing slightly faster than larger families. This suggests that there may be a smaller demand for larger houses in the future, all other things being equal.
- The number of families with just adult children living at home grew slower than the rate for families overall, but still constitutes a fifth of all families.
- All types of households without children grew faster than their counterparts with children. This is particularly so for Multi-family households which grew by 73%. Although this form of household is a relatively small proportion of households overall, its rapid growth may signal a shift towards adults flattening together instead of living with their parents. This is likely to increase the demand for houses with more bedrooms, as it is likely that each adult will require their own bedroom.

Table 13: Family Type by Number of Bedrooms - 2001

Family Type	Number of Bedrooms					Avg No. of Bedrooms	Total Households
	One	Two	Three	Four	Five+		
Family with one child aged 0-17	2%	20%	50%	22%	7%	3.1	51,753
Family with two children aged 0-17	1%	9%	52%	30%	8%	3.4	52,008
Family with three children aged 0-17	0.2%	6%	44%	36%	14%	3.7	20,688
Family with four+ children aged 0-17	0.2%	5%	47%	29%	20%	3.7	9,486
Family with just children aged 18+	1%	11%	48%	30%	9%	3.4	34,668
Couple Only Households	6%	23%	52%	17%	3%	2.9	91,929
Multi Family Household	0%	7%	42%	32%	19%	3.7	14,265
One Person Household	53%	23%	20%	3%	1%	2.3	77,175
Other Households	43%	16%	27%	10%	4%	3.0	34,710

Source: NZ Census of Population and Dwellings
 Family Type of Household and Number of Dwellings for Households in the Auckland Region
 Percentages calculated on totals for family type
 Excludes 'not specified'

- Not surprisingly, the larger the family, the larger the house that family is likely to be living in.
- It is common for families of any size, except one person households, to be in a three bedroom dwelling, with four bedroomed dwellings being the next most common living arrangement.
- Very small dwellings are generally only occupied by single person households.

Table 14: Family Type by Ethnicity – 2001

Family Type	Ethnicity							Total
	European	Māori	Pacific Islanders	Chinese	Indian	Other Asian	Other Ethnic Groups	
One child 0-17	35,346	5,772	4,995	4,101	2,463	2,160	699	55,536
Two children 0-17	36,807	5,067	5,037	2,961	2,571	2,340	735	55,518
Three children 0-17	13,707	2,712	3,561	783	639	675	312	22,389
Four+ children 0-17	4,266	1,923	3,648	201	147	249	198	10,632
Just children 18+	26,034	2,157	2,352	3,018	1,218	1,023	264	36,066
Couple Only Family	81,240	4,470	2,487	2,562	1,536	1,239	471	94,005
Multi Family Household	4,770	2,331	4,425	1,836	1,089	591	132	15,174
One Person Household	64,401	3,999	2,040	1,485	672	819	444	73,860
Other Households	17,577	2,589	1,668	1,572	393	909	249	24,957
Total	284,154	31,020	30,210	18,519	10,731	10,002	3,501	388,137

Source: NZ Census of Population and Dwellings 1991, 2001

Family Type of Household and Ethnicity of Householder for Households in the Auckland Region

Note: Throughout this report, Indian refers to people from India as well as Fijian Indians

Excludes 'not specified'

Table 15: Family Type by Ethnicity - Percentage Change 1991 – 2001

Family Type	Ethnicity							Total
	European	Māori	Pacific Islanders	Chinese	Indian	Other Asian	Other Ethnic Groups	
One child 0-17	4%	13%	14%	238%	161%	344%	366%	20%
Two children 0-17	5%	14%	17%	108%	154%	434%	345%	18%
Three children 0-17	4%	11%	18%	42%	37%	217%	300%	13%
Four+ children 0-17	6%	15%	17%	-3%	2%	93%	1000%	14%
Just children 18+	-11%	28%	69%	468%	259%	610%	389%	8%
Sub Total (Families)	0%	15%	21%	182%	142%	357%	375%	16%
Couple Only Family	16%	53%	50%	154%	110%	211%	220%	22%
Multi Family Household	31%	42%	75%	488%	246%	338%	529%	77%
One Person Household	15%	67%	77%	173%	136%	250%	215%	22%
Other Households	7%	52%	102%	161%	20%	274%	177%	24%
Total Households	9%	29%	35%	190%	135%	314%	304%	20%

Source: NZ Census of Population and Dwellings 1991, 2001

Family Type of Household and Ethnicity of Householder for Households in the Auckland Region

Note: Throughout this report, Indian refers to people from India as well as Fijian Indians
Excludes 'not specified'

- Although categorising families by ethnicity is difficult, the householder of two thirds of families identified themselves as European in the 2001 census. 10% were NZ Maori, 11% Pacific Island, 4% Indian, and 10% were Asian. This distribution largely reflects the ethnic breakdown of the general population, although Asians and Indians are over-represented in the above figures due to their smaller average family size.
- There has been a substantial growth in the number of Indian and Asian families in the Auckland region since 1991, slight growth for Pacific and Maori families and virtually no change for European families.
- While families of all ethnic groups are tending to have smaller families, this is particularly true for Asian and Indian families. Asian families with only one child increased by 268 between 1991 and 2001, but those with four or more children increased by just 34%. A similar pattern can be observed for Indian families, although this is not the case for Pacific Island and Maori families.
- Adult children living with their parents is a growing phenomenon for all ethnic groups except Europeans although this living arrangement is still a significant component of European families overall.

Ethnicity

Table 16: Ethnicity of Householders in the Auckland Region

Ethnicity	1991	1991 proportion	2001	1996 proportion	% Change 1991-2001
European	261,636	83%	284,154	77%	9%
Māori	24,006	8%	31,020	8%	29%
Pacific	22,356	7%	30,213	8%	35%
Indian	4,566	2%	10,731	5%	135%
Chinese	6,399	1%	18,519	3%	189%
Asian	2,415	1%	10,005	3%	314%
Other Ethnic Groups	867	0%	3,504	1%	304%
Total Households (excl. not specifieds)	314,445	100%	368,019	100%	17%
Not Specified	2,742		17,784		
Total Households	317,187		385,803		22%

Source: NZ Census of Population and Dwellings 1991,2001

Ethnicity of Householder

Note: Throughout this report, Indian refers to people from India as well as Fijian Indians

Excludes 'not specified'

Table 17: Ethnicity by Number of Bedrooms - 2001

Ethnicity	Number of Bedrooms										Total
	One	%	Two	%	Three	%	Four	%	Five+	%	
NZ European	17,148	6%	58,182	21%	129,168	46%	57,840	21%	17,139	6%	279,477
NZ Maori	1,818	6%	6,102	20%	15,117	51%	5,055	17%	1,803	6%	29,895
Pacific	1,110	4%	5268	19%	14070	51%	4722	17%	2421	9%	27,591
Indian	687	6%	2802	25%	4851	43%	2070	18%	906	8%	11,316
Chinese	852	5%	2949	16%	7470	41%	4863	27%	1977	11%	18,111
Other Asian	795	8%	2142	22%	4119	43%	1851	19%	762	8%	9,669
Other Ethnicities	312	9%	903	27%	1467	44%	513	15%	168	5%	3,363
Total	21,558	6%	74,496	21%	167,325	47%	71,538	20%	23,031	6%	357,948

Source: NZ Census of Population and Dwellings 2001

Ethnicity of Householder and Number of Bedrooms for Households in the Auckland Region

Excludes 'not specified'

- A moderate degree of variation exists between ethnic groups in the type of house they live in. These differences do not appear material however.
- More instructive are the trends apparent since 1991. For all ethnic groups, there is a trend towards living in dwellings with more bedrooms. This is particularly true for Asians, but all ethnic groups have increased their proportion of households living in dwellings with four or more bedrooms.
- While the number of households living in one bedroom dwellings has increased for most ethnic groups, this increase has been slower than the increase in the number of households overall.
- Absolute decreases were recorded for Europeans in two bedroomed dwellings, and for Pacific Islanders in one bedroomed dwellings.
- Nearly all of the growth in the European population is being accommodated in dwellings with four or more bedrooms.

Table 18: Ethnicity by Number of Bedrooms: Percentage Change 1991 - 2001

Ethnicity	Bedrooms					Total
	One	Two	Three	Four	Five	
NZ European	1%	-10%	0%	43%	84%	9%
NZ Maori	16%	7%	14%	92%	243%	29%
Pacific Island	-2%	16%	19%	65%	179%	36%
Indian	56%	105%	91%	192%	260%	118%
Chinese	127%	163%	137%	270%	436%	190%
Other Asian	165%	245%	280%	536%	807%	314%
Other Ethnicities	235%	301%	268%	389%	409%	304%
Total	9%	0%	10%	59%	120%	20%

Source: NZ Census of Population and Dwellings 2001

Ethnicity of Householder and Number of Bedrooms for Households in the Auckland Region

Excludes 'not specified'

Table 19: Average Number of Household Members per Bedroom by Number of Bedrooms by Ethnicity - 2001

Ethnicity	Bedrooms					Av Hhld Size
	One	Two	Three	Four	Five+	
European	1.3	0.9	0.9	0.8	0.8	2.6
Maori	1.5	1.2	1.2	1.1	1.0	3.4
Pacific Peoples	1.9	1.7	1.6	1.4	1.2	4.6
Indian	2.1	1.5	1.3	1.1	1.0	3.7
Chinese	1.8	1.4	1.2	1.0	0.9	3.5
Other Asian	1.8	1.5	1.3	1.1	1.0	3.6
Other Ethnicities	1.5	1.3	1.3	1.1	0.9	3.5
Total Population	1.4	1.0	1.0	0.9	0.9	2.9

Source: NZ Census of Population and Dwellings 2001

Number of Bedrooms, Household Size & Ethnicity of Householder for Households in the Auckland Region

Excludes 'not specified'

- Considerable variation exists between ethnic groups in the average number of occupants per bedroom.
- Consistently across dwellings sizes, Europeans have smaller numbers of household members per bedroom than all other ethnic groups.
- The pattern of bedroom occupancy suggests that Europeans prefer to live (or can afford to live) in dwellings where each member of the household has their own bedroom and/or where spare bedrooms exist. Even in small dwellings with only two bedrooms, the average occupancy rate for Europeans is less than one person per bedroom.

- Pacific Island households have the highest numbers of household members per bedroom, except for those living in one bedroomed dwellings, where Indians average 2.1 occupants per bedroom.
- All ethnic groups have an average of more than one occupant per bedroom for one bedroomed dwellings. Five+ bedroomed dwellings have an average of less than one occupant per bedroom for most ethnic groups, indicating a surplus of bedrooms in large houses. Even in relatively large dwellings with four bedrooms, Pacific Island households have an average of well over one occupant per bedroom.

Income

Table 20: Median Household Income by Number of Bedrooms and Household Size - 2001

Household Size	Number of Bedrooms				
	One	Two	Three	Four	Five+
One	\$17,746	\$19,130	\$24,679	\$27,853	\$23,027
Two	\$43,740	\$43,915	\$52,805	\$60,313	\$56,290
Three	\$29,898	\$43,382	\$60,843	\$77,183	\$75,019
Four	\$29,524	\$38,357	\$62,522	\$85,214	\$90,444
Five	\$36,364	\$34,966	\$52,770	\$83,334	\$96,483
Six	\$45,001	\$36,019	\$47,638	\$73,807	\$95,736
Seven	\$27,501	\$36,786	\$45,573	\$69,368	\$94,050
Eight or more	\$60,000	\$37,857	\$53,094	\$74,562	\$100,001

Source: NZ Census of Population and Dwellings 1991

Median Household Income by Number of Bedrooms and Household Size for Households in the Auckland Region
Excludes 'not specified'

- In general terms, a household's median income does not appear to depend to a very great extent on the number of household members. More influential in predicting median household income is the size of the dwelling that household lives in.
- From patterns discernable within the median household income table, it is possible to deduce the following:
 - a. Households with two occupants have approximately double the income of those with one occupant. This suggests that in the main both occupants in two member households are working.
 - b. Households with three or four occupants are more likely to be families, many of which will only have one income. This is reflected in the fact that there is only a small difference in median household income between households with two household members and households with three or four members. Households with three, four or even five household members have a lower household income

than households with two members, when living in one or two bedroom dwellings.

- c. As numbers of household members increase, median household incomes either increase only slowly, or, in some cases, decrease. Additional members may be joining households but not bringing any income with them, suggesting that they may be joining the household for reasons of personal poverty.
- d. Almost without exception, increasing wealth accompanies increasing dwelling size. This suggests that, if they can afford it, households prefer to house their occupants in a greater number of bedrooms, or that they prefer to have spare rooms to run home businesses, etc from.

Table 21: Ethnicity by Household Income - 2001

Ethnicity	Income					Total
	<\$20,000	\$20,000-\$40,000	\$40,000-\$50,000	\$50,000-\$70,000	\$70,000+	
European	18%	21%	9%	17%	35%	100%
Maori	22%	24%	11%	18%	25%	100%
Pacific Peoples	24%	24%	11%	18%	23%	100%
Indian	17%	23%	11%	20%	29%	100%
Chinese	34%	25%	8%	13%	20%	100%
Other Asian	30%	29%	9%	15%	17%	100%
Other Ethnicities	28%	27%	10%	15%	21%	100%
Total	20%	21%	10%	17%	32%	100%

Source: NZ Census of Population and Dwellings

Ethnicity of Householder and Household Income for Households in the Auckland Region

Excludes 'not specified'

- The level of a household's income is a proxy for how well they can afford suitable housing. Income by itself is a crude measure, but it is an important component of housing affordability.
- In 2001, a third of households earned \$70,000 per annum or more. A fifth earned less than \$20,000, with the rest spread fairly evenly in between.
- Europeans have a greater household income than other ethnic groups however, by virtue of the fact that they have a greater proportion of their number earning more than \$70,000 per annum and a smaller proportion earning less than \$20,000.
- Asians appear to have the smallest household incomes. Nearly a third of Asian households earn less than \$20,000 per annum.

Table 22: Household Income by Ethnicity: % Change 1991 – 2001

Ethnicity	Income					Total
	<\$20,000	\$20,000- \$40,000	\$40,000- \$50,000	\$50,000- \$70,000	\$70,000+	
European	-27%	99%	-15%	6%	32%	13%
Maori	-19%	-11%	23%	65%	210%	22%
Pacific Peoples	-17%	-16%	38%	91%	251%	22%
Indian	72%	35%	72%	149%	344%	108%
Chinese	269%	151%	114%	122%	226%	186%
Other Asian	375%	228%	184%	291%	393%	290%
Other Ethnicities	282%	242%	235%	245%	377%	275%
Total	-17%	-16%	-1%	15%	105%	11%

Source: NZ Census of Population and Dwellings

Ethnicity of Householder and Household Income for Households in the Auckland Region

Excludes 'not specified'

- Changes in household income levels since 1991 give an indication of relative movements between income bands, and between ethnic groups.
- While Asians have increased their proportion of households earning high incomes, low income earning Asian households have also increased substantially.
- NZ Maori households have increased the proportion of their households earning \$70,000+ per annum substantially. This also applies to Pacific Island and Indian households

Population and Household Projections

A limited range of variables are available for projection purposes, and even what is available can only be considered as a projection of current and expected trends. Furthermore, given the complexity of housing demand and supply patterns and the spatial variability in these, it is extremely difficult to make housing demand conclusions in much detail. Nevertheless, projection data lends support to the following conclusions.

It is projected that the regional population will increase by 27% between 2001 and 2021 to reach 1,547,900. In household terms, this means around 156,000 extra households will be living in the region by this time, and increase of 37% over 2001. The household formation rate is higher than the population growth rate because the number of people per household is expected to fall. This in itself is expected to account for 27% of the increase in regional households, even if the population wasn't growing.

- The increasing regional population will require a housing stock which is increasing at the same rate. In addition, a further 27% of dwellings will be required simply to account for the expected future fall in occupancy rate. In total, **approximately 201,000 new dwellings will be required up until 2021** (using 1996 as a base).
- Current patterns suggest that with the exception of the Auckland CBD, **the greatest numbers of new households will be formed in areas peripheral to the current urban area**. Some of the things that could encourage a less dispersed pattern could include:
 - a) Policy changes to encourage higher densities in urban areas;
 - b) An improvement in higher density dwelling design and construction;
 - c) Urban amenity improvements;
 - d) The provision of more and improved social infrastructure provision;
 - e) The development of a stronger sense of community within existing urban areas;
 - f) A trend towards living close to work, assuming that the bulk of employment remains within the urban area; and
 - g) Developments in transport infrastructure that discourage peripheral living and commuting e.g. congestion pricing, urban public transport.
- A number of factors could further encourage further peripheral living, such as:
 - a) A continuation of planning policy that allows a reasonable degree of countryside living;
 - b) A public backlash against higher density living and the concomitant appeal of low density living at the periphery for reasons of poor urban design, perceived change in social status of the existing area, or a revived demand for increased private open space;
 - c) Developments in transport infrastructure that encourage commuting long distances in relatively short periods e.g. ALPURT;

- d) A trend towards working a home at least some days of the week and a consequential increase in tolerance for commuting on the remaining days;
- **Occupancy rates will gradually fall in most areas** with few exceptions. The greatest falls in occupancy rates will generally occur at the periphery of the urban area, probably indicating a transition from rural to urban type land uses and family structures. This may indicate an increasing demand for smaller houses in these areas, though the requirements of smaller households for smaller houses is difficult to establish. Equally likely, the family homes located in rural areas could be being occupied by young professional couples who spend some of their time working at home in the spare bedrooms or work their lifestyle block or large section in the weekends as relaxation.
 - **The median age of the population in many areas of the region will increase.** This is particularly so within the current urban area. The existing urban population is not only ageing, but young professionals are increasing moving into previously rural areas. This slows the rate of ageing in these peripheral locations, but creates a demand for houses (and services) that suit their professional lifestyles.
 - A big increase in the 65+ age group will be seen in all areas of the region with the exception of much of Auckland City and North Shore City. In the case of North Shore City the population is relatively old already - a further ageing of the population won't have much impact. The Auckland City population is relatively transient as a result of being the employment and educational centre of the region, thus attracting younger people to its territory. Auckland City is also the entrepot of migrants into New Zealand, these migrants generally being younger than the general population.
 - **The impacts of the ageing of the population will be modified by the increasing health and mobility of the same.** This may encourage them to stay in their family homes longer than they otherwise would, but at some stage they will probably trade down to smaller accommodation. There is evidence in the data that spare bedrooms are retained even when trading down occurs. In addition, there is a trend towards older people becoming self-employed in cottage industries, or taking up hobbies that require more space than they would otherwise require. Thus, the limit on demand for small houses may be greater than previously thought.
 - The **increasing density of the urban area** will inevitably place pressure on policy makers to accommodate extra dwellings in an appropriate fashion. This pressure will be greatest in Auckland City, which will reach densities of over 15 households per hectare gross by 2021 across a large proportion of its territory. At the same time, gross densities outside of the metropolitan urban limits will also be increasing. This will place pressure on the relevant authorities to provide urban facilities and infrastructure in these areas.

Conclusion

The Auckland regional population is becoming more diverse. Because the *demand* for housing is partly a result of personal circumstances and requirements it is likely that this population diversity will drive housing choices in the future, at least in combination with historic factors.

Housing change is a slow process however and it takes at least a generation to alter the housing stock markedly. Dwellings are generally built to last at least 50 years, so historic factors will continue to play a significant role in the region's housing choices.

The *supply* of housing is also outcome of the choices people make, and is dependent upon the rate and type of new construction as well as movements within the existing housing stock. Monitoring both of these elements will be essential to an adequate understanding of housing supply.

This report has not attempted to elaborate on the behavioural aspects of housing choice, instead focusing on historic patterns and change only. This is an area for further work that it is recommended be conducted. A behavioural and preference study will be particularly important for the Auckland Regional Growth Strategy to be implemented.